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UCC File: 2200

FUNCTIONAL SERVICING REPORT 469 & 509 RICE ROAD

CITY OF WELLAND November 2024

INTRODUCTION

The purpose of this Functional Servicing Report (FSR) is to address the municipal servicing requirements for the proposed subdivision development located at 469 & 509 Rice Road in the north-western portion of the Northwest Welland Secondary Plan (NWWSP) Area in the City of Welland, north of Quaker Road, west of Rice Road, east of Montgomery Road, and south of the municipal boundary with the Town of Pelham.

The subject lands are approximately 16.25 hectares and will consist of residential single detached, street townhouse, and back-to-back townhouse dwellings. The subject lands will be developed to include associated asphalt roadways, concrete curb, catch basins, storm sewers, sanitary sewers, and watermain.

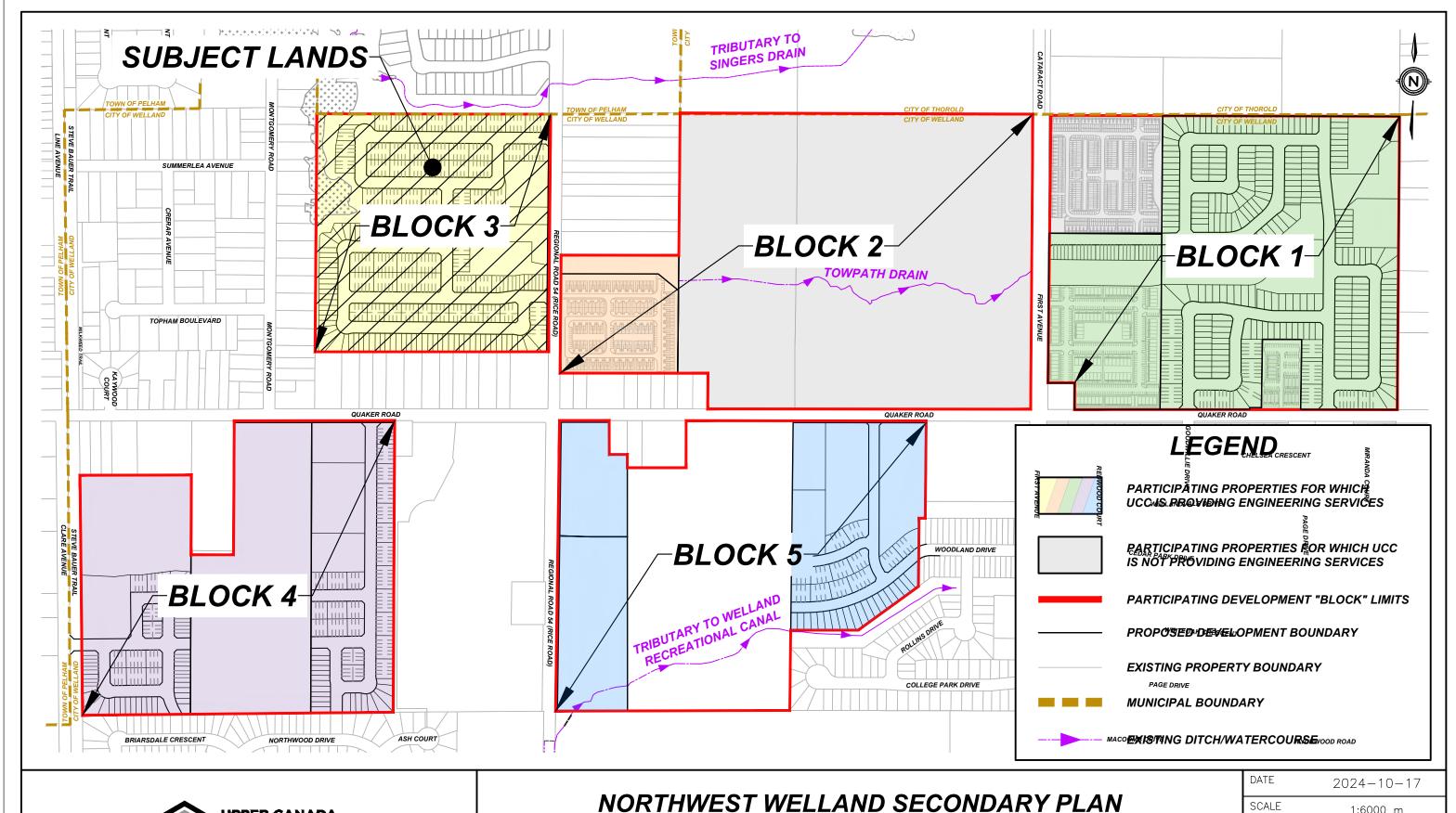
The subject lands are located along the western side of Regional Road 54 (Rice Road). The Regional Municipality of Niagara has completed an Environmental Assessment (EA) for Regional Roads 37 (Merritt Road) and 54 (Rice Road) in March 2024 which identified an expansion of the existing Right-of-Way for Rice Road to accommodate additional elements to the existing cross section (i.e. additional travel lanes, center turn lane, and sidewalks/paths). To accommodate the expanded cross section, the Region has identified that a road widening is required along the frontage of the subject lands along Rice Road.

The objectives of this report are as follows:

- 1. Identify domestic and fire protection water servicing needs for the site;
- 2. Identify sanitary servicing needs for the site;
- 3. Identify stormwater management needs for the site; and,
- 4. Identify the property requirements within the site to accommodate the road widening of Regional Road 54 (Rice Road) per the Regional EA.



As part of the Northwest Welland Secondary Plan (NWWSP), a Conceptual Municipal Servicing Design Report was prepared by Associated Engineering on behalf of the City of Welland This design report assessed the existing municipal infrastructure (water, sanitary, and storm) to service the Secondary Plan Area, and provided a conceptual framework to identify the locations where new or upgraded infrastructure will be required to support future development. The updated report (June 2024) has been included in Appendix A.





NORTHWEST WELLAND SECONDARY PLAN
CITY OF WELLAND
SITE LOCATION PLAN - BLOCK 3

DWG No.	FIGURE 1
REF No.	•
SCALE	1:6000 m
DATE	2024-10-17



WATER SERVICING

There is an existing 150mm diameter municipal watermain located on Quaker Road, in front of the subject lands and no existing watermain on First Avenue.

The Conceptual Municipal Servicing Design Report assessed the City of Welland watermain model to determine the required watermain sizes to provide adequate domestic water supply and fire protection to a minimum fire flow of 133 L/s within the Secondary Plan Area.

It was determined in the Design Report that a new 250mm diameter trunk watermain would be required within the subject lands and on First Avenue, extending from the existing 300mm watermain on Quaker Road and connecting to the existing 150mm diameter watermain on Montgomery Road and looping internally through the subject lands.

It was shown that a small 150mm diameter watermain would be extended through the easterly future development lands at 450 Rice Road from the proposed 250mm diameter trunk on Rice Road and a 300mm diameter trunk watermain loop within additional future development lands to the immediate east of the site. However, as the 450 Rice Road will be developed as a private condominium, it will not be permitted to provide two watermain connections. Therefore, the local 150mm diameter watermain will not connect between Rice Road and the easterly development lands.

Smaller diameter mains connecting the new 250mm diameter trunk watermains were determined to be able to provide domestic water supply and fire protection within the proposed local roads.

A Watermain Distribution Plan has been prepared by Upper Canada Consultants which shows the proposed watermain locations on Rice Road and within the westerly adjacent future development lands (which share the same owner as the subject lands) and is enclosed in Appendix B. As shown in this Plan:

- An upsized 300mm diameter trunk watermain loop is proposed on Rice Road and within the westerly development lands, connecting to the existing 300mm diameter watermain on Quaker Road and existing 150mm diameter watermain on Montgomery Road;
- An internal 300mm diameter watermain loop will be provided internally within the westerly development lands;
- The local internal streets will be serviced with local 150mm and 200mm diameter watermains; and,
- A single 300mm diameter water service has been preliminarily proposed for the subject lands, from the proposed 300mm diameter watermain on Rice Road.

Per discussions with City of Welland Staff, the overall watermain servicing within the NWWSP Area will be reviewed through the City of Welland watermain model as development applications are submitted within the area to determine the actual required watermain sizes for domestic water supply and fire protections.



The estimated peak domestic water demands have been summarized in Table 1 below for the proposed 401 dwellings (population of 902 persons), using an average residential flow rate of 270 L/capita/day. Peaking factors for the maximum daily demand and maximum hourly demand were taken from Table 3-1 of the Ministry of Environment Design Guidelines for Drinking Water Systems for a population between 500 - 1,000 persons. The peak demands will be confirmed as part of the detailed engineering design.

Table 1. Estimated Peak Domestic Water Demand		
Average Domestic Demand		
270 L/cap/day; 902 persons	2.82 L/s	
Maximum Day Peaking Factor		
	2.75	
Maximum Day Domestic Demand		
	7.76 L/s	
Peak Hour Peaking Factor		
	4.13	
Peak Hour Domestic Demand		
	11.65 L/s	

The fire hydrants located within the development site will be prepared to provide fire protection for the proposed dwellings. The spacing and location of the proposed fire hydrants will be provided in accordance with the City of Welland design standards as part of the detailed engineering design.

Therefore, there is expected to be adequate capacity to provide domestic water supply and fire protection within the subject lands and adjacent development lands.

SANITARY SERVICING

There is presently a 600mm diameter Regional trunk sanitary sewer flowing southerly on Rice Road to the existing 750mm diameter Regional trunk sanitary sewer flowing easterly on Quaker Road, which ultimately outlets to Towpath Road Sanitary Pumping Station.

A Sanitary Drainage Area Plan has been prepared for the proposed developments at 450 Rice Road and 469 & 509 Rice Road, and is enclosed in Appendix C. As shown in the enclosed Drainage Area Plan, a total sanitary drainage area of 12.12 ha and a population of 902 persons has been allocated for the subject lands, which will convey flows to the existing 600mm diameter Regional trunk sanitary sewer on Rice Road with a single private 200mm diameter sanitary service.



The existing 600mm diameter Regional trunk sanitary sewer on Quaker Road in front of the subject lands has a full flow capacity of 452.94 L/s. The future peak sanitary flow from the subject lands will is calculated to be 13.66 L/s, which will occupy 3.0% of the full flow capacity in the existing 600mm diameter sanitary sewer on Rice Road. With the addition of the adjacent 450 Rice Road property, the full build-out of the development area will occupy 3.9% of the full flow capacity in the 600mm diameter sanitary seer on Rice Road.

Therefore, the receiving sanitary sewer system is expected to have adequate capacity to receive future sanitary flows from the subject lands. The sanitary sewer design is attached in Appendix C for reference.

The Conceptual Municipal Servicing Design Report assessed the City of Welland InfoSWMM sanitary sewer model and the available capacities in the Towpath SPS and associated forcemain and the Welland WWTP.

Per the conclusions in the Design Report, there is expected to be adequate capacity in the existing Towpath SPS and associated forcemain following upgrades planned to this infrastructure by the Niagara Region, and Welland WWTP without upgrades for the entire NWWSP Area. The Design Report indicates that the capacity in the downstream sanitary sewer system will need to be reevaluated as part of detailed engineering design, prior to build-out of the NWWSP Area.

Therefore, there is expected to be adequate capacity in the receiving sanitary network for the subject lands.

STORMWATER MANAGEMENT

A Storm Servicing Plan has been included in Appendix D showing a preliminary layout of the proposed internal storm sewers discharging to the proposed stormwater management facilities (P10 and P11).

A separate Stormwater Management Plan has been prepared by Upper Canada Consultants (UCC) which includes the future Storm Drainage Areas for the subject lands and detailed calculations for each proposed stormwater management facility. The Stormwater Management Plan has been enclosed in Appendix F for reference.



REGIONAL ROAD 54 ROAD WIDENING

The Regional Municipality of Niagara has completed an Environmental Assessment (EA) for Regional Roads 37 (Merritt Road) and 54 (Rice Road) in March 2024 which identified an expansion of the existing Right-of-Way for Rice Road to accommodate the following cross-sectional elements:

- 3.0m wide multi-use path on the western side of the road;
- 16.5m wide asphalt to asphalt roadway consisting of 2 northbound lanes, 2 southbound lanes and a center left turn lane;
- Curb and gutter;
- 1.8m wide boulevards; and,
- 1.8m wide concrete sidewalk on the eastern side of the road.

As part of the proposed overall stormwater drainage system in the Northwest Welland Secondary Plan Area, the Towpath Drain has been lowered from Montgomery Road to Niagara Street to permit the construction of new municipal storm sewers and their respective outlets on Quaker Road, Rice Road, and First Avenue. As shown in the Storm Servicing Plan enclosed in Appendix D, new municipal storm sewers are proposed to be constructed on Rice Road with outlets directly into the Towpath Drain on the east side of the road, removing the necessity to maintain the existing roadside ditches along Rice Road.

UCC has prepared a proposed typical cross section for Rice Road which provides the above note pathways, boulevards, and roadway widths required in the EA for Rice Road within a 29.0m Right-of-Way, and is included in Appendix E.

As shown in the typical cross section, the existing Right-of-Way for Rice Road is 20.0m, which would require 9.0m of road widening within the adjacent properties on either side of the road. This can be accommodated along the frontage of the subject lands by dedicating a 5.0m road widening, and the remaining 4.0m widening can be obtained on the opposite side.

Therefore, the proposed 5.0m road widening within the subject lands is adequate to accommodate the proposed reconstruction of Regional Road 54 (Rice Road) in accordance with the Niagara Region's completed EA.



CONCLUSIONS AND RECOMMENDATIONS

Therefore, based on the above comments and design calculations provided for this site, the following summarizes the servicing for this site:

- 1. The existing municipal watermain system is expected to have adequate capacity to provide both domestic and fire protection water supply for the subject lands.
- 2. The receiving 600mm diameter Regional sanitary sewer on Rice Road, the Towpath SPS and associated forcemain, and Welland WWTP are expected to have adequate capacity for the subject lands upon full build-out of the NWWSP Area.
- 3. Detailed calculations, conclusions, and recommendations regarding Stormwater Management can be found in the Stormwater Management Plan found in Appendix F.

Based on the above and the accompanying calculations, there exists adequate municipal infrastructure for this development. We trust the above comments and enclosed calculations are satisfactory for approval. If you have any questions or require additional information, please do not hesitate to contact our office.

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Respectfully Submitted,

Reviewed By:

Brendan Kapteyn, P.Eng.



APPENDICES



APPENDIX A

NW Welland Secondary Plan Municipal Servicing Conceptual Design Report (Associated Engineering, June 2024)



REPORT

City of Welland

Northwest Welland Secondary Plan Municipal Servicing Conceptual Design Report

JUNE 2024





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REVISIONS PAGE

Northwest Welland Secondary Plan Municipal Servicing Conceptual Design Report

Client: Engineer:

Upper Canada Consultants

Associated Engineering (Ont.) Ltd.

Revision/ Issue	Date	Description	Prepared by/ Reviewed by	Client Review
1	2023-11-22	Municipal Servicing Report_v1	AL & BB/ RC & MG	
3	2024-03-26	Municipal Servicing Report_v3	AL & BB/ RC & MG	
5	2024-06-24	Municipal Servicing Report_v5	AL & BB/ RC & MG	
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TABLE OF CONTENTS

SECT	ION		PAGE NC
Table	e of Con	tents	i
List c	of Tables	8	ii
List c	of Figure	es	iii
1	Intro	oduction	1
	1.1	Study Area	1
	1.2	Proposed Secondary Plan	2
2	Back	ground information	3
	2.1	Sources	3
	2.2	Data Gaps	4
3	Wate	er	4
	3.1	Design Criteria	5
	3.2	Model Updates and Existing System Conditions	7
	3.3	Proposed System Requirements	11
4	Sanit	tary	14
	4.1	Design Criteria	15
	4.2	Existing System Capacity	15
	4.3	Proposed System Requirements	16
5	Storr	m	20
	5.1	Design Criteria	21
	5.2	Existing System Capacity	21
	5.3	Proposed System Requirements	22
6	Preli	minary Costing	24
7	Cond	clusions	25
Appe	endix A -	- Water	
Appe	endix B -	Sanitary	
Appe	endix C -	Storm	
Appe	endix D -	- Cost Estimate Detail	

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LIST OF TABLES

	PAGE NO.
Table 1-1: NWSP Population and Unit Numbers	2
Table 2-1: Water, Sanitary and Storm Data Sources	3
Table 2-2: Data Gaps	4
Table 3-1: New NWSP Demands	6
Table 3-2: Existing and Future WTP Pump Settings – City's InfoWater Model	7
Table 3-3: Identified Previous NWSP Demands from the City's Model	9
Table 3-4: Available and Required Water Storage	13
Table 5-1: Required Outlet Size	24
Table 6-1: Preliminary Cost Estimate for Municipal Servicing	24

LIST OF FIGURES

	PAGE NO
Figure 1-1: Northwest Welland Secondary Plan Study Area	1
Figure 1-2: NWSP Proposed Population and Unit Plan	2
Figure 3-1: Existing Watermains Configuration in Study Area	5
Figure 3-2: Shoalt's Tank Head – Existing and Future MDD Scenarios (without NWSP)	10
Figure 3-3: Bemis Tank Head – Existing and Future MDD Scenarios (without NWSP)	11
Figure 3-4: Proposed Infrastructure for NWSP Development	12
Figure 4-1: Schematic of Existing Sanitary System in NWSP Study Area	15
Figure 4-2: Proposed Sanitary System and Drainage Areas – Option 1	17
Figure 4-3: Proposed Sanitary System and Drainage Areas – Option 2	18
Figure 5-1: Schematic of Existing Stormwater Drainage Path	21
Figure 5-2: Proposed Storm System and Drainage Areas	23

1 INTRODUCTION

The City of Welland identified the development of the Northwest Secondary Plan as a priority to provide for detailed land use planning policies for a mix of uses, including policies that address infrastructure requirements, and natural and cultural heritage considerations. The Northwest Welland Secondary Plan (NWSP) will guide future growth and development within the study area. This report (previously issued May 2021) reviews background information and provides capacity analysis for existing water, sanitary, and storm sewer servicing in the study area. In addition, an initial assessment was completed for proposed conceptual water, sanitary, and storm servicing. These analyses were used to develop general recommendations for municipal water, sanitary, and storm servicing requirements in the Secondary Area.

1.1 Study Area

The study area (Figure 1-1) includes the land within the urban area boundary of Welland that is bounded by Clare Avenue to the west, Niagara Street to the east, land on the south side of Quaker Road to a depth of approximately 500m to the south and 500m to the north and comprises approximately 190ha. Quaker Road bisects through the Study Area and is identified as an arterial road and all other streets are considered local roads.

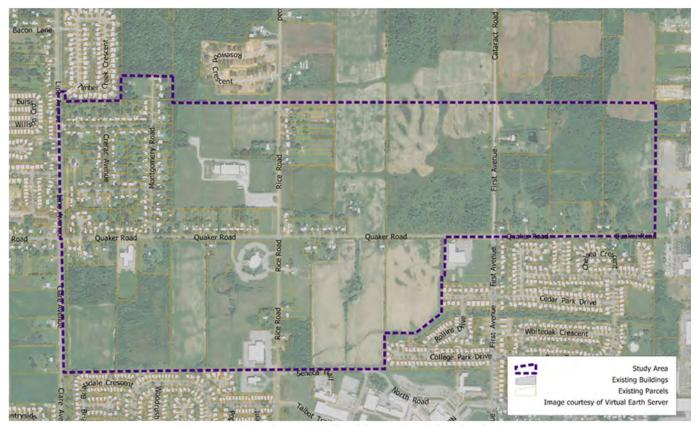


Figure 1-1: Northwest Welland Secondary Plan Study Area

Existing land uses are primarily residential, institutional, agricultural, and open space. Currently, municipal services for water, sanitary and storm exist in parts of the NWSP area, which will be leveraged to accommodate the NWSP area.

1.2 Proposed Secondary Plan

Figure 1-2 shows the proposed NWSP layout provided by Upper Canada Consultants (September 2023). Based on the proposed layout, population and unit numbers for each development block were also provided by Upper Canada Consultants. Projected units and populations are summarized in Table 1-1.

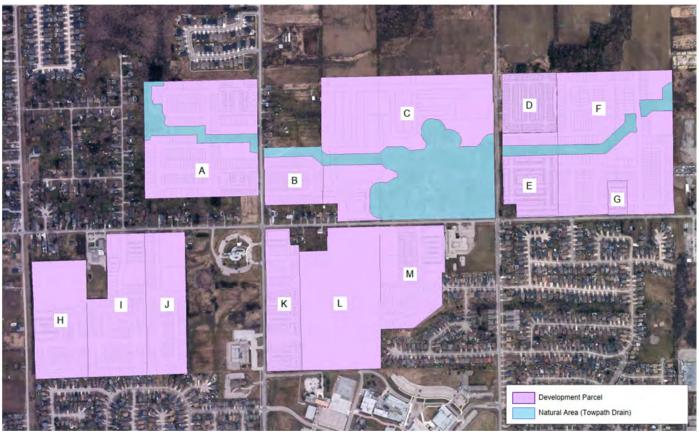


Figure 1-2: NWSP Proposed Population and Unit Plan

Table 1-1: NWSP Population and Unit Numbers

Block Number	Area (ha)	Units	Population (+/-)
А	13.25	386	1,081
В	3.36	114	319
С	18.15	800	2,240
D	4.05	360	1,008
Е	4.77	401	1,123
F	17.71	403	1,128
G	0.80	96	269

Block Number	Area (ha)	Units	Population (+/-)
Н	8.40	226	633
I	8.79	227	636
J	7.04	162	454
K	5.73	439	1,229
L	13.02	500	1,400
M	7.05	236	661

2 BACKGROUND INFORMATION

2.1 Sources

Table 2-1 provides a list of sources used to aid in completing the analysis of water, wastewater, and stormwater servicing for the NWSP area.

Table 2-1: Water, Sanitary and Storm Data Sources

System	Description	File Type(s)	Author(s)
All	City of Welland Northwest Area Planning and Servicing Study Municipal Class EA	PDF	Earth Tech
All	1m Elevation Contours	SHP	City of Welland
All	City of Welland GIS Data	GIS	City of Welland
All	City of Welland Official Plan	PDF	Dillon Consulting
All	Key Directions Report for the Northwest Welland Secondary Plan Area	PDF	SGL
All	City of Welland Municipal Standards, 2013	PDF	City of Welland
Water/Wastewater	2016 Water and Wastewater Master Servicing Plan Update Hydraulic Model for City of Welland, May 2017	PDF	GM Blue Plan
Water	Welland Water Model (part of the Niagara Region Water Model for the 2017 Niagara Region Master Servicing Plan), 2017	InfoWater	Niagara Region
*Water	City of Welland All Pipe Water Model	InfoWater	City of Welland
Water	Design Guidelines for Drinking-Water Systems, 2008	PDF	MECP
Water	City of Welland Fire Flow Requirements – By Building Zone	PDF	AE

System	Description	File Type(s)	Author(s)
*Wastewater	Welland All Pipe Wastewater Model	InfoSWMM	City of Welland/ Niagara Region
*Wastewater	City of Welland Pollution Prevention Control Plan Update & Wastewater Master Servicing Plan, 2020	PDF	GM Blue Plan
*Storm	Northwest Welland Stormwater Management Implementation Plan, 2022	PDF	Upper Canada Consultants

^{*}additional/updated data sources since May 2021 Report

2.2 Data Gaps

Data gaps are presented in Table 2-2, which summarizes missing, relevant information that would provide a clearer picture of the existing and future needs of the systems in future steps of this process (i.e. confirmation of criteria to be used in future design of systems).

Table 2-2: Data Gaps

System	Data Gaps	Justification
All	Detailed topographic survey	To confirm elevations for servicing

3 WATER

Water servicing in the Niagara Region is a two-tiered approach; Niagara Region has jurisdiction over the drinking water supply for homes and businesses throughout the Region and is responsible for treatment, storage, pumping, and trunk watermains. The City of Welland is responsible for the local distribution system.

Currently, the area surrounding the proposed development is pipe fed from the Welland Water Treatment Plant (WTP) to the Shoalt's Drive Reservoir and surrounding area. During periods where the WTP is offline, the area is predominately supplied by gravity from the Shoalt's Reservoir. The Welland system also has an elevated storage tank (Bemis) located in the southern portion of the distribution system.

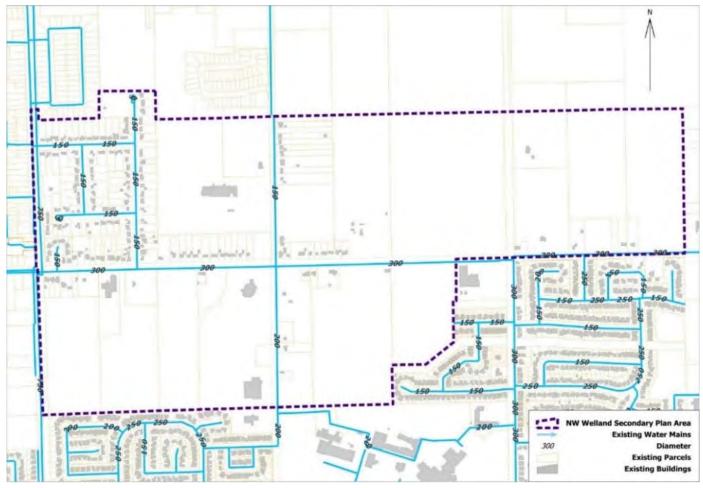


Figure 3-1: Existing Watermains Configuration in Study Area

The existing system configuration within the study area, including existing pipe diameters, is shown in

Figure 3-1. Within this area there is a small existing development east of Line Avenue and north of Quaker Road. This area, which was built in 2002, consists of 150mm PVC watermain connecting to both the 750mm CPP on Line Avenue to the west and the 300mm CI on Quaker Road to the south. In addition, there is a 150mm existing main on Rice Road (north of Quaker Road) which appears to serve few properties. There are also existing properties along Quaker Road, which are serviced off the 300mm main.

3.1 Design Criteria

The design criteria used for the analysis of the water distribution system includes the following:

- Target normal operating pressures:
 - Preferred system pressure between 350 kPa to 550 kPa (50 to 80 psi)
 - Minimum system pressure to be greater than 275 kPa (40 psi)
 - Maximum system pressure to be less than 700 kPa (100 psi)
- Fire flow requirements during MDD with 140 kPa (20 psi) residual system pressure:

- Parks: 67 L/s
- Low Density Residential (Single Family Residential): 67 L/s
- Medium Density Residential (Townhomes): 133 L/s
- Multi-Use: 133 L/s
- Per capita demand: 240 L/cap-day (Based on City design criteria)
- Peaking factors as per the City of Welland Model, as follows:
 - Maximum Day Demand peaking factor: 1.5
 - Peak Hour Demand peaking factor: 1.87 (2.81 x Average Day Demand)
- ADD and MDD demand patterns as per City of Welland Model
- C-Factor for new pipes: 135 (Based on the City design standard)

3.1.1 Water Demands

Table 3-1 summarizes the new demands assigned within the model for the NWSP area. These demands were calculated based on the newly proposed populations/units previously identified in Table 1-1 and design criteria noted in Section 3.1.

Table 3-1: New NWSP Demands

Junction ID	ADD (L/s)	MDD (L/s)	PHD (L/s)
814	0.89	1.33	2.49
951	3.89	5.83	10.93
1700	0.75	1.12	2.10
3952	1.76	2.64	4.94
8338	1.50	2.25	4.22
8622	3.41	5.12	9.59
8623	2.07	3.11	5.83
J-FUT-47	2.80	4.20	7.87
J_NWSP_4	1.26	1.89	3.55
J_NWSP_6	1.50	2.25	4.22
J_NWSP_8	2.07	3.11	5.83
J_NWSP_9	2.07	3.11	5.83
J_NWSP_10	3.12	4.68	8.77
J_NWSP_15	1.84	2.76	5.16
J_NWSP_20	3.13	4.70	8.81
J-FUT-49	1.77	2.65	4.97

Junction ID	ADD (L/s)	MDD (L/s)	PHD (L/s)
Total Demand	33.84	50.77	95.11

3.2 Model Updates and Existing System Conditions

An InfoWater Model (WELLAND_WATER_2023, dated October 23, 2023) provided by the City was used for the analysis. The City's model includes both existing and future Average Day Demand (ADD) and Maximum Day Demand (MDD) extended period simulation scenarios. Model data sets suggest that the existing demand scenarios in the model were last reviewed and updated in 2022. The earlier study completed for this development reviewed and commented on the Niagara Region & City of Welland InfoWater models for their future development growth, providing an insight into the future development areas of the region. It has been assumed that this information still applies despite the time passed since that report.

During the development of this study, City noted that there were two errors in the existing model scenarios that should be rectified and therefore, the analysis was updated with the following changes/corrections.

- The size of the watermain, dead end on Montogomery Road where hydrant was connected, was changed from 50mm to 150mm pipe.
- The connection to the intersection of the Regional trunk main at Line Avenue and Summerlea Avenue was opened in the model.
- Recent discussions with the City indicated that the watermain along Quaker Road from Clare Avenue
 to Rice Road is currently being replaced with a new 300mm watermain and therefore, this portion of
 pipe was upsized and a C-factor of 135 was assigned in the model to reflect the upgrade.
- The connection (IW pipe ID 2377) between the 750mm Region trunk main on Clare Avenue N and the 300mm watermain on Quaker Road was opened in the model.

Other than the above noted model updates, no quality control checks were conducted on the City's model; it was assumed that the model is sufficiently calibrated for the purpose of this analysis and is indicative of the current system.

Figures for this section can be found in Appendix A. Table 3-2 shows the existing and current future pumping schemes from the City's model (on/off settings) at the WTP for both ADD and MDD scenarios. No changes were made to these settings for the development analysis.

Table 3-2: Existing and Future WTP Pump Settings – City's InfoWater Model

Pump	Existing ADD	Existing MDD	Future ADD	Future MDD
Low Flow Pump #1	On at 0:00 Off at 6:00	Off at 0:00	Off at 0:00 On at 11:00	Off at 0:00 On at 20:00 Off at 22:00
Low Flow Pump #2	Off at 0:00	Off at 0:00	Off at 0:00 On at 20:00	Off at 0:00

Pump	Existing ADD	Existing MDD	Future ADD	Future MDD
High Flow Pump #1	Off at 0:00 On at 13:00	On at 0:00 Off at 7:00	On at 0:00	On at 0:00 Off at 2:00 On at 5:00
High Flow Pump #2	Off at 0:00	Off at 0:00 On at 12:00	On at 0:00 Off at 3:00 On at 6:00 Off at 20:00	On at 0:00 Off at 2:00 On at 5:00

3.2.1 Current Hydraulic Conditions

A hydraulic analysis of the existing system was completed to provide a baseline level of service to compare to the future development scenarios.

Figures A-1 and A-2 show the minimum pressure during existing ADD and MDD in the study limits and surrounding area. At certain locations within the study area, pressures are lower than the required minimum pressure of 275 kPa (40 psi). These low-pressure nodes are in proximity to the Shoalt's reservoir and occur during peak periods; simulation time 11am to 12 noon for ADD and 10am to 11am for MDD. The observed minimum pressures in this portion of the study area for ADD and MDD are 239 kPa and 234 kPa respectively and are thought to be due to high ground elevations (maximum of 193m) and fluctuations of the Shoalt's Drive Reservoir head (between 217.5m and 219.0m). As to be expected during higher demands, more low-pressure nodes were observed in the surrounding study area during MDD scenario than ADD. There were also few low-pressure nodes observed in the other future growth areas of the system.

Figure A-3 shows the available fire flow during MDD at a residual pressure of 140 kPa (20 psi). Certain portions of the study area, specifically watermains along the Rice Road and Topham Boulevard have available fire flows less than 67 L/s (the City standard for single family residential). However, the new 300mm watermain upgrade along Quaker Road (from Clare Avenue to Rice Road) improves fire flows along Quaker Road, Montgomery Road and in Summerlea Avenue. The dead ends of the watermains in this portion of the area still indicated low fire flows (< 67 L/s).

The low availability of fire flows is due to both the high ground elevation and the size of the watermains supplying these hydrants.

3.2.2 Future Conditions without NWSP Development

In the existing model from the City, it was observed that the future model scenario included NWSP infrastructure and demands based on the previous study. A total of 48.7 L/s for future ADD and 73.1 L/s for future MDD was allocated in the NWSP region at the model junctions summarized below in Table 3-3.

Table 3-3: Identified Previous NWSP Demands from the City's Model

Junction ID	Future ADD (L/s)	Future MDD (L/s)
3952	1.00	1.07
567	3.15	4.72
812	2.52	3.77
815	3.86	5.79
818	4.01	6.02
8622	1.18	1.77
8623	5.35	8.03
J-FUT-47	10.10	15.16
J-FUT-48	2.14	3.21
J-FUT-49	5.58	8.37
J-FUT-50	6.08	9.12
J-FUT-51	4.03	6.05
Total Demand	49.00	73.08

To prevent "doubling up" on NWSP demands, the previously proposed infrastructure for NWSP has been removed from the future analysis.

Figures A-4 and A-5 show the minimum pressure during future ADD and MDD, without the NWSP development. As these figures show, a significant improvement in pressures was noted in the surrounding study area when compared to the existing scenarios, with only a small number of low-pressure nodes noted. This is due to the change in the pumping procedure at the WTP for the future scenario.

Figures 3-2 and 3-3 below show the hydraulic grade (HG) for Shoalt's and Bemis tanks for the existing and future MDD Scenarios. The pumping operating procedure at the WTP for the existing scenario shuts down the pumps midmorning, coinciding with periods of higher system demand. During this mid-morning WTP shutdown, both the Shoalt's Drive Reservoir and the Bemis Elevated Tank levels are drawn down; this draw down is sharp and reaches its lowest hydraulic grade level (HG) around noon. However, with the current future pumping scheme at WTP, the HG at Shoalt's and Bemis shows a sustained hydraulic head after 6 am showing improved pressures in the surrounding study area.

The future pumping schemes in the model for ADD and MDD scenarios showed improved pressures surrounding the study area which appeared to resolve most of the low-pressure nodes that were highlighted in existing scenarios. A few low-pressure nodes (250 kPa to 261kPa) still persisted surrounding the study area particularly nodes close to the Shoalt's reservoir.

An attempt was made to assess the future system by changing the current future pumping scheme for MDD scenario by altering the pumping hours at pump H-1 (On at 0:00 and Off at 2:00) which showed improved pressures in the reservoir area but not completely eliminated. As modification of pumping schemes is outside of the scope of this analysis, this would need to be confirmed by the City when adjusting the overall system configuration and settings.

Figure A-6 shows the available fire flow during future MDD prior to the proposed development. Parts of the surrounding study area on the south and east sides showed sufficient fire flows as required for multi-family residential housing (133 L/s) however, the nodes on the Rice Road watermain have less than the design standard of 133 L/s. Most of the Shoalt's reservoir area showed adequate fire flows with the new 300mm watermain upgrade in Quaker Road and by opening the 750mm Region trunk main interconnection in Clare Avenue N with the exception of the dead-end locations.

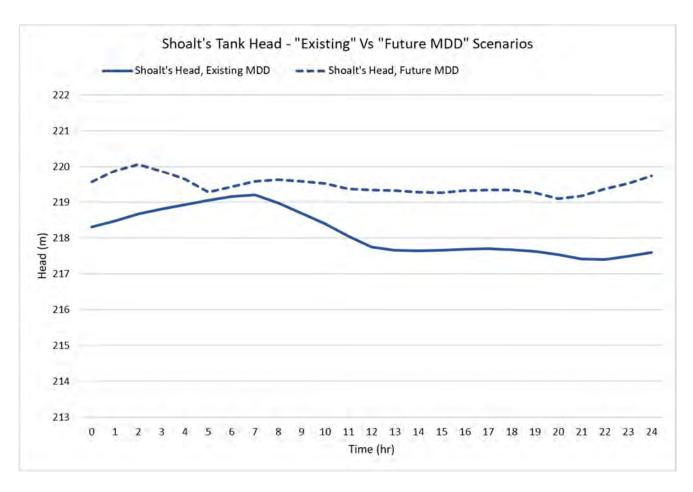


Figure 3-2: Shoalt's Tank Head – Existing and Future MDD Scenarios (without NWSP)

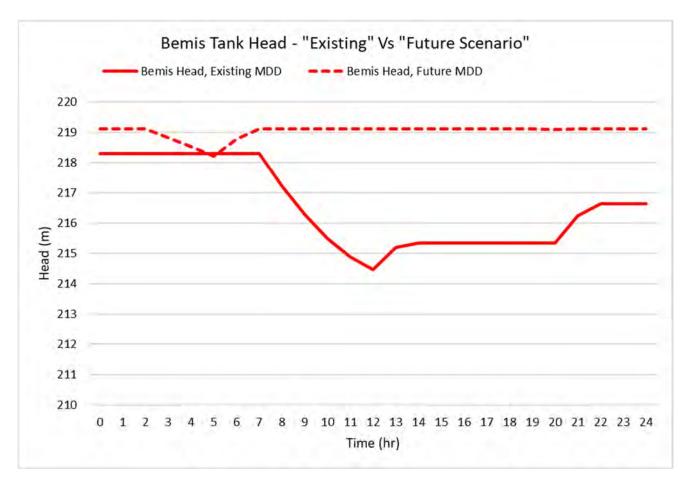


Figure 3-3: Bemis Tank Head – Existing and Future MDD Scenarios (without NWSP)

3.3 Proposed System Requirements

Several pipes and junctions were added to the City of Welland InfoWater model to represent future servicing of the NWSP area. The proposed pipe routing is laid based on the new NWSP site layout as shown in Figure 1-2 in Section 1.0 of this report. As the existing 300mm main on Quaker Road acts as a main supply line for this study area, the proposed mains for NWSP were mainly branched and looped out from this main to service the proposed development. Note that only significant pipes that will connect the NWSP site were included in the model. There will be additional future piping required along local roads upon finalization of the site layout.

Junction elevations for the newly added nodes in the study area were assigned based on the City of Welland 1 m contours. Pipe sizing for the major loops shown in Figure 3-4 was established as part of the hydraulic analysis to achieve the required fire flow of 133 L/s as needed for the medium density residential. New piping is shown in bold red; existing piping in blue.

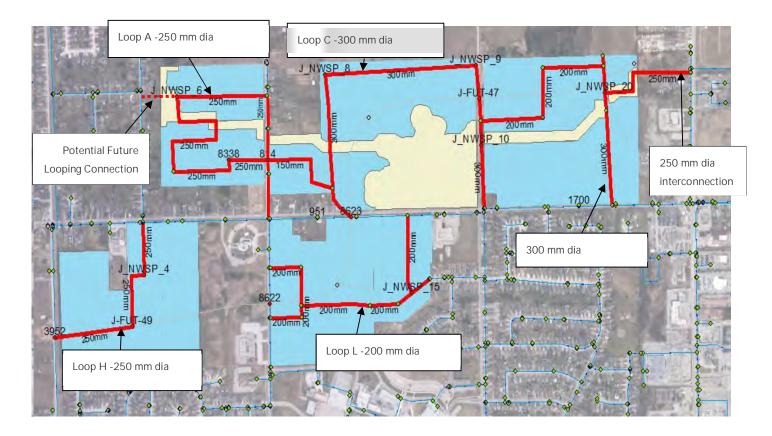


Figure 3-4: Proposed Infrastructure for NWSP Development

3.3.1 Hydraulic Analysis

The development demands for the proposed NWSP development were added to the Futures ADD and MDD scenarios in the model. The hydraulic analysis then was carried out with NWSP future demands to identify the impact of this proposed development on the future system and to confirm the pipe sizing and servicing requirements to support the future NWSP development.

Figures A-7 and A-8 show the minimum available pressures during ADD and MDD EPS, and Figure A-9 shows the available fire flows, with the NWSP area serviced with the proposed watermain sizes identified.

As these figures show, the addition of NWSP area to the future system does not significantly impact the surrounding system pressures, instead the proposed servicing has shown improved pressures over Future ADD and MDD when no NWSP development was added. As with the other modelled scenarios, there are existing low-pressure nodes near Shoalt's Drive Reservoir area, however no exacerbation of low pressures was noted when the NWSP development was added.

Figure A-9 shows most of the NWSP study area meets fire flow requirements of 133 L/s that is required for medium density housing with the following pipe servicing requirements.

The major watermain loops (Loop A, C, H and L) that are proposed to service the future NWSP development are shown in Figure 3-4 above. The pipe routing and sizing was identified based on the current site layout provided by the

developers and to achieve the design fire flow of 133 L/s throughout the study area. Should a change in the NWSP site layout occur in the future, a review of the analysis may be required to re-confirm the pipe sizes and servicing options. Furthermore, additional modelling may be required in the future to assess the extent of the overall system that is required to be constructed to facilitate each development block on a project-by-project basis.

To supply the required fire flow (133 L/s) to the northwest portion of the NWSP, specifically, the development that is planned west of Rice Road, an upgrade of Rice Road watermain and as well as the new water mains installed in this area should be a minimum of 250mm as shown as Loop A. With this upgrade, the fire flows in the area were improved and vary from 138 L/s to 213 L/s. It is also noted that a potential future looping connection between the northwest portion of the NWSP and the existing watermain on Montgomery Road can be considered based on final development details and servicing requirements within the area.

A new 300mm watermain loop, Loop C will be required to supply the C-block of the NWSP planned development. In addition, a new interconnection with 250mm watermain connecting the NWSP development to the watermain in Niagara Street on the eastern side is also made to improve the fire flows in the area.

Two major watermain loops with 200mm and 250mm, Loop L and Loop H respectively will be required for the southern portion of the NWSP, to provide the required fire flow of 133 L/s in this area. Without the Loop L, the development blocks K and M were not able to achieve the design fire flows of 133 L/s.

Overall, the proposed NWSP development shows improved operating pressures except in the low-pressure areas previously identified. Improved fire flows were also noted around the NWSP study area with the proposed pipe servicing, both within and outside the development boundaries.

3.3.2 Storage Requirements Review

A review of the City of Welland's overall storage capacity and existing and future storage requirements was conducted to determine the impact of the NWSP area on future storage needs. As per the MECP Design Guidelines for Drinking Water Systems, storage requirements for a water distribution system are as follows:

- Equalization Storage (A) = 25% of Maximum Day Demand
- Fire Storage (B) = 378 L/s for 6 hours (Based on MECP Equivalent Population Fire Flow Requirement)
- Emergency Storage (C) = 25% of A +B

Table 3-4 summarizes the total available storage identified in the Region Master Plan (as used in the previous report) and the calculated existing and future storage needs for the system based on the City of Welland model demands. As shown, there is sufficient storage in the Welland system to allow for the addition of the NWSP area. The total additional storage required for the addition of the NWSP area is 1.4 ML.

DescriptionStorage (ML)Total Available Storage37.0Existing Required Storage19.7Future Required Storage without NWSP (a)26.5

Table 3-4: Available and Required Water Storage

Description	Storage (ML)
Future Required Storage with NWSP (b)	27.9
Required Additional Storage for NWSP (b-a)	1.4

4 SANITARY

Sanitary servicing in Niagara Region is based on a two-tiered approach. The Region is responsible for the wastewater treatment plants, trunk sewers, pumping stations and forcemains. The City of Welland is responsible for the local gravity sewer system.

The sanitary sewage from the NWSP area will ultimately be treated at the Welland Wastewater Treatment Plant (WWTP). This WWTP services the City of Welland, Town of Pelham, and the Port Robinson area of the City of Thorold.

The existing sanitary services in the NWSP area includes a regional main down Rice Road, local main in the Montgomery subdivision, and local and regional (trunk) sanitary sewer along Quaker Road. Primary sanitary sewage flows south down Rice Road, and then east down Quaker Road to Towpath Road. Sanitary sewage then flows northeast along Towpath Road to Towpath Sewage Pumping Station (SPS). Towpath SPS receives gravity flow from the regional trunk sanitary sewer along Quaker Road and flows from Hurricane Road SPS (Rice Road). Sewage from Towpath SPS is pumped through a forcemain across the Welland River to a gravity system, which ultimately flows to the Welland WWTP. A schematic of the existing sanitary servicing within the NWSP study area is provided in Figure 4-1.



Figure 4-1: Schematic of Existing Sanitary System in NWSP Study Area

4.1 Design Criteria

Existing and future peak flows conveyed by the trunk sewer on Quaker Road to the Towpath SPS were assumed to be equivalent to the flows represented in the City's all-pipe InfoSWMM model.

Additional flows contributed to the Quaker Road trunk sewer, and ultimately the Towpath SPS, by the NWSP area were calculated using the following design criteria:

- Extraneous flows = 0.286 L/s/ha
- Roughness coefficient = 0.013
- Residential per capita flow rate (for sewage generation) = 275 L/cap/day
- Peaking factor = Calculated based on Harmon formula with values between 2.0 and 4.0

4.2 Existing System Capacity

4.2.1 Trunk Sewer

The available capacity of the existing trunk sewer along Quaker Road from Rice Road to the Towpath SPS was reviewed using the City's all pipe InfoSWMM model.

Currently Line Avenue is the break point in the collection system, with areas west of Line Avenue flowing west and then south, contributing to the Welland WWTP drainage area. However, the Region Master Servicing Plan Update (MSPU) identified a new 600mm diameter connection (WW-SS-002) along Quaker Road from Line Avenue to Rice Road, which would redirect approximately 130L/s of flows from Pelham (north-west of Line Avenue) to the Quaker Road trunk sewer, and ultimately the Towpath SPS. Given this change in flows through the Quaker Road trunk sewer, the available capacity of this sewer was reviewed with this new connection. This completed available capacity assessment, based on the InfoSWMM model outputs, is attached in Appendix B. In general, the Quaker Road trunk sewer has significant available capacity – with future available capacity ranging from 100L/s to 3,194L/s with the new Line Avenue connection.

4.2.2 Towpath SPS and Forcemain

The Region MSPU identified that Towpath SPS has existing and future deficiencies based on existing and design peak wet weather flows. As such, the Region MSPU identified a capital project to upgrade the Towpath SPS during the timeframe of 2022 – 2026 from 118L/s to 600L/s (WW-SPS-037).

The Region MSPU also indicates that the existing Towpath SPS forcemain has current capacity; however, will have a projected capacity deficit for 2051 growth. There is already a constructed 600mm diameter forcemain that can be commissioned in line with Towpath upgrades, as identified in the Region MSPU capital projects during the timeframe of 2032-2036 (WW-FM-022).

4.2.3 Welland WWTP

The Region MSPU identified that the existing Welland WWTP has surplus capacity available to treat existing and future flows at the plant, with the plant reaching 80% capacity around the 2041 time horizon.

4.3 Proposed System Requirements

4.3.1 NWSP Sanitary Drainage Areas and Proposed Collection System

As requested, two sanitary servicing options were prepared and reviewed for feasibility for the NWSP area, including:

1) development blocks on the east and west side of First Avenue are connected to a new city trunk located on First Avenue and 2) development blocks on the east and west side of First Avenue are connected through the development blocks to a new city trunk located on Quaker Road.

Figure 4-2 and Figure 4-3 (also provided in Appendix B as Figure B-1 and B-2, respectively) show the approximate location of future city trunk sanitary gravity sewers within the NWSP area and the location where the city trunks will connect to the existing Region trunk sewer on Quaker Road for each servicing option. Figure 4-2 and Figure 4-3 also show identifying numbers for the individual NWSP drainage areas, which are referenced in the sewer design sheets provided in Appendix B.

The design sheets for the proposed sanitary sewers have been prepared with the new Line Avenue connection included. Note that the inverts and pipe lengths assigned to the existing trunk sewer in the proposed design sheets are from the City's InfoSWMM model. Existing peak flows into the trunk sewer, input at existing manhole locations in the design sheets, are also as per the City's InfoSWMM model. All inverts and pipe lengths of the proposed city trunk sewers have been assigned based on preliminary modeling and the existing ground contours of the area. Note that, it is assumed that any other sanitary sewer required on future local roads servicing the NWSP area, will be 200 mm diameter.

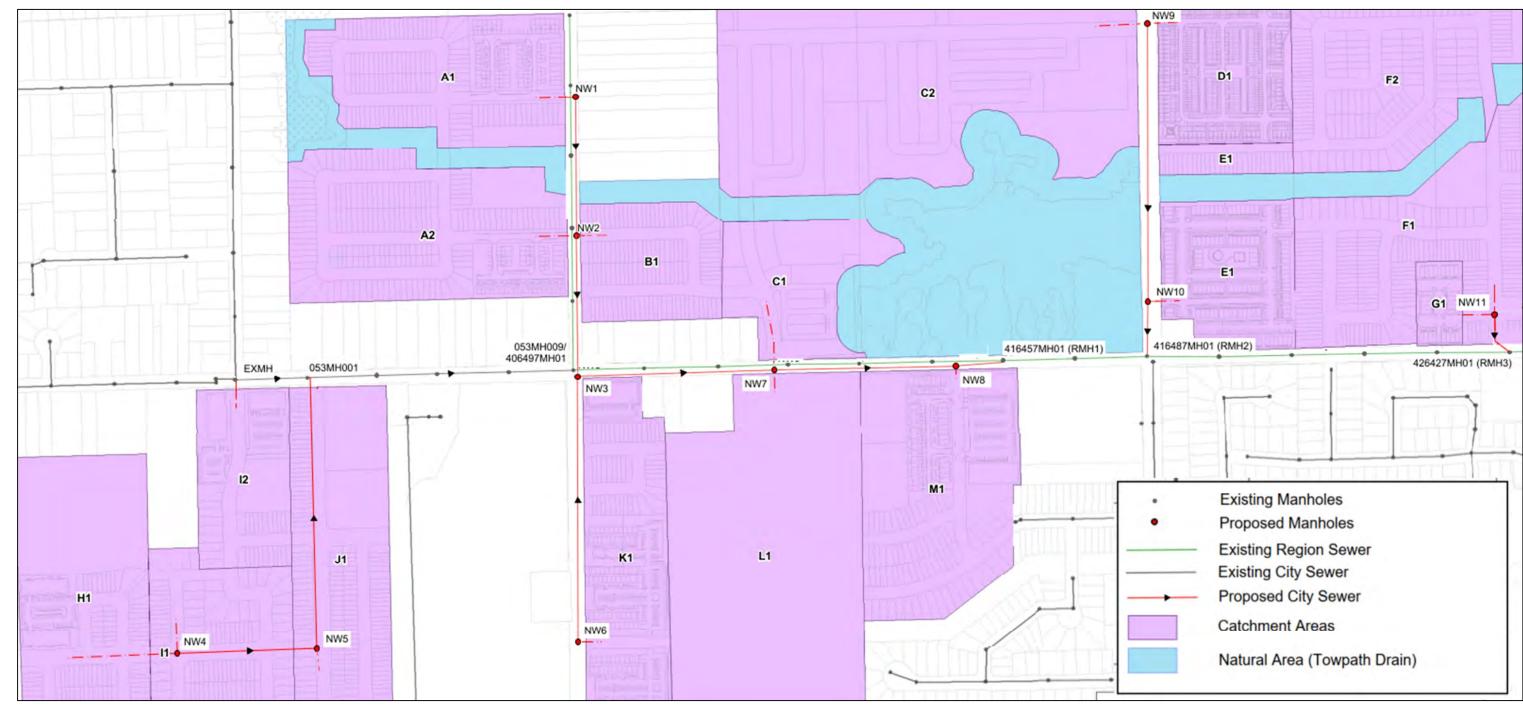


Figure 4-2: Proposed Sanitary System and Drainage Areas – Option 1

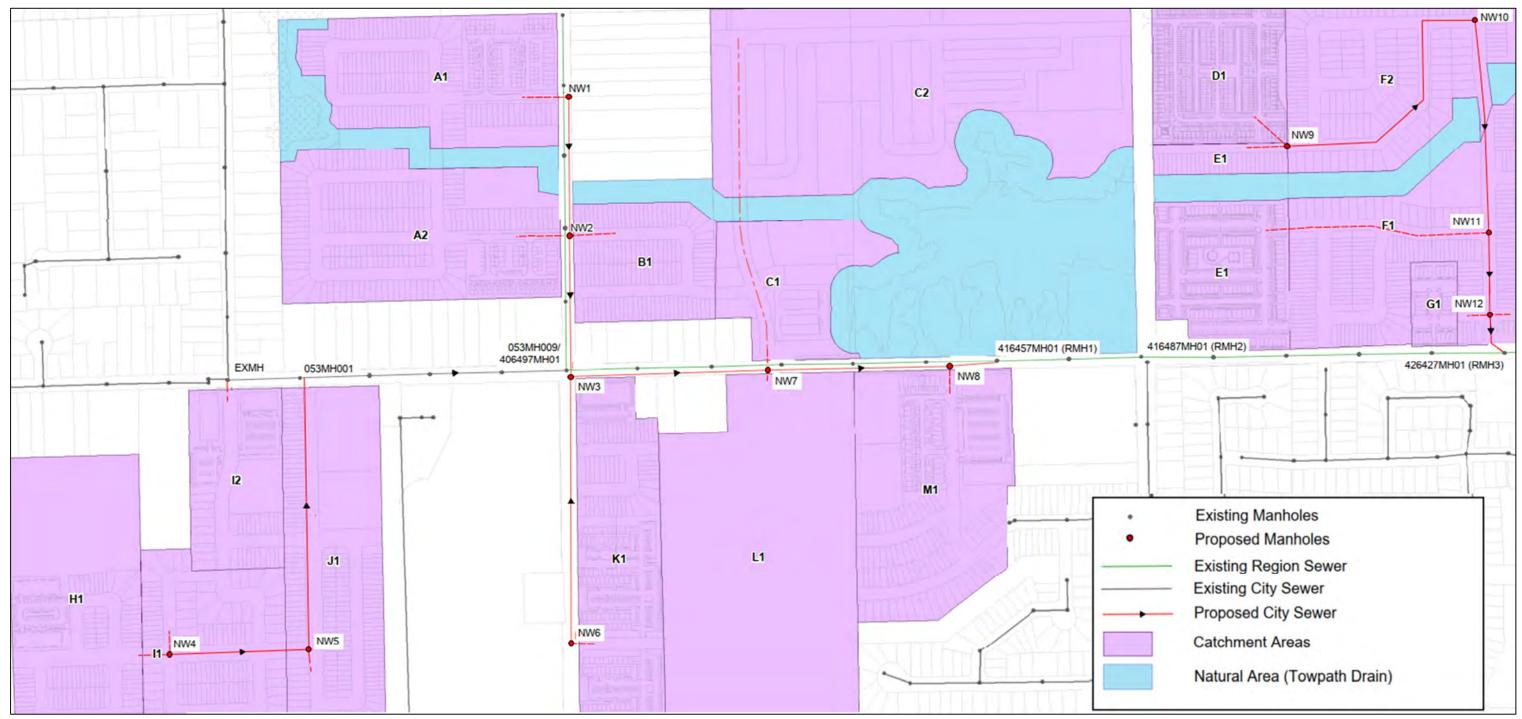


Figure 4-3: Proposed Sanitary System and Drainage Areas – Option 2

For servicing Option 2, the proposed trunk sewer within the quadrant east of First Avenue and north of Quaker Road (from NW10 to NW11) must cross the proposed Towpath Drain. For this preliminary assessment, using the existing ground contours and referencing the Towpath Drain Re-Alignment drawing package (Upper Canada Consultants, 2022) it appears that the proposed trunk sewer will be in direct conflict with the proposed box culvert and new creek bottom, making this servicing option not achievable. Further review and confirmation, based on proposed development details, will be required to determine viability of this servicing option moving forward.

As shown in the appended design sheets, the NWSP drainage area contributes overall an additional 143.3L/s of peak flow to the Quaker Road trunk sewer. Based on the capacity review of the existing trunk sewer on Quaker Road (provided in Appendix B), there are two (2) pipe segments that have an available capacity below 143L/s. The first pipe segment (19001376) is located between Rice Road and RMH1 (as shown on Figures 4-2 and 4-3 above). Since this segment will only receive an additional 27L/s sanitary flow from the NWSP area, this segment is not a concern. The second pipe segment (19001405) is located further downstream on Towpath Road between Grisdale Road and the Towpath Road SPS. Model analysis indicates this segment has 100L/s of available capacity with the Line Avenue trunk sewer connection. Further review and confirmation of available capacity within this segment should be completed prior to full build out of the NWSP area.

Although the phasing of future development within the NWSP area is not currently known, the proposed layout of this area and the associated sanitary design is such that the individual quadrants (defined as: areas west of Rice Road and north of Quaker Road (catchment area A); areas west of Rice Road and south of Quaker Road (catchment areas H, I, J); areas east of Rice Road and south of Quaker Road (catchment areas K, L, M); areas east of Rice Road and north of Quaker Road (catchment areas B, C1); areas east of First Avenue and north of Quaker Road (catchment areas D, E, F, G); and areas west of First Avenue (catchment area C2)) can mostly be developed independently of each other. Several exceptions to this include:

- the proposed city trunk sewer on Quaker Road (from NW3 to RMH1) must be constructed prior to development of catchment area A, catchment area B and catchment area K occurring;
- a portion of the proposed city trunk sewer on Quaker Road (from NW7 to RMH1) must be constructed prior to any development occurring within catchment areas C1 (and C2 for servicing Option 2), L, and M.
- for servicing Option 1, the proposed city trunk sewer on First Avenue (from NW9 to RMH2) must be constructed prior to development within catchment areas C2, D, and E.

The remainder of the city trunk sewers within each development quadrant should be constructed as development occurs in that quadrant starting from the downstream end.

Alternatively, to eliminate duplication of trunk infrastructure along Quaker Road and Rice Road, additional connections can be considered directly to the regional trunk main in order to eliminate the need for a 'local' trunk system. This approach would also eliminate most of the phasing exceptions noted above, as the local trunk would not need to be constructed.

4.3.2 Towpath SPS and Forcemain

The Welland NWSP area will contribute an additional 143.3L/s of peak flow to the Towpath SPS. As previously noted, the Region MSPU identified a planned upgrade to this SPS. The SPS upgrades will be required to address existing and future capacity and will be required to be completed before significant development can occur within the NWSP area.

The Towpath SPS forcemain has sufficient existing and future capacity to accommodate flows from the Welland NWSP area, provided the constructed 600mm diameter forcemain is commissioned prior to 2051 flows and build-out.

4.3.3 Welland WWTP and Downstream System

As previously noted, the Welland WWTP currently has a capacity surplus, and the NWSP area can be added. The Region MSPU did indicate the plant will reach 80% capacity around 2041. The post-2051 flows are expected to exceed the plant capacity; however, the plant can accommodate flows to 2051.

Additionally, the trunk sewer that the Towpath SPS forcemain discharges to has available capacity between the discharge point and the WWTP to accept an increase in flow. The design of the future Towpath SPS upgrade should confirm the capacity of the downstream trunk sewer when determining SPS outflow rates.

5 STORM

The existing NWSP area topography is quite flat and drains in a west to east direction. The land use is mainly pasture/ agricultural land interspersed with country residential homes. The plan area is significantly developed all around the boundary as well as within the plan area itself. The west side of the study area is already developed with country residential homes. There are two (2) major drainage channels that flow through the site – Towpath Drain within the northern portion of the development area and a tributary to Welland Recreational Canal within the southern portion of the development area. These two (2) channels are identified by the Niagara Peninsula Conservation Authority (NPCA) as requiring approval for any development draining to the channels. The existing stormwater drainage paths are shown in Figure 5-1.

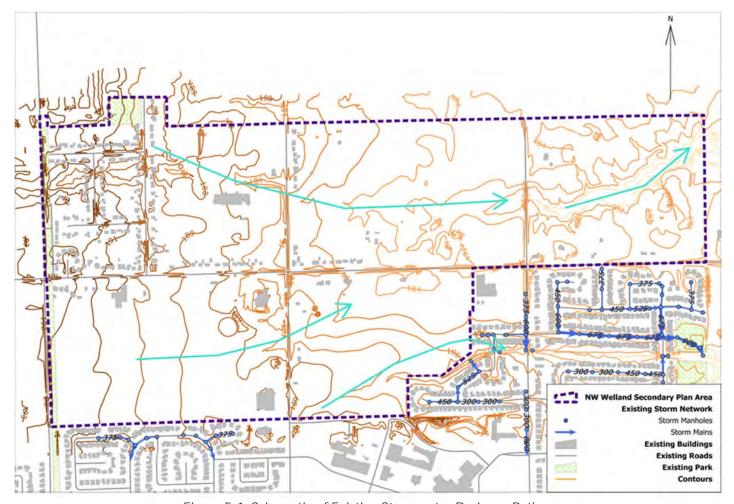


Figure 5-1: Schematic of Existing Stormwater Drainage Path

5.1 Design Criteria

The overall stormwater management plan for the NWSP area was initially developed by Aquafor Beech (2020) and updated and refined by Upper Canada Consultants (2022). The focus of this report is the identification of gravity sewer servicing requirements. The following design criteria were used in identifying these servicing requirements:

- Pipes were sized using the rational method with the City of Welland's 5-Year IDF curve values (a = 830, b = 0.777, c = 7.3)
- Friction factor = 0.013
- Run-off coefficients (as per City of Welland's Design Standards) of:
 - o Low Density Residential (i.e.: Single Family) = 0.40
 - o Medium Density Residential (i.e.: Semi-Detached) = 0.50
 - o High Density Residential (i.e.: Townhouses) = 0.60

5.2 Existing System Capacity

Since the proposed servicing, which is the focus of this report, will not leverage any existing gravity storm sewers in the area, no review of existing system capacity was conducted.

5.3 Proposed System Requirements

5.3.1 Proposed Stormwater Management Pond Locations

The stormwater management plan developed by Upper Canada Consultants identified approximate locations for eight (8) storm ponds, which will outlet to the Towpath Drain (channel north of Quaker Road), while one (1) storm pond will outlet to the tributary to Welland Recreational Canal (channel south of Quaker Road). The intent of the stormwater management plan is that all runoff from the proposed NWSP area will be directed to these storm pond locations through new gravity sewers installed on existing and future roads.

The approximate location of these proposed storm ponds is shown on the Ultimate Stormwater Management Plan figure from the Upper Canada Consultants Stormwater Management Implementation Plan (October 2022), which is included in Appendix C for reference. These pond locations were used to identify approximate outlet locations for the gravity sewers that will be required to service the NWSP area.

5.3.2 Proposed Gravity Sewers

Figure 5-2 (also provided in Appendix C as Figure C-2) shows the approximate location of future trunk storm gravity sewer outlets to the proposed storm ponds within the NWSP area. Figure 5-2 also shows identifying numbers for the individual NWSP drainage areas, which are referenced in the sewer design sheet found in Appendix C. Note, the design sheet was used primarily to identify outlet pipe sizing. Pipe sizes/lengths for the remainder of the future system were also approximated for preliminary costing (see Section 6), with a conservative assumption of a minimum pipe size of 450mm.

Based on the results of the completed sewer design sheet found in Appendix C, Table 5-1 shows the identified required outlet sizes for each approximate pond location.



Figure 5-2: Proposed Storm System and Drainage Areas

Table 5-1: Required Outlet Size

Outlet #	Size (mm)
SWM1	900
SWM2	900
SWM3	1050
SWM4	1200
SWM5	1350
SWM6	750
SWM7	1350
SWM8	1200
SWM9	1200

Note that pipe slopes identified in the design sheet were assigned based on the existing ground contours for the area and the required outlet elevations, with the intent of ensuring suitable cover over all proposed pipes.

6 PRELIMINARY COSTING

Preliminary costing for the conceptual water, sanitary, and stormwater servicing is provided in Table 6-1. Note – neither road works, utilities (including hydro, gas and communications servicing), nor restoration cost (asphalt) for works proposed on existing roads (Rice Road, Quaker Road, and First Avenue) are included in this estimate. A more detailed breakdown of these preliminary cost estimates can be found in Appendix D.

Table 6-1: Preliminary Cost Estimate for Municipal Servicing

Item	Scope of Work	Cost
Water Distribution System	Watermain (150mm to 300mm) including services, valves, and hydrants	\$26,366,775
Sanitary Collection Servicing	Sanitary Sewer (200mm to 450mm), including laterals and structures	\$36,657,195
Storm Collection Servicing	Storm Sewer (450mm to 1350mm), including structures	\$19,136,475
Sub-total	Water/Sanitary/Storm	\$82,160,445
Engineering	10% of Capital	\$8,216,200
Contingency	15% of Capital	\$12,324,200
TOTAL		\$102,700,845

7 CONCLUSIONS

The conclusions from the water, sanitary, and storm servicing capacity assessments are as follows:

Water:

- Proposed pipe servicing for the NWSP development is sized based on the design fire flow criteria of 133 L/s which are provided in Section 3. These include:
 - To supply fire flows for the northwest portion of NWSP development, the existing Rice Road watermain and the new infrastructure west of Rice Road (Loop A), should be a minimum of 250mm in diameter.
 - o To supply water and adequate fire flows to the south-west portion of the development, a new 250mm diameter interconnection (Loop-H) is required to connect the existing 750mm regional trunk main on Clare Avenue to the new 300mm main on Quaker Road.
 - o Loop C (300mm dia) for block C of NWSP and Loop L (200mm dia) for blocks K, L and M are required to provide the adequate fire flows.
 - o A new 250mm watermain interconnection connecting the NWSP development to the Niagara Street Watermain on the east side will also be required to support the required fire flows.
- The addition of the NWSP development to the City's system does not negatively impact the surrounding system, and instead should improve pressures and fire flows in the area.
- The existing system has sufficient storage to support the future NWSP development.
- The proposed development does not negatively impact the existing low-pressure areas identified near Shoalt's Reservoir.

Sanitary:

- The existing trunk along Quaker Road, which conveys flows to the Towpath SPS, has sufficient capacity to
 accept the additional 143.3 L/s peak flow generated by the NWSP area, with the exception of pipe segment
 19001405 on Towpath Road between Grisdale Road and the Towpath Road SPS. Model results indicate this
 segment has only 100L/s of available capacity.
- The Towpath SPS was identified in the Region MSPU as requiring an upgrade due to both growth north of the study area and the redirection of a portion of the flows from Pelham (north-west of Line Avenue) to the Towpath SPS through the Quaker Road trunk sewer. The timing of the Towpath SPS upgrade is 2022-2026 and will be required to be completed before significant development can occur within the NWSP area.
- The Towpath SPS forcemain has sufficient existing capacity; however, will have a projected capacity deficit for 2051 growth. There is already a constructed 600mm diameter forcemain that will require commissioning in line with Towpath SPS upgrades during the timeframe of 2032-2036 (WW-FM-022).
- The trunk sewer that the Towpath SPS forcemain discharges to has available capacity between the discharge point and the WWTP to accept an increase in flow.
- The WWTP has sufficient capacity to allow for the addition of the NWSP area.
- Future sanitary sewer sizing will range from 200 mm diameter to 450 mm diameter. Sizing to be confirmed during design.
- The phasing of future development within the NWSP area is not currently known; however, the proposed layout of this area is such that the individual quadrants (defined as: areas west of Rice Road and north of Quaker Road; areas west of Rice Road and south of Quaker Road; areas east of Rice Road and north of Quaker Road; areas east of First Avenue and north of

Quaker Road; and areas west of First Avenue) can mostly be developed independently of each other, with exceptions noted below.

- The proposed city trunk sewer on Quaker Road (from NW3 to RMH1) must be constructed prior to development west of Rice Road, north of Quaker Road, and lands fronting the east side of Rice Road both north and south of Quaker Road.
- A portion of the proposed city trunk sewer on Quaker Road (from NW7 to RMH1) must be constructed prior to any development occurring east of Rice Road and west of First Avenue.
- o For servicing Option 1, the proposed city trunk sewer on First Avenue (from NW9 to RMH2) must be constructed prior to development occurring immediately east and west of First Avenue.
- Alternatively, to eliminate duplication of trunk infrastructure along Quaker Road and Rice Road, additional
 connections can be considered directly to the regional trunk main in order to eliminate the need for a 'local'
 trunk system and most of the phasing exceptions noted above.

Storm:

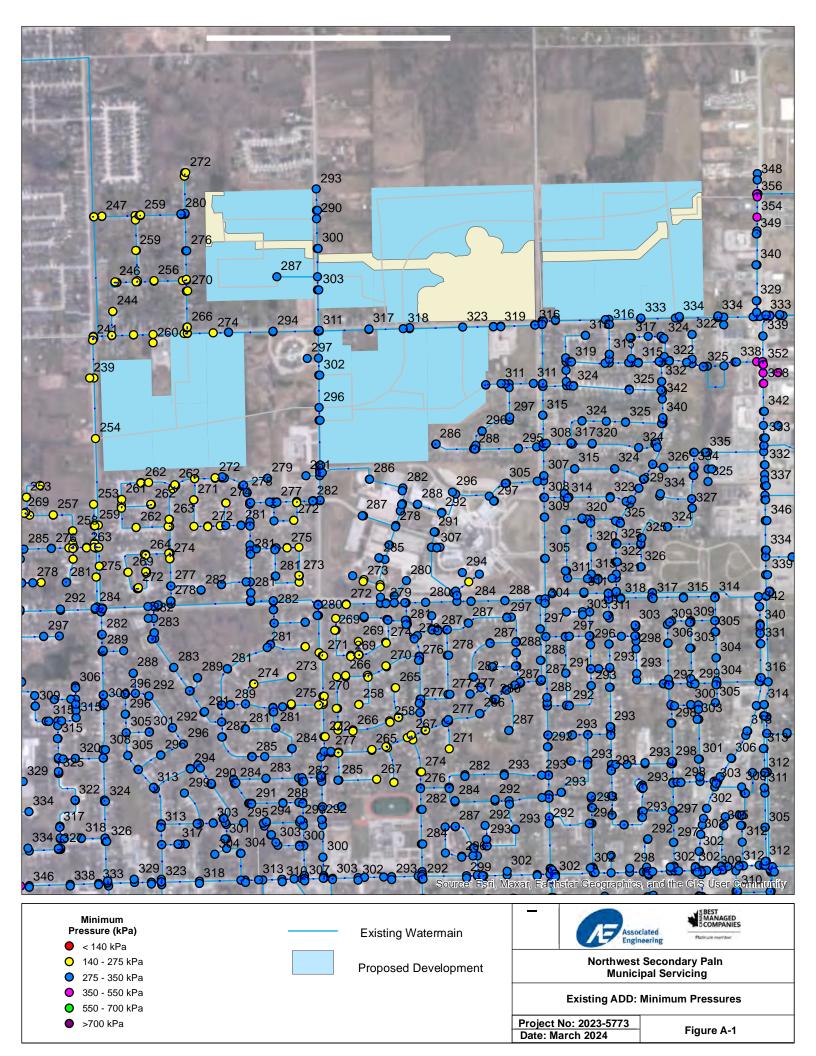
• The stormwater management plan developed by Upper Canada Consultants identified approximate locations for nine (9) new storm water ponds to service the NWSP area. Gravity sewers along the existing and future roads will direct runoff to these pond locations. Outlet sizing for the ponds will range from approximately 750 mm diameter to 1350 mm diameter. Sizing to be confirmed during design.

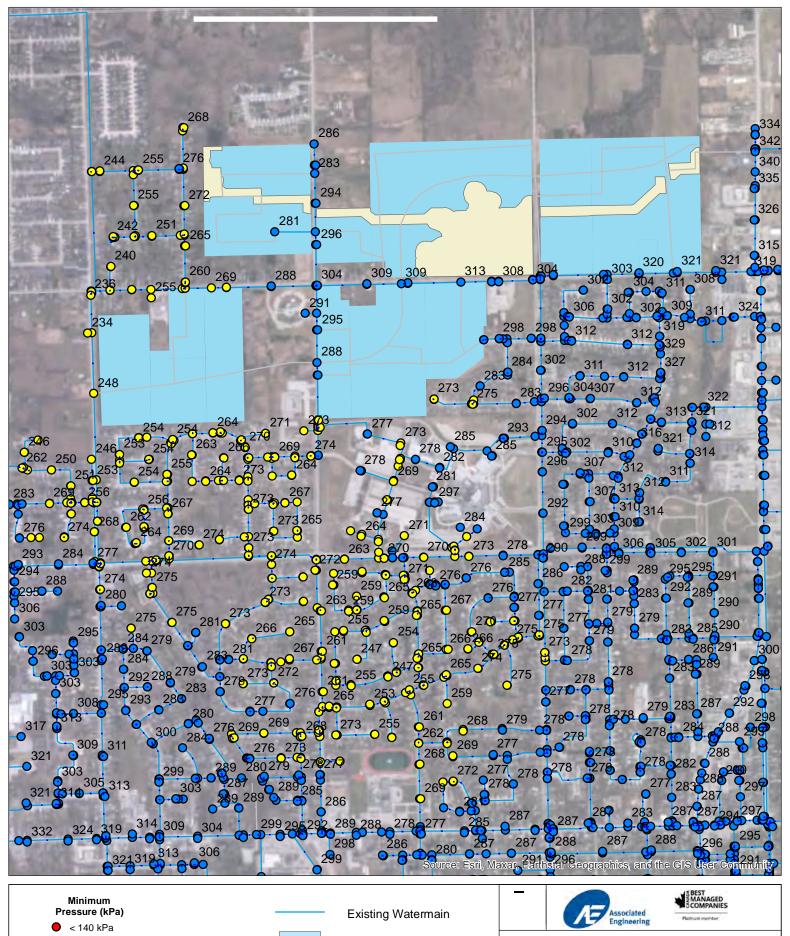
Respectfully Submitted by,

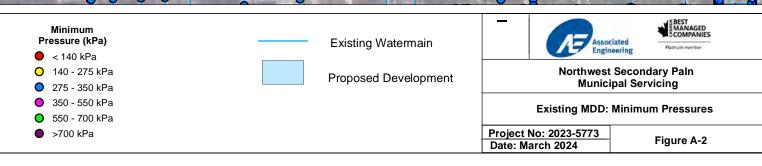
Andrea LaPlante, P.Eng. Project Manager

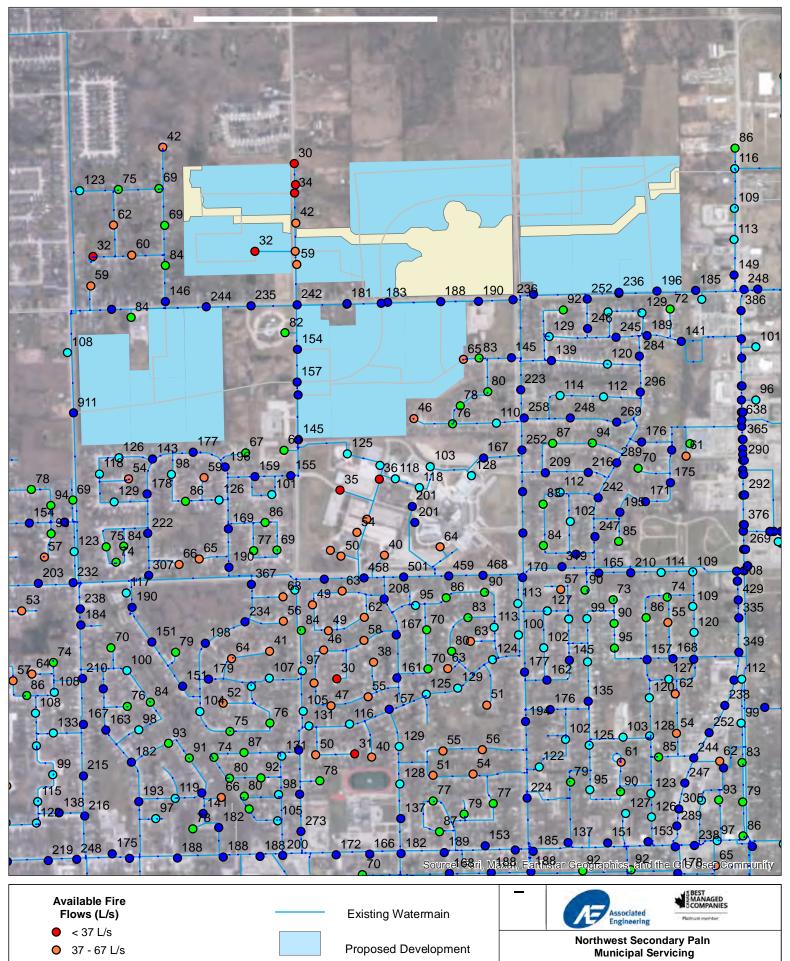


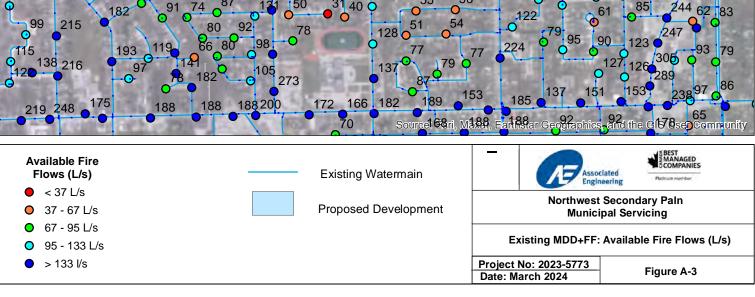
APPENDIX A - WATER

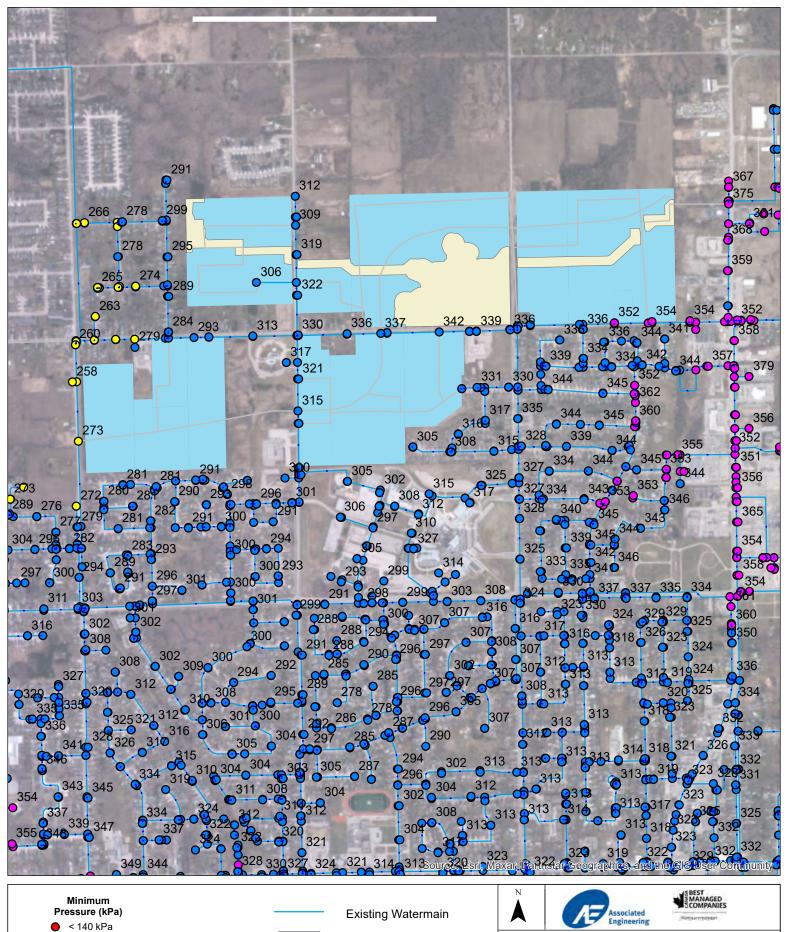


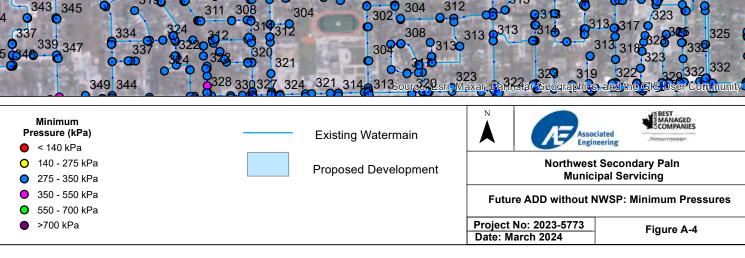


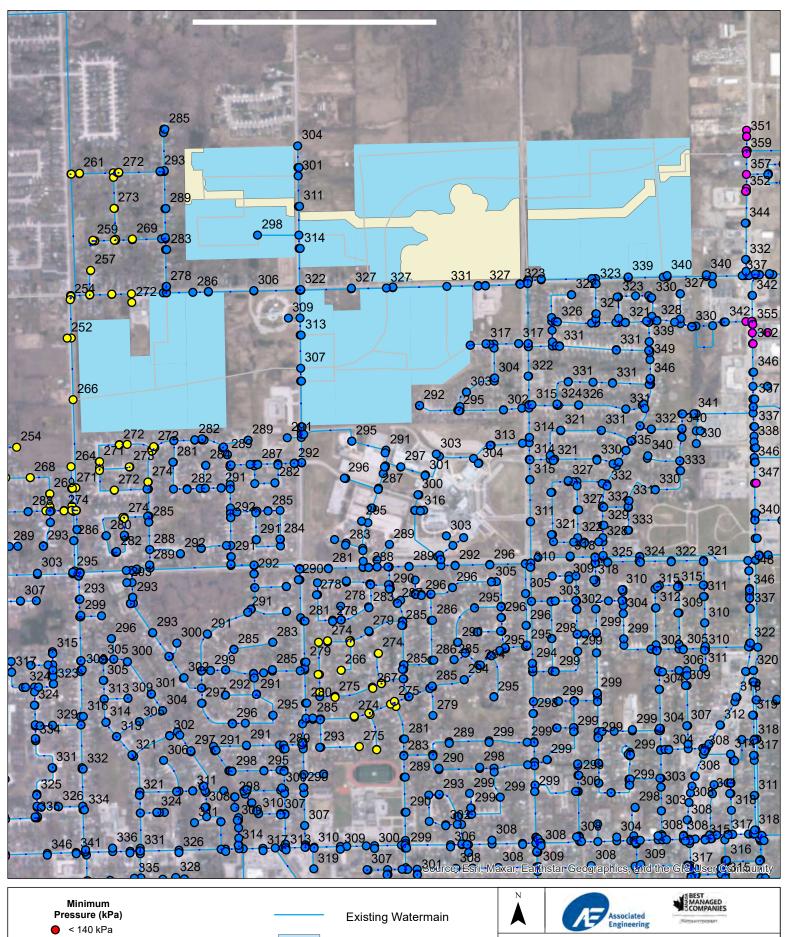


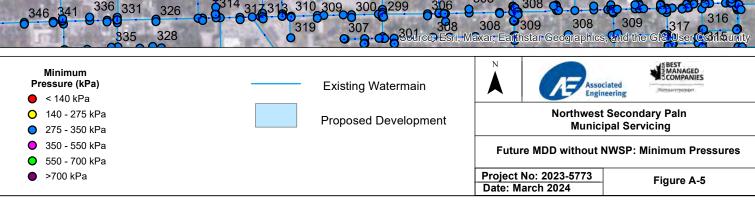


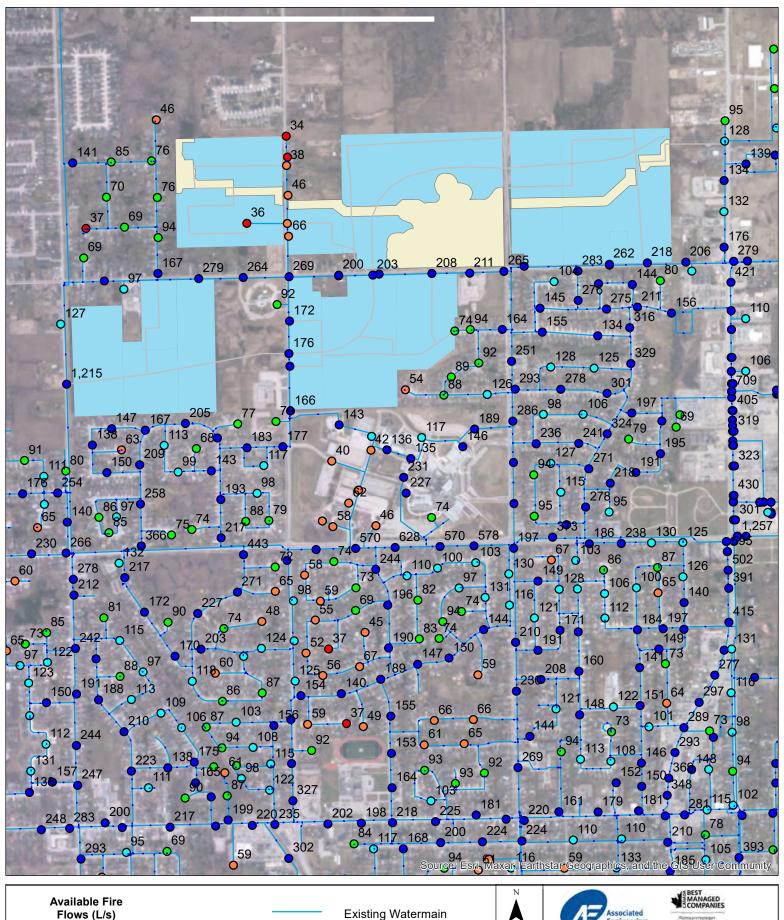














> 133 l/s

Proposed Development



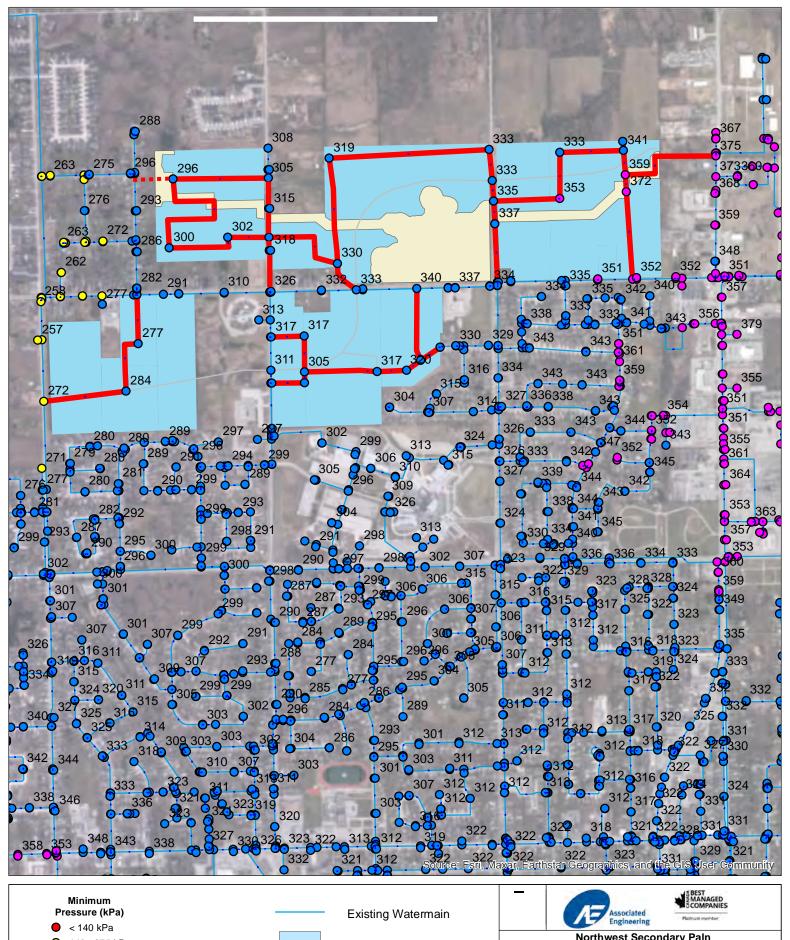


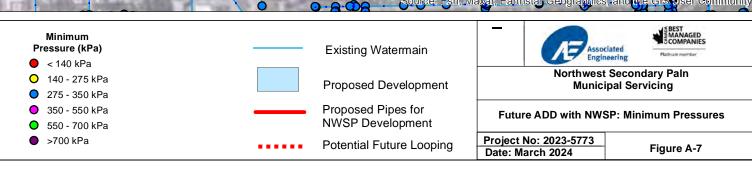
Northwest Secondary Pain Municipal Servicing

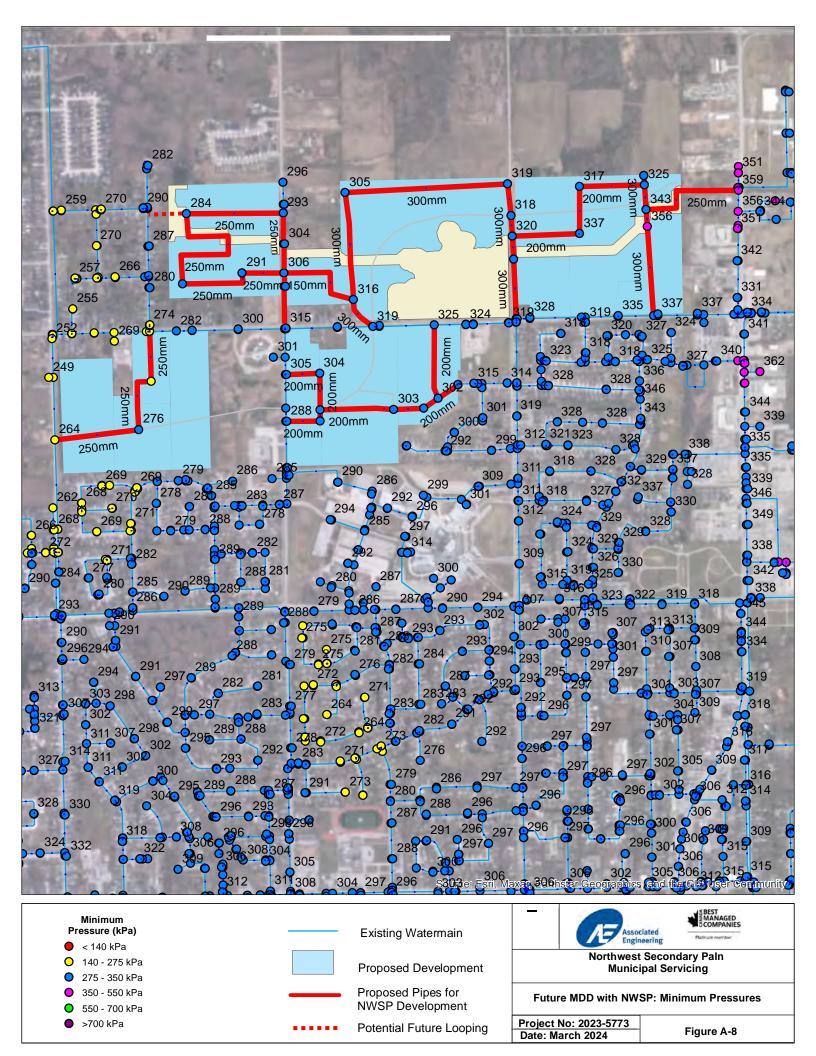
Future MDD+FF without NWSP: Available Fire

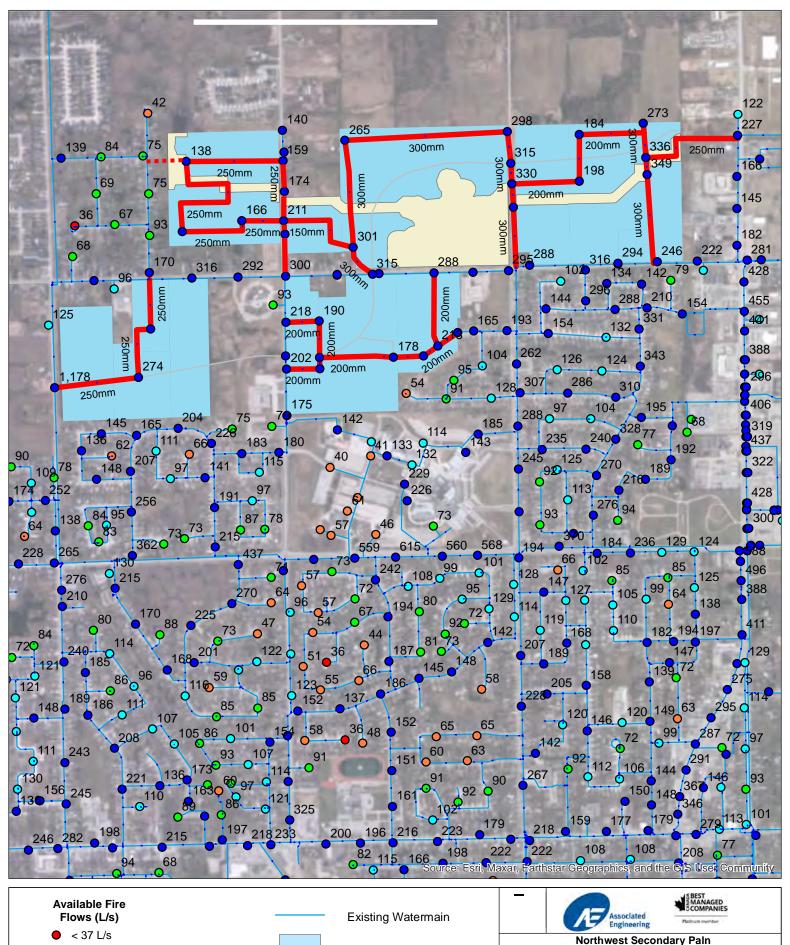
Flows Project No: 2023-5773 Date: March 2024

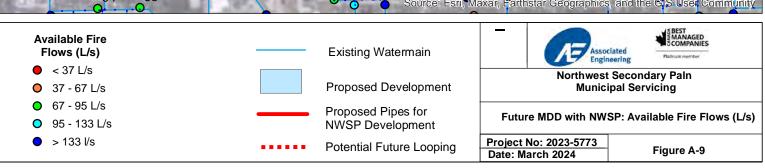
Figure A-6







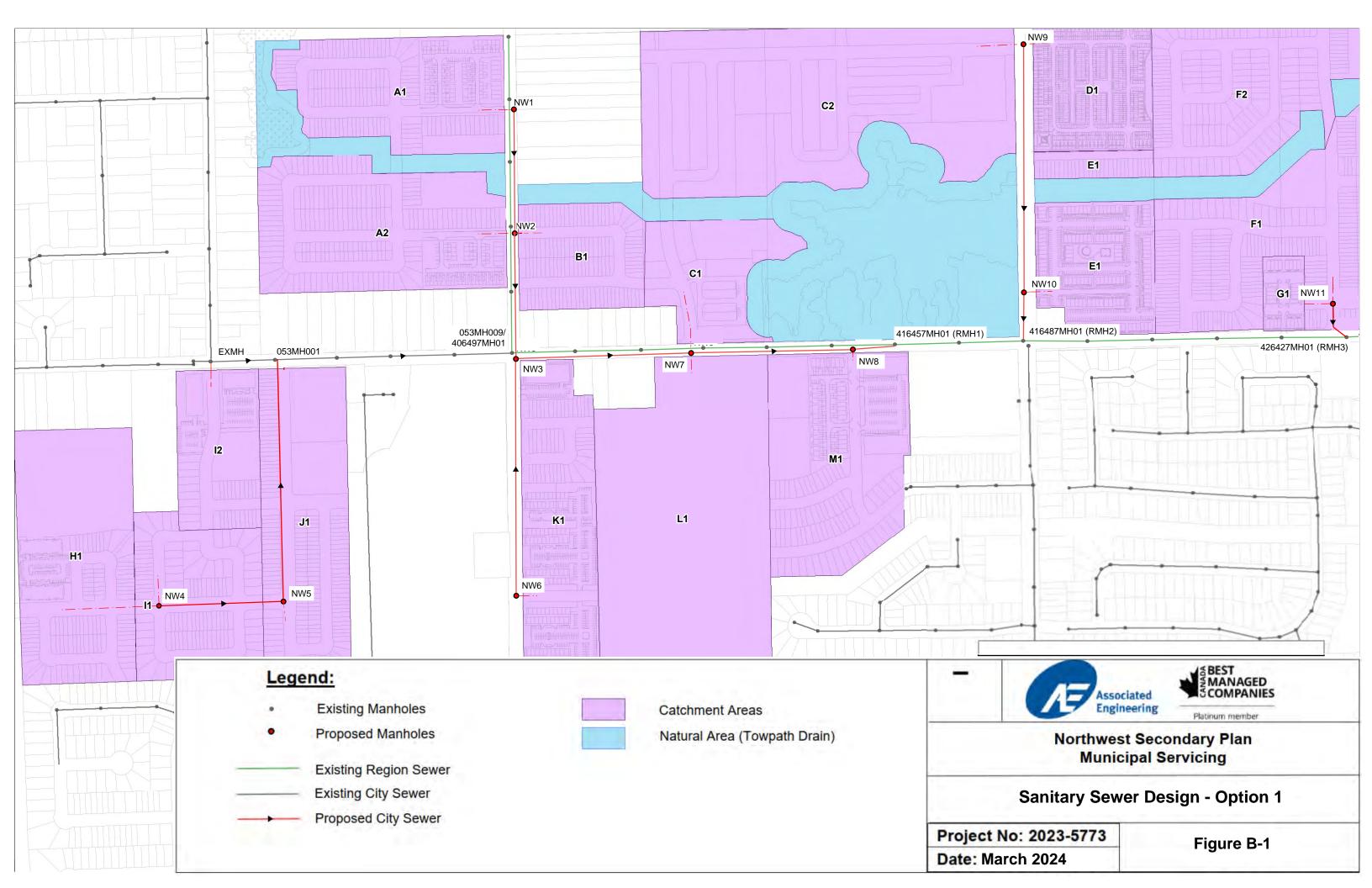


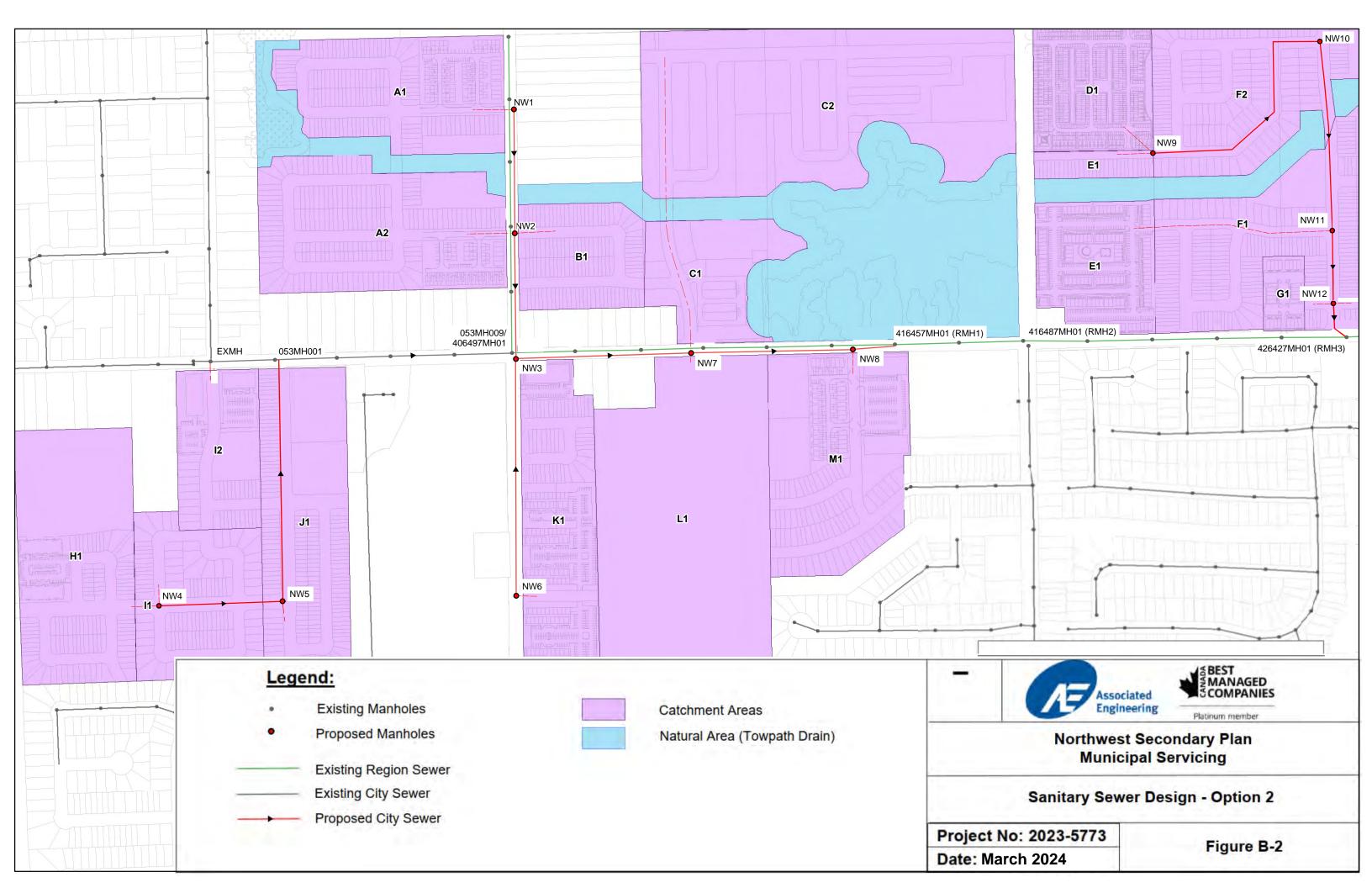


APPENDIX B - SANITARY

Northwest Secondary Plan Municipal Servicing 2041 Quaker Road to Towpath SPS Trunk Sewer Available Capacity

	Full Flow Capacity	2041 without Line A	Avenue Connection	2041 with Line Avenue Connection					
Pipe Segment ID	(L/s)	Peak Flow 2041 (L/s)	Available Capacity	Peak Flow 2041 (L/s)	Available Capacity				
	(L/ 3)	Peak Flow 2041 (L/S)	(L/s)	Peak Flow 2041 (L/S)	(L/s)				
19001374	608	146	462	276	332				
19001375	547	146	401	276	271				
19001376	383	147	236	277	106				
19001377	495	147	348	277	218				
19001378	446	147	299	277	169				
19001366	282	125	157	124	158				
19001367	327	126	201	125	202				
19001365	313	124	189	124	189				
19001364	370	124	246	123	247				
19001363	353	123	230	122	231				
19001379	639	147	492	277	362				
19001380	623	147	476	277	346				
19001381	540	148	392	278	262				
19001382	729	148	581	278	451				
19001383	452	148	304	278	174				
19001384	720	149	571	279	441				
19001385	747	149	598	279	468				
19001386	638	149	489	279	359				
19001387	588	149	439	279	309				
19001388	638	150	488	280	358				
19001389	816	150	666	280	536				
19001390	671	170	501	300	371				
19001391	731	170	561	300	431				
19001392	718	170	548	300	418				
19001393	731	170	561	300	431				
19001394	717	170	547	300	417				
19001395	714	170	544	300	414				
19001396	733	170	563	300	433				
19001397	844	170	674	300	544				
19001377	708	170	538	300	408				
19001399	740	170	570	300	440				
19001400	718	170	548	300	418				
19001400	718	170	548	300	418				
19001401	918	170	748	300	618				
19001403	917	170	747	300	617				
19001404	907	170	737	300	607				
19001405	401	171	230	301	100				
19001406	923	171	752	301	622				
19001407	1143	177	966	307	836				
19001407	914	177	737	307	607				
19001409	914	177	737	307	607				
19001410	912	177	737	307	605				
19001410	914	177	737	307	607				
19001411	1125	220	905	350	775				
19001412	889	220	669	350	539				
19001413	3470	220	3250	350	3120				
19001519	3544	220	3324	350	3120				
19001520	3344	220	3324	330	J194				





SANITARY SEWER DESIGN SHEET Design Option - 1

Project: Welland Northwest Secondary Plan Location:

Roughness Coefficient (n) = 0.013

Residential Per Capita Flow Rate = 0.00318287 L/cap/s (275 L/cap/day)
Infiltration Rate = 0.286 L/s/ha



	LOCATION								NWS	P POPUL AT	TION AND FLOW D	ATA			EX TRU	JNK FLOW	TOTAL (NWSP + EX)						SEWER I	DESIGN					
DESCRIPTION	DRAINAGE AREA	M	ANHOLE	INVERTS	LENGTH	AREA	POP	CUMULA	TIVE AVG. DA	AILY FLOW	PEAKING FACTOR	PEAK FLOW (NO INFIL.)	INFILT. FLOW	PEAK FLOW (W/ INFIL.)	ADDITIONAL	CUMULATIVE	TOTAL PEAK FLOW	PIPE SIZE	ACTUAL		DESIGN SLOPE	Act. Dia.		HYD. RAD.	FULL FLOW VELOCITY	FULL FLOW CAPACITY	PERCENT	CAPACITY	ACTUAL
									POP. Served	'	(PF = 1+14/(4+P^1/2))			(VV/ INFIL.)		PEAK FLOW (FROM MODEL)			SLOPE	CRITICAL SLOPE					VELOCITY	CAPACITY	FULL	CHECK	VELOCITY
STREET	D	FROM	то	U/S D/S	m	(ha)	(mml)	(ha)	(ppl)	(l/s)	(dmnl)	(L/s)	(L/s)	0.60	(L/s)		(L/s)	(mm)	(%)	(%)	(%)	(mm)	(m ²)	(m)	(m/s)	(L/s)	(%)		((-)
SIRCEI	ID ID	FROM	10		- "	(fid)	(ppl)	(ria)	(ppi)	(VS)	(drifti)	(DS)	(DS)	(L/s)	(08)		(US)	(mm)	(76)	(70)	(76)	(11111)	()	(111)	(111/3)	(03)	(70)		(m/s)
Rice Road (N of Quaker)	A1	NW1	NW2	182.30 181.02		6.0	532	6.0		1.69	3.96	6.71	1.72	8.43	0.0	0.0	8.4	200	0.64	1.54	0.64	203.2	0.032	0.051	0.84	27.4	30.8	OK	0.65
Rice Road (N of Quaker)	A2, B1	NW2	NW3	181.02 180.10	197	10.6	868	16.6	1400 4	4.46	3.70	16.49	4.76	21.25	0.0	0.0	21.2	250	0.47	1.43	0.47	254.0	0.051	0.064	0.84	42.5	50.0	OK	0.74
Kaywood Crt.				188.89 188.47	65	0.5	15	0.5	15 0	0.05	4.00	0.19	0.14	0.33	0.0	0.0	0.3	200	0.65	1.54	0.65	203.2	0.032	0.051	0.85	27.6	1.2	OK	0.20
Quaker Road (School/Daycare)						1.6	500	1.6	500 0	0.36	3.97	1.41	0.47	1.88	0.0	0.0	1.9												
Montgomery (end to Summerlea)				186.53 186.10	179	3.0	25	3.0	25 0	0.08	4.00	0.32	0.86	1.18	0.0	0.0	1.2	250	0.24	1.43	0.24	254.0	0.051	0.064	0.60	30.4	3.9	OK	0.24
Topham/Crerar/Summerlea				188.66 186.12	420	10.9	148	10.9	148 0	0.47	4.00	1.88	3.12	5.00	0.0	0.0	5.0	250	0.60	1.43	0.60	254.0	0.051	0.064	0.95	48.1	10.4	OK	0.53
Montgomery (Summerlea to Quaker)			EXMH	186.08 185.03	423	5.7	78	19.6	250 0	0.80	4.00	3.18	5.61	8.79	0.0	0.0	8.8	250	0.25	1.43	0.25	254.0	0.051	0.064	0.61	31.0	28.3	OK	0.46
Quaker Road (Line to Kaywood)				188.89 188.42	53	0.7	13	0.7	13 (0.04	4.00	0.16	0.20	0.36	0.0	0.0	0.4	200	0.89	1.54	0.89	203.2	0.032	0.051	1.00	32.3	1.1	OK	0.21
Quaker Road (Kaywood to Montgomery)			EXMH	188.41 184.55	270	3.4	38	4.6	565 2	2.15	3.95	8.50	1.32	9.82	0.0	0.0	9.8	250	1.43	1.43	1.43	254.0	0.051	0.064	1.46	74.2	13.2	OK	0.88
Quaker Road (W of Rice)	12	EXMH	053MH001	184.52 183.93	3 104	3.4	330	27.6	1145 4	4.00	3.76	15.05	7.90	22.95	0.0	0.0	22.9	300	0.57	1.34	0.57	304.8	0.073	0.076	1.04	76.2	30.1	OK	0.80
NWSP (W of Rice, S of Quaker)	H1, I1	NW4	NW5	186.40 185.40	210	13.8	938	13.8	938 2	2.99	3.82	11.40	3.94	15.34	0.0	0.0	15.3	200	0.48	1.54	0.48	203.2	0.032	0.051	0.73	23.7	64.7	OK	0.69
NWSP (W of Rice, S of Quaker)	J1	NW5	053MH001	185.40 183.90		7.0	454			4.43	3.70	16.41	5.96	22.36	0.0	0.0	22.4	250	0.39	1.43	0.39	254.0	0.051	0.064	0.76	38.7	57.7	OK	0.70
Quaker Road (W of Rice)	-	053MH001	053MH009 / 406497MH01	183.88 181.64	385	3.5	33	51.9	2570 8	8.54	3.50	29.87	14.86	44.72	0.0	0.0	44.7	300	0.58	1.34	0.58	304.8	0.073	0.076	1.05	76.8	58.2	OK	0.97
Rice Road (S of Quaker)	K1	NW6	NW3	184.50 180.10	387	5.7	1229	5.7	1229 3	3.91	3.74	14.63	1.64	16.27	0.0	0.0	16.3	200	1.14	1.54	1.14	203.2	0.032	0.051	1.13	36.5	44.5	OK	0.96
Quaker Road (Rice to W of First) Quaker Road (Rice to W of First)	C1, L1	NW3 NW7	NW7 NW8	180.10 179.24 179.24 178.72		16.6	1842			8.37 4.23	3.49 3.29	29.21 46.81	6.40 11.15	35.60 57.96	0.0	0.0	35.6 58.0	300 375	0.30 0.20	1.34	0.30	304.8 381.0	0.073	0.076	0.76 0.72	55.3 81.8	64.4 70.9	OK OK	0.71
Quaker Road (Rice to W of First)	M1	NW8	416457MH01 (RMH1)	178.72 178.58		7.1	661			6.33	3.23	52.83	13.17	66.00	0.0	0.0	66.0	450	0.20	1.17	0.20	457.2	0.114	0.093	0.72	133.0	49.6	OK	0.09
Flows from Hurricane SPS/Rice Road (North)	-	-	053MH009 / 406497MH01		-	-	-	-	-	-	-	-	-	-	97.7	97.7	97.7	-	-	-		-	-	-			-	-	
Flows from West of Quaker and Rice (from Line Ave)	-	_	053MH009 / 406497MH01			-		-	-	-	-	=	-	-	79.1	79.1	79.1	-		-			-	-	-	-	-	-	-
Quaker Road (Region Trunk E of Rice)	- 1	053MH009 / 406497MH01	416457MH01 (RMH1)	179.94 178.58	618	-		51.9	2570 8	8.54	3.50	29.87	14.86	44.72	0.0	176.8	221.5	750	0.22	0.99	0.22	762.0	0.456	0.191	1.19	544.8	40.7	OK	1.00
Quaker Road (W of First to First)	-	416457MH01 (RMH1)	416487MH01 (RMH2)	178.58 178.25	207	-	<u> </u>	98.0	7702 2	4.87	3.07	76.26	28.02	104.29	0.0	176.8	281.1	750	0.16	0.99	0.16	762.0	0.456	0.191	1.02	464.6	60.5	OK	0.95
First Ave (N of Quaker)	C2, D1, F2	NW9	NW10	179.40 178.41	393	26.1	3223	26.1	3223 1	0.26	3.42	35.04	7.47	42.51	0.0	0.0	42.5	375	0.25	1.25	0.25	381.0	0.114	0.095	0.80	91.5	46.5	OK	0.69
First Ave (N of Quaker)	E1	NW10	416487MH01 (RMH2)	178.41 178.25		4.8	1123			3.83	3.30	45.66	8.83	54.49	0.0	0.0	54.5	375	0.20	1.25	0.20	381.0	0.114	0.095	0.72	81.8	66.6	OK	0.68
Quaker Road (First to W of Niagara)	-	416487MH01 (RMH2)	426427MH01 (RMH3)	178.25 177.07	521	-	-	128.9	12048 3	8.70	2.87	111.23	36.86	148.09	3.0	179.8	327.9	750	0.23	0.99	0.23	762.0	0.456	0.191	1.22	557.0	58.9	OK	1.13
NWSP (N of Quaker, E of First)	F1, G1	NW11	426427MH01 (RMH3)	177.29 177.07	50	10.9	980	10.9	980 3	3.12	3.81	11.87	3.13	15.00	0.0	0.0	15.0	200	0.44	1.54	0.44	203.2	0.032	0.051	0.70	22.7	66.1	OK	0.67
Quaker Road (W of Niagara to Towpath)	-	426427MH01 (RMH3)	436437MH03	177.07 171.78	1320	-	-	139.8	13028 4	1.82	2.84	118.77	39.99	158.76	28.8	208.6	367.4	750	0.40	0.99	0.40	762.0	0.456	0.191	1.61	734.5	50.0	OK	1.42
Towpath (to SPS)	-	436540MH01	446525MH01	171.05 169.40	1002		-	139.8	13028 4	1.82	2.84	118.77	39.99	158.76	98.1	306.7	465.5	900	0.16	0.93	0.16	914.4	0.657	0.229	1.15	755.4	61.6	OK	1.07
					-									-					ļ	4			-			-			

- Notes:

 1. Residential design flows as per UCC

 2. Slopes approximate; calculated based on length
 3. Infiltration rate is 0.286 as per Region Master Plan Update 2021

 4. Peak Factors for NWSP as per Harmon's Formula
 5. Population for NWSP as per UCC
 6. All other peak flows as per All Pipe Model
 7. Assume population density for existing residential single family home is 2.5p/household
 8. School and daycare flows as per Building Code Table 8.2.1.3.B

SANITARY SEWER DESIGN SHEET Design Option - 2

Project: Welland Northwest Secondary Plan Location:

Roughness Coefficient (n) = 0.013

Residential Per Capita Flow Rate = 0.00318287 L/cap/s (275 L/cap/day)
Infiltration Rate= 0.286 L/s/ha

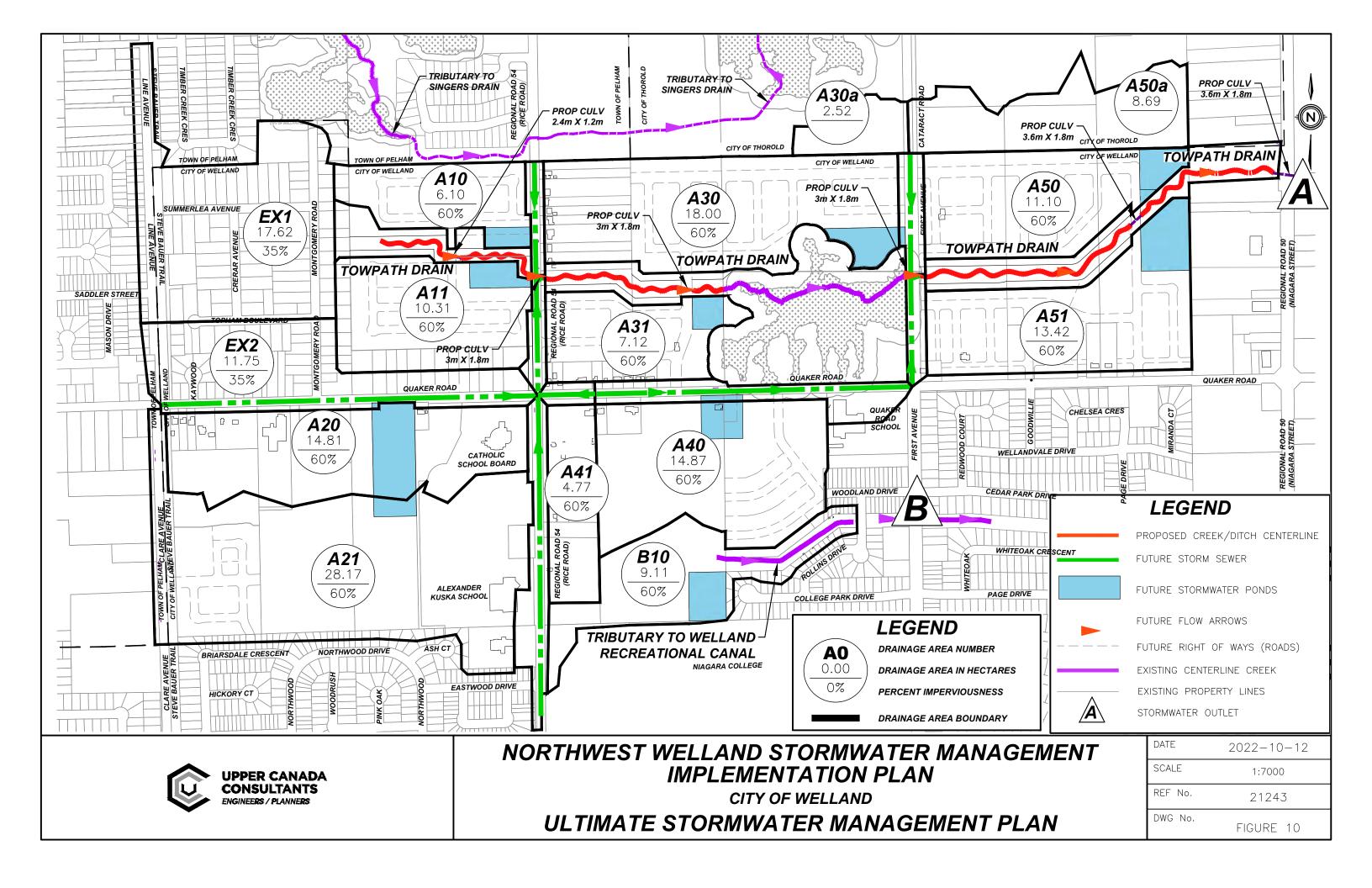


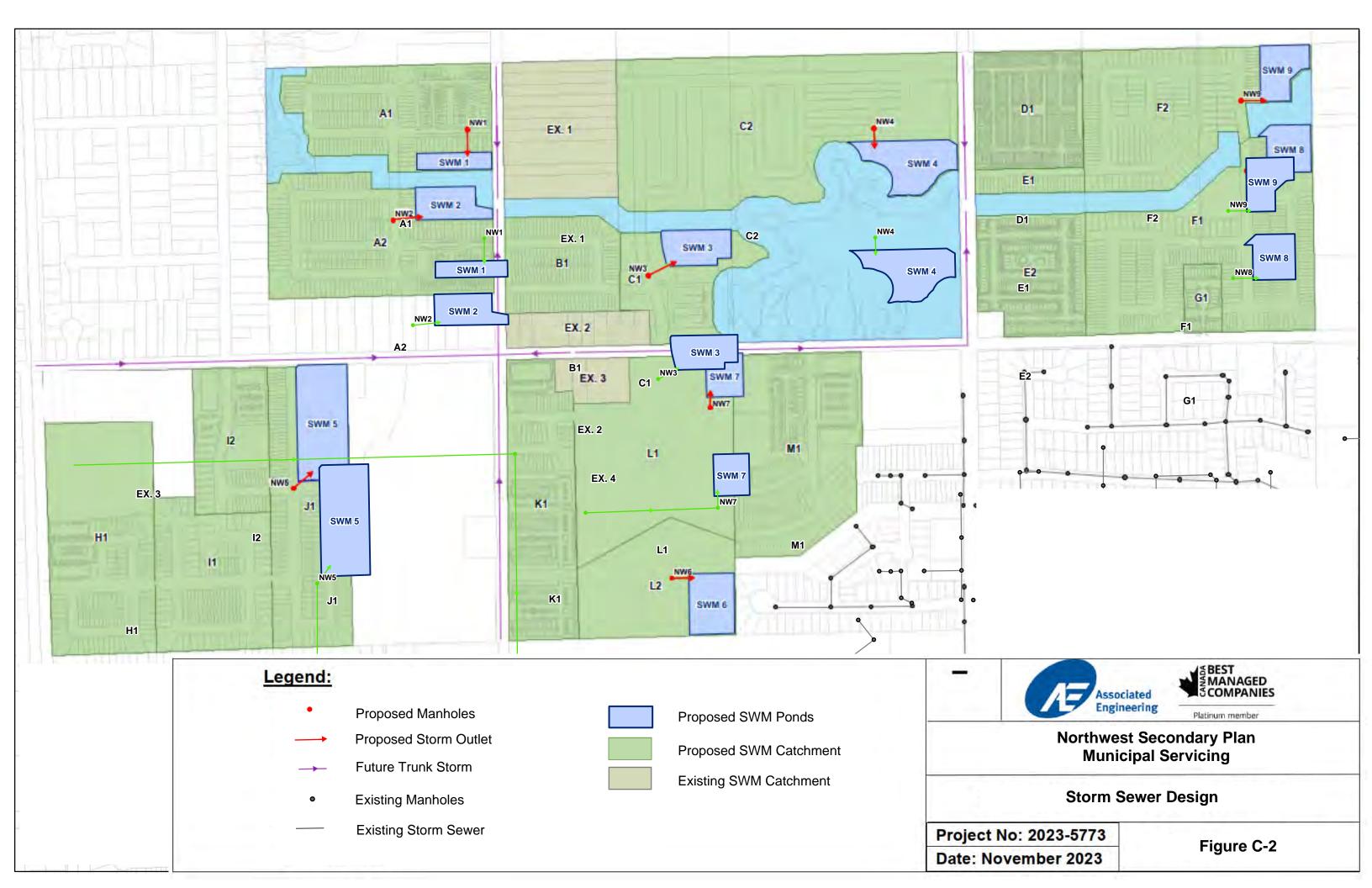
	LOCATION										NWSP POPUL	ATION AND FLOW I	DATA			EX TR	UNK FLOW	TOTAL (NWSP + EX)						SEWER I	DESIGN					
DESCRIPTION	DRAINAGE AREA	MAI	NHOLE	INV	ERTS	LENGTH	AREA	POP	CUM	ULATIVE	AVG. DAILY FLOW	PEAKING FACTOR	PEAK FLOW (NO INFIL.)	INFILT. FLOW	PEAK FLOW	ADDITIONAL	L CUMULATIVE	TOTAL PEAK FLOW	PIPE SIZE	ACTUAL	APPROX.	DESIGN SLOPE	Act. Dia.	PIPE AREA		FULL FLOW	FULL FLOW	PERCENT	CAPACITY	ACTUAL
					T		i		AREA	POP.		(PF = 1+14/(4+PM/2))			(W/INFIL.)	PEAK FLOW				SLOPE	CRITICAL SLOPE	1				VELOCITY	CAPACITY	FULL	CHECK	VELOCITY
				U/S	D/S					Served						(FROM MODE	EL) (FROM MODEL))										, '		ļ
STREET	ID	FROM	TO	0/3	D/S	m	(ha)	(ppl)	(ha)	(ppl)	(I/e)	(dmnl)	(L/s)	(L/s)	(L/s)	(L/s)		(L/s)	(mm)	(%)	(%)	(%)	(mm)	(m ²)	(m)	(m/s)	(L/s)	(%)		(m/s)
STREET	ID ID	PROW	10			- "	(na)	(ppi)	(ria)	(ppi)	(I/S)	(driffi)	(08)	(L/8)	(L/S)	(L/S)		(US)	(11111)	(70)	(70)	(76)	(11111)	()	(111)	(1103)	(00)	(70)		(III/S)
Rice Road (N of Quaker)	A1	NW1	NW2	182 30	181.02	200	6.0	532	6.0	532	1.69	3.96	6.71	1.72	8.43	0.0	0.0	8.4	200	0.64	1.54	0.64	203.2	0.032	0.051	0.84	27.4	30.8	OK	0.65
Rice Road (N of Quaker)	A2, B1	NW2	NW3		180.10		10.6	868	16.6	1400	4.46	3.70	16.49	4.76	21.24	0.0	0.0	21.2	250	0.47	1.43	0.47	254.0	0.051	0.064	0.84	42.5	50.0	OK	0.74
THOU THOU (IT OF QUARTE)	74,51	11112	11110	101.02	100.10	1	10.0		10.0	1-100	10	0.70	10.10	1.70		0.0	0.0			0.11	1.40	1	201.0	0.001	0.001	0.01	72.0	00.0	- Oil	
Kaywood Crt.				188.89	188.47	65	0.5	15	0.5	15	0.05	4.00	0.19	0.14	0.33	0.0	0.0	0.3	200	0.65	1.54	0.65	203.2	0.032	0.051	0.85	27.6	1,2	OK	0.20
						1										1												,		
Quaker Road (School/Daycare)						1	1.6	500	1.6	500	0.36	3.97	1.41	0.47	1.88	0.0	0.0	1.9								1	1	,		
						1																				Î		1		
Montgomery (end to Summerlea)				186.53	186.10	179	3.0	25	3.0	25	0.08	4.00	0.32	0.86	1.18	0.0	0.0	1.2	250	0.24	1.43	0.24	254.0	0.051	0.064	0.60	30.4	3.9	OK	0.24
Topham/Crerar/Summerlea				188.66	186.12	420	10.9	148	10.9	148	0.47	4.00	1.88	3.12	5.00	0.0	0.0	5.0	250	0.60	1.43	0.60	254.0	0.051	0.064	0.95	48.1	10.4	OK	0.53
Montgomery (Summerlea to Quaker)			EXMH	186.08	185.03	423	5.7	78	19.6	250	0.80	4.00	3.18	5.61	8.79	0.0	0.0	8.8	250	0.25	1.43	0.25	254.0	0.051	0.064	0.61	31.0	28.3	OK	0.46
						1																								
Quaker Road (Line to Kaywood)					188.42		0.7	13	0.7	13	0.04	4.00	0.16	0.20	0.36	0.0	0.0	0.4	200	0.89	1.54	0.89	203.2	0.032	0.051	1.00	32.3	1.1	OK	0.21
Quaker Road (Kaywood to Montgomery)			EXMH	188.41	184.55	270	3.4	38	4.6	565	2.15	3.95	8.50	1.32	9.82	0.0	0.0	9.8	250	1.43	1.43	1.43	254.0	0.051	0.064	1.46	74.2	13.2	OK	0.88
0 1 0 100 (8:1)		FXMH	053MH001	40450	400.00	404					100	0.70	45.05	7.00	00.05	0.0		20.0	000		101	0.53			0.070				01/	
Quaker Road (W of Rice)	12	EXMH	U53MH001	184.52	183.93	104	3.4	330	27.6	1145	4.00	3.76	15.05	7.90	22.95	0.0	0.0	22.9	300	0.57	1.34	0.57	304.8	0.073	0.076	1.04	76.2	30.1	OK	0.80
NIMOD AN (Pice O (O clas)	H1. I1	NW4	N1045	400.40	405.40	040	40.0	000	100		2.99	0.00	11.40	0.05	45.05			45.0	000		1.54				0.054	0.70			01/	
NWSP (W of Rice, S of Quaker) NWSP (W of Rice, S of Quaker)	J1	NW5	NW5 053MH001		185.40 183.90		13.8 7.0	938 454	13.8	938 1392	4.43	3.82	16.41	3.95 5.96	15.35 22.37	0.0	0.0	15.3 22.4	200 250	0.48	1.43	0.48	203.2 254.0	0.032	0.051	0.73	23.7 38.7	64.7 57.7	OK OK	0.69
WOF (W OF RICE, 3 OF QUARE)	JI	INVIS	033WF1001	100.40	103.30	309	7.0	404	20.6	1392	4.43	3.10	10.41	5.50	22.31	0.0	0.0	22.4	230	0.39	1.43	0.39	234.0	0.001	0.004	0.76	30.1	31.1	- OK	0.70
Quaker Road (W of Rice)	-	053MH001	053MH009 / 406497MH01	183.88	181.64	385	3.5	33	52.0	2571	8.54	3.50	29.87	14.86	44.73	0.0	0.0	44.7	300	0.58	1.34	0.58	304.8	0.073	0.076	1.05	76.8	58.2	OK	0.97
Quaker road (W or rice)		033WI 1001	0000011000374004371011101	100.00	101.04	303	3.3	35	32.0	23/1	0.54	3.30	23.01	14.00	77.73	0.0	0.0	77./	300	0.50	1.54	0.30	304.0	0.073	0.070	1.00	70.0	50.2	- OIC	0.37
Rice Road (S of Quaker)	K1	NW6	NW3	184.50	180.10	387	5.7	1229	5.7	1229	3.91	3.74	14.63	1.64	16.27	0.0	0.0	16.3	200	1.14	1.54	1.14	203.2	0.032	0.051	1.13	36.5	44.5	OK	0.96
						1	***************************************	<u> </u>	1													1					1			
Quaker Road (Rice to W of First)	-	NW3	NW7	180.10	179.24	287	-	T -	22.4	2629	8.37	3.49	29.21	6.39	35.60	0.0	0.0	35.6	300	0.30	1.34	0.30	304.8	0.073	0.076	0.76	55.3	64.4	OK	0.71
Quaker Road (Rice to W of First)	C1, C2, L1	NW7	NW8		178.72		31.2	3640	53.5	6269	19.95	3.15	62.90	15.31	78.21	0.0	0.0	78.2	450	0.20	1.17	0.20	457.2	0.164	0.114	0.81	133.0	58.8	OK	0.75
Quaker Road (Rice to W of First)	M1	NW8	416457MH01 (RMH1)	178.72	178.58	69	7.1	661	60.6	6930	22.06	3.11	68.61	17.32	85.94	0.0	0.0	85.9	450	0.20	1.17	0.20	457.2	0.164	0.114	0.81	133.0	64.6	OK	0.77
						1																								
Flows from Hurricane SPS/Rice Road (North)	-	-	053MH009 / 406497MH01	-	-	-	-	-	-	-	-			-	-	97.7	97.7	97.7	-	-	-		-	-	-	-	-	'	-	
Flows from West of Quaker and Rice (from Line Ave)	-	-	053MH009 / 406497MH01	-		<u> </u>		<u> </u>	<u> </u>	-	-		-	-	-	79.1	79.1	79.1	-	-	-		-	-	-	-	-		-	-
								ļ												ļ		-	-				ļ			
Quaker Road (Region Trunk E of Rice)	-	053MH009 / 406497MH01	416457MH01 (RMH1)	179.94	178.58	618	-	-	52.0	2571	8.54	3.50	29.87	14.86	44.73	0.0	176.8	221.5	750	0.22	0.99	0.22	762.0	0.456	0.191	1.19	544.8	40.7	OK	1.00
0 1 5 100 (5 11 W (15		440457141104 (7)14114)	400 407141 104 (75141 10)	470.50	477.07	700		ļ		0500	00.50	0.00	04.07	00.40	400.00		470.0	200.4	750				7000			1.17				4.07
Quaker Road (W of First to W of Niagara)	-	416457MH01 (RMH1)	426427MH01 (RMH3)	1/8.58	177.07	128	-	 	112.5	9500	30.59	2.98	91.07	32.18	123.26	3.0	179.8	303.1	750	0.21	0.99	0.21	762.0	0.456	0.191	1.17	532.2	56.9	OK	1.07
NWSP (N of Quaker, E of First)	D1, E1	NW9	NW10	170.00	178.32	408	4.9	1089	4.9	1089	3.47	3.78	13.09	1.40	14.49	0.0	0.0	14.5	200	0.41	1.54	0.41	203.2	0.032	0.051	0.68	21.9	66.1	OK	0.64
NWSP (N of Quaker, E of First)	F2	NW10	NW10 NW11		177.40		7.4	417	12.3	1506	4.79	3.68	17.64	3.53	21.17	0.0	0.0	21.2	250	0.41	1.43	0.41	254.0	0.032	0.064	0.68	34.0	62.3	OK	0.63
NWSP (N of Quaker, E of First)	E2, F1	NW11	NW12		177.17		14.2	1753	26.5	3259	10.37	3.41	35.39	7.58	42.97	0.0	0.0	43.0	375	0.20	1.45	0.20	381.0	0.031	0.004	0.07	81.8	52.5	OK	0.63
NWSP (N of Quaker, E of First)	G1	NW12	426427MH01 (RMH3)		177.07		0.8	269	27.3	3528	11.23	3.38	37.97	7.81	45.78	0.0	0.0	45.8	375	0.20	1.25	0.20	381.0	0.114	0.095	0.72	81.8	56.0	OK	0.65
Troi quanti, E oi i list)	- 01		120121111101 (RWI10)			1 30	0.0	200	1-7.5	5520	.1.25	0.00	01.01	7.01	.5.70	0.0	0.0		0.0	0.20	25	1 5.20	1 201.0	0.114	0.000	J	01.0	J J J	JI.	0.00
Quaker Road (W of Niagara to Towpath)	-	426427MH01 (RMH3)	436437MH03	177.07	171.78	1320	-	1 -	139.8	13029	41.82	2.84	118.77	39.99	158.77	28.8	208.6	367.4	750	0.40	0.99	0.40	762.0	0.456	0.191	1.61	734.5	50.0	OK	1.42
Towpath (to SPS)	-	436540MH01	446525MH01		169.40		-	-	139.8	13029	41.82	2.84	118.77	39.99	158.77	98.1	306.7	465.5	900	0.16	0.93	0.16	914.4	0.657	0.229	1.15	755.4	61.6	OK	1.07
				1		1					1				1	1						1		1		l	1	,		
						1									1	1									1	l		,		

- Notes:

 1. Residential design flows as per UCC
 2. Slopes approximate; calculated based on length
 3. Infiltration rate is 0.286 as per Region Master Plan Update 2021
 4. Peak Factors for NWSP Flows as per Harmon's Formula
 5. Population for NWSP as per UCC
 6. All other peak flows as per All Pipe Model
 7. Assume population density for existing residential single family home is 2.5p/household
 8. School and daycare flows as per Building Code Table 8.2.1.3.B

APPENDIX C - STORM





STORM SEWER DESIGN SHEET



Associated GLOBAL PERSPECTIVE. LOCAL FOCUS. Q=2.78AiR Storm Event = 5.00 Years **Northwest Secondary Plan** b а С A = Area (ha) **Municipal Servicing** 830 0.777 7.3 JOB No.: 2023-5773 R = Runoff Coefficient T_c = Time of Concentration n = 0.013= Avg Rainfall Intensity (mm/hr) = a / (T_c+c)^b DEVELOPMENT DATA DESIGN DATA PIPE DATA FROM INTENSITY LENGTH AREA TO AREA RUNOFF A * R **ACCUM** TIME OF PEAK PIPE SLOPE CRITICAL **DESIGN** FLOW VEL TRAVEL % COEFF. CONC. SLOPE FULL NO (ha) **FLOW** DIA SLOPE **FULL** TIME **FULL** R (min) (mm/hr) (mm) (%) (I/s) (m/s) (l/s) (%) (%) (min) Pond 1 NW1 SWM 1 3.006 695.399 809.60 Α1 5.70 0.53 3.006 12.00 83.21 900 0.20 0.93 0.20 40 1.27 0.52 85.89 Pond 2 Α2 NW2 SWM2 7.33 0.52 3.775 3.775 12.00 83.21 873.297 900 0.30 0.93 0.30 40 991.55 1.56 0.43 88.07 Pond 3 B1, Ex.2, C1 NW3 SWM3 8.50 0.49 4.193 4.193 12.00 83.21 969.880 1050 0.30 0.30 1495.68 1.73 0.39 64.85 0.89 40 Pond 4 Ex. 1, C2 NW4 SWM4 18.00 0.50 9.034 9.034 15.00 74.38 1867.971 1200 0.30 0.85 0.30 2135.42 1.89 87.48 Pond 5 H1, I1, I2, J1 NW5 SWM5 21.77 0.51 11.131 11.131 15.00 74.38 2301.570 1350 0.30 0.81 0.30 40 2923.42 2.04 0.33 78.73 Pond 6 L2 NW6 SWM6 3.88 12.00 448.794 0.30 1.38 73.60 0.50 1.940 1.940 83.21 750 0.30 0.99 40 609.77 0.48 Pond 7 K1, Ex.3, L1, M1 NW7 SWM7 22.90 0.53 12.041 12.041 15.00 74.38 2489.732 1350 0.30 0.81 0.30 40 2923.42 2.04 0.33 85.17 Pond 8 E2, F1, G1 NW8 SWM8 14.31 0.53 7.634 7.634 15.00 1578.491 0.30 2135.42 74.38 1200 0.30 0.85 116 1.89 1.02 73.92

Pond 9

D1, E1, F2

NW9

SWM9

13.14

0.53

6.975

6.975

15.00

74.38

1442.229

0.30

0.85

1200

0.30

116

2135.42

1.89

1.02

67.54

APPENDIX D - COST ESTIMATE DETAIL

Northwest Welland Secondary Plan Municipal Servicing

Preliminary Cost Estimate

Watermain				
Item	Quantity	Unit	Unit Price	Cost
150mm PVC DR18 Watermain	8420	m	\$455	\$3,831,100
150mm Gate Valve & Box	92	each	\$3,250	\$299,000
200 mm PVC DR18 Watermain	1645	m	\$520	\$855,400
200mm Gate Valve & Box	20	each	\$4,225	\$84,500
250 mm PVC DR18 Watermain	2480	m	\$620	\$1,537,600
250mm Gate Valve & Box	24	each	\$5,200	\$124,800
300mm PVC DR18 Watermain	1985	m	\$845	\$1,677,325
300mm Gate Valve & Box	22	each	\$7,150	\$157,300
Water Services	4350	each	\$2,600	\$11,310,000
Hydrants	97	each	\$9,750	\$945,750
Connect to Existing	13	each	\$6,500	\$84,500
Granular A	87500	t	\$35	\$3,062,500
Other General Construction	1	LS	\$2,397,000	\$2,397,000
Subtotal				\$26,366,775
Contingency (15% of subtotal)				\$3,955,100
Engineering (10% of subtotal)				\$2,636,700
Total	\$32,958,575			
Rounded Total				\$33,000,000

Sanitary Sewer				
Item	Quantity	Unit	Unit Price	Cost
200mm PVC DR35	13,620	m	\$490	\$6,673,800
250mm PVC DR35	586	m	\$585	\$342,810
375mm PVC DR35	734	m	\$975	\$715,650
450mm PVC DR35	69	m	\$1,175	\$81,075
Maintenance Hole Structure	134	each	\$13,000	\$1,742,000
Sanitary Laterals	4,350	each	\$3,900	\$16,965,000
Connect to Existing Trunk	3	each	\$6,500	\$19,500
Granular A	176,700	t	\$35	\$6,184,500
Flush & CCTV (end of construction)	15,009	m	\$20	\$300,180
Flush & CCTV (end of maintenance)	15,009	m	\$20	\$300,180
Other General Construction	1	LS	\$3,332,500	\$3,332,500
Subtotal				\$36,657,195
Contingency (15% of subtotal)				\$5,498,600
Engineering (10% of subtotal)				\$3,665,800
Total				\$45,821,595
Rounded Total				\$45,900,000

Northwest Welland Secondary Plan Municipal Servicing

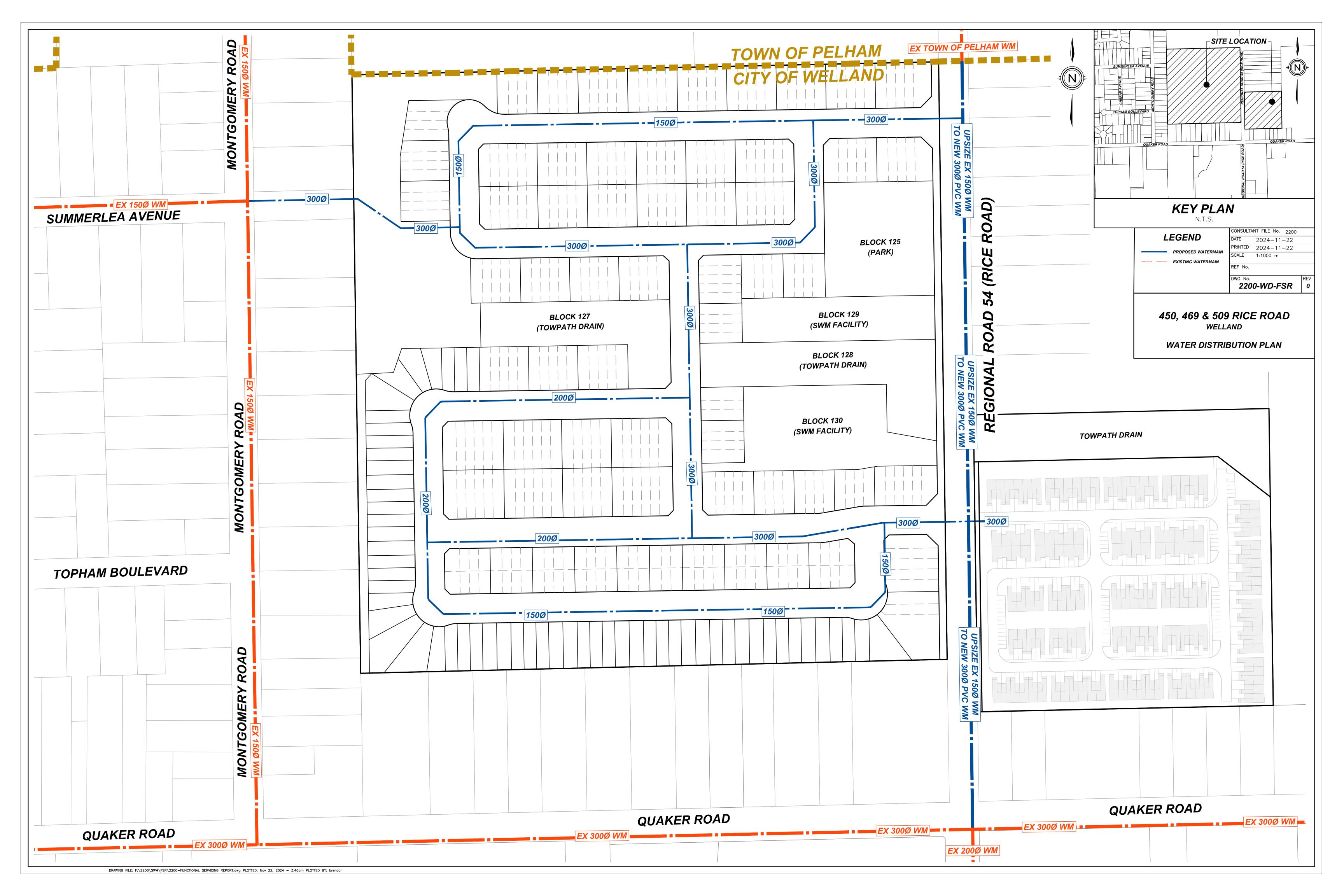
Preliminary Cost Estimate

Storm Sewer				
450mm PVC DR35 Ultra Rib	2204	m	\$455	\$1,002,820
525mm PVC DR35 Ultra Rib	2515	m	\$520	\$1,307,800
600mm CONC	2661	m	\$585	\$1,556,685
675mm CONC	81	m	\$815	\$66,015
750mm CONC	902	m	\$1,025	\$924,550
825mm CONC	554	m	\$1,175	\$650,950
900mm CONC	1015	m	\$1,380	\$1,400,700
1050mm CONC	941	m	\$1,775	\$1,670,275
1200mm CONC	332	m	\$2,190	\$727,080
1350mm CONC	80	m	\$2,795	\$223,600
1200mm Diameter MH	68	each	\$13,000	\$884,000
1500mm Diameter CBMH	13	each	\$18,200	\$236,600
1800mm Diameter CBMH	18	each	\$20,800	\$374,400
2400mm Diameter CBMH	2	each	\$24,700	\$49,400
Catchbasin	380	each	\$4,175	\$1,586,500
Catchbasin leads	1900	m	\$490	\$931,000
Granular A	95800	t	\$35	\$3,353,000
Flush & CCTV (end of construction)	11285	m	\$20	\$225,700
Flush & CCTV (end of maintenance)	11285	m	\$20	\$225,700
Other General Construction	1	LS	\$1,739,700	\$1,739,700
Subtotal	-	-		\$19,136,475
Contingency (15% of subtotal)		\$2,870,500		
Engineering (10% of subtotal)		\$1,913,700		
Total		\$23,920,675		
Rounded Total				\$24,000,000



APPENDIX B

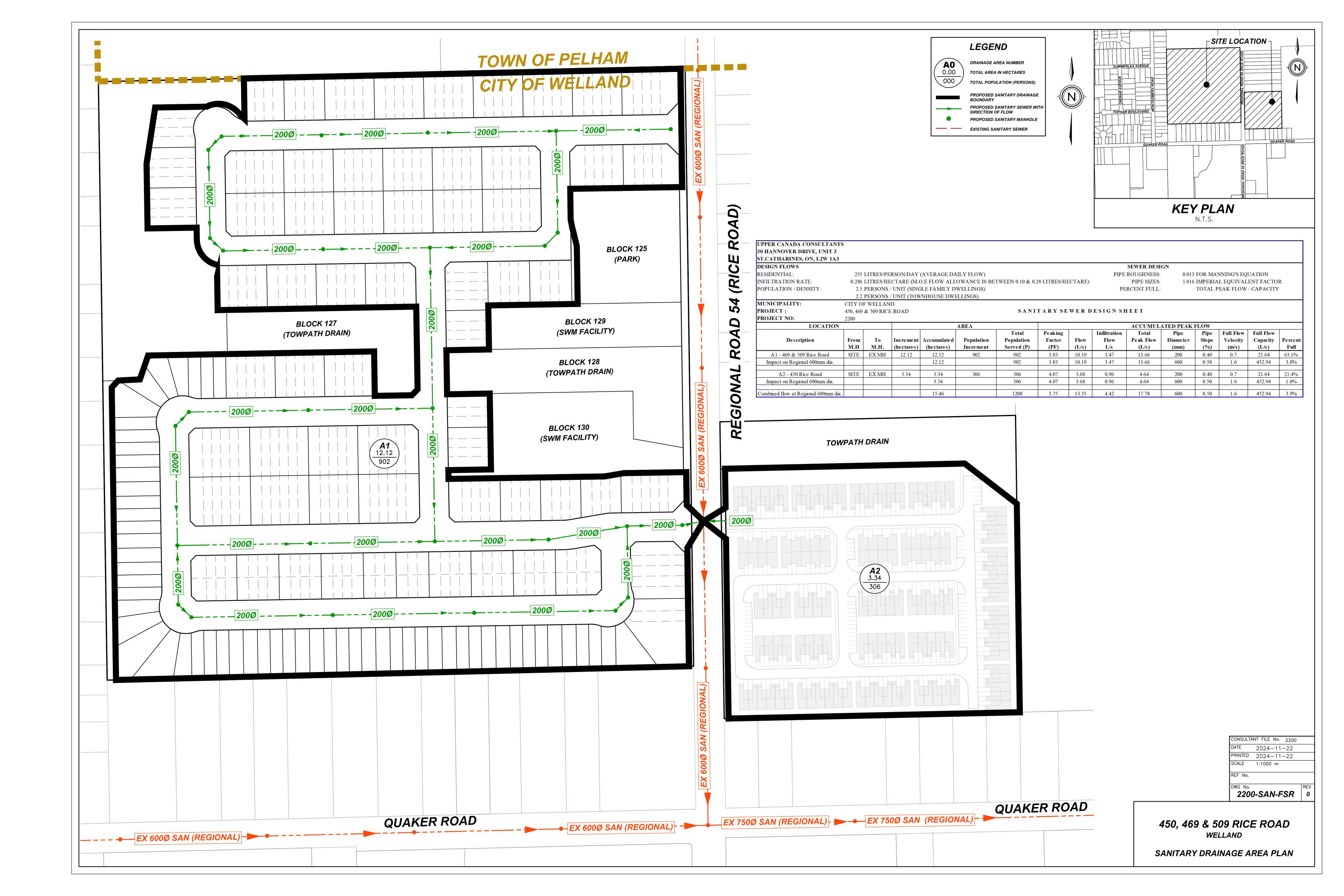
Water Distribution Plan (DWG#: 2200-WD-FSR)





APPENDIX C

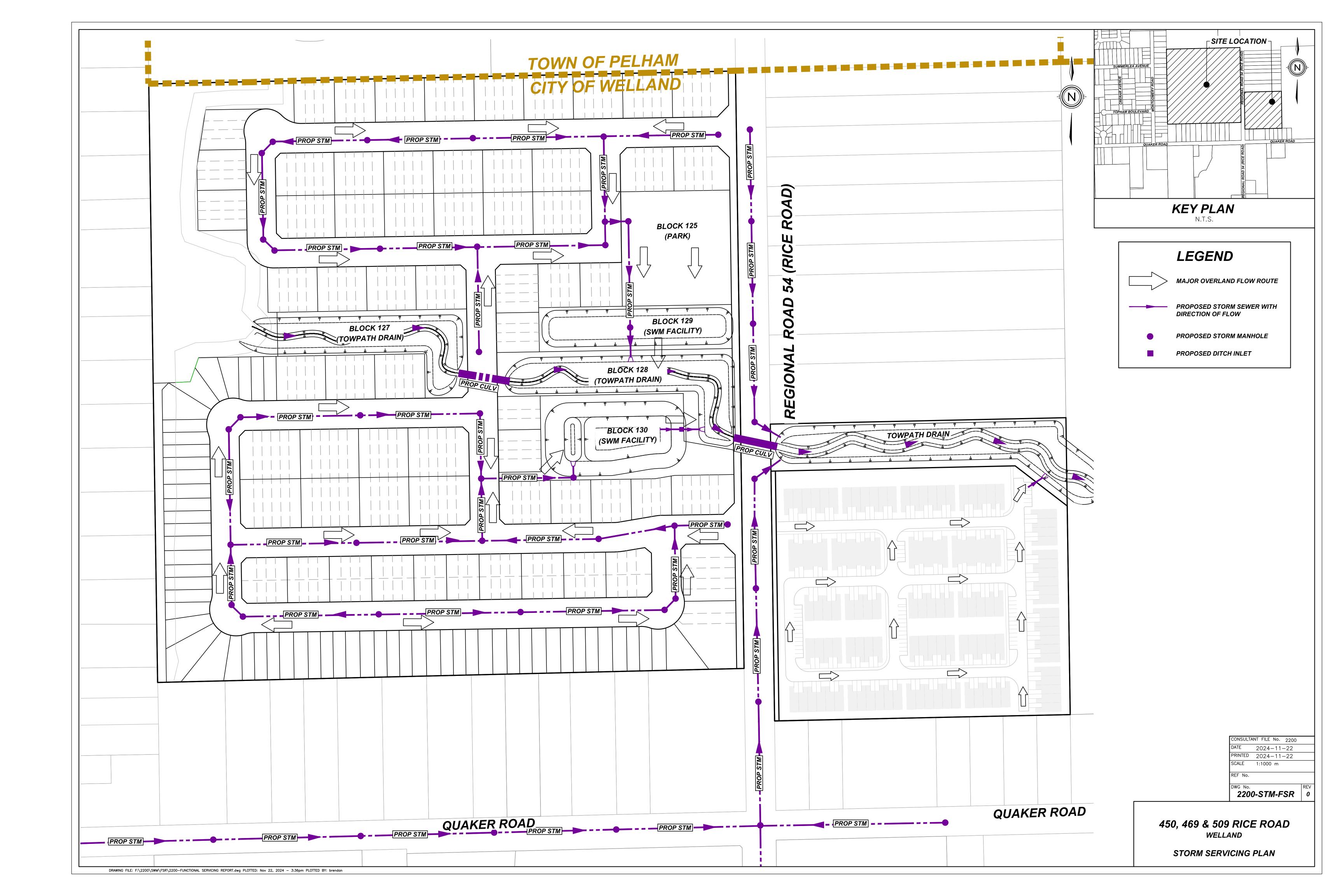
Sanitary Drainage Area Plan (DWG#: 2200-SAN-FSR)





APPENDIX D

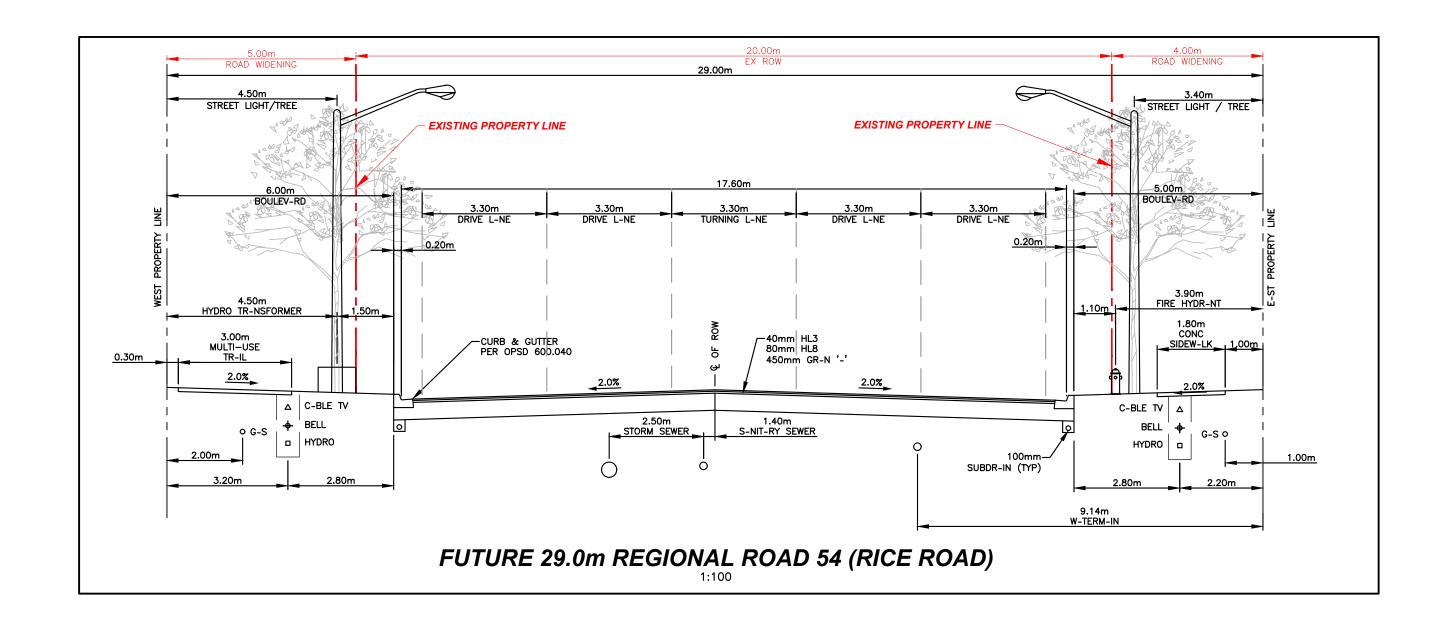
Storm Servicing Plan (DWG#: 2200-STM-FSR)





APPENDIX E

Proposed 29.0m Right-of-Way - Regional Road 54 (Rice Road)





APPENDIX F

469 & 509 Rice Road Stormwater Management Plan (UCC, October 2024)

STORMWATER MANAGEMENT PLAN 469 & 509 RICE ROAD CITY OF WELLAND

Prepared For:

BSF Communities 3340 Schmon Parkway Thorold, ON L2V 4Y6

Prepared by:

Upper Canada Consultants 3-30 Hannover Drive St. Catharines, Ontario L2W 1A3

October 2024

TABLE OF CONTENTS

1.0	INT	RODUC	TION	1
	1.1	Study	Area	1
	1.2	Objec	etives	2
	1.3	Existi	ing & Proposed Conditions	4
2.0	STO	RMWA	TER MANAGEMENT CRITERIA	5
3.0	STO	RMWA	TER ANALYSIS	5
	3.1	_	n Storms	6
	3.2	Existi	ing Conditions	6
	3.3	Propo	osed Conditions	8
4.0	STO	RMWA	TER MANAGEMENT ALTERNATIVES	13
	4.1	Scree	ning of Stormwater Management Alternatives	13
	4.2	Select	tion of Stormwater Management Alternatives	15
5.0	STO	RMWA	TER MANAGEMENT PLAN	15
	5.1	North	nern Stormwater Management Facility 'P10'	15
		5.1.1	Stormwater Quality Control	15
		5.1.2	Stormwater Quantity Controls	16
	5.2	South	ern Stormwater Management Facility 'P31'	18
		5.2.1	Stormwater Quality Control	18
		5.1.2	Erosion Control	18
		5.1.3	Stormwater Management Facility 'P11' Configuration	19
	5.3	Overa	all Stormwater Management Plan	24
		5.3.1	Block 2	24
		5.3.2	Block 3	24
		5.3.3	Block 4	27
		5.3.4	Block 5	28
		5.3.5	Existing and Future Peak Flow Comparison	30
6.0	SED	IMENT	AND EROSION CONTROL	32
7.0	STO	RMWA	TER MANAGEMENT FACILITY MAINTENANCE	32
		7.1	Oil/Grit Separator	32
		7.2	Dry Pond Facility	34
		7.3	Wet Pond Facility	34
8.0	CON	CLUSI	ONS AND RECOMMENDATIONS	37

LIST OF TABLES

Table 1.	Rainfall Data	6
Table 2.	Existing Peak Stormwater Flows – Towpath Drain	8
Table 3.	Hydrologic Parameters for Future Conditions	ç
Table 4.	Evaluation of Stormwater Management Practices	14
Table 5.	Stormwater Management Dry Pond Facility 'P10' Characteristics	18
Table 6.	SWM Facility 'P31' - Stormwater Quality Volume Calculations	18
Table 7.	SWM Facility 'P11' – Stormwater Quality Volume Requirements	19
Table 8.	Stormwater Management Facility 'P11' Forebay Sizing	21
Table 9.	Stormwater Management Wet Pond Facility 'P11' Characteristics	23
Table 10.	SWM Facility 'P11' – MECP Quality Requirements Comparison	23
Table 11.	Stormwater Management Wet Pond Facility 'P30' Characteristics	25
Table 12.	SWM Facility 'P30' – MECP Quality Requirements Comparison	25
Table 13.	Stormwater Management Wet Pond Facility 'P31' Characteristics	26
Table 14.	SWM Facility 'P31' – MECP Quality Requirements Comparison	26
Table 15.	Stormwater Management Wet Pond Facility 'P50' Characteristics	27
Table 16.	SWM Facility 'P50' – MECP Quality Requirements Comparison	28
Table 17.	Stormwater Management Wet Pond Facility 'P40' Characteristics	29
Table 18.	SWM Facility 'P40' – MECP Quality Requirements Comparison	29
Table 19.	Impacts of SWM Facilities on Peak Flows at Outlets A through D	31

LIST OF FIGURES

Figure 1.	Site Location Plan – Block 3	3
Figure 2.	Existing Stormwater Drainage Area Plan	7
Figure 3.	Future Stormwater Drainage Area Plan	11
Figure 4.	Future Hydraulic Modelling Schematic	12
Figure 5.	Stormwater Management Pond P10	17
Figure 6.	Stormwater Management Pond P11	22

APPENDICES

Appendix A	Existing Conditions MIDUSS Output File
Appendix B	Stormwater Management Facility Calculations (P10)
Appendix C	Hydroworks Sizing Software Output File
Appendix D	Oil/Grit Separator Sample Inspection Report
Appendix E	Stormwater Management Facility Calculations (P11)
Appendix F	Future Conditions MIDUSS Output File

REFERENCES

- 1. Stormwater Management Planning and Design Manual Ontario Ministry of Environment (March 2003)
- 2. Soils of the Regional Municipality of Niagara Soil Survey Report No. 60 of the Ontario Institute of Pedology. (1989)
- 3. Northwest Welland Stormwater Management Implementation Plan Upper Canada Consultants (October 2022)

STORMWATER MANAGEMENT PLAN

469 & 509 Rice Road

CITY OF WELLAND

1.0 INTRODUCTION

1.1 Study Area

Upper Canada Consultants (UCC) has been retained by landowner of the 469 & 509 Rice Road properties to prepare a stormwater management plan to address the stormwater management needs for the proposed subdivision development located within the aforementioned properties.

The proposed subdivision is located in the north-western portion of the Northwest Welland Secondary Plan (NWWSP) area in the City of Welland, north of Quaker Road, west of Rice Road, east of Montgomery Road, and south of the municipal boundary with the Town of Pelham.

UCC has previously prepared a Stormwater Management Implementation Plan for the entirety of the NWWSP Area. This Plan identified the preferred locations of future stormwater management (SWM) Facilities within the developable areas in the Secondary Plan in support of the realignment of the Towpath Drain, which flows through the proposed subdivision lands, and identified the existing stormwater flows through each segment of the existing watercourse.

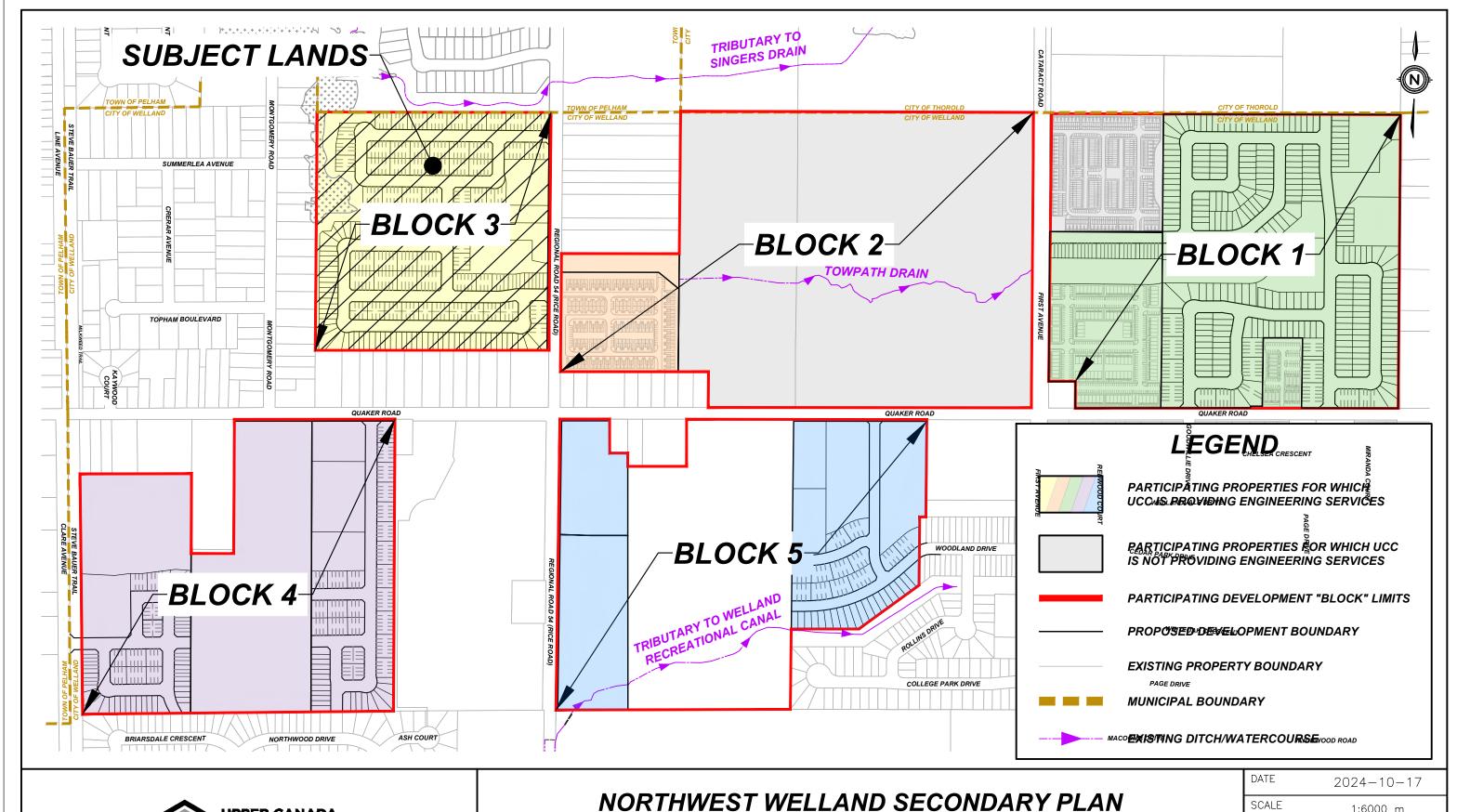
It was identified in the Implementation Plan that two SWM Facilities are to be constructed in the eastern limit of the proposed subdivision lands to provide stormwater management quality and quantity controls for the entire 'Block' of development area, bound by Quaker Road on the south, Rice Road on the west, east of Montgomery Road, and south of the municipal boundary with the Town of Pelham as shown in Figure 1 as Block 3. Therefore, this Block (Block 1) will hereafter be referred to as 'subject lands' in this report.

The subject lands are approximately 16.25 hectares and will consist of residential single detached, street townhouse, and back-to-back townhouse dwellings. The subject lands will be developed to include associated asphalt roadways, concrete curb, catch basins, storm sewers, sanitary sewers, and watermain.

1.2 Objectives

The objectives of this study are as follows:

- 1. Establish specific criteria for the management of stormwater from this site.
- 2. Determine the impact of development on the stormwater peak flow & volume of stormwater from the drainage area.
- 3. Investigate alternatives for controlling the quality of stormwater discharging from the site.
- 4. Establish the property requirements to construct stormwater management facilities for the Draft Plan of Subdivision.





NORTHWEST WELLAND SECONDARY PLAN CITY OF WELLAND SITE LOCATION PLAN - BLOCK 3

DATE	2024-10-17
SCALE	1:6000 m
REF No.	-
DWG No.	FIGURE 1

1.3 Existing & Proposed Conditions

a) Existing Conditions

The topography of the subject lands is relatively flat with a general slope towards the Towpath Drain, which flows through the middle of the site from west to east direction. The Towpath Drain conveys stormwater flows through the City of Welland and the City of Thorold, prior to ultimately outletting into the Welland Canal, with multiple crossings at Municipal and Regional roads, and Highway 406.

Existing stormwater flows and the delineation of existing stormwater drainage areas for the Towpath Drain were assessed as part of the Implementation Plan to the culvert crossing at Regional Road 50 (Niagara Street) and will be the basis for future peak flow targets for all stormwater management facilities constructed within the Secondary Plan Area.

As part of the realignment of the Towpath Drain, twin 2.4 x 1.8m concrete box culverts will be constructed crossing Regional Road 50 (Niagara Street), a 1.8 x 1.2m concrete box culvert will be constructed crossing Regional Road 54 (Rice Road), and the existing 1800mm diameter culvert crossing First Avenue will remain. Upgrades to the First Avenue Culvert will be subject to a future NPCA Work Permit.

b) Proposed Conditions

The subject lands are approximately 16.25 hectares and will consist of residential single detached, street townhouse, and back-to-back townhouse dwellings.

The subject lands will include associated asphalt roadways, concrete curb, catch basins, storm sewers, sanitary sewers, and watermain.

It is proposed to convey all future Stormwater flows from the subject lands to the Towpath Drain as identified in the Implementation Plan.

UCC has been retained as the engineering consultant for the majority of the developing landowners in the NWWSP, as shown in Figure 1. For the purpose of maintaining consistency between the various Draft Plan of Subdivision submissions within the Secondary Plan Area, the "Proposed Conditions" stormwater modelling will include the future SWM Facilities designed for each respective Block in the NWWSP.

For lands where Planning Act Applications are not expected to be submitted in the near future as of the writing of this stormwater management plan, where UCC has not been retained as the engineering consultant, or a stormwater management alternative has not yet been selected, future stormwater flows have been allocated to the Towpath Drain at the existing levels identified in the Implementation Plan.

The existing conditions MIDUSS modelling output file provided in the Implementation Plan has been included in Appendix A for reference.

2.0 STORMWATER MANAGEMENT CRITERIA

New developments are required to provide stormwater management in accordance with provincial and municipal policies including:

- Stormwater Quality Guidelines for New Development (MECP/MNRF, May 1991)
- Stormwater Management Planning and Design Manual (MECP, March 2003)

Based on the comments and outstanding policies from the City of Welland, Regional Municipality of Niagara, Niagara Peninsula Conservation Authority (NPCA), and the Ministry of the Environment, Conservation and Parks (MECP), the following site-specific considerations were identified:

- Per City of Welland requirements, stormwater **quality** improvements must be provided to a minimum of Enhanced Protection (80% TSS Removal).
- Per the Northwest Welland Stormwater Management Implementation Plan prepared by Upper Canada Consultants, future stormwater management facilities within the Secondary Plan Area will be required to provide **quantity** controls up to and including the 100 year design storm event before outletting to the Towapth Drain.
- **Erosion control** to be provided in accordance with MECP guidelines. The guidelines require an extended detention volume to be detained for 24 hours.

Based on above policies and site specific considerations, the following stormwater management criteria have been established for this site:

- Stormwater **quality** controls are to be provided for the more frequent storm events to provide Enhanced Protection (80% TSS Removal), prior to discharging to the receiving watercourse (Towpath Drain).
- To maintain existing water surface elevations in the Towpath Drain, stormwater quantity controls will be provided up to and including the 100 year design storm event.
- **Erosion protection** will be provided in accordance with MECP guidelines. The quidelines require an extended detention volume to be detained for 24 hours.

3.0 STORMWATER ANALYSIS

Stormwater for the existing and proposed conditions was estimated using the MIDUSS computer modelling program. This program was selected because it is applicable to both urban and rural drainage areas like the study area. It is relatively easy to use and modify for the future drainage conditions and control facilities. It readily allows for design storm hyetographs for the various return periods being investigated.

3.1 Design Storms

Design storm hyetographs for the storm system design uses a Chicago distribution based on the City of Welland Intensity-Duration-Frequency (IDF) curves. Hyetographs for the 25mm, 2, 5, 10, 25 and 100 year events were developed using a 4 hour Chicago distribution. The 25mm design storm event parameters were derived using the IDF curve and a 4-hour Chicago distribution. Table 1 summarizes the rainfall data applied in the stormwater modelling.

Table 1. Rainfall Data								
Design Storm (Return Period)	Chicago	Duration (minutes)						
(Hetarii Terrou)	a	b	c	(Illinates)				
25mm	512	6.0	0.800	240				
2 Year	755	8.0	0.789	240				
5 Year	830	7.3	0.777	240				
10 Year	860	6.5	0.763	240				
25 Year	900	5.2	0.745	240				
100 Year	1020	4.7	0.731	240				

3.2 Existing Conditions

Existing conditions within the Towpath Drain were assessed as part of the Implementation Plan to determine the existing the peak flows within the watercourse at existing and future roadway crossings. The existing catchment areas as provided in Figure 2 of the Implementation Plan have been included as Figure 2 in this stormwater management plan for reference.

For consistency between the stormwater management plans submitted by UCC in the NWWSP, Outlets A through D have been identified at specific locations along the Towpath Drain to demonstrate that the existing flows identified in the Implementation Plan are maintained at all locations within the watercourse under future conditions. The locations of Outlets A through D can be found on Figure 3 and the summary of the existing flows at each Outlet have been summarized in Table 2 below.

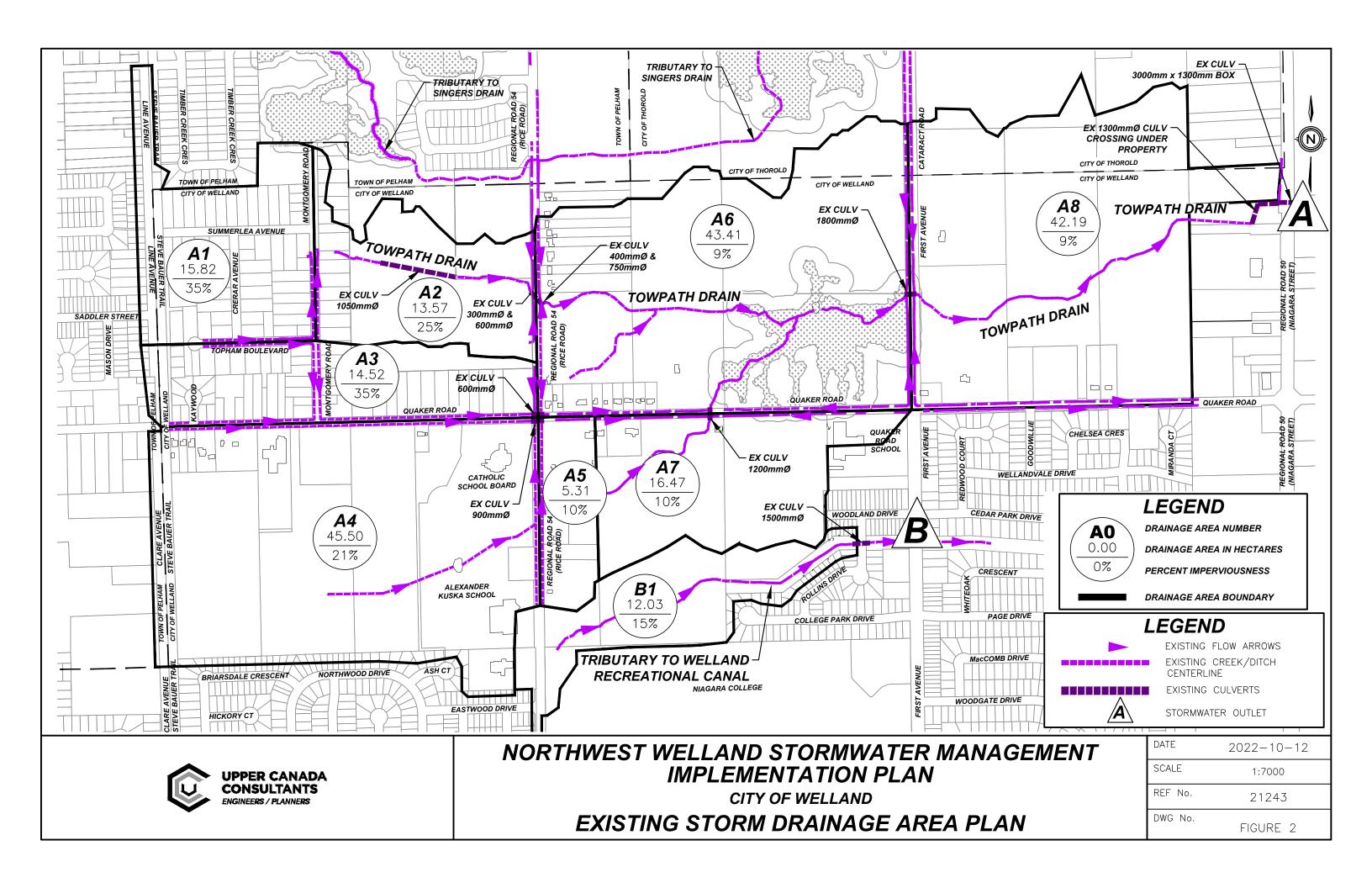


Table 2. Existing Peak Stormwater Flows – Towpath Drain								
T	Peak Flow (m ³ /s)							
Location	2 Year	5 Year	10 Year	25 Year	100 Year			
Outlet A1	1.317	1.589	1.800	2.099	2.558			
Outlet A2	3.301	4.194	4.777	5.619	6.987			
Outlet B (*)	3.425	4.367	4.977	5.863	7.305			
Outlet C	4.035	5.176	5.914	7.005	8.781			
Outlet D	4.509	5.835	6.678	7.938	9.995			

Note (*): Outlet B was not specified as a location where peak flows were evaluated within the Implementation Plan.

Therefore, the change in existing peak flow across the 803m width of Drainage Area A6 (between Rice Road and First Avenue) was prorated to the location of Outlet B (at 205m east of Rice Road) for the peak flow at Outlet B for each design storm event.

3.3 Proposed Conditions

For the purpose of maintaining consistency between the various Draft Plan of Subdivision submissions within the NWWSP Area, the "Proposed Conditions" stormwater modelling will include the future SWM Facilities designed for each respective Block in the NWWSP.

For lands where Planning Act Applications are not expected to be submitted in the near future, as of the writing of this stormwater management plan, or where UCC has not been retained as the engineering consultant, future stormwater flows have been allocated to the Towpath Drain at the existing levels identified in the Implementation Plan.

The future stormwater drainage areas for the NWWSP Area are shown in Figure 3, and a schematic of the future hydrologic modelling is provided as Figure 4.

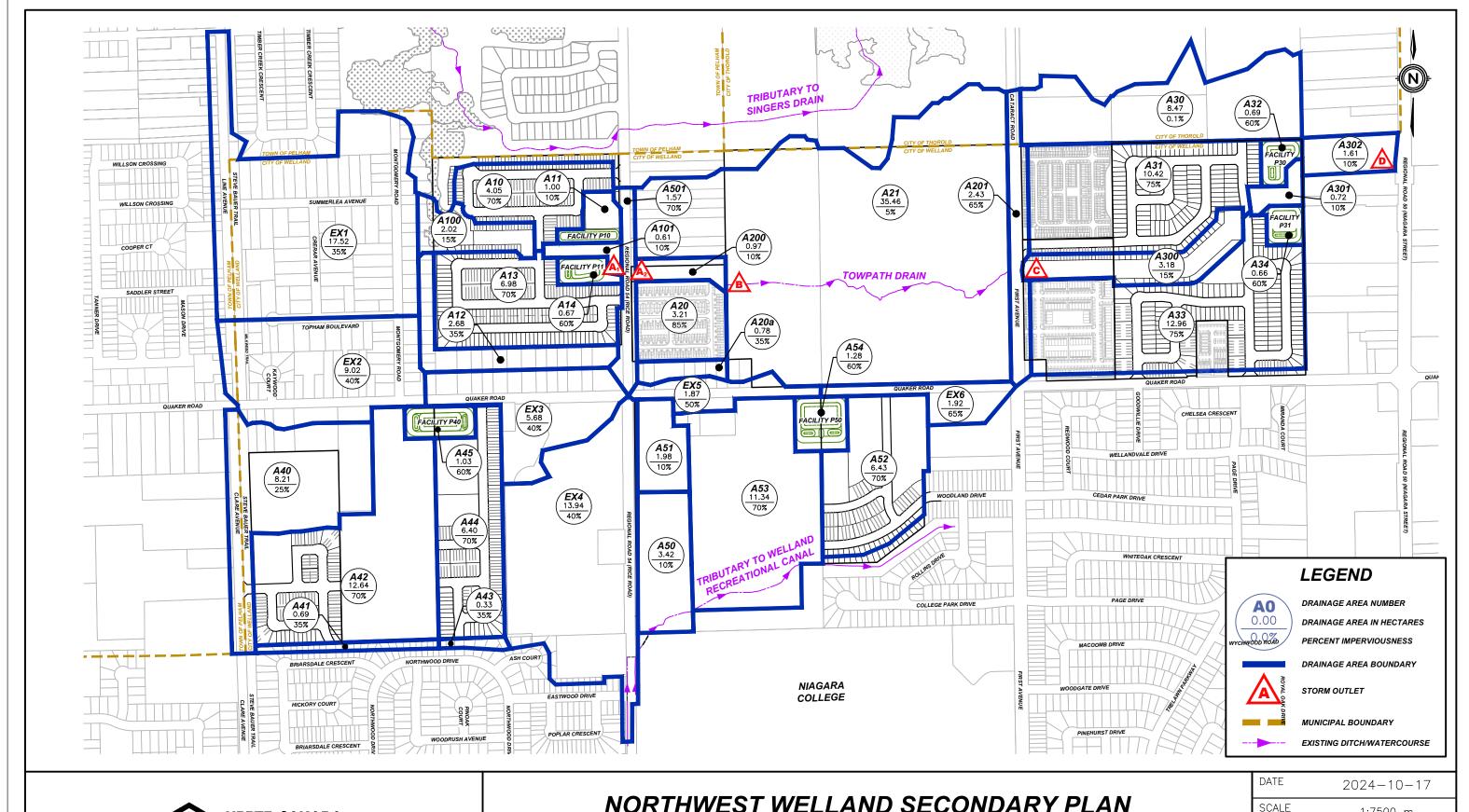
Table 3 below provides a summary of the catchment areas shown in Figure 3 and associated hydrological parameters used for the MIDUSS software model.

The future conditions MIDUSS modelling output file has been enclosed in Appendix F for reference.

Table 3. Hydrologic Parameters for Future Conditions								
Area	Area	Length	Slope	Mannii	ng – "n"	Soil	SCS	Percent
No.	(ha)	(m)	(%)	Perv.	Imperv.	Type	CN	Impervious
EX1	17.52	343	1.0	0.25	0.015	CD	74	35%
A100	2.02	116	0.4	0.25	0.015	CD	74	15%
A10	4.05	164	1.0	0.25	0.015	CD	74	70%
A11	1.00	82	1.0	0.25	0.015	CD	74	10%
A101	0.61	64	1.0	0.25	0.015	CD	74	10%
A12	2.68	134	1.0	0.25	0.015	CD	74	35%
A13	6.98	216	1.0	0.25	0.015	CD	74	70%
A14	0.67	67	1.0	0.25	0.015	CD	74	60%
A40	8.21	234	1.0	0.25	0.015	CD	74	25%
A41	0.69	68	1.0	0.25	0.015	CD	74	35%
A42	12.64	290	1.0	0.25	0.015	CD	74	70%
A43	0.33	47	1.0	0.25	0.015	CD	74	35%
A44	6.40	207	1.0	0.25	0.015	CD	74	70%
A45	1.03	83	1.0	0.25	0.015	CD	74	60%
EX2	9.02	245	1.0	0.25	0.015	CD	74	40%
EX3	5.68	195	1.0	0.25	0.015	CD	74	40%
EX4	13.94	305	1.0	0.25	0.015	CD	74	40%
A50	3.42	151	1.0	0.25	0.015	CD	74	10%
A51	1.98	115	1.0	0.25	0.015	CD	74	10%
A501	1.57	102	1.0	0.25	0.015	CD	74	70%
A20a	0.78	72	1.0	0.25	0.015	CD	74	35%
A20	3.21	146	1.0	0.25	0.015	CD	74	85%
A200	0.97	80	1.0	0.25	0.015	CD	74	10%
A21	35.46	487	0.2	0.25	0.015	CD	74	5%
A52	6.43	207	1.0	0.25	0.015	CD	74	70%
A53	11.34	275	1.0	0.25	0.015	CD	74	70%
A54	1.28	92	1.0	0.25	0.015	CD	74	60%
EX5	1.87	112	1.0	0.25	0.015	CD	74	50%
EX6	1.92	113	0.2	0.25	0.015	CD	74	65%

Stormwater Management Plan 469 & 509 Rice Road, City of Welland

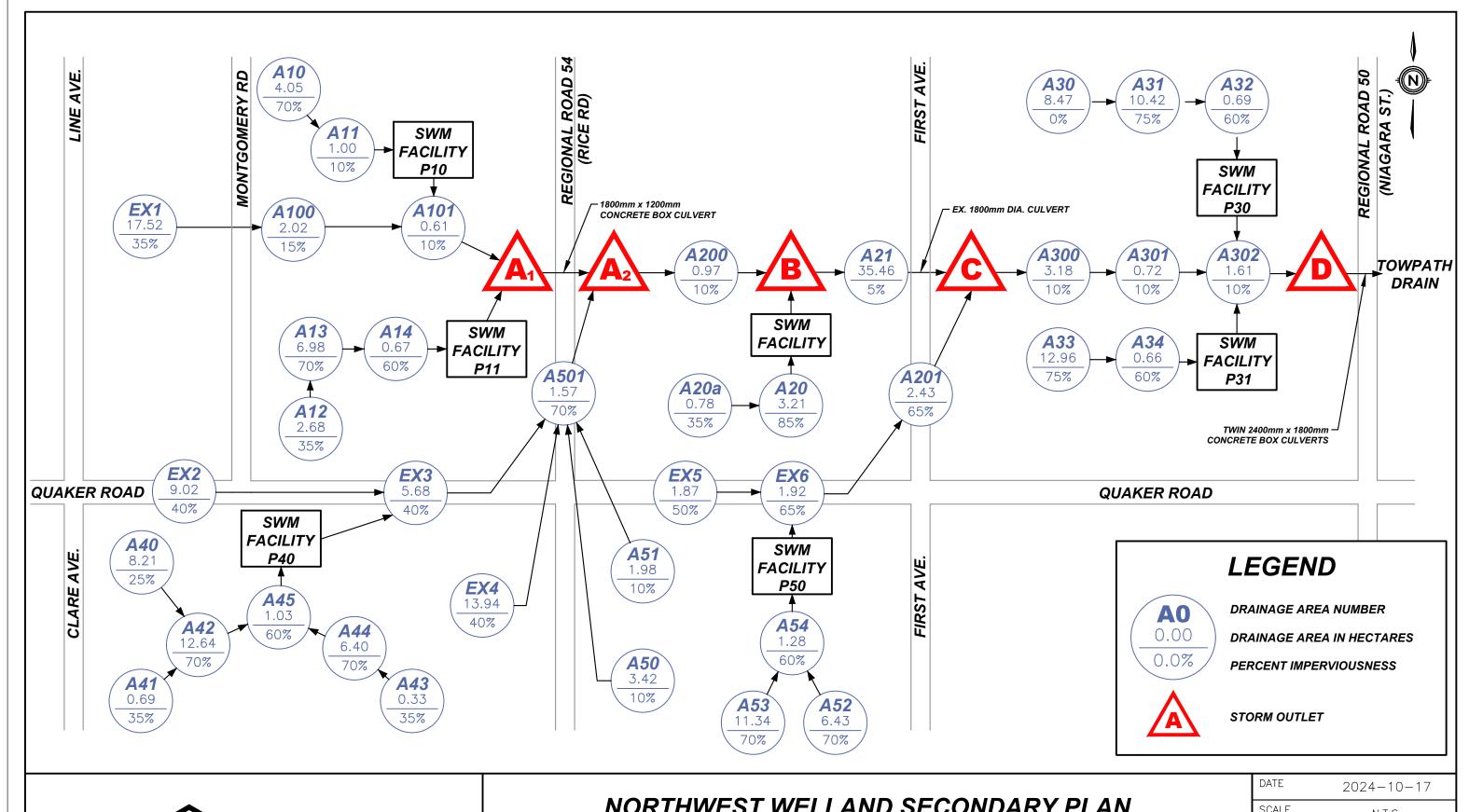
A30 A31	8.47	238 264	1.0	0.25	0.015	CD CD	74 74	0.1% 75%
A32	0.69	68	1.0	0.25	0.015	CD	74	60%
A33	12.99	294	1.0	0.25	0.015	CD	74	75%
A34	0.66	66	1.0	0.25	0.015	CD	74	60%
A302	1.61	104	0.2	0.25	0.015	CD	74	10%
	204.87 Total Area (ha)							





NORTHWEST WELLAND SECONDARY PLAN CITY OF WELLAND FUTURE STORM DRAINAGE AREAS

DATE	2024-10-17
SCALE	1:7500 m
REF No.	-
DWG No.	FIGURE 3





NORTHWEST WELLAND SECONDARY PLAN

CITY OF WELLAND
FUTURE HYDROLOGICAL MODELLING SCHEMATIC

DATE	2024-10-17
SCALE	N.T.S.
REF No.	-
DWG No.	FIGURE 4

4.0 STORMWATER MANAGEMENT ALTERNATIVES

4.1 Screening of Stormwater Management Alternatives

A variety of stormwater management alternatives are available to control the quantity and quality of stormwater, most of which are described in the Stormwater Management Planning and Design Manual (MECP, March 2003). Alternatives for the proposed and ultimate developments were considered in the following broad categories: lot level, vegetative, infiltration, and end-of-pipe controls. General comments on each category are provided below. Individual alternatives for the proposed development are listed in Table 4 with comments on their effectiveness and applicability to the proposed outlet.

a) Lot Level Controls

Lot level controls are not generally suitable as the primary control facility for quality control. They are generally used to enhance stormwater quality in conjunction with other types of control facilities.

b) <u>Vegetative Alternatives</u>

Vegetative stormwater management practices are not generally suitable as the primary control facility for quality control. They are generally used to enhance stormwater quality in conjunction with other types of control facilities.

c) Infiltration Alternatives

Where soils are suitable, infiltration techniques can be very effective in providing quantity and quality control. However, the very small amount of surface area on this site dedicated to permeable surfaces such as greenspace and landscaping make this an impractical option. Therefore, infiltration techniques will not be considered for this development.

d) End-of-Pipe Alternatives

Surface storage techniques can be very effective in providing quality and quantity control.

Wet facilities are effective practices for stormwater erosion, quality and quantity control for large drainage areas (>5 ha).

Dry facilities can provide effective quantity control for drainage areas of varying sized. When used in addition to an Oil/Grit Separator, such facilities can provide effective quantity and quality controls for smaller drainage areas (generally <5 ha).

Table 4. Evaluation of Stormwater Management Practices								
469 & 509			or Implementation					
Rice Road	Topography	Soils	Bedrock	Groundwater	Area	Technical	Recommend	
	Flat	Variable	> 5m	At Considerable	± 15.38ha	Effectiveness	Implementation	
Site Conditions	±1%	±15 mm/hr		Depth		(10 high)	Yes / No	Comments
Lot Level Controls								
Lot Grading	<5%	nlc	nlc	nlc	nlc	2	Yes	Quality/quantity benefits
Roof Leaders to Surface	nlc	nlc	nlc	nlc	nlc	2	Yes	Quality/quantity benefits
Roof Ldrs.to Soakaway Pits	nlc	loam, infiltr. > 15 mm/hr	>1m Below Bottom	>1m Below Bottom	< 0.5 ha	6	Yes	Quality/quantity benefits
Sump Pump Fdtn. Drains	nlc	nlc	nlc	nlc	nlc	2	No	Unsuitable site conditions
Vegetative								
Grassed Swales	< 5 %	nlc	nlc	nlc	nlc	7	Yes	Quality/quantity benefits
Filter Strips(Veg. Buffer)	< 10 %	nlc	nlc	>.5m Below Bottom	< 2 ha	5	No	Unsuitable site conditions
Infiltration								
Infiltration Basins	nlc	loam, infiltr. > 15 mm/hr	>1m Below Bottom	>1m Below Bottom	< 5 ha	2	No	Unsuitable site conditions
Infiltration Trench	nlc	loam, infiltr. > 15 mm/hr	>1m Below Bottom	>1m Below Bottom	< 2 ha	4	No	Unsuitable site conditions
Rear Yard Infiltration	< 2.0 %	loam, infiltr. > 15 mm/hr	>1m Below Bottom	>1m Below Bottom	< 0.5 ha	7	No	Unsuitable site conditions
Perforated Pipes	nlc	loam, infiltr. > 15 mm/hr	>1m Below Bottom	>1m Below Bottom	nlc	4	No	Unsuitable site conditions
Pervious Catch basins	nlc	loam, infiltr. > 15 mm/hr	>1m Below Bottom	>1m Below Bottom	nlc	3	No	Unsuitable site conditions
Sand Filters	nlc	nlc	nlc	>.5m Below Bottom	< 5 ha	5	No	High maintenance/poor aesthetics
Surface Storage								
Dry Ponds	nlc	nlc	nlc	nlc	> 5 ha	7	Yes	No quality control
Wet Ponds	nlc	nlc	nlc	nlc	> 5 ha	9	Yes	Very effective quality/quantity control
Wetlands	nlc	nlc	nlc	nlc	> 5 ha	6	No	Very effective quality control
Other								-
Oil/Grit Separator	nlc	nlc	nlc	nlc	<5 ha	7	Yes	Quality Control for small areas

Reference: Stormwater Management Practices Planning and Design Manual - 2003 nlc - No Limiting Criteria

4.2 Selection of Stormwater Management Alternatives

Stormwater management alternatives were screened based on technical effectiveness, physical suitability for this site, and their ability to meet the stormwater management criteria established for proposed and future development areas. The following stormwater management alternatives are recommended for implementation on the proposed development:

- Lot grading to be kept as flat as practical in order to slow down stormwater and encourage infiltration.
- Roof leaders to be discharged to the ground surface in order to slow down stormwater and encourage infiltration.
- **Grassed swales** to be used to collect rear lot drainage. Grassed swales tend to filter sediments and slow down the rate of stormwater.
- A **dry pond facility** and **oil/grit separator** on the north side of the Towpath Drain is to be constructed to provided stormwater quantity and quality controls.
- One **wet pond facility** on the south side of the Towpath Drain is to be constructed to provide stormwater quality and quantity controls.

5.0 STORMWATER MANAGEMENT PLAN

A MIDUSS model was created to assess existing and future flows generated by the proposed subdivision. The stormwater management facility was sized according to MECP Guidelines (MECP, March 2003) as follows:

5.1 Northern Stormwater Management Facility 'P10'

5.1.1 Stormwater Quality Control

To improve stormwater quality for Drainage Area A10, it is proposed a stormwater oil/grit separator provides TSS (Total Suspended Solids) removal for this type of development.

To provide MECP Enhanced Quality Improvements, the proposed Oil/Grit Separator will be designed to achieve a TSS Removal of at least 80%. The total stormwater drainage area contributing to the proposed oil/grit separator is 4.05 hectares with an overall impervious coverage of approximately 70%. The modelling for a Hydroworks unit has indicated that an HD 12 will provide 81.3% TSS overall removal and capture 99.7% of the stormwater flows. Therefore, a Hydroworks HD 12 is proposed for this site development. Output calculations for the quality assessment can be found in Appendix C.

5.1.2 Stormwater Quantity Controls

As shown in Figure 5, it is proposed to construct a dry pond facility along the north of the Towpath Drain, in the eastern portion of the subject lands. It is proposed to construct a two-stage control outlet for the proposed stormwater management facility. The first stage of control consists of a control orifice located immediated upstream of the proposed storm sewer outlet to the Towpath Drain to detain the future stormwater volumes and release them slowly over an extended period of time. The second stage of control consists of a an emergency spillway to provide an outlet for greater storm events.

The proposed bottom elevation of the facility is 185.75 m with a top elevation of 186.70 m, for an active storage depth of 0.95 m and associated storage volume of 2,370 m³.

Based on the configuration of the proposed facility, it was determined that a 100 mm diameter control orifice at an invert of 184.80 m can adequately control the future flows from the subject lands to the Towpath Drain.

Major overland flows within the northern portion of the subject lands directed to the proposed dry pond facility, and then to the Towpath Drain.

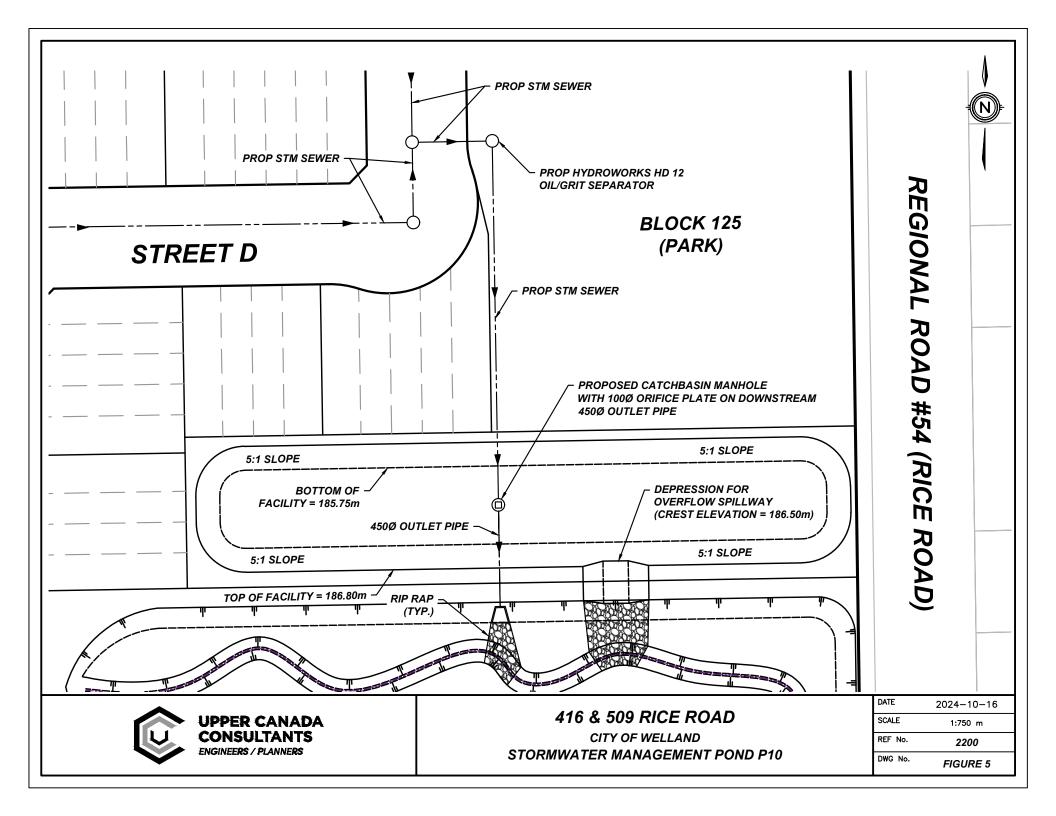


Table 5 summarizes the peak inflows and outflows for the stormwater management facility along with corresponding pond elevations. Based on the MIDUSS model, the maximum wet pond elevation is 186.51 m, and an active storage volume is 1,804 m³ for the 100-year design storm event.

Table 5. Stormwater Management Dry Pond Facility 'P10' Characteristics				
Design	Peak Flo	ws (L/s)	Maximum Elevation (m)	Maximum
Storm	Future Inflow	Future Outflow		Storage (m3)
25mm	273	23	185.94	390
2 Year	422	25	186.13	803
5 Year	497	26	186.26	1,035
10 Year	1,229	26	186.30	1,229
25 Year	0.644	27	186.41	1,531
100 Year	0.783	105	186.51	1,804

5.2 Southern Stormwater Management Facility 'P31'

5.2.1 Stormwater Quality Control

The stormwater drainage outlet for the proposed Wet Pond 'P11' is the Towpath Drain, where *Enhanced* protection will be provided. Based on Table 3.2 of SWMP & Design Manual, the Enhanced water quality storage requirement for wet pond facilities in a development with 60% impervious area is approximately 202 m³/ha. The wet pond facility will provide stormwater quality controls for a drainage area of approximately 9.66 hectares (Areas A12 and A13) as shown in Table 6.

Table 6. SWM Facility 'P31' - Stormwater Quality Volume Calculations			
Total Water Quality Volume = 9.66 ha x 202 m ³ /ha = 1,951 m ³	Reference: Table 3.2, SWMP & Design Manual (MECP 2003)		
Permanent Pool Volume = 9.66 ha x 162 m ³ /ha = 1,565 m ³	Extended Detention Volume = 9.66 ha x 40 m ³ /ha = 386m ³		

5.1.2 Erosion Control

Using the MIDUSS hydrological model, the stormwater volume from the 25mm - 4 hour design storm event for the overall 10.33 hectare area (Areas A12 to A14) is 1,350 m³.

The following table shows the stormwater storage volumes required using both the water quality and erosion control guidelines.

Table 7. SWM Facility 'P11' – Stormwater Quality Volume Requirements				
A. Permanent Pool Volume (m ³)	1,565 m ³			
B. Extended Detention Volume (m ³)	386 m ³			
C. Stormwater Volume from 25mm – 4-hour rainfall event	1,350 m ³			
D. Minimum Extended Detention Volume (greater of B & C)	1,350 m ³			
Total Quality and Extended Detention Volume (A + D)	2,915 m ³			

5.1.3 Stormwater Management Facility 'P11' Configuration

As shown in Figure 6, it is proposed to construct a three-stage control outlet for the proposed stormwater management facility. The first stage of control consists of a reverse slope pipe acting as a tubular control orifice to detain the extended detention volume and release it slowly over an extended period of time. The second stage of control consists of a ditch inlet catch basin and outlet pipe which provides an outlet for flows exceeding the extended detention volume. The third stage will consist of an emergency spillway to provide an outlet for greater storm events.

The proposed bottom elevation of the facility is 183.30 m, and the permanent pool water level is proposed at 184.40 m, for a permanent water depth of 1.50 metres. The configuration of the facility provides 1,616 m 3 of permanent pool volume, which is more than the required 1,565 m 3 . The proposed top of pond is at an elevation of 186.80 m which provides a total active volume of 6,222 m 3 with 5:1 side slopes.

Based on the configuration of the proposed facility, it was determined that a 100 mm diameter quality orifice at an invert of 184.80 m can provide 40 hours of extended detention for the 25mm design storm event, which has a corresponding water surface elevation of 185.31m within the proposed facility.

The proposed ditch inlet catchbasin will be constructed with the rim at an elevation of 186.10 m which will provide an extended detention volume of 3,519 m³, which is greater than the minimum volume of 1,350 m³ specified in Table 7.

The outflow pipe from the stormwater management facility is to be 450mm in diameter and will convey the stormwater flows from the ditch inlet to the proposed headwall structure outletting to Towpath Drain. A stage-storage-discharge relationship was determined for the facility and is included in Appendix E for reference purposes.

Major overland flows within the southern portion of the subject lands directed to the proposed wetpond facility, and then to the Towpath Drain.

A sediment forebay was included in this stormwater management facility to minimize the transport of heavy sediment from the storm sewer outlet throughout the facility and to localize maintenance activities. Calculations for the forebay sizing follow MECP Guidelines and is shown in Table 8.

Table	Table 8. Stormwater Management Facility P11 Forebay Sizing				
a) Forebay Settling Lengt	h (MOE	SWN	MP&D, Equation 4.5	5)	
$(r \times 0)$			r = 8.4	:1	(Length:Width Ratio)
Settling Length = $\sqrt{\frac{r}{r}}$	$\frac{\lambda Q}{V_c}$		$Q_p = 0.014$	m^3/s	(25mm Storm Pond Discharge)
\	-3 /		$V_s = \boxed{0.0003}$	m/s	(Settling Velocity)
Settling Length =	19.80	m			
b) Dispersion Length (Mo	OE SWN	MP&I	D, Equation 4.6)		
	8 × 0		Q = 1.052	m^3/s	(5 Yr Stm Sew Design Inflow)
$Dispersion\ Length =$	$\frac{\sigma \times Q}{D \times V_f}$		D = 1.50	m	(Depth of Perm. Pool in the Forebay)
	- J		$V_f = \boxed{0.5}$	m/s	(Desired Velocity)
Dispersion Length =	11.22	m			
c) Minimum Forebay Dee	ep Zone	Botto	m Width (MOE SW	MP&D),	Equation 4.7)
$Width = \frac{Min.Forebo}{9}$	ay Leng	th_			
8			19.80	m	(minimum required length)
Width =	2.47	m	(minimum required	d width)	
d) Average Velocity of F	low				
			$Q = \boxed{0.584}$	m^3/s	(25mm Storm Design Inflow)
	0		A = 10.50	m^2	(Cross Sectional Area)
Average Velocity =	$\frac{\mathcal{L}}{A}$		D = 1.50	m	(Depth of Forebay)
			W = 2.50	m	(Proposed Bottom Width)
			$SS = \boxed{3}$:1	(Side Slopes - Minimum)
Average Velocity =	0.06	m/s			
Is this Acceptable?	Yes		(Maximum velocit	y of flow	= 0.15 m/s)
e) Cleanout Frequency					
Is this Acceptable?	Yes		L = 21.0	m	(Proposed Bottom Length)
			ASL = 2.2	m ³ /ha	(Annual Sediment Loading)
			A = 9.66	ha	(Drainage Area)
			FRC = 80	%	(Facility Removal Efficiency)
			FV = 298.1	m^3	(Forebay Volume)
Cleanout Frequency =	Cleanout Frequency = 11.2 Years				
Is this Acceptable? Yes (10 Year Minimum Cleanout Frequency)					

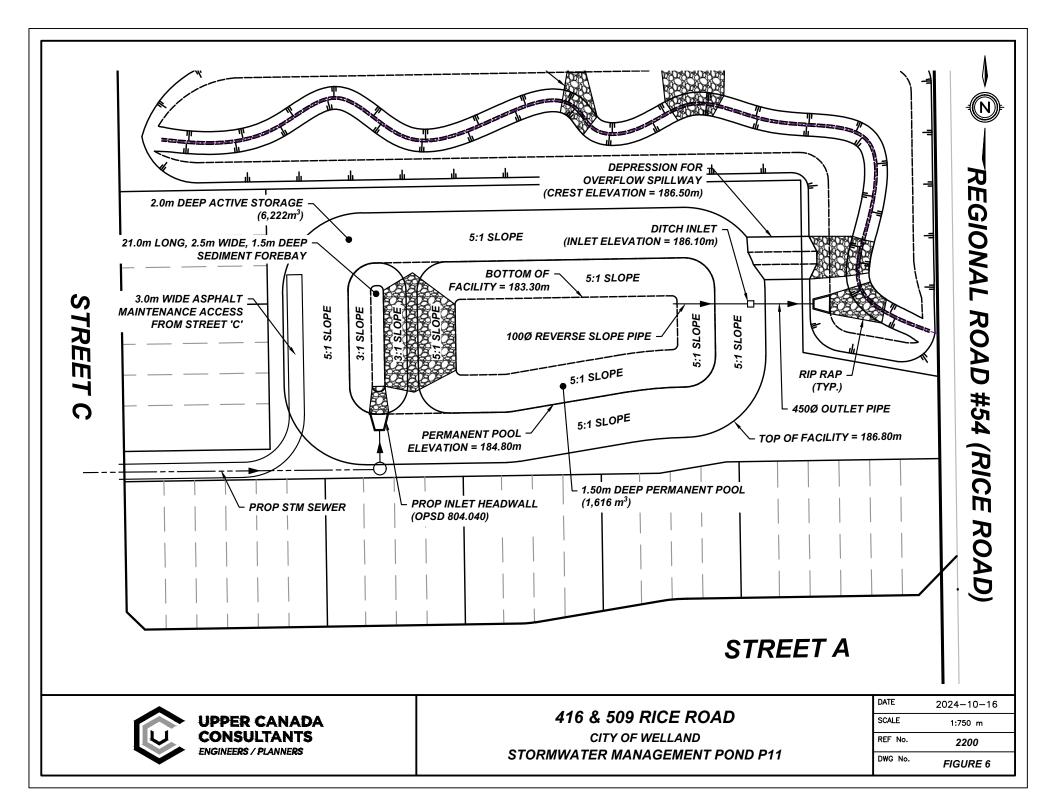


Table 9 summarizes the peak inflows and outflows for the stormwater management facility along with corresponding pond elevations. Based on the MIDUSS model, Table 9 shows the maximum wet pond elevation of 186.28 m, and an active storage volume of 4,180 m³ for the 100-year design storm event.

Table 9. Stormwater Management Wet Pond Facility 'P11' Characteristics				
Design	Peak Flo	ows (L/s)	Maximum Elevation (m)	Maximum
Storm	Future Inflow	Future Outflow		Storage (m3)
25mm	584	14	185.31	1,163
2 Year	889	18	185.63	2,132
5 Year	1,052	20	185.81	2,641
10 Year	1,177	22	185.95	3,066
25 Year	1,367	48	186.14	3,650
100 Year	1,659	143	186.28	4,180

Table 10. SWM Facility 'P11' – MECP Quality Requirements Comparison				
SWM Facility Characteristic	MECP Requirement	Provided by SWM Facility		
Permanent Pool Volume (m ³) - minimum	1,565 (min)	1,616		
Extended Detention Volume (m ³) – <i>minimum</i>	1,350 (min)	3,519		
Total Quality + Detention Storage (m ³) – <i>minimum</i>	2,915 (min)	5,135		
Drawdown Time (hr) – minimum	24 (min)	40		
Forebay Length (m) – minimum	19.80 (min)	21.00		
Forebay Width (m) – minimum	2.41 (min)	2.50		
Average Forebay Velocity (m/s) – maximum	0.15 (max)	0.06		
Cleanout Frequency (years) - minimum	10 (min)	11		

As shown in Table 10, the proposed stormwater management facility configuration satisfies the quality control requirements for the associated drainage area.

5.3 Overall Stormwater Management Plan

As previously discussed, UCC has prepared a comprehensive Future conditions MIDUSS model to include all of the proposed stormwater management facilities to be constructed within the properties for which UCC is providing engineering services. The facilities included in the model are SWM Facilities P10 through P50, as shown in Figures 3 and 4.

Within properties where there are no Planning Act Applications forthcoming at the time of writing this report, that UCC is not providing engineering services, or a stormwater management alternative has not been selected, existing conditions were assumed in accordance with the Implementation Plan (see Figure 2).

As part of the Planning Act Applications on the properties where UCC is providing engineering services, separate Stormwater Management Reports will be submitted to outline the detailed calculations for each proposed facility. For the purposes of this Stormwater Management Plan, Tables 11 through 18 have been including providing the summary of the characteristics of each SWMF designed by UCC in the NWWSP Area.

5.3.1 Block 2

As shown in Figure 1, Block 2 consists of a property where UCC is providing the engineering services (450 Rice Road) and the remaining property where UCC is not providing engineering services. The same owner owns the subject lands and the 450 Rice Road property.

The proposed stormwater management facilities within the subject lands (P10 and P11) provide over-controlling for stormwater quantity such that the 450 Rice Road property does not require on-site stormwater quantity controls.

The 450 Rice Road will provide only stormwater management quality controls (Facility P20) which will be via an Oil/Grit Separator as the tributary drainage area (Areas A20 and A20a) is below 5.0 hectares. A separate SWM Plan will be submitted outlining the detailed calculations for this Block.

The adjacent lands where UCC is not providing engineering services have been assumed at existing conditions for the purposes of identifying future stormwater flows within the realigned watercourse. A separate SWM Plan will be submitted by the owner's engineering consultant addressing the future stormwater management within this property.

5.3.2 Block 3

As shown in Figure 1, Block 3 consists of lands owned by multiple owners and will include two communal wet pond SWM Facilities (P30 and P31) providing quality and quantity controls for the Areas A30 to A34. A separate SWM Plan will be submitted outlining the detailed calculations for this Block.

Table 11 to 14 below summarize the design characteristics for Facilities P30 and P31.

Table 11. Stormwater Management Wet Pond Facility 'P30' Characteristics				
Design	Peak Flo	ws (L/s)	- · · · · · · · · · · · · · · · · · · ·	Maximum
Storm	Inflow	Outflow		Storage (m3)
25mm	760	25	179.28	1,460
2 Year	1,210	34	179.64	2,856
5 Year	1,401	38	179.85	3,675
10 Year	1,576	42	180.03	4,365
25 Year	1,840	114	180.19	5,104
100 Year	2,246	250	180.38	5,999

Table 12. SWM Facility 'P30' – MECP Quality Requirements Comparison			
SWM Facility Characteristic	MECP Requirement	Provided by SWM Facility	
Permanent Pool Volume (m ³) - minimum	2,011 (min)	2,221	
Extended Detention Volume (m ³) – <i>minimum</i>	1,924 (min)	4,649	
Total Quality + Detention Storage (m ³) – <i>minimum</i>	3,935 min)	6,870	
Drawdown Time (hr) – minimum	24 (min)	29	
Forebay Length (m) – minimum	17.08 (min)	21.00	
Forebay Width (m) – minimum	2.13 (min)	6.00	
Average Forebay Velocity (m/s) – maximum	0.15 (max)	0.05	
Cleanout Frequency (years) - minimum	10 (min)	11	

Table 13. Stormwater Management Wet Pond Facility 'P31' Characteristics				
Design	Peak Flo	ws (L/s)	Maximum Elevation (m)	Maximum Storage (m3)
Storm	Future Inflow	Future Outflow		
25mm	922	32	178.84	1,746
2 Year	1,478	43	179.20	3,116
5 Year	1,765	48	179.39	3,856
10 Year	1,983	52	179.54	4,465
25 Year	2,245	107	179.71	5,183
100 Year	2,731	221	179.88	5,982

Table 14. SWM Facility 'P31' – MECP Quality Requirements Comparison			
SWM Facility Characteristic	MECP Requirement	Provided by SWM Facility	
Permanent Pool Volume (m ³) - minimum	2,497 (min)	2,733	
Extended Detention Volume (m ³) – <i>minimum</i>	2,114 (min)	4,692	
Total Quality + Detention Storage (m ³) – <i>minimum</i>	4,615 (min)	7,425	
Drawdown Time (hr) – minimum	24 (min)	26	
Forebay Length (m) – minimum	29.30 (min)	33	
Forebay Width (m) – minimum	3.66 (min)	4.10	
Average Forebay Velocity (m/s) – maximum	0.15 (max)	0.07	
Cleanout Frequency (years) - minimum	10 (min)	10	

As shown in the above tables, Facilities P30 and P31 have adequate capacity to provide stormwater management quantity and quality controls in accordance with MECP requirements and the requirements of the Implementation Plan.

5.3.3 Block 4

As shown in Figure 1, Block 4 consists of multiple properties owned by a single owner for which UCC is providing engineering services separated by a property for which there is not expected to be a future Planning Act Application submitted in the near future.

The area fronting on Rice Road will be consolidated into multiple properties that will be subject to separate applications for Site Plan Approval. The stormwater management facility characteristics for quantity control (storage) within these areas are not presently known and have therefore been included at existing conditions. Stormwater management quality controls will also be provided in accordance with the Implementation Plan.

For the area fronting onto Quaker Road, it is proposed to constuct a single communal wet pond SWM Facility (P50) to provide quality and quantity controls for Areas A52, A53, and A54 prior to discharging to the Towpath Drain.

Additionally, there is an existing catchment area within these lands that drain to the existing unnamed tributary to the Welland Recreational Canal that was constructed as part of the College Park Subdivision.

For the purposes of this Stormwater Management Plan, it was assumed that the majority of this area will convey future stormwater flows to the Towpath Drain. However, a separate SWM Plan will be submitted outlining the detailed calculations for this Block to ensure that future stormwater flows to each watercourse are controlled to existing levels.

Table 15 and 16 below summarize the design characteristics for Facility P50.

Table 15. Stormwater Management Wet Pond Facility 'P50' Characteristics				
Design	Peak Flo	ws (L/s)	Maximum	Maximum Storage (m3)
Storm	Future Inflow	Future Outflow	Elevation (m)	
25mm	1,227	9	182.40	2,607
2 Year	1,923	17	182.70	4,589
5 Year	2,285	20	182.85	5,617
10 Year	2,514	21	182.96	6,474
25 Year	2,924	23	183.13	7,762
100 Year	3,539	132	183.33	9,342

Table 16. SWM Facility 'P50' – MECP Quality Requirements Comparison			
SWM Facility Characteristic	MECP Requirement	Provided by SWM Facility	
Permanent Pool Volume (m³) - minimum	3,287 (min)	5,743	
Extended Detention Volume (m ³) – <i>minimum</i>	2,782 (min)	7,895	
Total Quality + Detention Storage (m ³) – minimum	6,072 (min)	13,638	
Drawdown Time (hr) – minimum	24 (min)	99	
West Forebay			
Forebay Length (m) – minimum	12.42 (min)	18.50	
Forebay Width (m) – minimum	1.55 (min)	3.80	
Average Forebay Velocity (m/s) – maximum	0.15 (max)	0.04	
Cleanout Frequency (years) - minimum	10 (min)	11	
East Forebay			
Forebay Length (m) – minimum	6.98 (min)	18.50	
Forebay Width (m) – minimum	0.87 (min)	3.80	
Average Forebay Velocity (m/s) – maximum	0.15 (max)	0.03	
Cleanout Frequency (years) - minimum	10 (min)	20	

As shown in the above tables, Facility P50 has adequate capacity to provide stormwater management quantity and quality controls in accordance with MECP requirements and the requirements of the Implementation Plan.

5.3.4 Block 5

As shown in Figure 1, Block 5 consists of lands owned by multiple owners for which UCC is providing engineering services and will include a single communal wet pond SWM Facility (P40) providing quality and quantity controls for the Areas A40 to A45. A separate SWM Plan will be submitted outlining the detailed calculations for this Block.

Table 17 and 18 below summarize the design characteristics for Facility P40.

Table 17. Stormwater Management Wet Pond Facility 'P40' Characteristics					
Design	Peak Flows (L/s)		Maximum	Maximum	
Storm	Future Inflow	Future Outflow	Elevation (m)	Storage (m3)	
25mm	1,513	41	186.59	3,005	
2 Year	2,374	64	187.04	5,502	
5 Year	2,832	72	187.27	6,887	
10 Year	3,124	129	187.42	7,854	
25 Year	3,648	198	187.60	9,121	
100 Year	4,453	430	187.86	10,981	

Table 18. SWM Facility 'P40' – MECP Quality Requirements Comparison					
SWM Facility Characteristic	MECP Requirement	Provided by SWM Facility			
Permanent Pool Volume (m ³) - minimum	4,297 (min)	4,612			
Extended Detention Volume (m ³) – <i>minimum</i>	3,593 (min)	7,091			
Total Quality + Detention Storage (m ³) – <i>minimum</i>	7,890 (min)	11,703			
Drawdown Time (hr) – minimum	24 (min)	30			
West Forebay					
Forebay Length (m) – minimum	23.34 (min)	25.00			
Forebay Width (m) – minimum	2.92 (min)	5.20			
Average Forebay Velocity (m/s) – maximum	0.15 (max)	0.07			
Cleanout Frequency (years) - minimum	10 (min)	10			
East Forebay					
Forebay Length (m) – minimum	14.14 (min)	25.00			
Forebay Width (m) – minimum	1.77 (min)	5.00			
Average Forebay Velocity (m/s) – maximum	0.15 (max)	0.05			
Cleanout Frequency (years) - minimum	10 (min)	10			

As shown in the above tables, Facility P40 has adequate capacity to provide stormwater management quantity and quality controls in accordance with MECP requirements and the requirements of the Implementation Plan.

5.3.5 Existing and Future Peak Flow Comparison

As summarized in Table 19 below, the proposed SWM Facilities (P10 through P50) can provide adequate stormwater quantity controls to control future flows to the existing levels identified in the Implementation Plan at each identified outlet along the Towpath Drain during each storm event.

Table 19. Im	pacts of SWM Facili	ities on Peak Flows at O	utlets A through D					
Design Starm	Peak Flow (m ³ /s)							
Design Storm	Existing	Change						
Uı	ostream of Rice Road	d Culvert Crossing – Ou	tlet A1					
2 Year	1.317	0.983	-25.4%					
5 Year	1.589	1.185	-25.4%					
10 Year	1.800	1.344	-25.3%					
25 Year	2.099	1.583	-24.6%					
100 Year	2.558	1.908	-25.4%					
Downstream of Rice Road Culvert Crossing – Outlet A2								
2 Year	3.301	2.916	-11.7%					
5 Year	4.194	3.502	-16.5%					
10 Year	4.777	3.959	-17.1%					
25 Year	5.619	4.621	-17.8%					
100 Year	6.987	5.662	-19.0%					
To	wpath Drain Upstre	am of Existing PSW – O	outlet B					
2 Year	3.425	3.353	-2.1%					
5 Year	4.367	4.015	-8.1%					
10 Year	4.977	4.532	-8.9%					
25 Year	5.863	5.284	-9.9%					
100 Year	7.305	6.464	-11.5%					
Dow	nstream of First Ave	enue Culvert Crossing –	Outlet C					
2 Year	4.035	4.031	-0.1%					
5 Year	5.176	4.834	-6.6%					
10 Year	5.914	5.467	-7.6%					
25 Year	7.005	6.402	-8.6%					
100 Year	8.781	7.881	-10.2%					
Ups	tream of Niagara St	reet Culvert Crossing –	Outlet D					
2 Year	4.509	4.177	-7.4%					
5 Year	5.835	5.016	-14.0%					
10 Year	6.678	5.677	-15.0%					
25 Year	7.938	6.649	-16.2%					
100 Year	9.995	8.188	-18.1%					

6.0 SEDIMENT AND EROSION CONTROL

Sediment controls are required during construction. The proposed extended detention facility can be used for this purpose. Therefore, the proposed constructed wet pond facility should be constructed prior to the facility for sediment control during construction.

The following additional erosion and sediment controls will also be implemented during construction:

- Install silt control fencing along the limits of construction where overland flows will flow beyond the limits of the development or into downstream watercourse.
- Re-vegetate disturbed areas as soon as possible after grading works have been completed.
- Lot grading and siltation controls plans will be provided with sediment and erosion control measures to the appropriate agencies for approval during the final design stage.
- The Stormwater management facility be cleaned after construction prior to assumption by municipality.

7.0 STORMWATER MANAGEMENT FACILITY MAINTENANCE

7.1 Oil/Grit Separator

The future owners of a Hydroworks facility are provided with a Owner's Manual, which explains the function, maintenance requirements and procedures for this facility. In addition to the Owner's Manual, a site inspection report sheet is enclosed in Appendix D for future reference and maintenance activities.

Generally, the sediment which is removed from the oil/grit separator will not be contaminated to the point that it would be classified as hazardous waste. However, the sediment should be tested to determine disposal options. The Ministry of Environment, Conservation and Parks publishes sediment disposal guidelines which should be consulted for current information pertaining to the exact parameters and acceptable levels for the various disposal options.

The function of the proposed stormwater quality protection facility, a stormwater oil/grit separator, will require maintenance on a regular basis. Areas prone to oil spills should be inspected frequently. The following is a summary of the maintenance activities required.

Regular inspections of the stormwater maintenance hole (MH) oil/grit interceptor will indicate whether maintenance is required. Post-Construction the separator should be inspected every six months during the first year to establish the rate of sediment accumulation. If the unit is subject to oil spills or runoff from unstabilized sites it should be inspected more frequently.

Points of regular inspections are as follows:

- a) Is there sediment in the separator sump? The level of sediment can be measured from the surface without entry into the oil/grit separator with a Sludge Judge, Core Pro, AccuSludge or equivalent sampling device that allows the submerged sediment to be sampled. These clear samplers are equipped with a ball value that allows the inspector to get a core of the contents in the sump. Two or three should be taken in different areas of the sump to ensure samples are accurate.
- b) Is there oil in the separator sump? This can usually be seen from the surface and can be physically checked by lowering a sludge Judge about 300mm below the surface of the water and removing it. If an appreciable amount of oil has been captured, an oil layer will be floating on top of the water sample. The separator should be cleaned if an appreciable amount of oil (2.5 centimeters) has been captured.
- c) Is there debris or trash in the separator? This can be observed from the surface without entry into the unit. If a significant amount of trash has been captured, the unit should be cleaned to ensure it continues to operate at peak capacity.
- d) Completion of the Inspection Report (a sample report is included in Appendix D for reference purposes). These reports will provide details about the operation and maintenance requirements for this type of stormwater quality device. After an evaluation period (usually 2 years) this information will be used to maximize efficiency and minimize the costs of operation and maintenance for the maintenance hole oil/grit separator.

Typically, a stormwater MH oil/grit separators are cleaned out using vacuum pumping. No entry into the unit is required for maintenance. Cleaning should occur annually or whenever the accumulation reaches 15 percent of the sediment storage and after any major spills have occurred. The manufacturer provides an installation certificate which contains th separators capacities and sediment depths requiring maintenance. Oil levels greater than 2.5 centimeters should be removed immediately by a licensed waste management firm.

The preferred option is an off-site disposal, arranged by a licensed waste management firm.

The future owners of a Hydroworks facility are provided with an Owner's Manual, which explains the function, maintenance requirements and procedures for the facility. In addition to the Owner's Manual, a site inspection report sheet is attached for future reference and maintenance activities.

7.2 Dry Pond Facility

The dry detention stormwater management facility for this development may subject to frequent wetting and deposition of sediments as a result of frequent low intensity storm events. The purpose of the dry detention area is detain peak flows to existing levels. For the initial operation period of the stormwater management facility, the required frequency of maintenance is not definitively known and many of the maintenance tasks will be performed on an 'as required' basis. For example, during the construction phase of the development there will be a greater potential for increased maintenance frequency, which depends on the maintenance of the adjacent oil/grit separator and the effectiveness of the sediment and erosion control techniques employed.

Inspections of the dry detention areas will indicate whether or not maintenance is required. Inspections should be made after every significant storm during the first two years of operation or until all development is completed to ensure the dry detention area is functioning properly. This may translate into an average of six inspections per year. Once all building activity is finalized, inspections shall be performed annually.

The following points should be addressed during inspections of the facility:

- a) Standing water above the ditch inlet a day or more after a storm may indicate a blockage in the orifices in the control structure. The blockage may be caused by trash or sediment and a visual inspection would be required to determine the cause.
- b) The vegetation around the dry detention area should be inspected to ensure its aesthetics. Visual inspections will indicate whether replacement of plantings are required.
- c) The dry detention area has been created by excavating a detention area and the integrity of the embankment should be periodically checked to ensure that the side slopes have not sloughed.

Trash removal is an integral part of maintenance and an annual cleanup, usually in the spring, is a minimum requirement. After this, trash removal is performed on an as required basis on observation of trash build-up during inspections.

Grass cutting is a maintenance activity that is done solely for aesthetic purposes. It is recommended that grass cutting be limited to the upper embankment areas. It should be note that municipal by-laws may require regular grass maintenance for weed control

7.3 Wet Pond Facility

Maintenance is a necessary and important aspect of urban stormwater quality and quantity measures such as constructed wetlands. Many pollutants (i.e. nutrients, metals, bacteria, etc.) bind to sediment and therefore removal of sediment on a scheduled basis is required.

The wet pond for this development is subject to frequent wetting and deposition of sediments as a result of frequent low intensity storm event. The purpose of the wet pond is to improve post development sediment and contaminant loadings by detaining the 'first flush' flow for a 24 hour period. For the initial operation period of the stormwater management facility, the required frequency of maintenance is not definitively known and many of the maintenance tasks will be performed on an 'as required' basis. For example, during the home construction phase of the development there will be a greater potential for increased maintenance frequency, which depends on the effectiveness of sediment and erosion control techniques employed.

Inspections of the wet pond will indicate whether or not maintenance is required. Inspections should be made after every significant storm during the first two years of operation or until all development is completed to ensure the wet pond is functioning properly. This may translate into an average of six inspections per year. Once all building activity is finalized, inspections shall be performed annually. The following points should be addressed during inspections of the facility.

- a) Standing water above the inlet storm sewer invert a day or more after a storm may indicate a blockage in the reverse slope pipe or orifice. The blockage may be caused by trash or sediment and a visual inspection would be required to determine the cause.
- b) The vegetation around the wet pond should be inspected to ensure its function and aesthetics. Visual inspections will indicate whether replacement of plantings are required. A decline in vegetation habitat may indicate that other aspects of the constructed wet pond are operating improperly, such as the detention times may be inadequate or excessive.
- c) The accumulation of sediment and debris at the wet pond inlet sediment forebay or around the high water line of the wet pond should be inspected. This will indicate the need for sediment removal or debris clean up.
- d) The wet pond has been created by excavating a detention area. The integrity of the embankments should be periodically checked to ensure that it remains watertight and the side slopes have not sloughed.

Grass cutting is a maintenance activity that is done solely for aesthetic purposes. It is recommended that grass cutting be eliminated. It should be noted that municipal by-laws may require regular grass maintenance for weed control.

Trash removal is an integral part of maintenance and an annual clean-up, usually in the spring, is a minimum requirement. After this, trash removal is performed as required basis on observation of trash build-up during inspections.

To ensure long term effectiveness, the sediment that accumulates in the forebay area should be removed periodically to ensure that sediment in not deposited throughout the facility. For sediment removal operations, typical grading/excavating equipment should be used to remove sediment from the inlet forebay and detention areas. Care should be taken to ensure that limited damage occurs to existing vegetation and habitat.

Generally, the sediment which is removed from the detention pond will not be contaminated to the point that it would be classified as hazardous waste. However, the sediment should be tested to determine the disposal options.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of this study, the following conclusions are offered:

- Infiltration techniques are not suitable for this site as the primary control facility due to the low soil infiltration rates.
- One proposed stormwater management wet pond facility and a dry pond and oil/grit separator will provide stormwater quality, quantity and erosion controls to the proposed development.
- Multiple stormwater management facilities external to the subject lands will provide stormwater quality, quantity and erosion controls for the respective catchment areas, to be addressed in separate SWM Reports as part of forthcoming Planning Act Applications.
- Various lot level vegetative stormwater management practices can be implemented to enhance stormwater quality.
- This report was prepared in accordance with the provincial guidelines contained in "Stormwater Management Planning and Design Manual, March 2003".

The above conclusions lead to the following recommendations:

- That the stormwater management criteria established in this report be accepted.
- That the wet pond facility and dry pond and Oil/Grit Separator be constructed to provide stormwater quality protection to MECP *Enhanced* Protection levels and quantity controls as outlined in this report.
- That the external SWM Facilities be constructed to the criteria established in the separately submitted SWM Reports.
- That additional lot level controls and vegetative stormwater management practices as described previously in this report be implemented.
- That sediment and erosion controls during construction as described in this report be implemented.

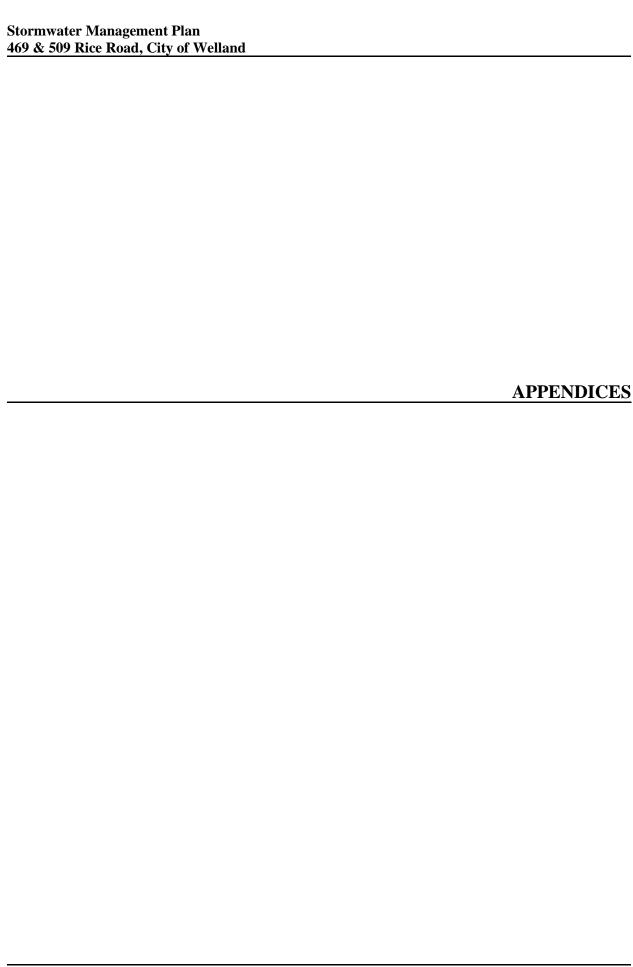
Respectfully Submitted,

B. Kaptuyn

B. J. KAPTEYN

100509155

Brendan Kapteyn, P.Eng.



Stormwater Management Plan	
469 & 509 Rice Road, City of Welland	
	APPENDIX A
	Existing Conditions MIDUSS Output File

Upper Canada Consultants

	Output File (4.7) EX.OUT opened 2024-04-03 15:59 Units used are defined by G = 9.810	4	CATCHMENT 5.000 ID No. 99999
	24 144 10.000 are MAXDT MAXHYD & DTMIN values		5.310 Area in hectares
35	Licensee: UPPER CANADA CONSULTANTS COMMENT		188.000 Length (PERV) metres 1.000 Gradient (%)
	4 line(s) of comment		10.000 Per cent Impervious
	STORMWATER MANAGEMENT PLAN QUAKER ROAD		188.000 Length (IMPERV) .000 %Imp. with Zero Dpth
	CITY OF WELLAND		1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
35	EXISTING CONDITIONS COMMENT		.250 Manning "n" 74.000 SCS Curve No or C
	<pre>3 line(s) of comment ************************************</pre>		.100 Ia/S Coefficient
	25mm STORM EVENT		8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reser
2	*******		.051 1.879 .000 .000 c.m/s .098 .806 .169 C perv/imperv/total
2	STORM 1 1=Chicago;2=Huff;3=User;4=Cdn1hr;5=Historic	15	ADD RUNOFF
	512.000 Coefficient a		.051 1.930 .000 .000 c.m/s
	6.000 Constant b (min) .800 Exponent c	4	CATCHMENT 6.000 ID No. 99999
	.450 Fraction to peak r		43.410 Area in hectares 538.000 Length (PERV) metres
	240.000 Duration 240 min 25.035 mm Total depth		1.000 Gradient (%)
3	IMPERVIOUS		9.000 Per cent Impervious
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .015 Manning "n"		538.000 Length (IMPERV) .000 %Imp. with Zero Dpth
	98.000 SCS Curve No or C		1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	.100 Ia/S Coefficient .518 Initial Abstraction		.250 Manning "n" 74.000 SCS Curve No or C
35	COMMENT		.100 Ia/S Coefficient
	<pre>3 line(s) of comment **************</pre>		8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reser
	AREA NORTH OF QUAKER		.255 1.930 .000 .000 c.m/s
4	************ CATCHMENT	35	.098 .803 .162 C perv/imperv/total
-	1.000 ID No. 99999	33	3 line(s) of comment
	15.820 Area in hectares 325.000 Length (PERV) metres		****************
	1.000 Gradient (%)		TOTAL FLOW AT FIRST AVENUE
	35.000 Per cent Impervious	15	ADD RUNOFF
	325.000 Length (IMPERV) .000 %Imp. with Zero Dpth	9	.255 2.185 .000 .000 c.m/s ROUTE
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>	_	.000 Conduit Length
	.250 Manning "n" 74.000 SCS Curve No or C		.000 No Conduit defined .000 Zero lag
	.100 Ia/S Coefficient		.000 Beta weighting factor
	8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		.000 Routing timestep 0 No. of sub-reaches
	.499 .000 .000 .000 c.m/s		.255 2.185 2.185 .000 c.m/s
15	.098 .805 .346 C perv/imperv/total ADD RUNOFF	17	COMBINE
15	.499 .499 .000 .000 c.m/s		1 Junction Node No. .255 2.185 2.185 2.185 c.m/s
4	CATCHMENT	14	START
	2.000 ID No. 99999 13.570 Area in hectares	35	1 1=Zero; 2=Define COMMENT
	301.000 Length (PERV) metres		<pre>3 line(s) of comment</pre>
	1.000 Gradient (%) 25.000 Per cent Impervious		********** AREA SOUTH OF QUAKER
	301.000 Length (IMPERV)		******
	.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat	4	CATCHMENT 7.000 ID No. 99999
	.250 Manning "n"		16.470 Area in hectares
	74.000 SCS Curve No or C		331.000 Length (PERV) metres
	.100 Ia/S Coefficient 8.924 Initial Abstraction		1.000 Gradient (%) 10.000 Per cent Impervious
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>		331.000 Length (IMPERV)
	.309 .499 .000 .000 c.m/s .098 .802 .274 C perv/imperv/total		.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
35	COMMENT		.250 Manning "n"
	<pre>3 line(s) of comment ************************************</pre>		74.000 SCS Curve No or C .100 Ia/S Coefficient
	FLOW AT RICE ROAD		8.924 Initial Abstraction
15	ADD RUNOFF		<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reser .149 .000 2.185 2.185 c.m/s</pre>
	.309 .808 .000 .000 c.m/s		.098 .805 .169 C perv/imperv/total
4	CATCHMENT 3.000 ID No. 99999	15	ADD RUNOFF .149 .149 2.185 2.185 c.m/s
	14.520 Area in hectares	9	.149 .149 2.185 2.185 C.M/S ROUTE
	311.000 Length (PERV) metres 1.000 Gradient (%)		.000 Conduit Length
	1.000 Gradient (%) 35.000 Per cent Impervious		.000 No Conduit defined .000 Zero lag
	311.000 Length (IMPERV)		.000 Beta weighting factor
	.000 %Imp. with Zero Dpth Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		.000 Routing timestep 0 No. of sub-reaches
	.250 Manning "n"		.149 .149 .149 2.185 c.m/s
	74.000 SCS Curve No or C .100 Ia/S Coefficient	17	COMBINE 1 Junction Node No.
	8.924 Initial Abstraction		.149 .149 .149 2.334 c.m/s
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>	18	CONFLUENCE 1 Junction Node No.
	.098 .803 .345 C perv/imperv/total		.149 2.334 .149 .000 c.m/s
15	ADD RUNOFF .461 1.269 .000 .000 c.m/s	4	CATCHMENT 8.000 ID No. 99999
4	CATCHMENT 1.209 .000 C.m/s		42.190 Area in hectares
	4.000 ID No. 99999		530.000 Length (PERV) metres
	45.500 Area in hectares 551.000 Length (PERV) metres		1.000 Gradient (%) 9.000 Per cent Impervious
	1.000 Gradient (%)		530.000 Length (IMPERV)
	21.000 Per cent Impervious 551.000 Length (IMPERV)		.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	.000 %Imp. with Zero Dpth		.250 Manning "n"
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"		74.000 SCS Curve No or C .100 Ia/S Coefficient
	74.000 SCS Curve No or C		8.924 Initial Abstraction
	.100 Ia/S Coefficient 8.924 Initial Abstraction		1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reser
	Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		.250 2.334 .149 .000 c.m/s .098 .803 .162 C perv/imperv/total
	.611 1.269 .000 .000 c.m/s	35	COMMENT
15	ADD RUNOFF		<pre>3 line(s) of comment ************************************</pre>
	.611 1.879 .000 .000 c.m/s		TOTAL FLOW AT NIAGARA STREET
35	COMMENT 3 line(s) of comment	15	**************************************
	******		.250 2.584 .149 .000 c.m/s
	AREA SOUTH OF QUAKER	27	HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen
			Volume = .1074966E+05 c.m
		14	START 1 1=Zero; 2=Define
			1 1-Delot 2-Deline

35	COMMENT					4	CATCHMEN	orr .				
55		e(s) of comment				1	5.000	ID No.	99999			
	******						5.310	Area in	hectares			
		FORM EVENT					188.000		(PERV) metr	res		
	******	***					1.000	Gradien				
2	STORM 1	1=Chicago;2=Huff;3=	TT00x:4-Cd	nlhr:E-Wigtori			188.000		t Imperviou (IMPERV)	ıs		
	755.000	Coefficient a	ober / 4-ca	HIHI / J-HIBCOII			.000		ith Zero Dr	oth		
	8.000	Constant b (min	1)				1	Option	1=SCS CN/C;	2=Horton	; 3=Green-Ampt;	4=Repeat
	.789	Exponent c					.250	Manning	"n"			
	.450 240.000	Fraction to peak r Duration 240 min					74.000		ve No or C			
		Duration 240 min 38.971 mm Total					8.924		efficient Abstractio	nn.		
3	IMPERVIOU		depen				1				glr; 3=SWM HYD;	4=Lin. Reserv
_	1	Option 1=SCS CN/C;	2=Horton;	3=Green-Ampt;	4=Repeat				3.219	.149	.000 c.m/s	
	.015	Manning "n"						.194	.863	.261	C perv/imperv/	total
	98.000	SCS Curve No or C				15	ADD RUNG					
	.100	Ia/S Coefficient				4			3.301	.149	.000 c.m/s	
35	.518 COMMENT	Initial Abstraction				4	CATCHMEN 6.000	ID No.	00000			
-		e(s) of comment					43.410		hectares			
	******						538.000		(PERV) metr	res		
		TH OF QUAKER					1.000	Gradien	ıt (%)			
	******						9.000		t Imperviou	ıs		
4	CATCHMENT 1.000						538.000		(IMPERV)	+ h		
	15.820	ID No. 99999 Area in hectares					1		ith Zero Dp 1=SCS CN/C;		; 3=Green-Ampt;	4=Repeat
	325.000	Length (PERV) metre	s				.250	Manning				
	1.000	Gradient (%)					74.000	SCS Cur	ve No or C			
	35.000	Per cent Impervious					.100		efficient			
	325.000	Length (IMPERV)					8.924		Abstractio		1 . 2 0174 1777	4
	.000	%Imp. with Zero Dpt Option 1=SCS CN/C;		2-Croon Ampt:	4-Bonost		1		1=Triangir; 3.301	.149	glr; 3=SWM HYD; .000 c.m/s	4=Lin. Reserv
	.250	Manning "n"	z-nor com,	3-GI een-Ampe,	4-Repeat			.194	.868	.255	C perv/imperv/	total
	74.000	SCS Curve No or C				35	COMMENT		.000	.233	c pcrv/rmpcrv/	COCCL
	.100	Ia/S Coefficient						ne(s) of c	omment			
	8.924	Initial Abstraction						******				
	1	Option 1=Trianglr;			4=Lin. Reserv			LOW AT FIR				
			.149	.000 c.m/s	1	1.5		*******	******			
15	ADD RUNOF		.427	C perv/imperv/	total	15	ADD RUNG		2 706	1.40	000/-	
13		813 .813	.149	.000 c.m/s		9	ROUTE	.485	3.786	.149	.000 c.m/s	
4	CATCHMENT	r .013		.000 0.1111/10		,	.000	Conduit	Length			
	2.000	ID No. 99999					.000		luit defined	1		
	13.570	Area in hectares					.000	Zero la	g			
	301.000	Length (PERV) metre	s				.000	Beta we	ighting fac	ctor		
	1.000	Gradient (%)					.000		timestep			
	25.000	Per cent Impervious					0		sub-reaches			
	301.000 .000	Length (IMPERV) %Imp. with Zero Dpt	h			17	COMBINE	. 485	3.786	3.786	.000 c.m/s	
	1	Option 1=SCS CN/C;		3=Green-Ampt;	4=Repeat	17		nction Nod	le No.			
	.250	Manning "n"								3.786	3.786 c.m/s	
	74.000	SCS Curve No or C				14	START					
	.100	Ia/S Coefficient						Zero; 2=De	fine			
	8.924	Initial Abstraction				35	COMMENT					
	1	Option 1=Trianglr; 504 .813	2=Rectang	<pre>1r; 3=SWM HYD; .000 c.m/s</pre>	4=Lin. Reserv		3 lir	ne(s) of c	omment			
		194 .862		.000 C.m/s C perv/imperv/	total			JTH OF QUA	VFD			
35	COMMENT	.002	.501	c perv/imperv/	cocar		******		исыс			
		e(s) of comment				4	CATCHMEN	T				
	******	*****					7.000	ID No.	99999			
	FLOW AT F						16.470	Area in	hectares			
		******					331.000		(PERV) metr	res		
15	ADD RUNOF		140	000/-			1.000	Gradien				
4	CATCHMENT	504 1.317	.149	.000 c.m/s			10.000 331.000		t Imperviou	ıs		
-	3.000	ID No. 99999					.000		(IMPERV) with Zero Dr	oth		
	14.520	Area in hectares					1				; 3=Green-Ampt;	4=Repeat
	311.000	Length (PERV) metre	s				.250	Manning	"n"			
	1.000	Gradient (%)					74.000		ve No or C			
	35.000	Per cent Impervious					.100		efficient			
	.000	Length (IMPERV) %Imp. with Zero Dpt	h				8.924		Abstractio		alm: 3-cmm nan.	A-Tin Boson
	.000	Option 1=SCS CN/C;		3=Green-Amnt:	4=Reneat			.249		3.786	glr; 3=SWM HYD; 3.786 c.m/s	4=LIN. Reserv
	.250	Manning "n"	2-1101 00117	J-Green Amper	4-Repeat			.194	.858	.261	C perv/imperv/	total
	74.000	SCS Curve No or C				15	ADD RUNG				- P	
	.100	Ia/S Coefficient						. 249	.249	3.786	3.786 c.m/s	
	8.924	Initial Abstraction		1 2 com:	4-7:	9	ROUTE					
	1	Option 1=Trianglr;			4=Lin. Reserv		.000		Length			
		749 1.317 194 .861	.149	.000 c.m/s C perv/imperv/	total		.000	No Cond Zero la	luit defined	1		
15	ADD RUNOF			- beralimberal			.000		g ighting fac	tor		
			.149	.000 c.m/s			.000		timestep	-		
4	CATCHMENT	r					0	No. of	sub-reaches			
	4.000	ID No. 99999						.249	.249	.249	3.786 c.m/s	
	45.500 551.000	Area in hectares				17	COMBINE					
	1.000	Length (PERV) metre Gradient (%)	٥					nction Nod .249	le No. .249	. 249	4.035 c.m/s	
	21.000	Per cent Impervious				18	CONFLUE		. 437	.447	4.030 C.III/S	
	551.000	Length (IMPERV)				10		nction Nod	le No.			
	.000	%Imp. with Zero Dpt						. 249	4.035	.249	.000 c.m/s	
	1	Option 1=SCS CN/C;	2=Horton;	3=Green-Ampt;	4=Repeat	4	CATCHMEN		00000			
	.250	Manning "n"					8.000	ID No.				
	74.000 .100	SCS Curve No or C Ia/S Coefficient					42.190 530.000		hectares (PERV) metr	-ec		
	8.924	Initial Abstraction					1.000	Gradien				
	1	Option 1=Trianglr;	2=Rectang	lr; 3=SWM HYD;	4=Lin. Reserv		9.000		ıt Imperviou	ıs		
	1.1		.149	.000 c.m/s	_		530.000	Length	(IMPERV)			
1 -			.336	C perv/imperv/	total		.000		ith Zero Dr			
15	ADD RUNOF		.149	.000 c.m/s			1			2=Horton	; 3=Green-Ampt;	4=Repeat
35	COMMENT	153 3.219	. 1 2 3	.000 C.M/S			.250 74.000	Manning SCS Cur	"n" ve No or C			
		e(s) of comment					.100		efficient			
	******	***					8.924		Abstractio	on		
		TH OF QUAKER					1	Option	1=Trianglr;	2=Rectan	glr; 3=SWM HYD;	4=Lin. Reserv
	******							. 474	4.035	.249	.000 c.m/s	
								.194	.867	.255	C perv/imperv/	total
						35	COMMENT	/-> ^				
								ne(s) of c	omment			
									GARA STREET			
									WARA SIREEI			
						15	ADD RUNG					
								. 474	4.509	.249	.000 c.m/s	
						27	HYDROGR#	APH DISPLA	Υ			
									o/Hydrograp	oh chosen		
						* *		= .23622	02E+05 c.m			
						14	START 1 1=2	Zero; 2=De	fine			
								20	-			

35	COMMENT	4	CATCHMENT
	3 line(s) of comment *********		5.000 ID No. 99999 5.310 Area in hectares
	5-YEAR STORM EVENT		188.000 Length (PERV) metres
	******		1.000 Gradient (%)
2	STORM		10.000 Per cent Impervious
	1 l=Chicago;2=Huff;3=User;4=Cdnlhr;5=Historic 830.000 Coefficient a		188.000 Length (IMPERV) .000 %Imp. with Zero Dpth
	7.300 Constant b (min)		1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	.777 Exponent c		.250 Manning "n"
	.450 Fraction to peak r 240.000 Duration 240 min		74.000 SCS Curve No or C .100 Ia/S Coefficient
	45.874 mm Total depth		8.924 Initial Abstraction
3	IMPERVIOUS		Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		.101 4.093 .249 .000 c.m/s .236 .875 .300 C perv/imperv/total
	.015 Manning "n" 98.000 SCS Curve No or C	15	ADD RUNOFF
	.100 Ia/S Coefficient		.101 4.194 .249 .000 c.m/s
	.518 Initial Abstraction	4	CATCHMENT
35	COMMENT 3 line(s) of comment		6.000 ID No. 99999 43.410 Area in hectares
	*********		538.000 Length (PERV) metres
	AREA NORTH OF QUAKER		1.000 Gradient (%)
	*****		9.000 Per cent Impervious
4	CATCHMENT 1.000 ID No. 99999		538.000 Length (IMPERV) .000 %Imp. with Zero Dpth
	15.820 Area in hectares		1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	325.000 Length (PERV) metres		.250 Manning "n"
	1.000 Gradient (%)		74.000 SCS Curve No or C
	35.000 Per cent Impervious 325.000 Length (IMPERV)		.100 Ia/S Coefficient 8.924 Initial Abstraction
	.000 %Imp. with Zero Dpth		8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		.676 4.194 .249 .000 c.m/s
	.250 Manning "n"		.236 .885 .294 C perv/imperv/total
	74.000 SCS Curve No or C	35	COMMENT
	.100 Ia/S Coefficient 8.924 Initial Abstraction		<pre>3 line(s) of comment ************************************</pre>
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>		TOTAL FLOW AT FIRST AVENUE
	.980 .000 .249 .000 c.m/s		*******
	.236 .880 .461 C perv/imperv/total	15	ADD RUNOFF
15	ADD RUNOFF .980 .980 .249 .000 c.m/s	9	.676 4.870 .249 .000 c.m/s ROUTE
4	CATCHMENT	,	.000 Conduit Length
	2.000 ID No. 99999		.000 No Conduit defined
	13.570 Area in hectares		.000 Zero lag
	301.000 Length (PERV) metres 1.000 Gradient (%)		.000 Beta weighting factor
	25.000 Per cent Impervious		.000 Routing timestep 0 No. of sub-reaches
	301.000 Length (IMPERV)		.676 4.870 4.870 .000 c.m/s
	.000 %Imp. with Zero Dpth	17	COMBINE
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"		Junction Node No.
	74.000 SCS Curve No or C	14	.676 4.870 4.870 c.m/s START
	.100 Ia/S Coefficient		1 1=Zero; 2=Define
	8.924 Initial Abstraction	35	COMMENT
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		<pre>3 line(s) of comment</pre>
	.608		*********** AREA SOUTH OF QUAKER
35	COMMENT		AREA SOUTH OF QUARER
	<pre>3 line(s) of comment</pre>	4	CATCHMENT
	**********		7.000 ID No. 99999
	FLOW AT RICE ROAD ************************************		16.470 Area in hectares
15	ADD RUNOFF		331.000 Length (PERV) metres 1.000 Gradient (%)
13	.608 1.589 .249 .000 c.m/s		10.000 Gradient (%) 10.000 Per cent Impervious
4	CATCHMENT		331.000 Length (IMPERV)
	3.000 ID No. 99999		.000 %Imp. with Zero Dpth
	14.520 Area in hectares 311.000 Length (PERV) metres		1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	1.000 Gradient (%)		.250 Manning "n" 74.000 SCS Curve No or C
	35.000 Per cent Impervious		.100 Ia/S Coefficient
	311.000 Length (IMPERV)		8.924 Initial Abstraction
	.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
	.250 Manning "n"		.306 .000 4.870 4.870 c.m/s .236 .880 .300 C perv/imperv/total
	74.000 SCS Curve No or C	15	ADD RUNOFF
	.100 Ia/S Coefficient		.306 .306 4.870 4.870 c.m/s
	8.924 Initial Abstraction	9	ROUTE
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .902 1.589 .249 .000 c.m/s</pre>		.000 Conduit Length .000 No Conduit defined
	.236 .882 .462 C perv/imperv/total		.000 Zero lag
15	ADD RUNOFF		.000 Beta weighting factor
4	.902 2.491 .249 .000 c.m/s CATCHMENT		.000 Routing timestep 0 No. of sub-reaches
**	4.000 ID No. 99999		0 No. of sub-reaches .306 .306 .306 4.870 c.m/s
	45.500 Area in hectares	17	COMBINE
	551.000 Length (PERV) metres		Junction Node No.
	1.000 Gradient (%) 21.000 Per cent Impervious	18	.306 .306 .306 5.176 c.m/s CONFLUENCE
	551.000 Length (IMPERV)	10	1 Junction Node No.
	.000 %Imp. with Zero Dpth		.306 5.176 .306 .000 c.m/s
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat	4	CATCHMENT
	.250 Manning "n"		8.000 ID No. 99999 42.190 Area in hectares
			42.190 Area in hectares 530.000 Length (PERV) metres
	74.000 SCS Curve No or C .100 Ia/S Coefficient		
	.100 Ia/S Coefficient 8.924 Initial Abstraction		1.000 Gradient (%)
	.100 Ia/S Coefficient 8924 Initial Abstraction 1 Option 1=Triang1r; 2=Rectang1r; 3=SWM HYD; 4=Lin. Reserv		1.000 Gradient (%) 9.000 Per cent Impervious
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s		1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV)
15	.100 Ia/S Coefficient 8924 Initial Abstraction 1 Option 1=Triang1r; 2=Rectang1r; 3=SWM HYD; 4=Lin. Reserv		1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 %Imp. with Zero Dpth
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s 236 .885 .372 C perv/imperv/total ADD RUNOFF 1.602 4.093 .249 .000 c.m/s		1.000
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s .236 .885 .372 C perv/imperv/total ADD RUNOFF 1.602 4.093 .249 .000 c.m/s COMMENT		1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 % Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat 250 Manning "n" 74.000 SCS Curve No or C
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s 236 .885 .372 C perv/imperv/total ADD RUNOFF 1.602 4.093 .249 .000 c.m/s		1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1-SCS CN/C; 2-Horton; 3-Green-Ampt; 4-Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s .236 .885 .372 C perv/imperv/total ADD RUNOFF .1.602 4.093 .249 .000 c.m/s COMMENT 3 line(s) of comment		1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s 236 .885 .372 C perv/imperv/total ADD RUNOFF 1.602 4.093 .249 .000 c.m/s COMMENT 3 line(s) of comment		1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 % Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .659 5.176 .306 .000 c.m/s
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s .236 .885 .372 C perv/imperv/total ADD RUNOFF .1.602 4.093 .249 .000 c.m/s COMMENT 3 line(s) of comment		1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1-SCS CN/C; 2-Horton; 3-Green-Ampt; 4-Repeat 250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1-Trianglr; 2-Rectanglr; 3-SWM HYD; 4-Lin. Reserv .659 5.176 .306 .000 c.m/s .236 .885 .294 C perv/imperv/total
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s .236 .885 .372 C perv/imperv/total ADD RUNOFF .1.602 4.093 .249 .000 c.m/s COMMENT 3 line(s) of comment	35	1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 %*Imp. with Zero Dpth 1 Option 1-8CS CN/C; 2-Horton; 3-Green-Ampt; 4-Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1-Trianglr; 2-Rectanglr; 3-SWM HYD; 4-Lin. Reserv .659 5.176 .306 .000 c.m/s .236 .885 .294 C perv/imperv/total
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s .236 .885 .372 C perv/imperv/total ADD RUNOFF .1.602 4.093 .249 .000 c.m/s COMMENT 3 line(s) of comment	35	1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1-SCS CN/C; 2-Horton; 3-Green-Ampt; 4-Repeat 250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1-Trianglr; 2-Rectanglr; 3-SWM HYD; 4-Lin. Reserv .659 5.176 .306 .000 c.m/s .236 .885 .294 C perv/imperv/total
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s .236 .885 .372 C perv/imperv/total ADD RUNOFF .1.602 4.093 .249 .000 c.m/s COMMENT 3 line(s) of comment	35	1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 % Imp, with Zero Dpth 1 Option 1-SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat 2.50 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .659 5.176 .306 .000 c.m/s .236 .885 .294 C perv/imperv/total COMMENT 3 line(s) of comment TOTAL FLOW AT NIAGARA STREET
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s .236 .885 .372 C perv/imperv/total ADD RUNOFF .1.602 4.093 .249 .000 c.m/s COMMENT 3 line(s) of comment		1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .659 5.176 .306 .000 c.m/s .236 .885 .294 C perv/imperv/total COMMENT 3 line(s) of comment TOTAL FLOW AT NIAGARA STREET
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s .236 .885 .372 C perv/imperv/total ADD RUNOFF .1.602 4.093 .249 .000 c.m/s COMMENT 3 line(s) of comment	35	1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat 2.50 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .659 5.176 .306 .000 c.m/s .236 .885 .294 C perv/imperv/total COMMENT 3 line(s) of comment TOTAL FLOW AT NIAGARA STREET ADD RUNOFF
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s .236 .885 .372 C perv/imperv/total ADD RUNOFF .1.602 4.093 .249 .000 c.m/s COMMENT 3 line(s) of comment		1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1-SCS CN/C; 2-Horton; 3-Green-Ampt; 4-Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1-Trianglr; 2-Rectanglr; 3-SWM HYD; 4-Lin. Reserv .659 5.176 .306 .000 c.m/s .236 .885 .294 C perv/imperv/total COMMENT 3 line(s) of comment
115	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s .236 .885 .372 C perv/imperv/total ADD RUNOFF .1.602 4.093 .249 .000 c.m/s COMMENT 3 line(s) of comment	15	1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1-SCS CN/C; 2-Horton; 3-Green-Ampt; 4-Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1-Trianglr; 2-Rectanglr; 3-SWM HYD; 4-Lin. Reserv .659 5.176 .306 .000 c.m/s .236 .885 .294 C perv/imperv/total COMMENT 3 line(s) of comment
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s .236 .885 .372 C perv/imperv/total ADD RUNOFF .1.602 4.093 .249 .000 c.m/s COMMENT 3 line(s) of comment	15 27	1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 & Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .659 5.176 .306 .000 c.m/s .236 .885 .294 C perv/imperv/total COMMENT 3 line(s) of comment
	.100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.602 2.491 .249 .000 c.m/s .236 .885 .372 C perv/imperv/total ADD RUNOFF .1.602 4.093 .249 .000 c.m/s COMMENT 3 line(s) of comment	15	1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 %Imp, with Zero Dpth 1 Option 1-SCS CN/C; 2-Horton; 3-Green-Ampt; 4-Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1-Trianglr; 2-Rectanglr; 3-SWM HYD; 4-Lin. Reserv .659 5.176 .306 .000 c.m/s .236 .885 .294 C perv/imperv/total COMMENT 3 line(s) of comment

35	COMMENT					4	CATCHMEN					
	3 line(s	s) of comment *					5.000 5.310	ID No.	99999 hectares			
	10-YEAR STO					1	188.000		(PERV) metre	s		
	*******	*					1.000	Gradien				
2	STORM 1	1=Chicago;2=Huff;3=U	Jser;4=Cdn	lhr;5=Historic			188.000		t Impervious (IMPERV)			
	860.000	Coefficient a					.000	%Imp. w	ith Zero Dpt			
		Constant b (min) Exponent c)				.250	Manning		Z=Horton;	3=Green-Ampt;	4=kepeat
		Fraction to peak r					74.000		ve No or C			
		Duration 240 min 1.471 mm Total o	lepth				.100 8.924		efficient Abstraction			
3	IMPERVIOUS						1	Option	1=Trianglr;	2=Rectang	lr; 3=SWM HYD;	4=Lin. Reserv
		Option 1=SCS CN/C; 2 Manning "n"	2=Horton;	3=Green-Ampt; 4	=Repeat			117 267	4.660 .883	.306	.000 c.m/s C perv/imperv/t	otal
	98.000	SCS Curve No or C				15	ADD RUNO		.003	.520	o perv/imperv/e	0001
		Ia/S Coefficient Initial Abstraction				4	CATCHMEN		4.777	.306	.000 c.m/s	
35	COMMENT	INICIAL ADSCIACCION				4	6.000	ID No.	99999			
	3 line(s	s) of comment					43.410		hectares	_		
	AREA NORTH					-	1.000	Gradien	(PERV) metre	S		
	******	*					9.000	Per cen	t Impervious			
4	CATCHMENT 1.000	ID No. 99999				:	.000		(IMPERV) ith Zero Dpt	h		
	15.820	Area in hectares					1	Option	1=SCS CN/C;		3=Green-Ampt;	4=Repeat
		Length (PERV) metres Gradient (%)	3				.250 74.000	Manning SCS Cur	"n" ve No or C			
	35.000 I	Per cent Impervious					.100	Ia/S Co	efficient			
		Length (IMPERV) %Imp. with Zero Dpth					8.924		Abstraction		lr; 3=SWM HYD;	A-Lin Bosovi
	1 (Option 1=SCS CN/C; 2		3=Green-Ampt; 4	=Repeat			784	4.777	.306	.000 c.m/s	
		Manning "n"				35		267	.896	.323	C perv/imperv/t	otal
		SCS Curve No or C Ia/S Coefficient				35	COMMENT 3 lin	ne(s) of c	omment			
	8.924	Initial Abstraction					******	******	*****			
	1 (Option 1=Trianglr; 2 0 .000 .	2=Rectangl .306	r; 3=SWM HYD; 4	=Lin. Reserv		TOTAL FL	OW AT FIR	ST AVENUE			
	.26	7 .894 .		perv/imperv/to	tal	15	ADD RUNO					
15	ADD RUNOFF 1.110		. 306	000/-				784	5.561	.306	.000 c.m/s	
4	CATCHMENT	0 1.110 .	. 300	.000 c.m/s		9	ROUTE .000	Conduit	Length			
		ID No. 99999					.000	No Cond	uit defined			
		Area in hectares Length (PERV) metres					.000	Zero la Beta we	g ighting fact	or		
	1.000	Gradient (%)					.000		timestep	01		
		Per cent Impervious Length (IMPERV)					0		sub-reaches 5.561 5	.561	.000 c.m/s	
		%Imp. with Zero Dpth	1			17	COMBINE.	704	5.501	.501	.000 C.m/s	
		Option 1=SCS CN/C; 2	2=Horton;	3=Green-Ampt; 4	=Repeat			ction Nod		5.61	F F63 /	
		Manning "n" SCS Curve No or C				14	START	784	5.561 5	.561	5.561 c.m/s	
	.100	Ia/S Coefficient					1 1=Z	Zero; 2=De	fine			
		Initial Abstraction Option 1=Trianglr; 2	2=Rectandl	r: 3=SWM HVD: 4	l=I.in Reserv	35	COMMENT 3 lin	ne(s) of c	omment			
	.690		.306	.000 c.m/s			******	***	Ollilleric			
2.5	. 26	7 .896 .	.424 C	perv/imperv/to	otal		AREA SOU	TH OF QUA	KER			
35	COMMENT 3 line(s	s) of comment				4	CATCHMEN					
	******	******					7.000	ID No.				
	FLOW AT RIC	CE ROAD ******					16.470 331.000		hectares (PERV) metre	e e		
15	ADD RUNOFF					-	1.000	Gradien				
4	.690 CATCHMENT	0 1.800 .	.306	.000 c.m/s			10.000	Per cen	t Impervious			
4		ID No. 99999				-	.000	%Imp. w	(IMPERV) ith Zero Dpt	h		
		Area in hectares					1	Option	1=SCS CN/C;		3=Green-Ampt;	4=Repeat
		Length (PERV) metres Gradient (%)	3				.250 74.000	Manning SCS Cur	"n" ve No or C			
	35.000 I	Per cent Impervious					.100	Ia/S Co	efficient			
		Length (IMPERV) %Imp. with Zero Dpth	1				8.924		Abstraction		lr; 3=SWM HYD;	4=Lin Reserv
	1 (Option 1=SCS CN/C; 2		3=Green-Ampt; 4	=Repeat			353		.561	5.561 c.m/s	1-2211. 1100011
		Manning "n" SCS Curve No or C				15	ADD RUNO	267	.894	.329	C perv/imperv/t	otal
	.100	Ia/S Coefficient				15		353	.353 5	.561	5.561 c.m/s	
		Initial Abstraction		. 2 0004 0000		9	ROUTE					
	1 (Option 1=Trianglr; 2 0 1.800 .	2=Rectangl .306	r; 3=SWM HYD; 4	=LIN. Keserv		.000		Length uit defined			
	.26	7 .896 .		perv/imperv/to	otal		.000	Zero la	g			
15	ADD RUNOFF 1.020		.306	.000 c.m/s			.000		ighting fact timestep	or		
4	CATCHMENT		. 500	.000 0.111, 0			0		sub-reaches			
		ID No. 99999 Area in hectares				17	COMBINE	353	.353	.353	5.561 c.m/s	
		Length (PERV) metres	3			17		ction Nod	e No.			
		Gradient (%)						353	.353	.353	5.914 c.m/s	
		Per cent Impervious Length (IMPERV)				18	CONFLUEN 1 Jun	ICE Iction Nod	e No.			
	.000	%Imp. with Zero Dpth	1					353	5.914	.353	.000 c.m/s	
		Option 1=SCS CN/C; 2 Manning "n"	2=Horton;	3=Green-Ampt; 4	=Repeat	4	CATCHMEN 8.000	ID No.	00000			
		SCS Curve No or C					42.190		hectares			
		Ia/S Coefficient Initial Abstraction				Ę	530.000		(PERV) metre	s		
	1 (Option 1=Trianglr; 2		r; 3=SWM HYD; 4	=Lin. Reserv		1.000 9.000	Gradien Per cen	t (%) t Impervious			
	1.840	0 2.820 .	.306	.000 c.m/s		į	530.000	Length	(IMPERV)			
15	.267 ADD RUNOFF		.399 C	! perv/imperv/to	rai		.000		ith Zero Dpt 1=SCS CN/C;		3=Green-Ampt;	4=Repeat
	1.840		.306	.000 c.m/s			.250	Manning	"n"	,,	Imper	
35	COMMENT 3 line(s	s) of comment					74.000		ve No or C efficient			
	******	*					8.924	Initial	Abstraction			
	AREA SOUTH						1	Option	1=Trianglr;	2=Rectang	lr; 3=SWM HYD;	4=Lin. Reserv
								764 267		.353	.000 c.m/s C perv/imperv/t	otal
						35	COMMENT					
								ne(s) of c	omment ******			
							TOTAL FL	OW AT NIA	GARA STREET			
						15	ADD RUNO		******			
						10		764	6.678	.353	.000 c.m/s	
						27	HYDROGRA	APH DISPLA	Y.			
									o/Hydrograph 45E+05 c.m	cnosen		
						14	START					
							1 1=Z	dero; 2=De	Ilne			

35	COMMENT	4 CATCHMENT	
	<pre>3 line(s) of comment ************************************</pre>	5.000 ID No. 99999 5.310 Area in hectares	
	25-YEAR STORM EVENT	188.000 Length (PERV) metres	
	******	1.000 Gradient (%)	
2	STORM 1	10.000 Per cent Impervious 188.000 Length (IMPERV)	
	1 1=Chicago;2=Huff;3=User;4=Cdnlhr;5=Historic 900.000 Coefficient a	.000 %Imp. with Zero Dpth	
	5.200 Constant b (min)	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>	
	.745 Exponent c	.250 Manning "n" 74.000 SCS Curve No or C	
	.450 Fraction to peak r 240.000 Duration 240 min	74.000 SCS Curve No or C .100 Ia/S Coefficient	
	59.713 mm Total depth	8.924 Initial Abstraction	
3	IMPERVIOUS	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>	
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .015 Manning "n"	.146 5.473 .353 .000 c.m/s .308 .892 .367 C perv/imperv/total	
	98.000 SCS Curve No or C	15 ADD RUNOFF	
	.100 Ia/S Coefficient	.146 5.619 .353 .000 c.m/s	
35	.518 Initial Abstraction	4 CATCHMENT 6.000 ID No. 99999	
30	3 line(s) of comment	43.410 Area in hectares	
	******	538.000 Length (PERV) metres	
	AREA NORTH OF QUAKER	1.000 Gradient (%)	
4	************* CATCHMENT	9.000 Per cent Impervious 538.000 Length (IMPERV)	
**	1.000 ID No. 99999	.000 %Imp. with Zero Dpth	
	15.820 Area in hectares	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>	
	325.000 Length (PERV) metres	.250 Manning "n"	
	1.000 Gradient (%) 35.000 Per cent Impervious	74.000 SCS Curve No or C .100 Ia/S Coefficient	
	325.000 Length (IMPERV)	8.924 Initial Abstraction	
	.000 %Imp. with Zero Dpth	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>	
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat	.957 5.619 .353 .000 c.m/s .308 .906 .362 C perv/imperv/total	
	.250 Manning "n" 74.000 SCS Curve No or C	.308 .906 .362 C perv/imperv/total 35 COMMENT	
	.100 Ia/S Coefficient	3 line(s) of comment	
	8.924 Initial Abstraction	*********	
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.306 .000 .353 .000 c.m/s	TOTAL FLOW AT FIRST AVENUE	
	.308 .910 .519 C perv/imperv/total	15 ADD RUNOFF	
15	ADD RUNOFF	.957 6.576 .353 .000 c.m/s	
	1.306 1.306 .353 .000 c.m/s	9 ROUTE	
4	CATCHMENT	.000 Conduit Length	
	2.000 ID No. 99999 13.570 Area in hectares	.000 No Conduit defined .000 Zero lag	
	301.000 Length (PERV) metres	.000 Zero rag .000 Beta weighting factor	
	1.000 Gradient (%)	.000 Routing timestep	
	25.000 Per cent Impervious	0 No. of sub-reaches	
	301.000 Length (IMPERV) .000 %Imp. with Zero Dpth	.957 6.576 6.576 .000 c.m/s 17 COMBINE	
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat	17 COMBINE 1 Junction Node No.	
	.250 Manning "n"	.957 6.576 6.576 6.576 c.m/s	
	74.000 SCS Curve No or C	14 START	
	.100 Ia/S Coefficient	1 l=Zero; 2=Define	
	8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	35 COMMENT 3 line(s) of comment	
	.793 1.306 .353 .000 c.m/s	***********	
	.308 .910 .459 C perv/imperv/total	AREA SOUTH OF QUAKER	
35	COMMENT	******	
	3 line(s) of comment	4 CATCHMENT 7.000 ID No. 99999	
	FLOW AT RICE ROAD		
	FLOW AT RICE ROAD ************************************	16.470 Area in hectares 331.000 Length (PERV) metres	
15	**************************************	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%)	
	**************************************	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious	
15	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 331.000 Length (IMPERV)	
	**************************************	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious	
	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 331.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"	
	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%)	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 331.000 Length (IMPERV) .000 % Timp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C	
	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 331.000 Length (IMPERV) .000 % Imp, with Zero Dpth 1 Option 1-SCS CN/C; 2-Horton; 3-Green-Ampt; 4-Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient	
	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%)	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 331.000 Length (IMPERV) .000 % Timp. with Zero Dpth 1 Option 1-8CS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction	
	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 331.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/c; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .429 .000 6.576 6.576 c.m/s	
	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 131.000 Length (IMPERV) .000 % % Toption 1-SCS CN/C; 2-Horton; 3-Green-Ampt; 4-Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1-Trianglr; 2-Rectanglr; 3-SWM HYD; 4-Lin. Reserv .429 .000 6.576 6.576 c.m/S .308 .909 .369 C perv/imperv/total	
	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 331.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1-SCS CN/C; 2-Horton; 3-Green-Ampt; 4-Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1-Trianglr; 2-Rectanglr; 3-SWM HYD; 4-Lin. Reserv .429 .000 6.576 6.576 c.m/s .308 .909 .369 C perv/imperv/total 15 ADD RUNOFF	
	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"	16.470	
	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1-SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	16.470	
	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPERV) .000 % Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.164 2.099 .353 .000 c.m/s	16.470	
	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1-SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	16.470	
4	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/c; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.164 2.099 .353 .000 c.m/s ADD RUNOFF 1.164 3.263 .353 .000 c.m/s	16.470	
4	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "h" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 0 potion 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.164 2.099 .353 .000 c.m/s .308 .910 .519 C perv/imperv/total ADD RUNOFF 1.164 3.263 .353 .000 c.m/s	16.470	
15	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.164 2.099 .353 .000 c.m/s .308 .910 .519 C perv/imperv/total ADD RUNOFF 1.164 3.263 .353 .000 c.m/s CATCHMENT 4.000 ID NO. 99999	16.470	
15	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "h" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 0 potion 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.164 2.099 .353 .000 c.m/s .308 .910 .519 C perv/imperv/total ADD RUNOFF 1.164 3.263 .353 .000 c.m/s	16.470	
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15 4	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.164 2.099 .353 .000 c.m/s .308 .910 .519 C perv/imperv/total ADD RUNOFF 1.164 3.263 .353 .000 c.m/s CATCHMENT 4.000 ID No. 99999 45.500 Area in hectares 551.000 Length (PERV) metres 1.000 Gradient (%) 21.000 Per cent Impervious 551.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 2.211 3.263 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total	16.470	
15 4	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.164 2.099 .353 .000 c.m/s .308 .910 .519 C perv/imperv/total ADD RUNOFF 1.164 3.263 .353 .000 c.m/s CATCHMENT 4.000 ID No. 99999 45.500 Area in hectares 551.000 Length (PERV) metres 1.000 Gradient (%) 21.000 Per cent Impervious 551.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 2.211 3.263 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total	16.470	
15 4	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.164 2.099 .353 .000 c.m/s .308 .910 .519 C perv/imperv/total ADD RUNOFF 1.164 3.263 .353 .000 c.m/s CATCHMENT 4.000 ID No. 99999 45.500 Area in hectares 551.000 Length (PERV) metres 1.000 Gradient (%) 21.000 Per cent Impervious 551.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 2.211 3.263 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total	16.470	
15 4	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.164 2.099 .353 .000 c.m/s .308 .910 .519 C perv/imperv/total ADD RUNOFF 1.164 3.263 .353 .000 c.m/s CATCHMENT 4.000 ID No. 99999 45.500 Area in hectares 551.000 Length (PERV) metres 1.000 Gradient (%) 21.000 Per cent Impervious 551.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 2.211 3.263 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total	16.470	
15 4	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.164 2.099 .353 .000 c.m/s .308 .910 .519 C perv/imperv/total ADD RUNOFF 1.164 3.263 .353 .000 c.m/s CATCHMENT 4.000 ID No. 99999 45.500 Area in hectares 551.000 Length (PERV) metres 1.000 Gradient (%) 21.000 Per cent Impervious 551.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 2.211 3.263 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 331.000 Length (IMPERV) .000 & Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .429 .000 6.576 6.576 c.m/s .308 .909 .369 C perv/imperv/total 15 ADD RUNOFF .429 .429 6.576 6.576 c.m/s 8.001 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches .429 .429 .429 6.576 c.m/s 17 COMBINE 1 Junction Node No429 .429 .429 7.005 c.m/s 18 CONFLUENCE 1 Junction Node No429 .7.05 .429 .000 c.m/s 4 CATCHMENT 8.000 ID No. 9999 42.190 Area in hectares 530.000 Length (FERV) metres 1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 SCS Curve No or C .100 In Ja/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .933 7.095 .429 .000 c.m/s 3 COMMENT 3 Iine(s) of comment	
15 4	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.164 2.099 .353 .000 c.m/s .308 .910 .519 C perv/imperv/total ADD RUNOFF 1.164 3.263 .353 .000 c.m/s CATCHMENT 4.000 ID No. 99999 45.500 Area in hectares 551.000 Length (PERV) metres 1.000 Gradient (%) 21.000 Per cent Impervious 551.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 2.211 3.263 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 331.000 Length (IMPERV) .000 % Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 La/S Coefficient 8.924 Initial Abstraction 1 La/S Coefficient 8.924 Initial Abstraction 1 La/S Coefficient 8.924 Initial Abstraction 1 Age of the serve of th	
15 4	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.164 2.099 .353 .000 c.m/s .308 .910 .519 C perv/imperv/total ADD RUNOFF 1.164 3.263 .353 .000 c.m/s CATCHMENT 4.000 ID No. 99999 45.500 Area in hectares 551.000 Length (PERV) metres 1.000 Gradient (%) 21.000 Per cent Impervious 551.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 2.211 3.263 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 331.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .429 .000 6.576 6.576 c.m/s .308 .909 .369 C perv/imperv/total 15 ADD RUNOFF .429 .429 6.576 6.576 c.m/s .300 No Conduit Length .000 No Conduit defined .000 Eeta weighting factor .000 Beta weighting factor .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches .429 .429 .429 7.005 c.m/s 1 Junction Node No429 .429 .429 7.005 c.m/s 1 OCOMBINE 1 Junction Node No429 .429 .429 .000 c.m/s 4 CATCHENTE 1 Junction Node No429 .429 .429 .000 c.m/s 4 CATCHENTE 1 Junction Node No429 .429 .429 .000 c.m/s 1 Junction Node No429 .429 .429 .000 c.m/s 4 CATCHENTE 1 Junction Node No429 .429 .000 c.m/s 4 CATCHENTE 1 Junction Node No429 .429 .000 c.m/s 530.000 Length (PERV) metres 1.000 Gradient (%) 9.000 Per cent Impervious 530.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .933 7.005 .429 .000 c.m/s .308 .906 .362 C perv/imperv/total TOTAL FLOW AT NIAGARA STREET 15 ADD RUNOFF 1 is # of Hyeto/Hydrograph chosen	
15 4	ADD RUNOFF .793 2.099 .353 .000 c.m/s CATCHMENT 3.000 ID No. 99999 14.520 Area in hectares 311.000 Length (PERV) metres 1.000 Gradient (%) 35.000 Per cent Impervious 311.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.164 2.099 .353 .000 c.m/s .308 .910 .519 C perv/imperv/total ADD RUNOFF 1.164 3.263 .353 .000 c.m/s CATCHMENT 4.000 ID No. 99999 45.500 Area in hectares 551.000 Length (PERV) metres 1.000 Gradient (%) 21.000 Per cent Impervious 551.000 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 2.211 3.263 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total ADD RUNOFF 2.211 5.473 .353 .000 c.m/s .308 .907 .434 C perv/imperv/total	16.470 Area in hectares 331.000 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 331.000 Length (IMPERV) .000 % Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 La/S Coefficient 8.924 Initial Abstraction 1 La/S Coefficient 8.924 Initial Abstraction 1 La/S Coefficient 8.924 Initial Abstraction 1 Age of the serve of th	

35	COMMENT	4	CATCHMENT
	3 line(s) of comment **********		5.000 ID No. 99999 5.310 Area in hectares
	100-YEAR STORM EVENT		188.000 Length (PERV) metres
2	STORM		1.000 Gradient (%) 10.000 Per cent Impervious
	<pre>1 1=Chicago; 2=Huff; 3=User; 4=Cdn1hr; 5=Historic</pre>		188.000 Length (IMPERV)
	1020.000 Coefficient a 4.700 Constant b (min)		.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	.731 Exponent c .450 Fraction to peak r		.250 Manning "n" 74.000 SCS Curve No or C
	240.000 Duration 240 min		.100 Ia/S Coefficient
3	73.203 mm Total depth IMPERVIOUS		8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
3	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		.199 6.789 .429 .000 c.m/s
	.015 Manning "n" 98.000 SCS Curve No or C	15	.367 .904 .421 C perv/imperv/total ADD RUNOFF
	.100 Ia/S Coefficient		.199 6.987 .429 .000 c.m/s
35	.518 Initial Abstraction COMMENT	4	CATCHMENT 6.000 ID No. 99999
	<pre>3 line(s) of comment</pre>		43.410 Area in hectares
	********** AREA NORTH OF QUAKER		538.000 Length (PERV) metres 1.000 Gradient (%)
	******		9.000 Per cent Impervious
4	CATCHMENT 1.000 ID No. 99999		538.000 Length (IMPERV) .000 %Imp. with Zero Dpth
	15.820 Area in hectares		<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>
	325.000 Length (PERV) metres 1.000 Gradient (%)		.250 Manning "n" 74.000 SCS Curve No or C
	35.000 Per cent Impervious		.100 Ia/S Coefficient
	325.000 Length (IMPERV) .000 %Imp. with Zero Dpth		8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		1.246 6.987 .429 .000 c.m/s
	.250 Manning "n" 74.000 SCS Curve No or C	35	.368 .915 .417 C perv/imperv/total COMMENT
	.100 Ia/S Coefficient	33	<pre>3 line(s) of comment</pre>
	8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		**************************************
	1.566 .000 .429 .000 c.m/s		***********
15	.368 .924 .562 C perv/imperv/total ADD RUNOFF	15	ADD RUNOFF 1.246 8.233 .429 .000 c.m/s
13	1.566 1.566 .429 .000 c.m/s	9	ROUTE 8.233 .429 .000 C.m/S
4	CATCHMENT		.000 Conduit Length .000 No Conduit defined
	2.000 ID No. 99999 13.570 Area in hectares		.000 No Conduit defined .000 Zero lag
	301.000 Length (PERV) metres		.000 Beta weighting factor .000 Routing timestep
	1.000 Gradient (%) 25.000 Per cent Impervious		.000 Routing timestep 0 No. of sub-reaches
	301.000 Length (IMPERV)		1.246 8.233 8.233 .000 c.m/s
	.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat	17	COMBINE 1 Junction Node No.
	.250 Manning "n"		1.246 8.233 8.233 8.233 c.m/s
	74.000 SCS Curve No or C .100 Ia/S Coefficient	14	START 1 1=Zero; 2=Define
	8.924 Initial Abstraction	35	COMMENT
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .992 1.566 .429 .000 c.m/s</pre>		<pre>3 line(s) of comment *************</pre>
	.367 .923 .506 C perv/imperv/total		AREA SOUTH OF QUAKER
35	COMMENT 3 line(s) of comment	4	CATCHMENT
	<pre>3 line(s) of comment ************************************</pre>	4	7.000 ID No. 99999
	FLOW AT RICE ROAD		16.470 Area in hectares
15	ADD RUNOFF		331.000 Length (PERV) metres 1.000 Gradient (%)
	.992 2.558 .429 .000 c.m/s		10.000 Per cent Impervious
4	CATCHMENT 3.000 ID No. 99999		331.000 Length (IMPERV) .000 %Imp. with Zero Dpth
	14.520 Area in hectares		<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>
	311.000 Length (PERV) metres 1.000 Gradient (%)		.250 Manning "n" 74.000 SCS Curve No or C
	35.000 Per cent Impervious		.100 Ia/S Coefficient
	311.000 Length (IMPERV) .000 %Imp. with Zero Dpth		8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		.548 .000 8.233 8.233 c.m/s
	.250 Manning "n" 74.000 SCS Curve No or C	15	.368 .925 .423 C perv/imperv/total ADD RUNOFF
	.100 Ia/S Coefficient		.548 .548 8.233 8.233 c.m/s
	8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	9	ROUTE .000 Conduit Length
	1.440 2.558 .429 .000 c.m/s		.000 No Conduit defined
15	.367 .923 .562 C perv/imperv/total ADD RUNOFF		.000 Zero lag .000 Beta weighting factor
	1.440 3.998 .429 .000 c.m/s		.000 Routing timestep
4	CATCHMENT 4.000 ID No. 99999		0 No. of sub-reaches .548 .548 .548 8.233 c.m/s
	45.500 Area in hectares	17	COMBINE
	551.000 Length (PERV) metres 1.000 Gradient (%)		1 Junction Node No548 .548 8.781 c.m/s
	21.000 Per cent Impervious	18	CONFLUENCE
	551.000 Length (IMPERV) .000 %Imp. with Zero Dpth		1 Junction Node No. .548 8.781 .548 .000 c.m/s
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>	4	CATCHMENT
	.250 Manning "n" 74.000 SCS Curve No or C		8.000 ID No. 99999 42.190 Area in hectares
	.100 Ia/S Coefficient		530.000 Length (PERV) metres
	8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		1.000 Gradient (%) 9.000 Per cent Impervious
	2.790 3.998 .429 .000 c.m/s		530.000 Per cent impervious 530.000 Length (IMPERV)
15	.368 .916 .483 C perv/imperv/total ADD RUNOFF		.000 %Imp. with Zero Dpth
τ2	2.790 6.789 .429 .000 c.m/s		.250 Manning "n"
35	COMMENT 3 line(s) of comment		74.000 SCS Curve No or C
	******		.100 Ia/S Coefficient 8.924 Initial Abstraction
	AREA SOUTH OF QUAKER		<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>
	******		1.214 8.781 .548 .000 c.m/s .368 .916 .417 C perv/imperv/total
		35	COMMENT
			<pre>3 line(s) of comment ************************************</pre>
			TOTAL FLOW AT NIAGARA STREET
		15	**************************************
			1.214 9.995 .548 .000 c.m/s
		27	HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen
			Volume = .6645652E+05 c.m
		14	START 1 1=Zero; 2=Define
			I I-Delot Z-Deline

Stormwater Management Plan 469 & 509 Rice Road, City of Wella	nd
	APPENDIX B
	Stormwater Management Facility Calculations (P10)
Upper Canada Consultants	

Upper Canada Consultants

3-30 Hannover Drive

St. Catharines, ON, L2W 1A3

PROJECT NAME: 469 & 509 RICE ROAD, CITY OF WELLAND

PROJECT NO.: 2200

PROPOSED NORTH DRY POND CALCULATIONS (POND A10)

Outlet Orifice	Overflow Spillway
Diameter (m) = 0.100	Length $(m) = 5.00$
Cd = 0.63	Slopes $(X:1) = 20.00$
Invert $(m) = 184.80$	Invert (m) = 186.50

				Average					
	Increment	Active	Surface	Surface	Increment	Active	Quality	Overflow	Total
Elevation	Depth	Depth	Area	Area	Volume	Volume	Orifice	Spillway	Outflow
	(m)	(m)	(m2)	(m2)	(m3)	(m3)	(m3/s)	(m3/s)	(m3/s)
184.80		0.00				0	0.000	0.000	0.000
	-0.95								
185.75		0.00	1,845			0	0.021	0.000	0.021
	0.25			2,012	503				
186.00		0.25	2,179			503	0.023	0.000	0.023
	0.25			2,351	588				
186.25		0.50	2,523			1,091	0.026	0.000	0.026
	0.25			2,699	675				
186.50		0.75	2,876			1,765	0.028	0.000	0.028
	0.20			3,021	604				
186.70		0.95	3,166			2,370	0.030	1.215	1.244

Notes

^{1.} Pipe Orifice flow is calcuated using an orifice formula on the pipe from the ditch inlet to the outlet and uses the total head on the orifice.

^{2.} Overflow Weir flow is calculated using a trapezondial weir to convey outflow for less frequent storms through the embankment with an emergency spillway.

Stormwater Management Plan 469 & 509 Rice Road, City of Welland	
107 00 007 11100 110000, 0115 01 11001111	
	APPENDIX (
	Hydroworks Sizing Software Output File
Upper Canada Consultants	

```
Storm Water Management Sizing Model
                     Hydroworks, LLC
                       Version 4.4
               Continuous Simulation Program
                     Based on SWMM 4.4H
                     Hydroworks, LLC
        Developed by
        **********
                    Hydroworks, LLC
Metcalf & Eddy, Inc.
              University of Florida
Water Resources Engineers, Inc.
             (Now Camp Dresser & McKee, Inc.)
        * Modified SWMM 4.4 *
               Distributed and Maintained by
        **************
                       Hydroworks, LLC
                        888-290-7900
                     www.hydroworks.com
        ************
             If any problems occur executing this
             model, contact Mr. Graham Bryant at
             Hydroworks, LLC by phone at 888-290-7900 *
        ***************
            This model is based on EPA SWMM 4.4
        * "Nature is full of infinite causes which
        ***********
        * Entry made to the Rain Block
        * Created by the University of Florida - 1988

* Updated by Oregon State University, March 2000
        469 & 509 Rice Road
        City of Welland
        HydroDome Simulation
    ************************************
    # Precipitation Block Input Commands #
    7287
   Ending date, IYEND (Yr/Mo/Dy)......
Minimum interevent time, MIT......
Number of ranked storms, NPTS......
                                        2005/12/31
   NWS format, IFORM (See text)......
Print storm summary, ISUM (O-No 1-Yes)
Print all rainfall, IYEAR (O-No 1-Yes)
Save storm event data on NSCRAT(1)....
                                          0
                                          0
   Storm event statistics, NOSTAT....... 1100
KODEA (from optional group B0).......... 2
= 0, Do not include NCDC cumulative values.
    = 1, Average NCDC cumulative values.
= 2, Use NCDC cumulative value as ins
        Use NCDC cumulative value as inst. rain.
   KODEPR (from optional group B0)......
Print NCDC special codes in event summary:
    = 0, only on days with events.
= 1, on all days with codes present.
    Codes: A = accumulated value, I = incomplete value,
          M = missing value, 0 = other code present
*****************
  Precipitation output created using the Rain block *
  Number of precipitation stations... 1 **
Location Station Number
STATION ID ON PRECIP. DATA INPUT FILE = 7287
```

7287 CHECK TO BE SURE THEY MATCH.

REQUESTED STATION ID =

C - 1

```
Note, 15-min. data are being processed, but hourly print-out, summaries, and statistics are based on
hourly totals only. Data placed on interface file
are at correct 15-min. intervals.
# Entry made to the Runoff Block, last updated by #
# Oregon State University, and Camp, Dresser and #
# McKee, Inc., March 2002.
.......
 "And wherever water goes, amoebae go along for #
# the ride"
                           Tom Robbins
Maximum infiltration volume is limited to RMAXINF input on subcatchment lines.
Infiltration volume regenerates during non rainfall periods.
Quality is simulated - KWALTY.......

IVAP is negative. Evaporation will be set to zero
during time steps with rainfall.
Read evaporation data on line(s) F1 (F2) - IVAP..
Time TZERO at start of storm (hours).....
Use Metric units for I/O - METRIC..... ===> Ft-sec units used in all internal computations
Runoff input print control...
Runoff graph plot control ....
Runoff output print control..

Print headers every 50 lines - NOHEAD (0=yes, 1=no)
Print land use load percentages -LANDUPR (0=no, 1=yes)
Limit number of groundwater convergence messages to 10000 (if simulated)
                                    1/ 1/1971
Month, day, year of start of storm is:
Wet time step length (seconds).....
Dry time step length (seconds).....
                                                300.
                                                900.
Wet/Dry time step length (seconds)...
                                                450.
Simulation length is..... 20051231.0 Percent of impervious area with zero detention depth 25.0
                                          20051231.0 Yr/Mo/Dv
Horton infiltration model being used
Rate for regeneration of infiltration = REGEN * DECAY
DECAY is read in for each subcatchment
REGEN = ..... 0.01000
****************
* Processed Precipitation will be read from file
 # Data Group F1 #
# Evaporation Rate (mm/day) #
  **************************
 JAN. FEB. MAR. APR. MAY JUN. JUL. AUG. SEP. OCT. NOV. DEC.
 0.00 \quad 0.00 \quad 0.00 \quad 2.54 \quad 2.54 \quad 3.81 \quad 3.81 \quad 3.81 \quad 2.54 \quad 2.54 \quad 0.00 \quad 0.00
*******************
* CHANNEL AND PIPE DATA *
Input NAMEG: Drains
                                           Invert L Side R Side Intial
                                                                           Max Mann-
                                                                                      Fu111
                Trains to Channel Width Length NGTO: Type (m) (m)
equen Channel
                                             Slope
                                                    Slope
                                                            Slope
                                                                   Depth
                                                                          Depth
                                                                                 ings
                                                                                       Flow
       ID#
                                                           (m/m)
                                                                    (m)
umber
                                            (m/m) (m/m)
                                                                          (m)
                                                                                 "N"
                                                                                    (cms)
      ------
                                                                   0.0
      201 200 Dummy 0.0 0.0 0.0000 0.0000 0.0000
                                                                          0.0 0.0000 0.00E+00
 * SUBCATCHMENT DATA *
*NOTE. SEE LATER TABLE FOR OPTIONAL SUBCATCHMENT PARAMETERS*
     SLOPE
                                                       RESISTANCE FACTOR
                                                                          DEPRES. STORAGE(MM) INFILTRATION DECAY RATE GAGE MAXIMUM
                                                                                            RATE (MM/HR) (1/SEC) NO.
MAXIMUM MINIMUM
                                                                          IMPERV. PERV.
                                                        IMPERV.
                                                                   PERV.
 1 300 200 142.30 4.05 70.00 0.0200
                                                                                   5.080 63.50 10.16
                                                         0.015
                                                                           0.510
                                                                                                        0.00055
                                                                  0.250
                                                                                                                   1 101.60000
TOTAL NUMBER OF SUBCATCHMENTS...
                                  4.05
TOTAL TRIBUTARY AREA (HECTARES).
IMPERVIOUS AREA (HECTARES).....
                                    2.84
PERVIOUS AREA (HECTARES).....
TOTAL WIDTH (METERS).....
************
* GROUNDWATER INPUT DATA *
   SUB-
          CHANNEL ======= E L E V A T I O N S =======
                                                         ======= F L O W C O N S T A N T S ========
                     GROUND BOTTOM
                  (M) (M) (M) (M) (M) (M) (M) (M) (M)
                                                 TW
                                                    TW A1 B1 A2 B2 A3 (M) (MM/HR-M^B1) (MM/HR-M^B2) (MM/HR-M^2)
                                          BC
   CATCH
             OR
   NUMBER
            INLET
                                             (M)
                                                  0.61 3.484E-04 2.600 0.000E+00 1.000 0.00E+00
                     3.05 0.00 0.00 0.61
****************
* G R O U N D W A T E R I N P U T D A T A (CONTINUED) *
       SOIL PROPERTIES
                   SATURATED
                                                                PERCOLATION
                                                                             ET PARAMETERS
                     HYDRAULIC WILTING FIELD INITIAL
                                                        MAX. DEEP PARAMETERS
                                                                                  DEPTH FRACTION OF ET
     NO. POROSITY CONDUCTIVITY POINT CAPACITY MOISTURE PERCOLATION HCO
                                                                      PCO
                                                                                 OF ET TO UPPER ZONE
                                                      (mm/hr)
                                                                               (m)
                    (mm/hr)
```

5.080E-02 10.00 4.57

4.27

0.350

.1500 .3000

.3000

0

.4000

127.000

```
* Arrangement of Subcatchments and Channel/Pipes *
* See second subcatchment output table for connectivity *
Channel
  or Pipe
     201
           No Tributary Channel/Pipes
No Tributary Subareas....
   INLET
                                       201
           Tributary Channel/Pipes...
     200
           Tributary Subareas.....
*************
* Hydrographs will be stored for the following 1 INLETS *
        200
Ouality Simulation
Description
                                Variable
                                            Value
 Number of quality constituents....
                               NQS.....
1.22 cubic meters
Erosion is not simulated..... IROS......
DRY DAYS PRIOR TO START OF STORM... DRYDAY.....
                                            3.00 DAYS
 DRY DAYS REQUIRED TO RECHARGE
 CATCHBASIN CONCENTRATION TO
 INITIAL VALUES...... DRYBSN......
                                            5.00 DAYS
 DUST AND DIRT
 STREET SWEEPING EFFICIENCY..... REFFDD......
 DAY OF YEAR ON WHICH STREET
SWEEPING BEGINS...... KLNBGN..... DAY OF YEAR ON WHICH STREET
                                             120
                                             270
 SWEEPING ENDS..... KLNEND.....
Land use data on data group J2
LIMITING
                                                                         CLEANING AVAIL.
                                                                                         DAYS SINCE
                                                 BUILDUP
                                                          BUILDUP BUILDUP
                                                                         INTERVAL
                                                                                 FACTOR
AND USE BUILDUP EQUATION TYPE FUNCTIONAL DEPENDENCE OF
                                                                                 FRACTION
                                                                                          SWEEPING
                                                 OUANTITY
                                                          POWER
                                                                 COEFF.
                                                                         IN DAYS
        (METHOD) BUILDUP PARAMETER(JACGUT)
                           BUILDUP PARAMETER (JACGUT) (DDLIM)
                                                                 (DDFACT)
                                                                        (CLFREQ)
                                                                                 (AVSWP)
Urban De EXPONENTIAL(1)
                                 AREA(1)
                                                                           30.000
                                                                                           30.000
Constituent data on data group J3
Total Su
                         mg/l
Constituent units.....
Type of units.....
                             Λ
KALC....
                             2
Type of buildup calc.....
                       EXPONENTIAL(2)
KWASH.....
Type of washoff calc....
                             Ω
                     POWER EXPONEN.(0)
KACGUT.....
Dependence of buildup....
                            AREA(1)
LINKUP.....
Linkage to snowmelt.....
                     0
NO SNOW LINKAGE
Buildup param 1 (QFACT1).
                            28.020
Buildup param 2 (QFACT2).
Buildup param 3 (QFACT3).
                            0.500
67.250
Buildup param 4 (QFACT4).
Buildup param 5 (QFACT5).
                             0.000
                             0.000
Washoff power (WASHPO)...
                             1.100
Washoff coef. (RCOEF)...
                             0.086
Init catchb conc (CBFACT)
                           100.000
Precip. conc. (CONCRN)...
Street sweep effic (REFF)
                             0.000
                             0.300
Remove fraction (REMOVE).
                             0.000
1st order QDECAY, 1/day...
                             0.000
Land use number.....
***********
* Constant Groundwater Quality Concentration(s) *
                               0.0000 mg/l
 Total Susp has a concentration of..
************
* REMOVAL FRACTIONS FOR SELECTED CHANNEL/PIPES *
CHANNEL/ CONSTITUENT
   PIPE Total Susp
    201
          0.000
```

```
Subcatchment surface quality on data group L1 *
                                  Total
                                          Number
                         Land
                                 Gutter
                                            of
                                                   Loading
                                           Catch-
                                                   load/ha
                          Use
                                 Length
           No. Usage
                          No.
                                  Km
                                          Basins
                                                   Total Su
           300 Urban De 1
                                    0.28
                                             12.00 0.0E+00
   Totals (Loads in kg or other)
                                             12.00 0.0E+00
                                    0.28
    * DATA GROUP M1 *
TOTAL NUMBER OF PRINTED GUTTERS/INLETS...NPRNT..
NUMBER OF TIME STEPS BETWEEN PRINTINGS..INTERV..
STARTING AND STOPPING PRINTOUT DATES.....
    * DATA GROUP M3 *
CHANNEL/INLET PRINT DATA GROUPS.....
          *****************************
          * Rainfall from Nat. Weather Serv. file *
          Rainfall Station St. Catherines A
                    Ontario
State/Province
Rainfall Depth Summary (mm)
                                       Jun Jul
Year
         Jan Feb
                     Mar Apr
                                 Mav
                                                    Aug
                                                          Sep
                                                                Oct
                                                                            Dec
                                                                                    Total
1971
          31.
                 0.
                       0.
                             0.
                                         0. 126.
                                                     93.
                                                                 60.
                                                                       29.
                                                                                     391.
                           47.
                                        100.
                                  65.
                                                    115.
1972.
           0.
                 0.
                       0.
                                               39.
                                                           63.
                                                                 90.
                                                                        1.
                                                                               0.
                                                                                     521.
1973.
                           103.
                                         71.
                                                     29.
                                                                                     534.
1974.
           0.
                 0.
                       0.
                           67.
                                 105.
                                         62.
                                               50.
                                                     31.
                                                           74.
                                                                 37.
                                                                      110.
                                                                               0.
                                                                                     536.
                                                           73.
                                   0.
                                         94.
                                               78.
                                                     76.
                                                                  56.
                                                                               6.
                           119.
1976.
           0.
                 0.
                       0.
                                 136.
                                         87.
                                              101.
                                                     60.
                                                           72.
                                                                 73.
                                                                        13.
                                                                                     662.
1977.
           0.
                                                          230.
                                                                  71.
                                                                               1.
                 0.
                       0.
                            94.
                                  29.
                                         69.
                                               57.
                                                    150.
                                                                        0.
                                                                                     701.
1978.
                            72.
                                         72.
                                               43.
                                                                 95.
                                                               129.
                                                                        71.
1979.
           0.
                 0.
                       0.
                            84.
                                   92.
                                         33.
                                               91.
                                                     88.
                                                           84.
                                                                               0.
                                                                                     673.
1980.
                            81.
                                   39.
                                                                 91.
1981.
           0.
                 0.
                       0.
                            91.
                                  71.
                                        106.
                                             122.
                                                     61.
                                                          123.
                                                                        84.
                                                                               0.
                                                                                     749.
                                                                      143.
1982.
           0.
                       0.
                            28.
                                   65.
                                         97.
                                               36.
                                                     66.
                                                           82.
                                                                 25.
                                                                               0.
                                                                                     544.
                 0.
                 Ô.
1983.
           0.
                       0.
                            78.
                                 100.
                                         65.
                                               55.
                                                    106.
                                                           75.
                                                                122.
                                                                        92.
                                                                               0.
                                                                                     694
                            31.
                                               19.
                                                                        44.
                                                                                     562.
1984.
           0.
                 0.
                       0.
                                 113.
                                        136.
                                                     51.
                                                          144.
                                                                 24.
                                                                              0.
1985.
                      67.
                                               40.
                                                           42.
                                                                109.
                                                                                     501.
1986.
           0.
                 0.
                       0.
                            93.
                                 113.
                                         60.
                                               85.
                                                     83.
                                                           98.
                                                                 80.
                                                                        43.
                                                                              65.
                                                                                     719.
                                         80.
                                              122.
1988
           Ω
                 Ω
                      41
                            71
                                   42
                                         21
                                             110.
                                                     82
                                                           70
                                                                 68
                                                                        75
                                                                              5
                                                                                     585
                                 137.
                                                     45.
                                                           89.
                                                                        84.
                                                                               0.
1989.
                 0.
                            63.
                                        108.
                                               36.
                                                                                     647.
           0.
                      13.
                                                                  73.
1990
           0.
                 2.
                      38.
                            99.
                                 124
                                         44.
                                               68.
                                                     95.
                                                           56.
                                                               112
                                                                        96.
                                                                              0.
                                                                                     735
                      86. 124.
                                                     57.
                                                           79.
1991.
           0.
                 0.
                                  67.
                                         31.
                                               85.
                                                                 64.
                                                                        61.
                                                                              28.
                                                                                     682.
1992.
                      29. 127.
                                         92. 185.
                                                           77.
                                             32.
48.
                                                     61.
77.
1993.
           3.
                 0.
                       7.
                            83.
                                   56.
                                         86.
                                                           71.
                                                                 92.
                                                                        80.
                                                                              38.
                                                                                     610.
1994.
                                 105.
                                        124.
                                                          117.
                                                                 15.
                                                                              15.
                                                                                     633.
                            88.
                                                                        0.
1995.
         112.
                23.
                      16.
                           48.
                                  37.
                                         60.
                                             123.
                                                     66.
                                                           8.
                                                                137.
                                                                        94.
                                                                              0.
                                                                                     724.
                                                                                     207.
1998.
         0.
                 0.
                       0.
                                   51.
                                         54.
                                               64.
                                                     29.
                                                                  0.
                                                                               0.
                             0.
                                                                        1.
1999.
           0.
                 0.
                       0.
                            79.
                                   59.
                                         35.
                                               61.
                                                     58.
                                                          116.
                                                                 78.
                                                                        0.
                                                                               0.
                                                                                     487.
                       0. 123.
2000.
                                 134.
                                        216.
                                                                               0.
           0.
                 0.
                                               51.
                                                      0.
                                                            0.
                                                                  0.
                                                                        10.
                                                                                     534.
                                  88.
2001.
                            56.
                                         45.
                                               25.
                                                     30.
                                                           81. 129.
2002
           Ω
                 Ω
                       Ω
                            73
                                 104
                                         64
                                              53
                                                     49
                                                           5.2
                                                                 65
                                                                        8
                                                                               Ω
                                                                                     468
2003.
                 0.
                            10.
                                 163.
                                        77. o...
99. 115. 40.
53. 120.
                                         77.
                                               81.
                                                                  73.
                                                                                     537.
                                                                17.
                                 126.
2004
           0.
                 0.
                       0. 131.
                                                         112.
                                                           88
                                                                        Ω
                                                                              0.
                                                                                     616
                       0.
                                  42.
2005.
           0.
                 0.
                            38.
                                                                  0.
                                                                                     443.
Total Rainfall Depth for Simulation Period
                                              19310. (mm)
Rainfall Intensity Analysis (mm/hr)
(mm/hr)
       (#)
21481
                   (%)
74.6
                             ( mm )
                                         (%)
  2.50
                             6454.
                                        33.4
                   12.4
  5.00
         3585
                            3088.
                                        16.0
  7.50
         1973
                            2886.
                                        14.9
 10.00
          575
                    2.0
                            1233.
 12.50
          389
                    1.4
                            1070.
                                         5.5
                    0.7
 17.50
          210
                             846.
                                         4.4
                    0.2
                             306.
 20.00
           66
                                         1.6
 22.50
           92
                    0.3
                             487.
                                         2.5
 25.00
           39
                             232.
                    0.1
                                         1.2
 27.50
           37
                             246.
                             245.
 30.00
           34
                    0.1
                                         1.3
                             228.
 35 00
            5
                    0 0
                              42
                                         0.2
 37.50
          10
                    0.0
                              90.
                              97.
          10
12
 40.00
                    0.0
                             124.
 42.50
                    0.0
                                         0.6
 45.00
           9
                    0.0
                              99.
                                         0.5
 47.50
           1
                    0.0
                              12.
                                         0.1
>50.00
           49
                    0.2
                             829.
                                         4.3
```

Total # of Intensities 28803

```
(mm)
2.50
      (#) (%) (mm)
1077 38.9 1247.
                               (%)
                               6.5
 5.00
7.50
       507
               18.3
                      1850.
                               9.6
        326
              11.8
                      2006.
                              10.4
10.00
        226
                      1958.
12.50
       150
               5.4
                     1672.
                               8.7
 15.00
               4.0
                      1495.
17.50
       100
               3.6
                     1620.
                               8.4
 20.00
        67
               2.4
                     1260.
                               6.5
                      958.
22.50
        45
               1.6
                               5.0
25.00
        37
               1.3
                      881.
                               4.6
 27.50
30 00
        2.0
               0.7
                      575
                               3 0
 32.50
        20
                               3.3
35.00
37.50
        12
               0.4
                      405.
                               2 1
       8
9
4
4
2
                      290.
                               1.5
               0.3
                      350.
40.00
               0.3
                               1.8
                      165.
                               0.9
42.50
               0.1
45.00
47.50
                     173.
47.50 2 0.1 15
50.00 4 0.1 15
>50.00 15 0.5 88
Total # Days with Rain 2767
                       91.
                               0.5
                      192.
                               1.0
                      882.
***********
Total number of time steps = Final Julian Date =
                                      2056852
                                      2006001
Final time of day
                                          1. seconds.
                                        0.00
Final time of day =
                                              hours.
Final running time =
                                   306816.0000
Final running time =
                                   12784.0000
                                               davs.
************
   Extrapolation Summary for Watersheds
-----
    300 6296297 1661463
**********
    Extrapolation Summary for Channel/Pipes
* # Steps ==> Total Number of Extrapolated Steps *
* # Calls ==> Total Number of GUTNR Calls *
Chan/Pipe  # Steps  # Calls Chan/Pipe  # Steps  # Calls Chan/Pipe  # Steps  # Calls
                 -----
                                         -----
201 0 0
Millimeters over
                                          cubic meters Total Basin
Total Precipitation (Rain plus Snow)
                                             780127.
                                                      19263.
Total Infiltration
                                             233360.
                                                        5762.
Total Evaporation
                                              64396
                                                       1590
Surface Runoff from Watersheds
                                             484532.
                                                       11964.
Total Water remaining in Surface Storage Infiltration over the Pervious Area...
                                                 Ω
                                                          Ω
                                             233360.
                                                      19207.
Infiltration + Evaporation +
Surface Runoff + Snow removal +
Water remaining in Surface Storage +
Water remaining in Snow Cover.....
                                             782288.
                                                      19316.
Total Precipitation + Initial Storage.
                                             780127.
                                                      19263.
* Precipitation + Initial Snow Cover *
     - Infiltration -
*Evaporation - Snow removal -
*Surface Runoff from Watersheds -
Water in Surface Storage -
*Water remaining in Snow Cover
Error.....
***********
* Continuity Check for Channel/Pipes *
                                                     Millimeters over
                                          cubic meters Total Basin
                                          0.
Initial Channel/Pipe Storage.....
                                                          0.
Λ
                                             484532.
                                                      11964.
                                              0.
0.
Baseflow.....
                                                          0.
Groundwater Subsurface Inflow.....
Evaporation Loss from Channels.....
Channel/Pipe/Inlet Outflow.

Initial Storage + Inflow.

Final Storage + Outflow.
                                             484532.
484532.
                                             484532.
                                                      11964
                                                      11964.
                                             484532.
                                                      11964
```

Daily Rainfall Depth Analysis (mm)

```
* Final Storage + Outflow + Evaporation - *
  Watershed Runoff - Groundwater Inflow
     Initial Channel/Pipe Storage
 Final Storage + Outflow + Evaporation
Error.....
     Continuity Check for Subsurface Water
                                                                   Millimeters over
                                                cubic meters
                                                                   Subsurface Basin
Total Infiltration
                                                                        0.
Total Upper Zone ET
Total Lower Zone ET
                                                             0.
                                                                        Ω
                                                             0.
                                                                        0.
                                                             Ο.
Total Groundwater flow
                                                                        0.
Total Deep percolation
                                                             0.
                                                                        0.
                                                                      914.
Initial Subsurface Storage
Final Subsurface Storage
                                                         37032.
                                                                      914.
Upper Zone ET over Pervious Area
                                                             0.
                                                                        0.
Lower Zone ET over Pervious Area
                                                             0.
                                                                        Ο.
* Infiltration + Initial Storage - Final *
 Storage - Upper and Lower Zone ET -
* Groundwater Flow - Deep Percolation
     Infiltration + Initial Storage
                                             0.000 Percent
                                SUMMARY STATISTICS FOR SUBCATCHMENTS
                                 _____
                                                                    IMPERVIOUS AREA
                                                                                       TOTAL SUBCATCHMENT AREA
                                       TOTAL
                                                TOTAL
                                                              PEAK
                                                                               PEAK
                                                                                                  PEAK
                                    SIMULATED
                                                RUNOFF TOTAL RUNOFF
                                                                      RUNOFF
                                                                              RUNOFF
                                                                                          RUNOFF
                                                                                                  RUNOFF
                      AREA PERCENT RAINFALL
   SUBCATCH- OR INLET
                                                DEPTH LOSSES RATE
                                                                      DEPTH
                                                                               RATE
                                                                                           DEPTH
                                                                                                   RATE
                                                                                                           RUNOFF
                                                (MM) (MM)
                                                                       ( MM )
                                                                              (CMS)
   MENT NO.
                       (HA)
                             IMPER.
                                      ( MM )
                                                              (CMS)
                                                                                           ( MM )
                                                                                                          (MM/HR)
                                              52.776*****
                 200
                        4.05
                               70.019262.47
                                                               0.18917063.861
                                                                                 1.507 11960.536
         *** NOTE *** IMPERVIOUS AREA STATISTICS AGGREGATE IMPERVIOUS AREAS WITH AND WITHOUT DEPRESSION STORAGE
                                      SUMMARY STATISTICS FOR CHANNEL/PIPES
                                  _____
                                      MAXIMUM MAXIMUM MAXIMUM TIME
                                                                                         LENGTH
                                                                                                    MAXIMUM
                                                                                                               RATIO OF RATIO OF
                              FIII.I.
           FIII.I.
                    FIII.I.
                                      COMPILED
                                              COMPILTED COMPILTED COMPILTED
                                                                              OF
                                                                                          OF
                                                                                                   SURCHARGE
                                                                                                              MAX. TO MAX. DEPTH
                                                         DEPTH VELOCITY OCCURRENCE
(M) (M/S) DAY HR.
                                                                                        SURCHARGE
                  VELOCITY
                              DEPTH
                                       INFLOW
                                               OUTFLOW
                                                                                                    VOLUME
                                                                                                               FULL
                                                                                                                        TO FULL
           FLOW
   NUMBER
           (CMS)
                   (M/S)
                              (M)
                                       (CMS)
                                                (CMS)
                                                                                         (HOUR)
                                                                                                    (CU-M)
                                                                                                              FT.OW
                                                                                                                         DEPTH
                                                                                                              ----
                                        0.00
                                                                       1/ 0/1900 0.00
      201
                                        1.70
                                                                        8/14/1972 14.25
                                           TOTAL NUMBER OF CHANNELS/PIPES =
 *** NOTE *** THE MAXIMUM FLOWS AND DEPTHS ARE CALCULATED AT THE END OF THE TIME INTERVAL
               Runoff Quality Summary Page
               # If NDIM = 0 Units for: loads mass rates
# METRIC = 1 lb lb/sec
# METRIC = 2 kg kg/sec
               # If NDIM = 1 Loads are in units of quantity
# and mass rates are quantity/sec
                 If NDIM = 2 loads are in units of concentration
                            times volume and mass rates have units#
                             of concentration times volume/second
               Total Su NDIM = 0
              METRIC = 2
                                Total Su
Inputs
 1. INITIAL SURFACE LOAD.....
                                      88.
   TOTAL SURFACE BUILDUP.....
   INITIAL CATCHBASIN LOAD.....
 4. TOTAL CATCHBASIN LOAD.....
                                       0.
   TOTAL CATCHBASIN AND
   SURFACE BUILDUP (2+4).....
                                  66440.
Remaining Loads
 6. LOAD REMAINING ON SURFACE...
 7. REMAINING IN CATCHBASINS....
8. REMAINING IN CHANNEL/PIPES..
                                      0.
0.
 9. STREET SWEEPING REMOVAL....
10. NET SURFACE BUILDUP (2-9)...
11. SURFACE WASHOFF......
                                   60486.
                                   60435.
   CATCHBASIN WASHOFF.....
                                       Λ
13. TOTAL WASHOFF (11+12).....
                                   60435.
   LOAD FROM OTHER CONSTITUENTS
15. PRECIPITATION LOAD.....
                                       0.
15a.SUM SURFACE LOAD (13+14+15).
16. TOTAL GROUNDWATER LOAD.....
16a.TOTAL I/I LOAD.....
17. NET SUBCATCHMENT LOAD
   (15a-15b-15c-15d+16+16a)....
                                   60435.
>>Removal in channel/pipes (17a, 17b):
```

	REMOVE BY BMP FRACTION REMOVE BY 1st ORDER DECAY	
18.	TOTAL LOAD TO INLETS	60436.
19.	FLOW WT'D AVE.CONCENTRATION (INLET LOAD/TOTAL FLOW)	mg/l 125.
Perc	centages	
20.	STREET SWEEPING (9/2)	9.
21.	SURFACE WASHOFF (11/2)	91.
22.	NET SURFACE WASHOFF(11/10)	100.
23.	WASHOFF/SUBCAT LOAD(11/17)	100.
24.	SURFACE WASHOFF/INLET LOAD	
	(11/18)	100.
25.	CATCHBASIN WASHOFF/	
	SUBCATCHMENT LOAD (12/17)	0.
26.	CATCHBASIN WASHOFF/	
	INLET LOAD (12/18)	0.
27.	OTHER CONSTITUENT LOAD/	
	SUBCATCHMENT LOAD (14/17)	0.
28.	INSOLUBLE FRACTION/	
	INLET LOAD (14/18)	0.
29.	PRECIPITATION/	
	SUBCATCHMENT LOAD (15/17)	0.
30.	PRECIPITATION/	
	INLET LOAD (15/18)	0.
31.	GROUNDWATER LOAD/	
	SUBCATCHMENT LOAD (16/17)	0.
32.	GROUNDWATER LOAD/	
	INLET LOAD (16/18)	0.
32a.	INFILTRATION/INFLOW LOAD/	
	SUBCATCHMENT LOAD (16a/17)	0.
32b.	INFILTRATION/INFLOW LOAD/	
	INLET LOAD (16a/18)	0.
32c.	CH/PIPE BMP FRACTION REMOVAL/	
	SUBCATCHMENT LOAD (17a/17)	0.
32d.	CH/PIPE 1st ORDER DECAY REMOV	AL/
	SUBCATCHMENT LOAD (17b/17)	0.
33.	INLET LOAD SUMMATION ERROR	
	(18+8+6a+17a+17b-17)/17	0.

CAUTION. Due to method of quality routing (Users Manual, Appendix IX) quality routing through channel/pipes is sensitive to the time step. Large "Inlet Load Summation Errors" may result.

These can be reduced by adjusting the time step(s).

Note: surface accumulation during dry time steps at end of simulation is not included in totals. Buildup is only performed at beginning of wet steps or for street cleaning.

Diameter	%	Specific	Settling Velocity	Critical Peclet
(um)		Gravity	(m/s)	Number
2.	5.0	2.65	0.000003	0.054484
5.	5.0	2.65	0.000017	0.061150
8.	10.0	2.65	0.000043	0.067744
20.	15.0	2.65	0.000267	0.093400
50.	10.0	2.65	0.001629	0.152500
75.	5.0	2.65	0.003548	0.196250
100.	10.0	2.65	0.006044	0.235000
150.	15.0	2.65	0.012234	0.297500
250.	15.0	2.65	0.026615	0.391296
500.	5.0	2.65	0.060604	0.602917
1000.	5.0	2.65	0.111334	0.928988

TSS Removal	based on Lab	erformance Curve		
Model	Low Q Treated	High Q Treated	Runoff Treated	TSS Removed
#	(cms)	(cms)	(%)	(%)
HD 4	0.570	0.570	99.7	50.1
HD 5	0.570	0.570	99.7	57.2
HD 6	0.570	0.570	99.7	62.6
HD 7	0.570	0.570	99.7	66.7
HD 8	0.570	0.570	99.7	70.3
HD 10	0.570	0.570	99.7	76.4
HD 12	0.570	0.570	99 7	81 3

	Sullillary	OT	AIIIIuaı	FIOW	Treatminet	α	100	Reliiovai		
*									*	
**	******	***	*****	****	******	* * :	****	******	**	

HD 4								
Year	Flow Vol	Flow Treated	TSS In	TSS Rem	TSS Out	TSS Byp	Flow Treated	TSS Removal
	(m3)	(m3)	(kg)	(kg)	(kg)	(kg)	(%)	(%)
1971.	110842.	110083.	1199.	544.	655.	1.	99.3	45.4
1972.	141853.	134234.	1584.	801.	783.	40.	94.6	49.3
1973.	141509.	141509.	1690.	836.	854.	0.	100.0 99.7 100.0	49.5
1974.	144458.	144022.	1773.	986.	787. 811. 955. 1086. 977. 1025.	3.	99.7	55.5
1975.	123017.	123017.	1548.	738.	811.	0.	100.0	47.6
1976.	183000.	181642.	1955.	1000.	955.	12.	99.3 99.1 100.0	50.8
1977.	195902.	194171.	1900.	814.	1086.	11.	99.1	42.6
1978.	156589.	156589	1815.	838.	977	0.	100 0	46.2
1979.	187366.	186369	2032	1007.	1025			49.4
1980.	150474.	150474	2032. 1936.	957.	979	0.	100.0	49.4
1981.	208604.	200604	2140		000	0.	100.0	53.7
1982.	147048.	147049	1744	957. 1150. 944. 1134. 840.	1025. 979. 990. 799.	0.	100.0 100.0 100.0	54.2
1983.	194167.	102005	2244	1124	1110	2.	00 0	50.5
1984.	155914.	155303.	1722	040	002	٥.	100.0	48.5
1985.	135611.	135914.	1/32.	875.	074.	0.	100.0	51.8
1985.	198414.	135011.	1009.	8/5.	815.	0.	100.0 100.0 100.0	53.0
		198414.	2330.	1235.	1096.	0.		
1987.	205267.	204916.	2348.	1186.	1162.	0. 1. 0. 0.	99.8	50.5
1988.	164020.	164020.	1945.	1039.	906.	υ.	100.0	53.4
1989.	181655.	181655.	1882.	1012.	870.	0.	100.0 100.0 100.0 100.0	53.8
1990.	205888.	205888.	2416.	1317.	1099.	0.	100.0	54.5
1991.	192861.	141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338. 118744. 123654.	1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672.	875. 1235. 1186. 1039. 1012. 1317. 1153. 1263. 1198. 833.	1071.	0.	100.0	51.9
1992.	245243.	245243.	2623.	1263.	1360.	0. 0. 5. 0.	100.0	48.2
1993.	166069.	166069.	2155.	1198.	957.	0.	100.0	55.6
1994.	177635.	176860.	1806.	833.	972.	5.	99.6	46.0
1995.	207427.	207427.	2172.	1017.	1155.	0.	100.0 100.0	46.8
1998.	52279.	52279.	812.	393.	419.	0.	100.0	48.4
1999.	130058.	130058.	1672.	818.	855.	0.	100.0	48.9
2000.	151338.	151338.	1469.	608.	861.	0.	100.0	41.4
2001.	118744.	118744.	1351.	760.	592.	0.	100.0	56.2
		100654	1591.	836.	755	0.	100.0	52.5
2002.	123654.	123654.	1391.					
2002. 2003.	123654. 140924.	140924.	1630.	784.	846.	0.	100.0	48.1
				784. 818.	846. 879.	0.		
2003.	140924.	140924.	1630.	784. 818. 524.	846. 879. 768.	0. 0. 1.	100.0	48.1
2003. 2004.	140924. 169456.	140924. 169456.	1630. 1696.	784. 818. 524.	990. 799. 1110. 892. 815. 1096. 1162. 906. 870. 1099. 1071. 1360. 957. 972. 1155. 419. 855. 861. 592. 755. 846. 879. 768.	0. 0. 1.	100.0 100.0	48.1 48.2
2003. 2004.	140924. 169456.	140924. 169456.	1630. 1696.	784. 818. 524.	846. 879. 768.	0. 0. 1.	100.0 100.0	48.1 48.2
2003. 2004. 2005.	140924. 169456. 121805.	140924. 169456. 121455.	1630. 1696. 1291.				100.0 100.0 99.7	48.1 48.2 40.5
2003. 2004. 2005.	140924. 169456. 121805.	140924. 169456. 121455. Flow Treated	1630. 1696. 1291. TSS In	TSS Rem	TSS Out	TSS Byp	100.0 100.0 99.7 Flow Treated	48.1 48.2 40.5 TSS Removal
2003. 2004. 2005.	140924. 169456. 121805. Flow Vol (m3)	140924. 169456. 121455. Flow Treated (m3)	1630. 1696. 1291. TSS In (kg)	TSS Rem (kg)	TSS Out (kg)	TSS Byp (kg)	100.0 100.0 99.7 Flow Treated	48.1 48.2 40.5 TSS Removal
2003. 2004. 2005. HD 5 Year 1971.	140924. 169456. 121805. Flow Vol (m3) 110842.	140924. 169456. 121455. Flow Treated (m3) 110083.	1630. 1696. 1291. TSS In (kg) 1199.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3	48.1 48.2 40.5 TSS Removal (%) 52.2
2003. 2004. 2005. HD 5 Year 1971. 1972.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234.	1630. 1696. 1291. TSS In (kg) 1199. 1584.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1975.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1975. 1976.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1975. 1976.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1977. 1978.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141859. 144458. 123017. 183000. 195902. 156589. 187366. 150474.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1976. 1977. 1978. 1979. 1980. 1981.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1977. 1978. 1979. 1980. 1981. 1982.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5 100.0 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5 100.0 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1976. 1978. 1979. 1980. 1981. 1982. 1983.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1977. 1980. 1979. 1980. 1981. 1982. 1983. 1984.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5 100.0 100.0 100.0 100.0 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1976. 1978. 1979. 1980. 1981. 1982. 1983. 1984.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1977. 1980. 1979. 1980. 1981. 1982. 1983. 1984.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5 100.0 100.0 100.0 100.0 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1976. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1977. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 99.9 100.0 100.0 100.0 100.0 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 57.6 60.8
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1976. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1987. 1988. 1988.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 57.6 60.8 59.8 61.6
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1977. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1989.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 59.6 60.8 60.8 60.8 61.6 65.9 61.6
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1976. 1976. 1977. 1978. 1979. 1981. 1982. 1983. 1984. 1985. 1987. 1988. 1987. 1988.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.5 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 57.6 60.8 59.8 61.6 59.1 55.2
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1977. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1989.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 57.6 60.8 59.8 61.6 59.1 55.2 62.8
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1977. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 57.6 60.8 59.8 61.6 59.1 55.2 62.8 52.7
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993. 1994.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2348. 1945. 2416. 2224. 2416. 2224. 2623. 2155. 1806. 2172.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.5 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 57.6 60.8 59.8 61.6 59.1 55.2 62.8 53.8
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1991. 1992. 1993. 1994. 1995.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 57.6 60.8 59.8 61.6 59.1 55.2 62.8 52.7 53.8 56.3
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1988. 1989. 1990. 1991. 1992. 1993.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 57.6 60.8 59.8 61.6 59.1 55.2 62.8 52.7 53.8 56.3
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993. 1994. 1995. 1993.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672. 1469.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 57.6 60.8 59.8 61.6 59.1 55.2 62.8 52.7 53.8 56.3 56.4 49.0
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1991. 1992. 1993. 1994. 1993. 1994. 1999. 2000. 2001.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058. 151338.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338. 118744.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672. 1469. 1351.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 57.6 60.8 59.8 61.6 59.1 55.2 62.8 52.7 53.8 56.3 56.4 49.0 62.9
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993. 1991. 1992. 1993. 1994. 1995. 1998. 1999. 1999. 2000. 2001. 2002.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058. 151338. 118744.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338. 118744. 123654.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672. 1469. 1351.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.5 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 57.6 60.8 59.8 61.6 59.1 55.2 62.8 52.7 53.8 61.6 69.1 60.5 61.6 60.8 60.8
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1999. 1991. 1992. 1993. 1991. 1992. 1993. 1994. 1995. 1998. 1999. 2000. 2001. 2002.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058. 151338. 118744. 123654.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338. 118744. 123654. 140924.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672. 1469. 1351. 1591. 1630.	TSS Rem (kg) 627. 914. 965. 1097. 852. 1124. 1960. 977. 1146. 1290. 979. 997. 1391. 1354. 1182. 1126. 1489. 1315. 1447. 1354. 955. 1169. 457. 943. 720. 849. 952. 908.	TSS Out (kg) 573. 670. 725. 676. 697. 831. 940. 838. 886. 838. 845. 680. 954. 753. 693. 995. 763. 756. 928. 910. 1176. 801. 851. 1003. 355. 730. 749. 502. 639. 722.	TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 2. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 57.6 60.8 59.8 61.6 59.1 55.2 62.8 52.7 53.8 56.3 56.4 49.0 62.9 59.8 55.7
2003. 2004. 2005. HD 5 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993. 1994. 1995. 1998. 1999. 2000. 2001. 2002.	140924. 169456. 121805. Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058. 151338. 118744.	140924. 169456. 121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338. 118744. 123654.	1630. 1696. 1291. TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672. 1469. 1351.	TSS Rem (kg) 627.	TSS Out (kg) 573.	TSS Byp (kg) 1.	100.0 100.0 99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	48.1 48.2 40.5 TSS Removal (%) 52.2 56.3 57.1 61.7 55.0 57.1 50.2 53.8 56.2 56.7 60.5 61.0 57.5 56.5 59.0 59.7 57.6 60.8 59.8 61.6 59.1 55.2 62.8 52.7 53.8 61.6 69.1 60.5 61.6 60.8 60.8

HD 6								
но в Year	Flow Vol	Flow Treated	TSS In	TSS Rem	TSS Out	TSS Byp	Flow Treated	TSS Removal
	(m3)	(m3)	(kq)	(kq)	(kq)	(kq)	(%)	(%)
1971.	110842.	110083.	1199.	692.	508.	1.	99.3	57.6
1972.	141853.	134234.	1584.	994.	590.	40.	94.6	61.2
1973.	141509.	141509.	1690.	1059.	631.	0.	100.0	62.7
1974.	144458.	144022.	1773.	1186.	587.	3.	99.7	66.8
1975.	123017.	123017.	1548.	936.	613.	0.	100.0	60.4
1976.	183000.	181642.	1955.	1220.	735.	12.	99.3	62.0
1977.	195902.	194171.	1900.	1072.	828.	11.	99.1	56.1
1978.	156589.	156589.	1815.	1088.	727.	0.	100.0	59.9
1979.	187366.	186369.	2032.	1262.	770.	7.	99.5	61.9
1980.	150474.	150474.	1936.	1198.	738.	0.	100.0	61.9
1981.	208604.	208604.	2140.	1399.	741.	0.	100.0	65.4
1982.	147048.	147048.	1744.	1151.	593.	0.	100.0	66.0
1983.	194167.	193985.	2244.	1403.	841.	2.	99.9	62.5
1984.	155914.	155914.	1732.	1076.	656.	0.	100.0	62.1
1985.	135611.	135611.	1689.	1087.	603.	0.	100.0	64.3
1986.	198414.	198414.	2330.	1509.	821.	0.	100.0	64.8
1987.	205267.	204916	2348	1483	866	1	99.8	63.1
1988.	164020.	164020	1945.	1280.	665.	0.	100.0	65.8
1989.	181655.	181655	1882	1211	671	0.	100.0	64.4
1990.	205888.	205888	2416	1608	809	0.	100.0	66.5
1991.	192861.	102061	2710.	1420	706	0.	100.0	64.2
1991.	245243.	245242	2623	1500	1024	0.	100.0	61.0
1992.	166069.	166060	2023.	1/67	1024.	٥.	100.0	67.8
1993.	177635.	176060	4±55.	1047	093. 750	υ.	100.0	57.8
		1/0000.	1000.	104/.	759.	5.	77.0	
1995.		20/42/.	21/2.	1288.	884.	υ.	100.0	59.3
1998.	52279.	120050	012. 1670	5Ub.	3Ub.	υ.	100.0	62.3 62.0
1999.	130058.	150058.	10/2.	103/.	035.	υ.	100.0	
2000.	151338.	110744	1469.	g_b.	053.	υ.	100.0	55.6
2001.	118744.	118/44.	1551.	920.	431.	υ.	100.0	68.1
2002.	123654.	140004	1591.	1036.	556.	υ.	100.0	65.1 62.0
	140924.	140924.	1630.	1011.	619.	0.	100.0	
2004.	169456.	169456.	1696.	1053.	643.	0.	100.0	62.1
2005.	121805.	121455.	1291.	700.	591.	1.	99.7	54.2
HD 7	121805.	121455.	1291.	700.	591.	1.	99.7	54.2
	Flow Vol	121455. Flow Treated	1291. TSS In	700. TSS Rem	591. TSS Out	1. TSS Byp	Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	TSS Removal
HD 7		121455. Flow Treated (m3)	1291. TSS In (kg)	700. TSS Rem (kg)	591. TSS Out (kg)	1. TSS Byp (kg)	99.7 Flow Treated (%)	
HD 7 Year 1971.	Flow Vol (m3) 110842.	121455. Flow Treated (m3) 110083.	1291. TSS In (kg) 1199.	700. TSS Rem (kg) 748.	591. TSS Out (kg) 452.	TSS Byp (kg)	99.7 Flow Treated (%) 99.3	TSS Removal (%) 62.3
HD 7 Year	Flow Vol	121455. Flow Treated (m3) 110083. 134234.	1291. TSS In (kg) 1199. 1584.	700. TSS Rem (kg) 748. 1057.	591. TSS Out (kg) 452. 528.	1. TSS Byp (kg) 1. 40.	99.7 Flow Treated (%) 99.3 94.6	TSS Removal
HD 7 Year 1971. 1972.	Flow Vol (m3) 110842.	121455. Flow Treated (m3) 110083. 134234. 141509.	TSS In (kg) 1199. 1584. 1690.	700. TSS Rem (kg) 748. 1057. 1130.	591. TSS Out (kg) 452. 528. 560.	1. TSS Byp (kg) 1. 40. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0	TSS Removal (%) 62.3
HD 7 Year 1971. 1972.	Flow Vol (m3) 110842. 141853.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022.	TSS In (kg) 1199. 1584. 1690. 1773.	700. TSS Rem (kg) 748. 1057. 1130. 1250.	591. TSS Out (kg) 452. 528. 560. 523.	1. TSS Byp (kg) 1. 40. 0. 3.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7	TSS Removal (%) 62.3 65.1
HD 7 Year 1971. 1972. 1973.	Flow Vol (m3) 110842. 141853. 141509.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017.	TSS In (kg) 1199. 1584. 1690. 1773. 1548.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002.	591. TSS Out (kg) 452. 528. 560. 523. 546.	1. TSS Byp (kg) 1. 40. 0. 3. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0	TSS Removal (%) 62.3 65.1 66.9
HD 7 Year 1971. 1972. 1973. 1974.	Flow Vol (m3) 110842. 141853. 141509. 144458.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655.	1. TSS Byp (kg) 1. 40. 0. 3. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3	TSS Removal (%) 62.3 65.1 66.9 70.4
HD 7 Year 1971. 1972. 1973. 1974.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7
HD 7 Year 1971. 1972. 1973. 1974. 1975.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366.	Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5 100.0 100.0 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1980. 1981. 1982.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 155589. 187366. 150474. 208604. 147048. 194167.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 2.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5 100.0 100.0 100.0 99.9	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1980. 1981. 1982. 1983.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0 66.6
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1979. 1980. 1981. 1982. 1983. 1984. 1985.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0 66.6 66.3 68.6
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HD 7 Year 1971. 1972. 1973. 1974. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160. 1603. 1578. 1350.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530. 727. 770. 595.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 1. 0. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0 66.6 66.3 68.6 68.8 67.2
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1980. 1981. 1982. 1983. 1984. 1985.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655.	Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160. 1603. 1578. 1350. 1291.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530. 727. 770. 595. 591.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 2. 0. 0. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0 66.6 66.3 68.8 67.2 69.4 68.6
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HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1980. 1981. 1982. 1983. 1985. 1986. 1987. 1988. 1989. 1990. 1991.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1995. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160. 1603. 1578. 1350. 1291. 1689. 1513. 1708.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530. 727. 770. 595. 591. 728. 711. 915. 618.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.5 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0 66.6 66.3 68.6 68.8 67.2 69.4 68.6 69.9 68.0 65.1 71.3
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1989. 1990. 1991. 1992.	Flow Vol (m3) 110842. 141853. 141809. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427.	Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160. 1603. 1578. 1350. 1291. 1689. 1513. 1708. 1537. 1124.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530. 727. 770. 595. 591. 728. 711. 915. 618.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0 66.6 68.8 67.2 69.4 68.6 69.9 68.0 65.1 71.3 62.1
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1989. 1990. 1991. 1992.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279.	Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160. 1603. 1578. 1350. 1291. 1689. 1513. 1708. 1537. 1124. 1385. 543.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530. 727. 770. 595. 591. 728. 711. 915. 618. 681. 787.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0 66.6 66.3 68.6 68.8 67.2 69.4 68.6 69.9 68.0 65.1 71.3 62.1
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1980. 1981. 1982. 1983. 1984. 1985. 1988. 1989. 1991. 1992. 1993.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160. 1603. 1578. 1350. 1291. 1689. 1513. 1708. 1537. 1124. 1385. 543.	591. TSS Out (kg) 452. 528. 528. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530. 727. 770. 595. 591. 728. 711. 915. 618. 681. 787. 269.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.5 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0 66.6 66.3 68.6 68.8 67.2 69.4 68.6 69.9 68.0 65.1 71.3 62.1 63.8 66.9
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1989. 1990. 1991. 1992. 1993. 1994. 1995.	Flow Vol (m3) 110842. 141853. 141809. 144458. 123017. 183000. 195902. 155589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160. 1603. 1578. 1350. 1291. 1689. 1513. 1708. 1537. 1124. 1385. 543. 1118.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530. 727. 770. 595. 591. 728. 711. 915. 618. 681. 787. 269. 554.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0 66.6 68.8 67.2 69.4 68.6 69.9 68.0 65.1 71.3 62.1 63.8 66.9 66.9
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1989. 1990. 1991. 1992. 1993.	Flow Vol (m3) 110842. 141853. 141809. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058. 151338.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672. 1469. 1351.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160. 1603. 1578. 1350. 1291. 1689. 1513. 1708. 1537. 1124. 1385. 543. 1118. 883. 973.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530. 727. 770. 595. 591. 728. 711. 915. 618. 681. 787. 269. 554. 586.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.1 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0 66.6 68.8 67.2 69.4 68.6 69.9 68.0 65.1 71.3 62.1 63.8 66.9 66.9
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1991. 1992. 1993. 1994. 1995. 1999. 2000. 2001.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058. 151338. 118744.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338. 118744. 123654.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 812. 813.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160. 1603. 1578. 1350. 1291. 1689. 1513. 1708. 1537. 1124. 1385. 543. 1118. 883. 973. 1106.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530. 727. 770. 595. 591. 728. 711. 915. 618. 681. 787. 269. 554. 586.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0 66.6 66.3 68.6 68.8 67.2 69.4 68.6 69.9 68.0 65.1 71.3 62.1 63.8 66.9 66.9 66.9 66.9
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1989. 1990. 1991. 1992. 1993. 1994. 1995.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 155589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058. 151338. 118744. 123654.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338. 118744. 123654. 140924.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672. 1469. 1351. 1591.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160. 1603. 1578. 1350. 1291. 1689. 1513. 1708. 1537. 1124. 1385. 543. 1118. 883. 973. 1106. 1080.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530. 727. 770. 595. 591. 728. 711. 915. 618. 681. 787. 269. 554. 586. 379. 485.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.1 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0 66.6 68.8 67.2 69.4 68.6 69.9 68.0 65.1 71.3 62.1 63.8 66.9 66.9 66.9 66.9
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1985. 1986. 1987. 1988. 1989. 1991. 1992. 1993. 1994. 1995. 1998. 1999. 2000. 2001.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058. 151338. 118744.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338. 118744. 123654.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 812. 813.	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160. 1603. 1578. 1350. 1291. 1689. 1513. 1708. 1537. 1124. 1385. 543. 1118. 883. 973. 1106. 1080. 1124. 765.		1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	99.7 Flow Treated (%) 99.3 94.6 100.0 99.7 100.0 99.1 100.0	TSS Removal (%) 62.3 65.1 66.9 70.4 64.7 66.1 60.6 64.7 66.1 66.6 69.3 70.0 66.6 66.3 68.6 68.8 67.2 69.4 68.6 69.9 68.0 65.1 71.3 62.1 63.8 66.9 66.9 66.9 66.9

HD 8								
Year	Flow Vol	Flow Treated	TSS In	TSS Rem	TSS Out	TSS Byp	Flow Treated	TSS Removal
	(m3)	(m3)	(kg)	(kg)	(kg)	(kg)	(%)	(%)
1971.	110842.	110083.	1199.	794.	405.	1.	99.3	66.2
1972.	141853.	134234.	1584.	1111.	474.	40.	94.6	68.4
1973.	141509.	141509.	1690.	1190.	500.	0.	100.0	70.4
1974.	144458.	144022.	1773.	1307.	466.	3.	99.7	73.6
1975.	123017.	123017.	1548.	1060.	489.	0.	100.0	68.5
1976.	183000.	181642.	1955.	1375.	580.	12.	99.3	69.9
1977.	195902.	194171.	1900.	1230.	670.	11.	99.1	64.4
1978.	156589.	156589.	1815.	1238.	577.	0.	100.0	68.2
1979.	187366.	186369.	2032.	1420.	613.	7.	99.5	69.6
1980.	150474.	150474.	1936.	1361.	575.	0.	100.0	70.3
1981.	208604.	208604.	2140.	1556.	585.	0.	100.0	72.7
1982.	147048.	147048.	1744.	1276.	468.	0.	100.0	73.2
1983. 1984.	194167. 155914.	193985.	2244. 1732.	1575. 1210.	670. 522.	2. 0.	99.9 100.0	70.1 69.8
1984.	135611.	155914. 135611.	1689.	1210.	471.	0.	100.0	72.1
1986.	198414.	198414.	2330.	1681.	650.	0.	100.0	72.1
1987.	205267.	204916.	2348.	1668.	680.	1.	99.8	71.0
1988.	164020.	164020.	1945.	1421.	524.	0.	100.0	73.1
1989.	181655.	181655.	1882.	1353.	529.	0.	100.0	71.9
1990.	205888.	205888.	2416.	1768.	649.	0.	100.0	73.1
1991.	192861.	192861.	2224.	1594.	631.	0.	100.0	71.7
1992.	245243.	245243.	2623.	1812.	811.	0.	100.0	69.1
1993.	166069.	166069.	2155.	1611.	544.	0.	100.0	74.7
1994.	177635.	176860.	1806.	1194.	612.	5.	99.6	65.9
1995.	207427.	207427.	2172.	1467.	705.	0.	100.0	67.5
1998.	52279.	52279.	812.	577.	235.	0.	100.0	71.1
1999.	130058.	130058.	1672.	1172.	500.	0.	100.0	70.1
2000.	151338.	151338.	1469.	950.	519.	0.	100.0	64.6
2001.	118744.	118744.	1351.	1015.	336.	0.	100.0	75.1
2002.	123654.	123654.	1591.	1159.	432.	0.	100.0	72.8
2003.	140924.	140924.	1630.	1145.	485.	0.	100.0	70.3
2004.	169456.	169456.	1696.	1185.	511.	0.	100.0	69.9
2005.	121805.	121455.	1291.	822.	470.	1.	99.7	63.6
HD 10								
HD 10 Year	Flow Vol	Flow Treated	TSS In	TSS Rem	TSS Out	TSS Byp	Flow Treated	TSS Removal
HD 10 Year	Flow Vol	Flow Treated	TSS In	TSS Rem	TSS Out (kg)	TSS Byp (kg)	Flow Treated	TSS Removal
	(m3)	Flow Treated (m3) 110083.	TSS In (kg) 1199.	TSS Rem (kg) 879.	TSS Out (kg) 321.	(kg)	Flow Treated (%) 99.3	TSS Removal (%) 73.2
Year		(m3)	(kg)	(kg)	(kg)		(%)	(%)
Year 1971.	(m3) 110842.	(m3) 110083.	(kg) 1199.	(kg) 879.	(kg) 321.	(kg) 1.	(%) 99.3	(%) 73.2
Year 1971. 1972.	(m3) 110842. 141853.	(m3) 110083. 134234.	(kg) 1199. 1584.	(kg) 879. 1210.	(kg) 321. 375.	(kg) 1. 40.	(%) 99.3 94.6	(%) 73.2 74.5
Year 1971. 1972. 1973.	(m3) 110842. 141853. 141509.	(m3) 110083. 134234. 141509.	(kg) 1199. 1584. 1690.	(kg) 879. 1210. 1296.	(kg) 321. 375. 394.	(kg) 1. 40. 0.	(%) 99.3 94.6 100.0	(%) 73.2 74.5 76.7
Year 1971. 1972. 1973. 1974.	(m3) 110842. 141853. 141509. 144458.	(m3) 110083. 134234. 141509. 144022.	(kg) 1199. 1584. 1690. 1773.	(kg) 879. 1210. 1296. 1413.	(kg) 321. 375. 394. 359.	(kg) 1. 40. 0. 3.	(%) 99.3 94.6 100.0 99.7	(%) 73.2 74.5 76.7 79.6
Year 1971. 1972. 1973. 1974. 1975. 1976. 1977.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171.	(kg) 1199. 1584. 1690. 1773. 1548. 1955.	(kg) 879. 1210. 1296. 1413. 1162. 1499.	(kg) 321. 375. 394. 359. 387. 456. 539.	(kg) 1. 40. 0. 3. 0. 12.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2
Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350.	(kg) 321. 375. 394. 359. 387. 456. 539.	(kg) 1. 40. 0. 3. 0. 12. 11. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4
Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350.	(kg) 321. 375. 394. 359. 387. 456. 539. 465.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0
Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6
Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5 100.0 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374.	(kg) 321. 375. 394. 359. 456. 539. 465. 482. 454. 457. 370.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5 100.0 100.0 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 2.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 99.5 100.0 100.0 100.0 99.9	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 2. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817.	(kg) 321. 375. 394. 359. 466. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 77.8
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513. 540.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817.	(kg) 321. 375. 394. 359. 466. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 77.8
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1481. 1683. 1374. 1711. 1315. 1314. 1817. 1808.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513. 540.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 2. 0. 0. 1. 1. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8 78.0 77.0 79.0
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1481. 1683. 1374. 1711. 1315. 1314. 1817. 1808. 1538. 1470.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513. 540.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 2. 0. 0. 1. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8 78.0 77.0 79.0 78.1
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817. 1808. 1538.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513. 540. 407. 412. 505.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8 78.0 77.0 79.0 79.1 79.1 77.6 75.5
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817. 1808. 1538. 1470. 1912. 1726.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 457. 370. 533. 417. 376. 513. 540. 407. 412. 505.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8 78.0 77.0 79.0 78.1 79.1 77.6 75.5 80.4
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1989. 1989. 1990. 1991. 1992. 1993. 1994.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817. 1808. 1538. 1470. 1912. 1726. 1980. 1732.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513. 540. 407. 412. 505. 498. 643. 423. 488.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8 78.0 77.0 79.0 77.0 79.1 77.6 75.5 80.4 72.8
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990. 1991. 1992. 1993. 1993.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817. 1808. 1538. 1470. 1912. 1726. 1980. 1732.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513. 540. 407. 412. 505. 498. 643. 423. 488. 574.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8 78.0 77.0 79.0 79.1 77.6 75.5 80.4 72.8 73.6
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1999. 1991. 1992. 1993. 1994. 1993. 1994.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817. 1808. 1538. 1470. 1912. 1726. 1980. 1732. 1317. 1598.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513. 540. 407. 412. 505. 498. 643. 423. 488. 574.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8 78.0 77.0 79.0 78.1 79.1 77.6 75.5 80.4 72.8 73.6 77.5
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1989. 1990. 1991. 1992. 1993. 1994. 1995. 1998.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817. 1808. 1538. 1470. 1912. 1726. 1980. 1732. 1732. 1732.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513. 540. 407. 412. 505. 498. 643. 423. 428. 574. 183. 401.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8 78.0 77.0 79.0 79.1 79.1 79.1 77.6 75.5 80.4 72.8 73.6 77.6 77.6 77.6
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1989. 1990. 1991. 1992. 1993. 1993. 1994. 1995. 1999.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058.	(m3) 110083. 134234. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817. 1808. 1538. 1470. 1912. 1726. 1980. 1732. 1317. 1598. 629.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513. 540. 407. 412. 505. 498. 643. 423. 488. 574. 183. 401. 423.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8 78.0 77.0 79.0 79.0 79.1 77.6 75.5 80.4 72.8 73.6 77.5 76.0 71.2
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1990. 1991. 1992. 1993. 1993. 1994. 1998. 1999. 2000. 2001.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058. 151338.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338. 118744.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672. 1469. 1351.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817. 1808. 1538. 1470. 1912. 1726. 1980. 1732. 1317. 1598. 629. 1272.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513. 540. 407. 412. 505. 498. 643. 423. 488. 574. 183. 401. 423.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8 78.0 77.0 79.0 78.1 77.6 75.5 80.4 72.8 73.6 77.5 76.0 71.2 81.0
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1989. 1990. 1991. 1992. 1993. 1991. 1992. 1993. 1994. 1995. 1998.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058. 151338. 118744. 123654.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338. 118744. 123654.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672. 1469.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817. 1808. 1538. 1470. 1912. 1726. 1980. 1732. 1732. 1732. 1732. 1732. 1732. 1732. 1732. 1732. 1733.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513. 540. 407. 412. 505. 498. 643. 423. 428. 574. 183. 401. 423.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8 78.0 77.0 79.0 78.1 79.1 77.6 75.5 80.4 72.8 73.6 77.5 76.0 71.2
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1980. 1981. 1982. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1990. 1991. 1992. 1993. 1994. 1995. 1999. 1999. 2000. 2001. 2002. 2003.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058. 151338. 118744. 123654.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338. 118744. 123654. 140924.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672. 1469. 1351. 1591.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817. 1808. 1538. 1470. 1912. 1726. 1980. 1732. 1317. 1598. 629. 1272. 1046. 1094. 1248.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513. 540. 407. 412. 505. 498. 643. 423. 488. 574. 183. 401. 423. 257. 343.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8 78.0 77.0 79.0 79.0 79.1 77.6 75.5 80.4 72.8 73.6 77.5 76.0 71.2 81.0 78.4 76.0
1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1989. 1990. 1991. 1992. 1993. 1991. 1992. 1993. 1994. 1995. 1998.	(m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888. 192861. 245243. 166069. 177635. 207427. 52279. 130058. 151338. 118744. 123654.	(m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888. 192861. 245243. 166069. 176860. 207427. 52279. 130058. 151338. 118744. 123654.	(kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224. 2623. 2155. 1806. 2172. 812. 1672. 1469.	(kg) 879. 1210. 1296. 1413. 1162. 1499. 1362. 1350. 1550. 1481. 1683. 1374. 1711. 1315. 1314. 1817. 1808. 1538. 1470. 1912. 1726. 1980. 1732. 1732. 1732. 1732. 1732. 1732. 1732. 1732. 1732. 1733.	(kg) 321. 375. 394. 359. 387. 456. 539. 465. 482. 454. 457. 370. 533. 417. 376. 513. 540. 407. 412. 505. 498. 643. 423. 428. 574. 183. 401. 423.	(kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	(%) 99.3 94.6 100.0 99.7 100.0 99.3 99.1 100.0	(%) 73.2 74.5 76.7 79.6 75.0 76.2 71.2 74.4 76.0 76.5 78.6 78.8 76.2 75.9 77.8 78.0 77.0 79.0 79.1 79.1 77.6 75.5 80.4 72.8 73.6 77.5 76.0 71.2

HD 12								
Year	Flow Vol	Flow Treated	TSS In	TSS Rem	TSS Out	TSS Byp	Flow Treated	TSS Removal
	(m3)	(m3)	(kg)	(kg)	(kg)	(kg)	(%)	(%)
1971.	110842.	110083.	1199.	940.	259.	1.	99.3	78.3
1972.	141853.	134234.	1584.	1282.	302.	40.	94.6	78.9
1973.	141509.	141509.	1690.	1377.	313.	0.	100.0	81.5
1974.	144458.	144022.	1773.	1497.	275.	3.	99.7	84.3
1975.	123017.	123017.	1548.	1242.	308.	0.	100.0	80.2
1976.	183000.	181642.	1955.	1589.	366.	12.	99.3	80.8
1977.	195902.	194171.	1900.	1459.	441.	11.	99.1	76.3
1978.	156589.	156589.	1815.	1440.	375.	0.	100.0	79.4
1979.	187366.	186369.	2032.	1648.	385.	7.	99.5	80.8
1980.	150474.	150474.	1936.	1567.	368.	0.	100.0	80.9
1981.	208604.	208604.	2140.	1782.	358.	0.	100.0	83.3
1982.	147048.	147048.	1744.	1461.	284.	0.	100.0	83.8
1983.	194167.	193985.	2244.	1821.	423.	2.	99.9	81.1
1984.	155914.	155914.	1732.	1398.	334.	0.	100.0	80.7
1985.	135611.	135611.	1689.	1397.	293.	0.	100.0	82.7
1986.	198414.	198414.	2330.	1934.	397.	0.	100.0	83.0
1987.	205267.	204916.	2348.	1918.	430.	1.	99.8	81.6
1988.	164020.	164020.	1945.	1624.	321.	0.	100.0	83.5
1989.	181655.	181655.	1882.	1565.	318.	0.	100.0	83.1
1990.	205888.	205888.	2416.	2033.	384.	0.	100.0	84.1
1991.	192861.	192861.	2224.	1835.	389.	0.	100.0	82.5
1992.	245243.	245243.	2623.	2110.	514.	0.	100.0	80.4
1993.	166069.	166069.	2155.	1828.	327.	0.	100.0	84.8
1994.	177635.	176860.	1806.	1404.	402.	5.	99.6	77.6
1995.	207427.	207427.	2172.	1717.	455.	0.	100.0	79.0
1998.	52279.	52279.	812.	667.	145.	0.	100.0	82.2
1999.	130058.	130058.	1672.	1353.	320.	0.	100.0	80.9
2000.	151338.	151338.	1469.	1118.	351.	0.	100.0	76.1
2001.	118744.	118744.	1351.	1155.	196.	0.	100.0	85.5
2002.	123654.	123654.	1591.	1325.	266.	0.	100.0	83.3
2003.	140924.	140924.	1630.	1320.	310.	0.	100.0	81.0
2004.	169456.	169456.	1696.	1367.	330.	0.	100.0	80.6
2005.	121805.	121455.	1291.	978.	313.	1.	99.7	75.7
	Intensity (mm/h 1.50 2.25 3.00 3.75 4.75 5.75 8.00 0.00	12.2 18.4 24.5 30.6 38.7 46.9 65.2 81.6	Percentago NaN NaN NaN NaN NaN NaN NaN NaN					
	15.50	126.4	NaN					
	23.25	189.6	NaN					
******	******	*****	*****					
* Summar	ry of Quantity a	nd Quality Results	at *					
* Locati		INFlow in cms.	*					
* Values		ous at indicated t	ime step *					
******	*****	*****	******					
Date	e Time	Flow Total Su						
	ear Hr:Min	cum/s mg/l						
Flow wtd Flow wtd	means std devs value	0.001 125 0.009 65 1.696 293						
	alue	0.000 0.						
		484408. 60472						
		Cub-Met KILOGRAM						
===> SWMM	off simulation e 4 4.4 simulat			essages.				
******	******	******	******	***				
******	******	lation Date and Ti						
* Startin	ng Date Octob			*				
		11:15:47.553		*				
* Endin	ng Date Octob			*				
	Time	11:15:50. 29		*				
* Elabse	su IIMe	0.041 mir 2.476 sed	iuces.	*				
********	:u 11111C	2.476 sec	.UIIUB.					

Stormwater Management Plan 469 & 509 Rice Road, City of Welland	
	APPENDIX D
	Oil/Grit Separator Sample Inspection Report
Upper Canada Consultants	

SAMPLE INSPECTION REPORT

Owner:					
Location:					
Manhole Oil/Grit Separator:					
Type of Inspection	☐ Month	nly		ly	☐ Special
Inlet/Outlet Information					
	Inlet		Outlet		
Clear of Debris	□ Yes	□ No	□ Yes	□ No	
Build Up of Sediment	□ Yes	□ No	□ Yes	□ No	
Action Taken:					
Sediment Tank Information					
A. Manhole Sump Depth:	<u>±</u>	m from co	ver rim (to	be as-constructe	ed verified)
B. Measurement from Rim to Sediment Level		m			
C. Depth of Sediment:		m (A - B)			
Note: If the measured depth of required.	sediment	is greater tha	an 350mm 1	then sediment re	emoval is
Presence of Contaminants					
Oil	□ Yes	□ No	Depth:		m
Foam	□ Yes	□ No	Depth:		m
Action Taken:					
Name of Regulatory Agency			Telephone	No.:	
			Transactio	n No.:	
Name of Licensed Waste Managemen	nt Collect	or	Telephone	No.:	
			Transactio	n No.:	
Owner Notification	☐ Yes	□ No	Other:		
	Time:		Date:		
Name of Inspector:					
Signed:				Date:	

Stormwater Management Plan 469 & 509 Rice Road, City of Welland	
	APPENDIX E
	Stormwater Management Facility Calculations (P11)

Upper Canada Consultants

3-30 Hannover Drive

St. Catharines, ON, L2W 1A3

PROJECT NAME: 469 & 509 RICE ROAD, CITY OF WELLAND

PROJECT NO.: 2200

PROPOSED SOUTH WET POND CALCULATIONS (POND A11)								
Quality Requirements	Quality Orifice	Outlet Weir	Overflow Spillway	Outflow Pipe Orifice				
Drainage Area (ha) = 9.66	Diameter (m) = 0.100	Perimeter Length $(m) = 0.60$	Length $(m) = 2.50$	Diameter (m) = 0.450				
Enhanced $(m3/ha) = 202$	Cd = 0.63	Inlet Elevation $(m) = 186.10$	Slopes $(X:1) = 10.00$	Cd = 0.65				
Perm Pool $(m3/ha) = 162$	Invert $(m) = 184.80$		Invert $(m) = 186.50$	Invert $(m) = 184.80$				
Perm Pool Vol $(m3) = 1,565$	Por	nd Drawdown Time Calculation (MC	DE, 2003)	Obvert $(m) = 185.25$				
Active Vol (m3) 386	Water Surface Eleva	tion during 25mm Design Storm Event	t = 185.31	Top of Pipe $(m) = 185.35$				
25mm MOE Volume = 1,350	MOE Eq	uation 4.11 Drawdown Coefficient 'C2'	' = 1,059					
Water Level Elev. = 184.80 m	MOE Eq	uation 4.11 Drawdown Coefficient 'C3'	' = 2,024					
	M	OE Equation 4.11 Drawdown Time (h)	0 = 40					

				Average						Max			
	Increment	Active	Surface	Surface	Increment	Permanent	Active	Quality	Ditch	Pipe	Overflow	Total	Average
Elevation	Depth	Depth	Area	Area	Volume	Volume	Volume	Orifice	Inlet	Orifice	Spillway	Outflow	Discharge
	(m)	(m)	(m2)	(m2)	(m3)	(m3)	(m3)	(m3/s)	(m3/s)	(m3/s)	(m3/s)	(m3/s)	(m3/s)
183.30		-1.50	575			0							
5:1 SLOPE	0.75			815	611								
184.05		-0.75	1,055			611							
5:1 SLOPE	0.75			1,339	1,005								
184.80		0.00	1,624			1,616							
5:1 SLOPE													
184.80		0.00	2,037				0	0.000	0.000	0.000	0.000	0.000	
5:1 SLOPE	0.50			2,285	1,142								0.013
185.30		0.50	2,532				1,142	0.014	0.000	0.205	0.000	0.014	
5:1 SLOPE	0.80			2,971	2,377								0.109
186.10		1.30	3,410				3,519	0.024	0.000	0.458	0.000	0.024	
5:1 SLOPE	0.40			3,648	1,459								0.744
186.50		1.70	3,886				4,978	0.028	0.259	0.542	0.000	0.287	
5:1 SLOPE	0.30			4,148	1,244								1.104
186.80		2.00	4,410				6,222	0.030	0.599	0.597	1.324	1.922	

Notes

- 1. Quality Orifice flow is the orifice controlling for the 24 hour detention period and uses an orifice formula.
- 2. Pipe Orifice flow is calcuated using an orifice formula on the pipe from the ditch inlet to the outlet and uses the total head on the orifice.
- 3. Overflow Weir flow is calculated using a trapezondial weir to convey outflow for less frequent storms through the embankment with an emergency spillway.
- 4. Total Outflow is calculated by adding the Overflow Spillway with the lowest of Quality Orifice plus Ditch Inlet or Max Pipe Orifice.

Stormwater Management Plan 469 & 509 Rice Road, City of Welland	
	APPENDIX F Future Conditions MIDUSS Output File
	Future Conditions wildess Output File
Upper Canada Consultants	

Dorre	elopment Conditions with SWM			.088	.088	.023	.000 c.m/s
Deve		4	CATCHME	NT ID No.ć			
	Output File (4.7) 25MM.OUT opened 2024-10-16 18:02		13.000 6.980		hectares		
	Units used are defined by G = 9.810 24 144 10.000 are MAXDT MAXHYD & DTMIN values		216.000		(PERV) met	res	
	Licensee: UPPER CANADA CONSULTANTS		1.000	Gradien			
35	COMMENT		70.000		t Impervio	us	
	4 line(s) of comment		216.000		(IMPERV)		
	STORMWATER MANAGEMENT PLAN		.000		rith Zero Dy		; 3=Green-Ampt; 4=Repeat
	QUAKER ROAD CITY OF WELLAND		.250	Manning		, z-norcon,	, J-Green Ampe, 1-Repeat
	FUTURE CONDITIONS		74.000		ve No or C		
35	COMMENT		.100		efficient		
	<pre>3 line(s) of comment</pre>		8.924		Abstraction		
	***********		1		1=Trianglr	; 2=Rectang .023	glr; 3=SWM HYD; 4=Lin. Reserv
	25mm STORM EVENT			.461	.804	.592	.000 c.m/s C perv/imperv/total
2	STORM	15	ADD RUN		.001	. 332	c perv/imperv/cocur
-	1 1=Chicago; 2=Huff; 3=User; 4=Cdn1hr; 5=Historic			.461	.549	.023	.000 c.m/s
	512.000 Coefficient a	4	CATCHME				
	6.000 Constant b (min)		14.000	ID No.6			
	.800 Exponent c		.670 67.000		hectares (PERV) met	roa	
	.450 Fraction to peak r		1.000	Gradien		Les	
	240.000 Duration 6 240 min 25.035 mm Total depth		60.000		t Impervio	us	
3	IMPERVIOUS		67.000		(IMPERV)		
	<pre>Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		.000		rith Zero D		
	.015 Manning "n"		1			; 2=Horton;	; 3=Green-Ampt; 4=Repeat
	98.000 SCS Curve No or C		.250 74.000	Manning	"n" ve No or C		
	.100 Ia/S Coefficient		.100		ve No or C		
35	.518 Initial Abstraction		8.924		Abstraction	on	
33	3 line(s) of comment		1				glr; 3=SWM HYD; 4=Lin. Reserv
	*******			.036	.549	.023	.000 c.m/s
	PROP DEVELOPMENT NORTH OF SEGMENT 1 - POND P10			.098	.798	.518	C perv/imperv/total
	*******	15	ADD RUN				
4	CATCHMENT			.036	.584	.023	.000 c.m/s
	10.000 ID No.6 99999	27		APH DISPLA		nh shasan	
	4.050 Area in hectares				o/Hydrogram 86E+04 c.m		
	164.000 Length (PERV) metres 1.000 Gradient (%)	10	POND	13302	FOTAGO		
	1.000 Gradient (%) 70.000 Per cent Impervious			- Dischard	e - Volume	sets	
	164.000 Length (IMPERV)		184.800		00	.0	
	.000 %Imp. with Zero Dpth		185.300	.01	40 114	42.0	
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		186.100			19.0	
	.250 Manning "n"		186.500			78.0	
	74.000 SCS Curve No or C		186.800			22.0	
	.100 Ia/S Coefficient		Peak Ou	tflow = Depth =		c.m/s	
	8.924 Initial Abstraction Option 1=Trianglr: 2=Rectanglr: 3=SWM HYD: 4=Lin. Reserv			Storage =			
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .264 .000 .000 c.m/s			.036	.584	.014	.000 c.m/s
	.098 .806 .594 C perv/imperv/total	14	START				
15	ADD RUNOFF			Zero; 2=De	fine		
	.264 .264 .000 .000 c.m/s	35	COMMENT				
4	CATCHMENT			ne(s) of c			
	11.000 ID No.6 99999					T OF GENET	WEST OF RICE RD PON
	1.000 Area in hectares 82.000 Length (PERV) metres			******		DARLIN RD &	MEDI OF RICE RD. TON
	1.000 Gradient (%)	4	CATCHME	NT			
	10.000 Per cent Impervious		40.000	ID No.ć	99999		
	82.000 Length (IMPERV)		8.210		hectares		
	.000 %Imp. with Zero Dpth		234.000		(PERV) met	res	
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		1.000 25.000	Gradien			
	.250 Manning "n" 74.000 SCS Curve No or C		234.000		t Impervion (IMPERV)	us	
	.100 Ia/S Coefficient		.000		ith Zero D	pth	
	8.924 Initial Abstraction		1	Option	1=SCS CN/C	; 2=Horton	; 3=Green-Ampt; 4=Repeat
	<pre>Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>		.250	Manning			
	.009 .264 .000 .000 c.m/s		74.000		ve No or C		
	.098 .791 .168 C perv/imperv/total		.100 8.924		efficient Abstraction	on	
15	ADD RUNOFF .009 .273 .000 .000 c.m/s		1				glr; 3=SWM HYD; 4=Lin. Reserv
10	.009 .273 .000 .000 c.m/s POND			.193	.000	.014	.000 c.m/s
	6 Depth - Discharge - Volume sets			.098	.800	.274	C perv/imperv/total
	184.800 .000 .0	15	ADD RUN				
	185.750 .0210 1.0			.193	.193	.014	.000 c.m/s
	186.000 .0230 503.0	9	ROUTE .000	Conduit	Length		
	186.250 .0260 1091.0 186.500 .0280 1765.0		.000		uit define	đ	
	186.700 1.244 2370.0		.000	Zero la	g		
	Peak Outflow = .023 c.m/s		.000		ighting fac	ctor	
	Maximum Depth = 185.944 metres		.000		timestep	_	
	Maximum Storage = 390. c.m		0		sub-reaches		
	.009 .273 .023 .000 c.m/s	17	COMBINE	.193	.193	.193	.000 c.m/s
14	START 1 1=Zero; 2=Define	-,		nction Nod	le No.		
35	COMMENT			.193	.193	.193	.193 c.m/s
55	3 line(s) of comment	14	START				
	*******			Zero; 2=De	fine		
	PROP DEVELOPMENT SOUTH OF SEGMENT 1 - POND P11	4	CATCHME				
	*******		41.000	ID No.6			
4	CATCHMENT		.690 68.000		hectares (PERV) met	res	
	12.000 ID No.6 99999 2.680 Area in hectares		1.000	Gradien		- 50	
	2.680 Area in hectares 134.000 Length (PERV) metres		35.000		t Impervio	us	
	1.000 Gradient (%)		68.000		(IMPERV)		
	35.000 Per cent Impervious		.000	%Imp. w	rith Zero D		
	134.000 Length (IMPERV)		1			; 2=Horton	; 3=Green-Ampt; 4=Repeat
	.000 %Imp. with Zero Dpth		.250	Manning			
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		74.000 .100		ve No or C efficient		
	.250 Manning "n"		8.924		efficient Abstractio	on	
	74.000 SCS Curve No or C .100 Ia/S Coefficient		8.924				glr; 3=SWM HYD; 4=Lin. Reserv
	8.924 Initial Abstraction			.022	.000	.193	.193 c.m/s
					.798	.343	C perv/imperv/total
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv			.098	. / 30	.545	C per v/ imper v/ cocar
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .088 .000 .023 .000 c.m/s	15	ADD RUN	OFF			
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .088 .000 .023 .000 c.m/s .098 .801 .344 C perv/imperv/total</pre>		ADD RUN	OFF .022	.022	.193	.193 c.m/s
15	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .088 .000 .023 .000 c.m/s	15 4	ADD RUN	OFF .022	.022		

	12.640 Area in	n hectares				188.000	.88	30 1209	4.0	
		(PERV) metro	es			Peak Ou			c.m/s	
	1.000 Gradie					Maximum				
		nt Impervious	s				Storage =			000/-
		(IMPERV)	-1-		14	START	.056 1	.513	.041	.000 c.m/s
		with Zero Dpt		3=Green-Ampt; 4=Repeat	14		Zero; 2=Def	ine		
	.250 Manning		2-1102 0011,	5-010011 Impo, 1-10poud	35	COMMENT	2010, 2-201			
		rve No or C					ne(s) of co	mment		
		oefficient				*****	****			
		l Abstraction						SOUTH OF QU	AKER, EAS	T OF RICE - POND P50
	1 Option			rlr; 3=SWM HYD; 4=Lin. Reserv		*****				
	.809 .098	.022 .800	.193 .590	.193 c.m/s C perv/imperv/total	4	CATCHME 52.000	NT ID No.ó	00000		
15	ADD RUNOFF	.800	.590	C perv/imperv/total		6.430		hectares		
13	.809	.831	.193	.193 c.m/s		207.000		PERV) metr	es	
9	ROUTE					1.000	Gradient	: (%)		
		t Length				70.000		: Imperviou	s	
		duit defined				207.000	Length (
	.000 Zero la					.000		th Zero Dr		2 Garage America A Barrack
		eighting fact g timestep	tor			.250	Manning		2=HOTTON	; 3=Green-Ampt; 4=Repeat
		sub-reaches				74.000		re No or C		
	.809	.831	.831	.193 c.m/s		.100		efficient		
17	COMBINE					8.924		Abstractio		
	2 Junction No.					1				nglr; 3=SWM HYD; 4=Lin. Reserv
	.809	.831	.831	1.024 c.m/s			.426	.000	.041	.000 c.m/s
14	START 1 1=Zero; 2=De				15	ADD RUN	.098	.805	.593	C perv/imperv/total
4	CATCHMENT	arine			15		.426	.426	.041	.000 c.m/s
-	43.000 ID No.	5 99999			9	ROUTE	. 120	• 120		1000 CIM, B
	.330 Area in	n hectares			-	.000	Conduit			
		(PERV) metre	es			.000		it defined		
	1.000 Gradie					.000	Zero lag			
		nt Impervious	s			.000		ghting fac	tor	
		(IMPERV) with Zero Dp	th.			.000		timestep sub-reaches		
				3=Green-Ampt; 4=Repeat		-	.426	.426	.426	.000 c.m/s
	.250 Manning		2-1102 0011,	5-010011 Impo, 1-10poud	17	COMBINE		• 120		1000 CIM, B
		rve No or C				2 Ju	nction Node	No.		
		oefficient					.426	.426	.426	.426 c.m/s
		l Abstraction			14	START				
				rlr; 3=SWM HYD; 4=Lin. Reserv			Zero; 2=Def	ine		
	.011	.000 .798	.831 .343	1.024 c.m/s C perv/imperv/total	4	CATCHME 53.000	NT ID No.ó	00000		
15	ADD RUNOFF	. / 90	.343	C perv/imperv/total		11.340		hectares		
	.011	.011	.831	1.024 c.m/s		275.000		PERV) metr	es	
4	CATCHMENT					1.000	Gradient			
		ó 99999				70.000	Per cent	Imperviou	s	
		n hectares				275.000	Length (
		(PERV) metro	es			.000		th Zero Dr		
	1.000 Gradies 70.000 Per ces	nt (%) nt Imperviou:				.250	Manning		2=Horton	; 3=Green-Ampt; 4=Repeat
		(IMPERV)	B			74.000		re No or C		
		with Zero Dp	th			.100		efficient		
				3=Green-Ampt; 4=Repeat		8.924		Abstractio	n	
	.250 Manning					1				nglr; 3=SWM HYD; 4=Lin. Reserv
		rve No or C					.731	.000	.426	.426 c.m/s
		pefficient					.098	.798	.588	C perv/imperv/total
		l Abstraction		rlr; 3=SWM HYD; 4=Lin. Reserv	15	ADD RUN	.731	.731	.426	.426 c.m/s
	.424	.011	.831	1.024 c.m/s	9	ROUTE	. / 31	. / 31	.420	.420 C.M/S
	.098	.805	.593	C perv/imperv/total		.000	Conduit	Length		
15	ADD RUNOFF					.000		it defined		
	.424	.433	.831	1.024 c.m/s		.000	Zero lag			
9	ROUTE					.000		ghting fac	tor	
		t Length				.000		timestep ub-reaches		
	.000 No Cond	duit defined				-		.731	.731	.426 c.m/s
		ag eighting fact	tor		17	COMBINE		. / 31	./31	.420 C.M/S
		g timestep					nction Node	No.		
		sub-reaches					.731	.731	.731	1.157 c.m/s
	.424	.433	.433	1.024 c.m/s	18	CONFLUE				
17	COMBINE						nction Node			
	2 Junction No.	de No. .433	.433	1.457 c.m/s	4	CATCHME		1.157	.731	.000 c.m/s
14	START	. 133	• 433	1.437 C.M/S	-	54.000	ID No.ó	99999		
	1 1=Zero; 2=De	efine				1.280		hectares		
18	CONFLUENCE					92.000	Length (PERV) metr	es	
	2 Junction No.					1.000	Gradient	: (%)		
_	.424	1.457	.433	.000 c.m/s		60.000		Imperviou	s	
4	CATCHMENT 45.000 ID No.	5 00000				92.000	Length ((IMPERV) th Zero Dr	+h	
		n hectares				1				; 3=Green-Ampt; 4=Repeat
		(PERV) metre	es			.250	Manning		2-1101 0011	, J-Green Ampe, 1-Repeat
	1.000 Gradie					74.000		re No or C		
	60.000 Per cer	nt Impervious	s			.100		efficient		
		(IMPERV)				8.924		Abstraction		
		with Zero Dp		3-Green America A. Por		1				nglr; 3=SWM HYD; 4=Lin. Reserv
	1 Option .250 Manning	scs cn/c;	∠=Horton;	3=Green-Ampt; 4=Repeat			.070 1 .098	.157 .786	.731 .511	.000 c.m/s C perv/imperv/total
		rve No or C			15	ADD RUN		.,00		- Per v/ Imper v/ Cocal
		pefficient						.227	.731	.000 c.m/s
	8.924 Initia	l Abstraction			27	HYDROGR	APH DISPLAY	7		
				lr; 3=SWM HYD; 4=Lin. Reserv			# of Hyeto		h chosen	
	.056	1.457	.433	.000 c.m/s			= .278153	34E+04 c.m		
	.098	.791	.514	C perv/imperv/total	10	POND	n			
15	ADD RUNOFF	1 512	422	000 a m/c			- Discharge			
27	.056 HYDROGRAPH DISPLA	1.513 AY	.433	.000 c.m/s		182.000 182.800			.0	
2,		nı to/Hydrograpl	h chosen			183.150			5.0	
	Volume = .3593					183.500	.23	88 1075	1.0	
10	POND					183.800				
						184.000	1.02	28 1533	7.0	
	6 Depth - Discharg									
	6 Depth - Discharg 186.000 .0	000	.0			Peak Ou			c.m/s	
	6 Depth - Dischard 186.000 .0 186.800 .0	000 550 404	.0 8.0			Peak Ou Maximum	Depth =	182.397	metres	
	6 Depth - Dischard 186.000 .0 186.800 .0 187.300 .0	000 550 404 730 709	.0 8.0 1.0			Peak Ou Maximum Maximum	Depth = Storage =	182.397 2607.	metres c.m	.000 c.m/s
	6 Depth - Dischard 186.000 .0 186.800 .0 187.300 .0 187.500	000 550 404	.0 8.0 1.0 4.0		14	Peak Ou Maximum Maximum	Depth = Storage =	182.397	metres	.000 c.m/s

```
1=Zero; 2=Define
35
         COMMENT
          line(s) of comment
         PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30
          CATCHMENT
        30.000
                       ID No.ó 99999
                       Area in hectares
Length (PERV) metres
         8.470
          .200
                       Gradient (%)
       .100
238.000
                       Per cent Impervious
Length (IMPERV)
                       **Simple tamperv)
% Imp. with Zero Dpth
Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
Manning "n"
          .000
           .250
        74.000
                       SCS Curve No or C
Ia/S Coefficient
         8.924
                       Initial Abstraction
                       Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 07 .000 .009 .000 c.m/s 98 .803 .099 C perv/imperv/total
                                                              .000 c.m/s
C perv/imperv/total
                    .098
         ADD RUNOFF
                   .007
                                  .007
                                                 .009
                                                                 .000 c.m/s
         CATCHMENT
                       ID No.6 99999
        31.000
        10.420
                       Area in hectares
                       Length (PERV) metres
Gradient (%)
       264.000
                       Per cent Impervious
        75.000
       264.000
                       Length (IMPERV)
                       Nempth (IMPERV)

**Simp. with Zero Dpth

Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
          .000
                       Manning "n"
SCS Curve No or C
Ia/S Coefficient
           .250
        74.000
           .100
                   Initial Abstraction
Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
.723 .007 .009 .000 c.m/s
                                            .009 .000 c.m/s
.623 C perv/imperv/total
                             .007
.798
15
         ADD RUNOFF
                    .723
                                  .724
                                                  .009
                                                                 .000 c.m/s
         HYDROGRAPH DISPLAY
is # of Hyeto/Hydrograph chosen
         Volume
                   = .1834827E+04 c.m
          CATCHMENT
                       ID No.6 99999
        32,000
        .690
68.000
                       Area in hectares
Length (PERV) metres
                       Gradient (%)
Per cent Impervious
Length (IMPERV)
         1,000
        68.000
                       Simp. with Zero Dpth
Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
Manning "n"
           .000
           .250
                       SCS Curve No or C
        74.000
          8.924
                       Initial Abstraction
                       Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 37 .724 .009 .000 c.m/s 98 .518 C perv/imperv/total
                   .098
15
         ADD RUNOFF
                   .037
                                  .760
                                                                 .000 c.m/s
27
         HYDROGRAPH DISPLAY
         is # of Hyeto/Hydrograph chosen

Volume = .1924289E+04 c.m
10
         POND
          Depth - Discharge - Volume sets
         178.800
                      .000
                                       1520.0
         179.300
180.100
                            .0440
                                            4649.0
7069.0
          180.600
                              .414
         180.600 .414 7069.0
180.800 1.204 8137.0
Peak Outflow = .025 c.m/s
Maximum Depth = 179.280 metres
Maximum Storage = 1460. c.m
                                 = 1460. c.m
.760 .025
                                                                 .000 c.m/s
                  .037
14
         START
         1 1=Zero; 2=Define
COMMENT
          line(s) of comment
         PROP DEVELOPMENT SOUTH OF SEGMENT 3 - POND P31
          CATCHMENT
        33,000
                      ID No.ó 99999
       12.960
294.000
                       Area in hectares
Length (PERV) metres
                       Gradient (%)
Per cent Impervious
Length (IMPERV)
         1.000
       294.000
                       Simp. with Zero Dpth
Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
Manning "n"
          .000
           .250
        74.000
                        SCS Curve No or C
                        Ia/S Coefficient
         8.924
                       Initial Abstraction
                       Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 37 .000 .025 .000 c.m/s 98 .801 .625 C perv/imperv/total
                   . 098
         ADD RUNOFF
.887
                                  .887
                                                  .025
                                                                 .000 c.m/s
         HYDROGRAPH DISPLAY
5 is # of Hyeto/Hydrograph chosen
Volume = .2028780E+04 c.m
27
          CATCHMENT
           .660
                       Area in hectares
        66.000
                       Length (PERV) metres
```

```
1.000
                     Per cent Impervious
       60.000
       66.000
                     Length (IMPERV)
         .000
                     Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
                     Manning "n"
SCS Curve No or C
          . 250
          .100
                     Ia/S Coefficient
                     Initial Abstraction
Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
        8.924
                 .036
                           .887
                                          .025
.518
                                                         .000 c.m/s
        .098
ADD RUNOFF
                                                       C perv/imperv/total
        .036
HYDROGRAPH DISPLAY
                              .922
                                           .025
                                                          .000 c.m/s
              is # of Hyeto/Hydrograph chosen
        Volume = .2114417E+04 c.m
       6 Depth - Discharge - Volume sets
                        .000
        178.300
        178.900
        179.600
                         .0540
                                       4692.0
        179.800
180.000
                         .150
                                       5590.0
                                       6538.0
                        1.922
        180.300
                                       8059.0
        180.300 1.922 8059.0

Peak Outflow = .032 c.m/s

Maximum Depth = 178.844 metres

Maximum Storage = 1746. c.m

.036 .922 .032
                                                          .000 c.m/s
14
        START
              1=Zero; 2=Define
```

35	COMMENT						82.000		ı (PERV) metr			
	3 line	e(s) of c	omment ******	*****	******		1.000 10.000		ent (%) ent Imperviou	s		
	2-YEAR ST						82.000		ı (IMPERV)	_		
_		******	*****	*****	******		.000		with Zero Dp			
2	STORM 1	1=Chica	70.2=Wyff.2	-IIgor • 4 -Cdn	1hr;5=Historic		.250	Option Mannin		2=Horton	; 3=Green-Ampt;	4=Repeat
	755.000	Coeffic		-user, 4-cui	IIII, 3-HISCOITE		74.000		rve No or C			
	8.000	Constan	tb (mi	n)			.100	Ia/S C	Coefficient			
	.789	Exponen					8.924		al Abstractio			
	.450 240.000		n to peak n ó 240 mi				1	.015	.406	.941	glr; 3=SWM HYD; .941 c.m/s	4=Lin. Reserv
	240.000	38.971 m		depth				.194	.858	.261	C perv/imperv/	total
3	IMPERVIOU					15	ADD RUN					
	.015	Option Manning		2=Horton;	3=Green-Ampt; 4=Repeat	10	POND	.015	.422	.941	.941 c.m/s	
	98.000		ve No or C			10		- Dischar	rge - Volume	sets		
	.100		efficient				184.800		.000	.0		
	.518	Initial	Abstractio	n			185.750			1.0		
35	COMMENT 3 line	(s) of c	ommont				186.000 186.250		0230 50 0260 109	3.0		
	******						186.500		0280 176			
			T OF SEGMEN	т 1			186.700		.244 237	0.0		
_	******		**				Peak Ou			c.m/s		
4	CATCHMENT 1.000	: ID No.ó	99999					Depth Storage				
	17.520		hectares				11011111011	.015	.422	.025	.941 c.m/s	
	343.000		(PERV) metr	es		17	COMBINE					
	1.000	Gradien					1 Ju	nction No				
	35.000 343.000		t Imperviou (IMPERV)	s		14	START	.015	.422	.025	.963 c.m/s	
	.000		ith Zero Dp	th				Zero; 2=D	Define			
	1			2=Horton;	3=Green-Ampt; 4=Repeat	18	CONFLUE					
	.250 74.000	Manning	"n" ve No or C				1 Ju	nction No .015	ode No.	.025	.000 c.m/s	
	.100		efficient			35	COMMENT		.903	.025	.000 C.M/S	
	8.924		Abstractio	n			3 li	ne(s) of	comment			
	1				r; 3=SWM HYD; 4=Lin. Re	serv		******		_		
		396 .94	.000 .857	.000 .426 C	.000 c.m/s perv/imperv/total			*******	EL - SEGMENT	1		
15	ADD RUNOF		.037	.120 C	per v/ imper v/ cocar	4	CATCHME					
		396	.896	.000	.000 c.m/s		101.000		.ó 99999			
35	COMMENT	· · · · · · · ·					.610		in hectares			
	3 line	e(s) of c	omment				64.000 1.000		n (PERV) metr ent (%)	es		
	REALIGNED	CHANNEL	- SEGMENT	1			10.000		ent Imperviou	s		
	******						64.000		n (IMPERV)			
4	CATCHMENT 100.000	ID No.ó	00000				.000		with Zero Dp		· 3=Croon-Ampt	1=Bonost
	2.020		hectares				.250	Mannin		Z=HOI COII	; 3=Green-Ampt;	4=Repeat
	116.000		(PERV) metr	es			74.000		irve No or C			
	.400	Gradien					.100		Coefficient			
	15.000 116.000		t Imperviou (IMPERV)	s			8.924 1		al Abstractio		glr; 3=SWM HYD;	4=Tin Pegery
	.000		ith Zero Dp	th			-	.010	.963	.025	.000 c.m/s	1-Din. Reserv
					3=Green-Ampt; 4=Repeat			.194	.855	.260	C perv/imperv/	total
	1			z-nor con,								
	.250	Manning	"n"	z-norcon,		15	ADD RUN					
	.250 74.000	Manning SCS Cur	"n" ve No or C	2-1101 (011)				.010	.972	.025	.000 c.m/s	
	.250	Manning SCS Cur Ia/S Co	"n"			15 9	ADD RUN ROUTE .000	.010	.972 it Length	.025	.000 c.m/s	
	.250 74.000 .100 8.924	Manning SCS Cur Ia/S Co Initial Option	"n" ve No or C efficient Abstractio 1=Trianglr;	n 2=Rectangl:	r; 3=SWM HYD; 4=Lin. Re	9	ROUTE .000	.010 Condui No Con	it Length nduit defined		.000 c.m/s	
	.250 74.000 .100 8.924 1	Manning SCS Cur Ia/S Co Initial Option 046	"n" ve No or C efficient Abstractio 1=Trianglr; .896	n 2=Rectangl: .000	r; 3=SWM HYD; 4=Lin. Re	9	ROUTE .000 .000	.010 Condui No Con Zero l	it Length nduit defined Lag		.000 c.m/s	
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15 9	74.000 74.000 8.924 1 0.0 1.00 8.924 1 COMMENT 3 line ************************************	Manning SCS Cur Ia/S Co Initial Option 146 .94 .94 .94 .94 .94 .94 .94 .94 .94 .94	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 omment AY CULVERT .941 Length uit defined g ighting fac timestep sub-reaches .941 e No941	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s	9 serv 17 14	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of 1 Stero; 2=E 1 Conduit	it Length iduit defined lag veighting fac g timestep f sub-reaches .972 ode No972 offine comment ** f SOUTH OF SE ** 6.6 99999 in hectares n (PERV) metr ent Imperviou	.972 .972 .972 .972	.000 c.m/s	
15 9 17	74.000 74.000 8.924 1 0.0 COMMENT 3 line ************************************	Manning SCS Cur Ia/S Co Initial Option 146 .94 (s) of c ************************************	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined g ighting fac timestep sub-reaches .941 e No941 fine	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s	9 serv 17 14	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Condui No Con Zero 1 Beta w Routin No. of .010 Inction No. .010 Zero; 2=E Inc(s) of ************************************	it Length iduit defined lag veighting fac ng timestep f sub-reaches .972 de No972 define comment ** f SOUTH OF SE ** 1 (PERV) metr ant (*) ent Imperviou n (IMPERV) with Zero Dp	.972 .972 .972 .986 .986 .986 .986 .986 .986 .986 .986	.000 c.m/s .972 c.m/s POND P11	
15 9 17 14	74.000 74.000 8.924 1 0.0 1.00 8.924 1 COMMENT 3 line ************************************	Manning SCS Cur IA/S Co Initial Option 146 94 (s) of c ************************************	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined g ighting fac timestep sub-reaches .941 e No941 fine	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s	9 serv 17 14	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 condui conduity co	it Length iduit defined lag weighting fac gitimestep f sub-reaches .972 ode No972 Define comment ** f SOUTH OF SE ** 6.6 99999 in hectares in (PERV) metr ant (%) metr Imperviou n (IMPERV) with Zero Dp n l=SCS CM/C;	.972 .972 .972 .986 .986 .986 .986 .986 .986 .986 .986	.000 c.m/s	4=Repeat
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15 9 17 14	74.000 74.000 8.924 1 0.0 1.00 8.924 1 1 COMMENT 3 line ************************************	Manning SCS Cur Ia/S Co Initial Option 146 .94 (s) of c ************************************	"n" ve No or C efficient Abstractio 1-Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined g ighting fac timestep sub-reaches .941 e No941 fine comment NORTH OF SE	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000 tor .941	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s	9 serv 17 14	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Caroic 2=D Caroic 2=D Caroic 2=D Caroic 2=D Caroic 2=D Caroic 2=D Caroic 2 Caroic 3 Caroic	it Length iduit defined lag weighting fac ag timestep f sub-reaches .972 de No972 define comment ** f SOUTH OF SE ** .6 99999 In hectares in (PERV) metr sunt (%) ent Imperviou n (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient l Abstractio	.972 .972 .972 GMENT 1 - es s th 2=Horton	.000 c.m/s .972 c.m/s POND P11	-
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15 9 17 14 35	74.000 74.000 8.924 1 0.0 1.00 8.924 1 1 COMMENT 3 line ************************************	Manning SCS Curr Ia/S Co Initial Option 146 .94 (s) of c c*********************************	"n" ve No or C efficient Abstractio 1-Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined g ighting fac timestep sub-reaches .941 e No941 fine comment NORTH OF SE	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000 tor .941 .941	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s	9 serv 17 14	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Caroic 2=D Caroic 2=D Caroic 2=D Caroic 2=D Caroic 2=D Caroic 2=D Caroic 2 Caroic 3 Caroic	it Length iduit defined lag weighting fac ag timestep f sub-reaches .972 de No972 define comment ** f SOUTH OF SE ** .6 99999 In hectares in (PERV) metr sunt (%) ent Imperviou n (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient l Abstractio	.972 .972 .972 GMENT 1 - es s th 2=Horton	.000 c.m/s .972 c.m/s POND P11	4=Lin. Reserv
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15 9 17 14 35	.250 74.000 .100 8.924 1 .0 .1 COMMENT 3 line ********** *************************	Manning SCS Cur Ia/S Co Initial Option 146 .94 (s) of c ************************************	"n" ve No or C efficient Abstractio 1-Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined g ighting fac timestep sub-reaches .941 e No941 fine comment NORTH OF SE 99999 hectares (PERV) metr t (%)	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000 tor .941 .941 .941	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s	9 serv 17 14 35 4	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Cero; 2=D: .ne(s) of ************************************	it Length iduit defined lag verighting fac g timestep f sub-reaches .972 de No972 define comment ** f SOUTH OF SE ** .6 99999 in hectares in (PERV) metr ent (%) and Imperviou no (IMPERV) with Zero Dp nl=SCS CN/C; gg "n" urve No or C Coefficient al Abstractio n 1=Trianglr; .000	.972 .972 .972 GMENT 1 - es s th 2=Horton	.000 c.m/s .972 c.m/s POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; .972 c.m/s	4=Lin. Reserv
15 9 17 14 35	74.000 74.000 1.00 8.924 1 .0 .1 .COMMENT 3 line ************************************	Manning SCS Cur Ia/S Co Initial Option 146 .94 (s) of c ********** UT ROADW ********* 146 Conduit No Cond Zero la Beta we Routing No. of 146 ction Nod 146 ttion Nod 146 ttion Nod 146 TO 2=De 150 TO	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 Omment AY CULVERT .941 Length uit defined g ighting fac timestep sub-reaches .941 e No941 fine omment NORTH OF SE 99999 hectares (PERV) metr t (%) t Imperviou (IMPERV)	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000 tor .941 .941 GMENT 1 - P	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s	9 serv 17 14 35	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Exercity 2=E	it Length iduit defined lag veighting fac g timestep f sub-reaches .972 ode No972 offine comment ** f SOUTH OF SE ** ** ** ** ** ** ** ** ** ** ** ** **	.972 .972 .972 .972 es s th 2=Horton n 2=Rectan .972 .424	.000 c.m/s .972 c.m/s POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; .972 c.m/s C perv/imperv/	4=Lin. Reserv
15 9 17 14 35	.250 74.000 .100 8.924 1 .0 .1 COMMENT 3 line ********** *************************	Manning SCS Cur Ia/S Co Initial Option 46 .94 (s) of c ********* ******** ***** ***** ****	"n" ve No or C efficient Abstractio 1-Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined gighting fac timestep sub-reaches .941 fine comment NORTH OF SE 99999 hectares (PERV) metr t (%) t Imperviou (IMPERV) ith Zero Dp	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000 tor .941 .941 GMENT 1 - Poles es	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s	9 serv 17 14 35 4	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Ezero; 2=D .ne(s) of ************************************	it Length iduit defined lag verighting fac gg timestep f sub-reaches .972 ode No972 offine comment ** f SOUTH OF SE ** 6.6 99999 in hectares in (PERV) metr ent (%) with Zero Dp in Length Coefficient al Abstractio in 1=Trianglr; .000 .850	.972 .972 .972 .972 es s th 2=Horton n 2=Rectan .972 .424	.000 c.m/s .972 c.m/s POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; .972 c.m/s C perv/imperv/	4=Lin. Reserv
15 9 17 14 35	74.000 74.000 1.00 8.924 1 .0 .COMMENT 3 line ************************************	Manning SCS Curr Ia/S CO Initial Option 146 (s) of c **********************************	"n" ve No or C efficient Abstractio 1-Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined g ighting fac timestep sub-reaches .941 e No941 fine comment NORTH OF SE 99999 hectares (PERV) metr t (%) t Imperviou it Zero Dp 1=SCS CN/C; "n"	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000 tor .941 .941 GMENT 1 - Poles es	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s	9 serv 17 14 35 4	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Zero; 2=I Con Control Length Fradie Per ce Length % Imp. Option Mannin SCS CU Ia/S C Initia Option .134 .194 NT ID No. Area i Length % Imp. Option Mannin SCS CU Ia/S C Initia Option .134 .194 NT ID No. Area i Length Length Length III No. Area i Length III No. Area i Length Length III No. Area i Length Length III No. Area i Length	it Length iduit defined lag verighting fac gg timestep f sub-reaches .972 dde No972 define comment ** f SOUTH OF SE ** .6 99999 in hectares n (EERV) metr comficient al Abstractio n 1=Trianglr; .000 .850 .134 .6 99999 in hectares n (PERV) metr al Abstractio n 1=Trianglr; .000 .850 .134 .6 99999 in hectares	.972 .972 .972 .972 .972 es s th 2=Horton n 2=Rectan .972	.000 c.m/s .972 c.m/s POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; .972 c.m/s C perv/imperv/	4=Lin. Reserv
15 9 17 14 35	.250 74.000 .100 8.924 1 .01 .01 .01 .02 .03 .03 .04 .000 .000 .000 .000 .000 .0	Manning SCS Cur Ia/S Co Initial Option 146 .94 (s) of c ************************* Conduit No Cond Zero la Beta we Routing No. of 46 tion Nod 46 aro; 2=De c *********** ID No.ó Area in Length Gradien Per cen Length % Imp. w Option Manning SCS Cur SCS	"n" ve No or C efficient Abstractio 1-Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined grighting fac timestep sub-reaches .941 e No941 fine comment NORTH OF SE 99999 hectares (PERV) metr t (%) ith Zero Dp 1=SCS CN/C; "n" ve No or C	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000 tor .941 .941 GMENT 1 - Potes es s	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s	9 serv 17 14 35 4	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Czero; 2=D .ne(s) of ************************************	it Length iduit defined lag veighting fac g timestep f sub-reaches .972 de No972 define comment ** f SOUTH OF SE ** 6 99999 in hectares n (PERV) metr and (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractio n 1=Trianglr; .000 .134 .6 99999 in hectares n (PERV) metr and hectares n (PERV) metr and hectares n (PERV) metr metr show the service of the service n 1=Trianglr; .000 .134 .6 99999 in hectares n (PERV) metr metr (%)	.972 .972 .972 .972 GMENT 1 - es s th 2=Horton n 2=Rectan .972 .972	.000 c.m/s .972 c.m/s POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; .972 c.m/s C perv/imperv/	4=Lin. Reserv
15 9 17 14 35	74.000 74.000 1.00 8.924 1 .0 .1 COMMENT 3 line ************************************	Manning SCS Cur Ia/S Co Initial Option 146 .94 (s) of c ********** UT ROADW ********* 146 Conduit No Cond Zero la Beta we Routing No. of 46 tion Nod 146 tro; 2=De (s) of c ******** ID No.6 Area in Length %Imp. w Option Manning SC Cur Ia/S Co Ta/S Cur	"n" ve No or C efficient Abstractio 1-Trianglr; .896 .862 Domment AY CULVERT .941 Length	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000 tor .941 .941 GMENT 1 - P	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s	9 serv 17 14 35 4	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Elemention No010 Ezero; 2=E	it Length iduit defined lag verighting fac gg timestep f sub-reaches .972 Define comment ** f SOUTH OF SE ** 6 99999 in hectares in (EERV) metr ent (%) m 1=SCS CN/C; ng "n" rve No or C Ocefficient al Abstractio in 1=Trianglr; .000 .850 .134 .6 99999 in hectares in (PERV) metr ent (%) in hectares in (PERV) metr ent (%) in hectares in (PERV) metr ent (%) ent Imperviou	.972 .972 .972 .972 GMENT 1 - es s th 2=Horton n 2=Rectan .972 .972	.000 c.m/s .972 c.m/s POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; .972 c.m/s C perv/imperv/	4=Lin. Reserv
15 9 17 14 35	.250 74.000 .100 8.924 1 .01 .01 .01 .02 .03 .03 .04 .000 .000 .000 .000 .000 .0	Manning SCS Cur Ia/S Co Initial Option 46 .94 (s) of c ********* ******** ***** **** **** *	"n" ve No or C efficient Abstractio 1-Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined gighting fac timestep sub-reaches .941 e No941 fine comment NORTH OF SE 99999 hectares (PERV) metr t (%) t Imperviou (IMPERV) ith Zero Dp 1-SCS CN/C; "n" ve No or C efficient Abstractio	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000 tor .941 .941 .941 GMENT 1 - Potential Section Se	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s	9 serv 17 14 35 4	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Czero; 2=E .ne(s) of ************************************	it Length iduit defined lag veighting fac g timestep f sub-reaches .972 de No972 define comment ** f SOUTH OF SE ** 6 99999 in hectares n (PERV) metr and (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractio n 1=Trianglr; .000 .134 .6 99999 in hectares n (PERV) metr and hectares n (PERV) metr and hectares n (PERV) metr metr show the service of the service n 1=Trianglr; .000 .134 .6 99999 in hectares n (PERV) metr metr (%)	.972 .972 .972 .972 es s th 2=Horton n 2=Rectan .972 .424 .972	.000 c.m/s .972 c.m/s POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; .972 c.m/s C perv/imperv/	4=Lin. Reserv
15 9 17 14 35	.250 74.000 .100 8.924 1 1 .0 .11 COMMENT 3 line ************************************	Manning SCS Cur Ia/S Co Initial Option 146 (s) of c c*********************************	"n" ve No or C efficient Abstractio 1-Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined g ighting fac timestep sub-reaches .941 fine comment NORTH OF SE 99999 hectares (PERV) metr t (%) t Imperviou (IMPERV) ith Zero Dp 1=SCS CN/C; "n" ve No or C efficient Abstractio 1=Trianglr; .000	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000 tor .941 .941 .941 GMENT 1 - Potential Po	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s .941 c.m/s 3=Green-Ampt; 4=Repeat r; 3=SWM HYD; 4=Lin. Re .941 c.m/s	9 serv 17 14 35 4	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Zero; 2=E Ine(s) of ************************************	it Length iduit defined lag verighting fac gg timestep f sub-reaches .972 de No972 de No972 define comment ** f SOUTH OF SE ** 6.5 99999 in hectares in (EREV) metr ent (%) mit Imperviou in 1=Trianglr; .000 .850 .134 .6 99999 in hectares in (PERV) metr ent (%) mit Tere Dp in 1=CSC CN/C; mag "n" rive No or C Coefficient al Abstractio in 1=Trianglr; .000 .850 .134 .6 99999 in hectares in (PERV) metr ent (%) mit Zero Dp in lesCS CN/C; in 1=Trianglr; .000 .850 .134 .6 99999 in hectares in (PERV) metr ent (%) in 1=Trianglr; .01 .02 .03 .03 .04 .05 .05 .05 .05 .05 .05 .05 .05 .05 .05	.972 .972 .972 .972 GMENT 1 - es s th 2=Horton n 2=Rectan .972 .424 .972	.000 c.m/s .972 c.m/s POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; .972 c.m/s C perv/imperv/	4=Lin. Reserv
15 9 17 14 35	.250 74.000 .100 8.924 1 .0.1 COMMENT 3 line ************************************	Manning SCS Cur Ia/S Co Initial Option 46 .94 .8(s) of c	"n" ve No or C efficient Abstractio 1-Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined grightined grightined grightined sub-reaches .941 e No941 fine comment NORTH OF SE 99999 hectares (PERV) metr t (%) t Imperviou (IMPERV) ith Zero Dp 1=SCS CN/C; "n" ve No or C efficient Abstractio alstractio alstractio alstractio	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000 tor .941 .941 .941 GMENT 1 - Potential Po	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s .941 c.m/s OND P10 3=Green-Ampt; 4=Repeat	9 serv 17 14 35 4	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 .010 .2ero; 2=D .ne(s) of ************************************	it Length iduit defined lag veighting fac g timestep f sub-reaches .972 de No972 define comment "F SOUTH OF SE "A SERV' metr in hectares in (PERV) metr and (IMPERV) with Zero Dp in hectares 1 (Tarianglr; .000 .850 .134 .6 99999 in hectares in (PERV) metr ent (%) .01 Impervious .02 Impervious .03 Impervious .04 Impervious .05 Impervious .07 Impervious .0850 .194 .195 Impervious .196 Impervious .197 Imper	.972 .972 .972 .972 GMENT 1 - es s th 2=Horton n 2=Rectan .972 .424 .972	.000 c.m/s .972 c.m/s POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; .972 c.m/s C perv/imperv/	4=Lin. Reserv
15 9 17 14 35	74.000 74.000 1.00 8.924 1 1 COMMENT 3 line ************************************	Manning SCS Cur Ia/S Co Initial Option 46 .94 .8(s) of c	"n" ve No or C efficient Abstractio 1-Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined g ighting fac timestep sub-reaches .941 fine comment NORTH OF SE 99999 hectares (PERV) metr t (%) t Imperviou (IMPERV) ith Zero Dp 1=SCS CN/C; "n" ve No or C efficient Abstractio 1=Trianglr; .000	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000 tor .941 .941 .941 GMENT 1 - Potential Po	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s .941 c.m/s 3=Green-Ampt; 4=Repeat r; 3=SWM HYD; 4=Lin. Re .941 c.m/s	9 serv 17 14 35 4	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Ezero; 2=E	it Length iduit defined lag verighting fac gg timestep f sub-reaches .972 de No972 de No972 define comment ** f SOUTH OF SE ** 6.5 99999 in hectares in (EREV) metr ent (%) mit Imperviou in 1=Trianglr; .000 .850 .134 .6 99999 in hectares in (PERV) metr ent (%) mit Tere Dp in 1=CSC CN/C; mag "n" rive No or C Coefficient al Abstractio in 1=Trianglr; .000 .850 .134 .6 99999 in hectares in (PERV) metr ent (%) mit Zero Dp in lesCS CN/C; in 1=Trianglr; .000 .850 .134 .6 99999 in hectares in (PERV) metr ent (%) in 1=Trianglr; .01 .02 .03 .03 .04 .05 .05 .05 .05 .05 .05 .05 .05 .05 .05	.972 .972 .972 .972 GMENT 1 - es s th 2=Horton n 2=Rectan .972 .424 .972	.000 c.m/s .972 c.m/s POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; .972 c.m/s C perv/imperv/	4=Lin. Reserv
15 9 17 14 35	74.000 74.000 1.00 8.924 1 1 COMMENT 3 line ************************************	Manning SCS Cur Ia/S Co Initial Option 46 .94 .6(s) of c .********* FAGADW TO CONDUITE TO ADDW	"n" ve No or C efficient Abstractio 1-Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined grightined grightined sub-reaches .941 e No941 fine comment NORTH OF SE 99999 hectares (PERV) metr t (%) t Imperviou (IMPERV) ith Zero Dp 1-SCS CN/C; "n" ve No or C efficient Abstractio 1-Trianglr; .000 .857 .406	n 2=Rectangl: .000 .294 C - SEGMENT 1 .000 tor .941 .941 GMENT 1 - P es s th 2=Horton; n 2=Rectangl: .941 .658 C	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s .941 c.m/s 3=Green-Ampt; 4=Repeat r; 3=SWM HYD; 4=Lin. Re .941 c.m/s perv/imperv/total	9 serv 17 14 35 4	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of 0 Con	it Length iduit defined lag weighting fac ag timestep f sub-reaches .972 Define comment ** f SOUTH OF SE ** ** 66 9999 in hectares n (PERV) metr sub-reaches n (PERV) metr and (IMPERV) and Lag n'' arve No or C Defficient 1 Abstractio n 1=Trianglr, .000 .850 .134 .66 9999 in hectares n (PERV) metr sub-reaches n (PERV) metr sub	tor .972 .972 .972 .972 GMENT 1 - es s th 2=Horton n 2=Rectan .972 .424 .972 es s th 2=Horton	.000 c.m/s .972 c.m/s POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; .972 c.m/s C perv/imperv/	4=Lin. Reserv total 4=Repeat

	.194	.867	.665	C perv/imperv/total		74.000		ve No or C		
15	ADD RUNOFF .704	.838	.972	.972 c.m/s		.100 8.924		efficient Abstraction	n	
4	CATCHMENT	.050	.,,_	13,2 0111, 5		1				lr; 3=SWM HYD; 4=Lin. Reserv
		No.ó 99999					.302	.036	.300	.300 c.m/s
		ea in hectares ngth (PERV) met	tres		15	ADD RUN	.194 OFF	.863	.662	C perv/imperv/total
		dient (%)	0100					1.333	.300	.300 c.m/s
		cent Impervi	ous		9	ROUTE				
		ngth (IMPERV) mp. with Zero 1	Doth			.000	Conduit No Condu	Length uit defined		
				n; 3=Green-Ampt; 4=Repeat		.000	Zero lag			
		ning "n"	_			.000		ighting fac	tor	
		Curve No or (S Coefficient	U			.000		timestep sub-reaches		
	8.924 Ini	tial Abstract:				1			1.333	.300 c.m/s
	1 Opt	ion 1=Triangl: .838	r; 2=Rectar .972	nglr; 3=SWM HYD; 4=Lin. Reserv .972 c.m/s	17	COMBINE 2 Ju	nction Node			
	.194	.856	.592	C perv/imperv/total					1.333	1.633 c.m/s
15	ADD RUNOFF				14	START				
27	.060 HYDROGRAPH DI	.889	.972	.972 c.m/s	4	1 1=: CATCHME	Zero; 2=Dei	fine		
21		.splai Hyeto/Hydrogra	aph chosen		4	43.000	ID No.ó	99999		
	Volume = .2	2406793E+04 c.				.330		hectares		
10	POND	harge - Volume				47.000 1.000	Length (Gradient	(PERV) metr	es	
	184.800	.000	.0			35.000		t Imperviou	s	
	185.300		142.0			47.000	Length	(IMPERV)		
	186.100 186.500		519.0 978.0			.000 1		ith Zero Dp		3=Green-Ampt; 4=Repeat
	186.800		222.0			.250	Manning		z-Hor con,	3-Green-Ampt, 4-Repeat
	Peak Outflow		8 c.m/s			74.000		ve No or C		
	Maximum Depth Maximum Stora		3 metres			.100 8.924		efficient Abstraction	_	
	.060	.889	.018	.972 c.m/s		1				lr; 3=SWM HYD; 4=Lin. Reserv
35	COMMENT						.018	.000	1.333	1.633 c.m/s
	3 line(s)	of comment			15	ADD RUN	.194	.858	.426	C perv/imperv/total
		RICE RD CULVER	r - OUTLET	A1	15		.018	.018	1.333	1.633 c.m/s
	********				4	CATCHME				
17	COMBINE 1 Junction	Node No.				44.000 6.400	ID No.ó	99999 hectares		
	.060	.889	.018	.983 c.m/s		207.000		(PERV) metr	es	
14	START					1.000	Gradient	t (%)		
35	1 1=Zero; COMMENT	2=Define				70.000 207.000	Per cent	Imperviou	S	
33		of comment				.000		ith Zero Dp	th	
	*******	*****				1	Option 1	L=SCS CN/C;		3=Green-Ampt; 4=Repeat
	PROP DEVELOPM		QUAKER RD	WEST OF RICE RD PON		.250 74.000	Manning	"n" ve No or C		
4	CATCHMENT					.100		efficient		
	40.000 ID	No.ó 99999				8.924	Initial	Abstraction		
		ea in hectares ngth (PERV) met	tros			1	Option 1		2=Rectang 1.333	1r; 3=SWM HYD; 4=Lin. Reserv 1.633 c.m/s
		dient (%)	LIES				.194	.866		C perv/imperv/total
	25.000 Per	cent Impervi	ous		15	ADD RUN				
		ngth (IMPERV) mp. with Zero 1	Dn+h		9	ROUTE	.646	.660	1.333	1.633 c.m/s
				n; 3=Green-Ampt; 4=Repeat	,	.000	Conduit	Length		
		ning "n"				.000		uit defined		
		Curve No or ('S Coefficient	С			.000	Zero lag	g ighting fac	tor	
		tial Abstract:	ion			.000		timestep		
				nglr; 3=SWM HYD; 4=Lin. Reserv		0		sub-reaches		
	.300 .194	.000 .868	.018 .363	.983 c.m/s C perv/imperv/total	17	COMBINE	.646	.660	.660	1.633 c.m/s
15	ADD RUNOFF						nction Node	e No.		
•	.300 ROUTE	.300	.018	.983 c.m/s	1.4		.646	.660	.660	2.293 c.m/s
9		duit Length			14	START 1 1=:	Zero; 2=Dei	fine		
	.000 No	Conduit define	ed		18	CONFLUE	NCE			
		o lag					nction Node	e No. 2.293	.660	.000 c.m/s
		a weighting fa ting timestep			4	CATCHME			.000	C.m/B
	0 No.	of sub-reache	es			45.000	ID No.ó			
17	.300 COMBINE	.300	.300	.983 c.m/s		1.030 83.000		hectares (PERV) metr	98	
		Node No.				1.000	Gradient	t (%)		
14	.300 START	.300	.300	.300 c.m/s		60.000		Imperviou	S	
14		2=Define				83.000 .000	Length %	(IMPERV) ith Zero Dp	th	
4	CATCHMENT					1	Option 1	L=SCS CN/C;		3=Green-Ampt; 4=Repeat
		No.6 99999				.250	Manning			
		ea in hectares ngth (PERV) met	tres			74.000 .100		ve No or C efficient		
	1.000 Gra	dient (%)				8.924	Initial	Abstraction		
		cent Impervio	ous			1		l=Trianglr; 2.293	2=Rectang	1r; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s
		ngth (IMPERV) mp. with Zero 1	Dpth				.194	.857		.000 c.m/s C perv/imperv/total
	1 Opt	ion 1=SCS CN/		n; 3=Green-Ampt; 4=Repeat	15	ADD RUN	OFF			-
		ning "n" Curve No or (-		27		.088 2 APH DISPLAY	2.374 v	.660	.000 c.m/s
	.100 Ia	S Coefficient			41	5 is	# of Hyeto	o/Hydrograp	h chosen	
		tial Abstract:				Volume	= .648368			
	1 Opt	ion 1=Triangl: .000	r; 2=Rectar .300	nglr; 3=SWM HYD; 4=Lin. Reserv .300 c.m/s	10	POND 6 Depth	- Discharce	e - Volume	sets	
	.194	.857	.426	C perv/imperv/total		186.000	.00	00	.0	
15	ADD RUNOFF	22.5	225			186.800				
4	.036 CATCHMENT	.036	.300	.300 c.m/s		187.300 187.500				
•	42.000 ID	No.ó 99999				187.800	. 25	57 1055	2.0	
		ea in hectares				188.000				
		ngth (PERV) met adient (%)	cres			Peak Ou		.064 187.039		
	70.000 Per	cent Impervi	ous			Maximum	Storage =	5502.	c.m	
		ngth (IMPERV)	Doubh					2.374	.064	.000 c.m/s
		np. with Zero 1 ion 1=SCS CN/0		n; 3=Green-Ampt; 4=Repeat	17	COMBINE 2 Ju	nction Node	e No.		
				- · · · · · · · · · · · · · · · · · · ·						

14	START		.250	Manning			
25	1 1=Zero; 2=Define COMMENT		74.000		ve No or C efficient	!	
35	3 line(s) of comment		.100 8.924		Abstracti	on	
	**************************************		1				anglr; 3=SWM HYD; 4=Lin. Reserv
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD		.0	031	.053	.878	.878 c.m/s
	**********			194	.850	.260	C perv/imperv/total
4	CATCHMENT	15	ADD RUNO				
	2.000 ID No.6 99999	_		031	.084	.878	.878 c.m/s
	9.020 Area in hectares 245.000 Length (PERV) metres	9	ROUTE	g 3 - 4 -	T		
	245.000 Length (PERV) metres 1.000 Gradient (%)		.000	Conduit	uit define	.a	
	40.000 Per cent Impervious		.000	Zero la		u	
	245.000 Length (IMPERV)		.000		ighting fa	ctor	
	.000 %Imp. with Zero Dpth		.000	Routing	timestep		
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		0	No. of	sub-reache	s	
	.250 Manning "n"			031	.084	.084	.878 c.m/s
	74.000 SCS Curve No or C	17	COMBINE				
	.100 Ia/S Coefficient			ction Node			
	8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	1.4		031	.084	.084	.962 c.m/s
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .520 .000 .064 .064 c.m/s	14	START 1 1=Ze	ero; 2=De:	fino		
	.194 .868 .464 C perv/imperv/total	35	COMMENT	ero, z-be.	rine		
15	ADD RUNOFF			e(s) of c	omment		
	.520 .520 .064 .064 c.m/s			*****			
9	ROUTE		EXISTING	AREA WES	T OF RICE	RD AND S	OUTH OF QUAKER ROAD
	.000 Conduit Length		******	******	*****		
	.000 No Conduit defined	4	CATCHMENT				
	.000 Zero lag		4.000	ID No.ó			
	.000 Beta weighting factor		13.940		hectares		
	.000 Routing timestep		305.000		(PERV) met	res	
	0 No. of sub-reaches .520 .520 .520 .064 c.m/s		1.000 40.000	Gradien			
17	.520 .520 .064 C.m/s COMBINE		305.000	Length	t Impervio	ous	
1/	2 Junction Node No.		.000		(IMPERV) ith Zero D	m+h	
	.520 .520 .548 c.m/s		1				on; 3=Green-Ampt; 4=Repeat
14	START		.250	Manning		, 2-11020	on, s-orom impo, i-nopouc
	1 1=Zero; 2=Define		74.000		ve No or C		
18	CONFLUENCE		.100		efficient		
	2 Junction Node No.		8.924		Abstracti	.on	
	.520 .548 .520 .000 c.m/s		1	Option	1=Trianglr	; 2=Rect	anglr; 3=SWM HYD; 4=Lin. Reserv
35	COMMENT		.8	822	.000	.084	.962 c.m/s
	<pre>3 line(s) of comment</pre>		.1	194	.862	.461	C perv/imperv/total
	**********	15	ADD RUNO	FF			
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD			822	.822	.084	.962 c.m/s
	**********	9	ROUTE				
4	CATCHMENT		.000	Conduit		_	
	3.000 ID No.6 99999		.000		uit define	d	
	5.680 Area in hectares 195.000 Length (PERV) metres		.000	Zero la			
	1.000 Gradient (%)		.000		ighting fa timestep	CCOI	
	40.000 Per cent Impervious		0		sub-reache	s	
	195.000 Length (IMPERV)			822	.822	.822	.962 c.m/s
	.000 %Imp. with Zero Dpth	17	COMBINE				
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat			ction Node	e No.		
	.250 Manning "n"			822	.822	.822	1.784 c.m/s
	74.000 SCS Curve No or C	14	START				
	.100 Ia/S Coefficient			ero; 2=De:	fine		
	8.924 Initial Abstraction	18	CONFLUENC				
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>		2 June	ction Node	e No.		
	.330 .548 .520 .000 c.m/s			822	1.784	.822	.000 c.m/s
	.194 .865 .462 C perv/imperv/total	35	COMMENT				
15	ADD RUNOFF			e(s) of c	omment		
9	.330 .878 .520 .000 c.m/s				חש מם שאג	מדייע ספי	WELLAND MUNICIPAL BOUNDA
,	.000 Conduit Length			*******	AKEK KD 10	CIII OF	WELLAND MONICIPAL BOONDA
	.000 No Conduit defined	4	CATCHMENT	т			
	.000 Zero lag		501.000	ID No.ó	99999		
	.000 Beta weighting factor		1.570		hectares		
	.000 Routing timestep		102.000	Length	(PERV) met	res	
	0 No. of sub-reaches		1.000	Gradien	t (%)		
	.330 .878 .878 .000 c.m/s		70.000		t Impervio	us	
17	COMBINE		102.000	Length			
	2 Junction Node No.		.000		ith Zero D		
1.4	.330 .878 .878 c.m/s		1			; 2=Hort	on; 3=Green-Ampt; 4=Repeat
14	START 1 1=Zero; 2=Define		.250 74.000	Manning SCS Cur	"n" ve No or C		
35	COMMENT		.100		ve no or c efficient		
	3 line(s) of comment		8.924		Abstracti	on	
	**************************************		1				anglr; 3=SWM HYD; 4=Lin. Reserv
	PROP DEVELOPMENT SOUTH OF QUAKER RD, EAST OF RICE RD		_		1.784	.822	.000 c.m/s
	***********			194	.854	.656	C perv/imperv/total
4	CATCHMENT	15	ADD RUNO	FF			
	50.000 ID No.6 99999			149	1.933	.822	.000 c.m/s
	3.420 Area in hectares	9	ROUTE				
	151.000 Length (PERV) metres		.000	Conduit			
	1.000 Gradient (%)		.000		uit define	d	
	10.000 Per cent Impervious		.000	Zero la			
	151.000 Length (IMPERV)		.000		ighting fa	ctor	
	.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		.000		timestep sub-reache		
	.250 Manning "n"		-		sub-reacne 1.933	1.933	.000 c.m/s
	74.000 SCS Curve No or C	35	COMMENT		,,,	1.,,,,	.000 C.m/B
	.100 Ia/S Coefficient			e(s) of c	omment		
	8.924 Initial Abstraction		*****		-		
	<pre>Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>		FLOW D/S	OF RICE	RD CULVERT	- OUTLE	T A2
	.053 .000 .878 .878 c.m/s		******	*****			
	.194 .854 .260 C perv/imperv/total	17	COMBINE				
15	ADD RUNOFF			ction Node			
,	.053 .053 .878 .878 c.m/s	14	START	149	1.933	1.933	2.916 c.m/s
4	CATCHMENT 51.000 ID No.6 99999	14		ero. 2-D-	fine		
	1.980 Area in hectares	35	1 1=Ze	ero; 2=De:	TIME		
	115.000 Area in hectares 115.000 Length (PERV) metres	35		e(s) of c	omment		
	1.000 Gradient (%)		******		CCII C		
	10.000 Per cent Impervious				SOUTH OF O	UAKER RD	- QUALLITY CONTROL ONLY
	115.000 Length (IMPERV)		******	******		_	
	.000 %Imp. with Zero Dpth	4	CATCHMENT	T			
	1 Option 1=SCS CN/C: 2=Horton: 3=Green-Ampt: 4=Repeat		20.100	ID No. 6	99999		

	.780 Area in hectares	35	COMMENT
	72.000 Length (PERV) metres		<pre>3 line(s) of comment</pre>
	1.000 Gradient (%)		*************
	35.000 Per cent Impervious 72.000 Length (IMPERV)		FLOW U/S OF FIRST AVE CULVERT
	.000 %Imp. with Zero Dpth	17	COMBINE
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		1 Junction Node No.
	.250 Manning "n"		.181 3.489 3.489 3.489 c.m/s
	74.000 SCS Curve No or C	14	START
	.100 Ia/S Coefficient		1 1=Zero; 2=Define
	8.924 Initial Abstraction	35	COMMENT
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .040 .000 1.933 2.916 c.m/s		3 line(s) of comment
	.194 .857 .426 C perv/imperv/total		PROP DEVELOPMENT SOUTH OF QUAKER, EAST OF RICE - POND P50
15	ADD RUNOFF		*********
	.040 .040 1.933 2.916 c.m/s	4	CATCHMENT
4	CATCHMENT		52.000 ID No.6 99999
	20.000 ID No.6 99999		6.430 Area in hectares
	3.210 Area in hectares		207.000 Length (PERV) metres
	146.000 Length (PERV) metres		1.000 Gradient (%) 70.000 Per cent Impervious
	1.000 Gradient (%) 85.000 Per cent Impervious		70.000 Per cent Impervious 207.000 Length (IMPERV)
	146.000 Length (IMPERV)		.000 %Imp. with Zero Dpth
	.000 %Imp. with Zero Dpth		1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	<pre>Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		.250 Manning "n"
	.250 Manning "n"		74.000 SCS Curve No or C
	74.000 SCS Curve No or C		.100 Ia/S Coefficient
	.100 Ia/S Coefficient 8.924 Initial Abstraction		8.924 Initial Abstraction Option 1=Trianglr: 2=Rectanglr: 3=SWM HYD: 4=Lin. Reserv
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>
	.386 .040 1.933 2.916 c.m/s		.194 .866 .665 C perv/imperv/total
	.194 .854 .755 C perv/imperv/total	15	ADD RUNOFF
15	ADD RUNOFF		.649 .649 3.489 3.489 c.m/s
	.386 .422 1.933 2.916 c.m/s	9	ROUTE
9	ROUTE		.000 Conduit Length
	.000 Conduit Length		.000 No Conduit defined
	.000 No Conduit defined		.000 Zero lag
	.000 Zero lag .000 Beta weighting factor		.000 Beta weighting factor .000 Routing timestep
	.000 Routing timestep		0 No. of sub-reaches
	0 No. of sub-reaches		.649 .649 .649 3.489 c.m/s
	.386 .422 .422 2.916 c.m/s	17	COMBINE
17	COMBINE		2 Junction Node No.
	1 Junction Node No.		.649 .649 .649 c.m/s
	.386 .422 .422 3.338 c.m/s	14	START
14	START 1 1=Zero: 2=Define	4	1 1=Zero; 2=Define
18	1 1=Zero; 2=Define CONFLUENCE	4	CATCHMENT 53.000 ID No.6 99999
10	1 Junction Node No.		11.340 Area in hectares
	.386 3.338 .422 .000 c.m/s		275.000 Length (PERV) metres
35	COMMENT		1.000 Gradient (%)
	<pre>3 line(s) of comment</pre>		70.000 Per cent Impervious
	********		275.000 Length (IMPERV)
	REALIGNED CHANNEL - SEGMENT 2		.000 %Imp. with Zero Dpth
			1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
4	CATCHMENT		.250 Manning "n"
4	CATCHMENT 200.000 ID No.6 99999		.250 Manning "n" 74.000 SCS Curve No or C
4	CATCHMENT 200.000 ID No.6 99999 .970 Area in hectares		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient
4	CATCHMENT 200.000 ID No.6 99999		.250 Manning "n" 74.000 SCS Curve No or C
4	CATCHMENT 200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction
4	CATCHMENT 200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV)		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total
4	CATCHMENT 200.000	15	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF
4	CATCHMENT 200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s
4	CATCHMENT 200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"	15 9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE
4	CATCHMENT 200.000		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length
4	CATCHMENT 200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE
4	CATCHMENT 200.000		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .2000 Eero lag .000 Beta weighting factor
4	CATCHMENT 200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .015 3.338 .422 .000 c.m/s		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep
	CATCHMENT 200.000		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches
35	CATCHMENT 200.000	9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s
	CATCHMENT 200.000		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMEDINE
	CATCHMENT 200.000	9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMEINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s
35	CATCHMENT 200.000	9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBUNE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s
	CATCHMENT 200.000	9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNGFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No.
35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMEINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s
35	CATCHMENT 200.000	9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFIUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s
35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CATCHMENT CATCHMENT CATCHMENT 54.000 ID No.6 99999
35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CATCHMENT CATCHMENT CATCHMENT 54.000 ID No.6 99999
35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMENIE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFIUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares
35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Tringlr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFIUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious
35 15 35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV)
35 15 35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMEINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth
35 15 35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFIUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCIMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat
35 15 35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 Mo Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMEINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth
35 15 35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 II SC Coefficient
35 15 35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 1.171 .649 c.m/s COMEINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (PERV) metres 1.000 MTD. SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction
35 15 35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
35 15 35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMENNE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 \$Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .107 1.820 1.171 .000 c.m/s
35 15 35	CATCHMENT 200.000	9 17 18	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
35 15 35	CATCHMENT 200.000	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMENINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFIUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (PERV) metres 1.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .107 1.820 1.171 .000 c.m/s 1.194 .857 .592 C perv/imperv/total
35 15 35	CATCHMENT 200.000	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 IZ/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .107 1.820 1.171 .000 c.m/s .194 .857 .592 C perv/imperv/total ADD RUNOFF
35 15 35	CATCHMENT 200.000	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 &Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .107 1.820 1.171 .000 c.m/s .194 .857 .592 C perv/imperv/total ADD RUNOFF .107 1.923 1.171 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen
35 15 35	CATCHMENT 200.000	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 1.171 .649 c.m/s COMEINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp, with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat 2.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .107 1.820 1.171 .000 c.m/s ADD RUNOFF .107 1.923 1.171 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .4892284E+04 c.m
35 15 35	CATCHMENT 200.000	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/c; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 IA/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .107 1.820 1.171 .000 c.m/s ADD RUNOFF .107 1.923 1.171 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .4892284E+04 c.m POND
35 15 35 4	CATCHMENT 200.000	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMEINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (FERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .107 1.820 1.171 .000 c.m/s .194 .857 .592 C perv/imperv/total ADD RUNOFF .107 1.923 1.171 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .4892284E+04 c.m POND 6 Depth - Discharge - Volume sets
35 15 35	CATCHMENT 200.000	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Is/S COefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .107 1.820 1.171 .000 c.m/s .194 .857 .592 C perv/imperv/total ADD RUNOFF .107 1.923 1.171 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .4892284E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000
35 15 35 4	CATCHMENT 200.000	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFIJUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .107 1.820 1.171 .000 c.m/s .194 .857 .592 C perv/imperv/total ADD RUNOFF .107 1.923 1.171 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .4892284E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .00
35 15 35 4	CATCHMENT 200.000	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 IA/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .107 1.820 1.171 .000 c.m/s ADD RUNOFF .107 1.923 1.171 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .4892284E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .0190 5251.0 183.550 .0230 7895.0 183.550 .238 10751.0
35 15 35 4	CATCHMENT 200.000	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMEINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .107 1.820 1.171 .000 c.m/s ADD RUNOFF .107 1.820 1.171 .000 c.m/s .194 .857 .592 C perv/imperv/total ADD RUNOFF .107 1.923 1.171 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .4892284E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0336 33425.0
35 15 35 4	CATCHMENT 200.000	9 17 18 4	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMBINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Mamning "" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .107 1.820 1.171 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .4892284E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .00 182.800 .0190 5251.0 183.800 .396 13425.0 184.000 1.028 15337.0
35 15 35 4	CATCHMENT 200.000	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.171 .000 .649 .649 c.m/s .194 .865 .664 C perv/imperv/total ADD RUNOFF 1.171 1.171 .649 .649 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.171 1.171 1.171 .649 c.m/s COMEINE 2 Junction Node No. 1.171 1.171 1.171 1.820 c.m/s CONFLUENCE 2 Junction Node No. 1.171 1.820 1.171 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .107 1.820 1.171 .000 c.m/s ADD RUNOFF .107 1.820 1.171 .000 c.m/s .194 .857 .592 C perv/imperv/total ADD RUNOFF .107 1.923 1.171 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .4892284E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0336 33425.0

	Maximum Storage	= 4589. 1.923	c.m .017	.000 c.m/s	35	COMMENT 3 line(s) of comment
17	COMBINE	1.923	.017	.000 C.m/s		*********
	2 Junction N					REALIGNED CHANNEL - SEGMENT 3
14	.107 START	1.923	.017	.017 c.m/s	4	************ CATCHMENT
17	1 1=Zero; 2=	Define			-	300.000 ID No.6 99999
35	COMMENT					3.180 Area in hectares
	<pre>3 line(s) of ***********************************</pre>					146.000 Length (PERV) metres .200 Gradient (%)
	EXISTING AREA C	N QUAKER RD,	EAST OF RIC	CE RD		15.000 Per cent Impervious
	********	******				146.000 Length (IMPERV)
4	CATCHMENT 5.000 ID No	.ó 99999				.000 %Imp. with Zero Dpth Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
		in hectares				.250 Manning "n"
		h (PERV) meti	es			74.000 SCS Curve No or C
		ent (%) ent Imperviou	10			.100 Ia/S Coefficient 8.924 Initial Abstraction
		h (IMPERV)				1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
	.000 %Imp.	with Zero Dr				.071 4.031 .542 .000 c.m/s
		n 1=SCS CN/C; ng "n"	2=Horton;	3=Green-Ampt; 4=Repeat	15	.194 .859 .294 C perv/imperv/total ADD RUNOFF
		urve No or C			15	.071 4.102 .542 .000 c.m/s
	.100 Ia/S	Coefficient			4	CATCHMENT
		al Abstractio		la. 3-dun HVD. 4-Lia Decemb		301.000 ID No.6 99999 .720 Area in hectares
	.130	.000	.017	lr; 3=SWM HYD; 4=Lin. Reserv .017 c.m/s		.720 Area in hectares 69.000 Length (PERV) metres
	.194	.851		C perv/imperv/total		.200 Gradient (%)
15	ADD RUNOFF	120	015	015 /-		10.000 Per cent Impervious
9	.130 ROUTE	.130	.017	.017 c.m/s		69.000 Length (IMPERV) .000 %Imp. with Zero Dpth
-		it Length				1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
		nduit defined	l			.250 Manning "n"
	.000 Zero	lag weighting fac	tor			74.000 SCS Curve No or C .100 Ia/S Coefficient
		ng timestep	COL			8.924 Initial Abstraction
	0 No. c	f sub-reaches				<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserve</pre>
17	.130 COMBINE	.130	.130	.017 c.m/s		.011 4.102 .542 .000 c.m/s .194 .855 .260 C perv/imperv/total
17	2 Junction N	ode No.			15	.194 .855 .260 C perv/imperv/total ADD RUNOFF
	.130	.130	.130	.136 c.m/s		.011 4.113 .542 .000 c.m/s
18	CONFLUENCE				9	ROUTE
	2 Junction N	ode No. .136	.130	.000 c.m/s		.000 Conduit Length .000 No Conduit defined
35	COMMENT	.150	.150	.000 C.M/B		.000 Zero lag
	<pre>3 line(s) of</pre>					.000 Beta weighting factor
	**********		ENGE OF DI	GE DD		.000 Routing timestep 0 No. of sub-reaches
	EXISTING AREA C		EAST OF RIC	CE RD		.011 4.113 4.113 .000 c.m/s
4	CATCHMENT				17	COMBINE
		.6 99999				1 Junction Node No.
		in hectares h (PERV) metı	es		14	.011 4.113 4.113 4.113 c.m/s START
		ent (%)	.65			1 1=Zero; 2=Define
	65.000 Per c	ent Imperviou	10			
					35	COMMENT
	113.000 Lengt	h (IMPERV)			35	<pre>3 line(s) of comment</pre>
	113.000 Lengt .000 %Imp.	h (IMPERV) with Zero Dr	oth	3=Green-Ampt; 4=Repeat	35	<pre>3 line(s) of comment ************************************</pre>
	113.000 Lengt .000 %Imp. 1 Optic .250 Manni	h (IMPERV) with Zero Dr n 1=SCS CN/C; ng "n"	oth	3=Green-Ampt; 4=Repeat	35	<pre>3 line(s) of comment ********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ***********</pre>
	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS O	h (IMPERV) with Zero Dr n 1=SCS CN/C; ng "n" urve No or C	oth	3=Green-Ampt; 4=Repeat	35	3 line(s) of comment ********* PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 *********** CATCHMENT
	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S	h (IMPERV) with Zero Dr n 1=SCS CN/C; ng "n"	oth 2=Horton;	3=Green-Ampt; 4=Repeat		3 line(s) of comment ********* PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ CATCHMENT 30.000 ID No.6 99999
	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstraction n 1=Trianglr;	oth 2=Horton; on 2=Rectang	lr; 3=SWM HYD; 4=Lin. Reserv		3 line(s) of comment ********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ********** CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres
	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstraction n 1=Trianglr;	eth = 2=Horton; on = 2=Rectang: .130	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s		3 line(s) of comment ********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%)
	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/s 8.924 Initi 1 Optic .185 .194	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstraction n 1=Trianglr;	eth = 2=Horton; on = 2=Rectang: .130	lr; 3=SWM HYD; 4=Lin. Reserv		3 line(s) of comment ********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 *********** CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious
15	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstraction n 1=Trianglr;	eth = 2=Horton; on = 2=Rectang: .130	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s		3 line(s) of comment ********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 *********** CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious
	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT	h (IMPERV) with Zero Dr n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstraction n 1=Trianglr; .136 .867	2=Horton; on 2=Rectang: .130 .631	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total		3 line(s) of comment *********** ********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 *********** ********* 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option I=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
15	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/s 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185	h (IMPERV) with Zero Dr n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstraction n 1=Trianglr; .136 .867	2=Horton; on 2=Rectang: .130 .631	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total		3 line(s) of comment ********** ********* ********* ****
15	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of	h (IMPERV) with Zero Di n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 comment	on 2=Rectang: .130 .631 .130	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total		3 line(s) of comment *********** ********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 *********** ********* 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option I=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
15 35	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/s 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************* FIRST AVE FROM ************************************	h (IMPERV) with Zero Di n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 comment	on 2=Rectang: .130 .631 .130	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		3 line(s) of comment ********** ********* ********* CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction
15 35	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of *********** FIRST AVE FROM ************* CATCHMENT	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 comment	on 2=Rectang: .130 .631 .130	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		3 line(s) of comment *********** *********** ********* ****
15 35	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Di n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 comment	on 2=Rectang: .130 .631 .130	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		3 line(s) of comment ********** ********* ********* CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction
15 35	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic 1-Trianglr; 136 867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr	on 2=Rectang: .130 .631 .130	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		3 line(s) of comment ************ *********** **********
15 35	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dp n 1=SCS CM/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%)	on 2=Horton; 2=Rectang: .130 .631 (.130	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	4	3 line(s) of comment ********** ********** ********** CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reservance .035 .000 4.113 4.113 c.m/s ADD RUNOFF .035 .035 4.113 4.113 c.m/s
15 35	113.000 Lengt .000 %Imp1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi .1 Optic .185 .194 ADD RUNOFF .185 .COMMENT 3 line(s) of ************ CATCHMENT 201.000 ID No 2.430 Area 127.000 Lengt 1.000 Gradi 65.000 Per c	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic 1-Trianglr; 136 867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr	on 2=Horton; 2=Rectang: .130 .631 (.130	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	4	3 line(s) of comment ************* PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 *********** *********** **********
15 35	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dy n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 COmment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imperviou h (IMPERV) with Zero Dy with Zero Dy	on 2=Rectang: .130 .631	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA	4	3 line(s) of comment ************ PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ *********** **********
15 35	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/s 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic 136 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imperviou h (IMPERV) with Zero Dp 1=SCS CN/C; n 1=SCS CN/C;	on 2=Rectang: .130 .631	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	4	3 line(s) of comment *********** *********** **********
15 35	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstraction 1=Trianglr; 1.36 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imperviou h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n"	on 2=Rectang: .130 .631	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA	4	3 line(s) of comment ********** *********** ********** CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Mamming "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .035 .000 4.113 4.113 c.m/s .194 .867 .195 C perv/imperv/total ADD RUNOFF .035 .035 4.113 4.113 c.m/s CATCHMENT 31.000 ID No.6 99999 10.420 Area in hectares 264.000 Length (PERV) metres 1.000 Gradient (%)
15 35	113.000 Lengt .000 %Imp1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic 136 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imperviou h (IMPERV) with Zero Dp 1=SCS CN/C; n 1=SCS CN/C;	on 2=Rectang: .130 .631	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA	4	3 line(s) of comment *********** *********** **********
15 35	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dy n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imperviou h (IMPERV) with Zero Dy urve No or C Coefficient urve No or C Coefficient al Abstractic	on 2=Rectang .130 .631 .130 CITY OF WEI	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat	4	3 line(s) of comment ************************************
15 35	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 0ptic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************ FIRST AVE FROM ************* CATCHRENT 201.000 ID NC 2.430 Area 127.000 Lengt 1.000 Gradi 65.000 Per c 127.000 Lengt 1.000 Gradi 65.000 Per c 127.000 Lengt 1.000 SCS C .100 Ia/S 8.924 Initi 0ptic	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Impervion h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr;	con 2=Rectang: .130 .631 .130 .130 .130 .130 .130 .130 .130 .1	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv	4	3 line(s) of comment ************ *********** **********
15 35	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dy n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imperviou h (IMPERV) with Zero Dy urve No or C Coefficient urve No or C Coefficient al Abstractic	constant of the second of the	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat	4	3 line(s) of comment ************************************
15 35	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 0 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic 136 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imperviou h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .321 .848	ces seth con con con con con con con co	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	4	3 line(s) of comment ************ *********** **********
15 35 4	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstraction 1=Trianglr; 136 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstraction 1=Trianglr; .321	constant of the second of the	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s	4	3 line(s) of comment ************************************
15 35 4	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of *********** FIRST AVE FROM ************ CATCHRENT 201.000 ID NC 2.430 Area 127.000 Lengt 1.000 Gradi 65.000 Fer c 127.000 Lengt 1.000 Gradi 65.000 Fer c 127.000 Lengt 1.000 SCS C .100 Ia/S 8.924 Initi 0ptic .221 .194 ADD RUNOFF .221 ROUTE	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 Comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Impervion h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic 1 =Trianglr; .321 .848 .542	ces seth con con con con con con con co	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	4	3 line(s) of comment ************************************
15 35 4	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi	h (IMPERV) with Zero Dn n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Impervion h (IMPERV) with Zero Dn urve No or C Coefficient al Abstractic n 1=Trianglr; .321 .848 .542 it Length nduit defined	constant	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	15 4	3 line(s) of comment ************************************
15 35 4	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 0 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic 1.36 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imperviou h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .321 .848 .542 it Length motor lag the comment lag the comm	ces set con con con con con con con co	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	4	3 line(s) of comment ************************************
15 35 4	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dy n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imperviou h (IMPERV) with Zero Dy urve No or C Coefficient al Abstractic n 1=Trianglr; .321 .848 .542 it Length nduit defined	ces set con con con con con con con co	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	15 4	3 line(s) of comment ************************************
15 35 4	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of *********** FIRST AVE FROM *********** CATCHENT 201.000 ID Nc 2.430 Area 127.000 Lengt 1.000 Gradi 65.000 Per c 127.000 Lengt 1.000 Gradi 65.000 Per c 127.001 Lengt .000 Almp. 1 Optic .250 Manni 74.000 SCS C .101 Ia/S 8.924 Initi 0 Optic .221 .194 ADD RUNOFF .221 ROUTE .000 Condu .000 No Cc .000 Beta .000 Route!	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic 1.36 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imperviou h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .321 .848 .542 it Length motor lag the comment lag the comm	ces ces ces ces ces ces ces ces	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	15 4	3 line(s) of comment ************************************
15 35 4	113.000 Lengt .000 %Imp. 250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi	h (IMPERV) with Zero Dn n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imperviou h (IMPERV) with Zero Dn n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .321 .848 .542 it Length nduit defined lag weighting fac ng timestep	ces ces ces ces ces ces ces ces	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	15 4	3 line(s) of comment ************************************
15 35 4	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 0 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .321 Comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imprivion h (IMPERV) min Hectares h (PERV) metr ent (%) n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic 1 =Trianglr; .321 .848 .542 it Length induit defined lag weighting fax ng timestep f sub-reacher .542	cth = 2=Horton; 2=Rectang: .130	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	3 line(s) of comment ************ *********** **********
15 35 4	113.000 Lengt .000 %Imp. 250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi	h (IMPERV) with Zero Dp n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .321 Comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imprivion h (IMPERV) min Hectares h (PERV) metr ent (%) n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic 1 =Trianglr; .321 .848 .542 it Length induit defined lag weighting fax ng timestep f sub-reacher .542	cth = 2=Horton; 2=Rectang: .130	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	3 line(s) of comment ************************************
15 35 4	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dy n l=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n l=Trianglr; .136 .867 .321 COmment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imperviou h (IMPERV) with Zero Dy n l=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n l=Trianglr; .321 .848 .542 it Length nduit defined lag weighting fac ng timestep sub-reaches .542 ode No542	ceth = 2=Rectang: .130 .631130	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	3
15 35 4	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dn n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Impervion h (IMPERV) with Zero Dn n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .321 .848 .542 it Length nduit defined lag weighting fac ng timestep f sub-reaches .542 comment	ceth = 2=Rectang: .130 .631130	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	1
15 35 4	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dr n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .321 Comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Impervious h (IMPERV) with Zero Dr n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic 1 =Trianglr; .321 .848 .542 it Length nduit defined lag weighting fax ng timestep f sub-reaches .542 code No542 comment **********	ces 2=Rectang: .130 .631 .130 .130 .130 .130 .130 .130 .130 .1	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s	15 4	3
15 35 4 15 9	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 .COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dy n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .136 .867 .321 comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imperviou h (IMPERV) with Zero Dy urve No or C Coefficient al Abstractic n 1=Trianglr; .321 .848 .542 it Length nduit defined lag weighting fac ng timestep f sub-reaches .542 comment .542 comment ************************************	ces 2=Rectang: .130 .631 .130 .130 .130 .130 .130 .130 .130 .1	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s	15 4	1
15 35 4	113.000 Lengt .000 %Imp. 1 Optic .250 Manni 74.000 SCS C .100 Ia/S 8.924 Initi 1 Optic .185 .194 ADD RUNOFF .185 COMMENT 3 line(s) of ************************************	h (IMPERV) with Zero Dy n l=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n l=Trianglr; .136 .867 .321 Comment QUAKER RD TO .6 99999 in hectares h (PERV) metre ent (%) ent Imperviou h (IMPERV) with Zero Dy n l=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n l=Trianglr; .321 .848 .542 it Length nduit defined lag weighting fac ng timestep timestep f sub-reaches .542 comment ***************** ST AVE CULVES ************************************	ces 2=Rectang: .130 .631 .130 .130 .130 .130 .130 .130 .130 .1	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s LLAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s	15 4	1

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.100
                     Ia/S Coefficient
         8.924
                     Initial Abstraction
                     Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 61 1.158 4.113 4.113 c.m/s 94 .857 .592 C perv/imperv/total
                  .194
15
        ADD RUNOFF
        .061 1.3
HYDROGRAPH DISPLAY
                             1.210
                                           4.113
                                                          4.113 c.m/s
27
         is # of Hyeto/Hydrograph chosen
Volume = .3636135E+04 c.m
10
         POND
        POND
5 Depth - Discharge - Volume sets
178.800 .000 .0
179.300 .0260 1520.0
                          .0440
                                        4649.0
7069.0
                           .414
         180.600
         .414
1.204
Peak Outflow =
Maximum 5
        reak Outflow = 0.34 c.m/s
Maximum Depth = 179.642 metres
Maximum Storage = 2856. c.m
.061 1.210
                          4.113 c.m/s
17
              Junction Node No.
        .061
START
                             1.210
                                             .034
                                                          4.131 c.m/s
14
               1=Zero; 2=Define
         COMMENT
35
         line(s) of comment
        PROP DEVELOPMENT SOUTH OF SEGMENT 3 - POND P31
         CATCHMENT
                     ID No.6 99999
       33.000
       12,960
                     Area in hectares
Length (PERV) metres
      294.000
                     Gradient (%)
Per cent Impervious
Length (IMPERV)
        1.000
       75.000
      294.000
          .000
                     %Imp. with Zero Doth
                     Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
           .250
                     Manning "n"
SCS Curve No or C
       74.000
                     Ia/S Coefficient
Initial Abstraction
          .100
         8.924
                     Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 28 .000 .034 4.131 c.m/s 94 .863 .696 C perv/imperv/total
                1.428
                 .194
        ADD RUNOFF
1.428
15
        HYDROGRAPH DISPLAY
27
        is # of Hyeto/Hydrograph chosen
Volume = .3513004E+04 c.m
CATCHMENT
                     Area in hectares
         .660
                     Length (PERV) metres
Gradient (%)
Per cent Impervious
       66.000
         1.000
       60.000
                     Length (IMPERV)
%Imp. with Zero Dpth
       66.000
         .000
                     Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
                     Manning "n"
SCS Curve No or C
          . 250
       74.000
          . 100
                     Ia/S Coefficient
                      Initial Abstraction
                     Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
                 .059
                             1.428 .034
.856 .591
                                                        4.131 c.m/s
C perv/imperv/total
        ADD RUNOFF
15
        ADD RUNOFF
.059 1.478 .034
HYDROGRAPH DISPLAY
5 is # of Hyeto/Hydrograph chosen
Volume = .3665095E+04 c.m
                                                           4.131 c.m/s
         POND
       6 Depth - Discharge - Volume sets
                   .000
         178.300
                                        .0
1927.0
         178.900
         179.600
                          .0540
                                        4692.0
                         .150
         180.000
                            .321
                                        6538.0
        4.131 c.m/s
17
             Junction Node No
                .059
                                                           4.153 c.m/s
14
         START
               1=Zero; 2=Define
        CONFLUENCE
18
       1 Junction Node No.
                .059 4.153
        COMMENT
         3 line(s) of comment
        REALIGNED CHANNEL - SEGMENT 3
         CATCHMENT
      302.000
                    TD No. 6 99999
                     Area in hectares
Length (PERV) metres
         1.610
      104.000
       .200
10.000
                     Gradient (%)
Per cent Impervious
                     Length (IMPERV)
      104.000
                     %Imp. with Zero Dpth
Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
          .000
           . 250
                     Manning "n"
SCS Curve No or C
       74.000
```

```
.100
                Ia/S Coefficient
      8.924
                Initial Abstraction
                Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
                                .043 .000 c.m/s
.262 C perv/imperv/total
             .194
                       .868
      COMMENT
      3 line(s) of comment
      FLOW U/S OF NIAGARA ST CULVERT - OUTLET D
15
      ADD RUNOFF
      .024
START
                       4.177
                                   .043
                                              .000 c.m/s
14
           1=Zero; 2=Define
```

35	COMMENT					82.000		th (PERV) me	tres		
	3 line	e(s) of comment		********		1.000		ient (%)			
	E VEND (1		******		***	10.000 82.000		cent Impervi	ous		
		FORM EVENT	*********	*******	***	.000		th (IMPERV) . with Zero	Dnth		
2	STORM					.000				on; 3=Green-Ampt	· 4=Penest
-	1	1=Chicago:2=Hu:	ff:3=IIser:4=0	dn1hr;5=Historic		.250		ing "n"	C, Z-HOICE	on, s-Green-Ampo	, i-kepeat
	830.000	Coefficient a		Jan 1111 / 5 - 111 5 0 0 1 1 0		74.000		Curve No or	c		
	7.300	Constant b	(min)			.100		Coefficient			
	.777	Exponent c				8.924	Init:	ial Abstract	ion		
	.450	Fraction to pea	ak r			1	Optio	on 1=Triangl	r; 2=Recta	anglr; 3=SWM HYD	; 4=Lin. Reserv
	240.000	Duration ó 24					.020	.477	1.137	1.137 c.m/s	
			otal depth				.235	.875	.299	C perv/imperv	/total
3	IMPERVIOU				1	ADD F	UNOFF				
	1		N/C; 2=Horton	n; 3=Green-Ampt; 4=Re			.020	.497	1.137	1.137 c.m/s	
	.015	Manning "n"	_		1						
	98.000	SCS Curve No or						arge - Volum			
	.100 .518	Ia/S Coefficien Initial Abstrac				184.8 185.7		.000 .0210	.0 1.0		
35	COMMENT	INICIAL ADSCIA	CCION			186.0			503.0		
33		e(s) of comment				186.2			091.0		
		******				186.5			765.0		
	EXISTING	RES. WEST OF SEC	GMENT 1			186.7			370.0		
		*****					Outflow		6 c.m/s		
4	CATCHMENT	r					um Depth		6 metres		
	1.000	ID No.ó 99999					um Storage		. c.m		
	17.520	Area in hectare	es				.020	.497	.026	1.137 c.m/s	
	343.000	Length (PERV)	metres		1	7 COMBI	NE				
	1.000	Gradient (%)				1	Junction 1	Node No.			
	35.000	Per cent Imper					.020	.497	.026	1.160 c.m/s	
	343.000	Length (IMPERV			1						
	.000	%Imp. with Zero					1=Zero; 2:	=Define			
	.250	Option 1=SCS CI Manning "n"	N/C; Z=Horton	n; 3=Green-Ampt; 4=Re	peat 1	CONFI	UENCE Junction 1	Nodo No			
	74.000	SCS Curve No or				_			000	000/-	
	.100	Ia/S Coefficien			3.	5 COMME	.020	1.160	.026	.000 c.m/s	
	8.924	Initial Abstrac			3.		line(s) of	f gommont			
	1			nglr; 3=SWM HYD; 4=Li	n Bogory		*******				
	_	082 .000	.000	.000 c.m/s	ii. Keselv			NEL - SEGMEN	т 1		
		236 .879	.461	C perv/imperv/total			******				
15	ADD RUNOR					CATCE	MENT				
	1.0		.000	.000 c.m/s		101.000	ID No	o.ó 99999			
35	COMMENT					.610		in hectares			
		e(s) of comment				64.000		th (PERV) me			
	******	*****				1.000	Grad:	ient (%)			
	REALIGNEI	CHANNEL - SEGMI	ENT 1			10.000	Per	cent Impervi	ous		
	******	*****				64.000	Lengt	th (IMPERV)			
4	CATCHMENT					.000	%Imp	. with Zero	Dpth		
	100.000	ID No.ó 99999				1			C; 2=Horto	on; 3=Green-Ampt	; 4=Repeat
	2.020	Area in hectar				.250		ing "n"			
	116.000	Length (PERV)	metres			74.000		Curve No or			
	.400	Gradient (%)				.100		Coefficient			
	15.000	Per cent Imper	VI OUS			8.924		ial Abstract			
		, /									
	116.000	Length (IMPERV)			1				anglr; 3=SWM HYD	; 4=Lin. Reserv
	116.000 .000	%Imp. with Zero) o Dpth			1	.012	1.160	.026	.000 c.m/s	
	116.000 .000 1	%Imp. with Zero Option 1=SCS CI) o Dpth	n; 3=Green-Ampt; 4=Re		_	.012				
	116.000 .000 1 .250	%Imp. with Zero Option 1=SCS CI Manning "n") o Dpth N/C; 2=Horton	n; 3=Green-Ampt; 4=Re	epeat 1	_	.012 .235 UNOFF	1.160 .873	.026 .299	.000 c.m/s C perv/imperv	
	116.000 .000 1 .250 74.000	%Imp. with Zero Option 1=SCS Cl Manning "n" SCS Curve No or) o Dpth N/C; 2=Horton r C	n; 3=Green-Ampt; 4=Re	1	5 ADD F	.012 .235 UNOFF	1.160	.026	.000 c.m/s	
	116.000 .000 1 .250 74.000 .100	%Imp. with Zero Option 1=SCS CI Manning "n" SCS Curve No or Ia/S Coefficier) o Dpth N/C; 2=Horton r C nt	n; 3=Green-Ampt; 4=Re		5 ADD F	.012 .235 UNOFF .012	1.160 .873 1.172	.026 .299	.000 c.m/s C perv/imperv	
	116.000 .000 1 .250 74.000	%Imp. with Zero Option 1=SCS CI Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac) o Dpth N/C; 2=Horton r C nt ction		1	5 ADD F	.012 .235 UNOFF .012	1.160 .873 1.172	.026 .299 .026	.000 c.m/s C perv/imperv	
	116.000 .000 1 .250 74.000 .100 8.924	%Imp. with Zero Option 1=SCS CI Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Trians) o Dpth N/C; 2=Horton r C nt ction	1; 3=Green-Ampt; 4=Re 1glr; 3=SWM HYD; 4=Li .000 c.m/s	1	5 ADD F	.012 .235 UNOFF .012 	1.160 .873 1.172 uit Length onduit defin	.026 .299 .026	.000 c.m/s C perv/imperv	
	116.000 .000 1 .250 74.000 .100 8.924 1	%Imp. with Zero Option 1=SCS CI Manning "n" SCS Curve No of Ia/S Coefficier Initial Abstrac Option 1=Trians 055 1.082) o Dpth N/C; 2=Horton r C nt ction glr; 2=Rectan	nglr; 3=SWM HYD; 4=Li	n. Reserv	5 ADD F 0 ROUTE .000	.012 .235 EUNOFF .012 Condu	1.160 .873 1.172 uit Length onduit defin lag	.026 .299 .026	.000 c.m/s C perv/imperv	
35	116.000 .000 1 .250 74.000 .100 8.924 1	%Imp. with Zero Option 1=SCS CI Manning "n" SCS Curve No of Ia/S Coefficier Initial Abstract Option 1=Trians 055 1.082) o Dpth N/C; 2=Horton r C nt ction glr; 2=Rectan	nglr; 3=SWM HYD; 4=Li	n. Reserv	5 ADD F 0000 0000 0000	.012 .235 EUNOFF .012 Condu No Co	1.160 .873 1.172 uit Length onduit defin	.026 .299 .026 ed	.000 c.m/s C perv/imperv	
35	116.000 .000 1 .250 74.000 .100 8.924 1	%Imp. with Zero Option 1=SCS CI Manning "n" SCS Curve No of Ia/S Coefficier Initial Abstrac Option 1=Trians 055 1.082) o Dpth N/C; 2=Horton r C nt ction glr; 2=Rectan	nglr; 3=SWM HYD; 4=Li	n. Reserv	5 ADD F 0 ROUTE .000 .000	.012 .235 UNOFF .012 Condu No Co Zero Beta Rout:	1.160 .873 1.172 uit Length onduit defin lag weighting f	.026 .299 .026 ed	.000 c.m/s C perv/imperv	
35	116.000 .000 1 .250 74.000 .100 8.924 1 COMMENT 3 line	%Imp. with Zero Option 1=SCS Cl Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Trian 055 1.082 236 .874) o Dpth N/C; 2=Horton r C nt ction glr; 2=Rectan	nglr; 3=SWM HYD; 4=Li	n. Reserv	ROUTE .000 .000 .000 .000 .000 .000	.012 .235 UNOFF .012 	1.160 .873 1.172 uit Length onduit defin lag weighting f ing timestep	.026 .299 .026 ed	.000 c.m/s C perv/imperv	
35	116.000 .000 .1 .250 74.000 .100 8.924 1 COMMENT 3 line ************************************	%Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficie Initial Abstrac Option 1=Trian; 055 1.082 236 .874 e(s) of comment ************************************) o Dpth N/C; 2=Horton r C nt ction glr; 2=Rectar .000 .332	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total	n. Reserv	75 ADD F 70 ROUTE .000 700 700 700 700 700 700	.012 .235 EUNOFF .012 .012 .012 .012 .012 .013 .014 .014 .014 .015 .016 .016 .016 .016 .016 .016 .016 .016	1.160 .873 1.172 nit Length conduit defin lag weighting f ing timestep of sub-reach 1.172	.026 .299 .026 ed actor	.000 c.m/s C perv/imperv .000 c.m/s	
35	116.000 .000 1 .250 74.000 .100 8.924 1 COMMENT 3 line ************************************	%Imp. with Zerc Option 1=SCS Cl Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Trian; 055 1.082 236 .874 e(s) of comment ************************************) o Dpth N/C; 2=Horton r C nt ction glr; 2=Rectar .000 .332	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total	n. Reserv	ROUTE .000 .000 .000 .000 .000 .000	.012 .235 UNOFF .012 	1.160 .873 1.172 nit Length conduit defin lag weighting f ing timestep of sub-reach 1.172	.026 .299 .026 ed actor	.000 c.m/s C perv/imperv .000 c.m/s	
35	116.000 .000 .1 .250 74.000 .100 8.924 1 	%Imp. with Zero Option 1=SCS CI Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Trian; 055 1.082 236 .874 e(s) of comment ************************************) o Dpth N/C; 2=Horton r C nt ttion glr; 2=Rectar .000 .332	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total	n. Reserv	FOR ADD F ROUTE	.012 .235 EUNOFF .012 	1.160 .873 1.172 nit Length conduit defin lag weighting f ing timestep of sub-reach 1.172	.026 .299 .026 ed actor	.000 c.m/s C perv/imperv .000 c.m/s	
15	116.000 .000 1 .250 74.000 .100 8.924 1 COMMENT 3 line ************************************	%Imp. with Zerc Option 1=SCS Cl Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Trian; 055 1.082 236 .874 e(s) of comment ************************************) o Dpth N/C; 2=Horton r C nt ction glr; 2=Rectar .000 .332	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total	n. Reserv	7 COMBI	.012 .235 .UNOFF .012 	1.160 .873 1.172 uit Length onduit defin lag weighting f ing timester ing timester 1.172 Node No. 1.172	.026 .299 .026 ed actor es 1.172	.000 c.m/s C perv/imperv .000 c.m/s	
	116.000 .000 .1 .250 74.000 .100 8.924	%Imp. with Zero Option 1=SCS CI Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Trian; 055 1.082 236 .874 a(s) of comment ********** FUT ROADWAY CULVI ********* FF 055 1.137) o Dpth N/C; 2=Horton r C nt ttion glr; 2=Rectar .000 .332	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total	n. Reserv	5 ADD F	.012 .235 UNOFF .012 .012 .012 .012 .012 .012 .012 .012	1.160 .873 1.172 uit Length onduit defin lag weighting f ing timester ing timester 1.172 Node No. 1.172	.026 .299 .026 ed actor es 1.172	.000 c.m/s C perv/imperv .000 c.m/s	
15	116.000 .000 .1 .250 74.000 .100 8.924 .1 .COMMENT 3 lime ************************************	%Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficies Initial Abstrac Option 1=Trians 1.082 236 .874 etc.) of comment ************************************) o Dpth N/C; 2=Hortor r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total	n. Reserv	5 ADD F	.012 .235 .235 .2010 FF .012 .012 .012	1.160 .873 1.172 uit Length onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 =Define	.026 .299 .026 ed actor es 1.172	.000 c.m/s C perv/imperv .000 c.m/s	
15	116.000 .000 .100 .250 74.000 .100 8.924 1 	%Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficier Initial Abstrac Option 1=Trian; 055 1.082 236 .874 e(s) of comment ************************************) o Dpth N/C; 2=Hortor r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total	n. Reserv	5 ADD F	.012 .235 UNOFF .012 .012 .012 .012 .012 .012 .012 .012	1.160 .873 1.172 uit Length onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 =Define	.026 .299 .026 ed actor es 1.172	.000 c.m/s C perv/imperv .000 c.m/s	
15	116.000 .000 .1 .250 74.000 .100 8.924 .1 COMMENT 3 lim ************************************	%Imp. with Zero Option 1=SCS CI Manning "n" SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=Trian 055 1.082 236 .874 a(s) of comment ********* FF 055 1.137 Conduit Length No Conduit def: Zero lag) o Dpth N/C; 2=Horton r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total	n. Reserv	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 .UNOFF .012	1.160 .873 1.172 int Length onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment ***	.026 .299 .026 ed actor es 1.172	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15	116.000 .000 1 .250 74.000 .100 8.924 1 .0 .COMMENT 3 line ************************************	%Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstract Option 1=Trian; 055 1.082 236 .874 e(s) of comment ************************************) o Dpth N/C; 2=Hortor r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total	n. Reserv	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 .UNOFF .012	1.160 .873 1.172 Dit Length Individed in lag weighting fing timester 1.172 Node No. 1.172 Define f comment *** TY SOUTH OF	.026 .299 .026 ed actor es 1.172	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15	116.000 .000 .1 .250 74.000 .100 8.924 .1 COMMENT 3 lim ************************************	%Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No or Ia/S Coefficien Initial Abstra. Option 1=Trian, 055 1.082 236 .874 e(s) of comment ********** FUT ROADWAY CULVI ********* FF Conduit Length No Conduit def; Zero lag Beta weighting Routing timest) o Dpth N/C; 2=Hortor r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total	n. Reserv	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 .UNOFF .012	1.160 .873 1.172 Dit Length Individed in lag weighting fing timester 1.172 Node No. 1.172 Define f comment *** TY SOUTH OF	.026 .299 .026 ed actor es 1.172	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15	116.000 .000 .1 .250 74.000 .100 8.924 1 .2 COMMENT 3 lime ************************************	*Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficier Initial Abstrac Option 1=Trians 1.082 236 .874 ets) of comment ************************************) o Dpth N/C; 2=Horton r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total ? 1 .000 c.m/s	n. Reserv	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 EUNOFF .012 Condu No Cc Eero Beta No. C .012 INE Junction I .012 I=Zero; 2: NT line(s) oi t************************************	1.160 .873 1.172 uit Length onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF ***	.026 .299 .026 ed actor es 1.172	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15 9	116.000 .000 .1 .250 74.000 .100 8.924 1.(%Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No or Ia/S Coefficien Initial Abstra. Option 1=Trian, 055 1.082 236 .874 e(s) of comment ********** FUT ROADWAY CULVI ********* FF Conduit Length No Conduit def; Zero lag Beta weighting Routing timest) o Dpth N/C; 2=Hortor r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total	n. Reserv	7 COMBI 1 2 STARI 5 COMME 1 4 STARI 6 COMME 1 5 COMME 1 6 CATCE 1 CATCE 1 CATCE	.012 .235 UNOFF .012 .012 .000 .000 .000 .000 .000 .012 .012	1.160 .873 1.172 Dit Length Individed in lag weighting fing timester 1.172 Node No. 1.172 Define f comment *** TY SOUTH OF	.026 .299 .026 ed actor es 1.172	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15	116.000 .000 .1 .250 74.000 .100 8.924 .1 COMMENT 3 lim ************************************	*Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficier Initial Abstrac Option 1=Trians 1.082 236 .874 ets) of comment ************************************) o Dpth N/C; 2=Horton r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total ? 1 .000 c.m/s	n. Reserv	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 .UNOFF .012	1.160 .873 1.172 Dit Length Onduit defin lag weighting f ing timested 1.172 Node No. 1.172 Define f comment *** TY SOUTH OF *** D.6 99999	.026 .299 .026 ed actor es 1.172	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15 9	116.000 .000 .1 .250 74.000 .100 8.924 1 COMMENT 3 line ************************************	*Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficies Initial Abstrac Option 1=Trians 055 1.082 236 .874 e(s) of comment ************************************) o Dpth N/C; 2=Horton r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total ? 1 .000 c.m/s	n. Reserv	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 EUNOFF .012	1.160 .873 1.172 nit Length onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** o.6 99999 in hectares	.026 .299 .026 ed actor es 1.172	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15 9	116.000 .000 .1 .250 74.000 .100 8.924 1 COMMENT 3 line ************************************	%Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficie! Initial Abstract Option 1=Trian; 055 1.082 236 .874 e(s) of comment ************************************) oo Dpth N/C; 2=Hortor r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep thes 1.137	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total 1 .000 c.m/s	n. Reserv	7 COMMB1 1 START 1 COMMB2 4 START 5 COMMB2 1 1 2 2 3 ****** 1 COMMB2 1 2 2 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	.012 .235 .UNOFF .012	1.160 .873 1.172 uit Length onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** >.6 99999 in hectares in hectares	.026 .299 .026 ed actor es 1.172 1.172	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15 9 17	116.000 .000 .1 .250 74.000 .100 8.924 .1 .2 COMMENT 3 lime ************************************	%Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficie! Initial Abstract Option 1=Trian; 055 1.082 236 .874 e(s) of comment ************************************) oo Dpth N/C; 2=Hortor r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep thes 1.137	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total 1 .000 c.m/s	n. Reserv	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 EUNOFF .012	1.160 .873 1.172 uit Length onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** *** 0.6 9999 in hectares th (PERV) me leint (%)	.026 .299 .026 ed actor es 1.172 1.172	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15 9 17	116.000 .000 .1 .250 74.000 .100 8.924 .1	*Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficies Initial Abstrac Option 1=Triang 055 1.082 236 .874 e(s) of comment ************************************) oo Dpth N/C; 2=Hortor r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep thes 1.137	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total 1 .000 c.m/s	n. Reserv	7 COMBI 1 START 5 CAMME 2 A CATCE 12.000 2.686 134.000 35.000 134.000	.012 .235 EUNOFF .012 .012 .012 .012 .012 .012 .012 .012	1.160 .873 1.172 nit Length onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** oin hectares th (PERV) me ient (%) eent Impervi th (IMPERV) th (JMERV) th vith Zero	.026 .299 .026 ed actor es 1.172 1.172	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s	/total
15 9 17 14	116.000 .000 .1 .250 74.000 .100 8.924 .1	*Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficier Initial Abstracoption 1=Triang 155 1.082 236 .874 ets) of comment ************************************) oo Dpth N/C; 2=Hortor r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep thes 1.137	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total 1 .000 c.m/s	n. Reserv	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 EUNOFF .012 .012 .012 .012 .012 .012 .012 .012	1.160 .873 1.172 nit Length onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** oin hectares th (PERV) me ient (%) eent Impervi th (IMPERV) th (JMERV) th vith Zero	.026 .299 .026 ed actor es 1.172 1.172	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	/total
15 9 17 14	116.000 .000 .1 .250 74.000 .100 8.924 1 COMMENT 3 line ************************************	%Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficie! Initial Abstract Option 1=Trians 155 1.082 236 .874 e(s) of comment ************************************) oo Dpth N/C; 2=Horton r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep ches 1.137	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	n. Reserv	FROP CATCE 12000 3 ***** CATCE 12000 134.000 134.000 13250	.012 .235 .UNOFF .012	1.160 .873 1.172 Dit Length Onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 Define f comment *** Do.6 99999 in hectares th (PERV) me lent (%) cent Impervi h (IMPERV) . with Zero on ing "n"	.026 .299 .026 ed actor es 1.172 1.172 1.172	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s	/total
15 9 17 14	116.000 .000 .1 .250 74.000 .100 8.924 1 .2 COMMENT 3 line ********* FLOW AT I ********** ADD RUNOI .000 .000 .000 .000 .000 .000 .000 .0	*Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficies Initial Abstraction of the) oo Dpth N/C; 2=Horton r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep ches 1.137	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	1 1 1 3	FROP 1 1 START 1 COMMB1 5 COMMB1 1 1 1 COMMB1 1 1 1 1 1 1 1 1 1 1 1 1	.012 .235 EUNOFF .012	1.160 .873 1.172 uit Length onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** o.6 99999 in hectares th (PERV) me lent (%) rent Impervi ch (IMPERV) . with Zero on 1=SCS CN/ ing "n" Curve No or	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s	/total
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924	*Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficier Initial Abstract Option 1=Trian; 055 1.082 236 .874 (a) of comment ************************************) oo Dpth N/C; 2=Horton r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep ches 1.137	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	1 1 1 3	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 .UNOFF .012	1.160 .873 1.172 uit Length onduit defin lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** *** *** *** *** *** *** *** *** *	.026 .299 .026 ed actor es 1.172 1.172 segment 1 tres ous Dpth C; 2=Horto	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s	/total
15 9 17 14	116.000 .000 .1 .250 74.000 .100 8.924 .1 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2	%Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficie Initial Abstra. Option 1=Triang 055 1.082 236 .874 e(s) of comment ************************************) oo Dpth N/C; 2=Horton r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep ches 1.137	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	1 1 1 3	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 UNOFF .012 .012 .012 .012 .012 .012 .012 .012	1.160 .873 1.172 nit Length onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** o.6 99999 in hectares th (PERV) me ient (%) cent Impervi th (IMPERV) . with Zero o on 1=SCS CN/ ing "n" Curve No or Coefficient tal Abstract tal Abstract	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C	.000 c.m/s .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s	/total
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924 1 .2 COMMENT 3 line ********** ADD RUNOI .000 .000 .000 .000 .000 .000 .000 .0	*Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficies Initial Abstract Option 1=Trians 1.082 236 .874 et s) of comment ************************************) oo Dpth N/C; 2=Horton r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep 1.137 1.137	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	1 1 1 3	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 .UNOFF .012	1.160 .873 1.172 uit Length onduit defin lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** *** NT SOUTH OF *** uit Length of sub-reach 1.172 Define f comment *** T SOUTH OF *** """ UMPERV) with Zero """ Curve No or Coefficient ial Abstract n 1=Triangl	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C c ion r; 2=Recta	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND P11	/total
15 9 17 14 35	116.000 .000 .100 8.924 1.00 .250 COMMENT 3 line ************************************	*Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficie! Initial Abstraction of the) oo Dpth N/C; 2=Horton r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep ches 1.137 1.137	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	1 1 1 3	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 .UNOFF .012	1.160 .873 1.172 Dit Length Individed in lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 Define f comment *** TY SOUTH OF *** Do. 6 99999 in hectares th (PERV) me ient (%) cent Impervi th (IMPERV). with Zero on 1=SCS CN/ ing "n" Curve No or Coefficient ial Abstract n = 1-Triangl .000	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C ion r; 2=Recta	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - FOND F11 on; 3=Green-Ampt 1.172 c.m/s	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924 .1 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2	*Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficies Initial Abstra. Option 1=Trians 055 1.082 236 .874 e(s) of comment ************************************) oo Dpth N/C; 2=Horton r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep ches 1.137 1.137	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	1 1 3	FROM 1.000 50 ADD F 000 000 000 000 7 COMB1 1 STAR1 1 COMME 1 2.000 1.000	.012 .235 .UNOFF .012	1.160 .873 1.172 uit Length onduit defin lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** *** NT SOUTH OF *** uit Length of sub-reach 1.172 Define f comment *** T SOUTH OF *** """ UMPERV) with Zero """ Curve No or Coefficient ial Abstract n 1=Triangl	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C c ion r; 2=Recta	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND P11	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924	*Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficier Initial Abstract Option 1=Triang 155 1.082 236 .874 e(s) of comment ************************************) oo Dpth N/C; 2=Horton r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor epp ches 1.137 1.137	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	1 1 1 3	FROM 1.000 50 ADD F 000 000 000 000 7 COMB1 1 STAR1 1 COMME 1 2.000 1.000	.012 .235 .UNOFF .012	1.160 .873 1.172 uit Length onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** No. 6 99999 in hectares th (PERV) me ient (%) cent Impervi th (IMPERV). with Zero: on 1=SCS Corr Coefficient ial Abstract on 1=Triangl .000 .866	.026 .299 .026 ed actor es 1.172 1.172 segment 1 tres ous Dpth C; 2=Horto C	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND Pl1 on; 3=Green-Ampt 1.172 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924 .1 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2	%Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficie Initial Abstra. Option 1=Triang 055 1.082 236 .874 e(s) of comment ********** FUT ROADWAY CULVI ********** FOT Conduit Length No Conduit Jength No Conduit Length No Conduit Jength No Conduit Length No Condui) oo Dpth N/C; 2=Horton r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep ches 1.137 1.137 F SEGMENT 1 -	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	1 1 3 3	FROP PROPERTY OF THE PROPERTY	.012 .235 .UNOFF .012	1.160 .873 1.172 Dit Length Individed in lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 Define f comment *** TY SOUTH OF *** Do. 6 99999 in hectares th (PERV) me ient (%) cent Impervi th (IMPERV). with Zero on 1=SCS CN/ ing "n" Curve No or Coefficient ial Abstract n = 1-Triangl .000	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C ion r; 2=Recta	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - FOND F11 on; 3=Green-Ampt 1.172 c.m/s	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924 1 .2 COMMENT 3 line ************************************	*Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficies Initial Abstract Option 1=Trians 1.082 236 .874 et s) of comment ************************************) o Dpth N/C; 2=Horton r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor epthes 1.137 1.137 F SEGMENT 1 -	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	1 1 3 3	FOR ADD F ADD F	.012 .235 .UNOFF .012	1.160 .873 1.172 uit Length onduit defin lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** 0.6 99999 in hectares th (PERV) me ient (%) cent Impervi th (IMPERV) . with Zero . "Urve No or Coefficient ial Abstract n 1=Triangl .000 .866 .159	.026 .299 .026 ed actor es 1.172 1.172 segment 1 tres ous Dpth C; 2=Horto C	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND Pl1 on; 3=Green-Ampt 1.172 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924 1 COMMENT 3 line ********* ADD RUNOI .000 .000 .000 .000 .000 .000 .000 .0	*Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No or Ia/S Coefficie Initial Abstrac Option 1=Trian; 055 1.082 236 .874 e(s) of comment ********* FUT ROADWAY CULVI ********* FOSS 1.137 Conduit Length No Conduit def: Zero lag Beta weighting Routing timest No. of sub-reac 055 1.137 ction Node No. 055 1.137 ction Node No. 055 1.137 pro; 2=Define e(s) of comment ********** FUT NO.6 99999 Area in hectare Length (PERV) in Gradient (%) Per cent Imper Length (IMPERV) **Imp. with Zerc.) oo Dpth N/C; 2=Horton r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep ches 1.137 1.137 F SEGMENT 1 -	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s .1137 c.m/s	1 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 .UNOFF .012	1.160 .873 1.172 Dit Length Induit defin lag weighting fing timestep of sub-reach 1.172 Define f comment *** TY SOUTH OF *** Do. 6 99999 in hectares th (PERV) me ient (%) cent Impervi th (IMPERV) . with Zero On 1=SCS CN/ ing "n" Curve No or Coefficient ial Abstract on 1=Triangl .000 .866 .159 D. 6 99999	.026 .299 .026 ed actor es 1.172 1.172 1.172 segment 1 tres ous Dpth C; 2=Horto C c 1.172 .456	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND Pl1 on; 3=Green-Ampt 1.172 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924 .1 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2	*Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficier Initial Abstractoption 1=Triang 155 1.082 236 .874 ets) of comment ************************************) oo Dpth N/C; 2=Horton r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep ches 1.137 1.137 F SEGMENT 1 -	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	1 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	FROM 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	.012 .235 .UNOFF .012	1.160 .873 1.172 uit Length onduit defin lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** o.6 99999 in hectares th (PERV) me lent (%) con 1=SCS CN/ lng "n" Curve No or Coefficient ial Abstract on 1=Triangl .000 .866 .159 o.6 99999 in hectares	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C ion r; 2=Rect: 1.172 .456	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND Pl1 on; 3=Green-Ampt 1.172 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924	%Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No or In/S Coefficies Initial Abstract Option 1=Trians 1.082 236 .874 etc.) of comment ************************************	o o Dpth N/C; 2=Hortor r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor sp thes 1.137 1.137 F SEGMENT 1 - ss ss metres vious o Dpth N/C; 2=Hortor	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s .1137 c.m/s	1 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 ADD F 0 ROUTE	.012 .235 .UNOFF .012	1.160 .873 1.172 uit Length onduit defin lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** No.6 99999 in hectares th (PERV) me iant (%) curve No or Coefficient ial Abstract on 1=Triangl .000 .866 .159 .6 99999 in hectares th (PERV) me	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C ion r; 2=Rect: 1.172 .456	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND Pl1 on; 3=Green-Ampt 1.172 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924 .1 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2	*Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficies Initial Abstra. Option 1=Triang 055 1.082 236 .874 e(s) of comment ********** FUT ROADWAY CULVI ********** FOT Conduit Length No Conduit Jength No Conduit Length No of sub-rea. 055 1.137 ction Node No. 055 1.137 ero; 2=Define e(s) of comment ********* ELOPMENT NORTH OF ********** I D No.6 99999 Area in hectar Length (PERV) i Gradient (%) Per cent Imper Length (IMPERV *Imp. with Zerc. Option 1=SCS CI Manning "n" SCS Curve No oi SCS Curve N) o Dpth) o Dpth N/C; 2=Hortor r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep ches 1.137 1.137 F SEGMENT 1 - es metres vious) o Dpth N/C; 2=Hortor r C	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s .1137 c.m/s	1 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 EUNOFF .012 .012 .012 .012 .012 .012 .012 .012	1.160 .873 1.172 nit Length onduit defin lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** oin hectares th (PERV) me ient (%) cent Impervi th (IMPERV) . with Zero on 1=SCS CN/ ing "n" Curve No or Coefficient tal Abstract on 1=Triangl .000 .866 .159 o.6 99999 in hectares th (PERV) me ient (%)	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C ion r; 2=Rectt 1.172 .456	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND Pl1 on; 3=Green-Ampt 1.172 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924 1 .2 COMMENT 3 line ************************************	*Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No or In/S Coefficien Initial Abstract Option 1=Trians 1.052	o o Dpth N/C; 2=Hortor r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep thes 1.137 1.137 F SEGMENT 1 - es metres vious) o Dpth N/C; 2=Hortor r C nt	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s .1137 c.m/s	1 1 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 ADD F 1 START 1 COMME 1 3 ***** 4 CATCE 1 2.000 2.680 134.000 134.000 100 8.924 15 ADD F 14 CATCE 13.000 6.986 216.000 7.000	.012 .235 .UNOFF .012	1.160 .873 1.172 uit Length onduit defin lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** 0.6 99999 in hectares th (PERV) me ient (%) cont Impervi th (IMPERV) with Zero Coefficient ial Abstract tial Abstract 1.159 0.6 99999 in hectares th (PERV) me ient (%) cont in 1=Triangl 000 866 1.59 0.6 99999 in hectares th (PERV) me ient (%) cont impervi	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C ion r; 2=Rectt 1.172 .456	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND Pl1 on; 3=Green-Ampt 1.172 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924 .1 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2	*Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Trian; 055 1.082 236 .874 a(s) of comment ********** FIT ROADWAY CULVI ********** FF 055 1.137 Conduit Length No Conduit def: Zero lag Beta weighting Routing timest. No. of sub-reac 055 1.137 ction Node No. 055 1.137	o o Dpth N/C; 2=Hortor r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep ches 1.137 1.137 F SEGMENT 1 - es metres vious) o Dpth N/C; 2=Hortor r C nt ction	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total 1 .000 c.m/s .000 c.m/s .000 c.m/s 1.137 c.m/s	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 .UNOFF .012	1.160 .873 1.172 Dit Length Individefin lag weighting fing timestep of sub-reach 1.172 Define f comment *** TY SOUTH OF *** Do. 6 99999 in hectares th (PERV) me ient (%) cent Impervi th (IMPERV). With Zero Individed his abstract on 1=5CS of	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C 1.172 .456 1.172 tres ous	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND Pl1 on; 3=Green-Ampt 1.172 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 .100 1.250 74.000 .100 8.924 1 .200 .200 .200 .200 .200 .200 .200 .2	*Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Trian; 055 1.082 236 .874 a(s) of comment ********** FIT ROADWAY CULVI ********** FF 055 1.137 Conduit Length No Conduit def: Zero lag Beta weighting Routing timest. No. of sub-reac 055 1.137 ction Node No. 055 1.137	o o Dpth N/C; 2=Hortor r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep ches 1.137 1.137 F SEGMENT 1 - es metres vious) o Dpth N/C; 2=Hortor r C nt ction	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s .1137 c.m/s	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5 ADD F 1 START 1 COMME 1 3 ***** 4 CATCE 1 2.000 2.680 134.000 134.000 100 8.924 15 ADD F 14 CATCE 13.000 6.986 216.000 7.000	.012 .235 .UNOFF .012	1.160 .873 1.172 pit Length conduit defin lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 Define f comment *** NT SOUTH OF *** O.6 99999 in hectares th (PERV) me lent (%) con 1=SCS CN/ lng "n" Curve No or Coefficient ial Abstract on 1=Triangl .000 .866 .159 o.6 99999 in hectares th (PERV) me lent (%) cent Impervith (IMPERV) .866 .159 o.6 99999 in hectares th (PERV) me lent (%) cent Impervith (IMPERV) cent Impervith (IMPERV) with Zero .875 .875 .875 .875 .875 .875 .875 .875	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C ion r; 2=Rect. 1.172 .456 1.172 tres ous	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND Pl1 on; 3=Green-Ampt 1.172 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv /total
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924 COMMENT 3 line ********* ADD RUNOI .000 .000 .000 .000 .000 .000 .000 .0	*Imp. with Zerr Option 1=SCS CI Manning "n" SCS Curve No or In/S Coefficier Initial Abstractory of the Manning "n" SCS Curve No or In/S Coefficier Initial Abstractory of the Manning "n" SCS Curve No or Sub-reactory of the Manning "n" SCS Curve No of Sub-reactory of the Manning "n" SCS Curve No or Sub-reactory of the Manning "n" SCS Curve No of Sub-reactory of the Manning "n" SCS Curve No of Sub-reactory of the Manning "n" SCS Curve No or Sub-reactory of the Manning "n" SCS Curve No or Sub-reactory of the Manning "n" SCS Curve No or Sub-reactory of the Manning "n" SCS Curve No or In/S Coefficier Initial Abstractory option 1=SCS Curve No or In/S Coefficier Initial Abstractory of Introduction I = Triang Coption 1 = Triang Coption 1 = Triang Coption 1 = Triang Coption 1 = Triang Coption I = Triang Coptio) o Dpth N/C; 2=Horton r C nt ttion glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor ep ches 1.137 1.137 F SEGMENT 1 - es metres vious) o Dpth N/C; 2=Horton r C nt ttion glr; 2=Rectar	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total 1 .000 c.m/s .000 c.m/s .000 c.m/s 1.137 c.m/s .POND P10	n. Reserv	FROP 1 STAR1 1 STAR1 1 COMME 1 STAR1 1 STAR	.012 .235 .UNOFF .012	1.160 .873 1.172 pit Length conduit defin lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 Define f comment *** NT SOUTH OF *** O.6 99999 in hectares th (PERV) me lent (%) con 1=SCS CN/ lng "n" Curve No or Coefficient ial Abstract on 1=Triangl .000 .866 .159 o.6 99999 in hectares th (PERV) me lent (%) cent Impervith (IMPERV) .866 .159 o.6 99999 in hectares th (PERV) me lent (%) cent Impervith (IMPERV) cent Impervith (IMPERV) with Zero .875 .875 .875 .875 .875 .875 .875 .875	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C ion r; 2=Rect. 1.172 .456 1.172 tres ous	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND P11 anglr; 3=SWM HYD 1.172 c.m/s C perv/imperv 1.172 c.m/s	/total ; 4=Repeat ; 4=Lin. Reserv /total
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924 COMMENT 3 line ********* ADD RUNOI .000 .000 .000 .000 .000 .000 .000 .0	*Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficier Initial Abstrac Option 1=Triang 055 1.082 236 .874 e(s) of comment ********** FUT ROADWAY CULVI ********** FUT ROADWAY CULVI ********* Conduit Length No Conduit def: Zero lag Beta weighting Routing timest No. of sub-reac 055 1.137 ction Node No. 055 1.137 ero; 2=Define e(s) of comment ********* ELOPMENT NORTH OI ********* I D No.6 99999 Area in hectar Length (PERV) : Gradient (%) Per cent Imper Length (IMPERV *Imp. with Zerc Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficier Initial Abstrac Option 1=Triang 477 .000 236 .871	o o Dpth N/C; 2=Hortor r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor epp ches 1.137 1.137 F SEGMENT 1 - es metres vious o Dpth N/C; 2=Hortor r C nt ction glr; 2=Rectar 1.137	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s .1137 c.m/s .2137 c.m/s .3=Green-Ampt; 4=Re	n. Reserv	5 ADD F 1 CATCE 13.000 1.000 2.688 134.000 1.000 2.688 134.000 1.000 2.688 1.000 2.688 2.688 1.000 2.688 2.688 2.688 2.688 2.688 2.688	.012 .235 .UNOFF .012 .Condu No Cc .Condu No	1.160 .873 1.172 uit Length onduit defin lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** NT SOUTH OF *** NT SOUTH OF *** To SOUTH OF *** To Coefficient ial Abstract on 1=Triangl .000 .866 .159 D.6 99999 in hectares th (PERV) me ient (%) reschilt (%) res	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C ion r; 2=Rectt. 1.172 tres ous Dpth C; 2=Horto C Dpth C; 2=Horto C Dpth C; 2=Horto C	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND P11 anglr; 3=SWM HYD 1.172 c.m/s C perv/imperv 1.172 c.m/s	/total ; 4=Repeat ; 4=Lin. Reserv /total
15 9 17 14 35	116.000 .000 .10. 250 74.000 .100 8.924	*Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficier Initial Abstrac Option 1=Triang 055 1.082 236 .874 e(s) of comment ********** FUT ROADWAY CULVI ********** FUT ROADWAY CULVI ********* Conduit Length No Conduit def: Zero lag Beta weighting Routing timest No. of sub-reac 055 1.137 ction Node No. 055 1.137 ero; 2=Define e(s) of comment ********* ELOPMENT NORTH OI ********* I D No.6 99999 Area in hectar Length (PERV) : Gradient (%) Per cent Imper Length (IMPERV *Imp. with Zerc Option 1=SCS CI Manning "n" SCS Curve No oi Ia/S Coefficier Initial Abstrac Option 1=Triang 477 .000 236 .871	o o Dpth N/C; 2=Hortor r C nt ction glr; 2=Rectar .000 .332 ERT - SEGMENT .000 ined factor epp ches 1.137 1.137 F SEGMENT 1 - es metres vious o Dpth N/C; 2=Hortor r C nt ction glr; 2=Rectar 1.137	nglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s .000 c.m/s .1137 c.m/s .2137 c.m/s .3=Green-Ampt; 4=Re	n. Reserv	5 ADD F .000 .000 .000 .000 .000 .000 .000 .0	.012 .235 .UNOFF .012	1.160 .873 1.172 nit Length onduit defin lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 =Define f comment *** NT SOUTH OF *** O.6 99999 in hectares th (PERV) me ient (%) the ment in the ment correction in the ment in the ment correction in the ment in the ment in the ment correction in the ment in	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C ion r; 2=Recta 1.172 .456 1.172 tres ous Dpth C; 2=Horto C C	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND P11 anglr; 3=SWM HYD 1.172 c.m/s C perv/imperv 1.172 c.m/s	/total ; 4=Repeat ; 4=Lin. Reserv /total
15 9 17 14 35	116.000 .000 .10. 250 74.000 .100 8.924	*Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No or Ia/S Coefficient Initial Abstrac Option 1=Triang 155 1.082 236 .874 a(s) of comment ************************************	o o Dpth N/C; 2=Hortor r C nt ction glr; 2=Rectan .000 .332 ERT - SEGMENT .000 ined factor ep thes 1.137 1.137 F SEGMENT 1 - es metres vious) o Dpth N/C; 2=Hortor r C nt ction glr; 2=Rectan 1.137 .681	aglr; 3=SWM HYD; 4=Li .000 c.m/s C perv/imperv/total 1 .000 c.m/s .000 c.m/s 1.137 c.m/s .000 pl0 1; 3=Green-Ampt; 4=Re aglr; 3=SWM HYD; 4=Li 1.137 c.m/s C perv/imperv/total	n. Reserv	5 ADD F 1 START 1 COMME 1 3 ***** 4 CATCE 1 2.000 2.680 1.000 35.000 134.000 1.000 8.924 6 ADD F 4 CATCE 13.000 6.986 216.000 1.000 6.986 216.000 1.000 7.000 216.000 216.000 216.000 216.000 216.000 216.000 216.000 216.000 216.000 216.000	.012 .235 .UNOFF .012	1.160 .873 1.172 nit Length onduit defin lag weighting fing timestep of sub-reach 1.172 Node No. 1.172 Define f comment *** NT SOUTH OF *** O.6 99999 in hectares th (PERV) me lent (%) con 1=SCS CN/ ing "n" Curve No or Coefficient al Abstract on 1=Triangl .000 .866 .159 o.6 99999 in hectares th (PERV) me lent (%) cent Impervi con 1=SCS CN/ ing "n" Curve No or Coefficient with Zero on 1=SCS CN/ ing "n" Curve No or Coefficient with Zero on 1=SCS CN/ ing "n" Curve No or Coefficient Lag "Curve No or Coefficient Lag "Curve No or Coefficient Lag "Curve No or Coefficient Lag "Authority No Curve No or Coefficient Lag "Authority No C	.026 .299 .026 ed actor es 1.172 1.172 SEGMENT 1 tres ous Dpth C; 2=Horto C ion r; 2=Recto 1.172 .456 1.172 tres ous Dpth C; 2=Horto C c ion c c c ion	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.172 c.m/s - POND P11 anglr; 3=SWM HYD 1.172 c.m/s C perv/imperv 1.172 c.m/s	/total ; 4=Repeat ; 4=Lin. Reserv /total

	.236 .882	.688	C perv/imperv/total		74.000		re No or C		
15	ADD RUNOFF .835 .994	1.172	1.172 c.m/s		.100 8.924		efficient Abstractio	· m	
4	CATCHMENT	1.1/2	1.1/2 (/5		1				lr; 3=SWM HYD; 4=Lin. Reserv
	14.000 ID No.6 9999	9				.556	.044	.361	.361 c.m/s
	.670 Area in hect					.236	.884	.690	C perv/imperv/total
	67.000 Length (PER			15	ADD RUNC				252
	1.000 Gradient (%) 60.000 Per cent Imp			9	ROUTE	.556 1	L.594	.361	.361 c.m/s
	67.000 Length (IMP)			-	.000	Conduit	Length		
	.000 %Imp. with 2				.000		uit defined	i	
	1 Option 1=SC: .250 Manning "n"	CN/C; 2=Horton	n; 3=Green-Ampt; 4=Repeat		.000	Zero lag	g Lghting fac		
	74.000 SCS Curve No	or C			.000		timestep	COL	
	.100 Ia/S Coeffic				0		sub-reaches	3	
	8.924 Initial Abst					.556 1	L.594	1.594	.361 c.m/s
	1 Option 1=Tr: .072 .994		nglr; 3=SWM HYD; 4=Lin. Reserv 1.172 c.m/s	17	COMBINE 2 Jun	nction Node	NO.		
	.235 .873		C perv/imperv/total				L.594	1.594	1.955 c.m/s
15	ADD RUNOFF			14	START				
	.072 1.052	1.172	1.172 c.m/s	_		Zero; 2=Def	fine		
27	HYDROGRAPH DISPLAY 5 is # of Hyeto/Hyo	rograph chosen		4	CATCHMEN 43.000	NT ID No.ó	99999		
	Volume = .2954374E+0				.330		hectares		
10	POND				47.000		(PERV) metr	es	
	5 Depth - Discharge - V				1.000	Gradient			
	184.800 .000 185.300 .0140	.0 1142.0			35.000 47.000	Per cent Length (: Imperviou	ıs	
	186.100 .0240	3519.0			.000		th Zero Dr	oth	
	186.500 .287	4978.0			1			2=Horton;	3=Green-Ampt; 4=Repeat
	186.800 1.922	6222.0			.250	Manning			
	Peak Outflow = 18 Maximum Depth = 18	.020 c.m/s 5.805 metres			74.000 .100		re No or C		
	Maximum Storage =	2641. c.m			8.924		Abstractio	on	
	.072 1.05	.020	1.172 c.m/s		1				lr; 3=SWM HYD; 4=Lin. Reserv
35	COMMENT					.022		1.594	1.955 c.m/s
	3 line(s) of commen	it		15	ADD RUNC	. 236	.875	.460	C perv/imperv/total
	FLOW U/S OF RICE RD CO	LVERT - OUTLET	A1	13		.022	.022	1.594	1.955 c.m/s
	******			4	CATCHMEN				
17	COMBINE				44.000	ID No.ó			
	1 Junction Node No.		1.185 c.m/s		6.400 207.000		hectares (PERV) metr		
14	START 1.052	.020	1.165 C.M/S		1.000	Gradient		es	
	<pre>1 1=Zero; 2=Define</pre>				70.000		Imperviou	ıs	
35	COMMENT				207.000	Length (
	3 line(s) of commen				.000		th Zero Dr		3=Green-Ampt; 4=Repeat
			WEST OF RICE RD PON		.250	Manning		z=HOLCON;	3=Green-Ampt; 4=Repeat
	******				74.000		re No or C		
4	CATCHMENT				.100		efficient		
	40.000 ID No. 6 9999 8.210 Area in hect				8.924 1		Abstractio		lr; 3=SWM HYD; 4=Lin. Reserv
	234.000 Length (PER					.765	.022	1.594	1.955 c.m/s
	1.000 Gradient (%					. 236	.880		C perv/imperv/total
	25.000 Per cent Imp			15	ADD RUNC				
	234.000 Length (IMP) .000 %Imp. with 2			9	ROUTE	.765	.782	1.594	1.955 c.m/s
			n; 3=Green-Ampt; 4=Repeat	,	.000	Conduit	Length		
	.250 Manning "n"				.000	No Condu	it defined	i	
	74.000 SCS Curve No .100 Ia/S Coeffic				.000	Zero lag			
	.100 Ia/S Coeffic 8.924 Initial Abst				.000		ighting fac timestep	ctor	
			nglr; 3=SWM HYD; 4=Lin. Reserv		0		sub-reaches	3	
	.361 .000		1.185 c.m/s			.765	.782	.782	1.955 c.m/s
15	.236 .884 ADD RUNOFF	.398	C perv/imperv/total	17	COMBINE 2 Jun	nction Node			
13	.361 .365	.020	1.185 c.m/s			.765	.782	.782	2.737 c.m/s
9	ROUTE			14	START				
	.000 Conduit Leng					Zero; 2=Def	ine		
	.000 No Conduit o	efined		18	CONFLUEN 2 Jun	NCE nction Node	No.		
	.000 Beta weight:	ng factor					2.737	.782	.000 c.m/s
	.000 Routing time	step		4	CATCHMEN	NT			
	0 No. of sub-		1 105 /		45.000	ID No.ó			
17	.361 .363	.361	1.185 c.m/s		1.030 83.000		hectares (PERV) metr	-eg	
-,	2 Junction Node No.				1.000	Gradient			
	.361 .363		.361 c.m/s		60.000	Per cent	Imperviou	ıs	
14	START				83.000	Length (
4	1 1=Zero; 2=Define CATCHMENT				.000 1		ith Zero Dr L=SCS CN/C:		3=Green-Ampt; 4=Repeat
-	41.000 ID No.6 9999	9			.250	Manning		2-1102 00117	5-61661 Impo, I-Ropodo
	.690 Area in hect	ares			74.000		re No or C		
	68.000 Length (PER) 1.000 Gradient (%)				.100 8.924		efficient Abstractio		
	35.000 Per cent Imp				0.924				lr; 3=SWM HYD; 4=Lin. Reserv
	68.000 Length (IMPI	RV)					2.737	.782	.000 c.m/s
	.000 %Imp. with 2					.236	.876	.620	C perv/imperv/total
	1 Option 1=SC: .250 Manning "n"	CN/C; 2=Horton	n; 3=Green-Ampt; 4=Repeat	15	ADD RUNC		2.832	.782	.000 c.m/s
		or C		27		APH DISPLAY		.,02	C.m/B
	74.000 SCS Curve No				5 is	# of Hyeto	/Hydrograp	h chosen	
	.100 Ia/S Coeffic	ient			Volume	= .802374	11E+04 c.m		
	.100 Ia/S Coeffic 8.924 Initial Abst	ient raction	orly. 2-cum myp. 4-ri- p	1.0	POME				
	.100 Ia/S Coeffic 8.924 Initial Abst 1 Option 1=Tr:	ient raction anglr; 2=Rectar	nglr; 3=SWM HYD; 4=Lin. Reserv	10	POND 6 Depth -	- Discharge	a - Volume	sets	
	.100 Ia/S Coeffic 8.924 Initial Abst	ient raction anglr; 2=Rectar .361	nglr; 3=SWM HYD; 4=Lin. Reserv .361 c.m/s C perv/imperv/total	10		- Discharge		sets	
15	.100 Ia/S Coeffic 8.924 Initial Abst 1 Option 1=Tr: .044 .000 .236 .873	rient raction anglr; 2=Rectar .361 .459	.361 c.m/s C perv/imperv/total	10	6 Depth - 186.000 186.800	.00	00 50 404	.0 18.0	
	.100 Ia/S Coeffic 8.924 Initial Abst 1 Option 1=Tr: .044 .000 .236 .87: ADD RUNOFF .044 .044	rient raction anglr; 2=Rectar .361 .459	.361 c.m/s	10	6 Depth - 186.000 186.800 187.300	.00 .055	00 50 404 30 709	.0 48.0 91.0	
15 4	.100 Ia/S Coeffic 8.924 Initial Abst 1 Option 1=Tr: .044 .000 .236 .873	ient raction anglr; 2=Rectar .361 .459	.361 c.m/s C perv/imperv/total	10	6 Depth - 186.000 186.800 187.300 187.500	.00 .055 .073	00 50 404 30 709 70 842	.0 48.0 91.0 24.0	
	.100 Ia/S Coeffic 8.924 Initial Abst 1 Option 1=Tr: .044 .000 .236 .873 ADD RUNOFF .044 .044 CATCHMENT	ient raction anglr; 2=Rectar .361 .459 .361	.361 c.m/s C perv/imperv/total	10	6 Depth - 186.000 186.800 187.300	.00 .055 .073 .17	00 50 404 30 709 70 842 57 1055	.0 18.0 01.0 24.0	
	.100 IA/S Coeffic 8.924 Initial Abd 1 Option 1=Tr: .044 .000 .236 .87: ADD RUNOFF .044 .04 CATCHMENT 42.000 ID No.6 999; 12.640 Area in hect 290.000 Length (PER	ient raction anglr; 2=Rectai .361 .459 .361 9 ares) metres	.361 c.m/s C perv/imperv/total	10	6 Depth - 186.000 186.800 187.300 187.500 187.800 188.000 Peak Out	.00 .055 .073 .17 .25 .88	000 50 404 80 709 70 842 57 1055 80 1209	.0 48.0 91.0 24.0 52.0 94.0 c.m/s	
	.100 Ia/S Coeffic 8.924 Initial Abst 1 Option 1=Tr: .044 .00(.236 .87: ADD RUNOFF .044 .04* CATCHMENT 42.000 ID No.6 999: 12.640 Area in hect 290.000 Length (PER 1.000 Gradient (%	ient raction anglr; 2=Rectai .361 .459 .361 9 ares) metres	.361 c.m/s C perv/imperv/total	10	6 Depth - 186.000 186.800 187.300 187.500 187.800 188.000 Peak Out	.00 .055 .073 .17 .25 .88 tflow =	000 50 404 80 709 70 842 57 1055 80 1209 .072 187.266	.0 18.0 21.0 24.0 52.0 94.0 c.m/s metres	
	.100 IA/S Coeffic 8.924 Initial Abst 1 Option 1=Tr: .044 .000 .236 .87: ADD RUNOFF .04 CATCHMENT 42.000 ID No.6 999: 12.640 Area in hect 290.000 Length (PER Candeller) (PER C	ient raction anglr; 2=Rectai .361 .459 .361 9 ares) metres ervious	.361 c.m/s C perv/imperv/total	10	6 Depth - 186.000 186.800 187.300 187.500 187.800 188.000 Peak Out Maximum Maximum	.00 .055 .073 .17 .25 .88 tflow = Depth = Storage =	000 50 404 80 709 70 842 57 1055 80 1209 .072 187.266	.0 18.0 21.0 24.0 52.0 94.0 c.m/s metres	.000 c.m/s
	.100 IA/S Coeffic 8.924 Initial Abst 1 Option 1=Tr: .044 .000 .236 .87: ADD RUNOFF .044 CATCHMENT 42.000 ID No.6 999: 12.640 Area in hect 290.000 Length (PER Common 1.000 Gradient (%) 70.000 Per cent Imp	ient raction anglr; 2=Rectau .361 .459 .361 9 ares oneres ervious RV)	.361 c.m/s C perv/imperv/total	10	6 Depth - 186.000 186.800 187.300 187.500 187.800 188.000 Peak Out Maximum Maximum	.00 .055 .073 .17 .25 .88 tflow = Depth = Storage =	000 50 404 80 709 70 842 57 1055 80 1209 .072 187.266 6887.	.0 18.0 11.0 14.0 52.0 94.0 c.m/s metres c.m	.000 c.m/s

14	START		.250 Manning "n"		
2.5	1 1=Zero; 2=Define		74.000 SCS Curve N		
35	COMMENT 3 line(s) of comment		.100 Ia/S Coeffi 8.924 Initial Abs		
	**************************************				tanglr; 3=SWM HYD; 4=Lin. Reserv
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD		.039 .06		1.052 c.m/s
	**********		.236 .87	2 .299	C perv/imperv/total
4	CATCHMENT	15	ADD RUNOFF		
	2.000 ID No.ó 99999 9.020 Area in hectares	9	.039 .10	1.052	1.052 c.m/s
	245.000 Length (PERV) metres	,	.000 Conduit Ler	arth	
	1.000 Gradient (%)		.000 No Conduit		
	40.000 Per cent Impervious		.000 Zero lag	dozznou	
	245.000 Length (IMPERV)		.000 Beta weight	ing factor	
	.000 %Imp. with Zero Dpth		.000 Routing tim		
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		0 No. of sub-	reaches	
	.250 Manning "n"		.039 .10	.104	1.052 c.m/s
	74.000 SCS Curve No or C	17	COMBINE		
	.100 Ia/S Coefficient		2 Junction Node No		
	8.924 Initial Abstraction		.039 .10	.104	1.156 c.m/s
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	14	START		
	.624 .000 .072 .072 c.m/s .236 .885 .496 C perv/imperv/total	35	1 1=Zero; 2=Define	1	
15	.236 .885 .496 C perv/imperv/total ADD RUNOFF	35	3 line(s) of comme	n+	
13	.624 .624 .072 .072 c.m/s		*************		
9	ROUTE .024 .072 .072 C.m/S		EXISTING AREA WEST OF	RICE ED AND S	SOUTH OF OUNKER ROAD
,	.000 Conduit Length		************		DOULI OF GOMENIC KOND
	.000 No Conduit defined	4	CATCHMENT		
	.000 Zero lag		4.000 ID No.6 999	199	
	.000 Beta weighting factor		13.940 Area in hec	tares	
	.000 Routing timestep		305.000 Length (PER		
	0 No. of sub-reaches		1.000 Gradient (%	s)	
	.624 .624 .624 .072 c.m/s		40.000 Per cent Im	pervious	
17	COMBINE		305.000 Length (IME	PERV)	
	2 Junction Node No.		.000 %Imp. with		
	.624 .624 .660 c.m/s				ton; 3=Green-Ampt; 4=Repeat
14	START		.250 Manning "n"		
	1 1=Zero; 2=Define		74.000 SCS Curve N		
18	CONFLUENCE 2 Junction Node No.		.100 Ia/S Coeffi		
	2 Junction Node No624 .660 .624 .000 c.m/s		8.924 Initial Abs 1 Option 1=Tr		tanglr; 3=SWM HYD; 4=Lin. Reserv
35	COMMENT		.988 .00		1.156 c.m/s
33	3 line(s) of comment		.236 .88		C perv/imperv/total
	**************************************	15	ADD RUNOFF		C per v/ imper v/ cocar
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD		.988 .98	.104	1.156 c.m/s
	*********	9	ROUTE		
4	CATCHMENT		.000 Conduit Ler	ngth	
	3.000 ID No.6 99999		.000 No Conduit	defined	
	5.680 Area in hectares		.000 Zero lag		
	195.000 Length (PERV) metres		.000 Beta weight	ing factor	
	1.000 Gradient (%)		.000 Routing tim		
	40.000 Per cent Impervious		0 No. of sub-		
	195.000 Length (IMPERV)		.988 .98	.988	1.156 c.m/s
	.000 %Imp. with Zero Dpth	17	COMBINE		
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		2 Junction Node No		
	.250 Manning "n"	1.4	.988 .98	.988	2.144 c.m/s
	74.000 SCS Curve No or C .100 Ia/S Coefficient	14	START 1 1=Zero; 2=Define		
	8.924 Initial Abstraction	18	CONFLUENCE	•	
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	10	2 Junction Node No		
	.392 .660 .624 .000 c.m/s		.988 2.14		.000 c.m/s
	.236 .877 .492 C perv/imperv/total	35	COMMENT		1000 CIM, D
15	ADD RUNOFF		<pre>3 line(s) of comme</pre>	ent	
	.392 1.052 .624 .000 c.m/s		******		
9	ROUTE		RICE ROAD FROM QUAKER	RD TO CITY OF	F WELLAND MUNICIPAL BOUNDA
	.000 Conduit Length		******		
	.000 No Conduit defined	4	CATCHMENT		
	.000 Zero lag		501.000 ID No.ó 999	199	
	.000 Beta weighting factor		1.570 Area in hec	tares	
	.000 Routing timestep		102.000 Length (PEF		
	0 No. of sub-reaches		1.000 Gradient (%		
	.392 1.052 1.052 .000 c.m/s		70.000 Per cent Im		
17	COMBINE		102.000 Length (IMF		
	2 Junction Node No. .392 1.052 1.052 1.052 c.m/s		.000 %Imp. with 1 Option 1=S0		ton; 3=Green-Ampt; 4=Repeat
14	.392 1.052 1.052 1.052 C.m/s		.250 Manning "n"		con; s=Green-Ampt; 4=Repeat
	1 1=Zero; 2=Define		74.000 SCS Curve N		
35	COMMENT		.100 Ia/S Coeffi		
	3 line(s) of comment		8.924 Initial Abs		
	**********				tanglr; 3=SWM HYD; 4=Lin. Reserv
	PROP DEVELOPMENT SOUTH OF QUAKER RD, EAST OF RICE RD		.182 2.14	.988	.000 c.m/s
	**********		.236 .87		C perv/imperv/total
4	CATCHMENT	15	ADD RUNOFF		
	50.000 ID No.6 99999		.182 2.31	.7 .988	.000 c.m/s
	3.420 Area in hectares	9	ROUTE		
	151.000 Length (PERV) metres		.000 Conduit Ler		
	1.000 Gradient (%)		.000 No Conduit	defined	
	10.000 Per cent Impervious		.000 Zero lag	dan fact	
	151.000 Length (IMPERV) .000 %Imp. with Zero Dpth		.000 Beta weight		
	.000 %Imp. with Zero Dpth Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		.000 Routing tim 0 No. of sub-		
	Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"		.182 2.31		.000 c.m/s
	74.000 SCS Curve No or C	35	COMMENT 2.31	., 2.31/	.000 C.m/s
	.100 Ia/S Coefficient	33	3 line(s) of comme	ent	
	8.924 Initial Abstraction		******	-	
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		FLOW D/S OF RICE RD O	CULVERT - OUTL	ET A2
	.066 .000 1.052 1.052 c.m/s		******		
	.236 .868 .299 C perv/imperv/total	17	COMBINE		
15	ADD RUNOFF		1 Junction Node No	٠.	
	.066 .066 1.052 1.052 c.m/s		.182 2.31	.7 2.317	3.502 c.m/s
4	CATCHMENT	14	START		
	51.000 ID No.6 99999		1 1=Zero; 2=Define	•	
	1.980 Area in hectares	35	COMMENT		
	115.000 Length (PERV) metres		3 line(s) of comme	anc.	
	1.000 Gradient (%) 10.000 Per cent Impervious			יים ממשגעווט פוס שי	D - OHALLTY COMPROI ONLY
	10.000 Per cent Impervious 115.000 Length (IMPERV)		*************	OF QUAKEK RI	D - QUALLITY CONTROL ONLY
	.000 %Imp. with Zero Dpth	4	CATCHMENT		

		Area in hectare			35	COMMENT					
		Length (PERV) m	etres				ne(s) of				
		Gradient (%)					*******				
		Per cent Imperv Length (IMPERV)	ious			******	******	ST AVE CUL'	VERT		
		%Imp. with Zero	Doth		17	COMBINE					
				; 3=Green-Ampt; 4=Repeat			nction No	ode No.			
		Manning "n"	-				.229	4.202	4.202	4.202 c.m/s	
		SCS Curve No or			14	START					
		Ia/S Coefficien					Zero; 2=I	Define			
		Initial Abstrac			35	COMMENT					
	1		1r; 2=Rectang 2.317	glr; 3=SWM HYD; 4=Lin. Rese 3.502 c.m/s	cv	3 li	ne(s) of	comment			
	.23		.459	C perv/imperv/total		PROP DE	VELOPMENT	r SOUTH OF	OUAKER, EA	ST OF RICE - POND P5)
15	ADD RUNOFF			- F		*****			2		-
	.04	.049	2.317	3.502 c.m/s	4	CATCHME	NT				
4	CATCHMENT					52.000		.ó 99999			
		ID No.6 99999				6.430		in hectare			
		Area in hectare				207.000		n (PERV) m	etres		
		Length (PERV) m Gradient (%)	etres			1.000 70.000		ent (%) ent Imperv	iona		
		Per cent Imperv	່າດນອ			207.000		n (IMPERV)	LOUS		
		Length (IMPERV)				.000		with Zero	Dpth		
		%Imp. with Zero	Dpth			1				n; 3=Green-Ampt; 4=Re	epeat
			/C; 2=Horton	; 3=Green-Ampt; 4=Repeat		.250	Mannir				
		Manning "n"	_			74.000		irve No or			
		SCS Curve No or Ia/S Coefficien				.100 8.924		Coefficien			
		Initial Abstrac				0.924				nglr; 3=SWM HYD; 4=L:	n Pegerv
				glr; 3=SWM HYD; 4=Lin. Rese	cv	-	.768	.000	4.202	4.202 c.m/s	III. Kebel v
	.45		2.317	3.502 c.m/s			.236	.880	.687	C perv/imperv/total	L
	.23	.866	.772	C perv/imperv/total	15	ADD RUN	OFF				
15	ADD RUNOFF						.768	.768	4.202	4.202 c.m/s	
	.45	.494	2.317	3.502 c.m/s	9	ROUTE					
9	ROUTE	Conduit Length				.000		it Length nduit defi	nod		
		Conduit Length No Conduit defi	ned			.000	No Cor Zero		nea		
		Zero lag				.000		weighting :	factor		
		Beta weighting	factor			.000		ng timeste			
		Routing timeste				0		f sub-reac			
	0	No. of sub-reac	hes				.768	.768	.768	4.202 c.m/s	
	.45	.494	.494	3.502 c.m/s	17	COMBINE					
17	COMBINE					2 Ju	nction No		=	=-0 /	
		ion Node No.	404	2 006/-		am	.768	.768	.768	.768 c.m/s	
14	.45	.494	.494	3.996 c.m/s	14	START 1 1=	Zero; 2=I	Define			
		o; 2=Define			4	CATCHME					
18	CONFLUENCE					53.000		.ó 99999			
	1 Junct	ion Node No.				11.340	Area :	in hectare	s		
	.45	3.996	.494	.000 c.m/s		275.000		n (PERV) m	etres		
35	COMMENT					1.000		ent (%)			
	3 line(s) of comment				70.000 275.000		ent Imperv	ious		
		CHANNEL - SEGME	NT 2			.000		h (IMPERV) with Zero	Doth		
			N1 2			.000			DPCII		
	*******	*****				1	Option	n 1=SCS CN	/C: 2=Horto	n: 3=Green-Ampt: 4=Re	
4	********** CATCHMENT	*****				1 .250			/C; 2=Horto	n; 3=Green-Ampt; 4=Re	epeat
4	CATCHMENT	ID No.ó 99999				1 .250 74.000	Mannir			n; 3=Green-Ampt; 4=Re	epeat
4	CATCHMENT 200.000 .970	ID No.ó 99999 Area in hectare				.250 74.000 .100	Mannir SCS Ct Ia/S (ng "n" urve No or Coefficien	C t	n; 3=Green-Ampt; 4=Re	epeat
4	CATCHMENT 200.000 .970 80.416	ID No.6 99999 Area in hectare Length (PERV) m				.250 74.000 .100 8.924	Mannin SCS Cu Ia/S (Initia	ng "n" urve No or Coefficien al Abstrac	C t tion		
4	CATCHMENT 200.000 .970 80.416 1.000	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%)	etres			.250 74.000 .100 8.924	Mannir SCS Cu Ia/S (Initia Option	ng "n" urve No or Coefficien al Abstrac n 1=Triang	C t tion lr; 2=Recta	nglr; 3=SWM HYD; 4=L:	
4	CATCHMENT 200.000 .970 80.416 1.000 10.000	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv	etres			.250 74.000 .100 8.924	Manning SCS Ct Ia/S (Initial Option .397	ng "n" urve No or Coefficien al Abstrac n 1=Triang .000	C t tion lr; 2=Recta .768	nglr; 3=SWM HYD; 4=L: .768 c.m/s	in. Reserv
4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV)	ious		15	.250 74.000 .100 8.924 1	Mannin SCS Ct Ia/S (Initia Option .397 .236	ng "n" urve No or Coefficien al Abstrac n 1=Triang	C t tion lr; 2=Recta	nglr; 3=SWM HYD; 4=L:	in. Reserv
4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) %Imp. with Zero	etres ious Dpth	; 3=Green-Ampt; 4=Repeat	15	.250 74.000 .100 8.924 1 1 ADD RUN	Mannin SCS Ct Ia/S (Initia Option .397 .236	ng "n" urve No or Coefficien al Abstrac n 1=Triang .000	C t tion lr; 2=Recta .768	nglr; 3=SWM HYD; 4=L: .768 c.m/s	in. Reserv
4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000 1 .250	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) %Imp. with Zero Option 1=SCS CN Manning "n"	etres ious Dpth /C; 2=Horton	; 3=Green-Ampt; 4=Repeat	15 9	.250 74.000 .100 8.924 1 1 ADD RUN	Manning SCS Ct Ia/S (Initial Option .397	ng "n" urve No or Coefficien al Abstrac n 1=Triang .000 .886	C t tion lr; 2=Recta .768 .691	nglr; 3=SWM HYD; 4=L: .768 c.m/s C perv/imperv/tota:	in. Reserv
4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000 1 .250 74.000	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) %Imp. with Zero Option 1=SCS CN Manning "n" SCS Curve No or	etres ious Dpth /C; 2=Horton	; 3=Green-Ampt; 4=Repeat		.250 74.000 .100 8.924 1 1 ADD RUN 1 ROUTE .000	Manning SCS Ct Ia/S (Initial Option .397 .236 OFF .397	ng "n" irve No or Coefficien al Abstrac n 1=Triang .000 .886 1.397	C t tion lr; 2=Recta .768 .691	nglr; 3=SWM HYD; 4=L: .768 c.m/s C perv/imperv/tota:	in. Reserv
4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000 1 .250 74.000 .100	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) %Imp. with Zero Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficien	etres ious Dpth /C; 2=Horton C	; 3=Green-Ampt; 4=Repeat		.250 74.000 .100 8.924 1 1 ADD RUN 1 ROUTE .000 .000	Manning SCS Ct Ia/S Continued Initial Option .397 .236 OFF .397 Conduit No Continued Initial Continued Initial	ng "n" urve No or Coefficien al Abstrac a 1=Triang .000 .886 1.397 it Length aduit defin	C t tion lr; 2=Recta .768 .691	nglr; 3=SWM HYD; 4=L: .768 c.m/s C perv/imperv/tota:	in. Reserv
4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000 1 .250 74.000 .100 8.924	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) Ximp. with Zero Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficient Initial Abstrac	etres ious Dpth /C; 2=Horton C t		9	.250 74.000 .100 8.924 1 1 ADD RUN 1 ROUTE .000 .000	Manning SCS Ct Ia/S Ct Initial Option .397 .236 OFF .397 Conduit No Cor Zero I	ng "n" urve No or Coefficien al Abstrac n 1=Triang .000 .886 1.397 it Length nduit defin	C t tion lr; 2=Recta .768 .691 .768	nglr; 3=SWM HYD; 4=L: .768 c.m/s C perv/imperv/tota:	in. Reserv
4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000 1 .250 74.000 .100 8.924 1	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) Kimp. with Zero Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang	etres ious Dpth /C; 2=Horton C t tion lr; 2=Rectan	glr; 3=SWM HYD; 4=Lin. Rese	9	.250 74.000 .100 8.924 1 1 ADD RUN 1 ROUTE .000 .000 .000	Manning SCS Ct Initia Option .397 .236 OFF .397 Conduit No Con Zero Beta was selected to the conduction of the conductio	ng "n" urve No or Coefficien al Abstrac al =Triang .000 .886 1.397 at Length aduit defin	C tton lr; 2=Recta .768 .691 .768	nglr; 3=SWM HYD; 4=L: .768 c.m/s C perv/imperv/tota:	in. Reserv
4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000 1 .250 74.000 .100 8.924 1 .01	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) %Imp. with Zero Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang 9 3.996	etres ious Dpth /C; 2=Horton C t tion lr; 2=Rectan	glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s	9	.250 74.000 .100 8.924 1 1 ADD RUN 1 ROUTE .000 .000	Mannin SCS Ct Initia Option .397 .236 OFF .397 Condu: No Con Zero : Beta : Routin	ng "n" urve No or Coefficien al Abstrac al 1=Triang .000 .886 1.397 it Length aduit defi: lag weighting : ng timeste;	C ttion lr; 2=Recta .768 .691 .768 ned factor	nglr; 3=SWM HYD; 4=L: .768 c.m/s C perv/imperv/tota:	in. Reserv
4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000 1 .250 74.000 .100 8.924 1	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) %Imp. with Zero Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang 9 3.996	etres ious Dpth /C; 2=Horton C t tion lr; 2=Rectan	glr; 3=SWM HYD; 4=Lin. Rese	9	.250 74.000 .100 8.924 1 1 ADD RUNT ROUTE .000 .000 .000 .000 .000	Mannin SCS Ct Initia Option .397 .236 OFF .397 Condu: No Con Zero : Beta : Routin	ng "n" urve No or Coefficien al Abstrac al =Triang .000 .886 1.397 at Length aduit defin	C ttion lr; 2=Recta .768 .691 .768 ned factor	nglr; 3=SWM HYD; 4=L: .768 c.m/s C perv/imperv/tota:	in. Reserv
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35 15 35	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000 .1 .250 74.000 .100 8.924 .1 .23 COMMENT 3 line(************************************	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) Ximp. with Zero Option 1=SCS CN Manning "" SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang 9 3.996 6 .875 s) of comment ******** ******** ****** 9 4.015 s) of comment ******** "5 4.015 s) of comment ********* "1D No.6 99999 Area in hectare Length (PERV) m Gradient (%)	pth Dpth C; 2=Horton C ttion lr; 2=Rectan; .494 .299 TLET B .494 NT LANDS BY 6	glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s C perv/imperv/total .000 c.m/s	9 17 18	.250 74.000 .100 8.924 1 1 ADD RUN 1 ROUTE .000 .000 .000 .000 .000 .000 1 COMBINE 2 Ju 2 Ju 2 LCATCHNE 54.000 1.280 92.000 1.000 60.000 92.000 .000 1.250	Mannings Scs Colla/Sc Conduction No. Spr. No. Conduction	ng "n" urve No or Coefficien al Abstrac- n 1=Triang .000 .886 1.397 it Length induit defin lag weighting: g timeste; sub-reach 1.397 ode No. 1.397 ode No. 2.165 .6 9999 in hectare; h	C ttoon 117; 2=Recta .768 .691 .768 ned factor phes 1.397 1.397 1.397 Setres ious Dpth /C; 2=Horto	nglr; 3=SWM HYD; 4=L: .768 c.m/s C perv/imperv/tota: .768 c.m/s .768 c.m/s 2.165 c.m/s .000 c.m/s	in. Reserv
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35 15 35 4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000 .1 .250 74.000 .100 8.924 1 .23 COMMENT 3 line(************************************	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) in Simp. with Zero Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang 9 3.996 6 .875 s) of comment ************************************	petres ious Dpth /C; 2=Horton C ttion Ir; 2=Rectan; .494 .299 TLET B .494 NT LANDS BY 6 setres ious Dpth /C; 2=Horton C ttion Ir; 2=Rectan; .494 .268	glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s C perv/imperv/total .000 c.m/s OTHERS WEST OF FIRST AV ; 3=Green-Ampt; 4=Repeat glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s C perv/imperv/total	9 17 18 4	.250 74.000 .100 8.924 1 ADD RUN 1 ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Manningschaften SCS CC Ia/S (Initia Option .397 Condu: No Con Zero : Beta v Routi No Con .397 nction No. od .397 nction No. 397 NTI NO No. 397 NTI NO No. 397 ID No. Area : Lengtl %Imp. Option Manningschaften Coption Initia Option .131 .236 Option .131 APH DISPI # of Hyg = .598: - Dischan	ng "n" Irve No or Coefficien al Abstract .000 .886 1.397 it Length aduit defi: lag weighting: getimeste; f sub-react 1.397 ode No. 2.165 .6 99999 in hectare; n (PERV) me ant (%) ent Imperv. n (IMPERV) me ant (%) con 1=SCS (No. ng "n" Irve No or Coefficien al Abstract 1=Triang 2.165 .876 2.285 LAY eto/Hydrog; 2220E+04 c rge - Volum .000	C tttion lr; 2=Recta .768 .691 .768 ned factor p hes 1.397 1.397 1.397 2.397 1.397 1.397 1.397 2.4Horto C ttion lr; 2=Recta 1.397 .620 1.397 raph chosen .m me sets .0	nglr; 3=SWM HYD; 4=L768 c.m/s C perv/imperv/total .768 c.m/s .768 c.m/s .768 c.m/s 2.165 c.m/s .000 c.m/s n; 3=Green-Ampt; 4=R000 c.m/s C perv/imperv/total	in. Reserv
35 15 35 4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000 .1 .250 74.000 .100 8.924 1 .23 COMMENT 3 line(************************************	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) in Simp. with Zero Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang 9 3.996 6 .875 s) of comment ******* ****** 9 4.015 s) of comment ******* 1D No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (PERV) m Gradient (%) Per cent Imperv Length (PERV) m SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=SCS Curve In/S Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang 19 4.015 6 .884 19 4.202 Conduit Length	pth //C; 2=Horton C ttion Ir; 2=Rectan; .494 .299 TLET B .494 NT LANDS BY 6 setres ious Dpth //C; 2=Horton C ttion Ir; 2=Rectan; .494 .268 .494	glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s C perv/imperv/total .000 c.m/s OTHERS WEST OF FIRST AV ; 3=Green-Ampt; 4=Repeat glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s C perv/imperv/total	9 17 18 4	.250 74.000 .100 8.924 1 ADD RUN 1 ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Mannings SCS Conduction No. Composition No. Co	ng "n" Irve No or Coefficien al Abstract 1 = Triang .000 .886 1.397 it Length it	C tt tion 1r; 2=Recta .768 .691 .768 ned factor p hes 1.397 1.397 1.397 2.397 1.397 1.397 1.397 1.397 1.397 1.397 2.400 1.397 1.397 2.700 1.397 2.700 1.397 3.700 1.397 1.397 620 1.397 raph chosen .m me sets .0 5251.0	nglr; 3=SWM HYD; 4=L768 c.m/s C perv/imperv/total .768 c.m/s .768 c.m/s .768 c.m/s 2.165 c.m/s .000 c.m/s n; 3=Green-Ampt; 4=R000 c.m/s C perv/imperv/total	in. Reserv
35 15 35 4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000 .1 .250 74.000 .100 8.924 1 .01 .23 COMMENT 3 line(************************************	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) Ximp. with Zero Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang 9 3.996 66 .875 s) of comment ******** ********* ******* ******* ****	pth //C; 2=Horton C ttion Ir; 2=Rectan; .494 .299 TLET B .494 NT LANDS BY 6 setres ious Dpth //C; 2=Horton C ttion Ir; 2=Rectan; .494 .268 .494	glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s C perv/imperv/total .000 c.m/s OTHERS WEST OF FIRST AV ; 3=Green-Ampt; 4=Repeat glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s C perv/imperv/total	9 17 18 4	.250 74.000 .100 8.924 1 ADD RUN 1 ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Manningschaften Scs CC Ia/S (Initial Option .397 Condu: No Con Zero : 236 OFF .397 Conduingschaften School Carolingschaften Sc	ng "n" urve No or Coefficien al Abstrac- a 1=Triang .000 .886 1.397 it Length induit defin lag weighting is timeste f sub-reach 1.397 ode No. 2.165 .6 99999 in hectare in (PERV) me put (%) ent Imperv. in (IMPERV) in i	C tt tion Ir; 2=Recta .768 .691 .768 ned factor phes 1.397 1.397 1.397 2.397 1.397 1	nglr; 3=SWM HYD; 4=L768 c.m/s C perv/imperv/total .768 c.m/s .768 c.m/s .768 c.m/s 2.165 c.m/s .000 c.m/s n; 3=Green-Ampt; 4=R000 c.m/s C perv/imperv/total	in. Reserv
35 15 35 4	CATCHMENT 200.000 .970 80.416 1.000 10.000 10.000 11 .250 74.000 .100 8.924 1 .23 .COMMENT 3 line(************************************	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) in Simp. with Zero Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang 9 3.996 6 .875 s) of comment ******* ****** 9 4.015 s) of comment ******* 1D No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (PERV) m Gradient (%) Per cent Imperv Length (PERV) m SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=SCS Curve In/S Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang 19 4.015 6 .884 19 4.202 Conduit Length	ppth //C; 2=Horton C ttion lr; 2=Rectan; .494 .299 TLET B .494 NT LANDS BY 6 setres ious Dpth //C; 2=Horton C ttion lr; 2=Rectan; .494 .268 .494 ned	glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s C perv/imperv/total .000 c.m/s OTHERS WEST OF FIRST AV ; 3=Green-Ampt; 4=Repeat glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s C perv/imperv/total	9 17 18 4	.250 74.000 .100 8.924 1 ADD RUN 1 ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Manningscore Manningscore SCS CIa/SC Initia Option .397 Condui No Cool Zero: Beta v Routin No. od .397 nction No. 397 ID No. Area: Lengtl %Imp. Option Manningscore Initia Option .131 .236 CF .131 .236 OFF .131 .316 OFF .131 .326 OFF .131 .336	ng "n" Irve No or Coefficien al Abstract n = 1000 .886 1.397 it Length aduit defi: lag weighting: ng timeste; f sub-react 1.397 ode No. 2.165 .6 99999 in hectare; net (PERV) m ent (%) ent Imperv. with Zero n 1=SCS CN ng "n" Irve No or coefficien al Abstract 1=Triang 2.165 .876 2.285 LAY eto/Hydrog: 2220E+04 c rge - Volum .000 0190 01930 2230 1238	C tt tion 1r; 2=Recta .768 .691 .768 ned factor p hes 1.397 1.397 1.397 2.397 1.397 1.397 1.397 1.397 1.397 1.397 2.400 1.397 1.397 2.700 1.397 2.700 1.397 3.700 1.397 1.397 620 1.397 raph chosen .m me sets .0 5251.0	nglr; 3=SWM HYD; 4=L768 c.m/s C perv/imperv/total .768 c.m/s .768 c.m/s .768 c.m/s 2.165 c.m/s .000 c.m/s n; 3=Green-Ampt; 4=R000 c.m/s C perv/imperv/total	in. Reserv
35 15 35 4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000 .1 .250 74.000 .100 8.924 1 .23 COMMENT 3 line(************************************	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) in Simp. with Zero Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang 9 3.996 6 .875 s) of comment ******* Pf AREA A20 - OU ******** 9 4.015 s) of comment ******** ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (MPERV) m Gradient (%) Per cent Imperv Length (MPERV) m SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang 9 4.015 6 .884 19 4.202 Conduit Length No Conduit Length	ppth //C; 2=Horton C ttion lr; 2=Rectang .494 .299 TLET B .494 NT LANDS BY 6 setres ious Dpth //C; 2=Horton C ttion lr; 2=Rectang .494 .268 .494 ned factor	glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s C perv/imperv/total .000 c.m/s OTHERS WEST OF FIRST AV ; 3=Green-Ampt; 4=Repeat glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s C perv/imperv/total	9 17 18 4	.250 74.000 .100 8.924 1 ADD RUN 1 ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Manningscore SCS CC Ia/S (Initia Option .397 Conduit No Con Zero : Beta v Routin No. od .397 Inction No. od .397 Inction No. 397 NCE notion No. 397 ID No. Area : Lengtl %Imp. Option Manningscore Conduit SCS Cc Initia Option Manningscore SCS Cc Initia Option .131 - 236 OFF .131 - Dischal	ng "n" urve No or Coefficien al Abstrac- n 1=Triang .000 .886 1.397 it Length induit defin lag weighting g timeste g sub-reach 1.397 ode No. 2.165 .6 9999 in hectare n (PERV) me ent (%) ent Imperv) with Zero n 1=Triang 2.165 .876 2.285 LAY action 12 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	C ttool 1.768 .691 .768 .691 .768 .691 .768 .691 .768 .768 .768 .768 .768 .768 .768 .768 .768 .768 .768 .768 .768 .768 .769 .769 .769 .769 .769 .769 .776 .776 .776 .776 .776 .776 .776 .776 .776 .776 .776 .776 .777	nglr; 3=SWM HYD; 4=L768 c.m/s C perv/imperv/total .768 c.m/s .768 c.m/s .768 c.m/s 2.165 c.m/s .000 c.m/s n; 3=Green-Ampt; 4=R000 c.m/s C perv/imperv/total	in. Reserv
35 15 35 4	CATCHMENT 200.000 .970 80.416 1.000 10.000 80.416 .000 .1 .250 74.000 .100 8.924 1 .23 COMMENT 3 line(************************************	ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (IMPERV) in Simp. with Zero Option 1=SCS CN Manning "" SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang 9 3.996 6 .875 s) of comment ******* PF AREA A20 - OU ******** 10 FUT DEVELOPME ******** ID No.6 99999 Area in hectare Length (PERV) m Gradient (%) Per cent Imperv Length (PERV) m SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=SCS CN Manning "" SCS Curve No or Ia/S Coefficien Initial Abstrac Option 1=Triang 19 4.015 6 .884 69 4.202 Conduit Length No Conduit defi: Zero lag Beta weighting Routing timeste. No. of sub-reac No bereach	pth /C; 2=Horton C ttion lr; 2=Rectang .494 .299 TLET B .494 NT LANDS BY 6 setres ious Dpth /C; 2=Horton C ttion lr; 2=Rectang .494 .268 .494 ned factor p	glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s C perv/imperv/total .000 c.m/s OTHERS WEST OF FIRST AV ; 3=Green-Ampt; 4=Repeat glr; 3=SWM HYD; 4=Lin. Rese .000 c.m/s C perv/imperv/total	9 17 18 4	.250 74.000 .100 8.924 1 ADD RUN 1 ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Mannings SCS Conduction No. Composition No. Co	ng "n" Irve No or Coefficien al Abstract 1-Triang .000 .886 1.397 it Length aduit defi: lag weighting: g timeste; f sub-react 1.397 ode No. 2.165 .6 99999 in hectare: n (PERV) me ant (ERV) me ant (ERV) ment (%) sent Imperv. n (IMPERV) mit Zero n 1=SCS .876 2.285 LAY acto/Hydrog: 2220E+04 c rge - Volum .000 1900 2338 1.396 1.028	C ttion 1r; 2=Recta .768 .691 .768 ned factor phes 1.397 1.397 1.397 2.397 1.397 1.397 1.397 1.397 1.397 cttion lr; 2=Recta 1.397 .620 1.397 raph chosen .m me sets 5251.0 7895.0 77895.0 7051.0 3425.0 5337.0 20 c.m/s	nglr; 3=SWM HYD; 4=L768 c.m/s C perv/imperv/total .768 c.m/s .768 c.m/s .768 c.m/s 2.165 c.m/s .000 c.m/s n; 3=Green-Ampt; 4=R000 c.m/s C perv/imperv/total	in. Reserv

	Maximum Storage = 5617. c.m .131 2.285 .020	.000 c.m/s	35	COMMENT 3 line(s) of c			
17	.131 2.285 .020 COMBINE	.000 C.m/B		3 line(s) of a	Commerce		
	2 Junction Node No.			REALIGNED CHANNEL	L - SEGMENT	3	
	.131 2.285 .020	.020 c.m/s		*******			
14	START 1 1=Zero; 2=Define		4	CATCHMENT			
35	1 1=Zero; 2=Define COMMENT			300.000 ID No.6	n hectares		
33	3 line(s) of comment				(PERV) metr	res	
	*******			.200 Gradies			
	EXISTING AREA ON QUAKER RD, EAST OF	F RICE RD			nt Imperviou	ıs	
	******				(IMPERV)		
4	CATCHMENT 5.000 ID No.ó 99999				vith Zero Dr		3=Green-Ampt; 4=Repeat
	1.870 Area in hectares			.250 Manning		; Z=HOLCON;	3=Green-Ampt; 4=Repeat
	112.000 Length (PERV) metres				ve No or C		
	1.000 Gradient (%)				pefficient		
	50.000 Per cent Impervious				L Abstractio		
	112.000 Length (IMPERV)						lr; 3=SWM HYD; 4=Lin. Reserv
	.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort	ton; 3=Green-Ampt; 4=Repeat		.087	4.834 .880	.632 .332	.000 c.m/s C perv/imperv/total
	.250 Manning "n"	ton, 3-Green-Ampt, 4-Repeat	15	ADD RUNOFF	.000	.332	c perv/imperv/cocar
	74.000 SCS Curve No or C			.087	4.921	.632	.000 c.m/s
	.100 Ia/S Coefficient		4	CATCHMENT			
	8.924 Initial Abstraction			301.000 ID No.			
		tanglr; 3=SWM HYD; 4=Lin. Reserv			n hectares		
	.153 .000 .020 .236 .873 .554	.020 c.m/s			(PERV) metr	res	
15	.236 .873 .554 ADD RUNOFF	C perv/imperv/total			nt (%) nt Imperviou	18	
	.153 .153 .020	.020 c.m/s			(IMPERV)		
9	ROUTE				vith Zero Dr	pth	
	.000 Conduit Length					; 2=Horton;	3=Green-Ampt; 4=Repeat
	.000 No Conduit defined			.250 Manning			
	.000 Zero lag				rve No or C		
	.000 Beta weighting factor .000 Routing timestep				oefficient L Abstractio	on.	
	0 No. of sub-reaches						dr; 3=SWM HYD; 4=Lin. Reserv
	.153 .153 .153	.020 c.m/s		.014	4.921	.632	.000 c.m/s
17	COMBINE			.236	.869		C perv/imperv/total
	2 Junction Node No.		15	ADD RUNOFF			
	.153 .153 .153	.160 c.m/s		.014	4.935	.632	.000 c.m/s
18	CONFLUENCE		9	ROUTE			
	2 Junction Node No.				Length		
25	.153 .160 .153	.000 c.m/s			duit defined	1	
35	COMMENT 3 line(s) of comment			.000 Zero la	ag eighting fac	ator	
	**************************************				timestep	COL	
	EXISTING AREA ON QUAKER RD, EAST OF	F RICE RD			sub-reaches	3	
	******			.014		4.935	.000 c.m/s
4	CATCHMENT		17	COMBINE			
	6.000 ID No.ó 99999			1 Junction No.			
	1.920 Area in hectares			.014	4.935	4.935	4.935 c.m/s
	113.000 Length (PERV) metres		14	START			
	.200 Gradient (%)		25	1 1=Zero; 2=De	efine		
	65.000 Per cent Impervious		35	1 1=Zero; 2=De COMMENT			
	65.000 Per cent Impervious 113.000 Length (IMPERV)		35	1 1=Zero; 2=De			
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth	ton; 3=Green-Ampt; 4=Repeat	35	1 1=Zero; 2=De COMMENT 3 line(s) of c	comment	EGMENT 3 -	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth	ton; 3=Green-Ampt; 4=Repeat	35	1 1=Zero; 2=De COMMENT 3 line(s) of c	comment	EGMENT 3 -	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horn .250 Manning "n" 74.000 SCS Curve No or C	ton; 3=Green-Ampt; 4=Repeat	35	1 1=Zero; 2=De COMMENT 3 line(s) of c ********** PROP DEVELOPMENT ********** CATCHMENT	Comment	EGMENT 3 -	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hord .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient	ton; 3=Green-Ampt; 4=Repeat		1 1=Zero; 2=De COMMENT 3 line(s) of c ************************************	COMMENT NORTH OF SE	egment 3 -	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hord .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction			1 1=Zero; 2=De COMMENT 3 line(s) of o *********** PROP DEVELOPMENT *********** CATCHMENT 30.000 ID No.6 8.470 Area in	NORTH OF SE 5 99999 1 hectares		POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hord .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect	tanglr; 3=SWM HYD; 4=Lin. Reserv		1 1=Zero; 2=De COMMENT 3 line(s) of a ************************************	NORTH OF SE		POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hord .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s		1 1=Zero; 2=De COMMENT 3 line(s) of o *********** PROP DEVELOPMENT *********** CATCHMENT 30.000 ID No.0 8.470 Area in 238.000 Length .200 Gradien	NORTH OF SE	res	POND P30
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hord .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153	tanglr; 3=SWM HYD; 4=Lin. Reserv		1 1=Zero; 2=De COMMENT 3 line(s) of o *********** PROP DEVELOPMENT *********** CATCHMENT 30.000 ID No.0 8.470 Area in 238.000 Length .200 Gradien .100 Per cer	NORTH OF SE	res	POND P30
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s		1 1=Zero; 2=De COMMENT 3 line(s) of o *********** PROP DEVELOPMENT *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length .200 Gradien .100 Per cet 238.000 Length .000 %Imp. v	NORTH OF SE 5 99999 h hectares (PERV) metr ht (%) ht Imperviou (IMPERV) with Zero Dr	res 18 pth	
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hord .250 Manning "n" 74.000 SC Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total		1 1=Zero; 2=De COMMENT 3 line(s) of o ************ PROP DEVELOPMENT ************ CATCHMENT 30.000 Length .200 Gradier .100 Per cer 238.000 Length .000 %Imp. w 1 Option	NORTH OF SE 5 99999 n hectares (PERV) metr t (%) nt Imperviou (IMPERV) with Zero DE 1=SCS CN/C;	res 18 pth	POND P30 3=Green-Ampt; 4=Repeat
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hord .250 Manning "n 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total		1 1=Zero; 2=De COMMENT 3 line(s) of o *********** PROP DEVELOPMENT *********** 30.000 ID No.0 8.470 Area in 238.000 Length .200 Gradien .100 Per cer .100 Per cer .208.000 Length .000 %Imp. v 1 Option .250 Manning	NORTH OF SE 5 99999 n hectares (PERV) metr tt (%) nt Imperviou (IMPERV) with Zero Dp 1=SCS CN/C;	res 18 pth	
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		1 I=Zero; 2=De COMMENT 3 line(s) of o ************ PROP DEVELOPMENT *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length .200 Gradier .100 Per cer 238.000 Length .000 %Imp. v 1 Option .250 Manning 74.000 SCS Cur	NORTH OF SE 5 99999 n hectares (PERV) metr at (%) th Imperviou (IMPERV) with Zero Dp 1=SCS CN/C; g "n"	res 18 pth	
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hord .250 Manning "n 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		1 1=Zero; 2=De COMMENT 3 line(s) of of *********** PROP DEVELOPMENT *********** 30.000 ID No.0 8.470 Area in 238.000 Length .200 Gradier .100 Per cer 238.000 Length .000 %Imp. v 1 Option .250 Manning 74.000 SCS Cu .100 IA/S CS	NORTH OF SE 5 99999 n hectares (PERV) metr tt (%) tt Imperviou (IMPERV) vith Zero Dr 1=SCS CN/C; J "n" rve No or C pefficient	res us oth ; 2=Horton;	
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hord .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		1 I=Zero; 2=De COMMENT 3 line(s) of o ************ PROP DEVELOPMENT *********** CATCHMENT 30.000 ID No.0 8.470 Area in 238.000 Length .200 Gradien .100 Per cen 238.000 Length .000 %Imp. v 1 Option .250 Manning 74.000 SCS Cun .100 Ia/S CC 8.924 Initial	NORTH OF SE 5 99999 n hectares (PERV) metr tt (%) nt Imperviou (IMPERV) with Zero Dp 1=SCS CN/C; y "n" rve No or C pefficient L Abstractic	res us pth ; 2=Horton;	
15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		1 I=Zero; 2=De COMMENT 3 line(s) of o ************ PROP DEVELOPMENT *********** CATCHMENT 30.000 ID No.0 8.470 Area in 238.000 Length .200 Gradien .100 Per cen 238.000 Length .000 %Imp. v 1 Option .250 Manning 74.000 SCS Cun .100 Ia/S CC 8.924 Initial	NORTH OF SE 5 99999 1 hectares (PERV) metr 1t (%) 1=SCS CN/C; g "n" ve No or C efficient 1 Abstractic 1=Trianglr;	res us pth ; 2=Horton;	3=Green-Ampt; 4=Repeat
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15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hord .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment *************** FIRST AVE FROM QUAKER RD TO CITY OF ********************* *CATCHEENT 201.000 ID No.6 99999 2.430 Area in hectares 127.000 Length (PERV) metres	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		1 1=Zero; 2=De COMMENT 3 line(s) of of *********************************	NORTH OF SE 5 99999 h hectares (PERV) metr tt (%) with Zero Dg 1=SCS CN/C; y "n" rve No or C Defficient habstractic 1=Trianglr; .000 .885	res pth pth p=Horton; 2=Horton; 2=Rectang 4.935 .236	3=Green-Ampt; 4=Repeat (lr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	4	1	NORTH OF SE 5 99999 1 hectares (PERV) metr 1 (%) 1 Impervious vith Zero Dr 1=SCS CN/C; y "n" ve No or C 0efficient 1 Abstractic 1=Trianglr; .000	res pth ; 2=Horton; pn ; 2=Rectang 4.935	3=Green-Ampt; 4=Repeat dr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s
15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	4	1 1=Zero; 2=De COMMENT 3 line(s) of of ************* PROP DEVELOPMENT *********** CATCHMENT 30.000 ID No.0 8.470 Area in 238.000 Length .100 Per cer 238.000 Length .000 *Imp. t 1 Option .250 Manning 74.000 SCS Cun .100 Ia/S C 8.924 Initial .057 .236 ADD RUNOFF .057 CATCHMENT	NORTH OF SE 5 99999 1 hectares (PERV) metrat 1 (%) 2 in metration (IMPERV) 2 in metration (IMPERV) 3 in metration 1 = SCS CN/C; 5 in metration 1 = Trianglr; .000 .885	res pth pth p=Horton; 2=Horton; 2=Rectang 4.935 .236	3=Green-Ampt; 4=Repeat (lr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	4	1 1=Zero; 2=De COMMENT 3 line(s) of of ************* PROP DEVELOPMENT *********** 30.00 ID No.6 8.470 Area in 238.000 Length .200 Gradien .100 Per cer .200 Gradien .100 Ength .000 *Imp. v 1 Option .250 Manning 74.000 SCS Cuu .100 IA/S Ce 8.924 Initial 1 Option .057 .236 ADD RUNOFF .057 CATCHMENT 31.000 ID No.6	NORTH OF SE 5 99999 1 hectares (PERV) metrat 1 (%) 2 in metration (IMPERV) 2 in metration (IMPERV) 3 in metration 1 = SCS CN/C; 5 in metration 1 = Trianglr; .000 .885	res pth pth p=Horton; 2=Horton; 2=Rectang 4.935 .236	3=Green-Ampt; 4=Repeat (lr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hord .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************ FIRST AVE FROM QUAKER RD TO CITY OF ************ *********** ***********	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	4	1 1=Zero; 2=De COMMENT 3 line(s) of of *********************************	NORTH OF SE 5 99999 hectares (PERV) metr t (%) th Imperviou (IMPERV) yith Zero Dr 1=SCS CN/C; g'n" ve No or C befficient 1=Trianglr; .000 .885 .057	on ; 2=Rectang 4.935 4.935	3=Green-Ampt; 4=Repeat (lr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA	4	1	NORTH OF SE 5 99999 hectares (PERV) metr t (%) at Imperviou (IMPERV) yith Zero Dr 1=SCS CN/C; y "n" rve No or C oefficient l Abstractic 1=Trianglr; .000 .885 .057 5 99999 hectares (PERV) metr t (%)	res pth pth per 2=Horton; 2=Rectang 4.935 236 4.935	3=Green-Ampt; 4=Repeat (lr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA	4	1 1=Zero; 2=De COMMENT 3 line(s) of of ************** PROP DEVELOPMENT *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length .000 Per cee 238.000 Length .000 Per cee 1 Option .250 Manning 74.000 SCS Cun .100 Ia/S Co 8.924 Initial .007 .057 .236 ADD RUNOFF .057 CATCHMENT 31.000 ID No.6 10.420 Area in 264.000 Length 1.000 Gradien 1.000 Gradien Gradien 10 No.6 Gradien 10 No.6 Gradien Gradien Gradien Comment Co	NORTH OF SE 5 99999 h hectares (PERV) metrat th (%) th Impervious (IMPERV) with Zero Dp 1=SCS CN/C; g "n" vew No or C oefficient 1=Trianglr; .000 .885 .057 5 99999 h hectares (PERV) metrat th (%)	res pth pth per 2=Horton; 2=Rectang 4.935 236 4.935	3=Green-Ampt; 4=Repeat (lr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************* FIRST AVE FROM QUAKER RD TO CITY OF ************** CATCHMENT 201.000 ID No.6 99999 2.430 Area in hectares 127.000 Length (PERV) metres 1.000 Gradient (%) 65.000 Per cent Impervious 127.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA	4	1	NORTH OF SE 5 99999 hectares (PERV) metr t (%) th Imperviou (IMPERV) yith Zero Dr 1=SCS CN/C; g'n" ve No or C Defficient 1 Abstractic 1=Trianglr; .000 .885 .057 5 99999 hectares (PERV) metr at (%) th Imperviou (IMPERV) metr at (%)	res pth pth per 2=Horton; 2=Rectang 4.935 236 4.935	3=Green-Ampt; 4=Repeat (lr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA	4	1	NORTH OF SE 5 99999 In hectares (PERV) metr It (%) Int Impervious (IMPERV) It Impervious (IMPERV) It Second in the	on, 2=Rectang 4.935 .236 4.935	3=Green-Ampt; 4=Repeat Alr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s
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15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s	4	1	NORTH OF SE 5 99999 In hectares (PERV) metr It (%) Int Impervious (IMPERV) It Impervious (IMPERV) It Abstractic 1=Trianglr; .000 .885 .057 5 99999 In hectares (PERV) metr It (%) It Impervious (IMPERV) It Impervious (IMPERV) It Second (IMPERV	res pth pth per per per per per per per pe	3=Green-Ampt; 4=Repeat Alr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat
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15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	4	1 I=Zero; 2=De COMMENT 3 line(s) of of *********************************	NORTH OF SE 5 99999 In hectares (PERV) metr It (%) It Imperviou (IMPERV) It Sefficient I abstractic 1=Trianglr; .000 .885 .057 5 99999 In hectares (PERV) metr It (%) It Imperviou (IMPERV) It Imperviou I abstractic I =Trianglr; .057	res pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 res is pth ; 2=Horton; on ; 2=Rectang 4.935	3=Green-Ampt; 4=Repeat Alr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat Alr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	15 4	1 1=Zero; 2=De COMMENT 3 1ine(s) of of *********************************	NORTH OF SE 5 99999 1 hectares (PERV) metrat 1 (%) 1 Imperviou (IMPERV) 1 = SCS CN/C; 1 "" 2 coefficient 1 = Trianglr; 3 000 .885 .057 5 99999 1 hectares (PERV) metrat 1 (%) 2 min 2 min 3 min 4 min 5 en 6 perv) metrat 6 perv) metrat 6 perv) 1 = SCS CN/C; 7 "" 2 min 2 min 3 min 4 min 4 min 5 pervious 6 pervious	res pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 res is pth ; 2=Horton; on ; 2=Rectang 4.935	3=Green-Ampt; 4=Repeat (lr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************* FIRST AVE FROM QUAKER RD TO CITY OF ************** CATCHMENT 201.000 ID No.6 99999 2.430 Area in hectares 127.000 Length (PERV) metres 1.000 Gradient (%) 65.000 Per cent Impervious 127.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=Trianglr; 2=Rect .259 .374 .153 .236 .868 .647 ADD RUNOFF .259 .632 .153 ROUTE .000 Conduit Length .000 Zero lag	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	4	1	NORTH OF SE 5 99999 hectares (PERV) metr t (%) th Imperviou (IMPERV) yith Zero Dr 1=SCS CN/C; g'n" ve No or C befficient th Abstractic 1=Trianglr; con CIMPERV) metr th (%) th Imperviou th	res is pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 res is pth ; 2=Horton; 000 ; 2=Rectang 4.935 .723	3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	15 4	1 I=Zero; 2=De COMMENT 3 line(s) of of ********************** PROP DEVELOPMENT ************************************	NORTH OF SE 5 99999 n hectares (PERV) metr tt (%) nt Imperviou (IMPERV) 've No or C oefficient 1 abstractic 1=Trianglr; .000 .885 .057 5 99999 n hectares (PERV) metr tt (%) nt Imperviou (IMPERV) vith Zero Dr tr (IMPERV) v	res pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 res is pth ; 2=Horton; on ; 2=Rectang 4.935	3=Green-Ampt; 4=Repeat Alr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat Alr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************* FIRST AVE FROM QUAKER RD TO CITY OF ************** CATCHMENT 201.000 ID No.6 99999 2.430 Area in hectares 127.000 Length (PERV) metres 1.000 Gradient (%) 65.000 Per cent Impervious 127.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=Trianglr; 2=Rect .259 .374 .153 .236 .868 .647 ADD RUNOFF .259 .632 .153 ROUTE .000 Conduit Length .000 Zero lag	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	15 4	1	NORTH OF SE 5 99999 In hectares (PERV) metrat it (%) Int Impervious (IMPERV) Int Impervious (IMPERV) Int Impervious (IMPERV) I=SCS CN/C; I=SCS CN/C; I=Trianglr; .000 .885 .057 56 99999 In hectares (PERV) metrat It (%) Int Impervious (IMPERV) I=SCS CN/C; I=Impervious I=Impervio	res pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 res us pth ; 2=Horton; 2=Rectang 4.935 .723 4.935	3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	15 4	1 1=Zero; 2=De COMMENT 3 1ine(s) of of *********************************	NORTH OF SE 5 99999 In hectares (PERV) metr It (%) It Impervious (IMPERV) It Sefficient I abstractic 1=Trianglr; .000 .885 .057 5 99999 In hectares (PERV) metr It (%) It Impervious It	res pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 res us pth ; 2=Horton; 2=Rectang 4.935 .723 4.935	3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************* FIRST AVE FROM QUAKER RD TO CITY OF ************** CATCHMENT 201.000 ID No.6 99999 2.430 Area in hectares 127.000 Length (PERV) metres 1.000 Gradient (%) 65.000 Per cent Impervious 127.000 &Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=Trianglr; 2=Rect .259 .374 .153 .236 .868 .647 ADD RUNOFF .259 .632 .153 ROUTE .000 Conduit Length .000 No Conduit defined .000 Seta weighting factor ROUTE No. of sub-reaches .000 ROUTING timestep 0 No. of sub-reaches .259 .632 .632	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	1	NORTH OF SE 5 99999 h hectares (PERV) metr tt (%) tt Imperviou (IMPERV) yith Zero Dr 1=SCS CN/C; g'n'n ve No or C 1=Trianglr; .000 .885 .057 5 99999 h hectares (PERV) metr tt (%) tt Imperviou (IMPERV) with Zero Dr 1=SCS CN/C; g'n'n ve No or C 1=Trianglr; .086 1.341 Y co/Hydrograf 107E+04 c.m	res pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 res us pth ; 2=Horton; 2=Rectang 4.935 .723 4.935	3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	1 I=Zero; 2=De COMMENT 3 line(s) of of ********************** PROP DEVELOPMENT ********************** 30.000 ID No.6 8.470 Area ir 238.000 Length .200 Gradier .100 Per cer .100 Fer cer .100 ScS Cu .100 Id/Sc Manning 74.000 SCS Cu .100 Id/Sc Manning 74.000 SCS Cu .100 Id/Sc Manning 74.000 Josto .057 .236 ADD RUNOFF .057 CATCHMENT 31.000 ID No.6 10.420 Area ir 264.000 Length .000 Gradier 75.000 Per cer 264.000 Length .000 ScS Cu .200 Manning 74.000 SCS Cu .201 D No.6 4.000 Length .000 Gradier 75.000 Per cer 264.000 Length .000 SCS Cu .100 Id/Sc Manning 74.000 SCS Cu .100	NORTH OF SE 5 99999 n hectares (PERV) metr tt (%) nt Imperviou (IMPERV) 've No or C oefficient 1 abstractic 1=Trianglr; .000 .885 .057 5 99999 n hectares (PERV) metr tt (%) it Imperviou (IMPERV) 've No or C oefficient 1=SC CN/C; g' n" 've No or C oefficient to (IMPERV) 've No or C oefficient the Abstractic 1=Trianglr; .057 .886 1.341 'Y co/Hydrograf to 7E+04 c.m 5 99999	res pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 res us pth ; 2=Horton; 2=Rectang 4.935 .723 4.935	3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	1 1=Zero; 2=De COMMENT 3 line(s) of of ************************ PROP DEVELOPMENT ********************* 30.00 ID No.6 8.470 Area in 238.000 Length .200 Gradien .100 Per cen 238.000 Length .000 & Imp. v 1 Option .250 Manning 74.000 SCS Cun .100 Ia/S CS 8.924 Initial 1 Option .057 .236 ADD RUNOFF .057 CATCHMENT 31.000 ID No.6 10.420 Area in 1.000 Gradien 1.000 Gradien 1.000 Gradien 1.000 SCS Cun .100 Length .000 Area in 1.333 .236 ADD RUNOFF .1.333 HYDROGRAPH DISPLE 5 is # of Hyel Volume = .4376 CATCHMENT 32.000 Area in	NORTH OF SE 5 99999 In hectares (PERV) metr at (%) Int Impervious (IMPERV) Int Impervious (IMPERV) Int Impervious (IMPERV) Int Impervious (IMPERV) Int Abstractic 1=Trianglr; .000 .885 .057 5 99999 In hectares (PERV) metr at (%) Int Impervious (IMPERV) Int Impervious Int Impe	res pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 res as pth ; 2=Horton; 000 2=Rectang 4.935 .723 4.935 .723 4.935 ph chosen	3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	1 I=Zero; 2=De COMMENT 3 line(s) of of *********************************	NORTH OF SE 5 99999 h hectares (PERV) metr t (%) the Impervious (IMPERV) the Impervious (IMPERV) re No or C oefficient l Abstractic 1=Trianglr; .000 .885 .057 5 99999 h hectares (PERV) metr tr (No or C oefficient trianglr; .057 .886 1.341 The Impervious (Sefficient trianglr; .057 .886 1.341 The Impervious (PERV) metr trianglr; .059 .059 .059 .059 .059 .059 .059 .059	res pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 res as pth ; 2=Horton; 000 2=Rectang 4.935 .723 4.935 .723 4.935 ph chosen	3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	1 1=Zero; 2=De COMMENT 3 line(s) of of *********************************	NORTH OF SE 5 99999 in hectares (PERV) metr at (%) at Imperviou (IMPERV) int Abstractic 1=Trianglr; .000 .885 .057 5 99999 in hectares (PERV) metr at (%) at Imperviou (IMPERV) int Imp	res is pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 res is pth ; 2=Horton; on ; 2=Rectang 4.935 .723 4.935 ph chosen	3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s 4.834 c.m/s	15 4	1	NORTH OF SE 5 99999 h hectares (PERV) metr t (%) th Imperviou (IMPERV) ith Imperviou (IMPERV) re No or C befficient th Abstractic 1=Trianglr; .000 .885 .057 5 99999 h hectares (PERV) metr th (%) th Imperviou (IMPERV) with Zero Dp 1=SCS CN/C; g"n" re No or C befficient th (%) th Imperviou th Abstractic 1=Trianglr; .886 1.341 Y co/Hydrograf to/Hydrograf to	res is pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 res is pth ; 2=Horton; on ; 2=Rectang 4.935 .723 4.935 ph chosen	3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s 4.834 c.m/s	15 4	1 I=Zero; 2=De COMMENT 3 line(s) of of ********************** PROP DEVELOPMENT *********************** 30.000 ID No.6 8.470 Area it 238.000 Length .200 Gradiet .100 Per cet .200 Gradiet .100 ScS Cu .100 Id/Sc Manning 74.000 SCS Cu .100 Id/Sc Manning 74.000 SCS Cu .100 Id/Sc Manning 74.000 Josto .057 .236 ADD RUNOFF .057 CATCHMENT 31.000 ID No.6 10.420 Area it .200 Manning 75.000 Per cet .200 Manning 74.000 ScS Cu .201 D No.6 .201 Manning .201 D No.6 .201 Manning .201 M	NORTH OF SE 5 99999 n hectares (PERV) metr tt (%) at Impervious (IMPERV) int Impervious (Impervious (Impervious (IMPERV) int Impervious (IMPERV)	res is pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 res is pth ; 2=Horton; 2=Rectang 4.935 .723 4.935 ph chosen	3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total
15 35 4 15 9	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s 4.834 c.m/s	15 4	1 =Zero; 2=De COMMENT 3 line(s) of of *********************** PROP DEVELOPMENT ************************ 30.00 ID No.6 8.470 Area in 238.000 Length .200 Gradier .100 Per cer 238.000 Length .000 & Imp. v 1 Option .250 Manning 74.000 SCS Cun .100 IA/S CC 8.924 Initial 1 Option .057 .236 ADD RUNOFF .057 CATCHMENT 31.000 ID No.6 10.420 Area in 1000 Gradier 1.000 Gradier 1.000 Gradier 1.000 Ia/S CC 8.924 Initial 1.000 ID No.6 1.333 .250 Manning 74.000 SCS Cun .100 Ia/S CC 8.924 Initial 1 Option .250 Manning 74.000 SCS Cun .100 Ia/S CC 8.924 Initial 1 Option .250 Manning 74.000 SCS Cun .100 Ia/S CC 8.924 Initial .236 ADD RUNOFF .236 ADD RUNOFF .1.333 HYDROGRAPH DISPLI 5 is # of Hyet Volume = .43766 CATCHMENT 32.000 ID No.6 68.000 Length 1.000 Gradier 68.000 Fer cer 68.000 Length	NORTH OF SE 5 99999 h hectares (PERV) metr tt (%) tt Imperviou (IMPERV) vith Zero Dr 1=SCS CN/C; g'n" ve No or C vefficient Abstractic 1=Trianglr; .000 .885 .057 5 99999 h hectares (PERV) metr tt (%) tt Imperviou (IMPERV) vith Zero Dr 1=SCS CN/C; g'n" coefficient 1 Abstractic 1=Trianglr; .057 .886 1 1341 14 15 09999 h hectares (PERV) metr tt (%) tt Imperviou (IMPERV) hectares (PERV) metr tt (%) tt Imperviou (IMPERV) wetr tr t	res pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 4.935 res us pth ; 2=Horton; 2=Rectang 4.935 .723 4.935 .723 4.935 ph chosen	3=Green-Ampt; 4=Repeat (lr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat (lr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s
15 35 4	65.000 Per cent Impervious 113.000 Length (Imperv) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hort .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rect .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************************************	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s F WELLAND MUNICIPAL BOUNDA ton; 3=Green-Ampt; 4=Repeat tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s 4.834 c.m/s	15 4	1 =Zero; 2=De COMMENT 3 line(s) of of *********************** PROP DEVELOPMENT *********************** 30.00 ID No.6 8.470 Area in 238.000 Length .200 Gradier .100 Per cer 238.000 Length .200 Gradier .100 Area in 1 Option .250 Manning 74.000 SCS Cun .100 IA/S CC 8.924 Initial 1 Option .057 .236 ADD RUNOFF .057 CATCHMENT 31.000 ID No.6 10.420 Area in 1000 Gradier 1.000 Gradier 1.000 Gradier 1.000 Ia/S CC 8.924 Initial 1.000 Jength .000 Length .000 Length .000 Length .1 Option .250 Manning 74.000 SCS Cun .1 Option .250 Manning 74.000 SCS Cun .1 Option .250 Manning 74.000 SCS Cun .1 Option .250 Manning .236 ADD RUNOFF .1.333 HYDROGRAPH DISPLI 5 is # of Hyet Volume = .43766 CATCHMENT 32.000 Length .690 Area in 68.000 Length .1 Opciden .690 Area in 68.000 Length .000 Gradier .000 %Imp. v	NORTH OF SE 5 99999 h hectares (PERV) metr t (%) the Impervious (IMPERV) int Impervious (IMPERV) re No or C oefficient l Abstractic 1=Trianglr; .000 .885 .057 5 99999 h hectares (PERV) metr t (NEW No or C oefficient t See See See See See See See See See Se	res pth ; 2=Horton; 2=Rectang 4.935 .236 4.935 4.935 res us pth ; 2=Horton; 2=Rectang 4.935 .723 4.935 .723 4.935 ph chosen	3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total 4.935 c.m/s 3=Green-Ampt; 4=Repeat clr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total

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.100
                      Ia/S Coefficient
         8.924
                      Initial Abstraction
                     Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.341 4.935 4.935 c.m/s 6.873 .618 C perv/imperv/total
                  .236
15
         ADD RUNOFF
         .074 1.4
HYDROGRAPH DISPLAY
                              1.401
                                             4.935
                                                            4.935 c.m/s
27
         is # of Hyeto/Hydrograph chosen
Volume = .4571937E+04 c.m
10
         POND
         POND
5 Depth - Discharge - Volume sets
178.800 .000 .0
179.300 .0260 1520.0
                           .0440
                                          4649.0
7069.0
                            .414
         180.600
         .414
1.204
Peak Outflow =
Maximum =
        reak Outflow = 0.38 c.m/s
Maximum Depth = 179.851 metres
Maximum Storage = 3675. c.m
.074 1.401
                                                            4.935 c.m/s
17
               Junction Node No.
         .074
START
                              1.401
                                                            4.958 c.m/s
14
               1=Zero; 2=Define
         COMMENT
35
         line(s) of comment
         PROP DEVELOPMENT SOUTH OF SEGMENT 3 - POND P31
         CATCHMENT
                     ID No.6 99999
        33.000
        12,960
                      Area in hectares
Length (PERV) metres
      294.000
                     Gradient (%)
Per cent Impervious
Length (IMPERV)
         1.000
       75.000
      294.000
          .000
                      %Imp. with Zero Doth
                      Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
           .250
                      Manning "n"
SCS Curve No or C
        74.000
                      Ia/S Coefficient
Initial Abstraction
          .100
         8.924
                Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
1.708 .000 .038 4.958 c.m/s
.236 .884 .722 C perv/imperv/total
         ADD RUNOFF
1.708
15
         HYDROGRAPH DISPLAY
27
         is # of Hyeto/Hydrograph chosen
Volume = .4291300E+04 c.m
CATCHMENT
        34.000
                      Area in hectares
          .660
                      Length (PERV) metres
Gradient (%)
Per cent Impervious
        66.000
         1.000
        60.000
                      Length (IMPERV)
%Imp. with Zero Dpth
        66.000
          .000
                      Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat Manning "n" SCS Curve No or C
           . 250
        74.000
           . 100
                      Ia/S Coefficient
                      Initial Abstraction
                      Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
                  .072
                             1.708 .038
.873 .618
                                                         4.958 c.m/s
C perv/imperv/total
        .235 .873 .618
ADD RUNGFF .072 1.765 .038
HYDROGRAPH DISPLAY
5 is # of Hyeto/Hydrograph chosen
Volume = .4478340E+04 c.m
15
                                                            4.958 c.m/s
10
         POND
        6 Depth - Discharge - Volume sets
                    .000
         178.300
                                         .0
1927.0
         178.900
         179.600
                           .0540
                                          4692.0
                          .150
         180.000
                             .321
                                          6538.0
        4.958 c.m/s
17
             Junction Node No. .072 1.765
        .072
START
14
               1=Zero; 2=Define
         CONFLUENCE
18
       1 Junction Node No.
        .072 4.986
35
         3 line(s) of comment
         REALIGNED CHANNEL - SEGMENT 3
         CATCHMENT
      302.000
                     TD No. 6 99999
                      Area in hectares
Length (PERV) metres
         1.610
      104.000
       .200
10.000
                      Gradient (%)
Per cent Impervious
                      Length (IMPERV)
      104.000
                      %Imp. with Zero Dpth
Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
          .000
           . 250
                     Manning "n"
SCS Curve No or C
       74.000
```

```
.100
                 Ia/S Coefficient
       8.924
                 Initial Abstraction
                Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
                                .048 .000 c.m/s
.301 C perv/imperv/total
             .236
                        .884
       COMMENT
       3 line(s) of comment
       FLOW U/S OF NIAGARA ST CULVERT - OUTLET D
15
       ADD RUNOFF
      .030
START
                       5.016
                                              .000 c.m/s
14
           1=Zero; 2=Define
```

35	COMMENT					82.000		(PERV) met			
	3 lin	e(s) of comment		*****		1.000	Gradien				
	10 2772		******	*****		10.000 82.000		t Impervio	us		
		STORM EVENT	******	*****		.000		(IMPERV) ith Zero D	n+h		
2	STORM					1				n; 3=Green-Ampt;	4=Penest
-	1	1=Chicago:2=Hui	ff:3=IIser:4=Cd	n1hr;5=Historic		.250	Manning		, Z-HOICO	n, 3-Green-Ampe,	1-Kepeac
	860.000	Coefficient a	11,5-0501,1-04	/ 5 5002 10		74.000		ve No or C			
	6.500		(min)			.100		efficient			
	.763	Exponent c				8.924	Initial	Abstracti	on		
	.450	Fraction to pea	ak r			1	Option	1=Trianglr	; 2=Recta	nglr; 3=SWM HYD;	4=Lin. Reserv
	240.000	Duration ó 240					.024	.531	1.290	1.290 c.m/s	
			otal depth				.267	.886	.329	C perv/imperv	total
3	IMPERVIO				15	ADD RUNG					
	1		N/C; 2=Horton;	3=Green-Ampt; 4=Repeat	10	POND	.024	.555	1.290	1.290 c.m/s	
	.015	Manning "n"	- a		10		Diashana	. 17			
	98.000 .100	SCS Curve No or Ia/S Coefficier				184.800		e - Volume	.0		
	.518	Initial Abstrac				185.750	.02		1.0		
35	COMMENT	Inicial Abscrac	001011			186.000	.02		03.0		
-		e(s) of comment				186.250			91.0		
		*****				186.500			65.0		
	EXISTING	RES. WEST OF SEC	GMENT 1			186.700			70.0		
	******	*****				Peak Out	tflow =	.026	c.m/s		
4	CATCHMEN	T				Maximum	Depth =	186.301	metres		
	1.000	ID No.ó 99999				Maximum	Storage =	1229.	c.m		
	17.520	Area in hectare					.024	.555	.026	1.290 c.m/s	
	343.000	Length (PERV) r	metres		17	COMBINE					
	1.000	Gradient (%)					nction Nod				
	35.000 343.000	Per cent Imper			14	START	.024	.555	.026	1.313 c.m/s	
	.000	Length (IMPERV)			14		Zero; 2=De	e:			
	1			3=Green-Ampt; 4=Repeat	18	CONFLUE		rine			
	.250	Manning "n"	1, C, 2-101 con,	3-dreen Ampe, 1-Repeat			nction Nod	e No.			
	74.000	SCS Curve No or	rc					1.313	.026	.000 c.m/s	
	.100	Ia/S Coefficien			35	COMMENT					
	8.924	Initial Abstrac				3 lir	ne(s) of c	omment			
	1	Option 1=Triang	glr; 2=Rectang	lr; 3=SWM HYD; 4=Lin. Reser	v		******				
	1.	227 .000	.000	.000 c.m/s		REALIGN	ED CHANNEL	- SEGMENT	1		
		267 .892	.486	C perv/imperv/total			******				
15	ADD RUNO				4	CATCHMEN					
	1.	227 1.227	.000	.000 c.m/s		101.000	ID No.ó				
35	COMMENT					.610		hectares			
		e(s) of comment				64.000		(PERV) met	res		
						1.000	Gradien				
		D CHANNEL - SEGMI *****	ENT I			10.000		t Impervio	us		
4	CATCHMEN					64.000 .000		(IMPERV)			
*	100.000	ID No.6 99999				1		ith Zero D		n; 3=Green-Ampt;	4=Penest
	2.020	Area in hectare	eg.			.250	Manning		, 2-1101 00	n, s-dreen Ampe	1-Kepeac
	116.000	Length (PERV) r				74.000		ve No or C			
	.400	Gradient (%)				.100		efficient			
	15.000	Per cent Imper	vious			8.924		Abstracti	on		
	116.000	Length (IMPERV)				1				nglr; 3=SWM HYD	4=Lin. Reserv
	.000	%Imp. with Zero	Dpth				.016	1.313	.026	.000 c.m/s	
	1			3=Green-Ampt; 4=Repeat			.266	.884	.328	C perv/imperv	total
	.250	Manning "n"			15	ADD RUNG	OFF				
	74.000	SCS Curve No or					.016	1.329	.026	.000 c.m/s	
		Ia/S Coefficier			9	ROUTE					
	.100					.000	Conduit				
	8.924	Initial Abstrac					No Cond	uit define	d		
	8.924 1	Initial Abstraction 1=Trians	glr; 2=Rectang	lr; 3=SWM HYD; 4=Lin. Reser	v	.000					
	8.924 1	Initial Abstraction 1=Triang 063 1.227	glr; 2=Rectang	.000 c.m/s	v	.000	Zero la				
25	8.924 1	Initial Abstraction 1=Trians	glr; 2=Rectang		v	.000 .000	Zero la Beta we	ighting fa	ctor		
35	8.924 1 COMMENT	Initial Abstract Option 1=Triang 063 1.227 267 .883	glr; 2=Rectang	.000 c.m/s	v	.000 .000 .000	Zero la Beta we Routing	ighting fa timestep			
35	8.924 1 COMMENT 3 lin	Initial Abstract Option 1=Triang 063 1.227 267 .883 e(s) of comment	glr; 2=Rectang	.000 c.m/s	v	.000 .000 .000 .000	Zero la Beta we Routing No. of	ighting fa timestep sub-reache	s	000 c m/s	
35	8.924 1	Initial Abstraction 1=Trians 1063 1.227 267 .883 e(s) of comment	glr; 2=Rectang .000 .359	.000 c.m/s C perv/imperv/total	v 17	.000 .000 .000 .000	Zero la Beta we Routing No. of	ighting fa timestep		.000 c.m/s	
35	8.924 1	Initial Abstract Option 1=Triang 063 1.227 267 .883 e(s) of comment	glr; 2=Rectang .000 .359	.000 c.m/s C perv/imperv/total		.000 .000 .000 .000 0	Zero la Beta we Routing No. of	ighting fa timestep sub-reache 1.329	s	.000 c.m/s	
	8.924 1	Initial Abstract Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359	.000 c.m/s C perv/imperv/total		.000 .000 .000 .000 0 COMBINE	Zero la Beta we Routing No. of .016	ighting fa timestep sub-reache 1.329	s 1.329		
	8.924 1	Initial Abstrac Option 1=Trian; 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359	.000 c.m/s C perv/imperv/total		.000 .000 .000 .000 0 COMBINE	Zero la Beta we Routing No. of .016	ighting fa timestep sub-reache 1.329 e No.	s	.000 c.m/s	
	8.924 1	Initial Abstract Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359	.000 c.m/s C perv/imperv/total	17	.000 .000 .000 .000 0 COMBINE 1 Jun	Zero la Beta we Routing No. of .016	ighting fa timestep sub-reache 1.329 e No. 1.329	s 1.329		
15	8.924 1 COMMENT 3 lin ******** FLOW AT ******** ADD RUNO	Initial Abstrac Option 1=Trian; 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359	.000 c.m/s C perv/imperv/total	17	.000 .000 .000 .000 0 COMBINE 1 Jun	Zero la Beta we Routing No. of .016 nction Nod .016 Zero; 2=De	ighting fa timestep sub-reache 1.329 e No. 1.329	s 1.329		
15	8.924 1 COMMENT 3 lin ******** FLOW AT ******** ADD RUNO ROUTE 000 000	Initial Abstrac Option 1=Trian; 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 .359	.000 c.m/s C perv/imperv/total	17	.000 .000 .000 .000 0 COMBINE 1 Jur START 1 1=:	Zero la Beta we Routing No. of .016 nction Nod .016 Zero; 2=De	ighting fa timestep sub-reache 1.329 e No. 1.329 fine	s 1.329		
15	8.924 1	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ********** FUT ROADWAY CULVI ********** 063 1.290 Conduit Length	glr; 2=Rectang .000 .359 .359	.000 c.m/s C perv/imperv/total	17	.000 .000 .000 .000 0 COMBINE 1 Jun START 1 ==: COMMENT 3 1:	Zero la Beta we Routing No. of .016 nction Nod .016 Zero; 2=De ne(s) of c	ighting fatimestep sub-reache 1.329 e No. 1.329 fine comment	1.329 1.329	1.329 c.m/s	
15	8.924 1 COMMENT 3 lin ********** ********* AD RUNO ROUTE	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000	.000 c.m/s C perv/imperv/total	17	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 .cero; 2=De .cero; 2=De .cero; 0 of c .cero; 2=De .cero; 2=De	ighting fatimestep sub-reache 1.329 e No. 1.329 fine comment	1.329 1.329		
15	8.924 1 COMMENT 3 lin ************************************	Initial Abstrace Option 1=Triam; 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000	.000 c.m/s C perv/imperv/total	17 14 35	.000 .000 .000 .000 0 COMBINE 1 Jun START 1 1=: COMMENT 3 lir ************************************	Zero la Beta we Routing No. of .016 .016 .016 .02ero; 2=De ne(s) of c ************************************	ighting fatimestep sub-reache 1.329 e No. 1.329 fine comment	1.329 1.329	1.329 c.m/s	
15	8.924 1 COMMENT 3 lin ************************************	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 .359 .000 ined factor	.000 c.m/s C perv/imperv/total 1 .000 c.m/s	17	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 .2ero; 2=De ne(s) of c ************************************	ighting fa timestep sub-reache 1.329 e No. 1.329 fine comment	1.329 1.329	1.329 c.m/s	
15 9	8.924 1 COMMENT 3 lin ********** ADD RUNO ROUTE .000 .000 .000 .000 .000	Initial Abstrace Option 1=Triam; 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000	.000 c.m/s C perv/imperv/total	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De ne(s) of c ************************************	ighting fa timestep sub-reache 1.329 e No. 1.329 fine comment SOUTH OF S.	1.329 1.329	1.329 c.m/s	
15 9	8.924 1 COMMENT 3 lin ********* ADD RUNO ROUTE	Initial Abstrace Option 1=Trian; 063 1.227 267 .883 e(s) of comment ********* FUT ROADWAY CULVI ******** FFO Conduit Length No Conduit def: Zero lag Beta weighting Routing timeste No. of sub-reace 063 1.290	glr; 2=Rectang .000 .359 .359 .000 ined factor	.000 c.m/s C perv/imperv/total 1 .000 c.m/s	17 14 35	.000 .000 .000 .000 0 COMBINE 1 Ju START 1 1=: COMMENT 3 1:: ***********************************	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De ne(s) of c ************************************	ighting fatimestep sub-reache 1.329 e No. 1.329 fine comment SOUTH OF S. 99999 hectares	1.329 1.329	1.329 c.m/s	
15 9	8.924 1 COMMENT 3 lin ********** ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor app ches 1.290	.000 c.m/s C perv/imperv/total 1 .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De me(s) of c ************************************	ighting fatimestep sub-reache 1.329 e No. 1.329 fine comment SOUTH OF S 99999 hectares (PERV) met.	s 1.329 1.329	1.329 c.m/s	
17	8.924 1 COMMENT 3 lin ********** ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrace Option 1=Trian; 063 1.227 267 .883 e(s) of comment ********* FUT ROADWAY CULVI ******** FFO Conduit Length No Conduit def: Zero lag Beta weighting Routing timeste No. of sub-reace 063 1.290	glr; 2=Rectang .000 .359 .359 .000 ined factor	.000 c.m/s C perv/imperv/total 1 .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De ne(s) of c ************************************	ighting fatimestep sub-reache 1.329 e No. 1.329 fine comment SOUTH OF S. 99999 hectares (PERV) mett (%)	1.329 1.329 EGMENT 1	1.329 c.m/s	
15 9	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor app ches 1.290	.000 c.m/s C perv/imperv/total 1 .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De me(s) of c ************************************	ighting fatinestep sub-reache 1.329 e No. 1.329 fine omment SOUTH OF S. 99999 hectares (PERV) met t (%) t Impervio	1.329 1.329 EGMENT 1	1.329 c.m/s	
15 9 17 14	8.924 1 COMMENT 3 lin ********** AD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor app ches 1.290	.000 c.m/s C perv/imperv/total 1 .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 .016 .02ero; 2=De ne(s) of c *********** VELOPMENT ********** ID No.6 Area in Length Gradien Per cen Length	ighting fatimestep sub-reache 1.329 e No. 1.329 fine comment SOUTH OF S 99999 hectares (PERV) met t (%) t Impervio (IMPERV)	1.329 1.329 1.329 EGMENT 1	1.329 c.m/s	
15 9 17	8.924 1 COMMENT 3 lin ******** FLOW AT ******* ADD RUNT .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor app ches 1.290	.000 c.m/s C perv/imperv/total 1 .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De me(s) of c ************************************	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment SOUTH OF S. 99999 hectares (PERV) mett (%) t Impervio (IMPERV) ith Zero D ith Zero	s 1.329 1.329 1.329 egment 1	1.329 c.m/s	4=Repeat
15 9 17 14	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ********** FUT ROADWAY CULVI ********* FF 063 1.290 Conduit Length No Conduit def: Zero lag Beta weighting Routing timeste No. of sub-reac 063 1.290 ction Node No. 063 1.290 ero; 2=Define	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor app ches 1.290	.000 c.m/s C perv/imperv/total 1 .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De me(s) of c ************************************	ighting fat timestep sub-reache 1.329 e No. 1.329 fine omment SOUTH OF S. 99999 hectares (PERV) met t (%) t Impervio (IMPERV) it Tepco DileSCS CN/C	s 1.329 1.329 1.329 egment 1	1.329 c.m/s - POND P11	: 4=Repeat
15 9 17 14	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ********** FFT ROADWAY CULVI ********** 063 1.290 Conduit Length No Conduit def: Zero lag Beta weighting Routing timeste No. of sub-reac 063 1.290 ction Node No. 063 1.290 ero; 2=Define e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor sp ches 1.290	.000 c.m/s C perv/imperv/total 1 .000 c.m/s .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De me(s) of c ************************************	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment SOUTH OF S. 99999 hectares (PERV) mett (%) t Impervio (IMPERV) ith Zero D 01=SCS CN/C "n" ve No or C	s 1.329 1.329 EGMENT 1 res us pth ; 2=Horto	1.329 c.m/s - POND P11	; 4=Repeat
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstract Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor sp ches 1.290	.000 c.m/s C perv/imperv/total 1 .000 c.m/s .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 Zero; 2=De me(s) of c ********** TD No.6 Area in Length Gradien Per cen Length %Imp. w Option Manning SCS Cur Ia/S Co	ighting fatimestep sub-reachel.329 e No. 1.329 fine comment south OF S 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Zero D (Impervio "n" ver No or C efficient	s 1.329 1.329 EGMENT 1 res us pth ; 2=Horto	1.329 c.m/s - POND P11	: 4=Repeat
15 9 17 14	8.924 1 COMMENT 3 lin ******** ******** ADD RUNG .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ********** FUT ROADWAY CULVI ********* FFF 063 1.290 Conduit Length No Conduit def: Zero lag Beta weighting Routing timeste No. of sub-reac 063 1.290 ction Node No. 063 1.290 ero; 2=Define e(s) of comment ********** ELOPMENT NORTH OF	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor sp ches 1.290	.000 c.m/s C perv/imperv/total 1 .000 c.m/s .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De me(s) of control of control we we we we we VELOPMENT To No. ó Area in Length Gradien Per cen Length %Imp. w Option Manning SCS Cur IA/S Co Initial	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment SOUTH OF S. 99999 hectares (PERV) met t (%) t Impervio ith Zero D. 1=SCS CN/C "n" ve No or C efficient Abstracti	s 1.329 1.329 EGMENT 1 res us pth ; 2=Horto	1.329 c.m/s - POND F11 on; 3=Green-Ampt	-
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrace Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	2=Rectang	.000 c.m/s C perv/imperv/total 1 .000 c.m/s .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De me(s) of c ************************************	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment SOUTH OF S. 99999 hectares (PERV) met t (%) t Impervio (IMPERV) in 1.5CS CN/C "n" ve No or C efficient Abstracti. abstracti. = Trianglr	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta	1.329 c.m/s - POND P11 on; 3=Green-Ampt.	-
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrace Option 1=Trians 063 1.227 267 .883 e(s) of comment ********** FUT ROADWAY CULVI ********** 063 1.290 Conduit Length No Conduit def: Zero lag Beta weighting Routing timeste No. of sub-reace 063 1.290 ction Node No. 063 1.290 ero; 2=Define e(s) of comment ********** T ID No.6 99999 Area in hectare	### 2=Rectang	.000 c.m/s C perv/imperv/total 1 .000 c.m/s .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 .016 Zero; 2=De ne(s) of c ************************************	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment SOUTH OF S 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Zero D 1=SCS CN/C "n" ve No or C efficient Abstractil=Trianglr.000	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta	1.329 c.m/s - POND P11 m; 3=Green-Ampt. nnglr; 3=SWM HYD 1.329 c.m/s	; 4=Lin. Reserv
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstracy Option 1=Trians (1) (1) (2) (2) (3) (4) (5) (6) (7) (7) (7) (7) (7) (7) (7) (7) (7) (7	### 2=Rectang	.000 c.m/s C perv/imperv/total 1 .000 c.m/s .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De me(s) of c ************************************	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment SOUTH OF S. 99999 hectares (PERV) met t (%) t Impervio (IMPERV) in 1.5CS CN/C "n" ve No or C efficient Abstracti. abstracti. = Trianglr	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta	1.329 c.m/s - POND P11 on; 3=Green-Ampt.	; 4=Lin. Reserv
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstract Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor ap thes 1.290 1.290 F SEGMENT 1 - :	.000 c.m/s C perv/imperv/total 1 .000 c.m/s .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 Zero; 2=De ne(s) of c *********** TO No.6 Area in Length Gradien Per cen Length %Imp. w Option Manning SCS Cur Initial Option .178 .267 DFF	ighting fatimestep sub-reache 1.329 e No. 1.329 fine comment south OF S 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Zero D ("n" ve No or C efficient Abstracti 1=Trianglr .000 .880	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta 1.329 .481	1.329 c.m/s - POND P11 on; 3=Green-Ampt. nnglr; 3=SWM HYD. 1.329 c.m/s C perv/imperv.	; 4=Lin. Reserv
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ********* FUT ROADWAY CULVI ********* FFF 063 1.290 Conduit Length No Conduit def: Zero lag Beta weighting Routing timeste No. of sub-reac 063 1.290 ction Node No. 063 1.290 ero; 2=Define e(s) of comment ********* ELOPMENT NORTH OF ********** T ID No.6 99999 Area in hectar Length (PERV) r Gradient (%) Per cent Imper	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor app thes 1.290 1.290 F SEGMENT 1 - : ass metres vious	.000 c.m/s C perv/imperv/total 1 .000 c.m/s .000 c.m/s	17 14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De me(s) of c ************************************	ighting fatimestep sub-reache 1.329 e No. 1.329 fine comment SOUTH OF S 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Zero D 1=SCS CN/C "n" ve No or C efficient Abstractil=Trianglr.000	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta	1.329 c.m/s - POND P11 m; 3=Green-Ampt. nnglr; 3=SWM HYD 1.329 c.m/s	; 4=Lin. Reserv
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstracy Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor ap thes 1.290 1.290 F SEGMENT 1 - :	.000 c.m/s C perv/imperv/total 1 .000 c.m/s .000 c.m/s	17 14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 .016 Zero; 2=De me(s) of c ************************************	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment SOUTH OF S. 99999 hectares (PERV) met t (%) t Impervio (IMPERV) in 1.5CS CN/C "n" ve No or C efficient AbstractileTrianglr .000 .8880 .178	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta 1.329 .481	1.329 c.m/s - POND P11 on; 3=Green-Ampt. nnglr; 3=SWM HYD. 1.329 c.m/s C perv/imperv.	; 4=Lin. Reserv
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrace Option 1=Trians 063 1.227 267 .883 e(s) of comment *********** FUT ROADWAY CULVI ********** 063 1.290 Conduit Length No Conduit def: Zero lag Beta weighting Routing timest No. of sub-reace 063 1.290 ction Node No. 063 1.290 ction Node No. 063 1.290 ero; 2=Define e(s) of comment ********** T ID No.6 99999 Area in hectare Length (PERV) r Gradient (%) Per cent Imper Length (IMPERV) **Imp. with Zerce Value 1.220	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor epp thes 1.290 1.290 1.290 F SEGMENT 1 - :	.000 c.m/s 1 .000 c.m/s .000 c.m/s	17 14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 .016 .016 .016 .016 .016	ighting fatimestep sub-reachel.329 e No. 1.329 fine omment SOUTH OF S 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Zero D1=SCS CN/C efficient abstractil=Trianglr.000 .880 .178 99999	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta 1.329 .481	1.329 c.m/s - POND P11 on; 3=Green-Ampt. nnglr; 3=SWM HYD. 1.329 c.m/s C perv/imperv.	; 4=Lin. Reserv
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstracy Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor epp thes 1.290 1.290 1.290 F SEGMENT 1 - :	.000 c.m/s C perv/imperv/total 1 .000 c.m/s .000 c.m/s	17 14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De ne(s) of c ************************************	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment SOUTH OF S. 99999 hectares (PERV) mett (%) t Impervio (IMPERV) inth Zero D D 1=SCS CN/C "n" ve No or Cefficient Abstractil=Trianglr .000 .178 99999 hectares	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta 1.329 .481 1.329	1.329 c.m/s - POND P11 on; 3=Green-Ampt. nnglr; 3=SWM HYD. 1.329 c.m/s C perv/imperv.	; 4=Lin. Reserv
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrace Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor ap thes 1.290 1.290 1.290 F SEGMENT 1 - :	.000 c.m/s 1 .000 c.m/s .000 c.m/s	17 14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 .016 Zero; 2=De Metion Nod .016 Zero; 2=De ID No.66 Area in Length %Imp. w Option Manning SCS Cur Ia/S Co Initial Option .178 .267 .797 .178 .TD No.66 Area in Length .178 .787 .787 .787 .787 .787 .787 .787	ighting fatimestep sub-reache 1.329 e No. 1.329 fine comment south OF S 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Zero D (IMPERV) ith Zero Coefficient Abstractilstrianglr .000 .880 .178 99999 hectares (PERV) met terms of the sub-reache sub	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta 1.329 .481 1.329	1.329 c.m/s - POND P11 on; 3=Green-Ampt. nnglr; 3=SWM HYD. 1.329 c.m/s C perv/imperv.	; 4=Lin. Reserv
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ********** FUT ROADWAY CULVI ********* FFF 063 1.290 Conduit Length No Conduit def: Zero lag Beta weighting Routing timeste No. of sub-reac 063 1.290 ction Node No. 063 1.290 ero; 2=Define e(s) of comment ******** ELOPMENT NORTH OF ********** T T TD No.6 99999 Area in hectar Length (PERV) r Gradient (%) Per cent Imperv Length (IMPERV) *Imp. with Zerc Option 1=SCS CM Manning "" SCS Curve No oi SCS Curve No	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor app thes 1.290 1.290 1.290 f SEGMENT 1 - : as metres vious b Dpth N/C; 2=Horton;	.000 c.m/s 1 .000 c.m/s .000 c.m/s	17 14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 .016 .016 .016 .016 .016	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment south OF S. 99999 hectares (PERV) mett (%) ith Zero D 1=SCS CN/C "n" ve No or C efficient Abstracti 1=Trianglr .000 .1880 .178 99999 hectares (PERV) metter (%)	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta 1.329 481 1.329 res	1.329 c.m/s - POND P11 on; 3=Green-Ampt. nnglr; 3=SWM HYD. 1.329 c.m/s C perv/imperv.	; 4=Lin. Reserv
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstracy Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor ap thes 1.290 1.290 1.290 F SEGMENT 1 - : as metres vious) D Dpth N/C; 2=Horton; r C	.000 c.m/s 1 .000 c.m/s .000 c.m/s	17 14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 .016 .016 .016 .016 .016	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment SOUTH OF S. 99999 hectares (PERV) met t Impervio (IMPERV) in 1-1 in	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta 1.329 481 1.329 res	1.329 c.m/s - POND P11 on; 3=Green-Ampt. nnglr; 3=SWM HYD. 1.329 c.m/s C perv/imperv.	; 4=Lin. Reserv
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrace Option 1=Trians 063 1.227 267 .883 e(s) of comment ********** FUT ROADWAY CULVI ********** 063 1.290 Conduit Length No Conduit def: Zero lag Beta weighting Routing timest No. of sub-reace 063 1.290 ction Node No. 063 1.290 ction Node No. 063 1.290 ero; 2=Define e(s) of comment ********** T TD No.6 99999 Area in hectare Length (PERV) r Gradient (%) Per cent Imper Length (IMPERV) **Imper Velopion 1=SCS C Manning "n" SCS Curve No on Ia/S Coefficient Initial Abstrace	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor ep thes 1.290 1.290 1.290 F SEGMENT 1 - : es metres vious) D Dpth N/C; 2=Horton; r C	.000 c.m/s 1 .000 c.m/s .000 c.m/s	17 14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 .016 .016 .016 .016 .016	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment south OF S. 99999 hectares (PERV) mett (%) ith Zero D 1=SCS CN/C "n" ve No or C efficient Abstracti 1=Trianglr .000 .1880 .178 99999 hectares (PERV) metter (%)	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta 1.329 .481 1.329 res	1.329 c.m/s - POND P11 on; 3=Green-Ampt. nnglr; 3=SWM HYD. 1.329 c.m/s C perv/imperv.	; 4=Lin. Reserv
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrace Option 1=Trians 063 1.227 267 .883 e(s) of comment ********** FUT ROADWAY CULVI ********** 063 1.290 Conduit Length No Conduit def: Zero lag Beta weighting Routing timest No. of sub-reace 063 1.290 ction Node No. 063 1.290 ction Node No. 063 1.290 ero; 2=Define e(s) of comment ********** T TD No.6 99999 Area in hectare Length (PERV) r Gradient (%) Per cent Imper Length (IMPERV) **Imper Velopion 1=SCS C Manning "n" SCS Curve No on Ia/S Coefficient Initial Abstrace	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor ep thes 1.290 1.290 1.290 F SEGMENT 1 - : es metres vious) D Dpth N/C; 2=Horton; r C	.000 c.m/s 1 .000 c.m/s .000 c.m/s 1.290 c.m/s 1.290 c.m/s	17 14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De ne(s) of c ********** VELOPMENT ********** T ID No.ó Area in Length Gradien Per cen Length SCS Cur Li/S Cur II/S Cur II/S Cal Option .178 .267 DFF ID No.ó Area in Length Gradien Per cen Length **Imp. w	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment south OF S. 99999 hectares (PERV) mett (%) timpervio (IMPERV) int Larrianglr .000 .178 99999 hectares (PERV) mett timpervio (IMPERV) mett timpervio (IMPERV) int Larrianglr .000 .178 99999 hectares (PERV) mett (%) timpervio (IMPERV) it impervio (IMPERV) it impervio (IMPERV) it Impervio (IMPERV) it Impervio (IMPERV) it Larrianglr it Larrianglr .000 it	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta 1.329 .481 1.329 res us pth	1.329 c.m/s - POND P11 on; 3=Green-Ampt. nnglr; 3=SWM HYD. 1.329 c.m/s C perv/imperv.	; 4=Lin. Reserv /total
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstracy Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor ap thes 1.290 1.290 1.290 F SEGMENT 1 - : as as actives vious) D Dpth VC; 2=Horton; r C ction glr; 2=Rectang 1.290	.000 c.m/s 1 .000 c.m/s .000 c.m/s .000 c.m/s 1.290 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reser	17 14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 Zero; 2=De ne(s) of c ********** VELOPMENT ********** T ID No.ó Area in Length Gradien Per cen Length SCS Cur Li/S Cur II/S Cur II/S Cal Option .178 .267 DFF ID No.ó Area in Length Gradien Per cen Length **Imp. w	ighting fatimestep sub-reache 1.329 e No. 1.329 fine comment south OF S 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Zero D. 1-312 (PERV) met t (%) t Impervio (IMPERV) ith Zero D. 1-352 (PERV) met t Tero D. 1-352 (N/C)	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta 1.329 .481 1.329 res us pth	1.329 c.m/s - POND P11 on; 3=Green-Ampt. inglr; 3=SWM HYD. 1.329 c.m/s C perv/imperv. 1.329 c.m/s	; 4=Lin. Reserv /total
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstracy Option 1=Trians 063 1.227 267 .883 e(s) of comment ************************************	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor app thes 1.290 1.290 F SEGMENT 1 - : ass metres vious b Dpth N/C; 2=Horton; r C nt ttion glr; 2=Rectang 1.290 .695	.000 c.m/s 1 .000 c.m/s .000 c.m/s .000 c.m/s 1.290 c.m/s 3=Green-Ampt; 4=Repeat 1r; 3=SWM HYD; 4=Lin. Reser 1.290 c.m/s c perv/imperv/total	17 14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 .016 .016 .016 .016 .016	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment SOUTH OF S. 99999 hectares (PERV) met t (%) t Impervio (IMPERV) in 1-SCS CN/C "n" ve No or C efficient Abstractile-trianglr. 000 .880 .178 99999 hectares (PERV) met t (%) t Impervio (IMPERV) in 1-SCS CN/C "n" ve No or C version of the second s	s 1.329 1.329 1.329 1.329 EGMENT 1 res us pth r; 2=Horto on 1.329 1.329 res us pth r; 2=Horto	1.329 c.m/s - POND P11 on; 3=Green-Ampt. inglr; 3=SWM HYD. 1.329 c.m/s C perv/imperv. 1.329 c.m/s	; 4=Lin. Reserv /total
15 9 17 14 35 4	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ********** FUT ROADWAY CULVI ********** 063 1.290 Conduit Length No Conduit def: Zero lag Beta weighting Routing timest No. of sub-reac 063 1.290 ction Node No. 063 1.290 ction Node No. 063 1.290 ero; 2=Define e(s) of comment ********** T TD No.6 99999 Area in hectare Length (PERV) r Gradient (%) Per cent Imper Length (IMPERV) *Imp. with Zero Option 1=SCS CM Manning "n" SCS Curve No on Ia/S Coefficien Initial Abstrac Option 1=Trians 531 .000 267 .879 FF 531 .531	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor ap thes 1.290 1.290 1.290 F SEGMENT 1 - : as as actives vious) D Dpth VC; 2=Horton; r C ction glr; 2=Rectang 1.290	.000 c.m/s 1 .000 c.m/s .000 c.m/s .000 c.m/s 1.290 c.m/s 3=Green-Ampt; 4=Repeat 1r; 3=SWM HYD; 4=Lin. Reser	17 14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 .016 .016 .016 .016 .016	ighting fatimestep sub-reachel 1.329 e No. 1.329 fine comment south of S 99999 hectares (PERV) mett (%) t Impervio (IMPERV) ith Zero D (ET) (1.320	s 1.329 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on 1.329 .481 1.329 res us pth ; 2=Horto	1.329 c.m/s - POND P11 on; 3=Green-Ampt. inglr; 3=SWM HYD. 1.329 c.m/s C perv/imperv. 1.329 c.m/s	; 4=Lin. Reserv /total
15 9 17 14 35	8.924 1 COMMENT 3 lin ********* ADD RUNO .000 .000 .000 .000 .000 .000 .000 .0	Initial Abstrac Option 1=Trians 063 1.227 267 .883 e(s) of comment ********** FUT ROADWAY CULVI ********** 063 1.290 Conduit Length No Conduit def: Zero lag Beta weighting Routing timest No. of sub-reac 063 1.290 ction Node No. 063 1.290 ction Node No. 063 1.290 ero; 2=Define e(s) of comment ********** T TD No.6 99999 Area in hectare Length (PERV) r Gradient (%) Per cent Imper Length (IMPERV) *Imp. with Zero Option 1=SCS CM Manning "n" SCS Curve No on Ia/S Coefficien Initial Abstrac Option 1=Trians 531 .000 267 .879 FF 531 .531	glr; 2=Rectang .000 .359 ERT - SEGMENT .000 ined factor app thes 1.290 1.290 F SEGMENT 1 - : ass metres vious b Dpth N/C; 2=Horton; r C nt ttion glr; 2=Rectang 1.290 .695	.000 c.m/s 1 .000 c.m/s .000 c.m/s .000 c.m/s 1.290 c.m/s 3=Green-Ampt; 4=Repeat 1r; 3=SWM HYD; 4=Lin. Reser 1.290 c.m/s c perv/imperv/total	17 14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero la Beta we Routing No. of .016 .016 .016 .016 .016 .016 .016 .016	ighting fatimestep sub-reache 1.329 e No. 1.329 fine omment south OF S. 99999 hectares (PERV) mett (%) t Impervio (IMPERV) inth Zero D D 1=SCS CN/C "n" 0.880 .178 99999 hectares (PERV) mett (%) t Impervio (IMPERV) inth Zero D D 1=SCS CN/C "pr" 0.880 .178 99999 hectares (PERV) mett (%) t Impervio (IMPERV) inth Zero D 1=SCS CN/C "n" ve No or C efficient Abstracti Abstracti	s 1.329 1.329 1.329 EGMENT 1 res us pth ; 2=Horto on ; 2=Recta 1.329 .481 1.329 res us pth ; 2=Horto	1.329 c.m/s - POND P11 on; 3=Green-Ampt. inglr; 3=SWM HYD. 1.329 c.m/s C perv/imperv. 1.329 c.m/s	; 4=Lin. Reserv /total

	.267 .890 .703 C perv/imperv/total	74.000 SCS Curve No or C
15	ADD RUNOFF .933 1.112 1.329 1.329 c.m/s	.100 Ia/S Coefficient 8.924 Initial Abstraction
4	CATCHMENT	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>
	14.000 ID No.6 99999	1.695 .051 .408 .408 c.m/s
	.670 Area in hectares 67.000 Length (PERV) metres	.267 .897 .708 C perv/imperv/total 15 ADD RUNOFF
	1.000 Gradient (%)	1.695 1.737 .408 .408 c.m/s
	60.000 Per cent Impervious	9 ROUTE
	67.000 Length (IMPERV) .000 %Imp. with Zero Dpth	.000 Conduit Length .000 No Conduit defined
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat	.000 Zero lag
	.250 Manning "n"	.000 Beta weighting factor
	74.000 SCS Curve No or C .100 Ia/S Coefficient	.000 Routing timestep 0 No. of sub-reaches
	8.924 Initial Abstraction	1.695 1.737 1.737 .408 c.m/s
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>	v 17 COMBINE
	.083 1.112 1.329 1.329 c.m/s .267 .884 .637 C perv/imperv/total	2 Junction Node No. 1.695 1.737 1.737 2.145 c.m/s
15	ADD RUNOFF	14 START
	.083 1.177 1.329 1.329 c.m/s	1 1=Zero; 2=Define
27	HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen	4 CATCHMENT 43.000 ID No.6 99999
	Volume = .3408792E+04 c.m	.330 Area in hectares
10	POND	47.000 Length (PERV) metres
	5 Depth - Discharge - Volume sets 184.800 .000 .0	1.000 Gradient (%) 35.000 Per cent Impervious
	185.300 .0140 1142.0	47.000 Length (IMPERV)
	186.100 .0240 3519.0	.000 %Imp. with Zero Dpth
	186.500 .287 4978.0 186.800 1.922 6222.0	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"
	Peak Outflow = .022 c.m/s	74.000 SCS Curve No or C
	Maximum Depth = 185.947 metres	.100 Ia/S Coefficient
	Maximum Storage = 3066. c.m .083 1.177 .022 1.329 c.m/s	8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
35	.003 1.177 .022 1.329 C.m/B COMMENT	.026 .000 1.737 2.145 c.m/s
	<pre>3 line(s) of comment</pre>	.266 .885 .483 C perv/imperv/total
	*********	15 ADD RUNOFF
	FLOW U/S OF RICE RD CULVERT - OUTLET A1	.026 .026 1.737 2.145 c.m/s 4 CATCHMENT
17	COMBINE	44.000 ID No.6 99999
	1 Junction Node No.	6.400 Area in hectares
14	.083 1.177 .022 1.344 c.m/s START	207.000 Length (PERV) metres 1.000 Gradient (%)
	1 1=Zero; 2=Define	70.000 Per cent Impervious
35	COMMENT	207.000 Length (IMPERV)
	<pre>3 line(s) of comment ************************************</pre>	.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	PROP DEVELOPMENT SOUTH OF QUAKER RD & WEST OF RICE RD PON	.250 Manning "n"
	********	74.000 SCS Curve No or C
4	CATCHMENT 40.000 ID No.6 99999	.100 Ia/S Coefficient 8.924 Initial Abstraction
	8.210 Area in hectares	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
	234.000 Length (PERV) metres	.854 .026 1.737 2.145 c.m/s
	1.000 Gradient (%) 25.000 Per cent Impervious	.267 .887 .701 C perv/imperv/total 15 ADD RUNOFF
	234.000 Length (IMPERV)	.854 .874 1.737 2.145 c.m/s
	.000 %Imp. with Zero Dpth	9 ROUTE
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"	.000 Conduit Length .000 No Conduit defined
	74.000 SCS Curve No or C	.000 Zero lag
	.100 Ia/S Coefficient	.000 Beta weighting factor
	8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	.000 Routing timestep rv 0 No. of sub-reaches
	.408 .000 .022 1.344 c.m/s	.854 .874 .874 2.145 c.m/s
	.267 .894 .423 C perv/imperv/total	17 COMBINE
15	ADD RUNOFF .408 .408 .022 1.344 c.m/s	2 Junction Node No854 .874 .874 3.019 c.m/s
9	ROUTE	14 START
	.000 Conduit Length	1 1=Zero; 2=Define
	.000 No Conduit defined .000 Zero lag	18 CONFLUENCE 2 Junction Node No.
	.000 Beta weighting factor	.854 3.019 .874 .000 c.m/s
	.000 Routing timestep	4 CATCHMENT
	0 No. of sub-reaches .408 .408 .408 1.344 c.m/s	45.000 ID No.6 99999 1.030 Area in hectares
17	COMBINE	83.000 Length (PERV) metres
	Junction Node No.	1.000 Gradient (%)
14	.408 .408 .408 c.m/s START	60.000 Per cent Impervious 83.000 Length (IMPERV)
	1 1=Zero; 2=Define	.000 %Imp. with Zero Dpth
4	CATCHMENT	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	41.000 ID No.6 99999 .690 Area in hectares	.250 Manning "n" 74.000 SCS Curve No or C
	68.000 Length (PERV) metres	.100 Ia/S Coefficient
	1.000 Gradient (%)	8.924 Initial Abstraction
	35.000 Per cent Impervious 68.000 Length (IMPERV)	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .122 3.019 .874 .000 c.m/s
	.000 %Imp. with Zero Dpth	.267 .886 .638 C perv/imperv/total
	<pre>Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>	15 ADD RUNOFF
	.250 Manning "n" 74.000 SCS Curve No or C	.122 3.124 .874 .000 c.m/s 27 HYDROGRAPH DISPLAY
	.100 Ia/S Coefficient	5 is # of Hyeto/Hydrograph chosen
	8.924 Initial Abstraction	Volume = .9292279E+04 c.m
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .051 .000 .408 .408 c.m/s	v 10 POND 6 Depth - Discharge - Volume sets
	.267 .884 .483 C perv/imperv/total	186.000 .000 .0
15	ADD RUNOFF	186.800 .0550 4048.0
4	.051 .051 .408 .408 c.m/s	187.300 .0730 7091.0 187.500 .170 8424.0
4	CATCHMENT 42.000 ID No.6 99999	187.500 .170 8424.0 187.800 .257 10552.0
	12.640 Area in hectares	188.000 .880 12094.0
	290.000 Length (PERV) metres	Peak Outflow = .129 c.m/s
	1.000 Gradient (%) 70.000 Per cent Impervious	Maximum Depth = 187.415 metres Maximum Storage = 7854.c.m
	290.000 Length (IMPERV)	.122 3.124 .129 .000 c.m/s
	.000 %Imp. with Zero Dpth	17 COMBINE
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat	2 Junction Node No.

14	START		.250 Manning "n"	
25	1 1=Zero; 2=Define		74.000 SCS Curve No or C	
35	COMMENT 3 line(s) of comment		.100 Ia/S Coefficient 8.924 Initial Abstraction	
	**************************************		1 Option 1=Trianglr; 2=Rectanglr; 3	S=SWM HYD; 4=Lin. Reserv
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD			35 c.m/s
	**********			rv/imperv/total
4	CATCHMENT	15	ADD RUNOFF	
	2.000 ID No.ó 99999 9.020 Area in hectares	9	.046 .123 1.185 1.18 ROUTE	85 c.m/s
	9.020 Area in hectares 245.000 Length (PERV) metres	9	.000 Conduit Length	
	1.000 Gradient (%)		.000 No Conduit defined	
	40.000 Per cent Impervious		.000 Zero lag	
	245.000 Length (IMPERV)		.000 Beta weighting factor	
	.000 %Imp. with Zero Dpth		.000 Routing timestep	
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		0 No. of sub-reaches	
	.250 Manning "n"			35 c.m/s
	74.000 SCS Curve No or C	17	COMBINE	
	.100 Ia/S Coefficient		2 Junction Node No.	
	8.924 Initial Abstraction			08 c.m/s
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	14	START	
	.702 .000 .129 .129 c.m/s .267 .895 .518 C perv/imperv/total	35	1 1=Zero; 2=Define COMMENT	
15	ADD RUNOFF	35		
13	.702 .702 .129 .129 c.m/s		3 line(s) of comment	
9	ROUTE		EXISTING AREA WEST OF RICE RD AND SOUTH OF	OHAKER ROAD
,	.000 Conduit Length		**************************************	ZONICHE ROND
	.000 No Conduit defined	4	CATCHMENT	
	.000 Zero lag	_	4.000 ID No.6 99999	
	.000 Beta weighting factor		13.940 Area in hectares	
	.000 Routing timestep		305.000 Length (PERV) metres	
	0 No. of sub-reaches		1.000 Gradient (%)	
	.702 .702 .702 c.m/s		40.000 Per cent Impervious	
17	COMBINE		305.000 Length (IMPERV)	
	2 Junction Node No.		.000 %Imp. with Zero Dpth	
	.702 .702 .702 .745 c.m/s		<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Gr</pre>	een-Ampt; 4=Repeat
14	START		.250 Manning "n"	
	1 1=Zero; 2=Define		74.000 SCS Curve No or C	
18	CONFLUENCE 2 Junction Node No.		.100 Ia/S Coefficient	
	2 Junction Node No702 .745 .702 .000 c.m/s		8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3	-cws upp. 4-1 in December
35	.702 .745 .702 .000 C.m/s COMMENT			8 c.m/s
33	3 line(s) of comment			rv/imperv/total
	**************************************	15	ADD RUNOFF	v/imperv/cocar
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD			08 c.m/s
	************	9	ROUTE	
4	CATCHMENT		.000 Conduit Length	
	3.000 ID No.6 99999		.000 No Conduit defined	
	5.680 Area in hectares		.000 Zero lag	
	195.000 Length (PERV) metres		.000 Beta weighting factor	
	1.000 Gradient (%)		.000 Routing timestep	
	40.000 Per cent Impervious		0 No. of sub-reaches	
	195.000 Length (IMPERV)			08 c.m/s
	.000 %Imp. with Zero Dpth	17	COMBINE	
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		2 Junction Node No.	
	.250 Manning "n"	1.4		23 c.m/s
	74.000 SCS Curve No or C .100 Ia/S Coefficient	14	START 1 1=Zero; 2=Define	
	8.924 Initial Abstraction	18	CONFLUENCE	
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	10	2 Junction Node No.	
	.440 .745 .702 .000 c.m/s			00 c.m/s
	.267 .885 .514 C perv/imperv/total	35	COMMENT	· · · · · · · · · · · · · · · · · · ·
15	ADD RUNOFF		<pre>3 line(s) of comment</pre>	
	.440 1.185 .702 .000 c.m/s		********	
9	ROUTE		RICE ROAD FROM QUAKER RD TO CITY OF WELLAND	MUNICIPAL BOUNDA
	.000 Conduit Length		*******	
	.000 No Conduit defined	4	CATCHMENT	
	.000 Zero lag		501.000 ID No.ó 99999	
	.000 Beta weighting factor		1.570 Area in hectares	
	.000 Routing timestep		102.000 Length (PERV) metres	
	0 No. of sub-reaches		1.000 Gradient (%)	
17	.440 1.185 1.185 .000 c.m/s		70.000 Per cent Impervious	
17	COMBINE 2 Junction Node No.		102.000 Length (IMPERV) .000 %Imp. with Zero Dpth	
	.440 1.185 1.185 c.m/s		1 Option 1=SCS CN/C; 2=Horton; 3=Gr	een-Ampt: 4=Penest
14	START 1.105 1.105 1.105 C.m/S		.250 Manning "n"	
	1 1=Zero; 2=Define		74.000 SCS Curve No or C	
35	COMMENT		.100 Ia/S Coefficient	
	<pre>3 line(s) of comment</pre>		8.924 Initial Abstraction	
	***********		<pre>1 Option 1=Trianglr; 2=Rectanglr; 3</pre>	=SWM HYD; 4=Lin. Reserv
	PROP DEVELOPMENT SOUTH OF QUAKER RD, EAST OF RICE RD			00 c.m/s
	*********			rv/imperv/total
4	CATCHMENT	15	ADD RUNOFF	
	50.000 ID No.6 99999	_		00 c.m/s
	3.420 Area in hectares	9	ROUTE	
	151.000 Length (PERV) metres 1.000 Gradient (%)		.000 Conduit Length	
			.000 No Conduit defined .000 Zero lag	
	151.000 Length (IMPERV) .000 %Imp. with Zero Dpth		.000 Beta weighting factor .000 Routing timestep	
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		0 No. of sub-reaches	
	.250 Manning "n"			00 c.m/s
	74.000 SCS Curve No or C	35	COMMENT	
	.100 Ia/S Coefficient		3 line(s) of comment	
	8.924 Initial Abstraction		******	
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>		FLOW D/S OF RICE RD CULVERT - OUTLET A2	
	.077 .000 1.185 1.185 c.m/s		*********	
	.267 .875 .328 C perv/imperv/total	17	COMBINE	
15	ADD RUNOFF		1 Junction Node No.	
	.077 .077 1.185 1.185 c.m/s			59 c.m/s
4	CATCHMENT	14	START	
	51.000 ID No.6 99999		1 1=Zero; 2=Define	
	1.980 Area in hectares	35	COMMENT	
	115.000 Length (PERV) metres 1.000 Gradient (%)		<pre>3 line(s) of comment ************************************</pre>	
	1.000 Gradient (%) 10.000 Per cent Impervious		PROP DEVELOPMENT SOUTH OF QUAKER RD - QUALL	TTY CONTROL ONLY
	115.000 Fer Cent Impervious 115.000 Length (IMPERV)		*****************	.111 CONTROL ONLI
	.000 %Imp. with Zero Dpth	4	CATCHMENT	
	1 Option 1=SCS CN/C: 2=Horton: 3=Green-Ampt: 4=Repeat	•	20.100 ID No.6 99999	

	.780 Area in hectares	35	COMMENT
	72.000 Length (PERV) metres		<pre>3 line(s) of comment</pre>
	1.000 Gradient (%)		**********
	35.000 Per cent Impervious 72.000 Length (IMPERV)		FLOW U/S OF FIRST AVE CULVERT
	.000 %Imp. with Zero Dpth	17	COMBINE
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		1 Junction Node No.
	.250 Manning "n"		.269 4.762 4.762 4.762 c.m/s
	74.000 SCS Curve No or C	14	START
	.100 Ia/S Coefficient		1 1=Zero; 2=Define
	8.924 Initial Abstraction	35	COMMENT
	Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		<pre>3 line(s) of comment</pre>
	.057 .000 2.615 3.959 c.m/s		******
	.267 .884 .483 C perv/imperv/total		PROP DEVELOPMENT SOUTH OF QUAKER, EAST OF RICE - POND P50
15	ADD RUNOFF	_	******
	.057 .057 2.615 3.959 c.m/s	4	CATCHMENT
4	CATCHMENT 20.000 ID No.6 99999		52.000 ID No.6 99999
	3.210 Area in hectares		6.430 Area in hectares 207.000 Length (PERV) metres
	146.000 Length (PERV) metres		1.000 Gradient (%)
	1.000 Gradient (%)		70.000 Per cent Impervious
	85.000 Per cent Impervious		207.000 Length (IMPERV)
	146.000 Length (IMPERV)		.000 %Imp. with Zero Dpth
	.000 %Imp. with Zero Dpth		1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		.250 Manning "n"
	.250 Manning "n"		74.000 SCS Curve No or C
	74.000 SCS Curve No or C		.100 Ia/S Coefficient
	.100 Ia/S Coefficient		8.924 Initial Abstraction
	8.924 Initial Abstraction		<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>
	Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		.858 .000 4.762 4.762 c.m/s
	.500 .057 2.615 3.959 c.m/s		.267 .887 .701 C perv/imperv/total
	.267 .877 .785 C perv/imperv/total	15	ADD RUNOFF
15	ADD RUNOFF		.858 .858 4.762 4.762 c.m/s
_	.500 .549 2.615 3.959 c.m/s	9	ROUTE
9	ROUTE		.000 Conduit Length
	.000 Conduit Length .000 No Conduit defined		.000 No Conduit defined .000 Zero lag
	.000 No Conduit defined .000 Zero lag		.000 Zero lag .000 Beta weighting factor
	.000 Beta weighting factor		.000 Routing timestep
	.000 Routing timestep		0 No. of sub-reaches
	0 No. of sub-reaches		.858 .858 .858 4.762 c.m/s
	.500 .549 .549 3.959 c.m/s	17	COMBINE
17	COMBINE		2 Junction Node No.
	1 Junction Node No.		.858 .858 .858 c.m/s
	.500 .549 .549 4.508 c.m/s	14	START
14	START		1 1=Zero; 2=Define
	1 1=Zero; 2=Define	4	CATCHMENT
18	CONFLUENCE		53.000 ID No.ó 99999
	1 Junction Node No.		11.340 Area in hectares
	.500 4.508 .549 .000 c.m/s		275.000 Length (PERV) metres
35	COMMENT		1.000 Gradient (%)
	<pre>3 line(s) of comment</pre>		70.000 Per cent Impervious
	********		275.000 Length (IMPERV)
	REALIGNED CHANNEL - SEGMENT 2		.000 %Imp. with Zero Dpth
			1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
4	CATCHMENT 200.000 ID No.6 99999		.250 Manning "n" 74.000 SCS Curve No or C
	200.000 ID No.6 99999 .970 Area in hectares		74.000 SCS Curve No or C .100 Ia/S Coefficient
	80.416 Length (PERV) metres		8.924 Initial Abstraction
	00.410 Dength (IMAV) metres		
	1.000 Gradient (%)		
	1.000 Gradient (%) 10.000 Per cent Impervious		<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>
	10.000 Per cent Impervious		1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s
	10.000 Per cent Impervious	15	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s
	10.000 Per cent Impervious 80.416 Length (IMPERV)	15	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total
	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"	15 9	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE
	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C		1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE .000 Conduit Length
	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient		1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined
	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction		1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag
	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor
	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s		1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep
25	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 0ption 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total		1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches
35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT	9	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE .000 Conduit Length .000 Mo Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.523 1.523 1.523 .858 c.m/s
35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 0ption 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total		1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.523 1.523 1.523 .858 c.m/s COMBINE
35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment	9	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.523 1.523 1.523 .858 c.m/s COMBINE 2 Junction Node No.
35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT	9	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.523 1.523 1.523 .858 c.m/s COMBINE 2 Junction Node No.
35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .224 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.523 1.523 1.523 .858 c.m/s COMBINE 2 Junction Node No. 1.523 1.523 1.523 2.381 c.m/s
	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.523 1.523 1.523 .858 c.m/s COMBINE 2 Junction Node No. 1.523 1.523 1.523 2.381 c.m/s CONFIUENCE
	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .224 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.523 1.523 1.523 .858 c.m/s COMEINE 2 Junction Node No. 1.523 1.523 1.523 2.381 c.m/s CONFLUENCE 2 Junction Node No. 1.523 2.381 1.523 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares
15	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .224 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .224 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 In/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .224 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .264 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35 4	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .224 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35 4	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35 4	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35 4	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
15 35 4	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523
15 35 4	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523
15 35 4	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .024 4.508 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523
15 35 4	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523
15 35 4	10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .224 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF

	Maximum Storage = 6474. c.m .149 2.514 .021	.000 c.m/s	35	COMMENT 3 line(s) of comment	
17	.149 2.514 .021 COMBINE	.000 C.m/s		<pre>3 line(s) of comment *************</pre>	
	2 Junction Node No.			REALIGNED CHANNEL - SEGMENT 3	
	.149 2.514 .021	.021 c.m/s		******	
14	START 1 1=Zero; 2=Define		4	CATCHMENT	
35	1 1=Zero; 2=Define COMMENT			300.000 ID No.6 99999 3.180 Area in hectares	
33	3 line(s) of comment			146.000 Length (PERV) metres	
	*******			.200 Gradient (%)	
	EXISTING AREA ON QUAKER RD, EAST	OF RICE RD		15.000 Per cent Impervious	
	******			146.000 Length (IMPERV)	
4	CATCHMENT 5.000 ID No.ó 99999			.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt;	1=Bonost
	1.870 Area in hectares			.250 Manning "n"	4=Repeat
	112.000 Length (PERV) metres			74.000 SCS Curve No or C	
	1.000 Gradient (%)			.100 Ia/S Coefficient	
	50.000 Per cent Impervious			8.924 Initial Abstraction	
	112.000 Length (IMPERV)			1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD;	4=Lin. Reserv
	.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho	rton; 3=Green-Ampt; 4=Repeat		.099 5.467 .705 .000 c.m/s .267 .894 .361 C perv/imperv/t	n+n1
	.250 Manning "n"	rton; s=Green-Ampt; 4=Repeat	15	ADD RUNOFF	Stai
	74.000 SCS Curve No or C			.099 5.566 .705 .000 c.m/s	
	.100 Ia/S Coefficient		4	CATCHMENT	
	8.924 Initial Abstraction			301.000 ID No.6 99999	
		ctanglr; 3=SWM HYD; 4=Lin. Reserv		.720 Area in hectares	
	.175 .000 .021 .267 .885 .576			69.000 Length (PERV) metres	
15	.267 .885 .576 ADD RUNOFF	C perv/imperv/total		.200 Gradient (%) 10.000 Per cent Impervious	
	.175 .175 .021	.021 c.m/s		69.000 Length (IMPERV)	
9	ROUTE			.000 %Imp. with Zero Dpth	
	.000 Conduit Length			<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt;</pre>	4=Repeat
	.000 No Conduit defined			.250 Manning "n"	
	.000 Zero lag .000 Beta weighting factor			74.000 SCS Curve No or C .100 Ia/S Coefficient	
	.000 Beta weighting factor .000 Routing timestep			8.924 Initial Abstraction	
	0 No. of sub-reaches			1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD;	4=T.in. Reserv
	.175 .175 .175	.021 c.m/s		.016 5.566 .705 .000 c.m/s	Neserv
17	COMBINE			.267 .876 .328 C perv/imperv/t	otal
	2 Junction Node No.		15	ADD RUNOFF	
	.175 .175 .175	.180 c.m/s		.016 5.582 .705 .000 c.m/s	
18	CONFLUENCE		9	ROUTE	
	2 Junction Node No.			.000 Conduit Length	
25	.175 .180 .175	.000 c.m/s		.000 No Conduit defined	
35	COMMENT 3 line(s) of comment			.000 Zero lag .000 Beta weighting factor	
	***************			.000 Routing timestep	
	EXISTING AREA ON QUAKER RD, EAST	OF RICE RD		0 No. of sub-reaches	
	*****			.016 5.582 5.582 .000 c.m/s	
4	CATCHMENT		17	COMBINE	
	6.000 ID No.6 99999			1 Junction Node No.	
	1.920 Area in hectares			.016 5.582 5.582 5.582 c.m/s	
	113.000 Length (PERV) metres		14	START	
	.200 Gradient (%)		35	1 1=Zero; 2=Define	
	65.000 Per cent Impervious		35	1 1=Zero; 2=Define COMMENT	
	65.000 Per cent Impervious 113.000 Length (IMPERV)		35	1 1=Zero; 2=Define	
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth	rton; 3=Green-Ampt; 4=Repeat	35	1 1=Zero; 2=Define COMMENT 3 line(s) of comment	
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth	rton; 3=Green-Ampt; 4=Repeat	35	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ***********	
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho Manning "n" 74.000 SCS Curve No or C	rton; 3=Green-Ampt; 4=Repeat	35	1 1=Zero; 2=Define COMMENT 3 line(s) of comment *********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************** CATCHMENT	
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient	rton; 3=Green-Ampt; 4=Repeat		1 l=Zero; 2=Define COMMENT 3 line(s) of comment *********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************* CATCHMENT 30.000 ID No.6 99999	
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction			1 l=Zero; 2=Define COMMENT 3 line(s) of comment *********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares	
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re	ctanglr; 3=SWM HYD; 4=Lin. Reserv		1 1=Zero; 2=Define COMMENT 3 line(s) of comment *********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres	
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s		1 l=Zero; 2=Define COMMENT 3 line(s) of comment ********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%)	
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s		1 1=Zero; 2=Define COMMENT 3 line(s) of comment *********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres	
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total		1 l=Zero; 2=Define COMMENT 3 line(s) of comment *********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 *********** CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth	
15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total		1 l=Zero; 2=Define COMMENT 3 line(s) of comment ************ PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************* CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 0 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt;	4=Repeat
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total		1 l=Zero; 2=Define COMMENT 3 line(s) of comment *********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 % Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n"	4=Repeat
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		1 l=Zero; 2=Define COMMENT 3 line(s) of comment *********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C	4=Repeat
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************ PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************* CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient	4=Repeat
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning *n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		1	
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************ PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************* CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 % Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 0ption 1=Trianglr; 2=Rectanglr; 3=SWM HYD; .077 .000 5.582 5.582 c.m/s	4=Lin. Reserv
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	4	1	4=Lin. Reserv
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************* PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************** 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; .077 .000 5.582 5.582 c.m/s ADD RUNOFF	4=Lin. Reserv
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning *n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment *********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/t ADD RUNOFF .077 .077 5.582 5.582 c.m/s	4=Lin. Reserv
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************* PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************** 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/t ADD RUNOFF .077 .077 5.582 5.582 c.m/s	4=Lin. Reserv
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning *n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment *********** PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/t ADD RUNOFF .077 .077 5.582 5.582 c.m/s	4=Lin. Reserv
	65.000 Per cent Impervious	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************* PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 *************** 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PEEV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; .077 .000 5.582 5.582 c.m/s ADD RUNOFF .077 .077 5.582 5.582 c.m/s ADD RUNOFF .077 .077 5.582 5.582 c.m/s CATCHENT 31.000 ID No.6 99999 10.420 Area in hectares 264.000 Length (PEEV) metres	4=Lin. Reserv
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning *n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************* PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************* CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/t ADD RUNOFF .077 .077 5.582 5.582 c.m/s TATCHMENT 31.000 ID No.6 99999 10.420 Area in hectares 264.000 Length (PERV) metres 1.000 Gradient (%)	4=Lin. Reserv
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning *n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************* PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************** CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/t ADD RUNOFF .077 .077 5.582 5.582 c.m/s .250 ADD RUNOFF .077 .077 5.582 5.582 c.m/s 264.000 ID No.6 99999 10.420 Area in hectares 264.000 Length (PERV) metres 1.000 Gradient (%) 75.000 Per cent Impervious 264.000 Length (IMPERV)	4=Lin. Reserv
	13.000	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************ PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/t ADD RUNOFF .077 .077 5.582 5.582 c.m/s .261 .896 .267 C perv/imperv/t 31.000 ID No.6 99999 10.420 Area in hectares 264.000 Length (PERV) metres 1.000 Gradient (%) 75.000 Per cent Impervious 264.000 Length (IMPERV) .000 %Imp. with Zero Dpth	4=Lin. Reserv
	65.000 Per cent Impervious	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA rton; 3=Green-Ampt; 4=Repeat	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv
	13.000	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA erton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************ PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/t ADD RUNOFF .077 .077 5.582 5.582 c.m/s .261 .896 .267 C perv/imperv/t 31.000 ID No.6 99999 10.420 Area in hectares 264.000 Length (PERV) metres 1.000 Gradient (%) 75.000 Per cent Impervious 264.000 Length (IMPERV) .000 %Imp. with Zero Dpth	4=Lin. Reserv
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA erton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************* PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************* CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/t ADD RUNOFF .077 .077 5.582 5.582 c.m/s .267 ADD RUNOFF .077 .077 5.582 5.582 c.m/s CATCHMENT 31.000 ID No.6 99999 10.420 Area in hectares 264.000 Length (PERV) metres 1.000 Gradient (%) 75.000 Per cent Impervious 264.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n"	4=Lin. Reserv
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************ FIRST AVE FROM QUAKER RD TO CITY ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA rton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************* PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************* CATCHMENT 30.000 ID No.6 99999 8.470 Area in hectares 238.000 Length (PERV) metres .200 Gradient (%) .100 Per cent Impervious 238.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/t ADD RUNOFF .077 .077 5.582 5.582 c.m/s CATCHMENT 31.000 ID No.6 99999 10.420 Area in hectares 264.000 Length (PERV) metres 1.000 Gradient (%) 75.000 Per cent Impervious 264.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; .250 Manning "n" 74.000 SCS Curve No or C .100 IA/S Coefficient 8.924 Initial Abstraction	4=Lin. Reserv otal 4=Repeat
4	65.000 Per cent Impervious	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA rton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning *n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA rton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA rton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	15 4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning *n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************ FIRST AVE FROM QUAKER RD TO CITY ************** CATCHMENT 201.000 ID No.6 99999 2.430 Area in hectares 1.000 Gradient (%) 65.000 Per cent Impervious 127.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=Trianglr; 2=Re .287 .418 .175 .267 .882 .667 ADD RUNOFF .287 .705 .175 ROUTE .000 Conduit Length No Conduit defined .000 No Conduit defined .000 No Conduit defined	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA rton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
15	13.000	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA rton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	15 4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
15	13.000	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA rton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	15 4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
35 4 15 9	13.000	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA orton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	1 1-Zero; 2-Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning *n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Re .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************ FIRST AVE FROM QUAKER RD TO CITY ************** CATCHMENT 201.000 ID No.6 99999 2.430 Area in hectares 1.000 Gradient (%) 65.000 Per cent Impervious 127.000 Length (PERV) metres 1.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Ho .250 Manning "n" 74.000 SCS Curve No or C .100 IA/S Coefficient 1 Option 1=Trianglr; 2=Re .287 .418 .175 .267 .882 .667 ADD RUNOFF .287 .705 .175 ROUTE .000 Conduit Length .000 No Conduit defined .000 Routing timestep 0 No. of sub-reaches .287 .705 COMBINE	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA orton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
35 4 15 9	13.000	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA erton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
35 4 15 9	15.000 Per cent Impervious	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA erton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
35 4 15 9	13.000	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA erton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
35 4 15 9	15.000 Per cent Impervious	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA erton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	15 4	1 1-Zero; 2-Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
35 4 15 9	65.000	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA rton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	15 4	1 1-Zero; 2-Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
35 4 15 9	65.000 Per cent Impervious	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA rton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	15 4	1 1=Zero; 2=Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
35 4 15 9	13.000	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA rton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	15 4	1 1-Zero; 2-Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv
15 9	13.000	ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s OF WELLAND MUNICIPAL BOUNDA rton; 3=Green-Ampt; 4=Repeat ctanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s .000 c.m/s	15 4	1 1-Zero; 2-Define COMMENT 3 line(s) of comment ************************************	4=Lin. Reserv otal 4=Repeat 4=Lin. Reserv

```
.100
                     Ia/S Coefficient
         8.924
                     Initial Abstraction
                     Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 85 1.509 5.582 5.582 c.m/s 67 .884 .637 C perv/imperv/total
                  .085
15
        ADD RUNOFF
        .085 1.9
                             1.576
                                           5.582
                                                          5.582 c.m/s
27
         is # of Hyeto/Hydrograph chosen
Volume = .5356146E+04 c.m
10
         POND
        POND
5 Depth - Discharge - Volume sets
178.800 .000 .0
179.300 .0260 1520.0
                          .0440
                                        4649.0
7069.0
                           .414
         180.600
         .414
1.204
Peak Outflow =
Maximum 5
        reak Outflow = 0.42 c.m/s
Maximum Depth = 180.027 metres
Maximum Storage = 4365. c.m
.085 1.576
                          5.582 c.m/s
17
              Junction Node No.
        .085
START
                             1.576
                                                          5.608 c.m/s
14
               1=Zero; 2=Define
         COMMENT
35
         line(s) of comment
        PROP DEVELOPMENT SOUTH OF SEGMENT 3 - POND P31
         CATCHMENT
                    ID No.6 99999
       33.000
       12,960
                     Area in hectares
Length (PERV) metres
      294.000
                     Gradient (%)
Per cent Impervious
Length (IMPERV)
        1.000
       75.000
      294.000
          .000
                     %Imp. with Zero Doth
          .250
                     Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
                     Manning "n"
SCS Curve No or C
       74.000
                     Ia/S Coefficient
Initial Abstraction
          .100
         8.924
               Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
1.919 .000 .042 5.608 c.m/s
.267 .897 .739 C perv/imperv/total
15
        ADD RUNOFF
                1.919
        HYDROGRAPH DISPLAY
27
        is # of Hyeto/Hydrograph chosen
Volume = .4931688E+04 c.m
CATCHMENT
                     Area in hectares
         .660
                     Length (PERV) metres
Gradient (%)
Per cent Impervious
       66.000
         1.000
       60.000
                     Length (IMPERV)
%Imp. with Zero Dpth
       66.000
         .000
                     Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
                     Manning "n"
SCS Curve No or C
          . 250
       74.000
          . 100
                     Ia/S Coefficient
                      Initial Abstraction
                     Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
                 .082
                             1.919 .042
.884 .637
                                                       5.608 c.m/s
C perv/imperv/total
        ADD RUNOFF
15
        ADD RUNOFF
.082 1.983 .042
HYDROGRAPH DISPLAY
5 is # of Hyeto/Hydrograph chosen
Volume = .5148061E+04 c.m
                                                          5.608 c.m/s
         POND
       6 Depth - Discharge - Volume sets
                   .000
         178.300
                                        .0
1927.0
         178.900
         179.600
                          .0540
                                        4692.0
                         .150
         180.000
                            .321
                                        6538.0
        5.608 c.m/s
17
            Junction Node No. .082 1.983
        .082
START
14
               1=Zero; 2=Define
        CONFLUENCE
18
       1 Junction Node No.
        .082 5.642
         3 line(s) of comment
        REALIGNED CHANNEL - SEGMENT 3
         CATCHMENT
      302.000
                    TD No. 6 99999
                     Area in hectares
Length (PERV) metres
         1.610
      104.000
       .200
10.000
                     Gradient (%)
Per cent Impervious
                     Length (IMPERV)
      104.000
                     %Imp. with Zero Dpth
Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
          .000
           . 250
                     Manning "n"
SCS Curve No or C
       74.000
```

```
.100
                Ia/S Coefficient
      8.924
                Initial Abstraction
                Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
             .035
                    5.642
                                .052 .000 c.m/s
.329 C perv/imperv/total
                       .893
      COMMENT
      3 line(s) of comment
      FLOW U/S OF NIAGARA ST CULVERT - OUTLET D
15
      ADD RUNOFF
      .035
START
                       5.677
                                   .052
                                             .000 c.m/s
14
           1=Zero; 2=Define
```

35	COMMENT					82.0			(PERV) met	tres		
	3 line	s(s) of comment				1.0		Gradien				
	*******		******	*******	***	10.0			t Impervio	ous		
		STORM EVENT	*******	******	****	82.0			(IMPERV) with Zero I	n+h		
2	STORM						1				on; 3=Green-Ampt	· 4=Penest
-	1	1=Chicago:2=Hu	ff:3=IIser:4=0	Cdn1hr;5=Historic		. 2		Manning		z, z-Horte	n, s-Green-Ampo	, 1-Repeat
	900.000	Coefficient a		Jan 111 75 - 112 5 6 5 1 5		74.0			ve No or C	2		
	5.200	Constant b	(min)			.10			efficient			
	.745	Exponent c				8.9	24	Initial	. Abstracti	ion		
	.450	Fraction to pe	ak r				1	Option	1=Trianglr	r; 2=Recta	anglr; 3=SWM HYD	; 4=Lin. Reserv
	240.000	Duration ó 24					.03		.612	1.522	1.522 c.m/s	
			otal depth				.30		.898	.367	C perv/imperv	/total
3	IMPERVIOU				1	5 ADD	RUNOFI					
	1		N/C; 2=Horton	n; 3=Green-Ampt; 4=Re	epeat 1	0 PONI	.03	33	.644	1.522	1.522 c.m/s	
	.015	Manning "n"	- a		1			Diashawa				
	98.000 .100	SCS Curve No c					.800		ge - Volume 100	.0		
	.518	Initial Abstra					.750	.02		1.0		
35	COMMENT	Inicial Abscia	CCION				.000	.02		503.0		
-		e(s) of comment					.250	.02		091.0		
		*****					.500	.02		765.0		
	EXISTING	RES. WEST OF SE	GMENT 1				.700	1.2		370.0		
	******	******				Peal	k Outfl	low =	.027	7 c.m/s		
4	CATCHMENT	r				Max	imum De	epth =	186.413	3 metres		
	1.000	ID No.6 99999				Max	imum St	torage =	1531.	. c.m		
	17.520	Area in hectar	es				.03	33	.644	.027	1.522 c.m/s	
	343.000	Length (PERV)	metres		1		BINE					
	1.000	Gradient (%)				1		tion Nod				
	35.000	Per cent Imper			_		.03	33	.644	.027	1.546 c.m/s	
	343.000	Length (IMPERV			1							
	.000 1	%Imp. with Zer		. 3-0maan 3mmt . 4-D	epeat 1	1 000	T=Zei FLUENCE	ro; 2=De	fine			
	.250	Manning "n"	.N/C; Z=HOICOI	n; 3=Green-Ampt; 4=Re	speat I	0 CON		r tion Nod	lo No			
	74.000	SCS Curve No c	~ C			1	.03		1.546	.027	.000 c.m/s	
	.100	Ia/S Coefficie			3	5 COM	MENT	33	1.540	.027	.000 C.M/S	
	8.924	Initial Abstra			3	3		(s) of c	omment			
	1			nglr; 3=SWM HYD; 4=L:	n. Reserv			*****				
	1.4		.000	.000 c.m/s	iii iioboz i	REA	LIGNED	CHANNEL	- SEGMENT	r 1		
		.909	.518	C perv/imperv/total	L			*****				
15	ADD RUNOR					4 CAT	CHMENT					
	1.4	145 1.445	.000	.000 c.m/s		101.0	00	ID No.ó	99999			
35	COMMENT					.6	LO	Area in	hectares			
	3 line	e(s) of comment				64.0	00	Length	(PERV) met	tres		
		*****				1.0	00	Gradien				
	REALIGNE	CHANNEL - SEGM	ENT 1			10.0	00	Per cen	t Impervio	ous		
		******				64.0		Length	(IMPERV)			
4	CATCHMENT					.0			rith Zero I			
	100.000	ID No.6 99999					1			C; 2=Horto	on; 3=Green-Ampt	; 4=Repeat
	2.020	Area in hectar				.2		Manning		_		
	116.000	Length (PERV)	metres			74.0			ve No or C	2		
	.400	Gradient (%)				.10			efficient			
	15.000	Per cent Imper	vious			8.9	24 1		. Abstracti			. 4 74
	116 000		•)				_					
	116.000	Length (IMPERV					0.				anglr; 3=SWM HYD	; 4=Lin. Reserv
	.000	%Imp. with Zer	o Dpth	a. 3=Croon-Ampt. 4=Be	neat		.02	23	1.546	.027	.000 c.m/s	
	.000	%Imp. with Zer Option 1=SCS C	o Dpth	n; 3=Green-Ampt; 4=Re		5 300	.30	23 08				
	.000 1 .250	%Imp. with Zer Option 1=SCS C Manning "n"	o Dpth N/C; 2=Horton	n; 3=Green-Ampt; 4=Re	epeat 1	5 ADD	.30	23 08 F	1.546 .899	.027 .367	.000 c.m/s C perv/imperv	
	.000 1	%Imp. with Zer Option 1=SCS C	o Dpth N/C; 2=Horton or C	n; 3=Green-Ampt; 4=Re	1	5 ADD	RUNOFE	23 08 F	1.546	.027	.000 c.m/s	
	.000 1 .250 74.000	%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No c	o Dpth N/C; 2=Horton or C ent	n; 3=Green-Ampt; 4=Re	1		.30 RUNOFI .02 FE	23 08 F 23	1.546 .899	.027 .367	.000 c.m/s C perv/imperv	
	.000 1 .250 74.000 .100 8.924	%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No c Ia/S Coefficie Initial Abstra Option 1=Trian	o Dpth N/C; 2=Horton or C ont action	n; 3=Green-Ampt; 4=Ro	1	9 ROU	.30 RUNOFI .02 FE 00	23 08 F 23 Conduit	1.546 .899 1.567	.027 .367 .027	.000 c.m/s C perv/imperv	
	.000 1 .250 74.000 .100 8.924	%Imp. with Zer Option 1=SCS O Manning "n" SCS Curve No o Ia/S Coefficie Initial Abstra	o Dpth N/C; 2=Horton or C ont action		1	9 ROU	.30 RUNOFE .02 FE 00	23 08 F 23 Conduit	1.546 .899 1.567 Length	.027 .367 .027	.000 c.m/s C perv/imperv	
	.000 1 .250 74.000 .100 8.924 1	%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No c Ia/S Coefficie Initial Abstra Option 1=Trian	o Dpth N/C; 2=Horton or C ont action aglr; 2=Rectan	nglr; 3=SWM HYD; 4=L:	1 in. Reserv	9 ROU!	.30 RUNOFE .02 FE 00 00	23 08 F 23 Conduit No Cond Zero la Beta we	1.546 .899 1.567 Length Luit define ug	.027 .367 .027	.000 c.m/s C perv/imperv	
35	.000 1 .250 74.000 .100 8.924 1	%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No c Ia/S Coefficie Initial Abstra Option 1=Trian 177 1.445 308 .891	o Dpth N/C; 2=Horton or C ont action gglr; 2=Rectar	nglr; 3=SWM HYD; 4=L:	1 in. Reserv	9 ROU:	.30 RUNOFF .02 FE 00 00 00	23 08 F 23 Conduit No Cond Zero la Beta we Routing	1.546 .899 1.567 Length duit define grighting far timestep	.027 .367 .027	.000 c.m/s C perv/imperv	
35	.000 1 .250 74.000 .100 8.924 1 COMMENT 3 line	%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No c Ia/S Coefficie Initial Abstra Option 1=Triam 77 1.445 308 .891	o Dpth N/C; 2=Horton or C ont action gglr; 2=Rectar	nglr; 3=SWM HYD; 4=L:	1 in. Reserv	9 ROU" .00	.30 RUNOFF .02 FE 00 00 00 00 00 00	23 08 F 23 Conduit No Cond Zero la Beta we Routing No. of	1.546 .899 1.567 Length duit define g bighting fa g timestep sub-reache	.027 .367 .027 ed actor	.000 c.m/s C perv/imperv .000 c.m/s	
35	.000 1 .250 74.000 .100 8.924 1 COMMENT 3 line	%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No c Ia/S Coefficie Initial Abstra Option 1=Trian Option 2=445 308 .891	co Dpth IN/C; 2=Hortor or C ont oction uglr; 2=Rectar .000 .396	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota:	in. Reserv	9 ROU:	.30 RUNOFF .02 FE 00 00 00 00 00 00	23 08 F 23 Conduit No Cond Zero la Beta we Routing No. of	1.546 .899 1.567 Length duit define grighting far timestep	.027 .367 .027	.000 c.m/s C perv/imperv	
35	.000 1 .250 74.000 .100 8.924 1 COMMENT 3 line ************************************	%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No C 1a/S Coeffici Initial Abstra Option 1=Trian 177 1.445 308 .891 a(s) of comment ************************************	co Dpth IN/C; 2=Hortor or C ont oction uglr; 2=Rectar .000 .396	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota:	1 in. Reserv	9 ROU: .00 .00 .00 .00 .00 .00	.30 RUNOFI .02 FE 00 00 00 00 00 00 00 00	23 08 F 23 Conduit No Cond Zero la Beta we Routing No. of 23	1.546 .899 1.567 Length duit define grighting far frimestep sub-reache 1.567	.027 .367 .027 ed actor	.000 c.m/s C perv/imperv .000 c.m/s	
	.000 1 .250 74.000 .100 8.924 1 .(COMMENT 3 line	%Imp. with Zer Option 1=SCS Commaning "n" SCS Curve No c Ia/S Coefficie Initial Abstra Option 1=Trian 1745 308 .891	co Dpth IN/C; 2=Hortor or C ont oction uglr; 2=Rectar .000 .396	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota:	in. Reserv	9 ROU:	.30 RUNOFF .02 FE 00 00 00 00 00 00 00 00 .02 BINE Junct	23 08 F 23 Conduit No Cond Zero la Beta we Routing No. of 23 tion Nod	1.546 .899 1.567 : Length tuit define grighting far timestep sub-reache 1.567	.027 .367 .027 ed actor	.000 c.m/s C perv/imperv .000 c.m/s	
	.000 1 .250 74.000 .100 8.924 1 .(COMMENT 3 line ************************************	%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No c Ia/S Coefficie Initial Abstra Option 1=Trian Option 2=Trian Option 2=Trian Option 2=Trian Option 3=Trian Option 1=Trian Option 1=	no Dpth N/C; 2=Horton N/C; 2=Horton N/C	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota:	in. Reserv	9 ROU' .00 .00 .00 .00 .00 .00 .00	.30 RUNOFF .02 FE 00 00 00 00 00 00 00 00 00 .02 BINE Junct	23 08 F 23 Conduit No Cond Zero la Beta we Routing No. of 23 tion Nod	1.546 .899 1.567 Length duit define grighting far frimestep sub-reache 1.567	.027 .367 .027 ed actor	.000 c.m/s C perv/imperv .000 c.m/s	
15	.000 1 .250 74.000 .100 8.924 1 .(COMMENT 3 line ********** ********* ADD RUNOI	%Imp. with Zer Option 1=SCS Commaning "n" SCS Curve No c Ia/S Coefficie Initial Abstra Option 1=Trian 1745 308 .891	co Dpth IN/C; 2=Hortor or C ont oction uglr; 2=Rectar .000 .396	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota:	in. Reserv	9 ROUT .00 .00 .00 .00 .00 .01 .01 .01 .02 .03 .04 .04 .05 .04	.30 RUNOFF .02 FE .00 00 00 00 00 .02 BINE Junct .02 RT	23 08 F F 23 Conduit No Cond Zero la Beta we Routing No. of 23 tion Nod 23	1.546 .899 1.567 : Length duit define graphing far timestep sub-reache 1.567	.027 .367 .027 ed actor	.000 c.m/s C perv/imperv .000 c.m/s	
	.000 1 .250 74.000 .100 8.924 1 COMMENT 3 line ************************************	%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No c Ia/S Coefficie Initial Abstra Option 1=Trian 308 .891 a(s) of comment ************************************	no Dpth N/C; 2=Horton or C or C or C ction ction glr; 2=Rectar .000 .396	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota:	in. Reserv	9 ROU .00 .00 .00 .00 .00 .00 .00 .00 .00 .0	.30 RUNOFF .02 FE .00 00 00 00 00 00 00 .02 BINE Junct .02 RT 1=Zer	23 08 F 23 Conduit No Cond Zero la Beta we Routing No. of 23 tion Nod	1.546 .899 1.567 : Length duit define graphing far timestep sub-reache 1.567	.027 .367 .027 ed actor	.000 c.m/s C perv/imperv .000 c.m/s	
15	.000 1 .250 74.000 .100 8.924 1 .(%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No C Ia/S Coeffici Initial Abstra Option 1=Trian 177 1.445 308 .891 a(s) of comment ************************************	o Dpth N/C; 2=Horton or C int uction glr; 2=Rectai .000 .396	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota:	in. Reserv	9 ROU .00 .00 .00 .00 .00 .00 .00 .00 .00 .0	.30 RUNOFF .02 FE 00 00 00 00 00 00 00 00 00 RINE Junct .02 RT 1=Zer MENT	23 08 8 F 23 Conduit No Cond Zero la Beta we Routing No. of 23 tion Nod 23 ro; 2=De	1.546 .899 1.567 Length luit define a signification of the sub-reached of the sub-reach	.027 .367 .027 ed actor	.000 c.m/s C perv/imperv .000 c.m/s	
15	.000 1 .250 74.000 .100 8.924 1 .00 .: COMMENT 3 line ********* ******** ADD RUNOI ROUTE .000 .000	%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No c Ia/S Coefficie Initial Abstra Option 1=Trian 177 1.445 308 .891 a(s) of comment ************************************	o Dpth N/C; 2=Horton or C int uction glr; 2=Rectai .000 .396	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota:	in. Reserv	9 ROU .00 .00 .00 .00 .00 .00 .00 .00 .00 .0	.30 RUNOFF .02 FE 00 00 00 00 00 00 00 00 00 RINE Junct .02 RT 1=Zer MENT	23 08 F F 23 Conduit No Cond Zero la Beta we Routing No. of 23 tion Nod 23	1.546 .899 1.567 Length luit define a signification of the sub-reached of the sub-reach	.027 .367 .027 ed actor	.000 c.m/s C perv/imperv .000 c.m/s	
15	.000 1 .250 74.000 .100 8.924 1 .(COMMENT 3 line ************************************	%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No Is Coefficie Initial Abstra Option 1=Trian 177 1.445 108 .891 9(s) of comment ************************************	o Dpth N/C; 2=Horton or C int ction .396 VERT - SEGMENT .000	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota:	in. Reserv	9 ROUT .00 .00 .00 .00 .01 4 STAI 1 COMM	.30 RUNOFF .02 FE 00 00 00 00 00 00 00 .02 BINE Junct .02 RT 1=Zer MENT line(************************************	23 08 F 23 Conduit No Cond Zero la Beta we Routing No. of 23 tion Nod 23 ro; 2=De (s) of c	1.546 .899 1.567 Length the state of the s	.027 .367 .027 edd actor ess 1.567	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15	.000 1 .250 74.000 .100 8.924 1 .(%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No C Ia/S Coefficie Initial Abstra Option 1=Trian 1745 308 .891 e(s) of comment ************************************	o Dpth N/C; 2=Horton or C int cotion glr; 2=Rectar .000 .396 MERT - SEGMENT .000	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota:	in. Reserv	9 ROUT .00 .00 .00 .01 .01 .01 .02 .03 .04 .05 .05 .06 .06 .07 .07 .08 .08 .08 .08 .08 .08 .08 .08 .08 .08	30 RUNOFF .02 FE 00 00 00 00 00 00 00 .02 BINE Junct .02 RT 1=Zer MENT line(************************************	23 08 F 23 Conduit No Cond Zero la Beta we Routing No. of 23 tion Nod 23 ro; 2=De (s) of c	1.546 .899 1.567 Length uit define ig timestep sub-reache 1.567 le No. 1.567 define comment	.027 .367 .027 edd actor ess 1.567	.000 c.m/s C perv/imperv .000 c.m/s	
15	.000 1 .250 74.000 .100 8.924 1 .(COMMENT 3 line ************************************	*Imp. with Zer Option 1=SCS Manning "n" SCS Curve No c Ia/S Coefficie Initial Abstra Option 1=Trian 177 1.445 308 .891 a(s) of comment ************************************	o Dpth N/C; 2=Hortor or C or	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota:	in. Reserv	9 ROUT01 .01 .02 .03 .04 .05 .07 .06 .07 .07 .08 .08 .08 .08 .08 .08 .08 .08 .08 .08	30 RUNOFF .02 FE 00 00 00 00 00 00 00 .02 BINE Junct .02 RT 1=Zer MENT line(************************************	23 08 F 23 Conduit No Cond Zero la Beta we Routing No. of 23 tion Nod 23 ro; 2=De (s) of c ************************************	1.546 .899 1.567 Length uit define ig timestep sub-reache 1.567 le No. 1.567 define comment	.027 .367 .027 edd actor ess 1.567	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
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15 9 17 14 35	.000 1 .250 74.000 .100 8.924 1 .(%Imp. with Zer Option 1=SCS C Manning "n" SCS CUTVE NO C Ia/S COEfficie Initial Abstra Difficial Coefficie Initial Abstra 1.445 308 .891 201 .1445 308 .891 201 .1445 308 .891 201 .1445 308 .891 201 .1445 207 1.522 201 Conduit Length No Conduit def No Conduit Length No Conduit Length No Conduit def Exero lag Beta weighting Routing timest No. of Sub-rea 207 1.522 201 .1522 201 .1522 201 .1522 201 .1522 201 .1522 202 .1522 203 .1522 204 .1522 205 .1522 205 .1522 206 .1522 207 .1522 207 .1522 207 .1522 207 .1522 208 .1522 20	o Dpth N/C; 2=Horton r C int ction glr; 2=Rectai .000 .396 MERT - SEGMENT .000 dined factor ep ches 1.522 1.522 DF SEGMENT 1 - es metres vious) o Dpth N/C; 2=Horton or C ont	nglr; 3=SWM HYD; 4=L000 c.m/s C perv/imperv/tota: r 1 .000 c.m/s .000 c.m/s 1.522 c.m/s	in. Reserv	9 ROUT .00 .00 .00 .00 .00 7 COMM 1 4 STAI 5 COMM 12.00 .10 .35.00 .35.00 .34.00 .10 .35.00 .134.00 .11 8.99 5 ADD 4 CATT 13.00 6.99 216.00 1.00 70.00	.33 RUNOFI	23 08 F 23 Conduit No Cond Zero la Beta we Routing No. of 23 tion Nod 23 tion Nod 23 To; 2=De (s) of c ********** LOPMENT ********* LOPMENT ******** LOPMENT **ID No.6 Area in Length %Imp. w Option Manning SCS Cur Ia/S Co Initial Option 09 ID No.6 Area in Length fradien Per cen 10 The cond 10 T	1.546 .899 1.567 Length Litt define graph define for the state of the	.027 .367 .027 add actor ss 1.567 1.567 1.567 2.567 .514 1.567 .514	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.567 c.m/s - POND Pll on; 3=Green-Ampt 1.567 c.m/s C perv/imperv	; 4=Repeat
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15 9 17 14 35	.000 1.250 74.000 .100 8.924 1 .(%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No C Ia/S Coefficie Initial Abstra Option 1=Trian 177	o Dpth N/C; 2=Horton r C int ction glr; 2=Rectar .000 .396 MERT - SEGMENT .000 dined factor ep ches 1.522 1.522 F SEGMENT 1 - es metres vious) o Dpth N/C; 2=Horton ction	nglr; 3=SWM HYD; 4=L000 c.m/s C perv/imperv/tota: r 1 .000 c.m/s .000 c.m/s 1.522 c.m/s	in. Reserv	9 ROUT .00 .00 .00 .00 .00 .00 .00 .00 .00 .0	.33.RUNOFF .02.PURD TE .03.PURD TE .04.PURD TE .05.PURD TE .05.PUR	23 08 F 23 Conduit No Cond Zero la Beta we Routing No. of 23 tion Nod 23 ro; 2=De (s) of c ********** LOPMENT ********* LOPMENT This is a conducted in the second in the s	1.546 .899 1.567 Length luit define lighting fa fithmstep sub-reache 1.567 le No. 1.567 fine commment SOUTH OF S G 99999 hectares (PERV) met tit Impervic (IMPERV) ren	.027 .367 .027 add actor es 1.567 1.567 1.567 2.564 1.567 2.2-Horto C.3.2-Hort	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.567 c.m/s - POND Pll on; 3=Green-Ampt 1.567 c.m/s C perv/imperv	; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	.000 1 .250 74.000 .100 8.924 1 .(%Imp. with Zer Option 1=SCS C Manning "n" SCS CUTVE NO C Ia/S COefficie Initial Abstra Option 1=Trian 177	oo Dpth N/C; 2=Horton r C int cution glr; 2=Rectai .000 .396 MERT - SEGMENT .000 int int int int int int int int int in	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota: 1	in. Reserv	9 ROUT .00 .00 .00 .00 .00 .00 .00 .00 .00 .0	.33.RUNOFI .02.00 .00 .00 .00 .00 .00 .00 .00 .00	23 08 F 23 Conduit No Cond Zero la Beta we Routing No. of 23 tion Nod 23 ro; 2=De (s) of c ********** LOPMENT ********* LOPMENT This is a conducted in the second in the s	1.546 .899 1.567 Length luit define of the comment of the commen	.027 .367 .027 add actor es 1.567 1.567 1.567 2.564 1.567 2.2-Horto C.3.2-Hort	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.567 c.m/s - POND P11 on; 3=Green-Ampt anglr; 3=SWM HYI 1.567 c.m/s C perv/imperv 1.567 c.m/s	; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	.000 1 .250 74.000 .100 8.924 1 .(%IMP. with Zer Option 1=SCS C Manning "n" SCS Curve No C Ia/S Coefficie Initial Abstra Option 1=Trian 177	o Dpth N/C; 2=Horton r C int ction glr; 2=Rectar .000 .396 HERT - SEGMENT .000 dined factor ep ches 1.522 1.522 0F SEGMENT 1 es metres vious n Dpth N/C; 2=Horton glr; 2=Rectar 1.522 1.522	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota: r 1 .000 c.m/s .000 c.m/s 1.522 c.m/s - POND P10 n; 3=Green-Ampt; 4=Re	in. Reserv	9 ROUT .00 .00 .00 .00 .00 .00 .00 .00 .00 .0	.33 (RUNOFF) .02 (PM P) LEVEL .20 (PM P)	23 Conduit No Cond Zero la Beta we Routing No. of 23 tion Nod 23 ro; 2=De (s) of c ********* LOPMENT ******** LOPMENT Area in Length Gradien Per cen Length Option Manning O9 ID No.6 Area in Length %Imp. w Option Manning Cradien Per cen Length %Imp. w Option Manning Mann	1.546 .899 1.567 Length luit define of the comment of the commen	.027 .367 .027 add actor ss 1.567 1.567 1.567 2.569 2.500 2.514 1.567 .514 1.567 .514	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.567 c.m/s - POND P11 on; 3=Green-Ampt anglr; 3=SWM HYI 1.567 c.m/s C perv/imperv 1.567 c.m/s	; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	.000 1.250 74.000 1.100 8.924 1	%Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No C Ia/S Coefficie Initial Abstra Option 1=Trian Option 1=SCS C Conduit Length No Conduit dength No Conduit Length No Conduit Length No Conduit Jame Dength Ser Option 1=SCS C Option 1=SCS C Option 1=SCS C Option 1=SCS C Option 1=Trian Opt	o Dpth N/C; 2=Horton r C int ction glr; 2=Rectar .000 .396 HERT - SEGMENT .000 dined factor ep ches 1.522 1.522 0F SEGMENT 1 es metres vious n Dpth N/C; 2=Horton glr; 2=Rectar 1.522 1.522	nglr; 3=SWM HYD; 4=L: .000 c.m/s C perv/imperv/tota: r 1 .000 c.m/s .000 c.m/s 1.522 c.m/s - POND P10 n; 3=Green-Ampt; 4=Re	in. Reserv	9 ROUT .00 .00 .00 .00 .00 .00 .00 .00 .00 .0	.33 RUNOFF .22C .32C .32C .33C .33C .33C .33C .33C	23 Conduit No Cond Zero la Beta we Routing No. of 23 ro; 2=De (s) of c ********** LOPMENT ********* LOPMENT ********* LOPMENT ******** LOPMENT Length Gradien Per cen Length %Imp. w Option Manning SCS Cur Length Gradien Per cen Length Gradien Per cen Length Gradien Option O9 Region ID No.6 Area in Length Gradien Fer cen Length %Imp. w Option Manning SCS Cur Langth Voption Manning SCS Cur Length Voption Manning SCS Cur	1.546 .899 1.567 Length kuit define grighting fa grimmstep sub-reache 1.567 de No. 1.567 sfine comment SOUTH OF S (PERV) met tt (%) yith Zero I 1=SCS CN/C grim ve No or C cefficient 209999 hectares (PERV) met tt (%) yith Zero I 1=Trianglr .000 .897 .209 hectares (PERV) met tt (%) tt Impervice (IMPERV) yith Zero I 1=SCS CN/C grim ve No or C cefficient tt (%) tt Impervice (IMPERV) yith Zero I 1=SCS CN/C grim ve No or C cefficient 1=SCS CN/C grim	.027 .367 .027 add actor ss 1.567 1.567 1.567 2.2=Horto 2.1567 .514 1.567 2.514 1.567	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.567 c.m/s - POND P11 on; 3=Green-Ampt anglr; 3=SWM HYI 1.567 c.m/s C perv/imperv 1.567 c.m/s	; 4=Repeat ; 4=Lin. Reserv
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		308	.897	.721	C perv/imperv/total		74.000		rve No or		
15	ADD RUNG		1.292	1.567	1.567 c.m/s		.100 8.924		pefficient L Abstract		
4	CATCHMEN		1.232	1.507	1.307 C.m/B		1				glr; 3=SWM HYD; 4=Lin. Reserv
	14.000	ID No.	5 99999					980	.061	.484	.484 c.m/s
	.670		n hectares					.308	.910	.729	C perv/imperv/total
	67.000		(PERV) me	tres		15	ADD RUN			.484	
	1.000 60.000	Gradier Per cer	nt (%) nt Impervi	OUS		9	ROUTE	980	2.030	.484	.484 c.m/s
	67.000		(IMPERV)	Jour		•	.000	Conduit	t Length		
	.000		with Zero				.000		duit defin	ed	
	1 .250	Option Manning		C; 2=Hortor	; 3=Green-Ampt; 4=Repeat		.000	Zero la	ag eighting fa		
	74.000		ve No or	С			.000		g timestep	accor	
	.100		efficient				0	No. of	sub-reach	es	
	8.924		Abstract					980	2.030	2.030	.484 c.m/s
	1		1=Triangl	r; 2=Rectar. 1.567	nglr; 3=SWM HYD; 4=Lin. Reserv 1.567 c.m/s	17	COMBINE 2 Ju	nction Noo	de No		
		308	.898	.662	C perv/imperv/total			980	2.030	2.030	2.514 c.m/s
15	ADD RUNG					14	START				
			1.367	1.567	1.567 c.m/s	_		Zero; 2=De	efine		
27		PH DISPLA		aph chosen		4	CATCHME 43.000	INT ID No. ć	5 99999		
			130E+04 c.				.330		n hectares		
10	POND						47.000		(PERV) me	tres	
			ge - Volum				1.000	Gradier			
	184.800 185.300		000 L40 1	.0 .142.0			35.000 47.000		nt Impervio (IMPERV)	ous	
	186.100			519.0			.000		with Zero	Dpth	
	186.500			978.0			1	Option	1=SCS CN/		; 3=Green-Ampt; 4=Repeat
	186.800	1.9		222.0			.250	Manning		_	
	Peak Out Maximum			8 c.m/s 6 metres			74.000 .100		rve No or o pefficient		
		Storage =		. c.m			8.924		l Abstract		
		099	1.367	.048	1.567 c.m/s		1				glr; 3=SWM HYD; 4=Lin. Reserv
35	COMMENT							.031	.000	2.030	2.514 c.m/s
		ne(s) of c				15	ADD RUN	.308	.898	.515	C perv/imperv/total
				T - OUTLET	A1	13		.031	.031	2.030	2.514 c.m/s
		*******	+			4	CATCHME				
17	COMBINE						44.000	ID No.			
		oction Noo .099	ie No. 1.367	.048	1.583 c.m/s		6.400 207.000		n hectares (PERV) me		
14	START	.099	1.30/	.040	1.565 C.M/S		1.000	Gradier		cres	
		Zero; 2=De	efine				70.000		nt Impervi	ous	
35	COMMENT						207.000		(IMPERV)		
		ne(s) of c					.000		with Zero		; 3=Green-Ampt; 4=Repeat
				OUAKER RD 8	WEST OF RICE RD PON		.250	Manning		C; Z=HOFCOII	; 5=Green-Ampt; 4=Repeat
		******		~			74.000		rve No or	С	
4	CATCHMEN						.100		pefficient		
	40.000 8.210	ID No.	o 99999 n hectares				8.924 1		l Abstract		glr; 3=SWM HYD; 4=Lin. Reserv
	234.000		(PERV) me					.990	.031	2.030	2.514 c.m/s
	1.000	Gradier						.308	.896	.719	C perv/imperv/total
	25.000		nt Impervi	.ous		15	ADD RUN				
	.000		(IMPERV) with Zero	Double		9	ROUTE	.990	1.014	2.030	2.514 c.m/s
	1				n; 3=Green-Ampt; 4=Repeat	,	.000	Conduit	t Length		
	.250	Manning	y "n"				.000	No Cond	duit defin	ed	
	74.000 .100		ve No or				.000	Zero la			
	8.924		efficient L Abstract				.000		eighting fa g timestep		
	1				nglr; 3=SWM HYD; 4=Lin. Reserv		0		sub-reach		
		484	.000	.048	1.583 c.m/s			.990	1.014	1.014	2.514 c.m/s
15	ADD RUNG	308	.902	.457	C perv/imperv/total	17	COMBINE 2 Ju	nction No	a		
13		484	.484	.048	1.583 c.m/s			.990	1.014	1.014	3.528 c.m/s
9	ROUTE					14	START				
	.000		Length					Zero; 2=De	efine		
	.000	No Cond Zero la	duit defin	ied		18	CONFLUE 2 Ju	NCE inction No	do No		
	.000		eighting f	actor				.990	3.528	1.014	.000 c.m/s
	.000	Routing	g timester)		4	CATCHME				
	0	No. of	sub-reach	es			45.000	ID No.			
17	COMBINE	484	.484	.484	1.583 c.m/s		1.030 83.000		n hectares (PERV) me	tres	
		ction No	de No.				1.000	Gradier		- GB	
		484	.484	.484	.484 c.m/s		60.000	Per cer	nt Impervi	ous	
14	START	·					83.000 .000		(IMPERV)	Doubh	
4	1 1=2 CATCHMEN	ero; 2=De	erine				.000		with Zero		; 3=Green-Ampt; 4=Repeat
-	41.000	ID No.ć	5 99999				.250	Manning			,
	.690	Area in	n hectares				74.000		rve No or	С	
	68.000 1.000	Length Gradier	(PERV) me	tres			.100 8.924		pefficient L Abstract	ion	
	35.000		nt (%) nt Impervi	.ous			8.924				glr; 3=SWM HYD; 4=Lin. Reserv
	68.000	Length	(IMPERV)				_	.147	3.528	1.014	.000 c.m/s
	.000	%Imp. v	vith Zero					.308	.899	.662	C perv/imperv/total
	1 .250	Option Manning		C; Z=Hortor	; 3=Green-Ampt; 4=Repeat	15	ADD RUN	OFF .147	3.648	1.014	.000 c.m/s
	74.000		ve No or	С		27		.14/ RAPH DISPLA		1.014	. 550 C.M/B
	.100	Ia/S Co	efficient	:			5 is	# of Hyet	to/Hydrogra	aph chosen	
	8.924 1		Abstract		and an amount of the an	10		= .11209	983E+05 c.	m.	
	_	Option 061	1=Triangl	r; 2=Rectar. .484	nglr; 3=SWM HYD; 4=Lin. Reserv .484 c.m/s	10	POND 6 Depth	- Dischard	ge - Volum	e sets	
		308	.898	.515	C perv/imperv/total		186.000		000 000	.0	
15	ADD RUNG	FF					186.800	.05	550 4	048.0	
		061	.061	.484	.484 c.m/s		187.300			091.0	
4	CATCHMEN 42.000	IT ID No.ć	5 99999				187.500 187.800			424.0 552.0	
	12.640		hectares				188.000			094.0	
	290.000	Length	(PERV) me				Peak Ou			8 c.m/s	
	1.000 70.000	Gradier		oug.			Maximum			8 metres	
		Per cer Length	t Impervi	.ous				Storage = .147	= 9121 3.648	. c.m .198	.000 c.m/s
	290.000										
	.000		vith Zero	Dpth		17	COMBINE		3.040	.130	1000 01111/12

14	START		.250	Manning				
2.5	1 1=Zero; 2=Define		74.000	SCS Curv Ia/S Coe	e No or (2		
35	COMMENT 3 line(s) of comment		.100 8.924		rricient Abstracti	ion		
	**************************************		1				anglr; 3=SWM HYD; 4=Lin	. Reserv
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD		.0		.097	1.392	1.392 c.m/s	
	************			308	.899	.367	C perv/imperv/total	
4	CATCHMENT	15	ADD RUNOF					
	2.000 ID No.6 99999	_		059	.156	1.392	1.392 c.m/s	
	9.020 Area in hectares	9	ROUTE	a 3 4	T 1-			
	245.000 Length (PERV) metres 1.000 Gradient (%)		.000	Conduit	it define	ad.		
	40.000 Per cent Impervious		.000	Zero lag		- C		
	245.000 Length (IMPERV)		.000		ghting fa	actor		
	.000 %Imp. with Zero Dpth		.000	Routing				
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		0		ub-reache	es		
	.250 Manning "n"			059	.156	.156	1.392 c.m/s	
	74.000 SCS Curve No or C	17	COMBINE					
	.100 Ia/S Coefficient			ction Node				
	8.924 Initial Abstraction Option 1=Trianglr: 2=Rectanglr: 3=SWM HYD: 4=Lin. Reserv	1.4)59	.156	.156	1.548 c.m/s	
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .824 .000 .198 .198 c.m/s	14	START 1 1=Ze:	2-Daf				
	.308 .904 .547 C perv/imperv/total	35	COMMENT	ero; 2=Def	THE			
15	ADD RUNOFF	33		e(s) of co	mment.			
	.824 .824 .198 .198 c.m/s		******					
9	ROUTE		EXISTING :	AREA WEST	OF RICE	RD AND S	OUTH OF QUAKER ROAD	
	.000 Conduit Length		******					
	.000 No Conduit defined	4	CATCHMENT	r				
	.000 Zero lag		4.000	ID No.ó	99999			
	.000 Beta weighting factor		13.940	Area in				
	.000 Routing timestep		305.000		PERV) met	cres		
	0 No. of sub-reaches		1.000	Gradient				
	.824 .824 .198 c.m/s		40.000		Impervio	ous		
17	COMBINE 2 Junction Node No.		305.000	Length (th Zero I			
	2 Junction node No824 .824 .877 c.m/s		.000				on; 3=Green-Ampt; 4=Rep	ost
14	START .024 .024 .077 C.M/S		.250	Manning		, Z-HOIC	on, 3-Green-Ampc, 4-Rep	eac
	1 1=Zero; 2=Define		74.000		e No or (-		
18	CONFLUENCE		.100	Ia/S Coe		•		
	2 Junction Node No.		8.924		Abstracti	ion		
	.824 .877 .824 .000 c.m/s		1				anglr; 3=SWM HYD; 4=Lin	. Reserv
35	COMMENT		1.2		.000	.156	1.548 c.m/s	
	<pre>3 line(s) of comment</pre>		.3	308	.910	.549	C perv/imperv/total	
	***********	15	ADD RUNOF	FF				
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD		1.2	270 1	.270	.156	1.548 c.m/s	
	***********	9	ROUTE					
4	CATCHMENT		.000	Conduit				
	3.000 ID No.6 99999		.000		it define	ed		
	5.680 Area in hectares		.000	Zero lag				
	195.000 Length (PERV) metres		.000		ghting fa	actor		
	1.000 Gradient (%) 40.000 Per cent Impervious		.000	Routing	timestep ub-reache			
	195.000 Length (IMPERV)		1.2		.270	1.270	1.548 c.m/s	
	.000 %Imp. with Zero Dpth	17	COMBINE	.,,	.270	1.270	1.540 C.M/B	
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat			tion Node	No.			
	.250 Manning "n"		1.2		.270	1.270	2.818 c.m/s	
	74.000 SCS Curve No or C	14	START					
	.100 Ia/S Coefficient		1 1=Ze:	ero; 2=Def	ine			
	8.924 Initial Abstraction	18	CONFLUENC	Œ				
	Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		2 June	ction Node	No.			
	.515 .877 .824 .000 c.m/s		1.2	270 2	.818	1.270	.000 c.m/s	
	.308 .894 .543 C perv/imperv/total	35	COMMENT					
15	ADD RUNOFF			(s) of co	mment			
9	.515 1.392 .824 .000 c.m/s		*******				WELLAND MUNICIPAL BOUN	
9	ROUTE .000 Conduit Length		*****		KER RD IC	CITTOF	WELLAND MUNICIPAL BOON	DA
	.000 No Conduit defined	4	CATCHMENT					
	.000 Zero lag	-	501.000	ID No.ó	99999			
	.000 Beta weighting factor		1.570	Area in				
	.000 Routing timestep		102.000		PERV) met	res		
	0 No. of sub-reaches		1.000	Gradient				
	.515 1.392 1.392 .000 c.m/s		70.000	Per cent	Impervio	ous		
17	COMBINE		102.000	Length (
	2 Junction Node No.		.000		th Zero I			
	.515 1.392 1.392 c.m/s		1			2; 2=Hort	on; 3=Green-Ampt; 4=Rep	eat
14	START		.250	Manning		,		
35	1 1=Zero; 2=Define COMMENT		74.000 .100	SCS Curv	e No or (-		
33	3 line(s) of comment		8.924		Abstracti			
	**************************************		1				anglr; 3=SWM HYD; 4=Lin	Pegeru
	PROP DEVELOPMENT SOUTH OF QUAKER RD, EAST OF RICE RD				.818	1.270	.000 c.m/s	. Mener V
	**************************************				.901	.723	C perv/imperv/total	
4	CATCHMENT	15	ADD RUNOF					
	50.000 ID No.6 99999		.2	250 3	.038	1.270	.000 c.m/s	
	3.420 Area in hectares	9	ROUTE					
	151.000 Length (PERV) metres		.000	Conduit				
	1.000 Gradient (%)		.000		it define	ed		
	10.000 Per cent Impervious		.000	Zero lag				
	151.000 Length (IMPERV)		.000		ghting fa	actor		
	.000 %Imp. with Zero Dpth		.000	Routing				
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		0		ub-reache		000/-	
	.250 Manning "n" 74.000 SCS Curve No or C	35	COMMENT	250 3	.038	3.038	.000 c.m/s	
	.100 Ia/S Coefficient	33		e(s) of co	mment			
	8.924 Initial Abstraction		*****	*****				
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		FLOW D/S	OF RICE R	D CULVER	r - OUTLE	T A2	
	.097 .000 1.392 1.392 c.m/s		*****					
	.308 .892 .367 C perv/imperv/total	17	COMBINE					
15	ADD RUNOFF		1 June	ction Node	No.			
	.097 .097 1.392 1.392 c.m/s			250 3	.038	3.038	4.621 c.m/s	
4	CATCHMENT	14	START					
	51.000 ID No.6 99999			ero; 2=Def	ine			
	1.980 Area in hectares	35	COMMENT	·(a) -=				
	115.000 Length (PERV) metres 1.000 Gradient (%)		3 line	e(s) of co	MINEUL			
	1.000 Gradient (%) 10.000 Per cent Impervious				OUTH OF	DIJAKEB BU	- QUALLITY CONTROL ONL	Y
	115.000 Length (IMPERV)		******		01 (ZOLLEZZI CONTROL ONL	
	.000 %Imp. with Zero Dpth	4	CATCHMENT					
	1 Option 1=SCS CN/C: 2=Horton: 3=Green-Ampt: 4=Repeat		20.100	ID No. 6	99999			

	.780 Area in hectares	35	COMMENT
	72.000 Length (PERV) metres		<pre>3 line(s) of comment</pre>
	1.000 Gradient (%)		************
	35.000 Per cent Impervious 72.000 Length (IMPERV)		FLOW U/S OF FIRST AVE CULVERT
	.000 %Imp. with Zero Dpth	17	COMBINE
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		1 Junction Node No.
	.250 Manning "n"		.338 5.586 5.586 5.586 c.m/s
	74.000 SCS Curve No or C	14	START
	.100 Ia/S Coefficient		1 1=Zero; 2=Define
	8.924 Initial Abstraction	35	COMMENT
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .068 .000 3.038 4.621 c.m/s		3 line(s) of comment
	.308 .897 .514 C perv/imperv/total		PROP DEVELOPMENT SOUTH OF QUAKER, EAST OF RICE - POND P50
15	ADD RUNOFF		*********
	.068 .068 3.038 4.621 c.m/s	4	CATCHMENT
4	CATCHMENT		52.000 ID No.ó 99999
	20.000 ID No.ó 99999		6.430 Area in hectares
	3.210 Area in hectares		207.000 Length (PERV) metres
	146.000 Length (PERV) metres		1.000 Gradient (%) 70.000 Per cent Impervious
	1.000 Gradient (%) 85.000 Per cent Impervious		70.000 Per cent Impervious 207.000 Length (IMPERV)
	146.000 Length (IMPERV)		.000 %Imp. with Zero Dpth
	.000 %Imp. with Zero Dpth		1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	<pre>Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		.250 Manning "n"
	.250 Manning "n"		74.000 SCS Curve No or C
	74.000 SCS Curve No or C		.100 Ia/S Coefficient
	.100 Ia/S Coefficient 8.924 Initial Abstraction		8.924 Initial Abstraction Option 1=Trianglr: 2=Rectanglr: 3=SWM HYD: 4=Lin. Reserv
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>
	.575 .068 3.038 4.621 c.m/s		.308 .896 .719 C perv/imperv/total
	.308 .893 .806 C perv/imperv/total	15	ADD RUNOFF
15	ADD RUNOFF		.995 .995 5.586 5.586 c.m/s
	.575 .639 3.038 4.621 c.m/s	9	ROUTE
9	ROUTE		.000 Conduit Length
	.000 Conduit Length		.000 No Conduit defined
	.000 No Conduit defined .000 Zero lag		.000 Zero lag .000 Beta weighting factor
	.000 Zero lag .000 Beta weighting factor		.000 Beta weighting factor .000 Routing timestep
	.000 Routing timestep		0 No. of sub-reaches
	0 No. of sub-reaches		.995 .995 .995 5.586 c.m/s
	.575 .639 .639 4.621 c.m/s	17	COMBINE
17	COMBINE		2 Junction Node No.
	1 Junction Node No.		.995 .995 .995 c.m/s
	.575 .639 .639 5.253 c.m/s	14	START
14	START 1 1=Zero: 2=Define	4	1 1=Zero; 2=Define
18	1 1=Zero; 2=Define CONFLUENCE	4	CATCHMENT 53.000 ID No.6 99999
10	1 Junction Node No.		11.340 Area in hectares
	.575 5.253 .639 .000 c.m/s		275.000 Length (PERV) metres
35	COMMENT		1.000 Gradient (%)
	<pre>3 line(s) of comment</pre>		70.000 Per cent Impervious
	********		275.000 Length (IMPERV)
	REALIGNED CHANNEL - SEGMENT 2		.000 %Imp. with Zero Dpth

			1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
4	CATCHMENT		.250 Manning "n"
4	200.000 ID No.6 99999		.250 Manning "n" 74.000 SCS Curve No or C
4	200.000 ID No.6 99999 .970 Area in hectares		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient
4	200.000 ID No.6 99999		.250 Manning "n" 74.000 SCS Curve No or C
4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction
4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV)		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total
4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth	15	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF
4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s
4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"	15 9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1.001 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE
4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length
4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"		.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1.001 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE
4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient	9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined
4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s	9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1.001 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep
	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total	9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor ROUTE ROUTE ROUTE ROUTE .000 Routing timestep 0 No. of sub-reaches
35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total	9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s
	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total	9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s
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35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CCONFIUNENE
	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No.
35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMEINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s
35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHENT
35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPRV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMEINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s
35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT CATCHMENT 54.000 ID No.6 99999
35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBUNE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFIUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares
35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 &Imp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 c perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFIDENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 IA/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV)
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 8.98 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 Mo Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMENUE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (FPRV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Tringlr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 c perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (PERV) metres 1.000 Mimp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 IA/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 IA/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERY) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 8.98 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 Mo Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMENIE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (FPRV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %TEMP with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat 8.924 Initial Abstraction
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFIUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 IA/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .179 2.771 1.776 .000 c.m/s
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBUNE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFIUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .179 2.771 1.776 .000 c.m/s .179 2.771 1.776 .000 c.m/s .308 .900 .663 C perv/imperv/total
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s COMFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 IA/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .179 2.771 1.776 .000 c.m/s .308 .900 .663 C perv/imperv/total ADD RUNOFF
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 8.98 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBUNE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFIUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .179 2.771 1.776 .000 c.m/s .179 2.771 1.776 .000 c.m/s .308 .900 .663 C perv/imperv/total
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERY) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 8.98 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .179 2.771 1.776 .000 c.m/s ADD RUNOFF .179 2.924 1.776 .000 c.m/s HYDROGRAPH DISPLAN 5 is # of Hyeto/Bydrograph chosen
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMENURE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (FERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 &Imp with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat 2.50 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .179 2.771 1.776 .000 c.m/s ADD RUNOFF .179 2.924 1.776 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .8196629E+04 c.m
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 IA/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .179 2.771 1.776 .000 c.m/s .308 .900 .663 C perv/imperv/total ADD RUNOFF .179 2.924 1.776 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .8196629E+04 c.m POND
35 15 35 4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMEINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat 2.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.79 2.771 1.776 .000 c.m/s ADD RUNOFF .179 2.924 1.776 .000 c.m/s HYDROGRAPH DISPLAY 5 is # Of Hydrograph chosen Volume = .8196629E+04 c.m POND 6 Depth - Discharge - Volume sets
35 15 35	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 & Almp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Is/S COefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .179 2.771 1.776 .000 c.m/s .308 .900 .663 C perv/imperv/total ADD RUNOFF .179 2.924 1.776 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .8196629E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000
35 15 35 4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 *Imp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 \$Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .179 2.771 1.776 .000 c.m/s ADD RUNOFF .179 2.924 1.776 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .8196629E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .00 182.800 .0190 5251.0
35 15 35 4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 & Almp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Is/S COefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .179 2.771 1.776 .000 c.m/s .308 .900 .663 C perv/imperv/total ADD RUNOFF .179 2.924 1.776 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .8196629E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000
35 15 35 4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 8.898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .179 2.771 1.776 .000 c.m/s ADD RUNOFF .179 2.924 1.776 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .8196629E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0230 7895.0
35 15 35 4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 & Almp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CNC; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .101 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .179 2.771 1.776 .000 c.m/s ADD RUNOFF .179 2.924 1.776 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .8196629E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .0 182.800 .0190 5251.0 183.150 .0230 7895.0 183.150 .0230 13425.0 184.000 1.028 15337.0
35 15 35 4	200.000 ID No.6 99999 .970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .032 5.253 .639 .000 c.m/s .308 8.898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	17 18 4	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.776 .000 .995 .995 c.m/s .308 .908 .728 C perv/imperv/total ADD RUNOFF 1.776 1.776 .995 .995 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.776 1.776 1.776 .995 c.m/s COMBINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFLUENCE 2 Junction Node No. 1.776 2.771 1.776 .000 c.m/s CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .179 2.771 1.776 .000 c.m/s ADD RUNOFF .179 2.924 1.776 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .8196629E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .0230 7895.0

	Maximum Storage = 7762. c.m	35	COMMENT
17	.179 2.924 .023 .000 c.m/s COMBINE		<pre>3 line(s) of comment *************</pre>
	2 Junction Node No. .179 2.924 .023 .023 c.m/s		REALIGNED CHANNEL - SEGMENT 3
14	START	4	CATCHMENT
35	1 1=Zero; 2=Define COMMENT		300.000 ID No.6 99999 3.180 Area in hectares
	3 line(s) of comment		146.000 Length (PERV) metres .200 Gradient (%)
	EXISTING AREA ON QUAKER RD, EAST OF RICE RD		.200 Gradient (%) 15.000 Per cent Impervious
4	**************************************		146.000 Length (IMPERV) .000 %Imp. with Zero Dpth
•	5.000 ID No.6 99999		<pre>Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>
	1.870 Area in hectares 112.000 Length (PERV) metres		.250 Manning "n" 74.000 SCS Curve No or C
	1.000 Gradient (%)		.100 Ia/S Coefficient
	50.000 Per cent Impervious 112.000 Length (IMPERV)		8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
	.000 %Imp. with Zero Dpth Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		.119 6.402 .816 .000 c.m/s .308 .910 .399 C perv/imperv/total
	.250 Manning "n"	15	ADD RUNOFF
	74.000 SCS Curve No or C .100 Ia/S Coefficient	4	.119 6.521 .816 .000 c.m/s CATCHMENT
	8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		301.000 ID No.6 99999 .720 Area in hectares
	.211 .000 .023 .023 c.m/s		69.000 Length (PERV) metres
15	.308 .900 .604 C perv/imperv/total ADD RUNOFF		.200 Gradient (%) 10.000 Per cent Impervious
	.211 .211 .023 .023 c.m/s		69.000 Length (IMPERV)
9	ROUTE .000 Conduit Length		.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	.000 No Conduit defined		.250 Manning "n"
	.000 Zero lag .000 Beta weighting factor		74.000 SCS Curve No or C .100 Ia/S Coefficient
	.000 Routing timestep		8.924 Initial Abstraction
	0 No. of sub-reaches .211 .211 .023 c.m/s		1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .020 6.521 .816 .000 c.m/s
17	COMBINE	1.5	.308 .892 .367 C perv/imperv/total ADD RUNOFF
	2 Junction Node No211 .211 .211 c.m/s	15	.020 6.541 .816 .000 c.m/s
18	CONFLUENCE 2 Junction Node No.	9	ROUTE .000 Conduit Length
	.211 .217 .211 .000 c.m/s		.000 Conduit Length .000 No Conduit defined
35	COMMENT 3 line(s) of comment		.000 Zero lag .000 Beta weighting factor
	**************************************		.000 Routing timestep
	EXISTING AREA ON QUAKER RD, EAST OF RICE RD		0 No. of sub-reaches .020 6.541 6.541 .000 c.m/s
4	CATCHMENT	17	COMBINE
	6.000 ID No.6 99999 1.920 Area in hectares		1 Junction Node No020 6.541 6.541 6.541 c.m/s
	113.000 Length (PERV) metres	14	START
	.200 Gradient (%) 65.000 Per cent Impervious	35	1 1=Zero; 2=Define COMMENT
	113.000 Length (IMPERV)		<pre>3 line(s) of comment</pre>
	.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		******* PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30
	.250 Manning "n"		******
	74.000 SCS Curve No or C .100 Ia/S Coefficient	4	CATCHMENT 30.000 ID No.6 99999
	8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		8.470 Area in hectares 238.000 Length (PERV) metres
	.279 .217 .211 .000 c.m/s		.200 Gradient (%)
15	.308 .906 .697 C perv/imperv/total ADD RUNOFF		.100 Per cent Impervious 238.000 Length (IMPERV)
13	.279 .486 .211 .000 c.m/s		.000 %Imp. with Zero Dpth
35	COMMENT 3 line(s) of comment		1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"
	******		74.000 SCS Curve No or C
	FIRST AVE FROM QUAKER RD TO CITY OF WELLAND MUNICIPAL BOUNDA		.100 Ia/S Coefficient 8.924 Initial Abstraction
4	CATCHMENT		<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>
	201.000 ID No.6 99999 2.430 Area in hectares		.113 .000 6.541 6.541 c.m/s .308 .906 .309 C perv/imperv/total
	127.000 Length (PERV) metres	15	ADD RUNOFF
	1.000 Gradient (%) 65.000 Per cent Impervious	4	.113 .113 6.541 6.541 c.m/s CATCHMENT
	127.000 Length (IMPERV) .000 %Imp. with Zero Dpth		31.000 ID No.6 99999 10.420 Area in hectares
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		264.000 Length (PERV) metres
	.250 Manning "n" 74.000 SCS Curve No or C		1.000 Gradient (%) 75.000 Per cent Impervious
	.100 Ia/S Coefficient		264.000 Length (IMPERV)
	8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	.344 .486 .211 .000 c.m/s		.250 Manning "n"
15	.308 .898 .692 C perv/imperv/total ADD RUNOFF		74.000 SCS Curve No or C .100 Ia/S Coefficient
	.344 .816 .211 .000 c.m/s		8.924 Initial Abstraction
9	ROUTE .000 Conduit Length		1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 1.743 .113 6.541 6.541 c.m/s
	.000 No Conduit defined		.308 .907 .758 C perv/imperv/total
	.000 Zero lag .000 Beta weighting factor	15	ADD RUNOFF 1.743 1.763 6.541 6.541 c.m/s
	.000 Routing timestep	27	HYDROGRAPH DISPLAY
	0 No. of sub-reaches .344 .816 .816 .000 c.m/s		5 is # of Hyeto/Hydrograph chosen Volume = .6276292E+04 c.m
17	COMBINE	4	CATCHMENT 32.000 ID No.6 99999
	.344 .816 .816 6.402 c.m/s		.690 Area in hectares
35	COMMENT 3 line(s) of comment		68.000 Length (PERV) metres 1.000 Gradient (%)
	**********		60.000 Per cent Impervious
	FLOW D/S OF FIRST AVE CULVERT - OUTLET C		68.000 Length (IMPERV) .000 %Imp. with Zero Dpth
18	CONFLUENCE		<pre>Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>
	1 Junction Node No		.250 Manning "n" 74.000 SCS Curve No or C

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.100
                      Ia/S Coefficient
         8.924
                      Initial Abstraction
                      Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 02 1.763 6.541 6.541 c.m/s 08 .898 .662 C perv/imperv/total
                  .308
15
         ADD RUNOFF
         .102 1.8
HYDROGRAPH DISPLAY
                              1.840
                                             6.541
                                                            6.541 c.m/s
27
         is # of Hyeto/Hydrograph chosen
Volume = .6549078E+04 c.m
10
         POND
         POND
5 Depth - Discharge - Volume sets
178.800 .000 .0
179.300 .0260 1520.0
                           .0440
                                          4649.0
7069.0
                            .414
         180.600
         .414
1.204
Peak Outflow =
Maximum 5
        reak Outflow = .114 c.m/s
Maximum Depth = 180.194 metres
Maximum Storage = .5104 c.m
.102 1.840 ---
                          6.541 c.m/s
17
               Junction Node No.
        .102
START
                              1.840
                                              .114
                                                             6.569 c.m/s
14
                1=Zero; 2=Define
         COMMENT
35
         line(s) of comment
         PROP DEVELOPMENT SOUTH OF SEGMENT 3 - POND P31
         CATCHMENT
                     ID No.6 99999
        33.000
        12,960
                      Area in hectares
Length (PERV) metres
      294.000
                      Gradient (%)
Per cent Impervious
Length (IMPERV)
         1.000
       75.000
      294.000
          .000
                      %Imp. with Zero Doth
           .250
                      Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
                      Manning "n"
SCS Curve No or C
        74.000
                      Ia/S Coefficient
Initial Abstraction
          .100
         8.924
                Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 2.171 .000 .114 6.569 c.m/s .308 .910 .759 C perv/imperv/total
        ADD RUNOFF
2.171
15
         HYDROGRAPH DISPLAY
27
         is # of Hyeto/Hydrograph chosen
Volume = .5876996E+04 c.m
CATCHMENT
                      Area in hectares
          .660
                      Length (PERV) metres
Gradient (%)
Per cent Impervious
        66.000
         1.000
        60.000
                      Length (IMPERV)
%Imp. with Zero Dpth
        66.000
          .000
                      Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
                      Manning "n"
SCS Curve No or C
           . 250
        74.000
           . 100
                      Ia/S Coefficient
                       Initial Abstraction
                      Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
                  .098
                              2.171
                                        .114
                                                         6.569 c.m/s
C perv/imperv/total
         ADD RUNOFF
15
        ADD RUNOFF
.098 2.245 .114
HYDROGRAPH DISPLAY
5 is # of Hyeto/Hydrograph chosen
Volume = .6138025E+04 c.m
                                                             6.569 c.m/s
10
         POND
        6 Depth - Discharge - Volume sets
                    .000
         178.300
                                          .0
1927.0
         178.900
         179.600
                           .0540
                                          4692.0
                          .150
         180.000
                             .321
                                          6538.0
         180.300 1.922 8059.0
Peak Outflow = .107 c.m/s
Maximum Depth = 179.709 metres
         Maximum Storage = 5.098 2.245
COMBINE
                                      5183. c.m
17
             Junction Node No.
        .098
START
14
                1=Zero; 2=Define
         CONFLUENCE
18
       1 Junction Node No.
        .098 6.606
COMMENT
35
         3 line(s) of comment
         REALIGNED CHANNEL - SEGMENT 3
         CATCHMENT
      302.000
                     TD No. 6 99999
                      Area in hectares
Length (PERV) metres
         1.610
      104.000
       .200
10.000
                      Gradient (%)
Per cent Impervious
                      Length (IMPERV)
      104.000
                      %Imp. with Zero Dpth
Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
          .000
           . 250
                      Manning "n"
SCS Curve No or C
       74.000
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.100
                Ia/S Coefficient
      8.924
                Initial Abstraction
                Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
                    6.606
                                .107 .000 c.m/s
.368 C perv/imperv/total
             .308
                       .901
      COMMENT
      3 line(s) of comment
      FLOW U/S OF NIAGARA ST CULVERT - OUTLET D
15
      ADD RUNOFF
      .043
START
                       6.649
                                   .107
                                              .000 c.m/s
14
           1=Zero; 2=Define
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35	COMMENT						32.000		(PERV) met	res		
	3 line	e(s) of comment	*********	******	****		1.000 L0.000	Gradien	t (%) t Impervio			
	100-YEAR	STORM EVENT					32.000		(IMPERV)	ub		
			******	******	****		.000		ith Zero D	pth		
2	STORM						1			; 2=Horton	n; 3=Green-Ampt	; 4=Repeat
	1		f;3=User;4=C	dn1hr;5=Historic		_	.250	Manning				
	1020.000 4.700	Coefficient a	(min)			7	74.000 .100		ve No or C efficient			
	.731	Exponent c	(11111)				8.924		Abstracti	on		
	.450	Fraction to pea	ık r				1				nglr; 3=SWM HYD	; 4=Lin. Reserv
	240.000	Duration ó 240						054	.735	1.832	1.832 c.m/s	
			otal depth					367	.912	.422	C perv/imperv	/total
3	IMPERVIOU 1		I/C. 2=Worton	; 3=Green-Ampt; 4=R		15	ADD RUNO	FF 054	.783	1.832	1.832 c.m/s	
	.015	Manning "n"	V/C, Z-HOICOII	, 3-Green-Ampc, 4-A		10	POND .	034	.703	1.032	1.032 C.M/S	
	98.000	SCS Curve No or	. c					Discharge	e - Volume	sets		
	.100	Ia/S Coefficier					184.800	.0	00	.0		
	.518	Initial Abstrac	tion				185.750	.02		1.0		
35	COMMENT 3 line	e(s) of comment					186.000 186.250	.02		03.0 91.0		
		*******					186.500	.02		65.0		
	EXISTING	RES. WEST OF SEC	MENT 1				186.700	1.2		70.0		
	******	*****					Peak Out			c.m/s		
4	CATCHMENT						Maximum :					
	1.000	ID No.6 99999						Storage =				
	17.520	Area in hectare				17	COMBINE	054	.783	.105	1.832 c.m/s	
	343.000 1.000	Length (PERV) m Gradient (%)	netres			1/		ction Node	o No			
	35.000	Per cent Imperv	rious			-		054	.783	.105	1.857 c.m/s	
	343.000	Length (IMPERV)				14	START					
	.000	%Imp. with Zero	Dpth			1	1=Z	ero; 2=De:	fine			
	1		I/C; 2=Horton	; 3=Green-Ampt; 4=R	epeat		CONFLUEN					
	.250	Manning "n"	_			1		ction Nod				
	74.000 .100	SCS Curve No or Ia/S Coefficier				35	COMMENT	054	1.857	.105	.000 c.m/s	
	8.924	Initial Abstrac				33		e(s) of c	omment.			
	1			glr; 3=SWM HYD; 4=L	in. Reserv			*****				
	1.7		.000	.000 c.m/s			REALIGNE	D CHANNEL	- SEGMENT	1		
		368 .925	.563	C perv/imperv/tota	1			******				
15	ADD RUNOE						CATCHMEN					
35	1.7	731 1.731	.000	.000 c.m/s		10	.610	ID No.ó	hectares			
35	COMMENT 3 line	e(s) of comment				6	54.000		(PERV) met	res		
	******						1.000	Gradien		165		
	REALIGNED	CHANNEL - SEGME	ENT 1				10.000		t Impervio	us		
	******	******					54.000		(IMPERV)			
4	CATCHMENT						.000		ith Zero D			
	100.000	ID No.6 99999					1			; 2=Horton	n; 3=Green-Ampt	; 4=Repeat
	2.020	Area in hectare				_	.250	Manning				
	116.000	Length (PERV) m	netres			7	74.000		ve No or C			
	.400	Gradient (%)					.100 8.924		efficient Abstracti			
							8.924	Initial	ADSTRACTI	on		
	15.000	Per cent Imperv					1	Ontion	1-Trianglr	· 2=Pectar	oglr. 3=SWM HVD	· 4=Tin Pegeru
	116.000	Length (IMPERV))				1					; 4=Lin. Reserv
		Length (IMPERV) %Imp. with Zero	Dpth	; 3=Green-Ampt; 4=R	epeat		-	038	1=Trianglr 1.857 .914	.105	.000 c.m/s	
	116.000 .000 1 .250	Length (IMPERV) %Imp. with Zero Option 1=SCS CN Manning "n"	Dpth N/C; 2=Horton	; 3=Green-Ampt; 4=R		15	ADD RUNO	038 367 FF	1.857 .914	.105 .422	.000 c.m/s C perv/imperv	
	116.000 .000 1 .250 74.000	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS Curve No or	Dpth N/C; 2=Horton	; 3=Green-Ampt; 4=R			ADD RUNO	038 367 FF	1.857	.105	.000 c.m/s	
	116.000 .000 1 .250 74.000	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficien	Dpth J/C; 2=Horton C	; 3=Green-Ampt; 4=R			ADD RUNO	038 367 FF 038	1.857 .914 1.890	.105 .422	.000 c.m/s C perv/imperv	
	116.000 .000 1 .250 74.000 .100 8.924	Length (IMPERV) %Imp. with Zero Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac	Dpth J/C; 2=Horton C C ction				ADD RUNO	038 367 FF 038	1.857 .914 1.890 Length	.105 .422 .105	.000 c.m/s C perv/imperv	
	116.000 .000 1 .250 74.000 .100 8.924	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Triang	Dpth N/C; 2=Horton C nt ttion ylr; 2=Rectan	glr; 3=SWM HYD; 4=1			ADD RUNO ROUTE .000	038 367 FF 038 Conduit No Cond	1.857 .914 1.890 Length uit define	.105 .422 .105	.000 c.m/s C perv/imperv	
	116.000 .000 1 .250 74.000 .100 8.924 1	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Triang	D Dpth N/C; 2=Horton C C nt ttion glr; 2=Rectan .000	glr; 3=SWM HYD; 4=L	in. Reserv		ADD RUNO ROUTE .000 .000	038 367 FF 038 Conduit No Conduit Zero las	1.857 .914 1.890 Length uit define	.105 .422 .105	.000 c.m/s C perv/imperv	
35	116.000 .000 1 .250 74.000 .100 8.924 1	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Triang	Dpth N/C; 2=Horton C nt ttion ylr; 2=Rectan	glr; 3=SWM HYD; 4=1	in. Reserv		ADD RUNO ROUTE .000	038 367 FF 038 Conduit No Conduit Zero lag	1.857 .914 1.890 Length uit define	.105 .422 .105	.000 c.m/s C perv/imperv	
35	116.000 .000 1 .250 74.000 .100 8.924 1 .3 .COMMENT 3 line	Length (IMPERV) %Imp. with Zerc Option 1=SCS CM Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment	D Dpth N/C; 2=Horton C C nt ttion glr; 2=Rectan .000	glr; 3=SWM HYD; 4=L	in. Reserv		ADD RUNO ROUTE .000 .000 .000	038 367 FF 038 Conduit No Cond Zero la Beta we Routing	1.857 .914 1.890 Length uit define g ighting fa	.105 .422 .105	.000 c.m/s C perv/imperv	
35	116.000 .000 .000 1 .250 74.000 .100 8.924 1 .3 COMMENT 3 line	Length (IMPERV) %Imp. with Zerc Option 1=SCS CM Manning "n" SCS Curve No or Is/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment	o Dpth N/C; 2=Horton C C ttion ylr; 2=Rectan .000 .448	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9	ADD RUNO ROUTE .000 .000 .000 .000	038 367 FFF 038 Conduit No Conduit Zero lag Beta we Routing No. of	1.857 .914 1.890 Length uit defines g ighting fatimestep	.105 .422 .105	.000 c.m/s C perv/imperv	
35	116.000 .000 1 .250 74.000 .100 8.924 1 .1 .3 .COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 168 .905 e(s) of comment ************************************	o Dpth N/C; 2=Horton C C ttion ylr; 2=Rectan .000 .448	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000	038 367 FF 038 Conduit No Cond Zero la Beta we Routing No. of	1.857 .914 1.890 Length uit define g ighting fa timestep sub-reache 1.890	.105 .422 .105 d	.000 c.m/s C perv/imperv .000 c.m/s	
	116.000 .000 1 .250 74.000 .100 8.924 1 .3 COMMENT 3 line	Length (IMPERV) %Imp. with Zerc Option 1=SCS CM Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 e(s) of comment ************************************	o Dpth N/C; 2=Horton C C ttion ylr; 2=Rectan .000 .448	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9	ADD RUNO. ROUTE .000 .000 .000 .000 .000 .000 .000 .0	038 367 FF 038 Conduit No Conduit Zero lae Beta we. Routing No. of 1038 ction Node	1.857 .914 1.890 Length uit define g ighting fa timestep sub-reache 1.890 e No.	.105 .422 .105 d ector	.000 c.m/s C perv/imperv .000 c.m/s	
35	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Trians 101 1.731 368 .905 e(s) of comment ************************************	o Dpth 1/C; 2=Horton C C at tition JI; 2=Rectan .000 .448	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9 17 1	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000 .000 .0	038 367 FF 038 Conduit No Conduit Zero lae Beta we. Routing No. of 1038 ction Node	1.857 .914 1.890 Length uit define g ighting fa timestep sub-reache 1.890	.105 .422 .105 d	.000 c.m/s C perv/imperv .000 c.m/s	
15	116.000 .000 1 .250 74.000 .100 8.924 1 .1 .2 .2 .2 .2 .3 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1	Length (IMPERV) %Imp. with Zerc Option 1=SCS CM Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 e(s) of comment ************************************	o Dpth N/C; 2=Horton C C ttion ylr; 2=Rectan .000 .448	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9 17 1	ADD RUNO. ROUTE .000 .000 .000 .000 .000 .000 .000 .0	038 367 FF 038 Conduit No Conduit No Conduit Zero la Beta we Routing No. of 038 ction Nod	1.857 .914 1.890 Length uit define gighting fa timestep sub-reache 1.890 e No.	.105 .422 .105 d ector	.000 c.m/s C perv/imperv .000 c.m/s	
	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Trians 101 1.731 368 .905 e(s) of comment ************************************	o Dpth 1/C; 2=Horton C C at tition JI; 2=Rectan .000 .448	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9 17 1 14	ADD RUNO. ROUTE .000 .000 .000 .000 .000 .000 .000 .0	038 367 FF 038 Conduit No Conduit Zero lae Beta we. Routing No. of 1038 ction Node	1.857 .914 1.890 Length uit define gighting fa timestep sub-reache 1.890 e No.	.105 .422 .105 d ector	.000 c.m/s C perv/imperv .000 c.m/s	
15	116.000 .000 1 .250 74.000 .100 8.924 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Trians 101 1.731 168 .905 a(s) of comment ************************************	o Dpth A/C; 2=Horton C C at stion flr; 2=Rectan .000 .448 ERT - SEGMENT	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9 17 1 14	ADD RUNC ROUTE	038 367 FF 038 Conduit No Conduit No Conduit Zero la Beta we Routing No. of 038 ction Nod	1.857 .914 1.890 Length nit define grighting fa timestep sub-reache 1.890 e No. 1.890	.105 .422 .105 d ector	.000 c.m/s C perv/imperv .000 c.m/s	
15	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS CURVE No Or Ia/S Coefficier Initial Abstrac Option 1=Trians 101 1.731 368 .905 a(s) of comment ************************************	o Dpth 1/C; 2=Horton C C at tition July 2=Rectan .000 .448 RRT - SEGMENT .000	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9 17 14 135 3	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000 .000 .0	038 Conduit No Condi Zero la: Beta we. Routing No. of :038 ction Nod. 038 ero; 2=De: e(s) of conduit	1.857 .914 1.890 Length uit define glighting fa timestep sub-reache 1.890 e No. 1.890 fine comment	.105 .422 .105 d ctor s 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15	116.000 .000 1 .250 74.000 8.924 1 .3 COMMENT 3 line ************************************	Length (IMPERV) % Imp. with Zerc Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 168 .905 a(s) of comment ************************************	o Dpth A/C; 2=Horton C C Attition JIr; 2=Rectan .000 .448 ERT - SEGMENT .000 .000	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9 17 14 135 3	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000 .000 .0	038 Conduit No Conduit Zero la. Beta we. Routing No. of: 038 ero; 2=De: e(s) of conduit ELOPMENT:	1.857 .914 1.890 Length nit define grighting fa timestep sub-reache 1.890 e No. 1.890	.105 .422 .105 d ctor s 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15	116.000 .000 1 .250 74.000 .100 8.924 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CM Manning "n" SCS CURVE No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ************************************	o Dpth 1/C; 2=Horton C C strition plr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9 17 1 14 135 3	ADD RUDTE .000 .000 .000 .000 .000 .000 .000 .0	038 Conduit No Condi Zero la, Beta we. Routing No. of :038 ction Nod:038 ero; 2=De: e(s) of c. ************************************	1.857 .914 1.890 Length uit define glighting fa timestep sub-reache 1.890 e No. 1.890 fine comment	.105 .422 .105 d ctor s 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS CURVE NO OR Ia/S Coefficier Initial Abstrac Option 1=Trians 101 1.731 368 .905 a(s) of comment ************************************	o Dpth 1/C; 2=Horton C C at tition glr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor pp	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9 17 1 14 135 3	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000 .000 .0	038 Conduit No Conduit No Conduit Zero la Beta we. Routing No. of 038 ction Nod 038 ero; 2=De: e(s) of c. ************************************	1.857 .914 1.890 Length mit define graph of the street of	.105 .422 .105 d ctor s 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15 9	116.000 .000 .1 .250 74.000 .100 8.924 .1 .3: COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CM Manning "n" SCS CURVE No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ************************************	o Dpth 1/C; 2=Horton C C strition plr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9 17 1 14 1 35 3	ADD RUNC ROUTE .000 .000 .000 .000 .000 .000 .000 .00	038 Conduit No Condi Zero la. Beta we. Routing No. of : 038 ction Nodo 038 ction Nodo 038 ction f c. ************************************	1.857 .914 1.890 Length mit define graph of the street of	.105 .422 .105 d ctor s 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 lime ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS CURVE NO OR Ia/S Coefficier Initial Abstrac Option 1=Trians 101 1.731 368 .905 a(s) of comment ************************************	o Dpth 1/C; 2=Horton C C at tition glr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor pp	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9 17 1 14 1 35 3 4 1	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000 .000 .0	038 Conduit No Conduit No Conduit Zero la: Beta we: Routing No. of: 038 ction Nod: 038 ero; 2=De: ************************************	1.857 .914 1.890 Length nit defined of timestep sub-reachell.890 e No. 1.890 fine comment south OF S	.105 .422 .105 d ctor s 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15 9 17	116.000 .000 1 .250 74.000 .100 8.924 1 .3 COMMENT 3 line ********** ADD RUNOF .000 .000 .000 .000 .000 .000 .000 .0	Length (IMPERV) %Imp. with Zero Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Trians 101 1.731 368 .905 a(s) of comment ********* FUT ROADWAY CULVE ********* FF 101 1.832 Conduit Length No Conduit defi Zero lag Beta weighting Routing timeste No. of sub-reac 101 1.832	o Dpth 1/C; 2=Horton C C at tition glr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor pp	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota	in. Reserv 1	9 17 14 35 3 4 1 13	ADD RUND ROUTE .000 .000 .000 .000 .000 .000 .000 .0	O38 Conduit No Condi Zero la. Beta we Routing No. of : 038 ction Nod 038 ction Nod 038 ction Sod The state of the stat	1.857 .914 1.890 Length nit defines gighting fa timestep sub-reache 1.890 e No. 1.890 fine comment SOUTH OF S. 99999 hectares (PERV) mett t (%)	.105 .422 .105 d ctor s 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15 9	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS CURVE NO OR Ia/S Coefficier Initial Abstrac Option 1=Trians 101 1.731 368 .905 a(s) of comment ************************************	o Dpth 4/C; 2=Horton c C it ition flr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor pp thes 1.832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s	in. Reserv 1	9 17 14 135 3 4 1 13 3 3	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000 .000 .0	038 Conduit No Condi Zero la Beta we. Routing No. of 038 ction Nod 038 ero; 2=De: ELOPMENT T ID No.ó Area in Length Gradien Per cen	1.857 .914 1.890 Length uit define gighting fa timestep sub-reache 1.890 e No. 1.890 fine comment SOUTH OF S 99999 hectares (PERV) met t (%)	.105 .422 .105 d ctor s 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15 9 17	116.000 .000 .1 .250 74.000 .100 8.924 .1 .3: COMMENT 3 line ******** ADD RUNOE .000 .000 .000 .000 .000 .000 .000 .0	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Trians 101 1.731 168 .905 a(s) of comment ************************************	o Dpth 4/C; 2=Horton c C it ition flr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor pp thes 1.832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s	in. Reserv 1	9 17 14 135 3 4 1 13 3 3	ADD RUND ROUTE .000 .000 .000 .000 .000 .000 .000 .0	038 Conduit No Conduit No Conduit No Conduit Sero la Beta we. Routing No. of : 038 ero; 2=De: e(s) of conduit ************************************	1.857 .914 1.890 Length nit defined of the state of the	.105 .422 .105 d ctor s 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	
15 9 17	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zero Option 1=SCS CN Manning "n" SCS CURVE No Or Ia/S Coefficier Initial Abstrac Option 1=Trians 101 1.731 368 .905 36(s) of comment ********* FUT ROADWAY CULVE ********* FF 101 1.832 Conduit Length No Conduit defi Zero lag Beta weighting Routing timeste No. of sub-reac 101 1.832 ction Node No. 101 1.832 aro; 2=Define	o Dpth 4/C; 2=Horton c C it ition flr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor pp thes 1.832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s	in. Reserv 1	9 17 14 135 3 4 1 13 3 3	ADD RUND ROUTE .000 .000 .000 .000 .000 .000 .000 .0	038 Conduit No Conduit No Conduit Zero la: Beta we. Routing No. of : 038 ction Nod: 038 ero; 2=De: ELOPMENT: T ID No.6 Area in Length Gradien Per cent Length % Imp. w.	1.857 .914 1.890 Length nit define gighting fa timestep sub-reache 1.890 e No. 1.890 fine comment SOUTH OF S 99999 hectares (PERV) mett t (%) t Impervio (IMPERV) ith Zero D	.105 .422 .105 d d ctor s 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s	/total
15 9 17	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS CURVE No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 168 .905 e(s) of comment ************************************	o Dpth 4/C; 2=Horton c C it ition flr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor pp thes 1.832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s	in. Reserv 1	9 17 14 135 3 4 1 13 3 3	COMBINE 1=2 COMMENT 1 START 1 S Lin. ************************************	038 Conduit No Conduit No Conduit No Conduit Sero la Beta we Routing No. of 038 ero; 2=De: ELOPMENT T T T T T T T T T T T T T T T T T T	1.857 .914 1.890 Length pit defines gighting fa timestep sub-reache 1.890 e No. 1.890 fine comment SOUTH OF S 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Zero D L=SCS CN/C	.105 .422 .105 d d ctor s 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s	/total
15 9 17	116.000 .000 .1 .250 74.000 .100 8.924 .1 .3 .COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zero Option 1=SCS CM Manning "n" SCS CURVE No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ************************************	Dopth 1/C; 2=Horton C C tt ttion plr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor sp thes 1.832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s	in. Reserv 1	9 17 1 14 35 3 4 1 13 3 13	ADD RUND ROUTE .000 .000 .000 .000 .000 .000 .000 .0	O38 Conduit No Condi Zero la. Beta we. Routing No. of : 038 ction Nod 038 ction Nod 038 ction Nod 038 T I D No. ó Area in Length Gradien Per cen Length %Imp. w Option Manning	1.857 .914 1.890 Length nit define- grighting fatimestep sub-reache 1.890 e No. 1.890 fine comment SOUTH OF S 99999 hectares (PERV) metic (PERV) metic (TMPERV) ith Zero D 1=SCS CN/C "n"	.105 .422 .105 d ctor s 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s	/total
15 9 17	116.000 .000 .1 .250 74.000 .100 8.924 .1 .3 .COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS CURVE NO OR Ia/S Coefficier Initial Abstrac Option 1=Trians 101 1.731 368 .905 a(s) of comment ************************************	Dopth 1/C; 2=Horton C C tt ttion plr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor sp thes 1.832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s	in. Reserv 1	9 17 1 14 35 3 4 1 13 3 13	COMBINE 1=2 COMMENT 1 START 1 S Lin. ************************************	038 Conduit No Conduit No Conduit No Conduit Sero la Beta we. Routing No. of 038 ction Nod 038 ero; 2=De: ELOPMENT ********* T ID No.6 Area in Length Gradien Per cen Length %Imp. w Option Manning SCS Cur	1.857 .914 1.890 Length pit defines gighting fa timestep sub-reache 1.890 e No. 1.890 fine comment SOUTH OF S 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Zero D L=SCS CN/C	.105 .422 .105 d ctor s 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s	/total
15 9 17	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zero Option 1=SCS CN Manning "n" SCS CURVE No or Ia/S Coefficier Initial Abstrac Option 1=Trians 101 1.731 368 .905 a(s) of comment ********* FUT ROADWAY CULVE ********* FOO 1 1.832 Conduit Length No Conduit defit Zero lag Beta weighting Routing timeste No. of sub-reac 101 1.832 ction Node No. 101 1.832 ction Node No. 101 1.832 cro; 2=Define a(s) of comment ********** ELOPMENT NORTH OF *********** ************************	Dopth 1/C; 2=Horton C C tt ttion plr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor sp thes 1.832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s	in. Reserv 1	9 17 14 35 3 4 1 13 3 13	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000 .000 .0	038 Conduit No Conduit No Conduit Zero la: Beta we. Routing No. of: 038 ction Nod: 038 ero; 2=De: ELOPMENT: T ID No.6 Area in Length Gradien Per cent Length %Imp. w Option Manning SCS Cur- Ia/S Co- Initial	1.857 .914 1.890 Length nit define gighting fa timestep sub-reache 1.890 e No. 1.890 fine comment SOUTH OF S 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Zero D 1=SCS CN/C "n" ve No or C efficient Abstracti	.105 .422 .105 d d ctor s 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s 1.890 c.m/s	/total
15 9 17 14 35	116.000 .000 1 .250 74.000 .100 8.924 1 1 .2 COMMENT 3 line ********** ADD RUNOR .000 .000 .000 .000 .000 .000 .000 .0	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS CURVE NO OR Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ************************************	o Dpth 4/C; 2=Horton c C at tition glr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor EP thes 1.832 1.832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s	in. Reserv 1	9 17 14 35 3 4 1 13 3 13	ADD RUND ROUTE .000 .000 .000 .000 .000 .000 .000 .0	O38 Conduit No Conduit No Conduit No Conduit No Conduit Sero la Beta we Routing No. of O38 ero; 2=De: e(s) of ce ************************************	1.857 .914 1.890 Length uit defined grighting farent in the step sub-reache 1.890 e No. 1.890 fine comment SOUTH OF S. 99999 hectares (PERV) metter (%) to Impervio (IMPERV) ith Zero D. 1-SCS CN/C "n" ve No or Cefficient Abstracti-eTrianglr	.105 .422 .105 d ctor s 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s - POND P11	/total
15 9 17 14 35	116.000 .000 1 .250 74.000 .100 8.924 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CM Manning "n" SCS CURVE No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ************************************	Dopth 1/C; 2=Horton C C tt ttion plr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor pp thes 1.832 1.832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s	in. Reserv 1	9 17 14 35 3 4 1 13 3 13	ADD RUND ROUTE .000 .000 .000 .000 .000 .000 .000 .0	O38 Conduit No Conduit No Conduit No Conduit No Conduit Cero la Beta we Routing No. of : 038 ction Node 038 ction Node 038 ction Node 038 Tion Node 048 Tion Node 048 Tion Node 048 Tion Node 048 Tion Node 058 Tion Node 068 Tion Node 068	1.857 .914 1.890 Length nit defined of the state of the s	.105 .422 .105 d ctor s 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 .COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS CURVE NO OR IA/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ********* FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ********* FOOT 1.832 Conduit Length No Conduit defi Zero lag Beta weighting Routing timeste No. of sub-reac 101 1.832 ction Node No. 101 1.832 aro; 2=Define a(s) of comment ********** ELOPMENT NORTH OF ********** I D No.6 99999 Area in hectare Length (PERV) in	Dopth 1/C; 2=Horton C C tt ttion plr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor pp thes 1.832 1.832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s	in. Reserv	9 17 14 135 3 4 1 13 3 7	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000 .000 .0	O38 Conduit No Conduit No Conduit No Conduit No Conduit Sero la Beta we. Routing No. of 038 ction Nod 038 ction Nod 038 ction Nod 048 ction Nod 058 ction Nod 068 ct	1.857 .914 1.890 Length uit defined grighting farent in the step sub-reache 1.890 e No. 1.890 fine comment SOUTH OF S. 99999 hectares (PERV) metter (%) to Impervio (IMPERV) ith Zero D. 1-SCS CN/C "n" ve No or Cefficient Abstracti-eTrianglr	.105 .422 .105 d ctor s 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s - POND P11	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924 .1 .3	Length (IMPERV) %Imp. with Zerc Option 1=SCS CM Manning "n" SCS CURVE No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ************************************	o Dpth 1/C; 2=Horton 1/C; 2=Horton 1/C; 2=Horton 1/C; 2=Rectan 1,000 1,448 ERT - SEGMENT 1,000 Ined 1,832 1,832 1,832 7 SEGMENT 1 -	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s	in. Reserv	9 17 14 135 3 4 1 13 3 7	ADD RUND ROUTE ADD RUND ROUTE ROUTE ROUTE	O38 Conduit No Conduit No Conduit No Conduit No Conduit Cero la Beta we Routing No. of O38 ction Nod Oarea in Length % Imp. w Option Manning SCS Cur Ia/S Co Initial Option C262 Option C262 S67 FFF	1.857 .914 1.890 Length nit define- grighting fa timestep sub-reache 1.890 e No. 1.890 fine comment SOUTH OF S. 99999 hectares (PERV) met- tt (%) tt Impervio (IMPERV) ith Zero D. 1-SCS CN/C "n" ve No or C efficient Abstracti 1-trianglr .000 .914	.105 .422 .105 d ctor s 1.890 1.890 egment 1 -	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s - POND P11 n; 3=Green-Ampt nglr; 3=SWM HYD 1.890 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS CURVE No or Ia/S Coefficier Initial Abstrac Option 1=Trians 101 1.731 368 .905 a(s) of comment ********* FUT ROADWAY CULVE ********* FUT ROADWAY CULVE TO 1 1.832 Conduit Length No Conduit defit Zero lag Beta weighting Routing timeste No. of sub-reac 101 1.832 ction Node No. 102 1.832 ction Node No. 103 1.8	o Dpth 1/C; 2=Horton 1/C; 2=Ho	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s	in. Reserv	9 17 1 14 135 3 4 1 13 3 13	ADD RUNO ROUTE	038 Conduit No Conduit No Conduit Terp 1038 Conduit Sero la Beta we Routing No. of 038 ction Nod 038 ero; 2=De 1038 ero; 2=De 105 10 No. ó Area in Length Gradien Per cen Per cen Length Manning SCS Cur Ia/S Co Initial Option 262 367 FFF	1.857 .914 1.890 Length nit defined of the state of the s	.105 .422 .105 d ctor s 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ********** FUT ROADWAY CULVE ********* FF 101 1.832 Conduit Length No Conduit defi Zero lag Beta weighting Routing timeste No. of sub-reac 101 1.832 ction Node No. 101 1.832 ero; 2=Define a(s) of comment ********* ID No.6 99999 Area in hectare Length (PERV) in Gradient (%) Per cent Imperv Length (IMPERV) Great Imperv Length (IMPERV) Great Imperv Length (IMPERV) Fer cent Imperv Length (IMPERV) Fer cent Imperv Length (IMPERV)	o Dpth 4/C; 2=Horton 7/C; 2=Ho	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s	in. Reserv	9 17 14 15 3 4 1 13 7 15	ADD RUND ROUTE ADD RUND ROUTE ROUTE ROUTE	O38 Conduit No Conduit No Conduit No Conduit No Conduit Sero la Beta we Routing No. of O38 ero; 2=De: e(s) of ce ************************************	1.857 .914 1.890 Length uit defined of the second of the s	.105 .422 .105 d ctor s 1.890 1.890 egment 1 -	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s - POND P11 n; 3=Green-Ampt nglr; 3=SWM HYD 1.890 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CM Manning "n" SCS CURVE No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ************************************	o Dpth 1/C; 2=Horton C C tt ttion plr; 2=Rectan .000 .448 ERT - SEGMENT .000 ined factor pp thes 1.832 1.832 7 SEGMENT 1 -	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s	in. Reserv	9 17 14 35 3 4 1 13 7 15 4 1	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000 .000 .0	O38 Conduit No Conduit No Conduit No Conduit Caro lai Beta we. Routing No. of : 038 ction Node 038 ction Node 038 ction Node 038 ro; 2=De: e(s) of ce ************************************	1.857 .914 1.890 Length uit defined of the second of the s	.105 .422 .105 d ctor s 1.890 1.890 egment 1 -	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s - POND P11 n; 3=Green-Ampt nglr; 3=SWM HYD 1.890 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
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15 9 17 14 35	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CM Manning "n" SCS CURVE No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ********* FUT ROADWAY CULVE ********** FUT ROADWAY CULVE TO 1 1.832 Conduit Length No Conduit defit Zero lag Beta weighting Routing timeste No. of sub-reac 101 1.832 ction Node No. 102 1.832 ction Node No. 103 1.832 ction Node No. 101 1.832 ction Node No. 102 1.832 ction Node No. 103 1.	o Dpth 1/C; 2=Horton 1/C; 2=Horton 1/C; 2=Rectan 1,000 1,448 ERT - SEGMENT 1,000 Ined 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s 1.832 c.m/s	in. Reserv	9 17 1 14 35 3 4 1 13 3 13 7 15 4 1 21	ADD RUNO ROUTE	038 Conduit No Conduit No Conduit No Conduit No Conduit No Conduit Sero la Beta we. Routing No. of : 038 ero; 2=De: e(s) of cr ************************************	1.857 .914 1.890 Length nit define gighting fa timestep sub-reache 1.890 e. No. 1.890 fine comment SOUTH OF S 99999 hectares (PERV) mett t (%) t Impervio (IMPERV) ight Zero D 1=SCS CN/C "n" ve No or C efficient Abstract 1=Trianglr .000 .914 .262 99999 hectares (PERV) mett t t (%)	.105 .422 .105 d d ctor s 1.890 1.890 egment 1 -	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s - POND P11 n; 3=Green-Ampt nglr; 3=SWM HYD 1.890 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS CUTVE NO OR IA/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 e(s) of comment ********* FUT ROADWAY CULVE ********* ******* ****** ****** ******	o Dpth 1/C; 2=Horton 1/C; 2=Horton 1/C; 2=Horton 1/C; 2=Rectan 1,000 1,448 RRT - SEGMENT 1,000 Ined 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s 1.832 c.m/s	in. Reserv	9 17 14 135 3 4 1 13 7 15 4 1 21	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000 .000 .0	O38 Conduit No Conduit No Conduit No Conduit No Conduit No Conduit Sero la Beta we Routing No. of 038 ction Nod 048 ction Nod 058 ction Nod 068 ction Nod 068 ction Nod 068 ction Nod 078 ction N	1.857 .914 1.890 Length uit defined of the series of the s	.105 .422 .105 d d ctor s 1.890 1.890 egment 1 -	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s - POND P11 n; 3=Green-Ampt nglr; 3=SWM HYD 1.890 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 1 .250 74.000 .100 8.924 1 .3 COMMENT 3 line ********* ADD RUNOF .000 .000 .000 .000 .000 .000 .000 .0	Length (IMPERV) %Imp. with Zerc Option 1=SCS CM Manning "n" SCS CUTVE No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ************************************	o Dpth 1/C; 2=Horton 1/C; 2=Rectan 2000 448 ERT - SEGMENT .000 ined factor 1.832 1.832 1.832 5 SEGMENT 1 - 28 aetres rious 0 Dpth 1/C; 2=Horton 1/C; 2=	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s 1.832 c.m/s POND P10	in. Reserv	9 17 14 135 3 4 1 13 7 15 4 1 21	ADD RUNG ROUTE .000 .000 .000 .000 .000 .000 .000 .0	O38 Conduit No Conduit No Conduit No Conduit Caro lai Beta we Routing No. of : 038 ction Nod 046 Area in Length 0ption : 262 367 To To Length Gradien Per cen Length Gradien Per cen Length Gradien Per cen Length Length Cradien Per cen Length Length Cradien Per cen Length	1.857 .914 1.890 Length nit define- grighting fatimestep grows and timestep l.890 e No. 1.890 fine comment SOUTH OF S 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Zero D efficient Abstracti 1-Trianglr .000 .914 .262 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Jero D efficient Abstracti 1-Trianglr .000 .914 .262 99999 hectares (PERV) met t (%) t Impervio (IMPERV)	.105 .422 .105 d ctor s 1.890 1.890 egment 1 -	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s - POND P11 n; 3=Green-Ampt nglr; 3=SWM HYD 1.890 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv
15 9 17 14 35	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS CURVE No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ******** FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ******** FOOT 1.832 Conduit Length No Conduit defit Zero lag Beta weighting Routing timeste No. of sub-reac 101 1.832 ction Node No. 101 1.832 ero; 2=Define aro; 2=Define aro; 2=Define ********* FI ID No.6 99999 Area in hectare Length (PERV) in Gradient (%) Per cent Imperv Length (IMPERV) %Imp. with Zerc Option 1=SCS CU Manning "n" SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Triang SCS Curve No or Ia/S Coefficier Initial Abstrac Option 1=Triang	o Dpth 1/C; 2=Horton 1/C; 2=Horton 1/C; 2=Horton 1/I; 2=Rectan 1,000 1,448 ERT - SEGMENT 1,000 Ined 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s 1.832 c.m/s POND P10 .; 3=Green-Ampt; 4=R	in. Reserv	9 17 14 135 3 4 1 13 7 15 4 1 21	ADD RUNO ROUTE	O38 Conduit No Conduit No Conduit No Conduit No Conduit Sero la Beta we. Routing No. of 038 ero; 2=De: e(s) of c. ************************************	1.857 .914 1.890 Length int define of the series of the s	.105 .422 .105 d d ctor s 1.890 1.890 1.890 cgment 1.890 on ; 2=Rectan 1.890 .559 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s - POND P11 n; 3=Green-Ampt nglr, 3=SWM HYD 1.890 c.m/s C perv/imperv 1.890 c.m/s	/total ; 4=Repeat ; 4=Lin. Reserv /total
15 9 17 14 35	116.000 .000 .1 .250 74.000 .100 8.924 .1 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3	Length (IMPERV) %Imp. with Zerc Option 1=SCS CM Manning "n" SCS CULYE No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ************************************	o Dpth 1/C; 2=Horton 1/C; 2=Horton 1/C; 2=Horton 1/C; 2=Rectan 1,000 1,448 ERT - SEGMENT 1,000 Ined factor 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s 1.832 c.m/s POND P10	in. Reserv	9 17 14 135 3 4 1 13 7 15 4 1 21	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000 .000 .0	O38 Conduit No Conduit No Conduit No Conduit No Conduit Caro la Beta we Routing No. of O38 ero; 2=De: e(s) of ce ************************************	1.857 .914 1.890 Length uit define graph in the define graph in the series 1.890 e No. 1.890 fine comment south of S. 99999 hectares (PERV) met the series 1.890 .914 .262 99999 hectares (PERV) met the series 1.890 .914 .262 99999 hectares (PERV) met the series 1.890 .914 .262 99999 hectares (PERV) met the series 1.890 .914 .262 99999 hectares (PERV) met the series 1.890 1.891 1.89	.105 .422 .105 d d ctor s 1.890 1.890 1.890 cgment 1.890 on ; 2=Rectan 1.890 .559 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s - POND P11 n; 3=Green-Ampt nglr; 3=SWM HYD 1.890 c.m/s C perv/imperv	/total ; 4=Repeat ; 4=Lin. Reserv /total
15 9 17 14 35	116.000 .000 1 .250 74.000 .100 8.924 1 1 .3 COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS CUTVE No or Is/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 8(s) of comment ********* FUT ROADWAY CULVE ********** FUT ROADWAY CULVE ********** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ********** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ********** FUT ROADWAY ********* FUT ROADWAY CULVE *********** FUT ROADWAY ********** FUT ROADWAY ********** FUT ROADWAY *********** FUT ROADWAY ************ FUT ROADWAY ************ FUT ROADWAY ************* FUT ROADWAY **	o Dpth 1/C; 2=Horton 1/C; 2=Horton 1/C; 2=Horton 1/I; 2=Rectan 1,000 1,448 ERT - SEGMENT 1,000 Ined 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s 1.832 c.m/s POND P10 .; 3=Green-Ampt; 4=R	in. Reserv	9 17 14 35 3 4 1 13 3 13 7 15 4 1 21	ADD RUNO ROUTE	038 Conduit No Conduit No Conduit No Conduit Sero la Beta we Routing No. of 1038 ction Nod 038 ero; 2=De: E(S) of c: ************************************	1.857 .914 1.890 Length init define gighting fa timestep sub-reache 1.890 e No. 1.890 e No. 1.890 fine comment SOUTH OF S 99999 hectares (PERV) mett t (%) t Impervio (IMPERV) ich Zero D 1-SCS CN/C "n" ve No or C efficient Abstract 1-Trianglr .000 .914 .262 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Zero D 1-SCS CN/C "n" un or C 1-SCS CN/C 1-Trianglr .010 .914 .262 99999 hectares (PERV) met t (%) t Impervio (IMPERV) ith Zero D 1-SCS CN/C "n"	.105 .422 .105 d d ctor s 1.890 1.890 1.890 on ; 2=Rectai 1.890 on ; 2=Rectai 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s - POND P11 n; 3=Green-Ampt nglr, 3=SWM HYD 1.890 c.m/s C perv/imperv 1.890 c.m/s	/total ; 4=Repeat ; 4=Lin. Reserv /total
15 9 17 14 35	116.000 .000 .10 .250 74.000 .100 8.924 .1 .1 .2. COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CN Manning "n" SCS CUTVE No or Is/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 8(s) of comment ********* FUT ROADWAY CULVE ********** FUT ROADWAY CULVE ********** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ******** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ********** FUT ROADWAY CULVE ********* FUT ROADWAY CULVE ********** FUT ROADWAY ********* FUT ROADWAY CULVE *********** FUT ROADWAY ********** FUT ROADWAY ********** FUT ROADWAY *********** FUT ROADWAY ************ FUT ROADWAY ************ FUT ROADWAY ************* FUT ROADWAY **	o Dpth 1/C; 2=Horton 1/C; 2=Horton 1/C; 2=Horton 1/C; 2=Rectan 1,000 1,448 ERT - SEGMENT 1,000 Ined factor 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832 1,832	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s 1.832 c.m/s POND P10	in. Reserv	9 17 14 35 3 4 1 13 3 13 7 15 4 1 21	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000 .000 .0	038 Conduit No Conduit No Conduit No Conduit No Conduit No Conduit Sero la Beta we Routing No. of 038 ction Nod 038 ero; 2=De: e(s) of c ************************************	1.857 .914 1.890 Length uit define graph in the define graph in the series 1.890 e No. 1.890 fine comment south of S. 99999 hectares (PERV) met the series 1.890 .914 .262 99999 hectares (PERV) met the series 1.890 .914 .262 99999 hectares (PERV) met the series 1.890 .914 .262 99999 hectares (PERV) met the series 1.890 .914 .262 99999 hectares (PERV) met the series 1.890 1.891 1.89	.105 .422 .105 d d ctor s 1.890 1.890 1.890 on ; 2=Rectai 1.890 on ; 2=Rectai 1.890 1.890	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s - POND P11 n; 3=Green-Ampt nglr, 3=SWM HYD 1.890 c.m/s C perv/imperv 1.890 c.m/s	/total ; 4=Repeat ; 4=Lin. Reserv /total
15 9 17 14 35	116.000 .000 .10 .250 74.000 .100 8.924 .1 .1 .2. COMMENT 3 line ************************************	Length (IMPERV) %Imp. with Zerc Option 1=SCS CM Manning "n" SCS CURVE No or Ia/S Coefficier Initial Abstrac Option 1=Triang 101 1.731 368 .905 a(s) of comment ************************************	o Dpth 1/C; 2=Horton 1/C; 2=Horton 1/C; 2=Rectan 200 2448 ERT - SEGMENT 200 31.832 32.747	glr; 3=SWM HYD; 4=I .000 c.m/s C perv/imperv/tota 1 .000 c.m/s .000 c.m/s 1.832 c.m/s POND P10 glr; 3=SWM HYD; 4=I 1.832 c.m/s C perv/imperv/tota	in. Reserv	9 17 14 35 3 4 1 13 7 15 4 1 21 7	ADD RUNO ROUTE .000 .000 .000 .000 .000 .000 .000 .0	O38 Conduit No Conduit No Conduit No Conduit No Conduit Sero la Beta we. Routing No. of 038 ero; 2=De: e(s) of c. ************************************	1.857 .914 1.890 Length int define grighting fa timestep sub-reache 1.890 e No. 1.890 fine omment SOUTH OF S. 99999 hectares (PERV) mett t (%) timpervio (IMPERV) int Zero D deficient Abstractient (Impervio (IMPERV) timpervio (IMPERV) timpervio (IMPERV) int Zero D deficient Abstractient (Impervio (IMPERV) int Zero D deficient (Impervio (IMPERV) int Zero D deficient (Impervio (IMPERV) int Impervio (IMPERV) int Zero D deficient (Impervio (IMPERV) int Zero D deficient (Impervio (IMPERV) int Zero D deficient Abstractient Abstractient Abstractient Abstractient (Interviological Imperviological Imperviolo	.105 .422 .105 d d ctor s 1.890 1.890 1.890 egment 1	.000 c.m/s C perv/imperv .000 c.m/s .000 c.m/s .000 c.m/s 1.890 c.m/s - POND P11 n; 3=Green-Ampt 1.890 c.m/s C perv/imperv 1.890 c.m/s	/total ; 4=Repeat ; 4=Lin. Reserv /total

	.368 .908 .746 C perv/imperv/total	74.000 SCS Curve No or C
15	ADD RUNOFF 1.307 1.567 1.890 1.890 c.m/s	.100 Ia/S Coefficient 8.924 Initial Abstraction
4	CATCHMENT	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
=	14.000 ID No.6 99999	2.409 .078 .607 .607 c.m/s
	.670 Area in hectares	.368 .921 .755 C perv/imperv/total
	67.000 Length (PERV) metres	15 ADD RUNOFF
	1.000 Gradient (%) 60.000 Per cent Impervious	2.409 2.475 .607 .607 c.m/s 9 ROUTE
	67.000 Length (IMPERV)	.000 Conduit Length
	.000 %Imp. with Zero Dpth	.000 No Conduit defined
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"	.000 Zero lag .000 Beta weighting factor
	74.000 SCS Curve No or C	.000 Routing timestep
	.100 Ia/S Coefficient	0 No. of sub-reaches
	8.924 Initial Abstraction	2.409 2.475 2.475 .607 c.m/s
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .124 1.567 1.890 1.890 c.m/s	v 17 COMBINE 2 Junction Node No.
	.367 .914 .695 C perv/imperv/total	2.409 2.475 2.475 3.082 c.m/s
15	ADD RUNOFF	14 START
	.124 1.659 1.890 1.890 c.m/s	1 1=Zero; 2=Define
27	HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen	4 CATCHMENT 43.000 ID No.6 99999
	Volume = .5247869E+04 c.m	.330 Area in hectares
10	POND	47.000 Length (PERV) metres
	5 Depth - Discharge - Volume sets	1.000 Gradient (%)
	184.800 .000 .0 185.300 .0140 1142.0	35.000 Per cent Impervious 47.000 Length (IMPERV)
	186.100 .0240 3519.0	.000 %Imp. with Zero Dpth
	186.500 .287 4978.0	<pre>Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>
	186.800	.250 Manning "n" 74.000 SCS Curve No or C
	Maximum Depth = 186.281 metres	.100 Ia/S Coefficient
	Maximum Storage = 4180. c.m	8.924 Initial Abstraction
	.124 1.659 .143 1.890 c.m/s	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>
35	COMMENT 3 line(s) of comment	.039 .000 2.475 3.082 c.m/s .367 .911 .557 C perv/imperv/total
	<pre>3 line(s) of comment ************************************</pre>	.367 .911 .557 C perv/imperv/total 15 ADD RUNOFF
	FLOW U/S OF RICE RD CULVERT - OUTLET A1	.039 .039 2.475 3.082 c.m/s
	********	4 CATCHMENT
17	COMBINE 1 Junction Node No.	44.000 ID No.6 99999 6.400 Area in hectares
	1 Junction Node No124 1.659 .143 1.908 c.m/s	207.000 Length (PERV) metres
14	START	1.000 Gradient (%)
	1 1=Zero; 2=Define	70.000 Per cent Impervious
35	COMMENT 3 line(s) of comment	207.000 Length (IMPERV) .000 %Imp. with Zero Dpth
	**************************************	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	PROP DEVELOPMENT SOUTH OF QUAKER RD & WEST OF RICE RD PON	.250 Manning "n"
	*********	74.000 SCS Curve No or C
4	CATCHMENT 40.000 ID No.6 99999	.100 Ia/S Coefficient 8.924 Initial Abstraction
	8.210 Area in hectares	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
	234.000 Length (PERV) metres	1.193 .039 2.475 3.082 c.m/s
	1.000 Gradient (%)	.368 .906 .744 C perv/imperv/total
	25.000 Per cent Impervious 234.000 Length (IMPERV)	15 ADD RUNOFF 1.193 1.226 2.475 3.082 c.m/s
	.000 %Imp. with Zero Dpth	9 ROUTE
	<pre>Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>	.000 Conduit Length
	.250 Manning "n" 74.000 SCS Curve No or C	.000 No Conduit defined .000 Zero lag
	.100 Ia/S Coefficient	.000 Zero lag .000 Beta weighting factor
	8.924 Initial Abstraction	.000 Routing timestep
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	
	.607 .000 .143 1.908 c.m/s .367 .911 .503 C perv/imperv/total	1.193 1.226 1.226 3.082 c.m/s 17 COMBINE
15	ADD RUNOFF	2 Junction Node No.
	.607 .607 .143 1.908 c.m/s	1.193 1.226 1.226 4.308 c.m/s
9	ROUTE .000 Conduit Length	14 START 1 1=Zero; 2=Define
	.000 Conduit Length .000 No Conduit defined	18 CONFLUENCE
	.000 Zero lag	2 Junction Node No.
	.000 Beta weighting factor	1.193 4.308 1.226 .000 c.m/s
	.000 Routing timestep 0 No. of sub-reaches	4 CATCHMENT 45.000 ID No.6 99999
	.607 .607 1.908 c.m/s	1.030 Area in hectares
17	COMBINE	83.000 Length (PERV) metres
	2 Junction Node No.	1.000 Gradient (%)
14	.607 .607 .607 .607 c.m/s START	60.000 Per cent Impervious 83.000 Length (IMPERV)
	1 1=Zero; 2=Define	.000 %Imp. with Zero Dpth
4	CATCHMENT	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>
	41.000 ID No.6 99999	.250 Manning "n" 74.000 SCS Curve No or C
	.690 Area in hectares 68.000 Length (PERV) metres	.100 Ia/S Coefficient
	1.000 Gradient (%)	8.924 Initial Abstraction
	35.000 Per cent Impervious	<pre>Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>
	68.000 Length (IMPERV) .000 %Imp. with Zero Dpth	.184 4.308 1.226 .000 c.m/s .367 .912 .694 C perv/imperv/total
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat	.367 .912 .694 C perv/imperv/total 15 ADD RUNOFF
	.250 Manning "n"	.184 4.453 1.226 .000 c.m/s
	74.000 SCS Curve No or C	27 HYDROGRAPH DISPLAY
	.100 Ia/S Coefficient 8.924 Initial Abstraction	5 is # of Hyeto/Hydrograph chosen Volume = .1443723E+05 c.m
	8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	
	.078 .000 .607 .607 c.m/s	6 Depth - Discharge - Volume sets
	.367 .914 .559 C perv/imperv/total	186.000 .000 .0
15	ADD RUNOFF .078 .078 .607 .607 c.m/s	186.800 .0550 4048.0 187.300 .0730 7091.0
4	CATCHMENT	187.500 .170 8424.0
	42.000 ID No.6 99999	187.800 .257 10552.0
	12.640 Area in hectares	188.000 .880 12094.0
	290.000 Length (PERV) metres 1.000 Gradient (%)	Peak Outflow = .430 c.m/s Maximum Depth = 187.856 metres
	70.000 Per cent Impervious	Maximum Storage = 10981. c.m
	290.000 Length (IMPERV)	.184 4.453 .430 .000 c.m/s
	.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat	17 COMBINE 2 Junction Node No.
	250 Manaia Bull	2 0 mocson note no.

14	START			nning "n"			
2.5	1 1=Zero; 2=Define			S Curve No or /S Coefficien			
35	COMMENT 3 line(s) of comment			itial Abstrac			
	**************************************					anglr; 3=SWM HYD; 4=Lin. Reser	rv
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD		.092	.148	1.706	1.706 c.m/s	
	**********		.368	.916	.422	C perv/imperv/total	
4	CATCHMENT	15	ADD RUNOFF				
	2.000 ID No.6 99999	9	.092	.240	1.706	1.706 c.m/s	
	9.020 Area in hectares 245.000 Length (PERV) metres	9		nduit Length			
	1.000 Gradient (%)			Conduit defi	ned		
	40.000 Per cent Impervious			ro lag			
	245.000 Length (IMPERV)			ta weighting	factor		
	.000 %Imp. with Zero Dpth			uting timeste			
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>			. of sub-reac	hes		
	.250 Manning "n"		.092	.240	.240	1.706 c.m/s	
	74.000 SCS Curve No or C	17	COMBINE				
	.100 Ia/S Coefficient			n Node No.			
	8.924 Initial Abstraction		.092	.240	.240	1.925 c.m/s	
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	14	START	0.0-64			
	1.013 .000 .430 .430 c.m/s .368 .912 .586 C perv/imperv/total	35	1 1=Zero; COMMENT	2=Define			
15	.368 .912 .586 C perv/imperv/total ADD RUNOFF	35		of gommont			
13	1.013 1.013 .430 .430 c.m/s		**********	of comment			
9	ROUTE		EXISTING ARE	A WEST OF RIC	E ED AND S	OUTH OF QUAKER ROAD	
,	.000 Conduit Length		********		E KD MID D	COIN OF QUARTER ROAD	
	.000 No Conduit defined	4	CATCHMENT				
	.000 Zero lag			No.ó 99999			
	.000 Beta weighting factor		13.940 Ar	ea in hectare	s		
	.000 Routing timestep			ngth (PERV) m			
	0 No. of sub-reaches		1.000 Gr	adient (%)			
	1.013 1.013 1.013 .430 c.m/s			r cent Imperv			
17	COMBINE		305.000 Le	ngth (IMPERV)			
	2 Junction Node No.			mp. with Zero			
	1.013 1.013 1.013 1.074 c.m/s				/C; 2=Hort	on; 3=Green-Ampt; 4=Repeat	
14	START			nning "n"			
	1 1=Zero; 2=Define			S Curve No or			
18	CONFLUENCE			/S Coefficien			
	2 Junction Node No. 1.013 1.074 1.013 .000 c.m/s			itial Abstrac		engle: 3-dww HVD: 4-1in Dege	
35	COMMENT 1.074 1.013 .000 C.m/s		1.566	.000	.240	anglr; 3=SWM HYD; 4=Lin. Reser 1.925 c.m/s	LV
33	3 line(s) of comment		.367	.923	.590	C perv/imperv/total	
	**************************************	15	ADD RUNOFF	.,25	.550	c perv/imperv/cocar	
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD		1.566	1.566	.240	1.925 c.m/s	
	************	9	ROUTE				
4	CATCHMENT			nduit Length			
	3.000 ID No.6 99999		.000 No	Conduit defi	ned		
	5.680 Area in hectares		.000 Ze	ro lag			
	195.000 Length (PERV) metres		.000 Be	ta weighting	factor		
	1.000 Gradient (%)			uting timeste			
	40.000 Per cent Impervious			. of sub-reac			
	195.000 Length (IMPERV)		1.566	1.566	1.566	1.925 c.m/s	
	.000 %Imp. with Zero Dpth	17	COMBINE				
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat			n Node No.			
	.250 Manning "n"	1.4	1.566	1.566	1.566	3.491 c.m/s	
	74.000 SCS Curve No or C .100 Ia/S Coefficient	14	START 1 1=Zero;	2=Define			
	8.924 Initial Abstraction	18	CONFLUENCE	z=Deline			
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv			n Node No.			
	.632 1.074 1.013 .000 c.m/s		1.566	3.491	1.566	.000 c.m/s	
	.367 .903 .582 C perv/imperv/total	35	COMMENT	3.131	1.500	1000 O.M., D	
15	ADD RUNOFF		<pre>3 line(s)</pre>	of comment			
	.632 1.706 1.013 .000 c.m/s		*******				
9	ROUTE		RICE ROAD FR	OM QUAKER RD	TO CITY OF	WELLAND MUNICIPAL BOUNDA	
	.000 Conduit Length		*******	****			
	.000 No Conduit defined	4	CATCHMENT				
	.000 Zero lag			No.ó 99999			
	.000 Beta weighting factor			ea in hectare			
	.000 Routing timestep			ngth (PERV) m	etres		
	0 No. of sub-reaches			adient (%)			
17	.632 1.706 1.706 .000 c.m/s COMBINE			r cent Imperv			
1,				ngth (IMPERV) mp. with Zero			
	2 Junction Node No. .632 1.706 1.706 1.706 c.m/s					on; 3=Green-Ampt; 4=Repeat	
14	START			nning "n"		,	
	1 1=Zero; 2=Define			S Curve No or	C		
35	COMMENT			/S Coefficien			
	<pre>3 line(s) of comment</pre>		8.924 In	itial Abstrac	tion		
	*********					anglr; 3=SWM HYD; 4=Lin. Reser	rv
	PROP DEVELOPMENT SOUTH OF QUAKER RD, EAST OF RICE RD		.314	3.491	1.566	.000 c.m/s	
	***********		.367	.915	.751	C perv/imperv/total	
4	CATCHMENT	15	ADD RUNOFF				
	50.000 ID No.6 99999		.314	3.754	1.566	.000 c.m/s	
	3.420 Area in hectares	9	ROUTE	nduit Tar-+1			
	151.000 Length (PERV) metres 1.000 Gradient (%)			nduit Length Conduit defi	ned		
	1.000 Gradient (%) 10.000 Per cent Impervious			Conduit deri ro lag	eu		
	151.000 Fer cent impervious 151.000 Length (IMPERV)			ta weighting	factor		
	.000 %Imp. with Zero Dpth			uting timeste			
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat			. of sub-reac			
	.250 Manning "n"		.314	3.754	3.754	.000 c.m/s	
	74.000 SCS Curve No or C	35	COMMENT				
	.100 Ia/S Coefficient			of comment			
	8.924 Initial Abstraction		******	****			
	<pre>Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>			RICE RD CULVE	RT - OUTLE	T A2	
	.148 .000 1.706 1.706 c.m/s		******	****			
	.367 .912 .422 C perv/imperv/total	17	COMBINE				
15	ADD RUNOFF			n Node No.			
4	.148 .148 1.706 1.706 c.m/s	14	.314	3.754	3.754	5.662 c.m/s	
4	CATCHMENT 51 000 TD No 6 99999	14		2=Define			
	51.000 ID No.6 99999 1.980 Area in hectares	35	1 1=Zero; COMMENT	2=Define			
	1.980 Area in nectares 115.000 Length (PERV) metres	35		of comment			
	1.000 Gradient (%)		*********				
	10.000 Per cent Impervious				QUAKER RD	- QUALLITY CONTROL ONLY	
	115.000 Length (IMPERV)		*******				
	.000 %Imp. with Zero Dpth	4	CATCHMENT				
	1 Option 1=SCS CN/C: 2=Horton: 3=Green-Ampt: 4=Repeat		20.100 ID	No.6 99999			

	.780 Area in hectares	35	COMMENT
	72.000 Length (PERV) metres		<pre>3 line(s) of comment</pre>
	1.000 Gradient (%)		**********
	35.000 Per cent Impervious 72.000 Length (IMPERV)		FLOW U/S OF FIRST AVE CULVERT
	.000 %Imp. with Zero Dpth	17	COMBINE
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		1 Junction Node No.
	.250 Manning "n"		.559 6.890 6.890 6.890 c.m/s
	74.000 SCS Curve No or C	14	START
	.100 Ia/S Coefficient		1 1=Zero; 2=Define
	8.924 Initial Abstraction	35	COMMENT
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		3 line(s) of comment
	.087 .000 3.754 5.662 c.m/s .366 .914 .558 C perv/imperv/total		
15	ADD RUNOFF		PROP DEVELOPMENT SOUTH OF QUAKER, EAST OF RICE - POND P50
	.087 .087 3.754 5.662 c.m/s	4	CATCHMENT
4	CATCHMENT		52.000 ID No.6 99999
	20.000 ID No.6 99999		6.430 Area in hectares
	3.210 Area in hectares		207.000 Length (PERV) metres
	146.000 Length (PERV) metres		1.000 Gradient (%)
	1.000 Gradient (%)		70.000 Per cent Impervious
	85.000 Per cent Impervious 146.000 Length (IMPERV)		207.000 Length (IMPERV) .000 %Imp. with Zero Dpth
	.000 %Imp. with Zero Dpth		1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		.250 Manning "n"
	.250 Manning "n"		74.000 SCS Curve No or C
	74.000 SCS Curve No or C		.100 Ia/S Coefficient
	.100 Ia/S Coefficient		8.924 Initial Abstraction
	8.924 Initial Abstraction		<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		1.198 .000 6.890 6.890 c.m/s
	.720	15	.368 .906 .744 C perv/imperv/total ADD RUNOFF
15	ADD RUNOFF	15	1.198 1.198 6.890 6.890 c.m/s
13	.720 .807 3.754 5.662 c.m/s	9	ROUTE
9	ROUTE	•	.000 Conduit Length
	.000 Conduit Length		.000 No Conduit defined
	.000 No Conduit defined		.000 Zero lag
	.000 Zero lag		.000 Beta weighting factor
	.000 Beta weighting factor		.000 Routing timestep
	.000 Routing timestep		0 No. of sub-reaches
	0 No. of sub-reaches .720 .807 .807 5.662 c.m/s	17	1.198 1.198 1.198 6.890 c.m/s COMBINE
17	.720 .807 .807 5.662 c.m/s COMBINE	17	2 Junction Node No.
Τ,	1 Junction Node No.		1.198 1.198 1.198 c.m/s
	.720 .807 .807 6.417 c.m/s	14	START
14	START		1 1=Zero; 2=Define
	1 1=Zero; 2=Define	4	CATCHMENT
18	CONFLUENCE		53.000 ID No.6 99999
	1 Junction Node No.		11.340 Area in hectares
	.720 6.417 .807 .000 c.m/s		275.000 Length (PERV) metres
35	COMMENT		1.000 Gradient (%)
	<pre>3 line(s) of comment ************************************</pre>		70.000 Per cent Impervious 275.000 Length (IMPERV)
	REALIGNED CHANNEL - SEGMENT 2		.000 %Imp. with Zero Dpth
	*********		1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
4	CATCHMENT		.250 Manning "n"
	200.000 ID No.ó 99999		74.000 SCS Curve No or C
	.970 Area in hectares		.100 Ia/S Coefficient
	80.416 Length (PERV) metres		8.924 Initial Abstraction
	1.000 Gradient (%)		<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>
	10.000 Per cent Impervious		2.157 .000 1.198 1.198 c.m/s
	80.416 Length (IMPERV) .000 %Imp. with Zero Dpth	15	.368 .919 .753 C perv/imperv/total ADD RUNOFF
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat	13	2.157 2.157 1.198 1.198 c.m/s
	.250 Manning "n"	9	ROUTE
	74.000 SCS Curve No or C		.000 Conduit Length
	.100 Ia/S Coefficient		.000 No Conduit defined
	8.924 Initial Abstraction		.000 Zero lag
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>		.000 Beta weighting factor
	.053 6.417 .807 .000 c.m/s		.000 Routing timestep
35	.367 .912 .422 C perv/imperv/total		0 No. of sub-reaches 2.157 2.157 2.157 1.198 c.m/s
JJ	3 line(s) of comment	17	2.157 2.157 2.157 1.196 C.m/s COMBINE
	*******		2 Junction Node No.
	FLOW D/S OF AREA A20 - OUTLET B		2.157 2.157 2.157 3.355 c.m/s
_	*******	18	CONFLUENCE
15	ADD RUNOFF		2 Junction Node No.
35	.053 6.464 .807 .000 c.m/s	4	2.157 3.355 2.157 .000 c.m/s CATCHMENT
33	COMMENT 3 line(s) of comment	4	CATCHMENT 54.000 ID No.6 99999
	**************************************		1.280 Area in hectares
	EX RES. AND FUT DEVELOPMENT LANDS BY OTHERS WEST OF FIRST AV		92.000 Length (PERV) metres
	************		1.000 Gradient (%)
4	CATCHMENT		60.000 Per cent Impervious
4	CATCHMENT 21.000 ID No.6 99999		60.000 Per cent Impervious 92.000 Length (IMPERV)
4	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares		60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth
4	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres		60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CM/C; 2=Horton; 3=Green-Ampt; 4=Repeat
4	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares		60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth
4	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres .200 Gradient (%)		60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient
4	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres .200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth		60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction
4	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres .200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		60.000 Per cent Impervious 22.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
4	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres .200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"		60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp, with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s
4	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres 200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) 0.00 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat 250 Manning "n" 74.000 SCS Curve No or C	15	60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp, with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SC Curve No or C .100 Ia/S Coefficient 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s .367 .913 .695 C perv/imperv/total
4	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres 200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient	15	60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s .367 .913 .695 C perv/imperv/total ADD RUNOFF
4	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres .200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction		60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s .367 .913 .695 C perv/imperv/total ADD RUNOFF .225 3.539 2.157 .000 c.m/s
4	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres 200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	15 27	60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp, with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SC Curve No or C .100 Ia/S Coefficient .924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s .367 .913 .695 C perv/imperv/total ADD RUNOFF .225 3.539 2.157 .000 c.m/s HYDROGRAPH DISPLAY
4	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres 200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp, with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s .367 .913 .695 C perv/imperv/total ADD RUNOFF .225 3.539 2.157 .000 c.m/s HYDROGRAPH DISPLAY
15	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres .200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .559 6.464 .807 .000 c.m/s .368 .922 .395 C perv/imperv/total ADD RUNOFF		60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp, with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s .225 3.355 2.157 .000 c.m/s ADD RUNOFF .225 3.539 2.157 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .1040810E+05 c.m POND
15	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres .200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .559 6.464 .807 .000 c.m/s .368 .922 .395 C perv/imperv/total ADD RUNOFF .559 6.890 .807 .000 c.m/s	27	60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s .367 .913 .695 C perv/imperv/total ADD RUNOFF .225 3.539 2.157 .000 c.m/s HYDROGRAPH DISPLAY 5 is # Of Hyeto/Hydrograph chosen Volume = .1040810E+05 c.m POND 6 Depth - Discharge - Volume sets
	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres 200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .559 6.464 .807 .000 c.m/s .368 .922 .395 C perv/imperv/total ADD RUNOFF .559 6.890 .807 .000 c.m/s ROUTE	27	60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp, with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SC Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s .367 .913 .695 C perv/imperv/total ADD RUNOFF .225 3.539 2.157 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .1040810E+05 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .00
15	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres .200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .559 6.464 .807 .000 c.m/s .368 .922 .395 C perv/imperv/total ADD RUNOFF .559 6.890 .807 .000 c.m/s ROUTE .000 Conduit Length	27	60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp, with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s .225 3.355 2.157 .000 c.m/s ADD RUNOFF .225 3.539 2.157 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .1040810B+05 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .00 182.800 .0190 5251.0
15	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres .200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .559 6.464 .807 .000 c.m/s .368 .922 .395 C perv/imperv/total ADD RUNOFF .559 6.890 .807 .000 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined	27	60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 0ption 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s .367 .913 .695 C perv/imperv/total ADD RUNOFF .225 3.539 2.157 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .1040810E+05 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .0 182.800 .0190 5251.0 183.150 .0230 7895.0
15	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres .200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .559 6.464 .807 .000 c.m/s .368 .922 .395 C perv/imperv/total ADD RUNOFF .559 6.890 .807 .000 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag	27	60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp, with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SC Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s .367 .913 .695 C perv/imperv/total ADD RUNOFF .225 3.539 2.157 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .1040810E+05 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .0 182.800 .0190 5251.0 183.150 .0230 7895.0 183.150 .238 10755.0
15	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres .200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .559 6.464 .807 .000 c.m/s .368 .922 .395 C perv/imperv/total ADD RUNOFF .559 6.890 .807 .000 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor	27	60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 0ption 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s .367 .913 .695 C perv/imperv/total ADD RUNOFF .225 3.539 2.157 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .1040810E+05 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .0 182.800 .0190 5251.0 183.150 .0230 7895.0
15	CATCHMENT 21.000 ID No.6 99999 35.460 Area in hectares 487.000 Length (PERV) metres .200 Gradient (%) 5.000 Per cent Impervious 487.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .559 6.464 .807 .000 c.m/s .368 .922 .395 C perv/imperv/total ADD RUNOFF .559 6.890 .807 .000 c.m/s ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor	27	60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .225 3.355 2.157 .000 c.m/s .367 .913 .695 C perv/imperv/total ADD RUNOFF .225 3.539 2.157 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .1040810E+05 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .0 182.800 .0190 5251.0 183.150 .0230 7895.0 183.150 .238 10751.0 183.150 .396 i3425.0

	Maximum Storage = 9342. c	.m .132	.000 c.m/s	35	COMMENT 3 line(s	ı) of gor	mmont		
17	.225 3.539 COMBINE	.132	.000 C.m/s		********	s) of cor	umeric		
	2 Junction Node No.				REALIGNED C		- SEGMENT 3	3	
		.132	.132 c.m/s		*******				
14	START 1 1=Zero; 2=Define			4	CATCHMENT 300.000 I	D No.ó	00000		
35	COMMENT						hectares		
	<pre>3 line(s) of comment</pre>						PERV) metre	es	
	******					radient			
	EXISTING AREA ON QUAKER RD, EX	AST OF RICE	E RD				Impervious	3	
4	CATCHMENT					ength (IMPERV) th Zero Dpt	-h	
•	5.000 ID No.ó 99999								3=Green-Ampt; 4=Repeat
	1.870 Area in hectares					Manning '		•	2.,
	112.000 Length (PERV) metre	s					e No or C		
	1.000 Gradient (%)						fficient		
	50.000 Per cent Impervious 112.000 Length (IMPERV)						Abstraction		lr; 3=SWM HYD; 4=Lin. Reserv
	.000 %Imp. with Zero Dptl	h			.148		.881	.991	.000 c.m/s
			B=Green-Ampt; 4=Repeat		.368		.924		C perv/imperv/total
	.250 Manning "n"			15	ADD RUNOFF				
	74.000 SCS Curve No or C				.148	8	.029	.991	.000 c.m/s
	.100 Ia/S Coefficient 8.924 Initial Abstraction			4	CATCHMENT 301.000 I	D No.ó	00000		
			; 3=SWM HYD; 4=Lin. Reserv				hectares		
		.132	.132 c.m/s				PERV) metre	es	
		.642 C	perv/imperv/total			radient	(%)		
15	ADD RUNOFF						Impervious	3	
9	.266 .266 ROUTE	.132	.132 c.m/s			ength (IMPERV) th Zero Dpt	-h	
,	.000 Conduit Length								3=Green-Ampt; 4=Repeat
	.000 No Conduit defined					Manning		2-1102 00117	5-62 con impo, i-nopouc
	.000 Zero lag				74.000 S	CS Curve	e No or C		
	.000 Beta weighting factor	or					fficient		
	.000 Routing timestep						Abstraction		
	0 No. of sub-reaches .266 .266	.266	132 g m/g		1 O		=Triangir; .029	.991	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s
17	COMBINE	.200	.132 c.m/s		.367		.911		perv/imperv/total
	2 Junction Node No.			15	ADD RUNOFF				
		.266	.274 c.m/s		.030	8	.057	.991	.000 c.m/s
18	CONFLUENCE			9	ROUTE				
	2 Junction Node No.	200	000/-			onduit 1			
35	.266 .274 COMMENT	.266	.000 c.m/s			o Condu: Sero lag	it defined		
33	3 line(s) of comment						ghting fact	or	
	******						timestep		
	EXISTING AREA ON QUAKER RD, EX	AST OF RICE	E RD				ub-reaches		
	******				.030) 8	.057 8	3.057	.000 c.m/s
4	CATCHMENT 6.000 ID No.6 99999			17	COMBINE 1 Juncti	on Node	Ma		
	1.920 Area in hectares				.030			3.057	8.057 c.m/s
	113.000 Length (PERV) metre	s		14	START				
	000				1 1=Zero	; 2=Def:	4		
	.200 Gradient (%)					,	THE		
	65.000 Per cent Impervious			35	COMMENT				
	65.000 Per cent Impervious 113.000 Length (IMPERV)			35	COMMENT 3 line(s	s) of con			
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl	h	B=Green-Ampt: 4=Repeat	35	COMMENT 3 line(s ********	s) of cor	mment	MENT 3 - 1	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl	h	B=Green-Ampt; 4=Repeat	35	COMMENT 3 line(s	s) of cor	mment	SMENT 3 - 1	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp, with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C	h	B=Green-Ampt; 4=Repeat	35	COMMENT 3 line(s ********* PROP DEVELO ******** CATCHMENT	s) of con	mment ORTH OF SEG	gment 3 - 1	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient	h 2=Horton; 3	8=Green-Ampt; 4=Repeat		COMMENT 3 line(s ********* PROP DEVELO ******** CATCHMENT 30.000 I	of con	mment ORTH OF SEG	ement 3 - 1	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; : .250 Mannig "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction	h 2=Horton; 3			COMMENT 3 line(s ********** PROP DEVELO ********* CATCHMENT 30.000 I 8.470 A	DPMENT NO.	mment ORTH OF SEG 99999 hectares		POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 % Tmp. with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr;	h 2=Horton; 3 2=Rectangl:	r; 3=SWM HYD; 4=Lin. Reserv		COMMENT 3 line(s ********* PROP DEVELO ********* CATCHMENT 30.000 I 8.470 A 238.000 L	DPMENT NO.6	mment ORTH OF SEG 99999 hectares PERV) metre		POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient Initial Abstraction 1 Option 1=Trianglr; .339 .274	h 2=Horton; 3 2=Rectangl:			COMMENT 3 line(s ********** PROP DEVELO ********** CATCHMENT 30.000 I 8.470 A 238.000 L .200 G	DPMENT NO.	mment ORTH OF SEG 99999 hectares PERV) metre	es	POND P30
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 % Tmp. with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; .339 .274 .368 .914 ADD RUNOFF	2=Rectangl: .266	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total		COMMENT 3 line(s *********** PROP DEVELO. *********** CATCHMENT 30.000 I 8.470 A 238.000 L .200 G .100 P 238.000 L	DPMENT No. 6 9 TO No. 6 9 Area in langth (1) Fradient Per cent	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV)	es	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; 3 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 3 .339 .274 .368 .914 ADD RUNOFF .339 .594	h 2=Horton; 3 2=Rectangl:	r; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s		COMMENT 3 line(s *********** PROP DEVELO ************* CATCHMENT 30.000 I 8.470 A 238.000 L .200 G .100 P 238.000 L .000 F	DPMENT No. 6 Stream in langth (langth	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt	es 3	
15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; : 74.000 SC Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; : .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT	2=Rectangl: .266	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total		COMMENT 3 line(s *********** PROP DEVELO. ************ CATCHMENT 30.000 L 8.470 A 238.000 L .200 G .100 P 238.000 L .000 S .100 P	DPMENT No. 6 Stream in langth (16 Fraction to contract the contract th	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C;	es 3	POND P30 3=Green-Ampt; 4=Repeat
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; 3 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 3 .339 .274 .368 .914 ADD RUNOFF .339 .594	2=Rectangl: .266	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total		COMMENT 3 line(s ************************************	D No.6 ! Area in	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n"	es 3	
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp, with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient Initial Abstraction 1 Option 1=Trianglr; .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment	h 2=Horton; 3 2=Rectangl: .266 .723 C	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s		COMMENT 3 line(s *********** PROP DEVELO ************ CATCHMENT 30.000 L 8.470 A 238.000 L .200 G .100 P 238.000 L .000 % 10 OP 74.000 S	D No.6 ! Area in l Area in	99999 hectares pervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C	es 3	
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; : .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; : .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment	h 2=Horton; 3 2=Rectangl: .266 .723 C	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s		COMMENT 3 line(s ************ PROP DEVELO. *********** CATCHMENT 30.000 I 8.470 A 238.000 L .200 G .100 P 238.000 L .000 S .100 P 238.000 L .000 S .100 T .250 M 74.000 S .100 I	a) of configuration of the con	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction	es ; ; th 2=Horton;	3=Green-Ampt; 4=Repeat
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp, with Zero Dptl 1 Option 1=SCS CN/C; : .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; : .339 .274 .339 .274 .339 .274 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************************************	h 2=Horton; 3 2=Rectangl: .266 .723 C	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s		COMMENT 3 line(s *********** PROP DEVELO. ************ CATCHMENT 30.000 L 8.470 A 238.000 L 200 G 100 P 238.000 L 200 G 100 P 238.000 L 1 O 250 M 250	D No.6 9 CD No.6 9 Cradient No. Cradient	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr;	es th 2=Horton; 1 2=Rectang	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp, with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; .339 .274 .339 .274 .339 .594 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************************************	h 2=Horton; 3 2=Rectangl: .266 .723 C	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s		COMMENT 3 line(s ************ PROP DEVELO. ********** CATCHMENT 30.000 I 8.470 A 238.000 L .200 G .100 P 238.000 L .000 S .100 P 238.000 L .000 S .100 I 8.924 I 1 O .188	D No.6 : CD No.6	mment ORTH OF SEC 99999 hectares PERV) metre (%) Impervious th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; 0000 8	es : :h 2=Horton; 1 2=Rectang:	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp, with Zero Dptl 1 Option 1=SCS CN/C; : .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; : .339 .274 .339 .274 .339 .274 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************************************	h 2=Horton; 3 2=Rectangl: .266 .723 C	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s		COMMENT 3 line(s *********** PROP DEVELO. ************ CATCHMENT 30.000 L 8.470 A 238.000 L 200 G 100 P 238.000 L 200 G 100 P 238.000 L 1 O 250 M 250	D No.6 : CD No.6	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr;	es : :h 2=Horton; 1 2=Rectang:	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; 2 .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=Trianglr; 2 .368 .914 .368 .914 .369 .274 .368 .914 .369 .274 .368 .914 .369 .274 .368 .914 .369 .274 .368 .914 .370 .274 .389 .274 .389 .274 .389 .274 .389 .274 .389 .274 .389 .274 .389 .274 .389 .274 .389 .274 .389 .299 .2430 Area in hectares 127.000 Gradient (%)	h 2=Horton; : 2=Rectangl: .266 .723 C .266	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s	4	COMMENT 3 line(s ************ PROP DEVELO ************ CATCHMENT 30.000 g 8.470 A 238.000 L .200 G .100 P 238.000 L .000 % 1 00 S .100 S .100 S .100 S .100 I 1 0 S .250 M 74.000 S .100 I 1 1 0 S .368 ADD RUNOFF .188	DPMENT NO. 6 Stream In the search (15 Stream In 15 Stream	mment ORTH OF SEG 99999 hectares PERV) metre (%) IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 8	es : :h 2=Horton; 1 2=Rectang:	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; : .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 0ption 1=Trianglr; : .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************************************	h 2=Horton; : 2=Rectangl: .266 .723 C .266	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s	4	COMMENT 3 line(s ************ PROP DEVELO. ************ CATCHMENT 30.000 L 8.470 A 238.000 L .200 G .100 P 238.000 L .000 % .100 P .250 M 1 C .250 M 1 C .250 L .100 S .100 I 8.924 I .188 ADD RUNOFF .368 ADD RUNOFF CATCHMENT	DPMENT NO.6 ! TD No.6 ! Trea in ! Length (! Stradient Length (! Length (! Stradient Length (! Stradie	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 8 .916 .188	2=Rectang: 3.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s C perv/imperv/total
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; 2 .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************* FIRST AVE FROM QUAKER RD TO C: ************* 201.000 ID No.6 99999 2.430 Area in hectares 127.000 Length (PERV) metre: 1.000 Gradient (%) 65.000 Per cent Impervious 127.000 Length (IMPERV)	h 2=Horton; 3 2=Rectangli .266 .723 C .266	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s	4	COMMENT 3 line(s ************ PROP DEVELO *********** CATCHMENT 30.000 I 8.470 A 238.000 L .200 G .100 P 238.000 L .000 % .100 P 238.000 L .000 % .100 I .000 S .100 I 8.924 I 1 0 .188 .368 ADD RUNOFF .188 CATCHMENT 31.000 I	D) of con present No. (C) No.6 (c) rea in length () tradient her cent elength () (imp. with ption lenning (imp. c) (imp.	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 .916 .188 .8	2=Rectang: 3.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s C perv/imperv/total
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; : .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; : .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************************************	h 2=Horton; 2=Rectangl: .266 .723 C .266 ITY OF WELI	c; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA	4	COMMENT 3 line(s ************ PROP DEVELO ************ CATCHMENT 30.000 L 8.470 A 238.000 L .200 G .100 P 238.000 L .000 % 1 0 .250 M 74.000 S .100 I 8.924 I 1 0 .188.924 I 1 0 .188.66 ADD RUNOFF .188 CATCHMENT 31.000 L 1100 L 18.924 I 1 0 .188 .188	ppMENT No.6 : The No.6 : The No.6 : The ain in the per cent the cent cent cent (in the per cent the cent cent (in the per cent the cent cent (in the per cent the cent (in the	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 & .188 & 99999 hectares	2=Horton; 2=Rectang; 3.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s C perv/imperv/total
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; : .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; : .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************************************	h 2=Horton; 2=Rectangl: .266 .723 C .266 ITY OF WELI	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s	4	COMMENT 3 line(s ************************************	D No.6 9 To No.6 9 To No.6 9 Tradient (The control of the con	mment ORTH OF SEG 99999 hectares PERV) metre (%) IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 8 .188 8 99999 hectares PERV) metre	2=Horton; 2=Rectang; 3.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s C perv/imperv/total
	65.000 Per cent Impervious	h 2=Horton; 2=Rectangl: .266 .723 C .266 ITY OF WELI	c; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA	4	COMMENT 3 line(s ************ PROP DEVELO. *********** CATCHMENT 30.000 L 8.470 A 238.000 L .200 G .100 P .238.000 L .000 % .100 P .250 M 74.000 S .100 I 8.924 I 1 00 .3168 ADD RUNOFF CATCHMENT 31.000 I 10.420 A 264.000 L 10.000 G 75.000 P	ppMENT No.6 ! rea in !	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 & .916 .188 & .916 .188 & .99999 hectares PERV) metre (%)	2=Rectang: 1.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s C perv/imperv/total
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; 2 .250 Manning 'n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2 .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************* FIRST AVE FROM QUAKER RD TO C: ************* CATCHMENT 201.000 ID No.6 99999 2.430 Area in hectares 127.000 Length (PERV) metre: 1.000 Gradient (%) 65.000 Per cent Impervious 127.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; 2 .250 Manning 'n" 74.000 SCS Curve No or C	h 2=Horton; 2=Rectangli .266 .723 C .266 ITY OF WELI	c; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA	4	COMMENT 3 line(s ************ PROP DEVELOR 30.000 1 8.470 A 238.000 L -200 G -100 P 238.000 L -000 % -100 S -100	D No.6 : DNo.6 : DN	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 .916 .188 & 99999 hectares PERV) metre (%) Impervious Impervious	2=Rectang: .057 .368 (3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s C perv/imperv/total
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************************************	h 2=Horton; 3 2=Rectangl: .266 .723 C .266 ITY OF WELI	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s .AND MUNICIPAL BOUNDA	4	COMMENT 3 line(s ************ PROP DEVELO. ************ CATCHMENT 30.000 g. 8.470 A 238.000 L .000 g. 100 P 238.000 L .000 % 1 0100 I 8.924 I 1 0100 I 8.924 I 1 0188. ADD RUNOFF 1 188. CATCHMENT 31.000 G. 1500 G. 1500 G. 75.000 P 264.000 L .000 %	ppMENT No. 6 : rea in 1 : in the property of t	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 8 .916 .188 8 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt	2=Rectang: 3.057 3.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s c perv/imperv/total 8.057 c.m/s
	65.000 Per cent Impervious	h 2=Horton; 2=Rectangli .266 .723 C .266 ITY OF WELI s h 2=Horton; 2=Rectangli	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s .AND MUNICIPAL BOUNDA 	4	COMMENT 3 line(s ************************************	DD No.6 ! Inpution !: DD No.6 ! Inpution !!	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "" e No or C fficient Abstraction =Trianglr; .000 8 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C;	2=Rectang: 3.057 3.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s C perv/imperv/total
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=Trianglr; .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************************************	h 2=Horton; 2=Rectangli .266 .723 C .266 ITY OF WELI s h 2=Horton; 2=Rectangli	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA B=Green-Ampt; 4=Repeat 1; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s	4	COMMENT 3 line(s ************************************	ppMENT No. 6 ! In	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 8 .916 .188 8 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n"	2=Rectang: 3.057 3.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s c perv/imperv/total 8.057 c.m/s
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=Trianglr; .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************************************	h 2=Horton; 2=Rectangli .266 .723 C .266 ITY OF WELI s h 2=Horton; 2=Rectangli	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s .AND MUNICIPAL BOUNDA 	4	COMMENT 3 line(s ************* PROP DEVELO ************ CATCHMENT 30.000 L 8.470 A 238.000 L .000 % .100 P 238.000 L .000 % .100 S .100 I 8.924 I 1 08 .100 I 8.924 I 1 1.88 .368 ADD RUNOFF CATCHMENT 31.000 L .188 CATCHMENT 31.000 L .1000 G 75.000 P 264.000 L .000 % 75.000 P 264.000 L .000 % 75.000 P 264.000 S 74.000 S	ppMENT No. 6 ! In	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 & .916 .188 & .188	2=Rectang: 3.057 3.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s c perv/imperv/total 8.057 c.m/s
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15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment *********** FIRST AVE FROM QUAKER RD TO C: ************ CATCHMENT 201.000 ID No.6 9999 2.430 Area in hectares 127.000 Length (PERV) metre: 1.000 Gradient (%) 65.000 Per cent Impervious 65.000 Per cent Impervious 127.000 Length (IMPERV) .000 %Imp. with Zero Dptl 074.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 0 Toption 1=SCS CN/C; .433 .594 .367 .915 ADD RUNOFF .433 .991 ROUTE .000 Conduit Length	h 2=Horton; 2=Rectangli .266 .723 C .266 ITY OF WELI s h 2=Horton; 3 2=Rectangli .266 .723 C	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat 1; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total	4	COMMENT 3 line(s ************************************	pyment No. 6 irea in length (istradient length (ist	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 .916 .188 8 99999 hectares PERV) metre (%) Impervious Impervious Impervious Impervious Timpervious Tim	as in 2=Horton; 1 2=Rectang: 1.057 .368 3.057 as in 2=Horton; 1 2=Rectang: 1.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s C perv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 0ption 1=Trianglr; .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************************************	h 2=Horton; 2=Rectangli .266 .723 C .266 ITY OF WELI s h 2=Horton; 3 2=Rectangli .266 .723 C	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat 1; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total	4	COMMENT 3 line(s ************************************	pyment No. 6 irea in length (istradient length (ist	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 8 .916 .188 8 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr;	as in 2=Horton; 1 2=Rectang: 1.057 .368 3.057 as in 2=Horton; 1 2=Rectang: 1.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv
15	65.000	h 2=Horton; 3 2=Rectangli .266 .723 C .266 ITY OF WELI s h 2=Horton; 3 2=Rectangli .266 .723 C	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat 1; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total	15 4	COMMENT 3 line(s ************************************	position in the position in th	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 .916 .188 & 99999 hectares PERV) metre (%) Impervious	as in 2=Horton; 1 2=Rectang: 1.057 .368 3.057 as in 2=Horton; 1 2=Rectang: 1.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s C perv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s
15	13.000 Per cent Impervious	h 2=Horton; 3 2=Rectangli .266 .723 C .266 ITY OF WELI s h 2=Horton; 3 2=Rectangli .266 .723 C	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat 1; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total	15 4	COMMENT 3 line(s ************************************	poment No. 6 large in language	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 8 .9916 .188 8 .99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .188 8 .917 .151 8	2=Rectang: 3.057 .368 .057 .368 .057 .2=Horton; 2=Rectang: 3.057 .779	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total
15	65.000 Per cent Impervious	h 2=Rectangl: .266 .266 ITY OF WELI s 2=Rectangl: .266 .723 C .266 .723 C	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat 4: 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s	15 4	COMMENT 3 line(s ************************************	pyment No. 6 irea in length (ight) in le	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 .916 .188 8 99999 hectares PERV) metre (%) Impervious	2=Rectang: 3.057 .368 .057 .368 .057 .2=Horton; 2=Rectang: 3.057 .779	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total
35 4 15 9	65.000	h 2=Horton; 3 2=Rectangli .266 .723 C .266 ITY OF WELI s h 2=Horton; 3 2=Rectangli .266 .723 C	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat 1; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total	15 4	COMMENT 3 line(s ************************************	pyment No. 6 irea in length (ight) in le	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 .916 .188 8 99999 hectares PERV) metre (%) Impervious	2=Rectang: 3.057 .368 .057 .368 .057 .2=Horton; 2=Rectang: 3.057 .779	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total
15	65.000 Per cent Impervious	h 2=Rectangl: .266 .266 ITY OF WELI s 2=Rectangl: .266 .723 C .266 .723 C	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat 4: 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s	15 4	COMMENT 3 line(s ************************************	pyment No. 6 irea in length (ight) in le	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C ffficient Abstraction =Trianglr; .000 .916 .188 .8 99999 hectares PERV) metre (%) Impervious Imperviou	2=Rectang: 3.057 .368 .057 .368 .057 .2=Horton; 2=Rectang: 3.057 .779	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total
35 4 15 9	65.000 Per cent Impervious	h 2=Horton; 3 2=Rectangl: .266 .723	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat 4: 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s	15 4	COMMENT 3 line(s ************************************	pyment No. 6 in the property of the property o	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C ffficient Abstraction =Trianglr; .000 .916 .188 .8 99999 hectares PERV) metre (%) Impervious Imperviou	2=Rectang: 3.057 .368 .057 .368 .057 .2=Horton; 2=Rectang: 3.057 .779	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total
35 4 15 9	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************************************	h 2=Horton; 3 2=Rectangl: .266 .723	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s AND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s	15 4	COMMENT 3 line(s ************************************	pyment No. 6 irea in 1 irength () irea irea in 1 irength () irea irength () irea irength () irea irength () irength () irea irength () irea irength () irea irength () irea irea irength () irea irea irea irea irea irea irea irea	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 .916 .188 8 99999 hectares PERV) metre (%) Impervious Impervious Impervious Impervious Impervious Impervious Impervious Impervious Impervious 1.88 8 .917 .151 8 /Hydrograph 0E+04 c.m 99999 hectares PERV) metre	2=Rectang: 3.057 3.68 3.057 3.68 2=Horton; 2=Horton; 3.057 3.057 3.057 3.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total
35 4 15 9	65.000	h 2=Horton; 3 2=Rectangl: .266 .723	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s AND MUNICIPAL BOUNDA 3=Green-Ampt; 4=Repeat 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s	15 4	COMMENT 3 line(s ************************************	pyment No. 6 irea in length ()	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000	2=Rectang: 3.057 3.68 3.057 3.68 4.2=Horton; 4.2=Rectang: 5.057 4.057 4.057 4.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total
35 4 15 9	Accordance	h 2=Horton; 3 2=Rectangli, 266 .723	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA B=Green-Ampt; 4=Repeat T; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s	15 4	COMMENT 3 line(s ************************************	position in the position in th	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 .916 .188 .8 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .188 .917 .151 .151 .151 .151 .151 .151 .151 .1	2=Rectang: 3.057 3.68 3.057 3.68 4.2=Horton; 4.2=Rectang: 5.057 4.057 4.057 4.057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total
35 4 15 9	65.000	h 2=Horton; 3 2=Rectangli, 266 .723	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA B=Green-Ampt; 4=Repeat T; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s	15 4	COMMENT 3 line(s ************************************	pyment No. 6 irea in length () ireangth () irean	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 .916 .188 8 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .188 .917 .151 .8 /Hydrograph 0E+04 c.m 99999 hectares PERV) metre (%) Impervious Impervious Inpervious Impervious Impervious Impervious Impervious	2=Rectang: .057 .368 .057 .368 .057 .368 .057 .368 .057 .368 .057 .779 .058 .057 .779 .058 .057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total
35 4 15 9	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; .339 .274 .368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************************************	h 2=Horton; 3 2=Rectangli, 266 .723	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA B=Green-Ampt; 4=Repeat T; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s	15 4	COMMENT 3 line(s ************************************	D No.6 : D No.6	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C ffficient Abstraction =Trianglr; .000 .916 .188 8 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .151 8 /Hydrograph 0E+04 c.m 99999 hectares PERV) metre (%) Impervious IMPERV) Impervious	2=Rectang: 3.057 .368 .2=Horton; 2=Rectang: 3.057 .368 .2=Horton; 3.057 .779 .3057 .779 .3057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s perv/imperv/total 8.057 c.m/s 8.057 c.m/s
35 4 15 9	65.000 Per cent Impervious	h 2=Horton; 3 2=Rectangli, 266 .723	3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s LAND MUNICIPAL BOUNDA B=Green-Ampt; 4=Repeat T; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s	15 4	COMMENT 3 line(s ************************************	D No.6 : D No.6	mment ORTH OF SEG 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 .916 .188 8 99999 hectares PERV) metre (%) Impervious Impervious Impervious Impervious Impervious 1.88 8 99999 hectares PERV) th Zero Dpt =Trianglr; .151 8 /Hydrograph 0E+04 c.m 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .151 8 /Hydrograph 0E+04 c.m 99999 hectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C;	2=Rectang: 3.057 .368 .2=Horton; 2=Rectang: 3.057 .368 .2=Horton; 3.057 .779 .3057 .779 .3057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s Derv/imperv/total 8.057 c.m/s 3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s Derv/imperv/total

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.100
                      Ia/S Coefficient
         8.924
                      Initial Abstraction
                      Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 27 2.151 8.057 8.057 c.m/s 67 .914 .695 C perv/imperv/total
                  .367
15
         ADD RUNOFF
         .127 2.
HYDROGRAPH DISPLAY
                              2.246
                                              8.057
                                                            8.057 c.m/s
27
         is # of Hyeto/Hydrograph chosen
Volume = .8577177E+04 c.m
10
         POND
         POND
5 Depth - Discharge - Volume sets
178.800 .000 .0
179.300 .0260 1520.0
                           .0440
                                          4649.0
7069.0
                            .414
         180.600
         .414
1.204
Peak Outflow =
Maximum **
        reak Outflow = 250 c.m/s
Maximum Depth = 180.379 metres
Maximum Storage = 5999. c.m
.127 2.246
                           8.057 c.m/s
17
               Junction Node No.
         .127
START
                              2.246
                                               .250
                                                            8.089 c.m/s
14
                1=Zero; 2=Define
         COMMENT
35
         line(s) of comment
         PROP DEVELOPMENT SOUTH OF SEGMENT 3 - POND P31
         CATCHMENT
                     ID No.6 99999
        33.000
        12,960
                      Area in hectares
Length (PERV) metres
      294.000
                      Gradient (%)
Per cent Impervious
Length (IMPERV)
         1.000
       75.000
      294.000
          .000
                      %Imp. with Zero Doth
                      Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
           .250
                      Manning "n"
SCS Curve No or C
        74.000
                      Ia/S Coefficient
Initial Abstraction
          .100
         8.924
                Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv 2.640 .000 .250 8.089 c.m/s .368 .922 .783 C perv/imperv/total
15
         ADD RUNOFF
                 2.640
         HYDROGRAPH DISPLAY
27
         is # of Hyeto/Hydrograph chosen
Volume = .7430276E+04 c.m
CATCHMENT
                      Area in hectares
          .660
                      Length (PERV) metres
Gradient (%)
Per cent Impervious
        66.000
         1.000
        60.000
                      Length (IMPERV)
%Imp. with Zero Dpth
        66.000
          .000
                      Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
                      Manning "n"
SCS Curve No or C
           . 250
        74.000
           . 100
                      Ia/S Coefficient
                       Initial Abstraction
                      Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
                  .122
                              2.640 .250
.914 .695
                                                         8.089 c.m/s
C perv/imperv/total
         ADD RUNOFF
15
        ADD RUNOFF
.122 2.731 .250
HYDROGRAPH DISPLAY
5 is # of Hyeto/Hydrograph chosen
Volume = .7766209E+04 c.m
                                                            8.089 c.m/s
10
         POND
        6 Depth - Discharge - Volume sets
                    .000
         178.300
                                          .0
1927.0
         178.900
         179.600
                           .0540
                                          4692.0
                          .150
         180.000
                             .321
                                          6538.0
         180.300 1.922 8059.0
Peak Outflow = .221 c.m/s
Maximum Depth = 179.883 metres
         Maximum Storage = 5.122 2.731
COMBINE
                                      5982. c.m
                                                             8.089 c.m/s
17
             Junction Node No. .122 2.731
        .122
START
14
                1=Zero; 2=Define
         CONFLUENCE
18
       1 Junction Node No.
        .122 8.131
         3 line(s) of comment
         REALIGNED CHANNEL - SEGMENT 3
         CATCHMENT
      302.000
                     TD No. 6 99999
                      Area in hectares
Length (PERV) metres
         1.610
      104.000
       .200
10.000
                      Gradient (%)
Per cent Impervious
                      Length (IMPERV)
      104.000
                      %Imp. with Zero Dpth
Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
          .000
           . 250
                      Manning "n"
SCS Curve No or C
       74.000
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.100
                Ia/S Coefficient
      8.924
                Initial Abstraction
                Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
             .057
                                .221 .000 c.m/s
.422 C perv/imperv/total
                    8.131
                       .910
      COMMENT
      3 line(s) of comment
      FLOW U/S OF NIAGARA ST CULVERT - OUTLET D
15
      ADD RUNOFF
      .057
START
                       8.188
                                   .221
                                              .000 c.m/s
14
           1=Zero; 2=Define
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