

Upper Canada Planning & Engineering Ltd. 3-30 Hannover Drive St. Catharines, ON L2W 1A3

Phone 905-688-9400 Fax 905-688-5274

UCC File: 2201

FUNCTIONAL SERVICING REPORT 450 RICE ROAD

CITY OF WELLAND October 2024

INTRODUCTION

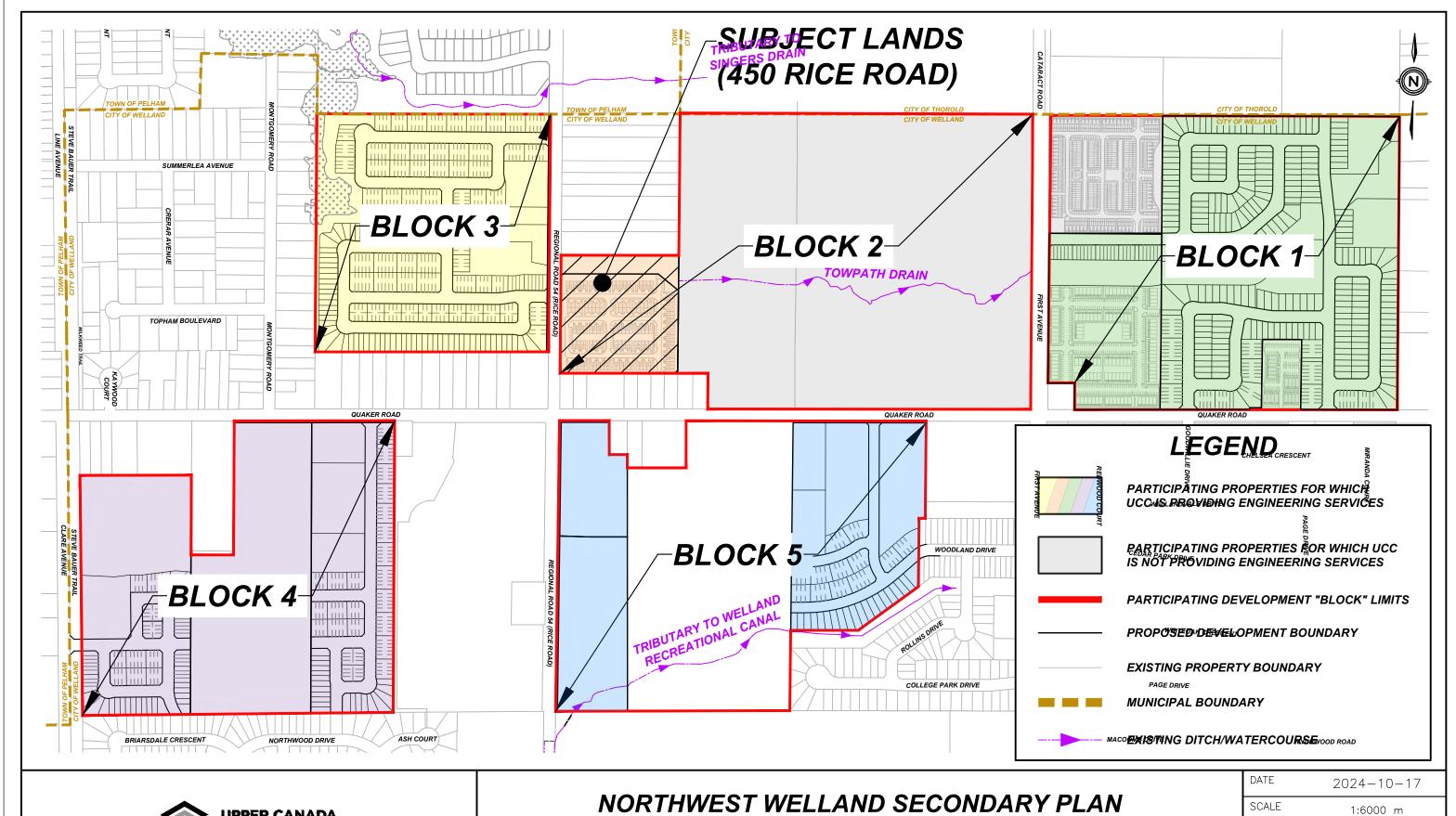
The purpose of this Functional Servicing Report (FSR) is to address the municipal servicing requirements for the proposed residential condominium development located at 450 Rice Road in the north-central portion of the Northwest Welland Secondary Plan (NWWSP) Area in the City of Welland, north of Quaker Road, west of First Avenue, east of Rice Road, and south of the municipal boundary with the Town of Pelham. The location of the subject lands within the NWWSP Area has been shown in Figure 1.

The development area is approximately 3.32 hectares and will consist of private residential townhouse condominiums. The subject lands will be developed to include associated asphalt roadways, concrete curb, catch basins, storm sewers, sanitary sewers, and watermain.

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; and,
- 3. Identify stormwater management needs for the site.

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.





CITY OF WELLAND SITE LOCATION PLAN - 450 RICE ROAD

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



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 future development lands at 469 & 509 Rice Road, on the west side of Rice Road adjacent to the subject lands.

It was shown that a small 150mm diameter watermain would be extended through the subject lands 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 subject lands will be developed as a private condominium, it will not be permitted to provide two watermain connections for the subject lands. 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 139 townhouse dwellings, 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 the Table 3-3 of the Ministry of Environment Design Guidelines for Drinking Water Systems.

The peaking factors shown in Table 1 below have been interpolated from the values shown in Table 3-3 of the MECP Guidelines. 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; 306 persons	0.96 L/s		
Maximum Day Peaking Factor			
	3.1		
Maximum Day Domestic Demand			
	2.98 L/s		
Peak Hour Peaking Factor			
_	4.7		
Peak Hour Domestic Demand			
	4.51 L/s		

Private fire hydrants will be provided within the development site 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 and Ontario Building Code requirements 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 upon confirmation from the City of Welland watermain model.

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 3.34 ha and a population of 306 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 4.64 L/s, which will occupy 1.0% of the full flow capacity in the existing 600mm diameter sanitary sewer on Rice Road. With the addition of the adjacent 469 & 509 Rice Road properties, the full build-out of the development area will occupy 3.9% of the full flow capacity in the 60mm 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

It is proposed to collect and convey all future stormwater flows generated within the subject lands to the Towpath Drain, which flows easterly along the northern limit of the subject lands.

A proposed storm sewer outlet will be constructed at the north eastern limit of the subject lands to convey minor stormwater flows to the watercourse and the major overland flow route will be conveyed to the same location.

A separate Stormwater Management Brief has been prepared by Upper Canada Consultants (UCC) which includes all detailed calculations for the subject land sand has been enclosed in Appendix D for reference. The following are the summarized conclusions from the enclosed Brief:

- 1. Stormwater quantity controls are not required on-site as the upstream adjacent lands (owned by the same owner) will provide adequate over-control to ensure future peak stormwater flows in the Towpath Drain are maintained to below existing levels.
- 2. The major overland route will convey stormwater flows northerly to the Towpath Drain.



3. Stormwater quality protection is being provided by a Hydroworks HD 12 stormwater oil/grit separator or approved equivalent in the proposed development.

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 C.

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.

B. J. KAPTEYN

100509155

SPOVINCE OF ONTP

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





CONFIDENTIALITY AND © COPYRIGHT FOR THIS REPORT

This document is for the sole use of the addressee and Associated Engineering (Ont.) Ltd. The document contains proprietary and confidential information that shall not be reproduced in any manner or disclosed to or discussed with any other parties without the express written permission of Associated Engineering (Ont.) Ltd. Information in this document is to be considered the intellectual property of Associated Engineering (Ont.) Ltd. in accordance with Canadian copyright law.

This report was prepared by Associated Engineering (Ont.) Ltd. for the account of City of Welland. The material in it reflects Associated Engineering (Ont.) Ltd.'s best judgement, in the light of the information available to it, at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Associated Engineering (Ont.) Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

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	
	Click or tap to enter a date.			
	Click or tap to enter a date.			

TABLE OF CONTENTS

SECT	ΓΙΟΝ		PAGE NO
Table	e of Con	itents	i
List	of Tables	S	ii
List	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	

İ

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.

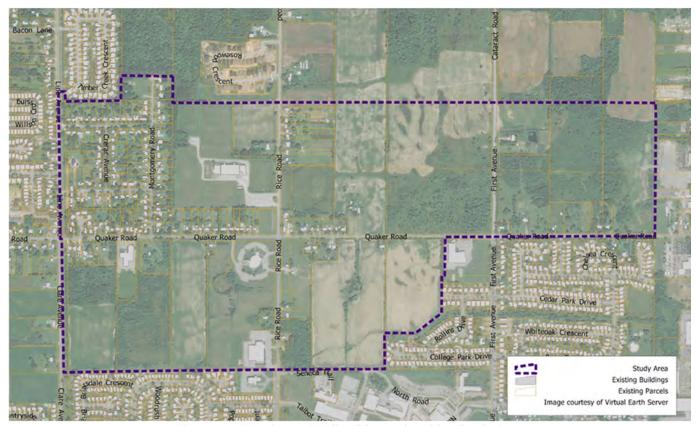


Figure 1-1: Northwest Welland Secondary Plan Study Area

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.

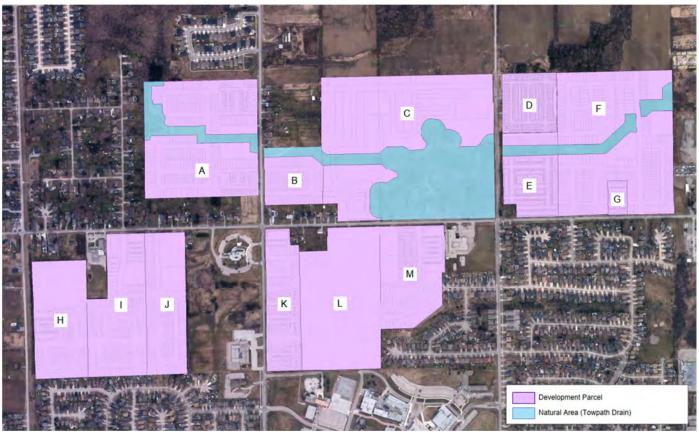


Figure 1-2: NWSP Proposed Population and Unit Plan

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.

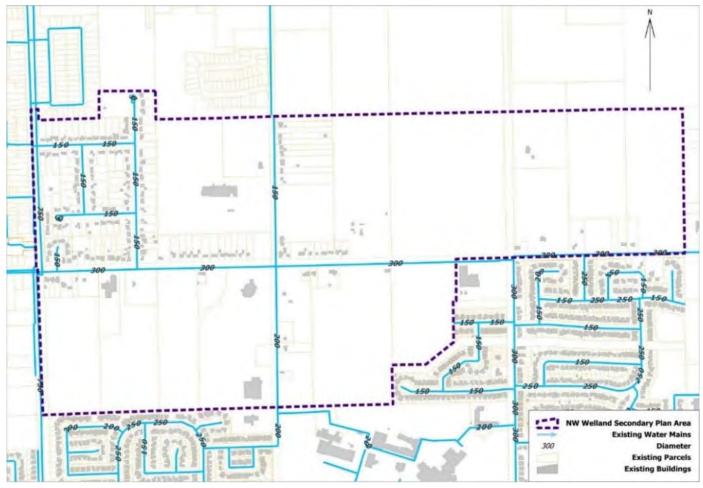


Figure 3-1: Existing Watermains Configuration in Study Area

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.

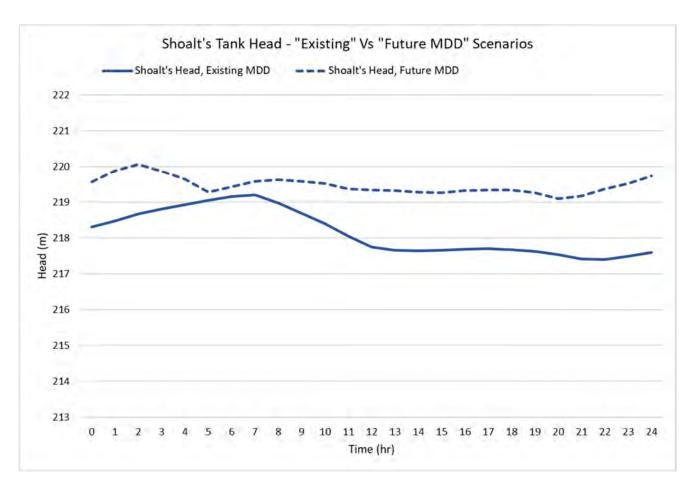


Figure 3-2: Shoalt's Tank Head – Existing and Future MDD Scenarios (without NWSP)

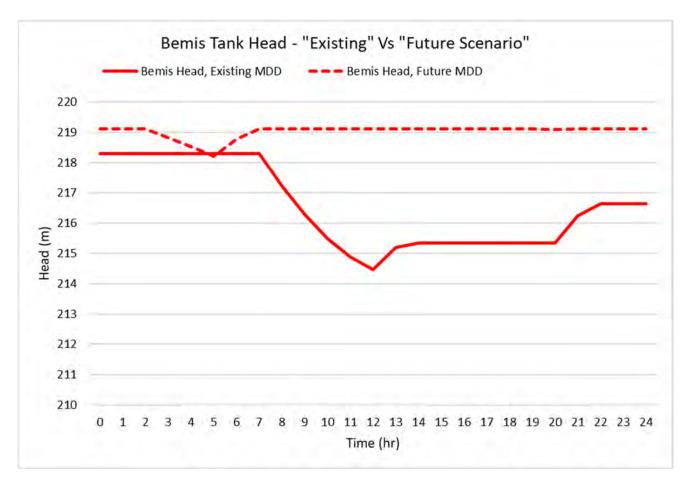


Figure 3-3: Bemis Tank Head – Existing and Future MDD Scenarios (without NWSP)

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.

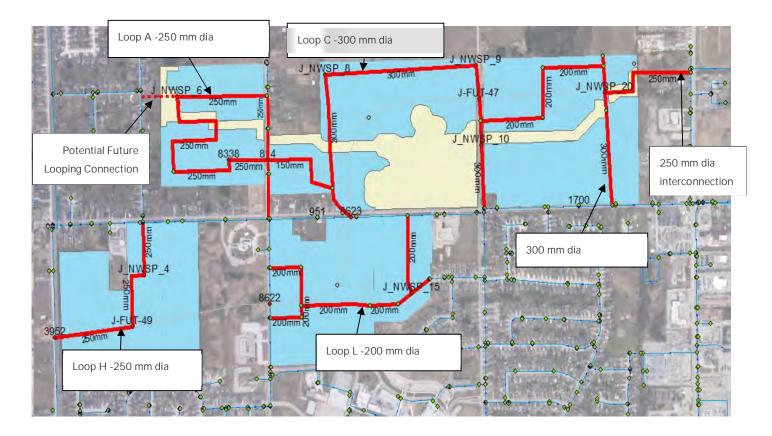


Figure 3-4: Proposed Infrastructure for NWSP Development

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.

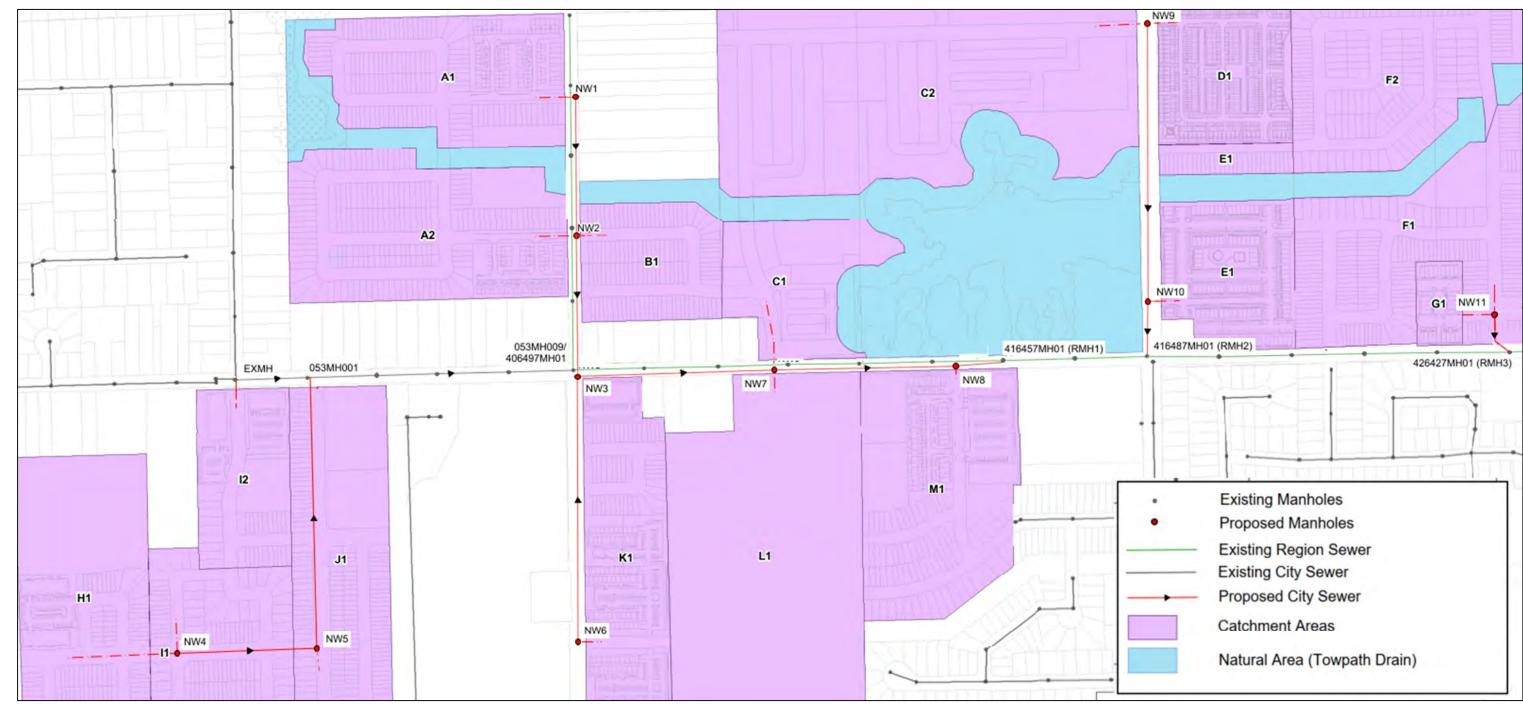


Figure 4-2: Proposed Sanitary System and Drainage Areas – Option 1

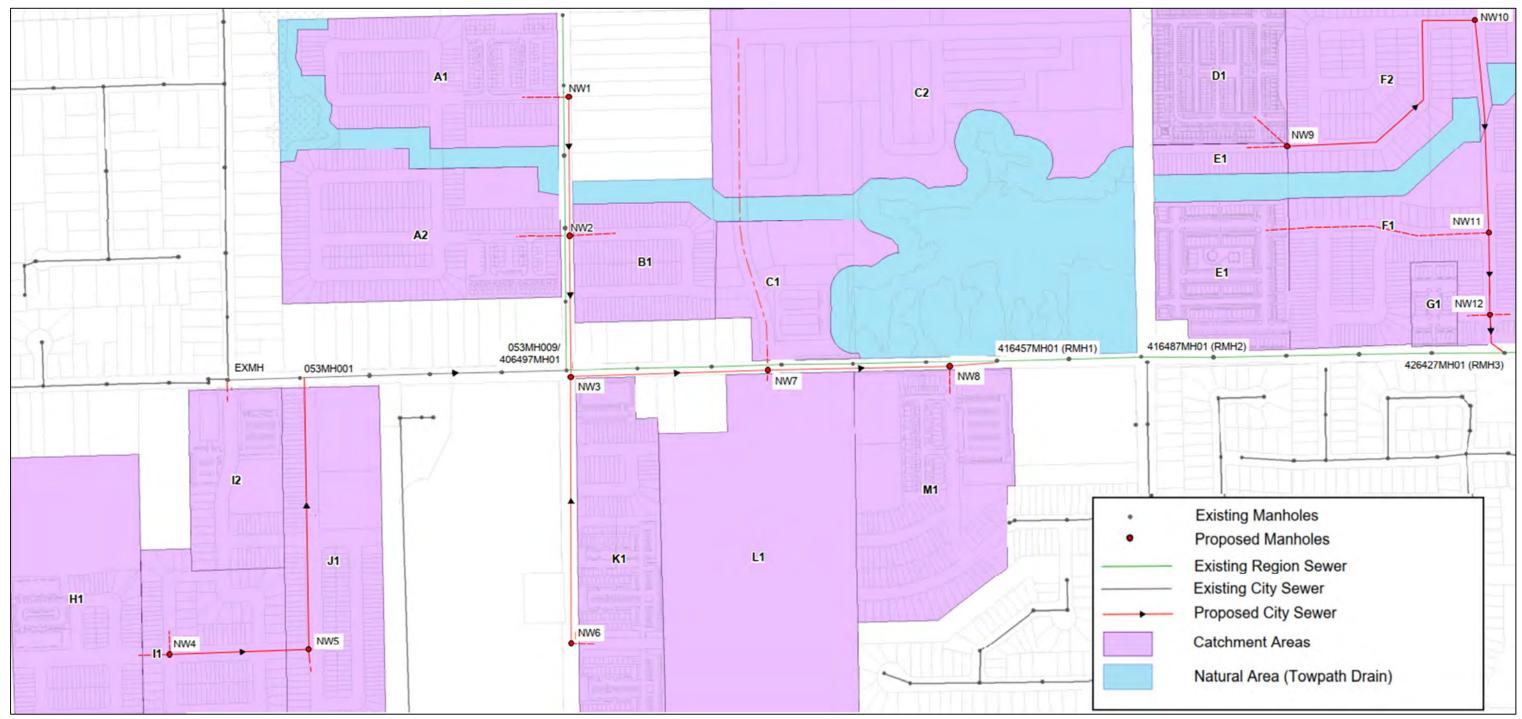


Figure 4-3: Proposed Sanitary System and Drainage Areas – Option 2

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.

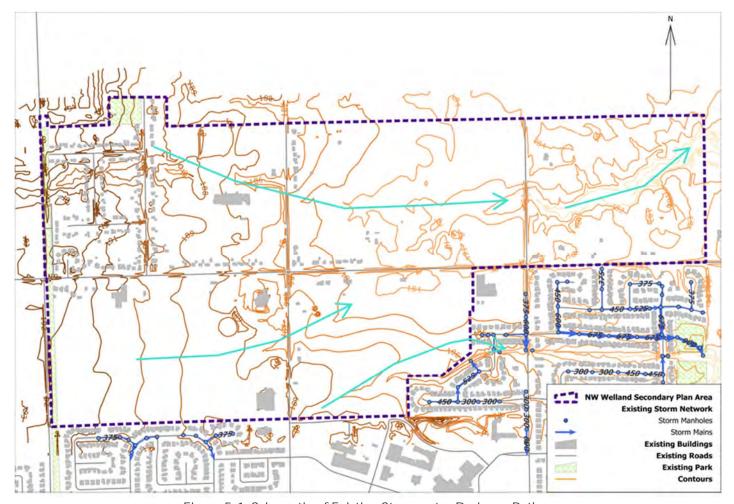


Figure 5-1: Schematic of Existing Stormwater Drainage Path

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:

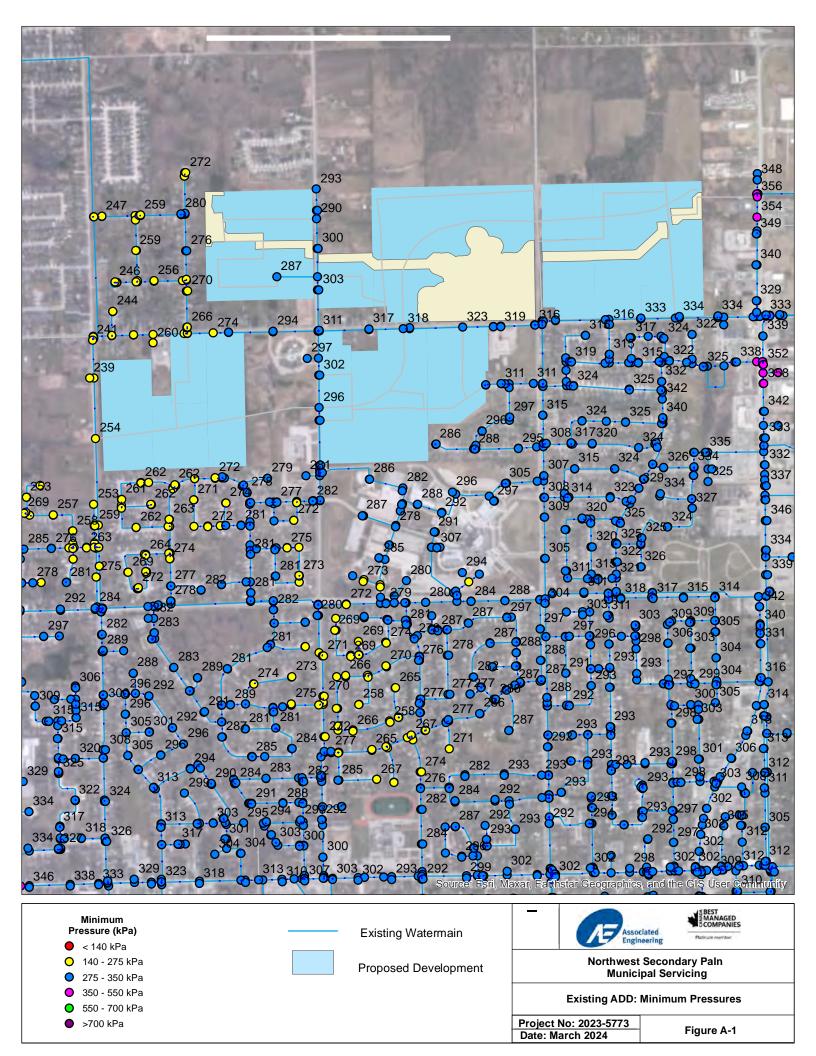
• The stormwater management plan developed by Upper Canada Consultants identified approximate locations for nine (9) new storm water ponds to service the NWSP area. Gravity sewers along the existing and future roads will direct runoff to these pond locations. Outlet sizing for the ponds will range from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

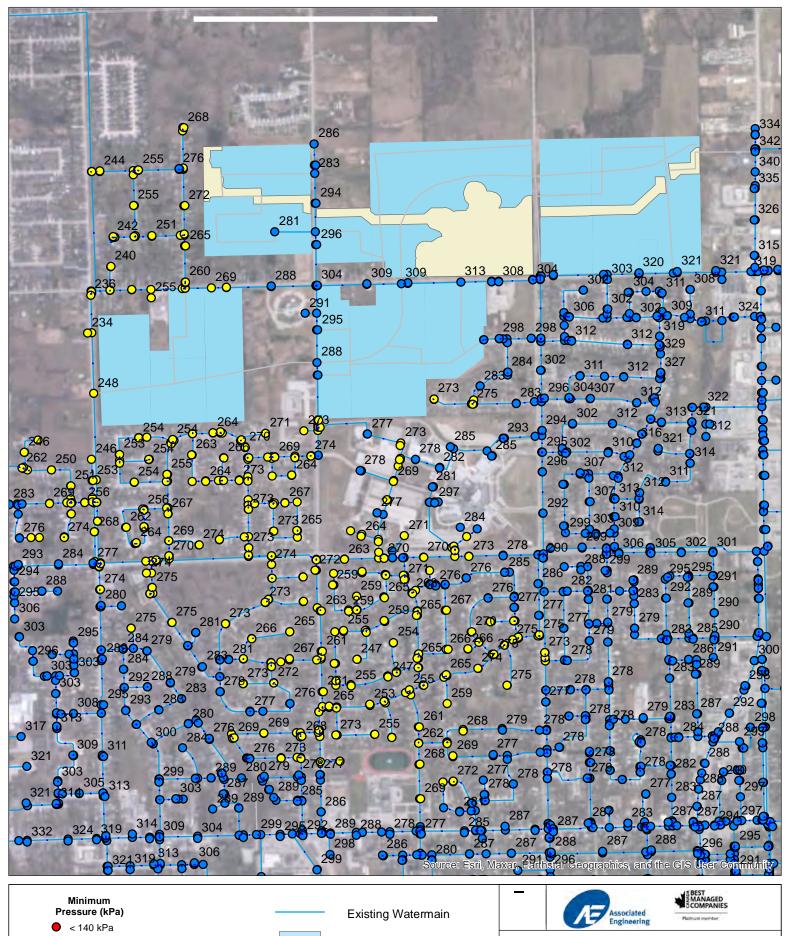
Respectfully Submitted by,

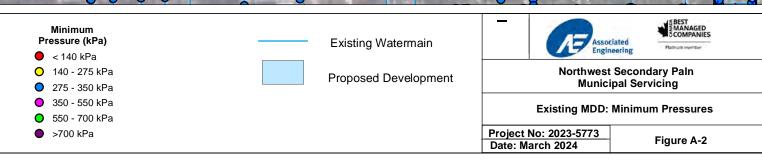
Andrea LaPlante, P.Eng. Project Manager

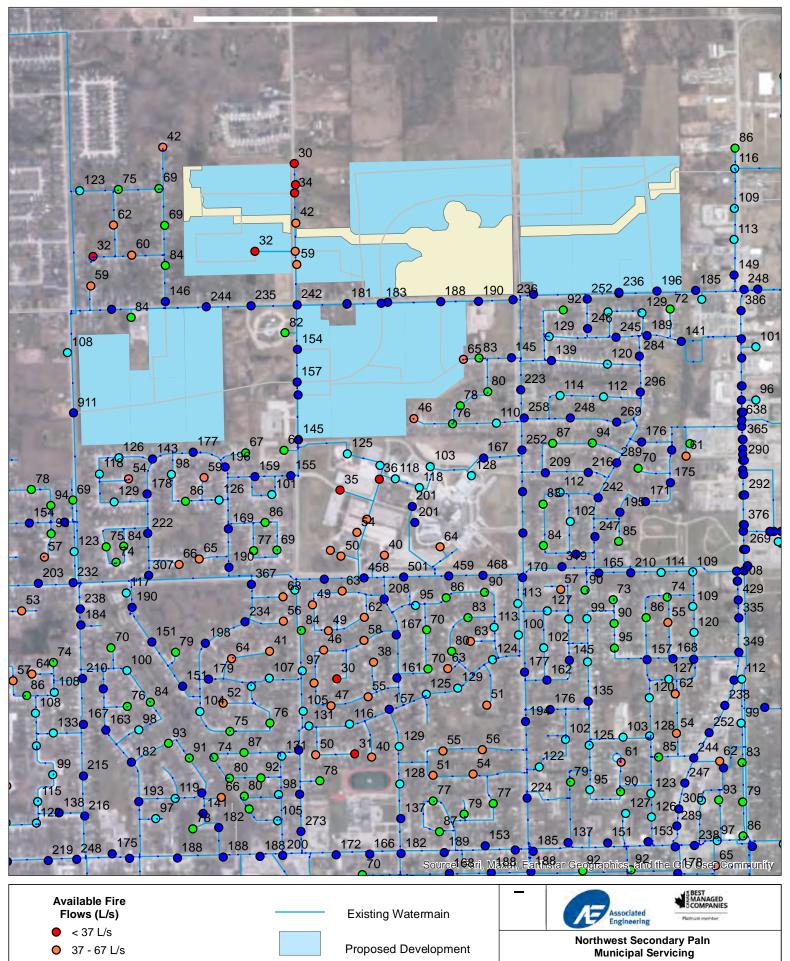


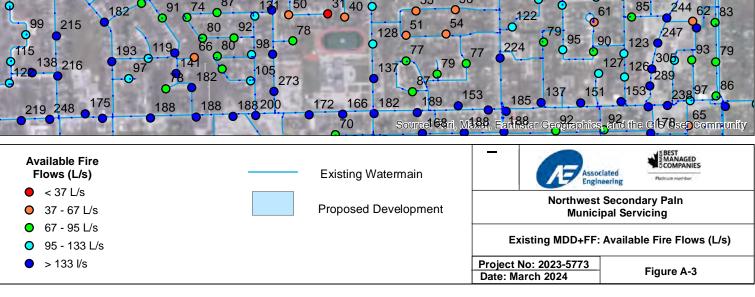
APPENDIX A - WATER

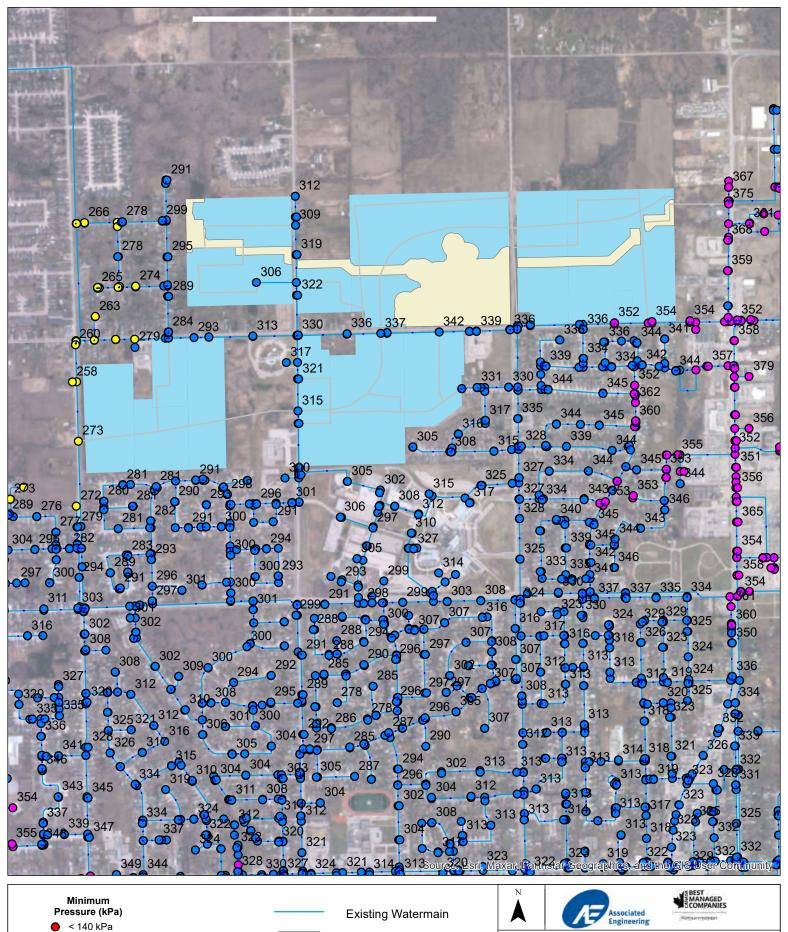


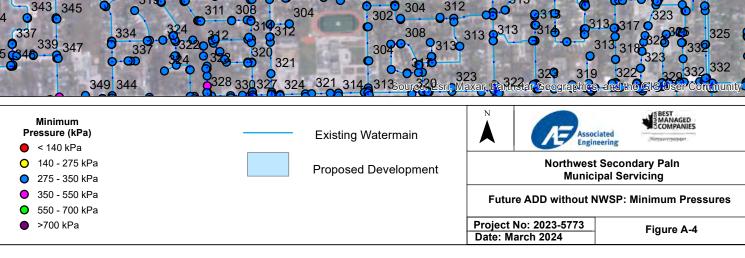


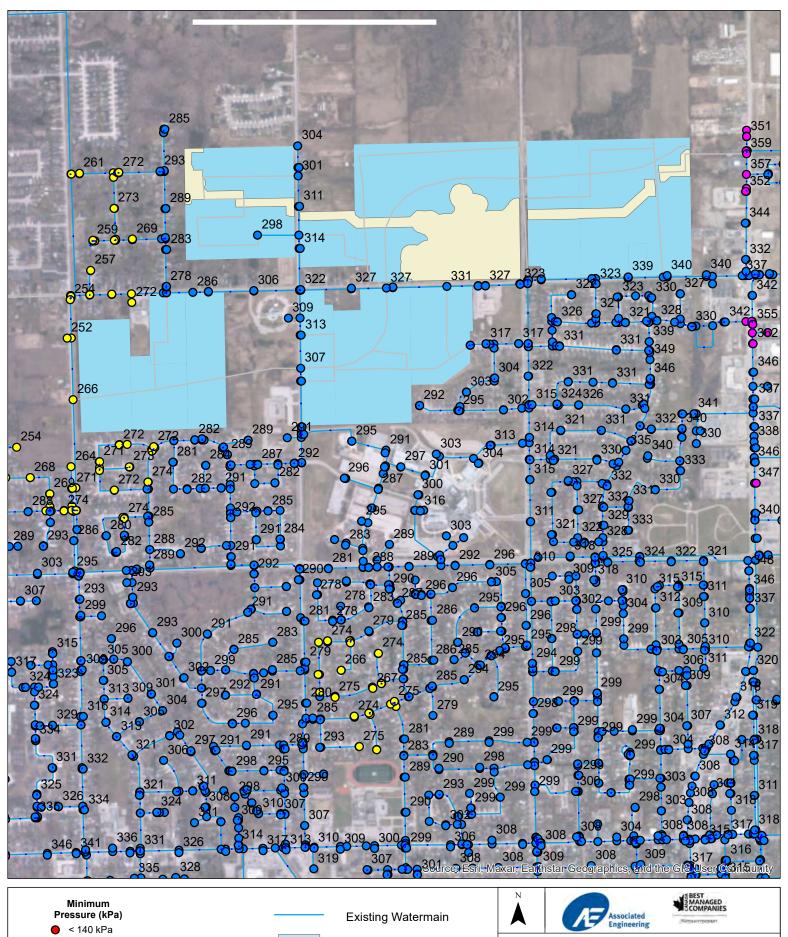


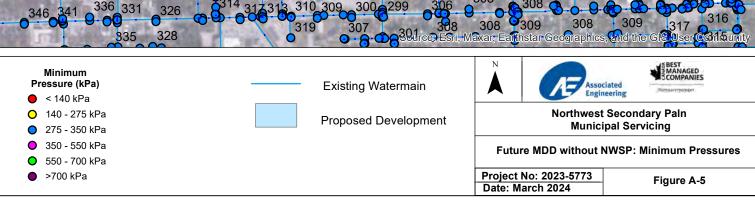


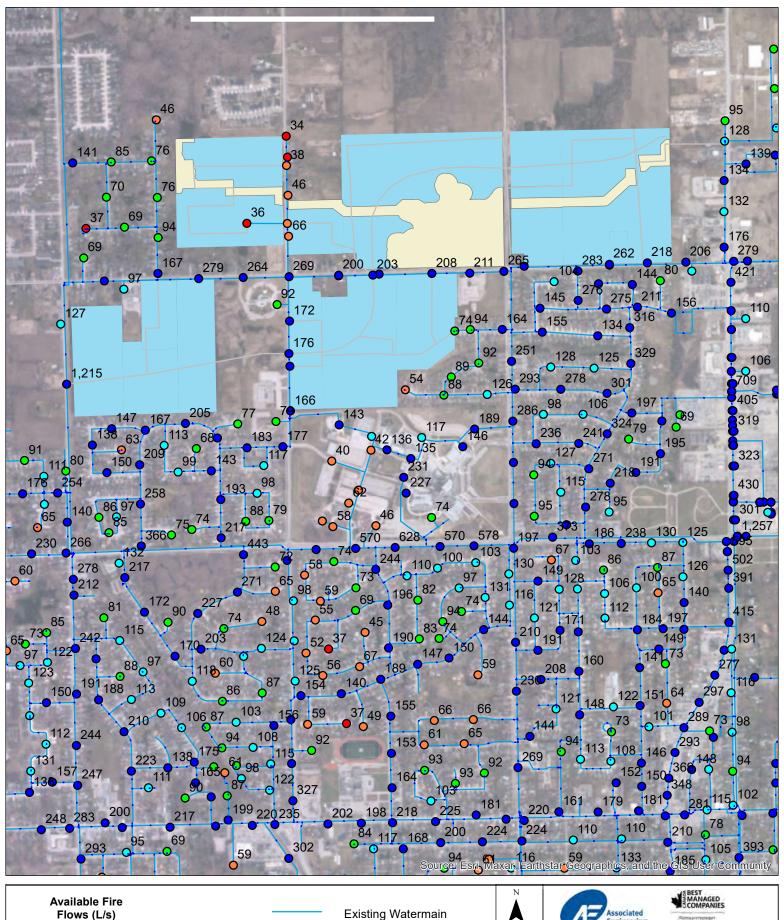














> 133 l/s

Proposed Development



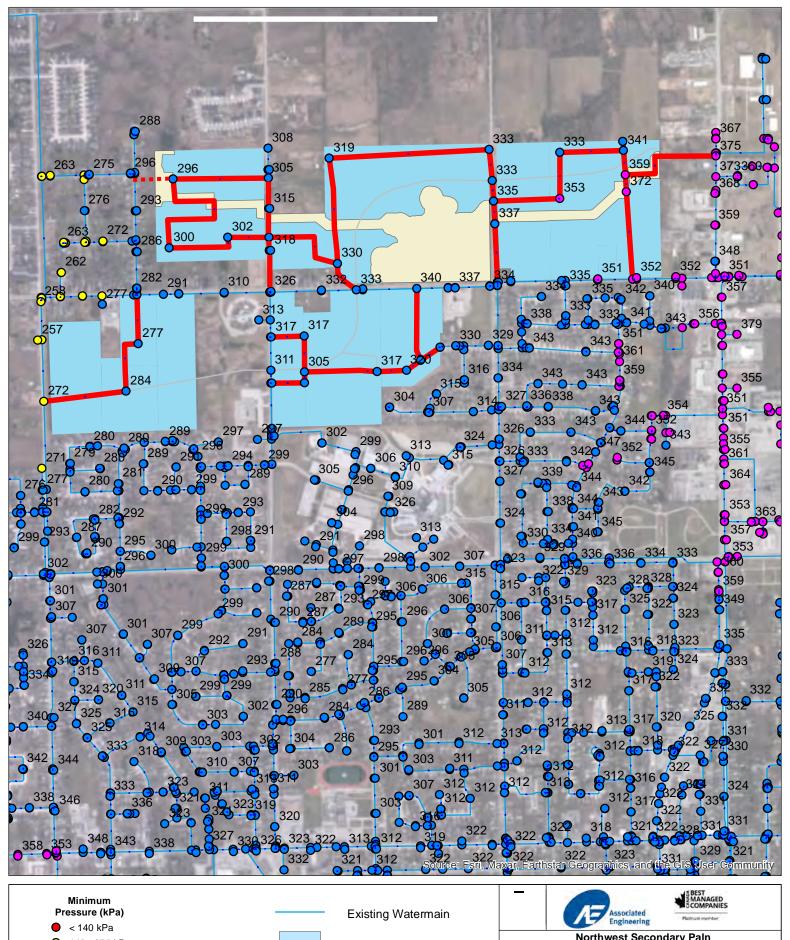


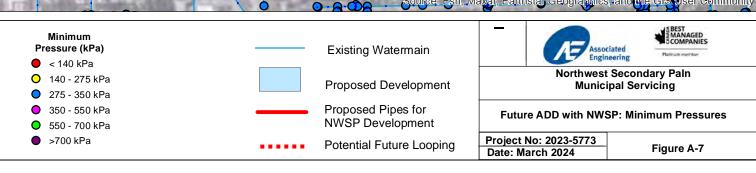
Northwest Secondary Pain Municipal Servicing

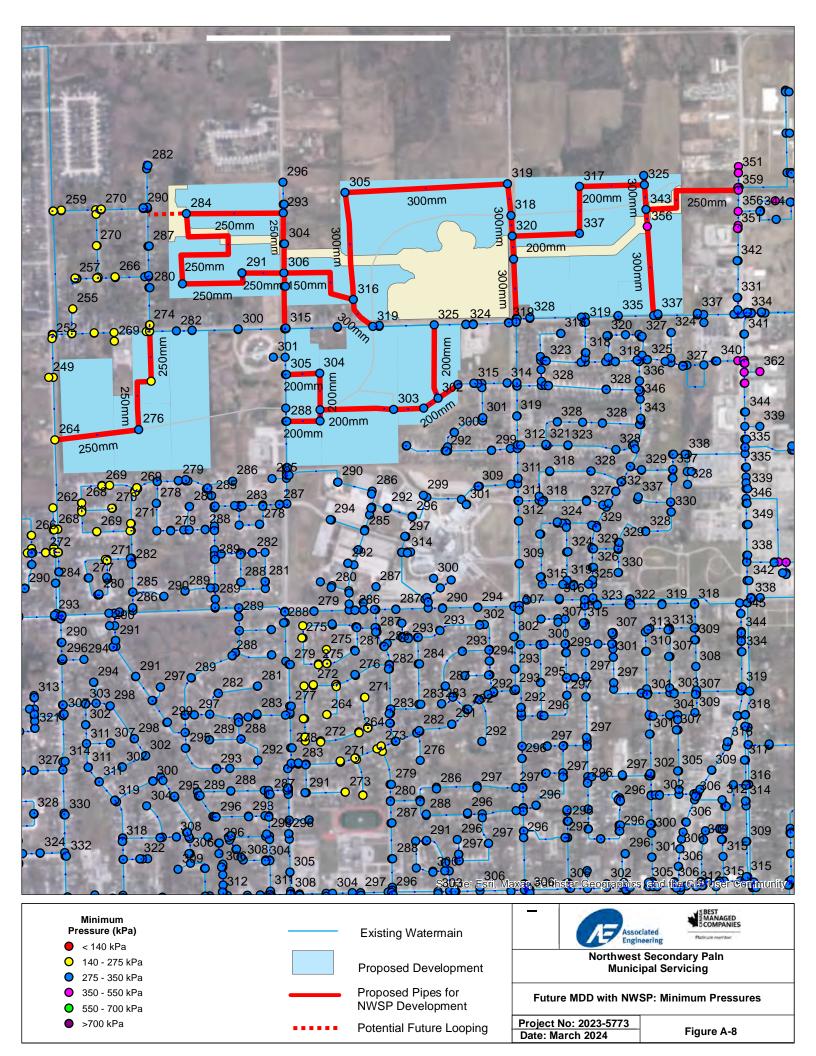
Future MDD+FF without NWSP: Available Fire

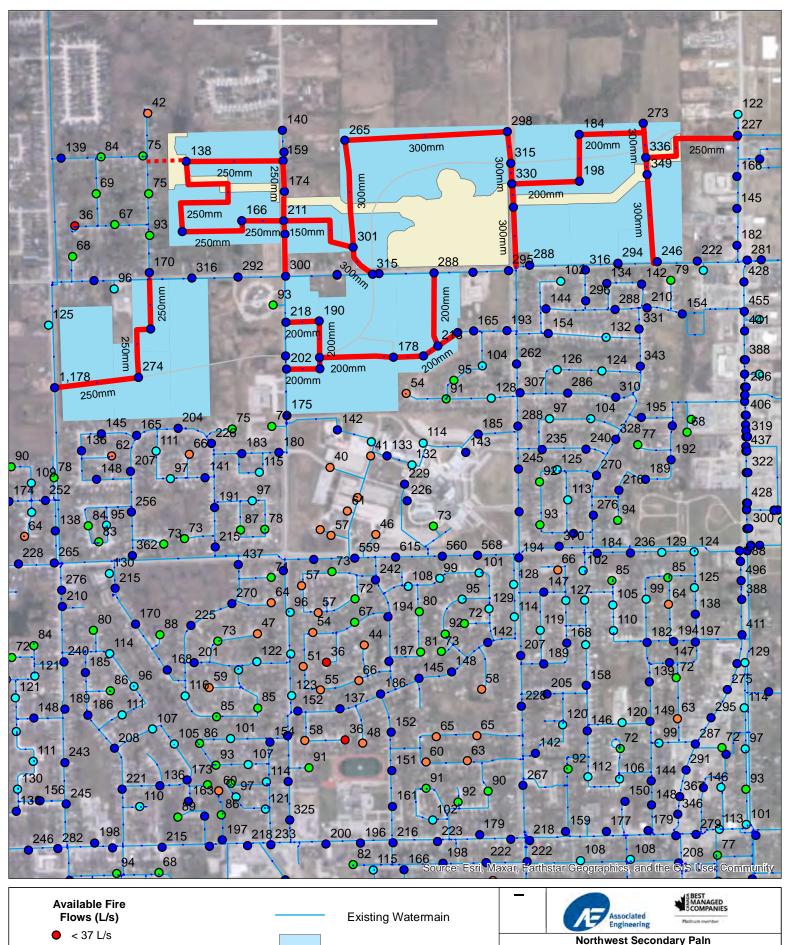
Flows Project No: 2023-5773 Date: March 2024

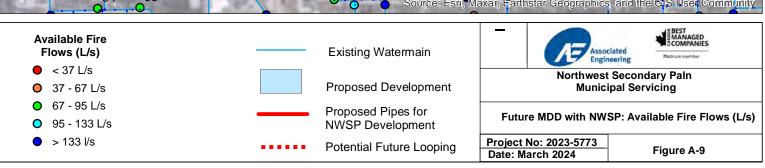
Figure A-6







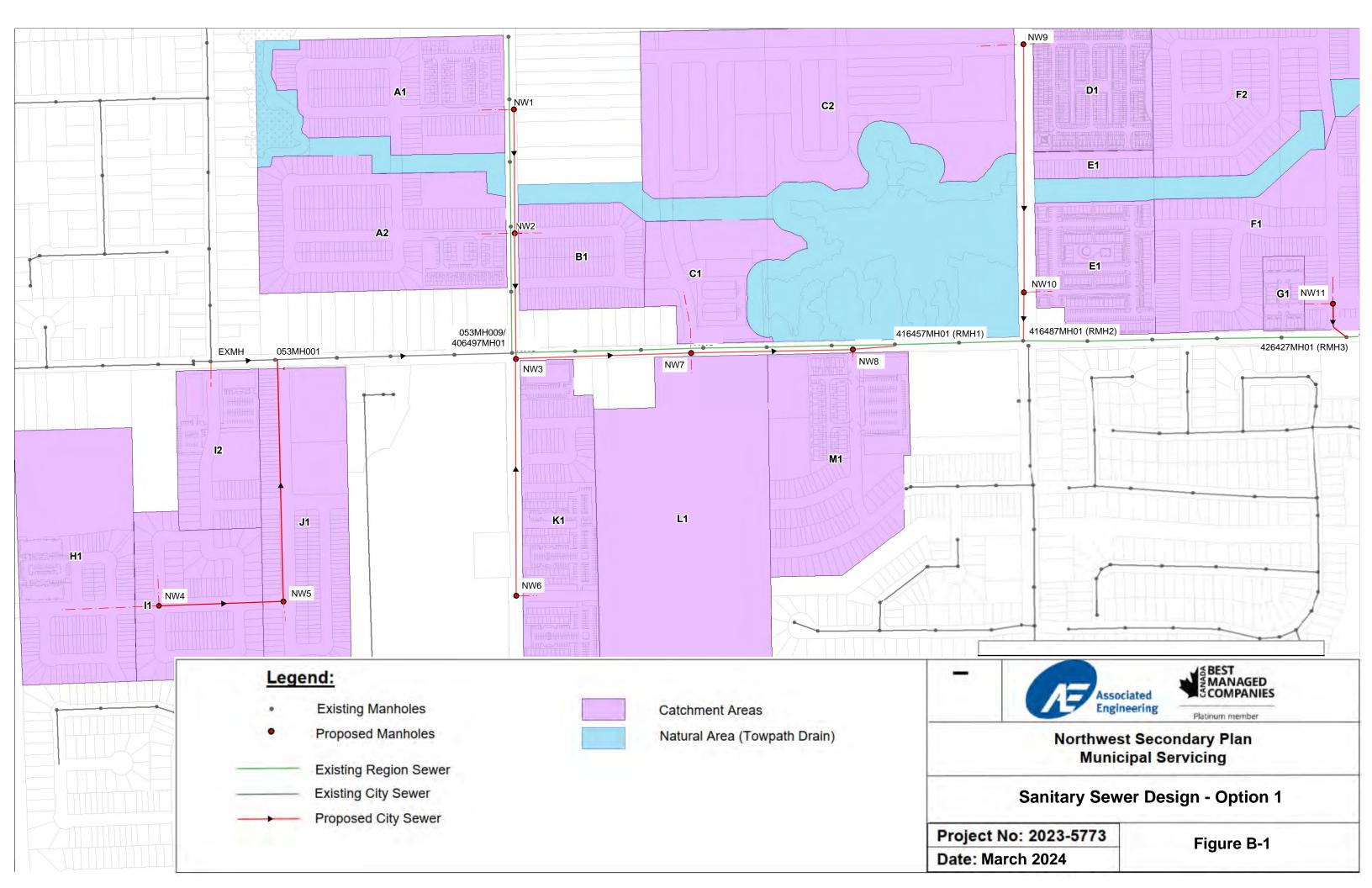


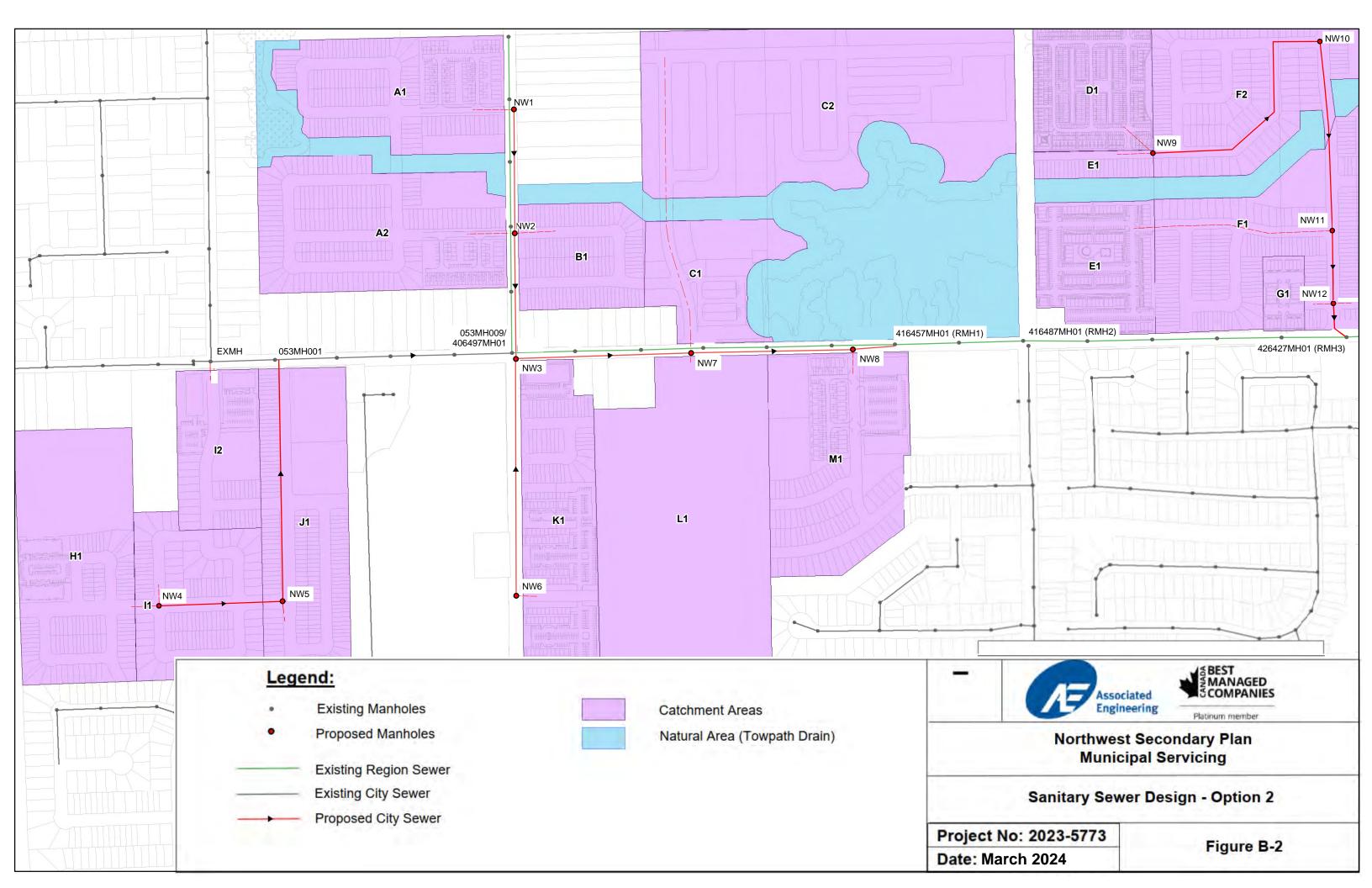


APPENDIX B - SANITARY

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 Av	renue 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											ATION AND FLOW					NK FLOW	TOTAL (NWSP + EX)						SEWER D						
DESCRIPTION	DRAINAGE AREA	MAI	NHOLE	INV	ERTS	LENGTH	AREA	POP		IULATIVE	AVG. DAILY FLOW	PEAKING FACTOR (PF = 1+14/(4+P^1/2))	PEAK FLOW (NO INFIL.)	INFILT. FLOW	PEAK FLOW (W/ INFIL.)	ADDITIONAL DEAK ELOW	PEAK FLOW	TOTAL PEAK FLOW	PIPE SIZE	ACTUAL SLOPE	APPROX. CRITICAL SLOPE	DESIGN SLOPE	Act. Dia.	PIPE AREA	HYD. RAD.	FULL FLOW VELOCITY	FULL FLOW CAPACITY		CAPACITY	ACTUAL VELOCITY
									AREA	POP. Served		(FT = TFTW(NFF-1/2))			(VV/ II VI IL.)		(FROM MODEL))		SLOFE	CIVITICAL SLOF L					VELOCITI	CAF ACIT I	FULL	CHECK	LEGGIII
				U/S	D/S																									
STREET	ID	FROM	ТО			m	(ha)	(ppl)	(ha)	(ppl)	(l/s)	(dmnl)	(L/s)	(L/s)	(L/s)	(L/s)		(L/s)	(mm)	(%)	(%)	(%)	(mm)	(m ²)	(m)	(m/s)	(L/s)	(%)		(m/s)
Disa Dand (N. of Ovellow)	A1	NW1	NW2	400.00	181.02	200		500	6.0	532	1.69	2.00	6.71	1.72	8.43	0.0	0.0	8.4	200	0.64	1.54	0.64	202.2	0.000	0.051	0.84	27.4	30.8	OK	0.05
Rice Road (N of Quaker) Rice Road (N of Quaker)	A2, B1	NW2	NW3		180.10		6.0 10.6	532 868	16.6	1400	4.46	3.96 3.70	16.49	4.76	21.25	0.0	0.0	21.2	200 250	0.64	1.43	0.64	203.2 254.0	0.032	0.064	0.84	42.5	50.0		0.65
Titoo Hoad (IT of addition)	72,0.		11110	101.02	100.10		10.0	- 000	10.0	1400	1.40	0.70	10.10	1.70	21.20	0.0	0.0			0.17	1.10	0.47	201.0	0.001	0.001	0.07	72.0			
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
																			· · · · · · · · · · · · · · · · · · ·											
Quaker Road (School/Daycare)							1.6	500	1.6	500	0.36	3.97	1.41	0.47	1.88	0.0	0.0	1.9												
Mantagara (and to Comments)				400.50	186.10	470				25	0.00	4.00	0.00	0.00	1.10		0.0	1.2	250	0.04	1.43	0.04	254.0	0.051	0.064	0.60	30.4		OK	0.24
Montgomery (end to Summerlea)				100.53	100.10	1/9	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	0.00	30.4	3.9	UK.	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
Quaker Road (Line to Kaywood)					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		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
Quaker Road (W of Rice)	12	FXMH	053MH001	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
NWSP (W of Rice, S of Quaker)	H1, I1	NW4	NW5		185.40		13.8	938	13.8	938	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		0.69
NWSP (W of Rice, S of Quaker)	J1	NW5	053MH001	185.40	183.90	389	7.0	454	20.8	1392	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
0 -1 - 0 - 144 (D:-)		0501411004	0501411000 / 400407141104	400.00	101.01		0.5			0570	0.51	0.50	20.07	44.00	11.70		0.0		000	0.50	101	0.50	0010		0.070	4.05				0.07
Quaker Road (W of Rice)	-	053MH001	053MH009 / 406497MH01	183.88	181.64	385	3.5	33	51.9	2570	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	3.91	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>											***************************************											
Quaker Road (Rice to W of First)	-	NW3	NW7		179.24		-	-	22.4	2629	8.37	3.49	29.21	6.40	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		0.71
Quaker Road (Rice to W of First)	C1, L1	NW7	NW8		178.72		16.6	1842	39.0	4471	14.23	3.29	46.81	11.15	57.96	0.0	0.0	58.0	375	0.20	1.25	0.20	381.0	0.114	0.095	0.72	81.8	70.9	OK	0.69
Quaker Road (Rice to W of First)	M1	NW8	416457MH01 (RMH1)	178.72	178.58	69	7.1	661	46.0	5132	16.33	3.23	52.83	13.17	66.00	0.0	0.0	66.0	450	0.20	1.17	0.20	457.2	0.164	0.114	0.81	133.0	49.6	OK	0.71
Flows from Hurricane SPS/Rice Road (North)	-	-	053MH009 / 406497MH01	-	-		-		-							97.7	97.7	97.7								-	-			
Tiows nontriumcane of critice road (rotal)			033Wi 1003 / 40043 / Wi 10 1					1								31.1	31.1	37.7							-					
Flows from West of Quaker and Rice (from Line Ave)	-	-	053MH009 / 406497MH01	-	-	-	-	-	-	-	-	-	-	-	-	79.1	79.1	79.1	-	-	-		-	-	-	-	-	-	-	-
								ļ																						
Quaker Road (Region Trunk E of Rice)	-	053MH009 / 406497MH01	416457MH01 (RMH1)	179.94	178.58	618	-	-	51.9	2570	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)	170 E0	178.25	207		 	98.0	7702	24.87	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	ACA C	60.5	OK	0.05
Quaker Road (W of Filst to Filst)		410437WHOT (KWITT)	410487WHOT (KWITZ)	170.30	170.23	201		+	36.0	7702	24.07	3.07	70.20	20.02	104.23	0.0	170.0	201.1	730	0.16	0.99	0.16	702.0	0.436	0.191	1.02	404.0	- 60.5		0.95
First Ave (N of Quaker)	C2, D1, F2	NW9	NW10	179.40	178.41	393	26.1	3223	26.1	3223	10.26	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	80	4.8	1123	30.9	4346	13.83	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
		·						ļ																						
Quaker Road (First to W of Niagara)	-	416487MH01 (RMH2)	426427MH01 (RMH3)	178.25	177.07	521		-	128.9	12048	38.70	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 20	177.07	E0	10.0	980	10.9	980	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
TANGE (IN OF QUARE), E OF FIRST)	F1, G1	INVVII	TZU4Z/WITUT (NWITO)	177.29	177.07	30	10.9	960	10.9	300	3.12	3.01	11.0/	3.13	15.00	0.0	0.0	13.0	200	U.##	1.04	U.444	203.2	0.032	0.001	0.70	22.1	00.1		0.07
Quaker Road (W of Niagara to Towpath)	-	426427MH01 (RMH3)	436437MH03	177.07	171.78	1320	-	-	139.8	13028	41.82	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	41.82	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
											1			1		1								1						

- 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



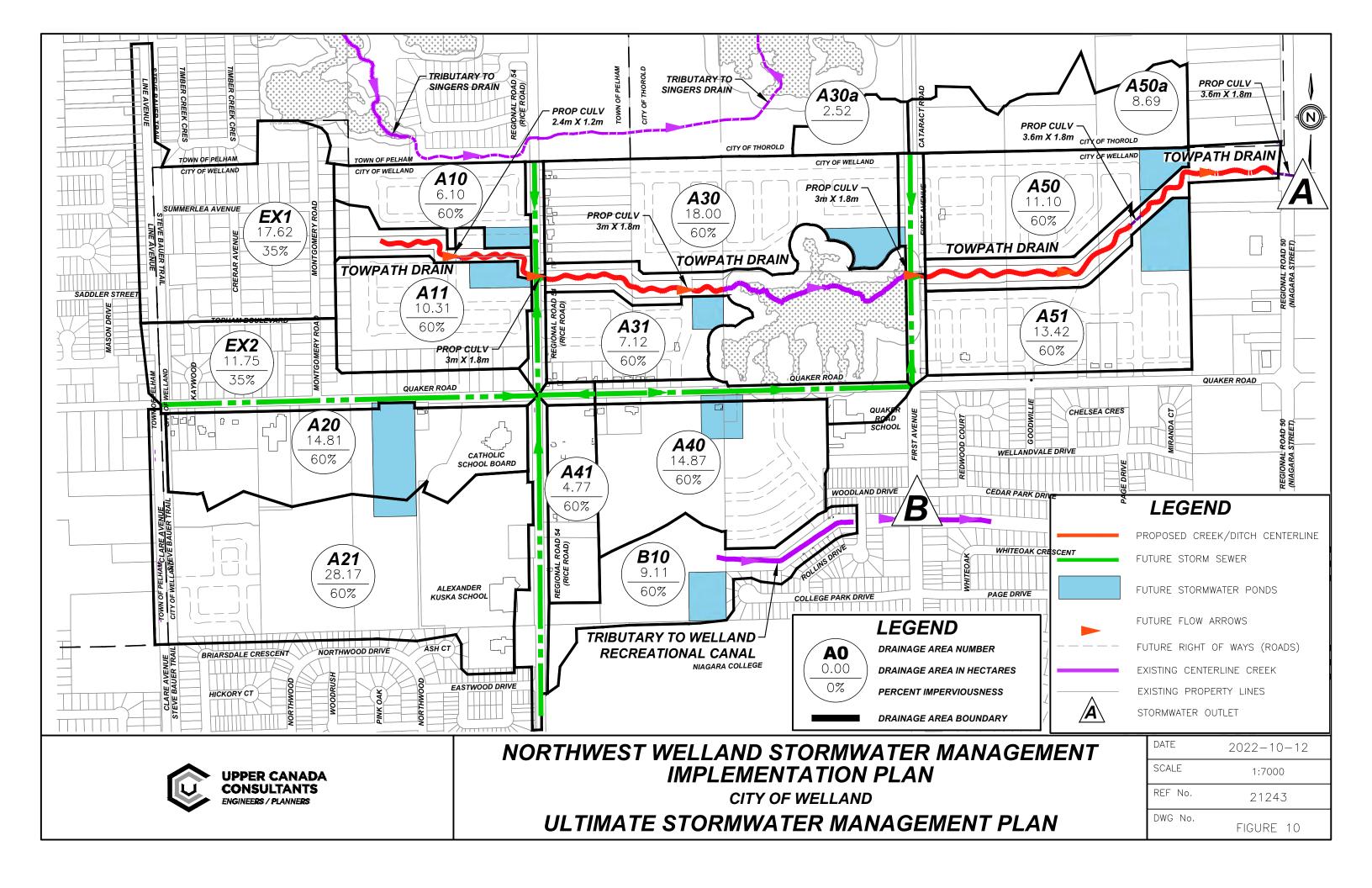
	LOCATION										NWSP POPULA	ATION AND FLOW I	DATA			EX TRI	UNK FLOW	TOTAL (NWSP + EX)						SEWER	DESIGN					
DESCRIPTION	DRAINAGE AREA	MAI MAI	NHOLE	INV	FRTS	LENGTH	AREA	POP	CUMU	ULATIVE	AVG. DAILY FLOW		PEAK FLOW (NO INFIL.)	INFILT. FLOW	PEAK FLOW	ADDITIONAL	L CUMULATIVE	TOTAL PEAK FLOW	PIPE SIZE	ACTUAL	APPROX.	DESIGN SLOPE	Act. Dia.			FULL FLOW	FULL FLOW	PERCENT	CAPACITY	ACTUAL
									AREA	POP.		(PF = 1+14/(4+PM/2))			(W/INFIL.)	PEAK FLOW				SLOPE	CRITICAL SLOPE					VELOCITY	CAPACITY	FULL	CHECK	VELOCITY
				U/S	D/S					Served						(FROM MODE	EL) (FROM MODEL)										, '	1	
STREET	ID.	FROM	то	0/3	D/S		(ha)	(ppl)	(ha)	(ppl)	(I/e)	(dmnl)	(L/s)	(L/s)	0.63	0.63		(L/s)	(mm)	(%)	(%)	(%)	(mm)	(m ²)	(m)	(m/s)	(L/s)	(%)		(m/s)
STREET	ID.	PROM	10			- "	(III)	(ppi)	(fia)	(ppi)	(I/S)	(driffi)	(08)	(L/8)	(L/s)	(L/s)		(L/S)	(mm)	(70)	(70)	(76)	(11111)	()	(111)	(1103)	(0.8)	(70)	$\overline{}$	(111/8)
Rice Road (N of Quaker)	Δ1	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
					1			1													1	1			1					
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
																														-
Quaker Road (School/Daycare)							1.6	500	1.6	500	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	0.08	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
									l																					
Topham/Crerar/Summerlea					186.12		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
																									ļ					
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
Quaker Road (W of Rice)	12	FXMH	053MH001	404.50	183.93	404	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
Quaker Road (W of Rice)	IZ.	EXIVIT	U53WH001	104.52	103.93	104	3.4	330	21.0	1145	4.00	3.70	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	UK	0.80
NWSP (W of Rice, S of Quaker)	H1. I1	NW4	NW5	196 40	185.40	210	13.8	938	13.8	938	2.99	3.82	11.40	3.95	15.35	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		183.90		7.0	454	20.8	1392	4.43	3.70	16.41	5.96	22.37	0.0	0.0	22.4	250	0.48	1.43	0.39	254.0	0.052	0.064	0.76	38.7	57.7	OK	0.70
Tivor (ii or tibo, o or quanto)		11110	00011111001	100.10	100.00	- 000	7.0	101	20.0	1002	1.10	0.10	10.11	0.00		0.0	0.0		200	0.00	1.40	0.00	1 201.0	0.001	0.007	0.70				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
						1		1															1	1			_	,		
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>						***************************************									,		
Quaker Road (Rice to W of First)	-	NW3	NW7	180.10	179.24	287		-	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

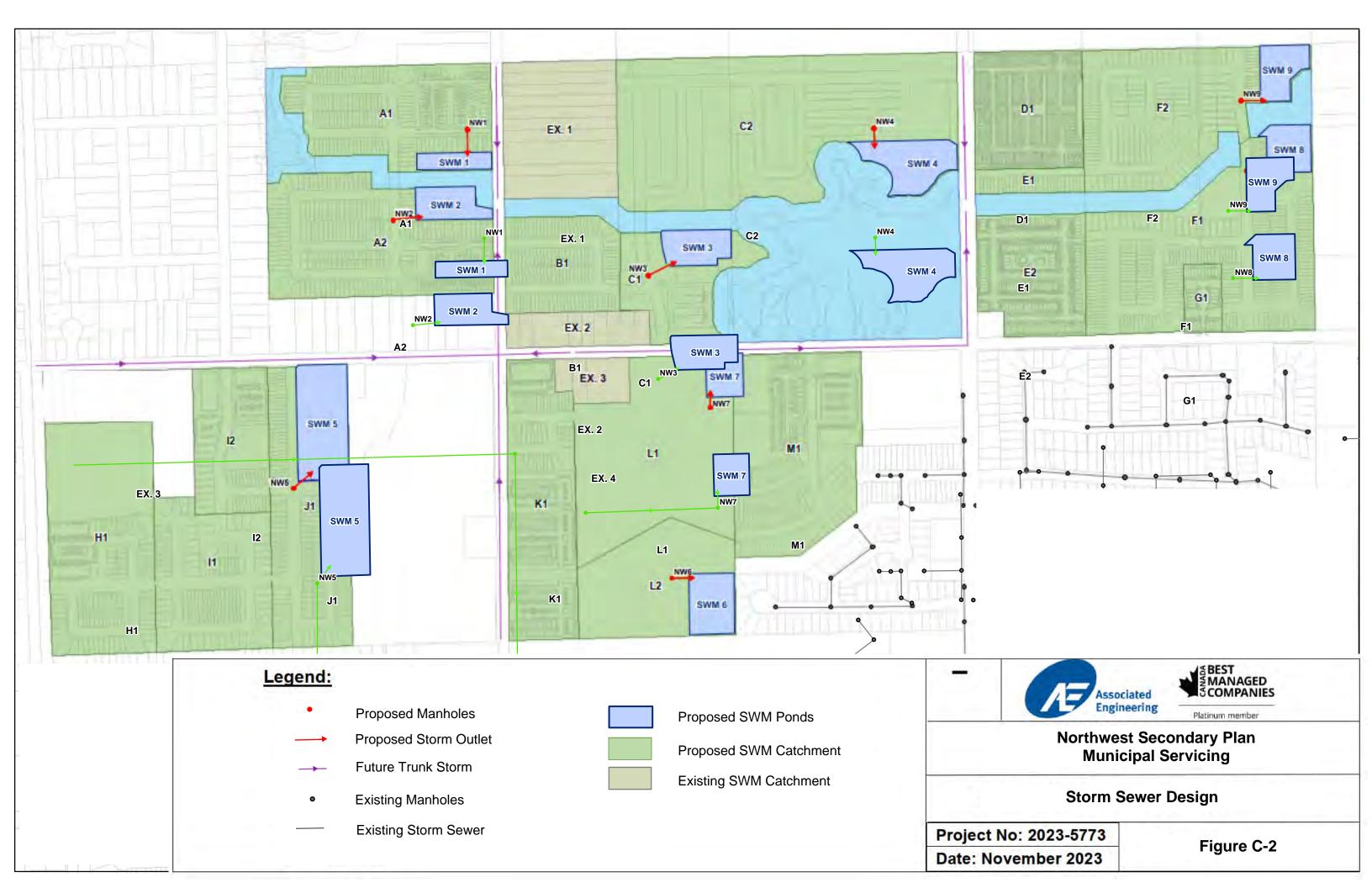
Flows from Hurricane SPS/Rice Road (North)	-	-	053MH009 / 406497MH01	-	-	-	-	-	-	-	-			-	-	97.7	97.7	97.7	-	-	-		-	-	-	-			- 1	
					-						<u> </u>											-		-	ļ		+	لـــــــــــــا		
Flows from West of Quaker and Rice (from Line Ave)		-	053MH009 / 406497MH01	-	 -	ļ		ļ				-	-			79.1	79.1	79.1	-		-	-			 	-			 - 	
Oveler Book (Bosins Twell F of Bios)		053MH009 / 406497MH01	416457MH01 (RMH1)	470.04	470.50	C40		ļ		2571	8.54	3.50	29.87	14.86	44.70		470.0	204 E	750	0.00	0.99		700.0	0.450	0.404	1.10	544.8	40.7	OK	1.00
Quaker Road (Region Trunk E of Rice)	-	053MH009 / 40649 / MH01	41645/MH01 (RMH1)	179.94	178.58	618	-	-	52.0	25/1	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	UK	1.00
Quaker Road (W of First to W of Niagara)	-	416457MH01 (RMH1)	426427MH01 (RMH3)	178 58	177.07	728		 	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
quaker road (w or riist to w or relagata)		410437WHOT (RWHTT)	420427MHOT (RWH5)	170.50	177.07	120		 	112.5	3300	30.30	2.30	31.07	32.10	125.20	3.0	173.0	303.1	7.50	0.21	0.55	0.21	102.0	0.400	0.131	1.17	332.2	30.5		1.07
NWSP (N of Quaker, E of First)	D1, E1	NW9	NW10	179,99	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	ОК	0.64
NWSP (N of Quaker, E of First)	F2	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	0.30	1.43	0.30	254.0	0.051	0.064	0.67	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	1.25	0.20	381.0	0.114	0.095	0.72	81.8	52.5	OK	0.64
NWSP (N of Quaker, E of First)	G1	NW12	426427MH01 (RMH3)	177.17	177.07	50	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
A																														
Quaker Road (W of Niagara to Towpath)	-	426427MH01 (RMH3)	436437MH03		171.78			l -	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	171.05	169.40	1002	-	-	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												, ,		

- 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

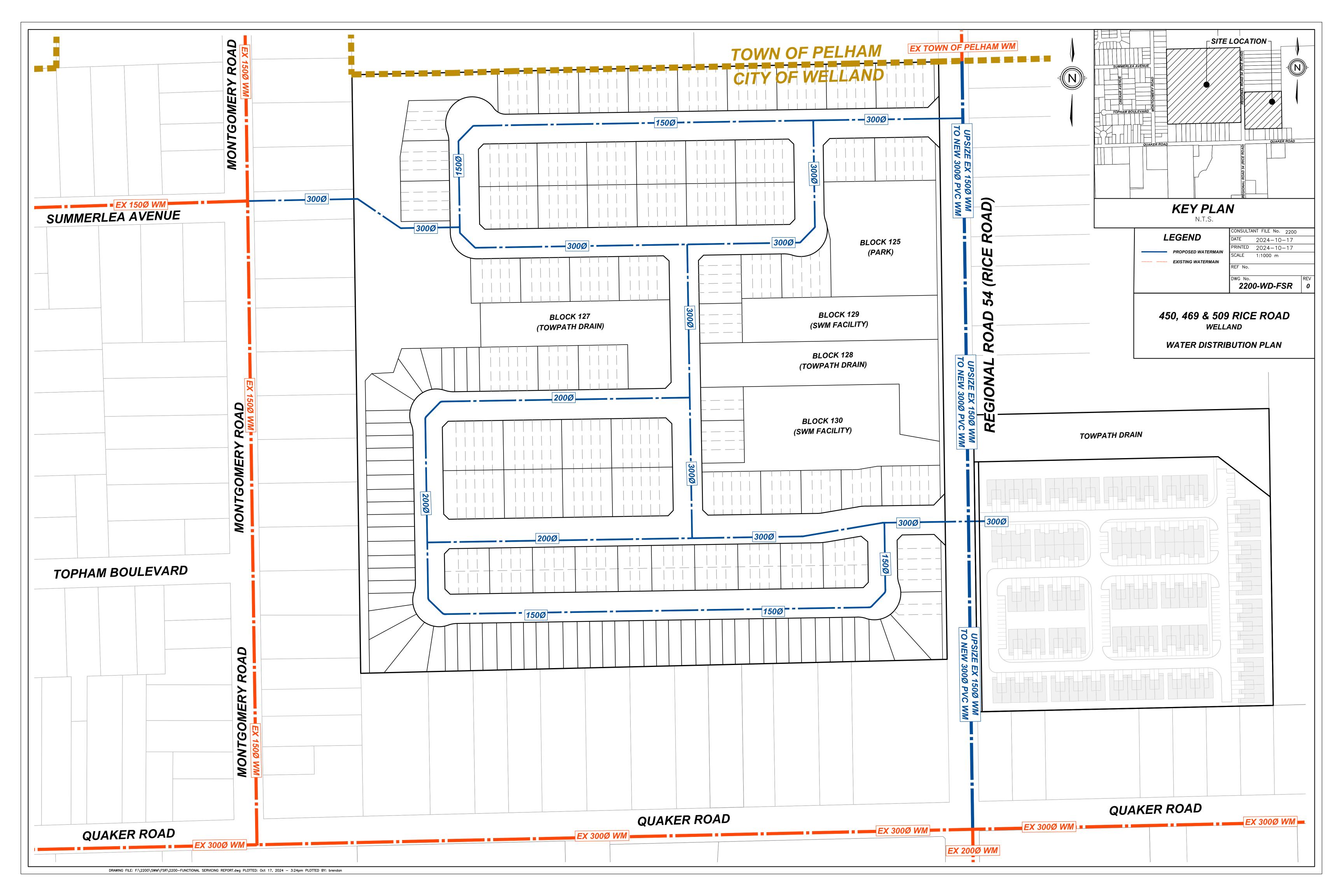
Preliminary Cost Estimate

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

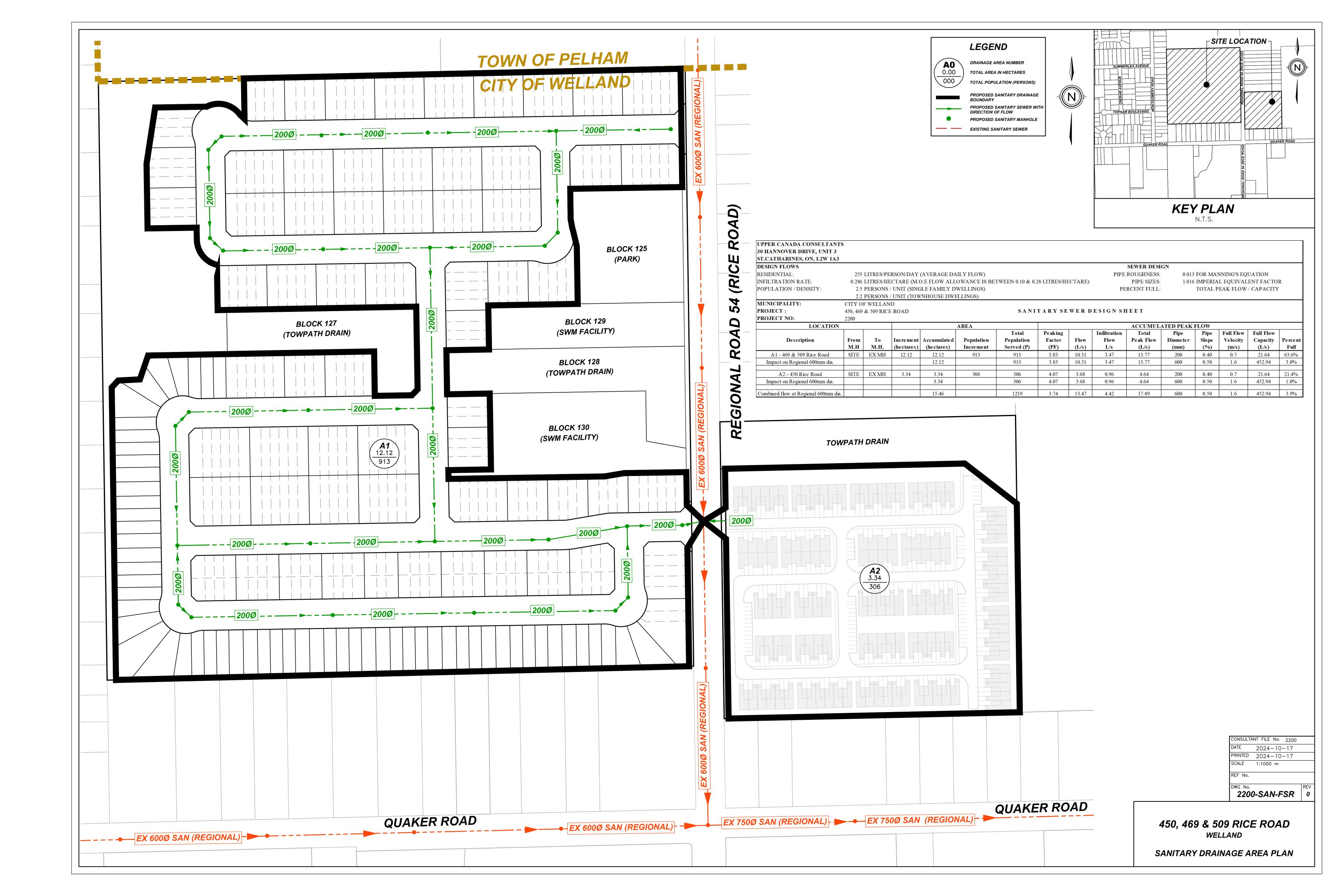
Water Distribution Plan (DWG#: 2200-WD-FSR)





APPENDIX C

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





APPENDIX D

450 Rice Road Stormwater Management Brief (UCC, October 2024)



Upper Canada Planning & Engineering Ltd. 3-30 Hannover Drive St. Catharines, ON L2W 1A3

Phone 905-688-9400 Fax 905-688-5274

STORMWATER MANAGEMENT BRIEF

450 RICE ROAD City of Welland October 16, 2024

INTRODUCTION

Upper Canada Planning & Engineering Ltd. (UCC) has been retained to provide a Stormwater Management Brief to address the stormwater management needs for the proposed residential condominium development in the City of Welland.

As shown in Figure 1, the proposed development is located at 405 Rice Road, in the north-western portion of the Northwest Welland Secondary Plan (NWWSP) area in the City of Welland, north of Quaker Road, immediately east of Rice Road, west of First Avenue, 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.

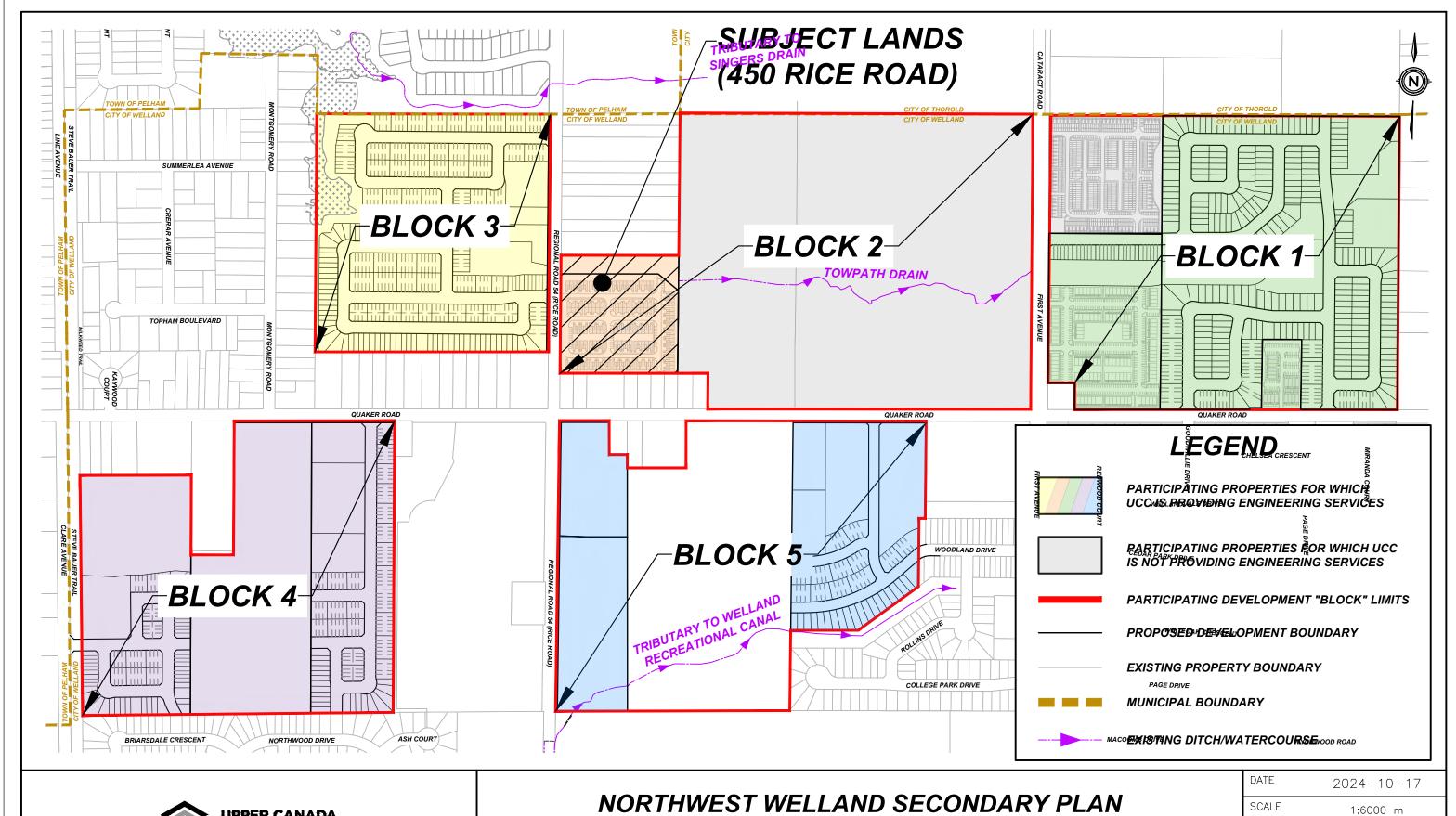
It was identified in the Implementation Plan that SWM Facilities are to be constructed within the 'Block' of development area bound by Quaker Road on the south, Rice Road on the east, west of First Avenue, and south of the municipal boundary with the Town of Pelham and City of Thorold as shown in Figure 1 as Block 2.

It is proposed to develop the 450 Rice Road property as a private condominium. Therefore, the proposed development will provide independent stormwater management from the remaining area within Block 2, and only the 450 Rice Road property will hereafter be referred to as 'subject lands' in this Brief.

The development area is approximately 3.32 hectares and will consist of private residential townhouse condominiums. The subject lands will be developed to include associated asphalt roadways, concrete curb, catch basins, storm sewers, sanitary sewers, and watermain.

The objectives of this study are as follows:

- 1. Establish criteria for the management of stormwater discharging from the site;
- 2. Determine the impact of the development on the peak flows discharging from the site; and,
- 3. Recommend a comprehensive plan for the management of stormwater runoff during and after construction.





CITY OF WELLAND SITE LOCATION PLAN - 450 RICE ROAD

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



STORMWATER QUANTITY ASSESSMENT

As identified in the Implementation Plan, stormwater management quantity controls are required within each Block to reduce future stormwater flows to existing levels within the Towpath Drain.

Immediately adjacent to the subject lands, on the west side of Rice Road are additional lands of the owner (469 & 509 Rice Road), which will be developed as a residential subdivision, including two stormwater management facilities that have been designed by UCC.

As shown in Figures 2 and 3, the 469 & 509 properties (Areas A10 to A14) are upstream of the subject lands (Area A20) and will be developed and constructed ahead of the subject lands, it is proposed to provide over-control future stormwater flows within the two proposed stormwater management facilities (P10 and P11) such that the subject lands can drain to the Towpath Drain without additional on-site quantity controls.

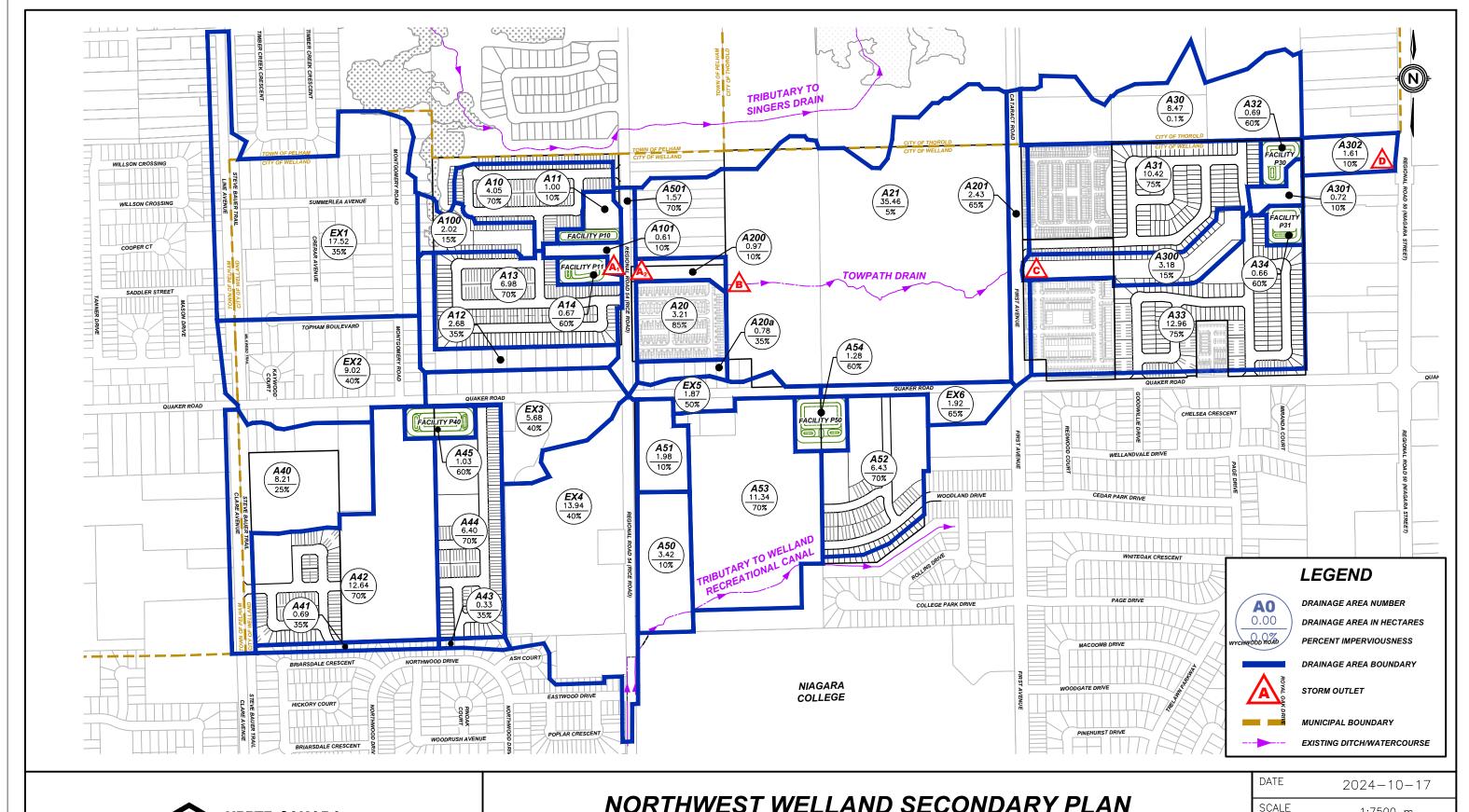
A separate Stormwater Management Plan has been prepared for the adjacent properties, outlining the detailed stormwater management calculations for the proposed stormwater management facilities, and has been enclosed in Appendix C for reference.

As summarized in Table 1 below, with the proposed over-controlling, the future peak flow at each location on the Towpath Drain are maintained below existing levels up to and including the 100 year design storm event. Therefore, independent on-site stormwater quantity controls are not required for the subject lands.

Major overland flows from within the subject lands will be directed northerly to the Towpath Drain.



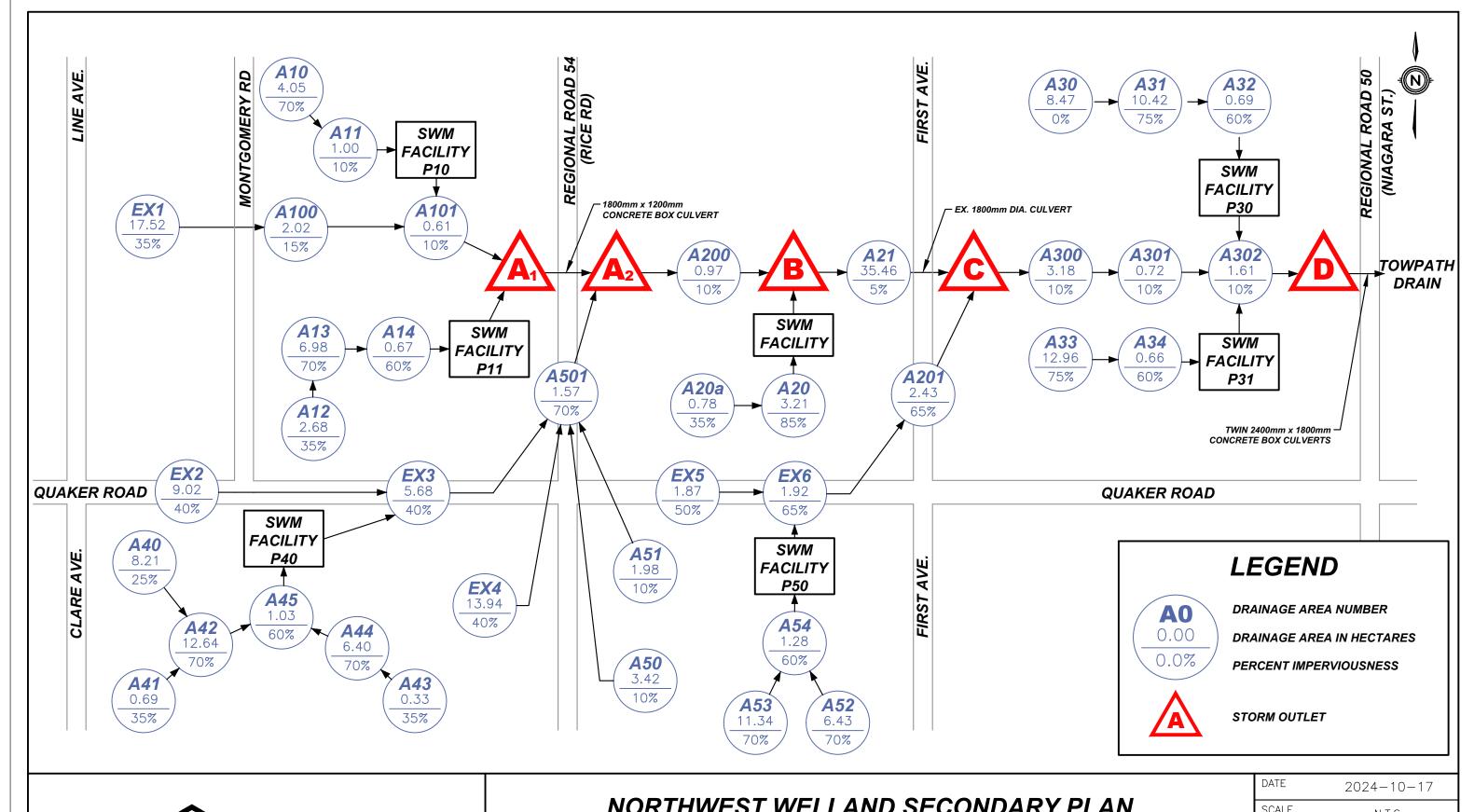
		Peak Flow (m ³ /s)	
Design Storm –	Existing	Future with SWM	Change
U		Culvert Crossing – Outlet A	
2 Year	1.317	0.983	-25.4%
5 Year	1.589	1.185	-25.4%
10 Year	1.800	1.344	-25.3%
25 Year	2.099	1.583	-24.6%
100 Year	2.558	1.908	-25.4%
Do	wnstream of Rice Road	l Culvert Crossing – Outlet	A2
2 Year	3.301	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	owpath Drain Upstrear	n of Existing PSW – Outlet	В
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%
Dov	vnstream of First Aven	ue Culvert Crossing – Outle	et 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%
Up	stream of Niagara Stre	et Culvert Crossing – Outle	t 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%





NORTHWEST WELLAND SECONDARY PLAN CITY OF WELLAND FUTURE STORM DRAINAGE AREAS

DATE	2024-10-17
SCALE	1:7500 m
REF No.	-
DWG No.	FIGURE 2





NORTHWEST WELLAND SECONDARY PLAN CITY OF WELLAND

CITY OF WELLAND
FUTURE HYDROLOGICAL MODELLING SCHEMATIC

DATE	2024-10-17
SCALE	N.T.S.
REF No.	-
DWG No.	FIGURE 3



STORMWATER QUALITY ASSESSMENT

The stormwater outlet for the site stormwater flows is the Towpath Drain. As identified in the Implementation Plan, stormwater quality improvements will be required to MECP Enhanced Levels (80% TSS Removal) prior to discharging from the site.

To improve stormwater quality, a stormwater oil/grit separator is proposed to provide TSS (Total Suspended Solids) removal for the subject lands.

It is required the unit will provide a minimum average of 80% TSS removal which achieves MECP Enhanced Quality Protection. The total stormwater drainage area contributing to the proposed oil/grit separator is 3.99 hectares with an approximate impervious coverage of approximately 75%. The modelling for a Hydroworks unit has indicated that an HD 12 will provide 80.9% 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 A.

Oil/Grit Separator Maintenance

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 B 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. 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 the 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.



CONCLUSIONS AND RECOMMENDATIONS

Therefore, based on the above comments and design calculations provided for this site, the following summarizes the stormwater management plan for this site.

- 1. Stormwater quantity controls are not required on-site as the upstream adjacent lands (owned by the same owner) will provide adequate over-control to ensure future peak stormwater flows in the Towpath Drain are maintained to below existing levels.
- 2. The major overland route will convey stormwater flows northerly to the Towpath Drain.
- 3. Stormwater quality protection is being provided by a Hydroworks HD 12 stormwater oil/grit separator or approved equivalent in the proposed 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.

Respectfully Submitted,

B. J. KAPTEYN
100509155

Brendan Kapteyn, P.Eng.

Encl.



APPENDICES



APPENDIX A

Hydroworks Sizing Software Output File

```
Storm Water Management Sizing Model
                      Hydroworks, LLC
                       Version 4.4
              Continuous Simulation Program
Based on SWMM 4.4H
Hydroworks, LLC
Graham Bryant
2003 - 2023
        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 * or by e-mail: support@hydroworks.com *
        ************************************
        * 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
        HydroDome Simulation
    .....
    Print NCDC special codes in event summar,
= 0, only on days with events.
= 1, on all days with codes present.
Codes: A = accumulated value, I = incomplete value,
M = missing value, O = other code present
************
Location Station Number
     1. 7287
STATION ID ON PRECIP. DATA INPUT FILE = 7287 REQUESTED STATION ID = 7287 CHECK TO BE SURE THEY MATCH.
"And wherever water goes, amoebae go along for # the ride" Tom Robbins #
```

```
Snowmelt parameter - ISNOW.....
                                                                                                                   subcatchment lines.
 Runoff graph plot control ...
Runoff output print control...

Print headers every 50 lines - NOHEAD (0=yes, 1=no) 0

Print land use load percentages -LANDUPR (0=no, 1=yes) 0

Limit number of groundwater convergence messages to 10000 (if simulated)

Month, day, year of start of storm is: 1/ 1/1971
                                                                                    1/ 1/1971
Month, day, year of start of storm is: 1/1
Wet time step length (seconds)......
Dry time step length (seconds).....
Wet/Dry time step length (seconds)...
Simulation length is.....
Percent of impervious area with zero detention depth
Horton infiltration model being used
Rate for regeneration of infiltration = REGEN * DECAY
DECAY is read in for each subcatchment
REGEN = 0.00
                                                                                                           300.
                                                                                                           900.
                                                                                                           450
                                                                                               20051231 0 Vr/Mo/Dv
 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 0.00 0.00 2.54 2.54 3.81 3.81 3.81 2.54 2.54 0.00 0.00
 *******************
  * CHANNEL AND PIPE DATA *
 | Input NAMEG: Drains equen Channel to Channel width Length Slope Slope Slope Depth (m/m) 
                                                                                                                                                                       Max Mann-
                                                                                                                                                                                                Full
                                                                                                                                                                 Depth ings Flow
(m) "N" (cms)
                                                                                                                                                    Depth
(m)
                                                                                                                   0.0000 0.0000
                                                                                                                                                         0.0
                                                                                                                                                                        0.0 0.0000 0.00E+00
   ***********
    * SUBCATCHMENT DATA *
  *NOTE. SEE LATER TABLE FOR OPTIONAL SUBCATCHMENT PARAMETERS*
SUBCATCH- CHANNEL WIDTH AREA PERCENT SLOPE
MENT NO. OR INLET (M) (HA) IMPERV. (M/M)
                                                                                                                                                                     DEPRES. STORAGE(MM) INFILTRATION DECAY RATE GAGE MAXIMUM
                                                                                                                                                                                                           KATE (MM/HR) (1/SEC) NO. VOLUME
MAXIMUM MINIMUM
                                                                                                                                                                                       PERV.
                                                                                                                             IMPERV. PERV.
                                                                                                                                                                  IMPERV.
                                                                                                                                                                                                                                                                                 (MM)
5.080 63.50 10.16 0.00055
                                                                                                        0.0200
                                                                                                                               0.015
                                                                                                                                                  0.250
                                                                                                                                                                     0.510
                                                                                                                                                                                                                                                               1 101.60000
 *************
  * 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 =========

        CATCH
        OR
        GROUND BOTTOM STAGE
        BC TW A1 B1 B1 A2 B2 B2 A3

        NUMBER
        INLET
        (M) (M) (M) (M) (M) (M) (MM/HR-M^B1) (MM/HR-M^B2)
        (MM/HR-M^2)

                                                                                                                 TW A1 B1 A2 B2 A3 (M) (MM/HR-M^B1) (MM/HR-M^B2) (MM/HR-M^2) (MM/HR-M^2) 0.61 3.484E-04 2.600 0.000E+00 1.000 0.00E+00
                                           602
  *************
    G R O U N D W A T E R I N P U T D A T A (CONTINUED) *
              S O I L P R O P E R T I E S
SATURATED
SUBCAT. HYDRAULIC WILTING FIELD INITIAL MAX. DEEP PARAMETERS
NO. POROSITY CONDUCTIVITY POINT CAPACITY MOISTURE PERCOLATION HCO PCO
                                                                                                                                                                            E T PARAMETERS
DEPTH FRACTION OF ET
OF ET TO UPPER ZONE
                                                                                                                                                                                   (m)
                 (mm/hr)
                                                                                                                        (mm/hr)
                                                                                                                        5.080E-02 10.00
                                                                                                                                                             4.57
                                                                                                                                                                                   4.27
                                                                                                                                                                                                         0.350
  ***********
 * Arrangement of Subcatchments and Channel/Pipes *
  * See second subcatchment output table for connectivity * * of subcatchment to subcatchment flows.
       Channel
                            No Tributary Channel/Pipes
                           No Tributary Subareas....
        INLET
             200
                            Tributary Channel/Pipes...
                            Tributary Subareas.....
  *************
  * Hydrographs will be stored for the following 1 INLETS *
                    200
```

A - 2

```
# General Quality Control Data Groups #
Number of quality constituents. NQS.
Number of land uses. JLAND.
Standard catchbasin volume. CBVOL.
Erosion is not simulated. IROS.
DRY DAYS PRIOR TO START OF STORM. DRYDAY.
DRY DAYS REQUIRED TO RECHARGE
CATCHBASIN CONCENTRATION TO
                                                                    1.22 cubic meters
                                                                   3.00 DAYS
 INITIAL VALUES..... DRYBSN.....
                                                                   5.00 DAYS
 DUST AND DIRT
 DUST AND DIRT
STREET SWEEPING EFFICIENCY. REFFDD.
DAY OF YEAR ON WHICH STREET
SWEEPING BEGINS. KLNBGN.
DAY OF YEAR ON WHICH STREET
                                                                 0.300
 .....
CLEANING AVAIL.
                                                                                        BUILDUP BUILDUP
                                                                           BUILDUP
                                                                                                               INTERVAL
                                                                                                                           FACTOR
AND USE BUILDUP EQUATION TYPE FUNCTIONAL DEPENDENCE OF
                                                                                                                                         SWEEPING
                                                                          QUANTITY
                                                                                                                           FRACTION
                                                                                        POWER COEFF.
(DDPOW) (DDFACT)
                                                                                                               IN DAYS
                     (METHOD) BUILDUP PARAMETER(JACGUT)
LNAME)
                                                                          (DDLIM)
                                                                                                               (CLFREO)
                                                                                                                           (AVSWP)
                                                                                                                                          (DSLCL)
Urban De EXPONENTIAL(1)
                                                   AREA(1)
                                                                         2.802E+01
                                                                                          0.500
                                                                                                    67 250
                                                                                                                 30 000
                                                                                                                               0 300
                                                                                                                                          30 000
# Constituent data on data group J3 #
                                      Total Su
Constituent units.....
Type of units.....
KALC....
Type of buildup calc....
                                 EXPONENTIAL(2)

        KWASH...
        0

        Type of washoff calc...
        POWER EXPONEN.(0)

        kACGUT...
        1

        Dependence of buildup...
        AREA(1)

Dependence of buildup...
LINKUP...
LINKUP...
Buildup param 1 (OFACTI).
Buildup param 2 (OFACTE).
Buildup param 3 (OFACTE).
Buildup param 3 (OFACTE).
Buildup param 4 (OFACTE).
Buildup param 4 (OFACTE).
Washoff power (WASHPO).
Washoff coef. (RCOEF)...
Init catchb conc (CEFACT)
Precip. conc. (CONCRN).
                                0
NO SNOW LINKAGE
                                         28.020
                                          0.500
                                            0.000
                                         1.100
0.086
100.000
Init catchb cone (CBFACT)
Precip. conc. (CONCRN)...
Street sweep effic (REFF)
Remove fraction (REMOVE).
lst order QDECAY, 1/day..
Land use number......
                                           0.000
* Constant Groundwater Quality Concentration(s) *
 Total Susp has a concentration of.. 0.0000 mg/l
***************
  REMOVAL FRACTIONS FOR SELECTED CHANNEL/PIPES *
CHANNEL/ CONSTITUENT
      PIPE Total Susp
       201 0.000
*************
* Subcatchment surface quality on data group L1 *
                                         Total Number Input
Gutter of Loading
Length Catch- load/ha
Km Basins Total Su
                                     Gutter
Length
Km
              Land Use
No. Usage No.
300 Urban De 1
                                                   Basins
   1 300 Urban De 1 0.28
Totals (Loads in kg or other) 0.28
                                                              0.0E+00
                                                    2.00 0.0E+00
                                                      2.00
    *******
* DATA GROUP M1 *
TOTAL NUMBER OF PRINTED GUTTERS/INLETS...NPRNT..
NUMBER OF TIME STEPS BETWEEN PRINTINGS..INTERV..
STARTING AND STOPPING PRINTOUT DATES.....
                                                                               0
     ******
     * DATA GROUP M3 *
CHANNEL/INLET PRINT DATA GROUPS.....
```

Rainfall Station St. Catherines A State/Province Ontario Rainfall Depth Summary (mm) Sep 52. 63. 63. 74. Jul 126. 39. 53. Total 391. 521. 534. Year 1971. 1972. 1973. May 0. 65. 77. 105. Jun 0. 100. 71. 62. Aug 93. 115. 29. 31. 60. 90. 139. 103. 1974. 0. 67. 37. 536. 94. 87. 69. 72. 33. 1975. 0. 0. 0. 0. 78. 76. 73. 56. 59. 13. 0. 71. 45. 442. 0. 0. 0. 0. 0. 78. 101. 57. 43. 91. 60. 122. 119. 136. 60. 150. 86. 88. 73. 71. 95. 129. 662. 701. 567. 673. 554. 1976 72 230. 156. 84. 79. 0. 39. 32. 1980. 81. 96. 123. 1981. 0. 91. 71. 106. 61. 91. 84. 0. 749. 36. 55. 19. 40. 85. 75. 144. 42. 98. 28. 78. 31. 32. 93. 1982. 0. 0. 0. 65. 97. 65. 136. 64. 60. 80. 21. 108. 44. 31. 92. 86. 124. 66. 25. 122. 143. 0. 544 0. 0. 67. 0. 100. 113. 52. 92. 44. 0. 43. 1983. 106. 694 51. 94. 83. 24. 109. 80. 71. 562. 501. 719. 1984. 1985. 1986. 65. 34. 94. 75. 84. 96. 61. 103. 77. 71. 1987. 42. 42. 730. 1988. 0. 0. 41. 110. 82. 68. 5. 0. 585. 36. 68. 85. 185. 32. 48. 95. 57. 70. 89. 56. 79. 77. 71. 68. 73. 112. 64. 47. 92. 15. 13. 38. 86. 29. 1989. 63. 99. 137. 647 1990 124. 735 1990. 1991. 1992. 1993. 99. 124. 127. 83. 88. 67. 56. 56. 28. 38. 38. 682. 869. 610. 61. 77. 66. 7. 44. 16. 0. 94. 1994. 633 54. 35. 216. 45. 64. 112. 23. 1995. 48. 37. 8. 0. 0. 0. 0. 0. 724. 64. 61. 51. 25. 1998 0. 0. 0. 0. 0. 79. 51. 59. 29. 58. 0. 30. 49. 64. 207 9. 116. 0. 81. 52. 1999. 2000. 2001. 2002. 487. 534. 454. 468. 0. 79. 59. 123. 134. 56. 88. 73. 104. 10. 163. 65. 2003. 81. 67. 73. 537. 131. 2004. 0. 0. 0. 0. 0. 126. 99. 78. 40. 88. 616. 2005. 38. 42. 53. 443. Total Rainfall Depth for Simulation Period 19310. (mm) Rainfall Intensity Analysis (mm/hr) (%) 33.4 16.0 14.9 6.4 5.5 3.4 (%) 74.6 12.4 (mm/hr) (mm) 6454. (#) 21481 2.50 3585 3088. 3585 1973 575 389 194 6.8 2.0 1.4 0.7 7.50 2886 17.50 210 0.7 846. 4.4 20.00 66 92 0.2 306. 22 50 487 25.00 27.50 30.00 32.50 39 37 34 29 232. 246. 245. 228. 35.00 5 10 0.0 42. 37.50 90. 10 12 9 40.00 0.0 97. 0.5 42.50 45.00 47.50 50.00 0.0 0.0 0.0 97. 124. 99. 12. 0.2 49 >50.00 0.2 829. Total # of Intensities 28803 Daily Rainfall Depth Analysis (mm) (#) (%) (mm) 2.50 1077 38.9 1247. 1 Depth Ana (%) 38.9 18.3 (mm) 1247. 1850. (%) 6.5 9.6 10.4 10.1 8.7 7.7 8.4 6.5 5.00 507 7.50 326 11.8 2006. 10.00 8.2 1958. 12.50 15.00 17.50 20.00 22.50 150 111 100 67 45 1672. 1495. 1620. 1260. 1.6 958. 5.0 4.6 25.00 37 881. 27.50 23 0.8 609. 30.00 32.50 35.00 37.50 0.7 0.7 0.4 0.3 575. 631. 405. 290. 350. 40.00 42.50 0.1 165. 45.00 0.1 173. 47 50 91 47.50 2 0.1 50.00 4 0.1 1 >50.00 15 0.5 8 Total # Days with Rain 2767 *********** * End of time step DO-loop in Runoff * Final Date (Mo/Day/Year) =
Total number of time steps =
Final Julian Date =
Final time of day =
Final time of day = 2056881 2006001 seconds.
 hours. Final running time = Final running time = hours. 12784.0000 * Extrapolation Summary for Watersheds * # Steps => Total Number of Extrapolated Steps * # Calls ==> Total Number of OVERLND Calls * Extrapolation Summary for Channel/Pipes * Extrapolation Summary for Channel/Pipes * # Steps => Total Number of Extrapolated Steps *
* # Calls ==> Total Number of GUTHR Calls *
* # Calls ==> Total Number of GUTHR Calls * Chan/Pipe # Steps # Calls Chan/Pipe # Steps # Calls Chan/Pipe # Steps # Calls 201 0 0

```
***********
  * Continuity Check for Surface Water '
                                                                                                                                              Millimeters over
                                                                                                                  cubic meters
 Total Precipitation (Rain plus Snow)
Total Infiltration
Total Evaporation
 Surface Runoff from Watersheds
                                                                                                                          510637.
                                                                                                                                                   12798.
 Total Water remaining in Surface Storage Infiltration over the Pervious Area...
                                                                                                                         191533
                                                                                                                                                   19202
Infiltration + Evaporation +
Surface Runoff + Snow removal +
Water remaining in Surface Storage +
Water remaining in Snow Cover......
Total Precipitation + Initial Storage.
                                                                                                                          770744.
                                                                                                                                                   19317.
                                                                                                                          768570.
                                                                                                                                                  19263
 The error in continuity is calculated as
 * Precipitation + Initial Snow Cover *
* Infiltration - *
*Evaporation - Snow removal - *
*Surface Runoff from Watersheds - *
Water in Surface Storage - *
*Water remaining in Snow Cover *
  * Precipitation + Initial Snow Cover *
 Error....
                                                                                               -0.283 Percent
  * Continuity Check for Channel/Pipes *
                                                                                                                                              Millimeters over
                                                                                                                 cubic meters Total Basin
 Initial Channel/Pipe Storage.....
                                                                                                                         0.
                                                                                                                                                           0.
Final Channel/Fipe Storage.

Final Channel/Fipe Storage.

Surface Runoff from Watersheds

Baseflow.

Groundwater Subsurface Inflow.
                                                                                                                          510637
                                                                                                                                                   12798
                                                                                                                                                           0.
 510637.
                                                                                                                                                   12798.
 Initial Storage + Inflow.
Final Storage + Outflow.
                                                                                                                          510637.
                                                                                                                                                   12798.
                                                                                                                          510637.
                                                                                                                                                   12798.
 * Final Storage + Outflow + Evaporation - *
* Watershed Runoff - Groundwater Inflow - *
* Initial Channel/Pipe Storage *
       Final Storage + Outflow + Evaporation *
                                                                                                        0.000 Percent
 Error....
 **********
  * Continuity Check for Subsurface Water *
                                                                                                                                                 Millimeters over
                                                                                                         cubic meters
                                                                                                                                                 Subsurface Basin
 Total Infiltration
Total Upper Zone ET
Total Lower Zone ET
Total Groundwater flow
Total Deep percolation
Initial Subsurface Storage
Final Subsurface Storage
Upper Zone ET over Pervious Area
Lower Zone ET over Pervious Area
                                                                                                                            36483.
                                                                                                                                                      914.
                                                                                                                            36483
  * Infiltration + Initial Storage - Final *
* Storage - Upper and Lower Zone ET - *
* Groundwater Flow - Deep Percolation *
*
                                                                                                 0.000 Percent
 Error .....
                                                                       SUMMARY STATISTICS FOR SUBCATCHMENTS
                                                                                                              PERVIOUS AREA IMPERVIOUS AREA
                                                                                                                                                                                              TOTAL SUBCATCHMENT AREA
                                                                                                         RUNOFF TOTAL RUNOFF
                                                                               SIMULATED
                                                                                                                                                                       RUNOFF
                                                                                                                                                                                                   RUNOFF RUNOFF
                                                                                                                                                                                                                                      UNIT
       SUBCATCH- OR INLET AREA PERCENT RAINFALL DETH LOSSES RATE MENT NO. NO. (HA) IMPER. (MM) (MM) (MM) (CMS)
                                                                                                                                                        DEPTH
                                                                                                                                                                           RATE
                                                                                                                                                                                                    DEPTH
                                                                                                                                                                                                                     RATE
                                                                                                                                                                                                                                      RUNOFF
               TO. NO. (HA) IMPER (MM) (MM) (CMS) (MM) (CMS
                                                                                   (MM)
                                                                                  SUMMARY STATISTICS FOR CHANNEL/PIPES
                                                                           MAXIMUM MAXIMUM MAXIMUM MAXIMUM TIME
COMPUTED COMPUTED OF
INFLOW OUTFLOW DEPTH VELOCITY OCCURRENCE
(CMS) (CMS) (M) (M/S) DAY HR.
                                                                                                                                                                                                LENGTH
                                                                                                                                                                                                                        MIJMIXAM
                                                                                                                                                                                                                                              RATIO OF RATIO OF
                                                                                                                                                                                              OF
SURCHARGE
(HOUR)
                                                                                  COMPUTED
INFLOW
(CMS)
                                                                                                                                                                                                                     SURCHARGE
VOLUME
(CU-M)
                                                                                                                                                                                                                                              MAX. TO MAX. DEPTH
FULL TO FULL
FLOW DEPTH
                          EIII.I.
                                            FIII.I.
                                                                 FIII.I.
                         FLOW
(CMS)
                                    VELOCITY
(M/S)
       CHANNET.
        NUMBER
                                                                                                                                                            1/ 0/1900
                                                                                        0.00
               200
                                                                                       1.76
                                                                                                                                                             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
```

Total Su NDIM = 0

METRIC	=	2	

	Total Su
Inputs	
1. INITIAL SURFACE LOAD 2. TOTAL SURFACE BUILDUP 3. INITIAL CATCHBASIN LOAD	87.
2. TOTAL SURFACE BUILDUP	67497.
3. INITIAL CATCHBASIN LOAD	0.
4. TOTAL CATCHBASIN LOAD	0.
5. TOTAL CATCHBASIN AND	
SURFACE BUILDUP (2+4)	67497.
Remaining Loads	
6. LOAD REMAINING ON SURFACE 7. REMAINING IN CATCHBASINS	32.
 REMAINING IN CATCHBASINS 	0.
8. REMAINING IN CHANNEL/PIPES	0.
Removals	
9. STREET SWEEPING REMOVAL 10. NET SURFACE BUILDUP (2-9) 11. SURFACE WASHOFF	5829.
10. NET SURFACE BUILDUP (2-9)	61668.
11. SURFACE WASHOFF	61617.
11. SURFACE WASHUFF. 12. CATCHEASIN WASHUFF. 13. TOTAL WASHUFF (11+12). 14. LOAD FROM OTHER CONSTITUENTS 15. PRECIPITATION LOAD. 15a. SUM SURFACE LOAD (13+14+15).	0.
13. TOTAL WASHOFF (11+12)	61617.
14. LOAD FROM OTHER CONSTITUENTS	0.
15. PRECIPITATION LOAD	0.
15a.SUM SURFACE LOAD (13+14+15).	61617.
IO. IOIAE GROONDWATER BOAD	0.
16a.TOTAL I/I LOAD	0.
17. NET SUBCATCHMENT LOAD	
(15a-15b-15c-15d-16+16a) >>Removal in channel/pipes (17a, 17a.REMOVE BY BMP FRACTION 17b.REMOVE BY 1st ORDER DECAY 18. TOTAL LOAD TO INLETS 9. BIOM WITH DAY COMPENTED TION	61617.
>>Removal in channel/pipes (17a,	17b):
17a.REMOVE BY BMP FRACTION	0.
17b.REMOVE BY 1st ORDER DECAY	0.
18. TOTAL LOAD TO INLETS	61618.
19. FLOW WT'D AVE.CONCENTRATION (INLET LOAD/TOTAL FLOW)	mg/l
(INLET LOAD/TOTAL FLOW)	121.
Percentages	
20. STREET SWEEPING (9/2)	
	9.
21. SURFACE WASHOFF (11/2)	9. 91.
21. SURFACE WASHOFF (11/2) 22. NET SURFACE WASHOFF(11/10)	91. 100.
21. SURFACE WASHOFF (11/2) 22. NET SURFACE WASHOFF(11/10) 23. WASHOFF/SUBCAT LOAD(11/17)	91. 100.
23. WASHOFF/SUBCAT LOAD(11/17) 24. SURFACE WASHOFF/INLET LOAD	91. 100. 100.
23. WASHOFF/SUBCAT LOAD(11/17) 24. SURFACE WASHOFF/INLET LOAD (11/18)	91. 100.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURFACE WASHOFF/INLET LOAD (11/18)	91. 100. 100.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURFACE WASHOFF/INLET LOAD (11/18)	91. 100. 100.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURFACE WASHOFF/INLET LOAD (11/18) 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17) 26. CATCHBASIN WASHOFF/	91. 100. 100.
23. WASHOFF/SUBCAT LOAD(11/17) 24. SURFACE WASHOFF/INLET LOAD (11/18) 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17) 26. CATCHBASIN WASHOFF/ INLET LOAD (12/18).	91. 100. 100.
23. WASHOFF/SUBCAT LOAD(11/17) 24. SURFACE WASHOFF/INLET LOAD (11/18) 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17) 26. CATCHBASIN WASHOFF/ INLET LOAD (12/18).	91. 100. 100.
23. WASHOFF/SUBCAT LOAD(11/17) 24. SURFACE WASHOFF/INLET LOAD (11/18) 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17) 26. CATCHBASIN WASHOFF/ INLET LOAD (12/18).	91. 100. 100.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURFACE WASHOFF/INLET LOAD (11/18) 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17) 26. CATCHBASIN WASHOFF/ INLET LOAD (12/18) 27. OTHER CONSTITUENT LOAD/ SUBCATCHMENT LOAD (14/17) 28. INSOLUBLE FRACTION/	91. 100. 100. 100. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18)	91. 100. 100. 100.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURFACE WASHOFF/INLET LOAD (11/18). 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17). 26. CATCHBASIN WASHOFF/ INLET LOAD (12/18). 27. OTHER CONSTITUENT LOAD/ SUBCATCHMENT LOAD (14/17). 28. INSOLUBLE FRACTION/ INLET LOAD (14/18). 29. PRECIPITATION/	91. 100. 100. 100. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18)	91. 100. 100. 100. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18). 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17) 26. CATCHBASIN WASHOFF/ INLET LOAD (12/18) 27. OTHER CONSTITUENT LOAD/ SUBCATCHMENT LOAD (14/17) 28. INSOLUBLE FRACTION/ INLET LOAD (14/18) 29. PRECIPITATION/ SUBCATCHMENT LOAD (15/17) 30. PRECIPITATION/ ON PRECIPITATION/ ON PRECIPITATION/ PRECIPITATION/ ON PRECIPITATION/ PRECIPITATION/ PRECIPITATION/ PRECIPITATION/ ON PRECIPITATION/ PRECIPITATION	91. 100. 100. 100. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18)	91. 100. 100. 100. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18). 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17) 26. CATCHBASIN WASHOFF/ INLET LOAD (12/18) 27. OTHER CONSTITUENT LOAD/ SUBCATCHMENT LOAD (14/17). 28. INSOLUBLE PRACTION/ INLET LOAD (14/18). 29. PRECIPITATION/ SUBCATCHENT LOAD (15/17) 30. PRECIPITATION/ INLET LOAD (16/18) 11. RET LOAD (15/18) 31. GROUNDWATER LOAD/	91. 100. 100. 100. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18). 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17) 26. CATCHBASIN WASHOFF/ INLET LOAD (12/18) 27. OTHER CONSTITUENT LOAD/ SUBCATCHMENT LOAD (14/17). 28. INSOLUBLE PRACTION/ INLET LOAD (14/18). 29. PRECIPITATION/ SUBCATCHENT LOAD (15/17) 30. PRECIPITATION/ INLET LOAD (16/18) 11. RET LOAD (15/18) 31. GROUNDWATER LOAD/	91. 100. 100. 100. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18). 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17) 26. CATCHBASIN WASHOFF/ INLET LOAD (12/18) 27. OTHER CONSTITUENT LOAD/ SUBCATCHMENT LOAD (14/17) 28. INSOLUBLE FRACTION/ INLET LOAD (14/18) 29. PRECIPITATION/ SUBCATCHMENT LOAD (15/17) 30. PRECIPITATION/ INLET LOAD (14/18) 31. GROUNDWATER LOAD/ SUBCATCHMENT LOAD (15/17) 32. GROUNDWATER LOAD/ SUBCATCHMENT LOAD (16/17)	91. 100. 100. 100. 0. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18). 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17) 26. CATCHBASIN WASHOFF/ INLET LOAD (12/18) 27. OTHER CONSTITUENT LOAD/ SUBCATCHMENT LOAD (14/17) 28. INSOLUBLE FRACTION/ INLET LOAD (14/18) 29. PRECIPITATION/ SUBCATCHMENT LOAD (15/17) 30. PRECIPITATION/ INLET LOAD (14/18) 31. GROUNDWATER LOAD/ SUBCATCHMENT LOAD (15/17) 32. GROUNDWATER LOAD/ SUBCATCHMENT LOAD (16/17)	91. 100. 100. 100. 0. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18). 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17) 26. CATCHBASIN WASHOFF/ INLET LOAD (12/18) 27. OTHER CONSTITUENT LOAD/ SUBCATCHMENT LOAD (14/17) 28. INSOLUBLE FRACTION/ INLET LOAD (14/18) 29. PRECIPITATION/ SUBCATCHMENT LOAD (15/17) 30. PRECIPITATION/ INLET LOAD (14/18) 31. GROUNDWATER LOAD/ SUBCATCHMENT LOAD (15/17) 32. GROUNDWATER LOAD/ SUBCATCHMENT LOAD (16/17)	91. 100. 100. 100. 0. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18)	91. 100. 100. 0. 0. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18)	91. 100. 100. 0. 0. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18)	91. 100. 100. 0. 0. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18). WASHOFF/ SUBCATCHMENT LOAD (12/17) 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17) 27. OTHER CONSTITUENT LOAD SUBCATCHMENT LOAD (14/17) 28. INSOLUBLE FRACTION/ INLET LOAD (14/18) 29. PRECIPITATION/ SUBCATCHMENT LOAD (15/17) 30. PRECIPITATION/ SUBCATCHMENT LOAD (16/17) 31. GROUNDWATER LOAD/ SUBCATCHMENT LOAD (16/17) 32a. INFILTRATION/INFLOW LOAD/ SUBCATCHMENT LOAD (16/17) 32b. INFILTRATION/INFLOW LOAD/ SUBCATCHMENT LOAD (16/17) 32b. INFILTRATION/INFLOW LOAD/ SUBCATCHMENT LOAD (16/17) 32b. INFILTRATION/INFLOW LOAD/ INLET LOAD (16/18) INSILTRATION/INFLOW LOAD/ INLET LOAD (16/18)	91. 100. 100. 0. 0. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18)	91. 100. 100. 0. 0. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18). 25. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17). 26. CATCHBASIN WASHOFF/ INLET LOAD (12/18) 27. OTHER CONSTITUENT LOAD/ SUBCATCHMENT LOAD (14/17). 28. INSOLUBLE FRACTION/ INLET LOAD (14/18). 29. PRECIPITATION/ SUBCATCHMENT LOAD (15/17) 30. PRECIPITATION/ INLET LOAD (16/18) 31. GROUNDWATER LOAD/ SUBCATCHMENT LOAD (16/17) 32. GROUNDWATER LOAD/ SUBCATCHMENT LOAD (16/17) 32a.INFILITRATION/INFLOW LOAD/ SUBCATCHMENT LOAD (16a/17) 32b.INFILITRATION/INFLOW LOAD/ INLET LOAD (16a/18) 32c.CH/PIPE BMP FRACTION REMOVAL, SUBCATCHMENT LOAD (16a/18) 32c.CH/PIPE BMP FRACTION REMOVAL, SUBCATCHMENT LOAD (17a/17) SUBCATCHMENT LOAD (17a/17)	91. 100. 100. 0. 0. 0. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18)	91. 100. 100. 0. 0. 0. 0. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18). WASHOFF/ SUBCATCHMENT LOAD (12/17). 26. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17). 27. OTHER CONSTITUENT LOAD (SUBCATCHMENT LOAD (14/17). 28. INSOLUBLE FRACTION/ INLET LOAD (14/18). 29. PRECIPITATION/ SUBCATCHMENT LOAD (15/17). 30. PRECIPITATION/ SUBCATCHMENT LOAD (15/17). 31. GROUNDWATER LOAD/ SUBCATCHMENT LOAD (16/17). 32. GROUNDWATER LOAD/ INLET LOAD (16/18). 32. INFILITATION/INFLOW LOAD/ SUBCATCHMENT LOAD (16/17). 32b. INFILITATION/INFLOW LOAD/ INLET LOAD (16/18). 32c. CH/PIPE BMP FRACTION REMOVAL, SUBCATCHMENT LOAD (17/17). 32d. CH/PIPE BMP FRACTION REMOVAL, SUBCATCHMENT LOAD (17/17). 32d. CH/PIPE BMP FRACTION REMOVAL, SUBCATCHMENT LOAD (17/17). 32d. CH/PIPE BM FRACTION REMOVAL SUBCATCHMENT LOAD (17/17).	91. 100. 100. 0. 0. 0. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18)	91. 100. 100. 0. 0. 0. 0. 0. 0.
23. WASHOFF/SUBCAT LOAD(11/17). 24. SURPACE WASHOFF/INLET LOAD (11/18). WASHOFF/ SUBCATCHMENT LOAD (12/17). 26. CATCHBASIN WASHOFF/ SUBCATCHMENT LOAD (12/17). 27. OTHER CONSTITUENT LOAD (SUBCATCHMENT LOAD (14/17). 28. INSOLUBLE FRACTION/ INLET LOAD (14/18). 29. PRECIPITATION/ SUBCATCHMENT LOAD (15/17). 30. PRECIPITATION/ SUBCATCHMENT LOAD (15/17). 31. GROUNDWATER LOAD/ SUBCATCHMENT LOAD (16/17). 32. GROUNDWATER LOAD/ INLET LOAD (16/18). 32. INFILITATION/INFLOW LOAD/ SUBCATCHMENT LOAD (16/17). 32b. INFILITATION/INFLOW LOAD/ INLET LOAD (16/18). 32c. CH/PIPE BMP FRACTION REMOVAL, SUBCATCHMENT LOAD (17/17). 32d. CH/PIPE BMP FRACTION REMOVAL, SUBCATCHMENT LOAD (17/17). 32d. CH/PIPE BMP FRACTION REMOVAL, SUBCATCHMENT LOAD (17/17). 32d. CH/PIPE BM FRACTION REMOVAL SUBCATCHMENT LOAD (17/17).	91. 100. 100. 0. 0. 0. 0. 0. 0. 0. 0. 7AL/

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.

* TSS Particle Size Distribution *

*****	**********								
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					

Summary of TSS Removal *

TSS	Removal	based	on	Lab	Performance	Curve

Mode:	Low Q Treated	High Q Treated	Runoff Treated	TSS Removed
#	(cms)	(cms)	(%)	(%)
HD 4	0.590	0.590	99.7	49.7
HD 5	0.590	0.590	99.7	56.8
HD 6	0.590	0.590	99.7	62.2
HD 7	0.590	0.590	99.7	66.3
HD 8	0.590	0.590	99.7	70.0
HD 1	0.590	0.590	99.7	76.1
HD 1:	0.590	0.590	99.7	80.9

Summary of Annual Flow Treatmnet & TSS Removal Flow Vol Flow Treated TSS In TSS Out TSS Byp Flow Treated TSS Removal Year TSS Rem (m3) (m3) 115745. (kg) 1222. (kg) 552. (kg) 670. (kg) (%) (%) 116564. 99.3 94.7 45.1 1971. 1972. 149181. 141324. 1619. 811 808. 38. 48.9 1973. 1974. 1975. 149110. 152213. 129663. 149110. 151749. 129663. 100.0 99.7 100.0 49.0 55.1 47.3 1727. 1812. 846 881 1000. 748. 1011. 812. 833. 50.4 1976 192886 191465 1993. 982. 12. 99.3 1977 206453. 204643 1928. 819. 1109. 11. 99.1 42.3 1978 165056 165056 1850 846 1004 0 100.0 45.7 1979 197487 196447 2062. 1015 1047 99.5 49.1 158573 219897 155020 100.0 100.0 100.0 48.9 53.4 53.6 1980 158573 1981 970 1012 219897 155020 2182. 1782. 1143 1983 204694 204489 2287 1144. 99.9 49.9 1984. 164353. 164353 1763. 848. 915 0. 100.0 48.1 1985 142913 142913 1728 885 843 0 100.0 51.2 52.6 209145 216006 172806 1986 2380 1252 1129 1190 100.0 1202 1052 99.8 50.2 1987 216387 2392 0. 1988 1983 931. 890. 172806 1989 191553 191553 1912. 1023 100.0 53.5 53.9 1990. 217088 217088 2466 1329 1136. 0. 100.0 1991. 203345. 203345 2264. 1165 1099. 0. 100.0 51.5 47.8 55.0 45.9 46.5 48.3 1992 258601 258601 2663 1272 1391 100.0 2205. 1832. 2205. 838. 1713. 1992 1993 1994 1995 1213. 842. 1025. 404. 992 990 1181 100.0 99.5 100.0 100.0 175049 175049 0. 5. 0. 0. 175049. 186299. 218706. 55011. 137028. 187198 218706 1998 55011. 137028. 433 1999. 830 883. 100.0 2000. 159568 159568 1492. 611. 881. 0. 100.0 40.9 55.7 52.1 47.7 47.6 2001 125122 125122 1384 613. 781. 100.0 1631 1667 1725 850 781. 871. 903. 786. 148496 178561. 127924. 2005. 128300. 1315. 529. 1. 99.7 40.2 HD 5 Year Flow Vol Flow Treated TSS In TSS Rem TSS Out TSS Byp Flow Treated TSS Removal (kg) 585. 692. (m3) 116564. 149181. (m3) 115745. 141324. (kg) 637. 927. (kg) 1222 (kg) (%) 52.1 55.9 56.5 1971 1619 38 100.0 1973. 149110. 149110. 1727 975 752. 0 1974. 152213. 151749. 1812. 1114 698. 99.7 61.4 1975 129663 129663 1581 864 717 100.0 54.6 56.9 1976 192886 191465 1993 1140 852 99 3 206453. 165056. 197487. 204643. 165056. 196447. 1928. 1928. 1850. 2062. 963. 990. 1152. 965. 861. 910. 99.3 99.1 100.0 99.5 100.0 49.7 53.5 55.7 56.3 1977 11 1979 1980 158573 158573 1981. 1116 866. 0 1981 219897 219897 2182. 1310. 872. 0 100.0 60.1 60.1 60.5 56.9 56.1 58.7 59.2 57.2 1982 155020 155020 1782 1077 705 0 100.0 1303. 989. 1014. 1410. 984. 774. 714. 971. 1983 204694 204489 2287 164353. 142913. 209145. 204489. 164353. 142913. 209145. 216006. 1763. 1728. 2380. 100.0 100.0 100.0 1986 1369. 99.8 1987 216387 2392. 1022. 1988. 172806 172806 1983. 1191. 792. 0. 100.0 60.1 59.4 61.0 58.6 54.7 62.2 1989 191553 191553 217088 1912 1137 776 100.0 0. 0. 0. 961. 938. 1206. 833. 100.0 100.0 100.0 100.0 1990 203345. 258601. 175049. 1327. 1457. 1372. 203345 258601 1993 175049 2205. 1994 187198 186299 1832. 965 867 99.5 52.5 1995 218706. 218706 2205. 1178. 1028. 0. 100.0 53.4 1998 55011. 55011 838. 467 370. 0. 100.0 55.8 137028. 159568. 125122. 1713. 1492. 1384. 953. 725. 865. 967. 760. 767. 519. 100.0 100.0 100.0 100.0 55.6 48.6 62.5 59.3 55.3 1999 137028 0. 2002. 130266 130266 1631. 665. 2003. 148496. 148496. 1667. 922. 745. 0. 100.0 2004. 178561. 178561 1725. 966 759. 0. 100.0 56.0 2005 128300. 127924 1315 633. 682 99.7 48.1 HD 6 Flow Vol Flow Treated TSS Rem TSS Byp Flow Treated Year (m3) 116564. (m3) 115745. (kg) 1222. (kg) 703. (kg) 519. (kg) (%) 57.5 1971 99.3 ō 1972 149181 141324 1619 1010. 609 38 94.7 60.9 94.7 100.0 99.7 100.0 99.3 99.1 1973 149110 149110 1727 650 62 3 62.3 66.4 60.1 61.8 55.6 59.5 1974 1975 1976 149110. 152213. 129663. 192886. 206453. 149110. 151749. 129663. 191465. 204643. 1727. 1812. 1581. 1993. 1077. 1204. 951. 1238. 607. 630. 754. 850. 11 1928 1078 1978 165056 165056 1850. 1102. 749. 0. 100.0 1979 197487 196447 2062 1272 790 99.5 61.5 100.0 100.0 100.0 99.9 1980 158573 158573 1981 1221 760 61.6 158573 219897 155020 204489 1980 1981 1982 1983 219897. 155020. 204694. 2182 1782 1422. 1170. 1419. 760 612 868 65.1 65.6 62.0 2287 0. 676 100.0 1984 164353 164353 1763. 1087 61.7 1985 142913 142913 1728. 1106 622. 0. 100.0 64.0 1986 209145 209145 2380. 1531 849. 0. 100.0 64.3 99.8 100.0 100.0 62.8 65.5 64.2 66.3 63.8 1987 216387 216006 2392 1504 888 172806. 191553. 217088. 172806. 191553. 217088. 1983. 1912. 1298 1228 684. 1988 0. 832. 100.0 1990 2466 1634 1991 203345. 203345 2264. 1445 819. 100.0 1992. 258601 258601 2663. 1613. 1050. 0. 100.0 60.6 1993 175049 175049 2205 1484. 722. 0. 100.0 67.3 1994 187198 186299 1832 1061 771 99.5 57.8 2205. 838. 1713. 1492. 59.1 61.9 61.6 55.0 218706 1303 0. 0. 0. 55011. 137028. 159568. 55011. 137028. 159568. 1998 1999 821. 671. 2000. 100.0 2001. 125122. 125122 1384. 937. 447. 0. 100.0 67.7 2002 130266 130266 1631. 1057 574. 100.0 64.8 2003 148496 148496 1667. 1725. 1022 645 100.0 61.3 100.0 128300. 127924.

HD 7								
Year	Flow Vol	Flow Treated	TSS In	TSS Rem	TSS Out	TSS Byp	Flow Treated	TSS Removal
1971.	(m3)	(m3)	(kg)	(kg)	(kg)	(kg)	(%)	(%)
1972.	149181.	141324.	1619.	1073.	545.	38.	94.7	64.8
1973.	149110.	149110.	1727.	1148.	579.	0.	100.0	66.5
1974. 1975.	152213.	151749.	1812.	1268.	543.	3.	99.7	69.9
1976.	192886.	191465.	1993.	1320.	673.	12.	99.3	65.8
1977.	206453.	204643.	1928.	1165.	763.	11.	99.1	60.1
1978. 1979.	165056.	165056.	1850.	1186.	664.	0.	100.0	64.1
1980.	158573.	158573.	1981.	1314.	668.	0.	100.0	66.3
1981.	219897.	219897.	2182.	1506.	676.	0.	100.0	69.0
1982. 1983.	204694	204489.	2287.	1243.	773.	2.	100.0	69.7 66.1
1984.	164353.	164353.	1763.	1162.	601.	0.	100.0	65.9
1985.	142913.	142913.	1728.	1181.	547.	0.	100.0	68.4
1986. 1987.	209145.	209145.	2380.	1627.	753. 791.	1.	99.8	66.9
1988.	172806.	172806.	1983.	1370.	613.	0.	100.0	69.1
1989. 1990.	191553.	191553.	1912.	1306.	607.	0.	100.0	68.3
1991.	203345.	203345.	2264.	1533.	732.	0.	100.0	67.7
1992.	258601.	258601.	2663.	1723.	940.	0.	100.0	64.7
1993. 1994.	175049.	175049.	2205.	1563.	642. 697	0.	100.0	70.9
1995.	218706.	218706.	2205.	1396.	809.	0.	100.0	63.3
1998.	55011.	55011.	838.	555.	283.	0.	100.0	66.2
1999. 2000.	137028.	137028.	1/13.	893.	5/6.	0.	100.0	56.4 59.9
2001.	125122.	125122.	1384.	991.	392.	0.	100.0	71.6
2002.	130266.	130266.	1631.	1126.	505.	0.	100.0	69.0
2003.	178561.	178561.	1725.	1137.	588.	0.	100.0	65.9
2005	128300.	127924.	1315.	775.	540.	1.	99.7	58.9
HD 8		Flow Treated (m3) 115745. 141324. 149110. 151749. 129663. 191465. 204643. 165056. 196447. 158573. 219897. 155020. 204489. 164353. 142913. 209145. 216006. 172806. 191553. 217088. 203345. 258601. 175049. 186299. 218706. 55011. 137028. 159568. 125122. 130266. 148496. 178961.						
Year	Flow Vol	Flow Treated (m3) 115745. 141324. 149110. 151749. 129663. 191465. 204643. 165056. 196447. 158573. 219897. 155020. 204489. 164353. 142913. 209145. 216006. 172806. 191553. 217088. 203345. 258601. 175049. 186299. 218706. 55011. 137028. 159568. 1259568. 1259568. 1259568.	TSS In	TSS Rem	TSS Out	TSS Byp	Flow Treated	TSS Removal
1971.	(m3)	(m3)	(kg)	(kg)	(kg)	(kg)	(%)	(%)
1971.	149181.	141324.	1619.	1129.	490.	38.	94.7	68.1
1973.	149110.	149110.	1727.	1208.	519.	0.	100.0	70.0
1974. 1975.	152213.	151749.	1812.	1330.	482.	3.	99.7	73.3
1976.	192886.	191465.	1993.	1397.	596.	12.	99.3	69.7
1977.	206453.	204643.	1928.	1244.	684.	11.	99.1	64.2
1978. 1979.	165056.	165056. 196447	1850.	1255.	595. 627	0.	100.0	67.8 69.4
1980.	158573.	158573.	1981.	1383.	598.	0.	100.0	69.8
1981.	219897.	219897.	2182.	1578.	603.	0.	100.0	72.3
1982.	204694.	204489.	2287.	1298.	484. 691.	2.	99.9	69.7
1984.	158573. 219897. 155020. 204694. 164353. 142913. 209145. 216387. 172806. 191553. 217088. 203345. 258601. 175049. 187198.	164353.	1763.	1225.	538.	0.	100.0	69.5
1985.	142913.	142913.	1728.	1238.	490.	0.	100.0	71.7
1986.	216387.	216006.	2392.	1691.	700.	1.	99.8	70.7
1988.	172806.	172806.	1983.	1442.	541.	0.	100.0	72.7
1989.	191553.	191553.	1912.	1368.	544. 671	0.	100.0	71.5
1991.	203345.	203345.	2264.	1613.	652.	0.	100.0	71.2
1992.	258601.	258601.	2663.	1832.	832.	0.	100.0	68.8
1993.	187198.	186299.	1832.	1039.	624.	U. 5.	99.5	74.3 65.8
1995.	218706.	218706.	2205.	1484.	722.	0.	100.0	67.3
1998. 1999.	55011.	55011.	838.	593.	245.	0.	100.0	70.8
2000.	159568.	159568.	1492.	958.	534.	0.	100.0	64.2
2001.	125122.	125122.	1384.	1034.	349.	0.	100.0	74.8
2002.	130266.	130266.	1631.	1182.	449.	0.	100.0	72.5
2004.	178561.	159568. 125122. 130266. 148496. 178561. 127924.	1725.	1199.	526.	0.	100.0	69.5
2005.	128300.	127924.	1315.	834.	481.	1.	99.7	63.4
HD 10								
Year	Flow Vol	Flow Treated	TSS In	TSS Rem	TSS Out	TSS Byp	Flow Treated	
1971.	(m3) 116564.	(m3) 115745.	(kg) 1222.	(kg) 893.	(kg) 329.	(kg) 0.	(%) 99.3	(%) 73.1
1972.	149181.	141324.	1619.	1230.	389.	38.	94.7	74.2
1973.	149110.	149110.	1727.	1319.	408.	0.	100.0	76.4 79.2
1975.	129663.	129663.	1581.	1181.	400.	0.	100.0	74.7
1976.	192886.	191465.	1993.	1521.	471.	12.	99.3	75.9
1977.	206453.	204643.	1928.	1375.	553. 481	11.	99.1	70.9 74.0
1979.	197487.	196447.	2062.	1565.	496.	6.	99.5	75.7
1980.	158573.	158573.	1981.	1508.	473.	0.	100.0	76.1
1981.	219897. 155020.	219897. 155020.	∠182. 1782.	1708.	474. 384.	0.	100.0	78.3 78.5
1983.	204694.	204489.	2287.	1734.	553.	2.	99.9	75.8
1984.	164353.	164353.	1763.	1334.	429.	0.	100.0	75.6 77.3
1986.	209145.	209145.	2380.	1848.	532.	0.	100.0	77.6
1987.	216387.	216006.	2392.	1835.	557.	1.	99.8	76.7
1988.	172806.	172806.	1983.	1560.	422.	0.	100.0	78.7 77.8
1990.	217088.	217088.	2466.	1940.	525.	0.	100.0	78.7
1991.	203345.	203345.	2264.	1749.	516.	0.	100.0	77.2
1992.	258601. 175049.	258601. 175049.	∠663. 2205.	1997. 1764.	667. 441.	0.	100.0	75.0 80.0
1994.	187198.	186299.	1832.	1334.	498.	5.	99.5	72.6
1995.	218706.	218706.	2205.	1617.	589.	0.	100.0	73.3 77.2
1998.	55UII. 137028.	137028.	838. 1713.	647. 1293.	191. 421.	0.	100.0	77.2 75.4
2000.	159568.	159568.	1492.	1057.	435.	0.	100.0	70.9
2001.	125122.	125122.	1384.	1114.	270.	0.	100.0	80.5 78.1
2003.	148496.	148496.	1667.	1263.	404.	0.	100.0	75.8
2004.	178561.	178561.	1725.	1299.	426.	0.	100.0	75.3
∠005.	128300.	(m3) 115745. 141324. 149110. 151749. 129663. 191465. 204643. 165056. 196447. 158573. 219897. 155020. 204489. 164353. 142913. 209145. 216006. 172806. 191553. 217088. 203345. 258601. 175049. 186299. 218706. 55011. 137028. 159568. 125122. 130266. 148496. 178561.	1315.	920.	395.	1.	99.7	69.9

HD 12								
Year	Flow Vol	Flow Treated (m3) 115745. 141324.	TSS In	TSS Rem	TSS Out	TSS Byp	Flow Treated	TSS Remov
	(m3)	(m3)	(kg)	(kg)	(kg)	(kg)	(%)	(%)
1971.	116564.	115745.	1222.	956.	266.	0.	99.3	78.2
1972.	149181	141324. 149110.	1619. 1727.	1303	316.	38.	94 7	78 6
1973.	149110.	140110	1727	1400.	326.	0.	100.0	81.1
	149110.	149110.	1727.		320.			01.1
1974.	152213.		1812.	1522.	289. 320. 379. 454. 388. 398. 386. 373.	3.	99.7	83.8
1975.	129663.	129663.	1581.	1262.	320.	0.	100.0	79.9
1976.	192886	191465	1993	1613	379	12.	99 3	80.5
	192886. 206453.	191465. 204643.	1993. 1928. 1850.	1013.	373.	12.	99.3 99.1	00.5
1977.	206453.	204643.	1928.	1473.	454.	11.		76.0
1978.	165056.	165056.	1850.	1463.	388.		100.0	79.0
1979.	197487.	196447.	2062.	1664	308	6.	99.5	80.5
1980.		150447.	1001	1505.	320.	0.	100.0	00.5
	158573.	1585/3.	1981.	1595.	386.	0.	100.0	80.5
1981.	219897.	158573. 219897.	1981. 2182.	1809.	373.	0.	100.0	82.9
1982.	155020.	155020.	1782.	1809.	299.	0.	100.0	83.2
1983.	204694.		2207		441	2.	99.9	80.6
	204054.	204489.	2287.	1040.	441.	۷.		80.0
1984.	164353.	164353.	1763.	1417.	346.	0.	100.0	80.4
1985.	164353. 142913.	164353. 142913.	1763. 1728.	1417. 1421. 1964. 1947. 1649.	308.	0.	100.0	82.2
1986.	209145.	209145.	2380.	1964	416	0.	100.0	82.5
				1504.	410.			
1987.	216387.	216006.	2392.	1947.	445.	1.	99.8	81.3
1988.	172806.	172806. 191553.	1983. 1912.	1649.	333.	0.	100.0	83.2
1989.	191553.	191553	1012	1584	328	n	100.0	82.9
			2455	2062.	400	٥.		
1990.	217088.	217088.	2466.	2062.	403.	0.	100.0	83.7
1991.	203345.	203345.	2264.	1861.	404.	0.	100.0	82.2
1992.	258601.	250601	2663.	2129.	535.	0.	100 0	79.9
	175040	175040	2205.	1000	246	0.	100.0	04.2
L993.	175049.	175049.	2663. 2205. 1832.	1859.	404. 535. 346. 413.			84.3
L994.	187198.	186299.	1832.	1418.	413.	5.	99.5	77.2
1995.	218706.	218706.	2205.		468.	0.	100.0	78.8
.998.	55011.	55011.	020	687. 1379. 1130.	100.	0.	100.0	82.0
	55011.	55011.	838. 1713.	687.	151. 334.	0.	100.0	
.999.	137028.	137028.	1713.	1379.	334.	0.	100.0	80.5
2000.	159568.	159568.	1492.	1130	362.	0.	100.0	75.7
		105100.	1204	1177	207		100.0	85.1
2001.	125122.	125122.	1384.	11//.	207.	0.	100.0	
2002.	130266.	130266.	1631.	1351.	280.	0.	100.0	82.8
2003.	148496.	148496.	1631. 1667.	1177. 1351. 1344.	323.	0.	100.0	80.6
2004.	178561.	178561.	1725.	1380.	344.	0.	100.0	80.0
				988.	227.	٠.		
2005.	128300.	127924.	1315.	988.	326.	1.	99.7	75.2
Sum	mary of Toront	o Rainfall Intens:	* ities * * *********					
Sum ******* ainfall I	mary of Toront	o Rainfall Intens	ities * * ********** Percentage					
Sum ******* ainfall I	mary of Toront ************ ntensity (mm/h	co Rainfall Intens:	* ities * * *********					
Sum ******* ainfall I 1 2	mary of Toront ********* ntensity (mm/h50	co Rainfall Intens: ************************* a) Flow (L/s) 12.7 19.0	tties * ******** Percentage NaN NaN					
Sum ******** ainfall I 1 2 3	mary of Toront ************************************	co Rainfall Intens: **************** 1) Flow (L/s) 12.7 19.0 25.4	* ities * * ******* Percentage NaN NaN NaN NaN					
Sum ******** ainfall I 2 3 3	mary of Toront ************************************	no Rainfall Intens: ******************* 1) Flow (L/s) 12.7 19.0 25.4 31.7	tities * * ******* Percentage NaN NaN NaN NaN NaN					
Sum ****** ainfall I 2 3 3 4	mary of Toront ********** ntensity (mm/h .50 .25 .00 .75	no Rainfall Intens: 1) Flow (L/s) 12.7 19.0 25.4 31.7 40.1	* ities * * ******* Percentage NaN NaN NaN NaN					
Sum ****** ainfall I 2 3 3 4	mary of Toront ********** ntensity (mm/h .50 .25 .00 .75	no Rainfall Intens: 1) Flow (L/s) 12.7 19.0 25.4 31.7 40.1	tities * * ******* Percentage NaN NaN NaN NaN NaN					
Sum ********* ainfall I 2 3 3 4 5	mary of Toront *************** ntensity (mm/H .50 .25 .00 .75 .75	to Rainfall Intens: ****************** a) Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6	* ities * * ******* Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN					
*********** ainfall I 1 2 3 3 4 5 8	mary of Toront *********** .50 .25 .00 .75 .75 .75	to Rainfall Intens: 1) Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6	tities * ********* Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na					
*********** ainfall I 2 3 3 4 5 8	mary of Toront ********** ntensity (mm/F .50 .25 .00 .75 .75 .75 .75 .00	to Rainfall Intens: 1) Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5	tities * * ******** Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na					
Sum ******** ainfall I 2 3 3 4 5 8	mary of Toront *********** .50 .25 .00 .75 .75 .75	to Rainfall Intens: 1) Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6	tities * ********* Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na					
********* infall I 2 3 4 5 8 10	mary of Toront ********** ntensity (mm/F .50 .25 .00 .75 .75 .75 .75 .00	to Rainfall Intens: 1) Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5	tities * * ******** Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na					
Summary Locatio Values	mary of Toront ntensity (mm/h .50 .25 .00 .75 .75 .75 .00 .00 .50 .25 of Quantity & n 200 n 200	10 Rainfall Intens: 11 Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 INFlow in cms. tous at indicated to the tous	tities * ** ** Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na					
Summary Locatio Values	mary of Toront ntensity (mm/h .50 .25 .00 .75 .75 .75 .00 .00 .50 .25	10 Rainfall Intens: 11 Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 IMPlow in cms.	tities * ** ** Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na					
Summary Locatio Values	mary of Toront ntensity (mm/h .50 .25 .00 .75 .75 .75 .00 .00 .00 .25 of Quantity a n 200 are instantane Time r Hr:Win	to Rainfall Intens: 1) Flow (L/s) 12.7 19.0 25.4 31.7 40.1 40.6 67.6 84.5 131.0 196.5 INFlow in cms. INFlow Total Su cum/s mg/l	tities * ** ** Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na					
Sum ******** **infall I 2 3 4 5 8 10 15 23 ****** Summary Locatio Values ***** Date to/Da/Yea	mary of Toront ntensity (mm/F .50 .25 .00 .75 .75 .75 .00 .00 .25 .25 .00 .00 .25 .25	10 Rainfall Intens: 11 Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5	Percentage NaN					
Summary Locatio Values Summary Locatio Values Values Locatio Valves Locatio Valves Locatio Valves Locatio Valves Locatio Valves	mary of Toront ntensity (mm/h.50 .25 .00 .75 .75 .00 .00 .00 .00 .00 .25 of Quantity a un 200 are instantane Time r Hr:Min eans	10 Rainfall Intens: 11 Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 108.1 109.1 Flow Total Su cum/s mg/l 0.002 121	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na					
Sum infall I 1 2 3 3 4 5 8 10 15 23 ****** Summary Locatio Values **** Date do Jay Yea Joa Yea Joa Yea Jow wtd m	mary of Toront ntensity (mm/F.50 .25 .00 .75 .75 .75 .00 .00 .25 .25 .25 .25 .25 .25 .25 .26 .27 .27 .27 .28 .28 .29 .29 .20 .20 .20 .20 .20 .20 .20 .20 .20 .20	10 Rainfall Intens: 11 Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 1NPlow in cms. tous at indicated: 1NPlow in cms. tous at indicated: 1NPlow in cms. 1	Percentage NaN					
**************************************	mary of Toront ntensity (mm/r).50 .25 .00 .75 .75 .00 .00 .00 .00 .25 of Quantity s m 200 m 200 m 200 m 200 m 200 m instantane Time m Hr:Mineans td devs	10 Rainfall Intens: 11 Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 1001 Flow Total Su cum/s mg/1	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na					
Summary Locatio Values ********** Summary Locatio Values ******** Date lo/Da/Yea ow wtd mow wtd s xximum vaximum	mary of Toront ntensity (mm/h .50 .25 .00 .75 .75 .75 .00 .00 .00 .25 of Quantity a n 200 are instantane Time r Hr:Mineans td devs lue	To Rainfall Intens: 1) Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 IMPlow in cms. House at indicated to the company of t	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na					
Summary Locatio Values Summary Locatio Values Sumy Locatio Values Summary Locatio Values Locatio Values Summary Locatio Values Locatio V	mary of Toront ntensity (mm/r).50 .25 .00 .75 .75 .75 .00 .00 .00 .25 of Quantity are instantane Time or Hr'Min leanstd devs lue lue	10 Rainfall Intens: 11 Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na					
Summary Locatio Values Summary Locatio Values Sum t Mary Locatio Values Summary Locatio Values Summary Locatio Values Summary Locatio Values Autal Indian	mary of Toront ntensity (mm/h .50 .25 .00 .75 .75 .75 .00 .00 .00 .25 of Quantity a n 200 are instantane Time r Hr:Win td devs. lue lue lss	10 Rainfall Intens: 11 Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 101 Total Su cum/s mg/1 10.002 10.009 65 1.762 293 0.000 60 510525. 6154 CUb-Met KILOGRAM	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na					
Summary Locatio Values	mary of Toront ***********************************	10 Rainfall Intens: 11 Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na	© ₹				
Summary Locatio Values Monormore Low wtd m Low wtd s Aximum va	mary of Toront ntensity (mm/h .50 .25 .00 .75 .75 .75 .00 .00 .50 .25 of Quantity a m 200 are instantane Time are IR-Min lue lue lue f simulation e 4.4 simulat s check output	To Rainfall Intens: (1) Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 *** *** *** *** *** *** ***	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na	essages.				
Summary Locatio Values Mo/Da/Yea Mo/Da/Da/Yea Mo/Da/Da/Da/Da/Da/Da/Da/Da/Da/Da/Da/Da/Da/	mary of Toront ***********************************	no Rainfall Intens: 1) Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 INPlow in cms. cous at indicated to coust in	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na	essages.				
sumfall I 1 2 3 4 5 8 10 15 23 Values Summary Locatio Values Saximum va inimum va otal load alway Alway Sw	mary of Toront ntensity (mm/h.50 .25 .00 .75 .75 .75 .00 .00 .00 .25 of Quantity a m 200 are instantane Time rr Hr:Min teans td devs lue lue f simulation e s check output	To Rainfall Intens: 10. Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 10.00 196.5 10.00	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na	essages.				
Summary Locatio Values Bota Windows Summary Locatio Values Summary Starting	mary of Toront ***********************************	CO Rainfall Intens: 10. Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 100 Total Su cum/s mg/l	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na	essages.				
Summary ainfall I 1 2 3 3 4 5 8 8 10 15 23 Summary Locatio Values Summary Locatio Values Australian Summary Locatio Values Summary Summ	mary of Toront ntensity (mm/r).50 .25 .00 .75 .75 .75 .00 .00 .00 .25 of Quantity a r flr:Min leans	To Rainfall Intens: 10. Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 10.009 10.0	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na	essages.				
Summary Locatio Values Mo/Da/Yea low wtd m low wtd saximum va otal load saximum va otal load saximum va Summary Summary Summary Summary Locatio Summary Locatio Summary Locatio Summary Locatio Summary Summar	mary of Toront ntensity (mm/r .50 .25 .00 .75 .75 .75 .00 .00 .00 .25 of Quantity a m 200 m 200 m 200 m 200 m 200 m 4.4 simulation a d.4.4 simulation a d.4.5 simulation a d.4.6 simulation a d.4.7 simulation a d.4.8 simulation a d.4.9 simul	10 Rainfall Intens: 11 Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 100 Total Su cum/s mg/l	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na	essages.				
Summary Locatio Values Summary Locatio Values Summary Locatio Values Summary Locatio Values Summary Starting Swmooth Swmoo	mary of Toront ***********************************	10 Rainfall Intens: 11 Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 10 Intensive Inten	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na	essages.				
sumfall I 1 2 3 3 4 5 8 10 15 23 *** Summary Locatio Values ** Summary Locatio Values *** Summary Locatio Values ** Summary Summary Locatio Values ** Summary Summary Locatio Values	mary of Toront ***********************************	10 Rainfall Intens: 11 Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 10 Intensive Inten	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na	essages.				
Summary Locatio Values Mo/Da/Yea Low wtd maximum va obtal load Swimmary Swimmary Locatio Values Swimmary Locatio Values Swimmary Locatio Values Mo/Da/Yea Low wtd maximum va obtal load ==> Runof ==> Runof ==> Swimm Alway Starting Ending	mary of Toront ntensity (mm/r .50 .25 .00 .75 .75 .75 .00 .00 .00 .25 of Quantity a m 200 m 200 m 200 m 200 m 200 m 4.4 simulation a d.4.4 simulation a d.4.5 simulation a d.4.6 simulation a d.4.7 simulation a d.4.8 simulation a d.4.9 simul	10 Rainfall Intens: 11 Flow (L/s) 12.7 19.0 25.4 31.7 40.1 48.6 67.6 84.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 131.0 196.5 100 Total Su cum/s mg/l	Percentage NaN NaN NaN NaN NaN NaN NaN NaN NaN Na	essages.				



APPENDIX B

Oil/Grit Sample Inspection Report

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:	



APPENDIX C

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.

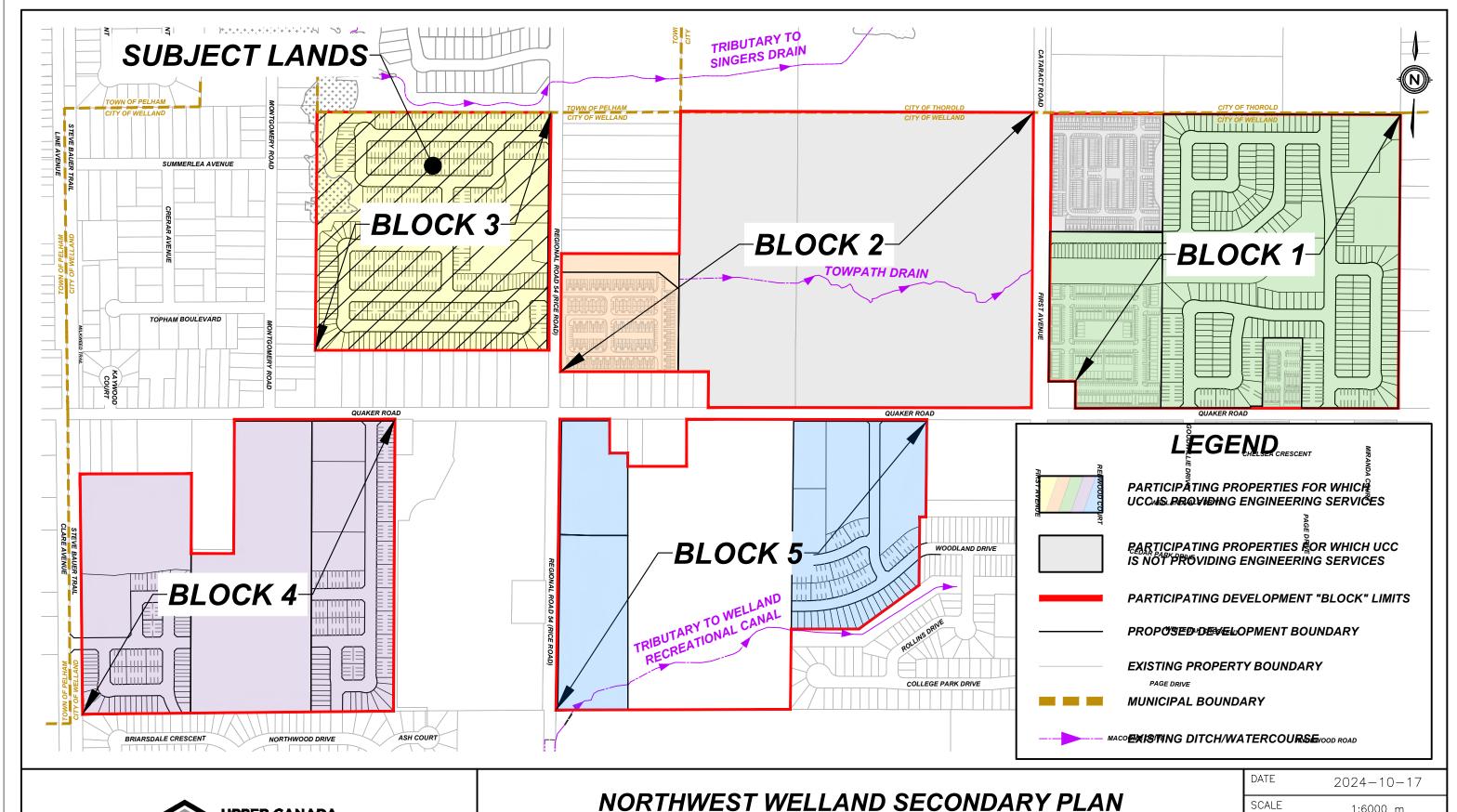
It was identified in the Implementation Plan that two SWM Facilities are to be constructed in the eastern limit of the proposed subdivision lands to provide stormwater management quality and quantity controls for the entire 'Block' of development area, bound by Quaker Road on the south, Rice Road on 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	(IIIII dees)		
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.

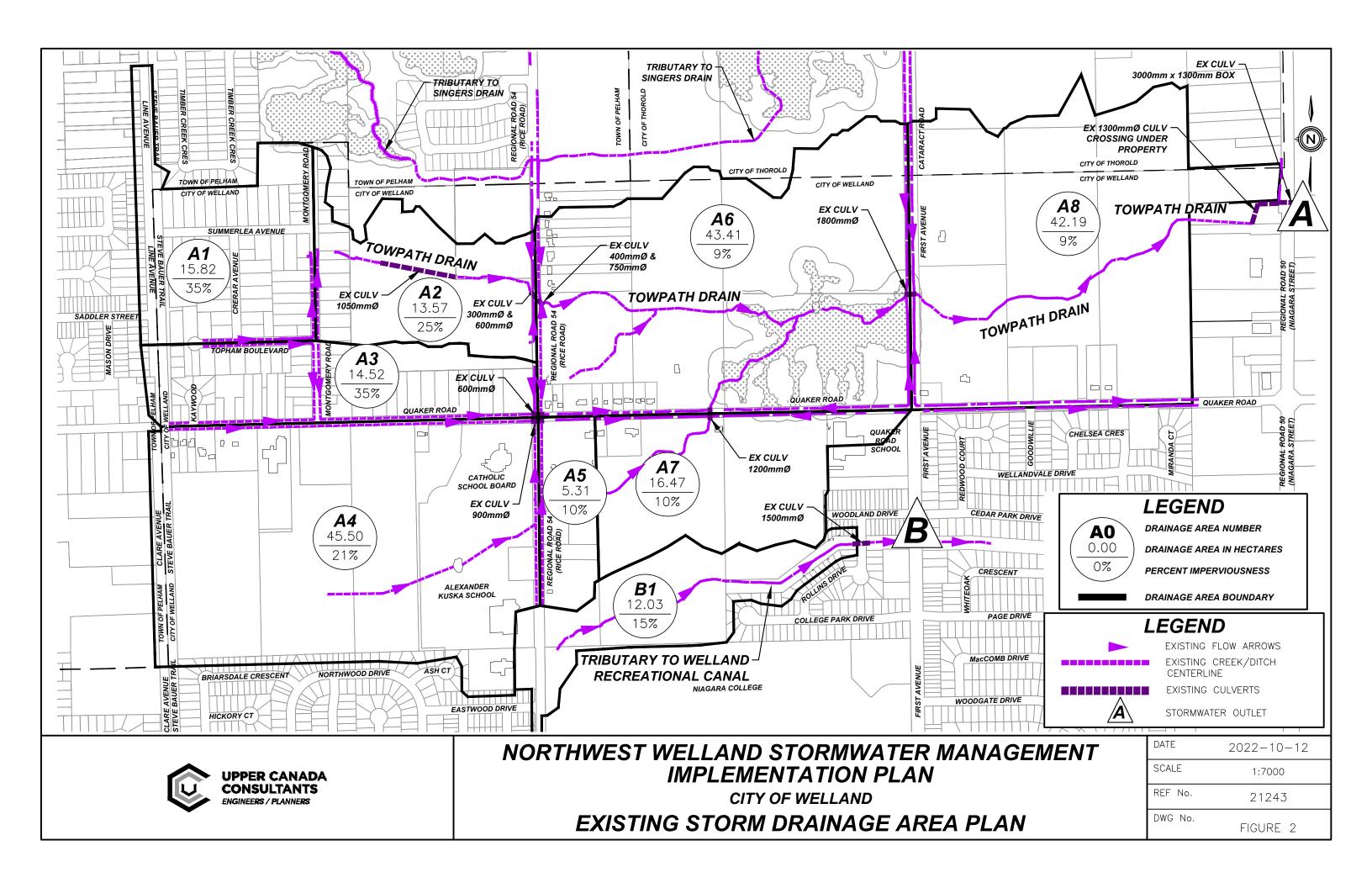


Table 2. Existing Peak Stormwater Flows – Towpath Drain							
T	Peak Flow (m ³ /s)						
Location	2 Year	5 Year	10 Year	25 Year	100 Year		
Outlet A1	1.317	1.589	1.800	2.099	2.558		
Outlet A2	3.301	4.194	4.777	5.619	6.987		
Outlet B (*)	3.425	4.367	4.977	5.863	7.305		
Outlet C	4.035	5.176	5.914	7.005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

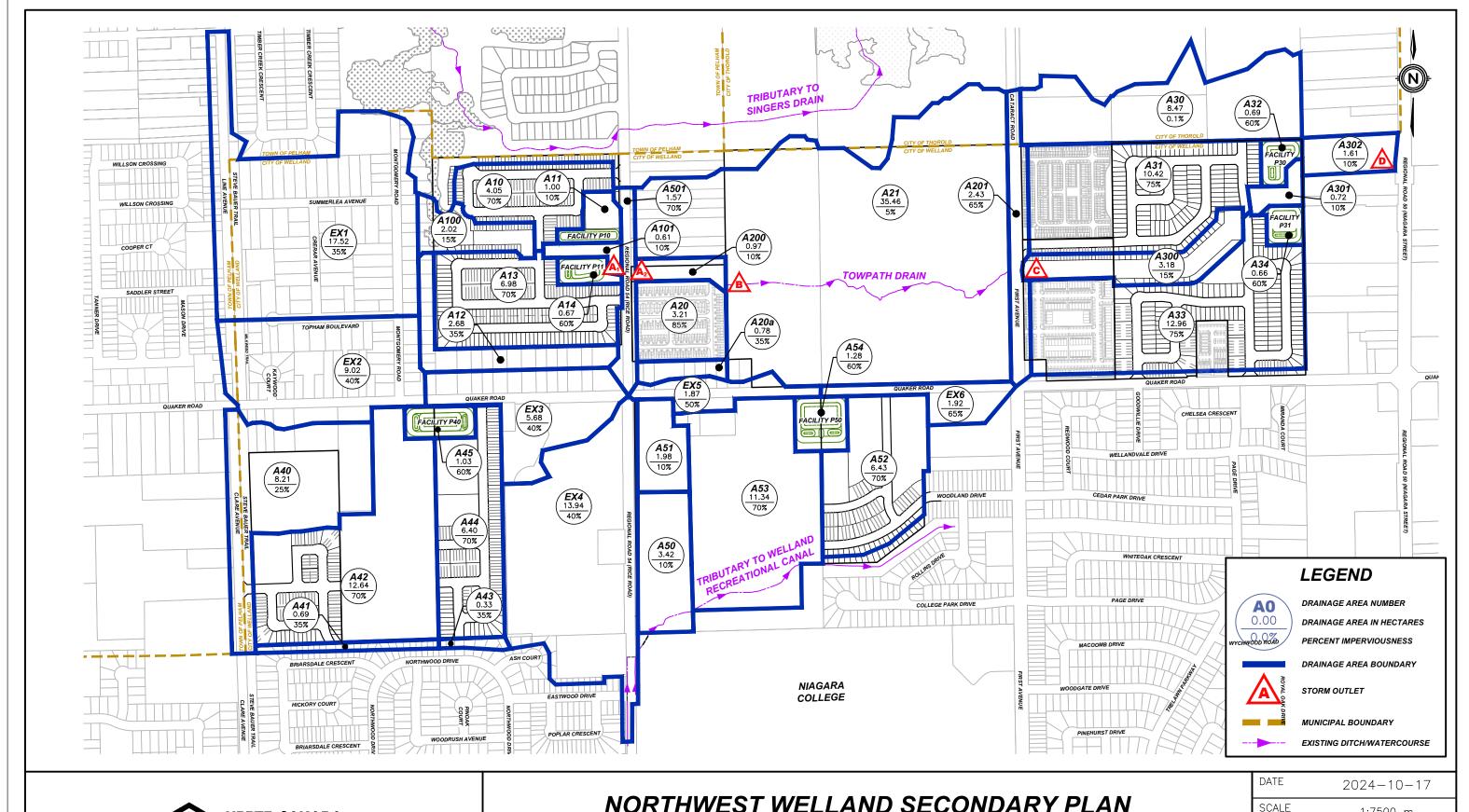
Table 3 below provides a summary of the catchment areas shown in Figure 3 and associated hydrological parameters used for the MIDUSS software model.

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

	Table 3. Hydrologic Parameters for Future Conditions							ns
Area	rea Area Length Slope Manning - "n"			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

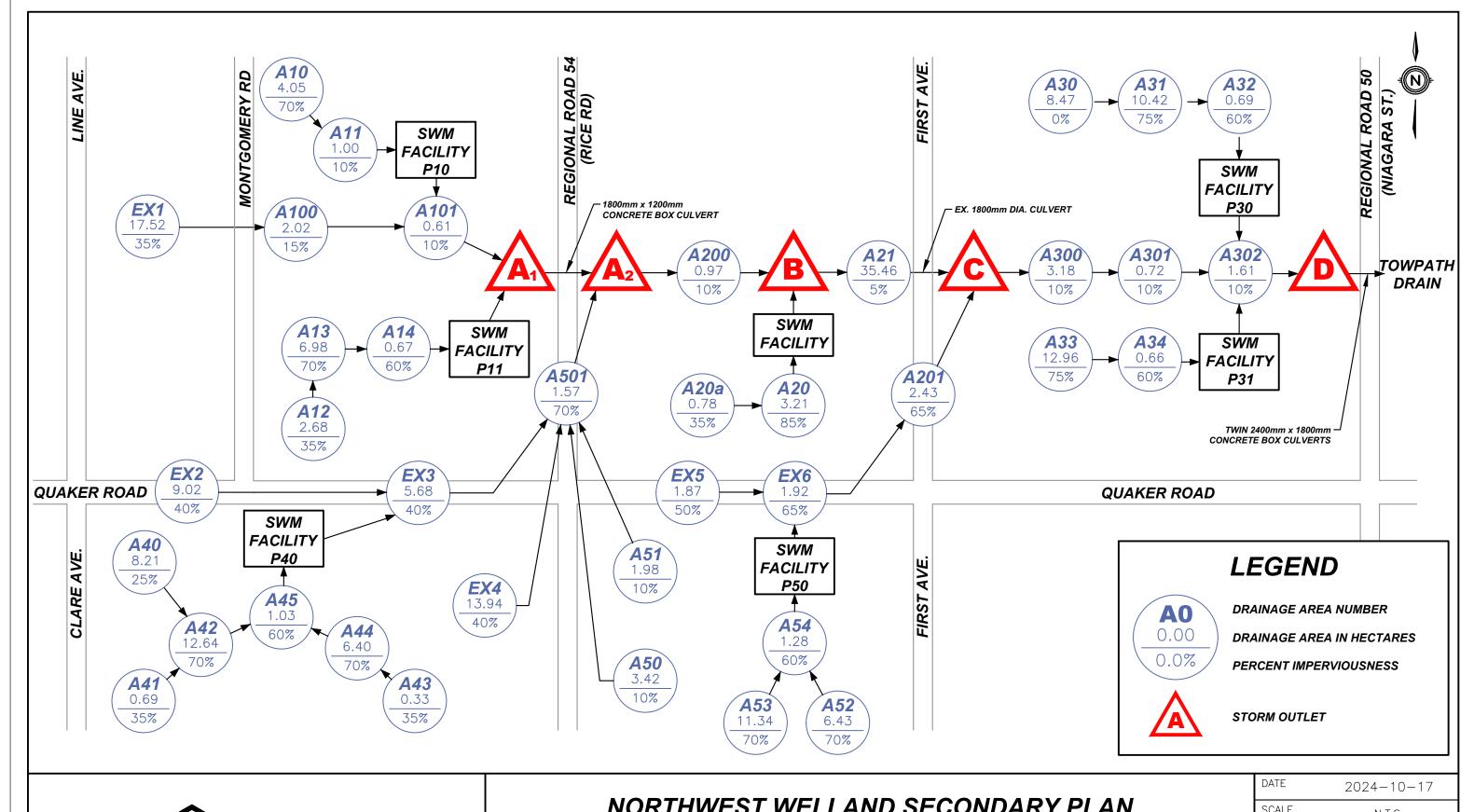
A30 A31	8.47	238 264	1.0	0.25	0.015	CD CD	74 74	0.1% 75%
A32	0.69	68	1.0	0.25	0.015	CD	74	60%
A33	12.99	294	1.0	0.25	0.015	CD	74	75%
A34	0.66	66	1.0	0.25	0.015	CD	74	60%
A302	1.61	104	0.2	0.25	0.015	CD	74	10%
	204.87 Total Area (ha)						,	





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

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

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.

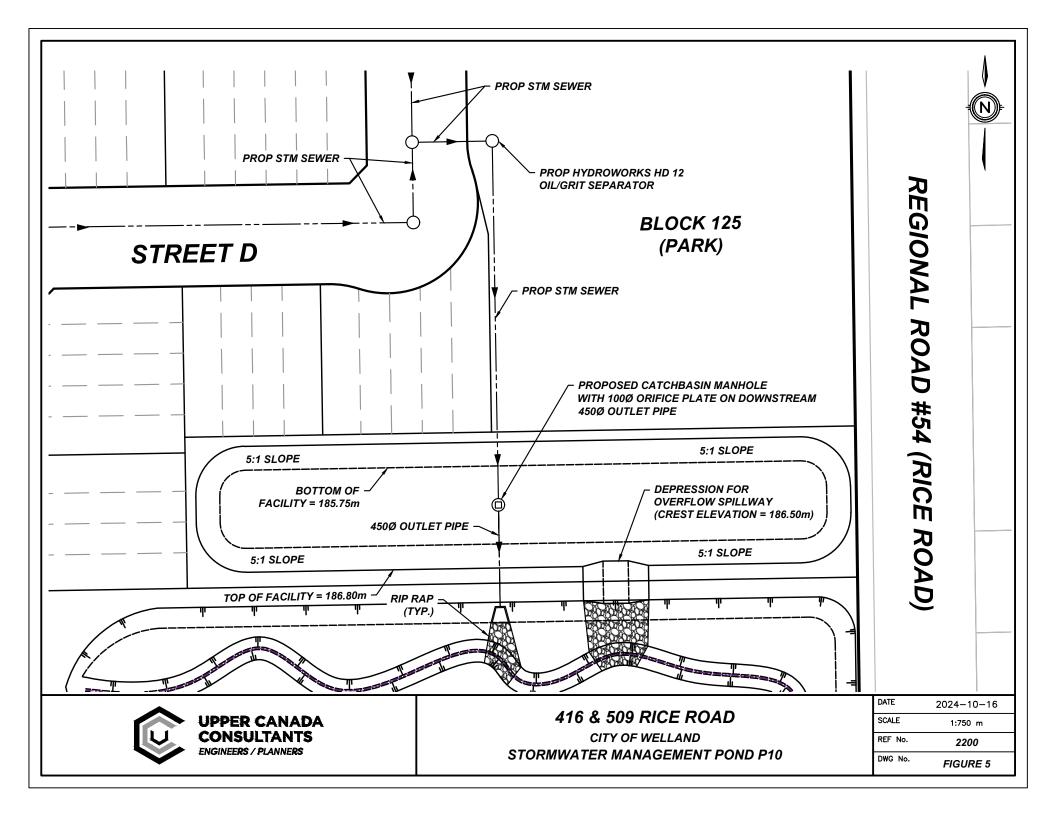


Table 5 summarizes the peak inflows and outflows for the stormwater management facility along with corresponding pond elevations. Based on the MIDUSS model, the maximum wet pond elevation is 186.51 m, and an active storage volume is 1,804 m³ for the 100-year design storm event.

Table 5. Stormwater Management Dry Pond Facility 'P10' Characteristics						
Design	Peak Flo	ws (L/s)	Maximum	Maximum Storage (m3)		
Storm	Future Inflow	Future Outflow	Elevation (m)			
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					
	Reference: Table 3.2, SWMP & Design Manual (MECP 2003)				
	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 =	11.2	Yea	ars		
Is this Acceptable? Yes (10 Year Minimum Cleanout Frequency)					

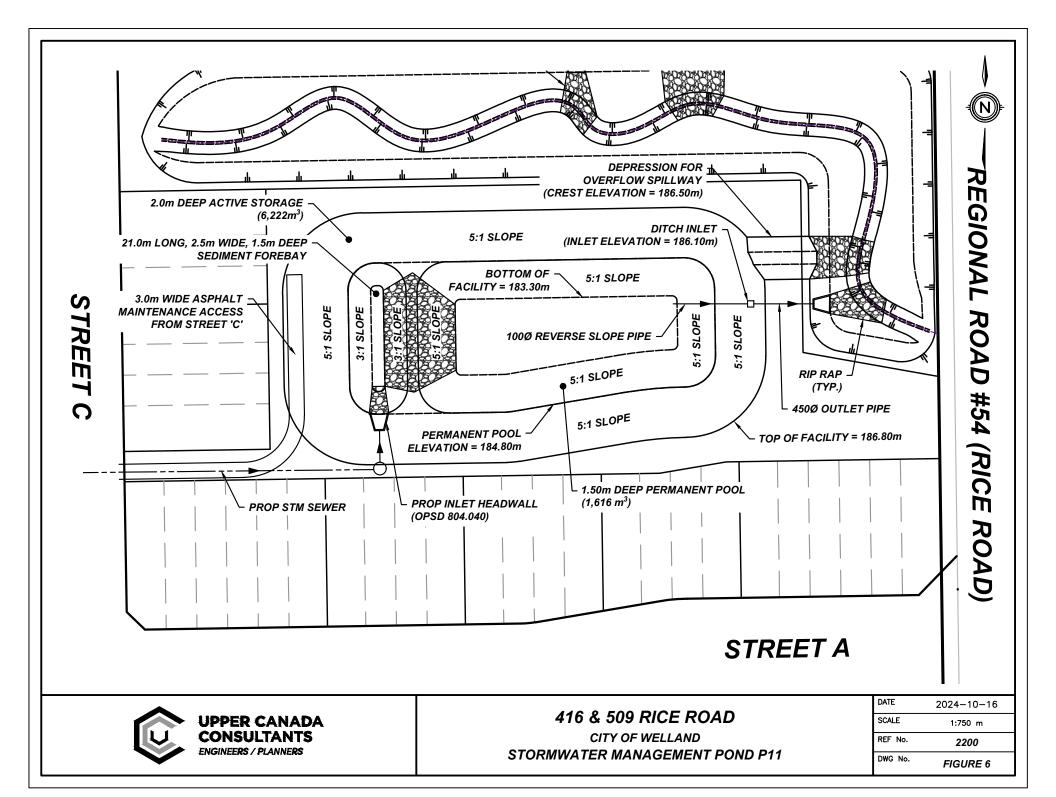


Table 9 summarizes the peak inflows and outflows for the stormwater management facility along with corresponding pond elevations. Based on the MIDUSS model, Table 9 shows the maximum wet pond elevation of 186.28 m, and an active storage volume of 4,180 m³ for the 100-year design storm event.

Table 9. Stormwater Management Wet Pond Facility 'P11' Characteristics						
Design	Peak Flo	ows (L/s)	Maximum	Maximum Storage (m3)		
Storm	Future Inflow	Future Outflow	Elevation (m)			
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	Maximum Storage (m3)			
Storm	Inflow	Outflow	Elevation (m)				
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	Maximum Storage (m3)			
Storm	Future Inflow	Future Outflow	Elevation (m)				
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 Flo	ows (L/s)	Maximum	Maximum Storage (m3)	
Storm	Future Inflow	Future Outflow	Elevation (m)		
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 Storm Peak Flow (m³/s)						
Design Storm	Existing	Existing Future with SWM				
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%			
Dov	vnstream of Rice Ro	ad Culvert Crossing – O	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.

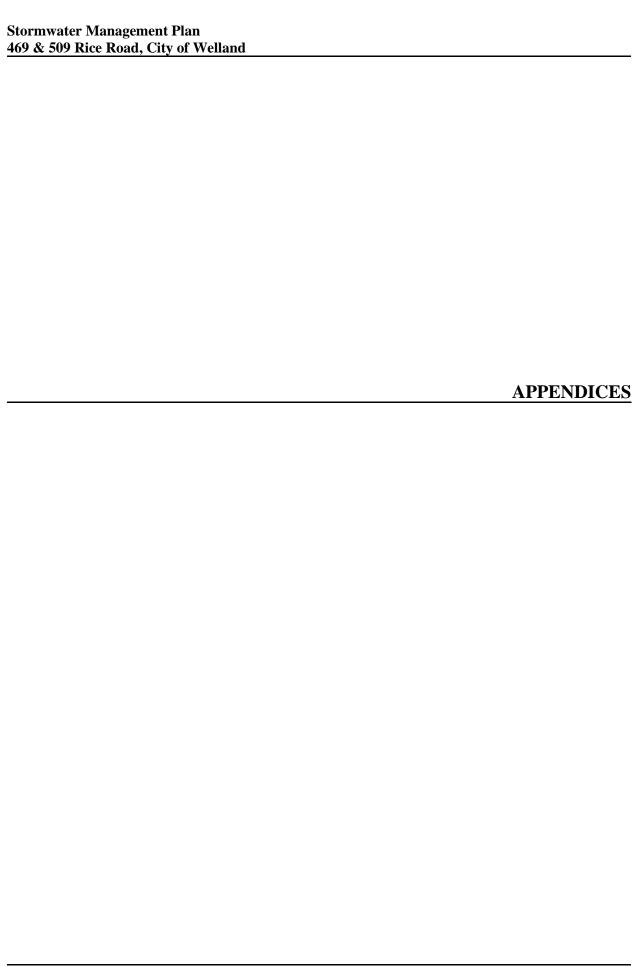
Respectfully Submitted,

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
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .461 .808 .000 .000 c.m/s	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	111111 / 5-11150011			.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	CONFLUEN		. 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			
									GARA 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
	<pre>3 line(s) of comment ************************************</pre>		5.000 ID No. 99999 5.310 Area in hectares
	5-YEAR STORM EVENT		188.000 Length (PERV) metres
•	******		1.000 Gradient (%) 10.000 Per cent Impervious
2	STORM 1		188.000 Length (IMPERV)
	830.000 Coefficient a		.000 %Imp. with Zero Dpth
	7.300 Constant b (min) .777 Exponent c		1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"
	.450 Fraction to peak r		74.000 SCS Curve No or C
	240.000 Duration 240 min 45.874 mm Total depth		.100 Ia/S Coefficient 8.924 Initial Abstraction
3	IMPERVIOUS		1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .015 Manning "n"		.101 4.093 .249 .000 c.m/s .236 .875 .300 C perv/imperv/total
	98.000 SCS Curve No or C	15	ADD RUNOFF
	.100 Ia/S Coefficient .518 Initial Abstraction	4	.101 4.194 .249 .000 c.m/s CATCHMENT
35	COMMENT	4	6.000 ID No. 99999
	<pre>3 line(s) of comment ************************************</pre>		43.410 Area in hectares 538.000 Length (PERV) metres
	AREA NORTH OF QUAKER		1.000 Gradient (%)
	************ CATCHMENT		9.000 Per cent Impervious
4	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 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>		.676 4.194 .249 .000 c.m/s
	.250 Manning "n" 74.000 SCS Curve No or C	35	.236 .885 .294 C perv/imperv/total 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. Reserv		**************************************
	.980 .000 .249 .000 c.m/s		**************************************
1 -	.236 .880 .461 C perv/imperv/total ADD RUNOFF	15	ADD RUNOFF
15	ADD RUNOFF .980 .980 .249 .000 c.m/s	9	.676 4.870 .249 .000 c.m/s
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 Beta weighting factor
	1.000 Gradient (%) 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 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat	17	COMBINE 1 Junction Node No.
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"		.676 4.870 4.870 c.m/s
	74.000 SCS Curve No or C	14	START
	.100 Ia/S Coefficient 8.924 Initial Abstraction	35	1 1=Zero; 2=Define COMMENT
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>		<pre>3 line(s) of comment</pre>
	.608		************ AREA SOUTH OF QUAKER
35	COMMENT		******
	3 line(s) of comment ************************************	4	CATCHMENT 7.000 ID No. 99999
	FLOW AT RICE ROAD		16.470 Area in hectares
1 -	**************************************		331.000 Length (PERV) metres
15	ADD RUNOFF .608 1.589 .249 .000 c.m/s		1.000 Gradient (%) 10.000 Per cent Impervious
4	CATCHMENT 3.000 ID No. 99999		331.000 Length (IMPERV)
	3.000 ID No. 99999 14.520 Area in hectares		.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat
	311.000 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
	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 .306 .000 4.870 4.870 c.m/s
	.250 Manning "n"		.236 .880 .300 C perv/imperv/total
	74.000 SCS Curve No or C .100 Ia/S Coefficient	15	ADD RUNOFF .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 .902 2.491 .249 .000 c.m/s		.000 Beta weighting factor
4	CATCHMENT		.000 Routing timestep 0 No. of sub-reaches
	4.000 ID No. 99999	1.0	.306 .306 .306 4.870 c.m/s
	45.500 Area in hectares 551.000 Length (PERV) metres	17	COMBINE 1 Junction Node No.
	1.000 Gradient (%)		.306 .306 .306 5.176 c.m/s
	21.000 Per cent Impervious 551.000 Length (IMPERV)	18	CONFLUENCE 1 Junction Node No.
	.000 %Imp. with Zero Dpth		.306 5.176 .306 .000 c.m/s
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"</pre>	4	CATCHMENT 8.000 ID No. 99999
	74.000 SCS Curve No or C		42.190 Area in hectares
	.100 Ia/S Coefficient 8.924 Initial Abstraction		530.000 Length (PERV) metres 1.000 Gradient (%)
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		9.000 Per cent Impervious
	1.602 2.491 .249 .000 c.m/s .236 .885 .372 C perv/imperv/total		530.000 Length (IMPERV)
15	ADD RUNOFF		<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>
35	1.602 4.093 .249 .000 c.m/s COMMENT		.250 Manning "n"
	<pre>3 line(s) of comment</pre>		74.000 SCS Curve No or C .100 Ia/S Coefficient
	*****		8.924 Initial Abstraction
	AREA SOUTH OF QUAKER *********		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
		35	COMMENT 3 line(s) of comment

			TOTAL FLOW AT NIAGARA STREET
		15	ADD RUNOFF
		27	.659 5.835 .306 .000 c.m/s HYDROGRAPH DISPLAY
		41	5 is # of Hyeto/Hydrograph chosen
		14	Volume = .3122033E+05 c.m START
		14	START 1 1=Zero; 2=Define

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 pervimpervie	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;	4-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	tal		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					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	
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 (IMPBRV) .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. 9999 45.500 Area in hectares 551.000 Length (PERV) metres 1.000 Gradient (%)	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 '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	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 "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 CATCHMENT 4.000 ID No. 99999 45.500 Area in hectares 551.000 Length (PERV) metres 1.000 Per cent Impervious 551.000 Length (IMPERV)	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 '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	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 "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 (PERV) metres 1.000 Gradient (%) 21.000 Per cent Impervious 551.000 Length (IMPERV) .000 % Imp. with Zero Dpth 0 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning "n"	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 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 0 option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C	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 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 CATCHENNT 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 (IMPERV) .000 % Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat Manning "h" 74.000 SCS Curve No or C .100 SCS Curve No or C	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 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 0 option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat .250 Manning 'n' 74.000 SCS Curve No or C	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 %tmp, 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 (IMPERV) .000 %tmp, 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 2.251 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	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 (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 .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 (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 .211 3.263 .353 .000 c.m/s .2121 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 (IMPERV) .000 %tmp. 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 (PERV) metres 1.000 Gradient (%) 21.000 Per cent Impervious 551.000 Length (IMPERV) .000 %tmp. 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	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 (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 .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 (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 .211 3.263 .353 .000 c.m/s .2121 3.263 .353 .000 c.m/s	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 (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 .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 (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=CSC SN/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	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 (IMPERV) .000 %Tmp. 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 (PERV) metres 1.000 Gradient (%) 2.000 Per cent Impervious 551.000 Length (IMPERV) .000 %Tmp. 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 COMMENT 3 line(s) of comment	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 (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 .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 (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=CSC SN/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	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	
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
* Precipitation + Initial 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 99.5 100.0 100.0 100.0 99.9	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. 1977. 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 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	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. 1985. 1987. 1988. 1989. 1990. 1991.	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	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.	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.	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. 2000. 2001. 2002.	140924. 169456. 121805. Flow Vol (m3) 110842. 141883. 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
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. 141883. 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. 1999.	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
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.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160. 1603. 1578.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530. 727.	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 68.8
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 1936. 2140. 1744. 2244. 1732. 1689. 2330. 2348. 1945	700. TSS Rem (kg) 748. 1057. 1130. 1250. 1002. 1300. 1158. 1175. 1348. 1290. 1483. 1221. 1496. 1148. 1160. 1603. 1578.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530. 727. 770.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 1.	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	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. 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
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 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. 164020. 181655. 205888.	Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888.	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. 1689.	591. TSS Out (kg) 452. 528. 560. 523. 546. 655. 743. 641. 685. 646. 657. 523. 748. 583. 530. 727. 770. 595. 591. 728.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 0. 0. 0. 0. 1. 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	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
HD 7 Year 1971. 1972. 1973. 1974. 1976. 1977. 1978. 1979. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1988. 1989. 1990.	Flow Vol (m3) 110842. 141853. 141509. 144458. 123017. 183000. 195902. 156589. 187366. 150474. 208604. 147048. 194167. 155914. 135611. 198414. 205267. 164020. 181655. 205888.	121455. Flow Treated (m3) 110083. 134234. 141509. 144022. 123017. 181642. 194171. 156589. 186369. 150474. 208604. 147048. 193985. 155914. 135611. 198414. 204916. 164020. 181655. 205888.	TSS In (kg) 1199. 1584. 1690. 1773. 1548. 1955. 1900. 1815. 2032. 140. 1744. 2244. 1732. 1689. 2330. 2348. 1945. 1882. 2416. 2224.	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.	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.	1. TSS Byp (kg) 1. 40. 0. 3. 0. 12. 11. 0. 7. 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	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
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1978. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1989.	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.	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.	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.	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.	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.	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	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 69.9 68.0 65.1
HD 7 Year 1971. 1972. 1973. 1974. 1975. 1976. 1977. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990.	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.	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.	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.	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.	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 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	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. 1980. 1981. 1982. 1983. 1984. 1985. 1986. 1987. 1988. 1989. 1990.	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 99.1 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0	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.	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. 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. 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. 2330. 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	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
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	(%) 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.	(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 77.1 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. 5.	(%) 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. 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. 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. 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. 257.	(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. 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 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. 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 79.1 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 $(m3) = 1,565$	Po	nd Drawdown Time Calculation (MC	DE, 2003)	Obvert $(m) = 185.25$				
Active Vol (m3) 386	Water Surface Eleva	ation 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 I
	Future Conditions MIDUSS 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	Ia/S Co	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 ahaaan	
	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		1 1=	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					ם חם משאנוו	WEST OF RICE RD PON
	1.000 Area in hectares 82.000 Length (PERV) metres			*******		DARLIK RD &	MEDI OF RICE RD. TON
	82.000 Length (PERV) metres 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 503.0 186.250 .0260 1091.0	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			
	Peak Outflow = .023 c.m/s		.000	Beta we	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,		nction Nod	e No.		
35	1 1=Zero; 2=Define COMMENT			.193	.193	.193	.193 c.m/s
33	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	reg	
	12.000 ID No.6 99999		1.000	Length Gradien		. 45	
	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		ve No or C		
	.250 Manning "n"		.100 8.924		efficient Abstraction	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
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv			.098	.798	.343	C perv/imperv/total
	.088 .000 .023 .000 c.m/s	15	ADD RUN				
	.088 .000 .023 .000 c.m/s .098 .801 .344 C perv/imperv/total			.022	.022	.193	.193 c.m/s
15	.088 .000 .023 .000 c.m/s	15 4		.022		.193	.193 c.m/s

	12.640 Area in hectares	3			188.000	.88	30 1209	4.0	
	290.000 Length (PERV) me	etres			Peak Out			c.m/s	
	1.000 Gradient (%)				Maximum				
	70.000 Per cent Impervi	ious				Storage =			000/-
	290.000 Length (IMPERV) .000 %Imp. with Zero	Doubh		14	START	.056	1.513	.041	.000 c.m/s
			n; 3=Green-Ampt; 4=Repeat	14		Zero; 2=Dei	Fine		
	.250 Manning "n"	C, 2-110200	i, b-diddi impo, i-nopoud	35	COMMENT	.010, 1-20.			
	74.000 SCS Curve No or	C				ne(s) of co	omment		
	.100 Ia/S Coefficient	:			*****	***			
	8.924 Initial Abstract						SOUTH OF QU	IAKER, EA	ST OF RICE - POND P50
	1 Option 1=Triang		nglr; 3=SWM HYD; 4=Lin. Reserv		******				
	.809 .022 .098 .800	.193 .590	.193 c.m/s C perv/imperv/total	4	CATCHMEN 52.000	ID No.ó	00000		
15	ADD RUNOFF	.590	C perv/imperv/cocai		6.430		hectares		
13	.809 .831	.193	.193 c.m/s		207.000		(PERV) metr	es	
9	ROUTE				1.000	Gradient	t (%)		
	.000 Conduit Length				70.000		t Imperviou	ıs	
	.000 No Conduit defin	ned			207.000		(IMPERV)		
	.000 Zero lag .000 Beta weighting i				.000 1		ith Zero Dr		2 Garage Sample A Barrack
	.000 Routing timester				.250	Manning		Z=HOI CO	n; 3=Green-Ampt; 4=Repeat
	0 No. of sub-reach				74.000		ve No or C		
	.809 .831	.831	.193 c.m/s		.100		efficient		
17	COMBINE				8.924		Abstractio		
	2 Junction Node 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=Define			15	ADD RUNG	.098	.805	.593	C perv/imperv/total
4	CATCHMENT			15		426	.426	.041	.000 c.m/s
-	43.000 ID No.6 99999			9	ROUTE				1000 O.M., D
	.330 Area in hectares			-	.000	Conduit			
	47.000 Length (PERV) me	etres			.000		uit defined	l	
	1.000 Gradient (%)				.000	Zero la			
	35.000 Per cent Impervi	Lous			.000		ighting fac	tor	
	47.000 Length (IMPERV) .000 %Imp. with Zero	Doth			.000		timestep sub-reaches	,	
			n; 3=Green-Ampt; 4=Repeat		-	426	.426	.426	.000 c.m/s
	.250 Manning "n"	c, z-norco	i, 3-dreen Ampe, 1-Repeat	17	COMBINE	120	.120	.120	.000 C.m/S
	74.000 SCS Curve No or	С			2 Jur	ction Node	e No.		
	.100 Ia/S Coefficient	=				426	.426	.426	.426 c.m/s
	8.924 Initial Abstract			14	START				
			nglr; 3=SWM HYD; 4=Lin. Reserv	_		Zero; 2=De	fine		
	.011 .000 .098 .798	.831	1.024 c.m/s	4	CATCHMEN 53.000		00000		
15	.098 .798 ADD RUNOFF	.343	C perv/imperv/total		11.340	ID No.ó	hectares		
13	.011 .011	.831	1.024 c.m/s		275.000		(PERV) metr	es	
4	CATCHMENT				1.000	Gradient			
	44.000 ID No.6 99999				70.000		Imperviou	ıs	
	6.400 Area in hectares				275.000	Length			
	207.000 Length (PERV) me	etres			.000		ith Zero Dr		
	1.000 Gradient (%)				1			2=Horto	n; 3=Green-Ampt; 4=Repeat
	70.000 Per cent Impervi	Lous			.250 74.000	Manning	"n" ve No or C		
	.000 %Imp. with Zero	Doth			.100		efficient		
			n; 3=Green-Ampt; 4=Repeat		8.924		Abstractio	n	
	.250 Manning "n"	•			1				nglr; 3=SWM HYD; 4=Lin. Reserv
	74.000 SCS Curve No or					731	.000	.426	.426 c.m/s
	.100 Ia/S Coefficient					.098	.798	.588	C perv/imperv/total
	8.924 Initial Abstract			15	ADD RUNG				405
	1 Option 1=Triangl	.831	nglr; 3=SWM HYD; 4=Lin. Reserv 1.024 c.m/s	9	ROUTE	731	.731	.426	.426 c.m/s
	.098 .805	.593	C perv/imperv/total	,	.000	Conduit	Length		
15	ADD RUNOFF				.000		it defined	l	
	.424 .433	.831	1.024 c.m/s		.000	Zero la	3		
9	ROUTE				.000		ighting fac	tor	
	.000 Conduit Length				.000		timestep		
	.000 No Conduit defin	ied			0	NO. OI :	sub-reaches	.731	.426 c.m/s
	.000 Zero rag	Factor		17	COMBINE	. /31	./31	./31	.426 C.M/S
	.000 Routing timester			-,		ction Node	e No.		
	0 No. of sub-reach					731	.731	.731	1.157 c.m/s
	.424 .433	.433	1.024 c.m/s	18	CONFLUE				
17	COMBINE					oction Node			
	2 Junction Node No.	400					1.157	.731	.000 c.m/s
14	.424 .433 START	.433	1.457 c.m/s	4	CATCHMEN 54.000	ID No.ó	99999		
14	1 1=Zero; 2=Define				1.280		hectares		
18	CONFLUENCE				92.000		(PERV) metr	es	
	2 Junction Node No.				1.000	Gradient	t (%)		
	.424 1.457	.433	.000 c.m/s		60.000		t Imperviou	ıs	
4	CATCHMENT				92.000		(IMPERV)		
	45.000 ID No.6 99999	_			.000		ith Zero Dr		n; 3=Green-Ampt; 4=Repeat
						OPCION .			
	1.030 Area in hectares				. 250	Manning	"n"		i, b-droom impe, i-nopoue
	83.000 Length (PERV) me				.250 74.000	Manning SCS Cur			n, b-dreen impe, i-nepeue
		etres			.250 74.000 .100	SCS Cur	"n" we No or C efficient		., o-orosa impo, i-kopouc
	83.000 Length (PERV) me 1.000 Gradient (%)	etres			74.000	SCS Curr Ia/S Co	ve No or C		i, 5-02001 imge/ 1-regede
	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero	etres ious Dpth			74.000 .100 8.924	SCS Curr Ia/S Cod Initial Option :	ve No or C efficient Abstractio l=Trianglr;	on 2=Recta	nglr; 3=SWM HYD; 4=Lin. Reserv
	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Imperv: 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN.	etres ious Dpth	n; 3=Green-Ampt; 4=Repeat		74.000 .100 8.924 1	SCS Curr Ia/S Coe Initial Option :	ve No or C efficient Abstractio l=Trianglr; 1.157	on 2=Recta .731	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s
	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Imperv: 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN, .250 Manning "n"	etres lous Dpth /C; 2=Horton	n; 3=Green-Ampt; 4=Repeat	15	74.000 .100 8.924 1	SCS Currials Option :	ve No or C efficient Abstractio l=Trianglr;	on 2=Recta	nglr; 3=SWM HYD; 4=Lin. Reserv
	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Imperv: 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN.	etres Lous Dpth /C; 2=Horton	n; 3=Green-Ampt; 4=Repeat	15	74.000 .100 8.924 1	SCS Currial Option :	ve No or C efficient Abstractio l=Trianglr; 1.157	on 2=Recta .731	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s
	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN, Manning "n" 74.000 SCS Curve No or	etres Lous Dpth /C; 2=Horton	n; 3=Green-Ampt; 4=Repeat	15 27	74.000 .100 8.924 1	SCS Currial Option :	ve No or C efficient Abstractio 1=Trianglr; 1.157 .786	on 2=Recta .731 .511	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total
	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN250 Manning "n" 74.000 SCS Curve No or .100 Ia/S Coefficient 8.924 Initial Abstract 1 Option 1=Triangi	etres Lous Dpth (C; 2=Horton C c c c cion Lr; 2=Rectan	nglr; 3=SWM HYD; 4=Lin. Reserv		74.000 .100 8.924 1 ADD RUNG HYDROGRA 5 is	SCS Currial Action 10 Control 10	ve No or C efficient Abstractic l=Trianglr; 1.157 .786 1.227 Y o/Hydrograp	on 2=Recta .731 .511	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s
	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN250 Manning "n" 74.000 SCS Curve No or .100 Ia/S Coefficient 8.924 Initial Abstract 1 Option 1=Triangl .056 1.457	Dpth (C; 2=Horton C c cion Lr; 2=Rectan	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s	27	74.000 .100 8.924 1 ADD RUNG HYDROGRA 5 is Volume	SCS Currial Action 10 Control 10	ve No or C efficient Abstractic 1=Trianglr; 1.157 .786	on 2=Recta .731 .511	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s
	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN, 74.000 SCS Curve No or 1.00 Ia/S Coefficient 1 Option 1=Triang .056 1.457 .098 .791	etres Lous Dpth (C; 2=Horton C c c c cion Lr; 2=Rectan	nglr; 3=SWM HYD; 4=Lin. Reserv		74.000 .100 8.924 1 ADD RUNG HYDROGRA 5 is Volume POND	SCS Currials Coordinated Coord	ve No or C efficient Abstractic 1=Trianglr; 1.157 .786 1.227 r o/Hydrograp 34E+04 c.m	2=Recta .731 .511 .731	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s
15	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Imperv: 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN250 Manning "n" 74.000 SCS Curve No or .100 Ia/S Coefficient 8.924 Initial Abstract 1 Option 1=Triang: .056 1.457 .098 .791 ADD RUNOFF	Dpth //C; 2=Horton C c c cinion Lr; 2=Rectan .433 .514	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	27	74.000 .100 8.924 1 ADD RUNG HYDROGRA 5 is Volume POND 6 Depth	SCS Curria/S Countial Option: 070 098 0FF 070 APH DISPLAM # of Hyett = .27815: Discharge	ve No or C efficient Abstractic 1=Trianglr; 1.157 .786 1.227 r b/Hydrograp 34E+04 c.m e - Volume	2=Recta .731 .511 .731 oh chosen	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s
	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN250 Manning "n" 74.000 SCS Curve No or .100 Ia/S Coefficient 8.924 Initial Abstract 1 Option 1=Triang .056 1.457 .098 .791 ADD RUNOFF .056 1.513	Dpth (C; 2=Horton C c cion Lr; 2=Rectan	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s	27	74.000 .100 8.924 1 ADD RUNC HYDROGRAI 5 is Volume POND 6 Depth - 182.000	SCS Curria/S Cot Initial Option: 070 :098 FF .070 :14PH DISPLAN* # of Hyett = .27815: Discharge .00	ve No or C sfficient Abstractic 1=Trianglr; 1.157 .786 1.227 r b(Hydrograp 34E+04 c.m	2=Recta .731 .511 .731 oh chosen sets	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s
15 27	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN, .250 Manning "n" 74.000 SCS Curve No or .100 Ia/S Coefficient 8.924 Initial Abstract 1 Option 1=Triangi .056 1.457 .098 .791 ADD RUNOFF .056 1.513 HYDROGRAPH DISPLAY	Dpth //C; 2=Horton C c cion lr; 2=Rectan .433 .514	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	27	74.000 .100 8.924 1 ADD RUNG HYDROGRA 5 is Volume POND 6 Depth	SCS Curria/S Countial Option: 070 098 0FF 070 APH DISPLAM # of Hyett = .27815: Discharge	ve No or C afficient Abstractic L=Trianglr; 1.157 .786 1.227 r p/Hydrograp 34E+04 c.m ae - Volume 00 525	2=Recta .731 .511 .731 oh chosen	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s
	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero .250 Manning "n" 74.000 SCS Curve No or .100 Is/S Coefficient 1 Option 1=Triang .056 1.457 .098 .791 ADD RUNOFF .056 1.513 HYDROGRAPH DISPLAY	Dpth C; 2=Horton C : :ion Lr; 2=Rectan .433 .514 .433 .raph chosen	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	27	74.000 .100 8.924 1 ADD RUNG HYDROGRI 5 is Volume POND 6 Depth 182.000 182.800	SCS Currial/S Countial Option: 070 098 NFF 070 14 of Hyetc 27815 Discharge .00	ve No or C stficient Abstractic L=Trianglr; 1.157 .786 1.227 r o/Hydrograp 34E+04 c.m = - Volume 00 90 525 30 785	22=Recta .731 .511 .731 oh chosen sets .0 ii.0	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s
	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN250 Manning "n" 74.000 SCS Curve No or .100 Ia/S Coefficient 8.924 Initial Abstract 1 Option 1=Triangl .056 1.457 .098 .791 ADD RUNOFF .056 1.513 HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrogr Volume = .3593299E+04 c. POND	Dpth C; 2=Horton C c c cion tr; 2=Rectan .433 .514 .433 caph chosen	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	27	74.000 .100 8.924 1 ADD RUNN HYDROGRI 5 is Volume POND 6 Depth 182.000 183.150 183.150 183.500	SCS Curria/S Cours Ia/S Cours Ia/S Cours Initial Option : 0.098	ve No or C sefficient Abstractic E-Trianglr; 1.157786 1.227 v	2=Recta .731 .731 .731 .731 .731 .0h chosen sets .0	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s
27	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN250 Manning "n" 74.000 SCS Curve No or .100 Ia/S Coefficient 8.924 Initial Abstract 1 Option 1=Triang .056 1.457 .098 .791 ADD RUNOFF .056 1.513 HYDROGRAPH DISPLAY 5 is # of Hyeto/Rydrog Volume = .3593299E+04 c. POND 6 Depth - Discharge - Volume	Dpth C; 2=Horton C c c cion tr; 2=Rectan	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	27	74.000 .100 8.924 1 ADD RUNG HYDROGRI 5 5 Volume POND 6 Depth - 182.000 183.150 183.500 183.800 184.000	SCS Curria/S Coordination Option: 070 098 FFF 070 070 070 070 070 070 070 070 070	ve No or C sefficient Abstractic sefficient Abstractic sefficient 7.786 1.157 1.227 2.76 2.74 2.76 2.77 2.77 2.77 2.77 2.77 2.77 2.77	2=Recta .731 .511 .731 .731 oh chosen sets .0 i1.0 i5.0 i1.0	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s
27	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN, .250 Manning "n" 74.000 SCS Curve No or .100 Ia/S Coefficient 1 Option 1=Triangl .056 1.457 .098 .791 ADD RUNOFF .056 1.513 HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrog Volume = .3593299E+04 c. POND 6 Depth - Discharge - Volum 186.000 .000	Dpth /C; 2=Horton C c c cition r; 2=Rectan .433 .514 .433 caph chosen me sets .0	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	27	74.000 .100 8.924 1 ADD RUNG HYDROGRA 5 is Volume POND 6 Depth 182.000 183.150 183.500 183.600 184.000	SCS Curria/S Coordination Option: 0.070	ve No or C officient Abstractic E-Trianglr; 1.157 .786 .786 .1.227 v / / / / / / / / / / / / / / / / / /	2=Recta .731 .511 .731 .731 oh chosen sets .0 :1.0 :5.0 :1.0 :5.0 :7.7 .7.7 .7.7	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s
27	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN250 Manning "n" 74.000 SCS Curve No or .100 Ia/S Coefficient 8.924 Initial Abstract 1 Option 1=Triangl .056 1.457 .098 .791 ADD RUNOFF .056 1.513 HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrogr Volume = .3593299E+04 c. POND 6 Depth - Discharge - Volum 186.000 .000 186.800 .0550	Dpth C; 2=Horton C C C C C C C C C C C C C C C C C C C	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	27	74.000 .100 8.924 1 ADD RUNN HYDROGRI 5 is Volume POND 6 Depth 182.000 183.150 183.500 184.000 Peak Out	SCS Curria/S Coordinate of the	ve No or C sefficient Abstractic E-Trianglr; 1.157786 1.227 r // // // // // // // // // // // // /	2=Recta .731 .511 .731 .731 bh chosen sets .0 !1.0 !5.0 !1.0 c.m/s	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s
27	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN, 250 Manning "n" 74.000 SCS Curve No or .100 Ia/S Coefficient 1 Option 1=Triangl .056 1.457 .098 .791 ADD RUNOFF .056 1.513 HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrogn Volume = .3593299E+04 c. POND 6 Depth - Discharge - Volum 186.000 .000 186.800 .0550 4. 187.300 .0730	Dpth /C; 2=Horton C: -ion Lr; 2=Rectan .433 .514 .433 .raph chosen m as sets .0 1048.0	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	27	74.000 .100 8.924 1 ADD RUNG HYDROGRI 5 is Volume POND 6 Depth 182.800 183.150 183.500 184.000 Peak Out Maximum Maximum	SCS Curria/S Coordination Option: 070 :: 098 NFF :: 070 :: NPH DISPLA: # of Hyetc = .27815: Discharge .00 .01: .02: .3: 1.00: .5: Leftow = Depth = Storage =	ve No or C sefficient Abstractic latrianglr; 1.157 .786 1.227 r / / / / / / / / / / / / / / / / / /	2=Recta .731 .511 .731 .731 oh chosen sets .0 11.0 15.0 17.0 c.m/s metres c.m	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s
27	83.000 Length (PERV) me 1.000 Gradient (%) 60.000 Per cent Impervi 83.000 Length (IMPERV) .000 %Imp. with Zero 1 Option 1=SCS CN, .250 Manning "n" 74.000 SCS Curve No or .100 Ia/S Coefficient 8.924 Initial Abstract 1 Option 1=Triangi .056 1.457 .098 .791 ADD RUNOFF .056 1.513 HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrogn Volume = .3593299E+04 c. POND 6 Depth - Discharge - Volum 186.000 .0550 4 187.300 .0730 187.500 .170	Dpth C; 2=Horton C C C C C C C C C C C C C C C C C C C	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	27	74.000 .100 8.924 1 ADD RUNG HYDROGRI 5 is Volume POND 6 Depth 182.800 183.150 183.500 184.000 Peak Out Maximum Maximum	SCS Curria/S Coordination Option: 070 :: 098 NFF :: 070 :: NPH DISPLA: # of Hyetc = .27815: Discharge .00 .01: .02: .3: 1.00: .5: Leftow = Depth = Storage =	ve No or C sefficient Abstractic E-Trianglr; 1.157786 1.227 r // // // // // // // // // // // // /	2=Recta .731 .511 .731 .731 bh chosen sets .0 !1.0 !5.0 !1.0 c.m/s	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .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	
35	.250 74.000 .100 8.924 1 .0	Manning SCS Cur Ia/S Co Initial Option	"n" ve No or C efficient Abstractio 1=Trianglr;	n 2=Rectangl: .000	r; 3=SWM HYD; 4=Lin. Re	9	ROUTE .000 .000 .000	.010 Condui No Con Zero l Beta w	it Length nduit defined lag weighting fac		.000 c.m/s	
35	.250 74.000 .100 8.924 1 .0 .1 COMMENT	Manning SCS Cur Ia/S Co Initial Option 046	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862	n 2=Rectangl: .000	r; 3=SWM HYD; 4=Lin. Re	9	ROUTE .000 .000	.010 Condui No Con Zero l Beta w Routin	it Length nduit defined Lag	tor	.000 c.m/s	
35	.250 74.000 .100 8.924 1 .0 .1 COMMENT 3 line	Manning SCS Cur Ia/S Co Initial Option 046 .94	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 comment	n 2=Rectangl: .000 .294 C	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total	9 serv	ROUTE .000 .000 .000 .000 .000	.010 Condui No Con Zero 1 Beta w Routin No. of	it Length nduit defined lag weighting fac ng timestep	tor	.000 c.m/s	
35	.250 74.000 .100 8.924 1 .0 .1 COMMENT 3 line ********* FLOW AT F	Manning SCS Cur Ia/S Co Initial Option 046 .94 a(s) of c	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 comment	n 2=Rectangl: .000	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total	9	ROUTE .000 .000 .000 .000 .000 0	Condui No Con Zero 1 Beta w Routin No. of	it Length iduit defined lag weighting fac ing timestep f sub-reaches .972	tor		
35	.250 74.000 .100 8.924 1 .0 .1 COMMENT 3 line ************************************	Manning SCS Cur Ia/S Co Initial Option 046 .94 e(s) of c	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 comment	n 2=Rectangl: .000 .294 C	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total	9 serv	ROUTE .000 .000 .000 .000 .000 0	.010 Condui No Con Zero 1 Beta w Routin No. of	it Length iduit defined lag weighting fac ing timestep f sub-reaches .972	tor		
15	.250 74.000 .100 8.924 1 .00 .1 COMMENT 3 line ********* FLOW AT F ********* ADD RUNOE	Manning SCS Cur Ia/S Co Initial Option 046 .94 e(s) of c	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 comment	n 2=Rectangl: .000 .294 C	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total	9 serv	ROUTE	Condui No Com Zero 1 Beta w Routin No. of .010	it Length induit defined lag weighting fac gg timestep E sub-reaches .972 ode No972	.972	.000 c.m/s	
	.250 74.000 .100 8.924 1 .0 .1 COMMENT 3 line ************************************	Manning SCS Cur Ia/S Co Initial Option 046 .94 e(s) of c	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 comment AY CULVERT	n 2=Rectangl: .000 .294 C	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total	9 serv 17	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Com Zero 1 Beta w Routin No. of .010	it Length induit defined lag weighting fac gg timestep E sub-reaches .972 ode No972	.972	.000 c.m/s	
15	.250 74.000 .100 8.924 1 .00 .1 COMMENT 3 line ********* FLOW AT F ********* ADD RUNOE	Manning SCS Cur Ia/S Co Initial Option 046 .994 e(s) of c ************************************	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 comment AY CULVERT .941 Length	n 2=Rectangl: .000 .294 C	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total	9 serv 17	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Com Zero 1 Beta w Routin No. of .010	it Length iduit defined lag weighting fac ug timestep t sub-reaches .972 ode No972 Define	.972	.000 c.m/s	
15	.250 74.000 .100 8.924 1 .0 .COMMENT 3 line ************************************	Manning SCS Cur Ia/S Co Initial Option 046 .994 e(s) of c ************************************	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined	n 2=Rectangl: .000 .294 C	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total	9 serv 17	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010	it Length iduit defined lag weighting fac ug timestep t sub-reaches .972 ode No972 Define	.972	.000 c.m/s	
15	.250 74.000 .100 8.924 1 .00	Manning SCS Cur Ia/S Co Initial Option 146	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined g ighting fac	n 2=Rectangl: .000 .294 C	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total	9 serv 17	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Condui No Condui Zero 1 Beta w Routin No. of .010 Inction No .010 Zero; 2=D 	it Length iduit defined lag weighting fac reg timestep f sub-reaches .972 ode No972 odefine comment reg court OF SE	.972	.000 c.m/s	
15	.250 74.000 .100 8.924 1 0 .1 COMMENT 3 line ************************************	Manning SCS Cur Ia/S	"n" we No or C efficient Abstractio 1-Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined g ighting fac timestep	n 2=Rectangl: .000 .294 C - SEGMENT 1	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total	9 serv 17 14	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Enction No .010 Zero; 2=D 	it Length iduit defined lag weighting fac reg timestep f sub-reaches .972 ode No972 odefine comment reg court OF SE	.972	.000 c.m/s	
15	.250 74.000 .100 8.924 1 .00	Manning SCS Cur Ia/S	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 comment AY CULVERT .941 Length uit defined g ighting fac	n 2=Rectangl: .000 .294 C - SEGMENT 1	r; 3=SWM HYD; 4=Lin. Re .000 c.m/s perv/imperv/total	9 serv 17 14	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Exero; 2=E	it Length iduit defined lag weighting fac reg timestep f sub-reaches .972 ode No972 odefine comment reg court OF SE	.972	.000 c.m/s	
15	.250 74.000 .100 8.924 1 .0 COMMENT 3 line ********** ************* ADD RUNOF .00 .000 .000 .000 .000 .000 .000 .00	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	n 2=Rectangl: .000 .294 C - SEGMENT 1	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 : : : : : : : : : : : : : : : : : :	it Length iduit defined lag veighting fac ng timestep f sub-reaches .972 ode No972 oefine comment ** r SOUTH OF SE ** 6 99999 in hectares	.972 .972	.000 c.m/s	
15 9	.250 74.000 .100 8.924 1 .000	Manning SCS Cur Ia/S Co Initial Option 146 .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 No.	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 Innction No. .010 Zero; 2=E Conne(s) of ************************************	it Length iduit defined lag weighting fac ag timestep f sub-reaches .972 ode No972 odeline comment ** f SOUTH OF SE ** 6. 99999 in (PERV) metr	.972 .972	.000 c.m/s	
15 9 17	.250 74.000 .100 8.924 1 .0 .1 COMMENT 3 lime ************************************	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	n 2=Rectangl: .000 .294 C - SEGMENT 1	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 : mction No. .010 : czero; 2=E: .ne(s) of ************************************	it Length iduit defined lag verighting fac gtimestep f sub-reaches .972 de No972 Define comment ** f SOUTH OF SE ** 6 99999 in hectares 1 (PERV) metr met (%)	.972 .972 .972 .972	.000 c.m/s	
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 (s) of c ********** ********* ******** ********	"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 ng 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
15 9 17 14	74.000 74.000 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	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 .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 Czero; 2=D .ne(s) of ************************************	it Length iduit defined lag verighting fac gtimestep f sub-reaches .972 de No972 define comment ** f SOUTH OF SE ** 6 99999 in hectares in (PERV) metr ant (%) ent Imperviou with Zero Dp ig "n"	.972 .972 .972 .986 .986 .986 .986 .986 .986 .986 .986	.000 c.m/s .972 c.m/s POND P11	4=Repeat
15 9 17 14	74.000 .100 8.924 1 1 1 COMMENT 3 line ************************************	Manning SCS Curr Ia/S Co Initial Option 146 994 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 e No941 fine comment	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 .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 Simption No. of 2 Coro; 2=D Coro 2=D Coro 2=D Coro 2=D Coro 2=D Coro 3	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 .972 c.m/s POND P11	4=Repeat
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	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: .ne(s) of ************************************	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	-
15 9 17 14 35	74.000 74.000 74.000 8.924 1 0.0 1.00 8.924 1 1.00 8.924 1 1.00 8.924 1 2.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	Manning SCS Cur Ia/S Co Initial Option 146 .94 .94 .95 .95 .96 .97 .97 .98 .98 .99 .99 .99 .99 .99 .99 .99 .99	"n" ve No or C efficient Abstractio 1=Trianglr; .896 .862 omment AY CULVERT .941 Length nit defined g ighting fac timestep sub-reaches .941 e No941 fine omment NORTH OF SE	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 .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 In the control of .010 In the	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 (%) in timestervious n (IMPERV) with Zero Dp n 1=SCS CN/C; gg "n" urve No or C Coefficient al Abstractio n 1=Trianglr;	.972 .972 .972 GMENT 1 - es s th 2=Horton n 2=Rectan	.000 c.m/s .972 c.m/s POND P11 ; 3=Green-Ampt;	-
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: .ne(s) of ************************************	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
15 9 17 14 35	.250 74.000 .100 8.924 1 .00 .100 8.924 1 .00 .000 .000 .000 .000 .000 .000 .0	Manning SCS Curr Ia/S CO Initial Option 146 994 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 (%)	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	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Condui No Con Zero 1 Beta w Routin No. of .010 Zero; 2=IC	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	.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 (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 - 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	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 74.000 8.924 1 0.0 1.00 8.924 1 1.00 8.924 1 1.00 8.924 2 1 1.00 8.924 2 1 1.00 8.924 2 0.00 0.00 0.00 0.00 0.00 0.00 0.00	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 - 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 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 ************** TO ROADW Zero la Beta we Routing No. of 146 ction Nod 146 cro; 2=De ction Nod Area in Length Gradien Fer cen Length Manning SCS Cur Manning SCS Cur	"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 ** 6.6 99999 in hectares n (TERV) 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 6.6 99999 in hectares n (PERV) metr and hectares n (PERV) metr and hectares n (PERV) metr mit (%)	.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 ** 6.6 99999 in hectares n (TERV) 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 6.6 99999 in hectares n (PERV) metr and hectares n (PERV) metr and hectares n (PERV) metr mit (%)	.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 it 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 .850 .134 .6 99999 in hectares in (PERV) metr ent (%) set Impervious in Impervious in (IMPERV) with Zero Dp in Impervious in (IMPERV) with Zero Dp in Impervious in Impervious in (IMPERV) with Zero Dp in Impersious in Impervious in Imp	.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 it 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 .********* F .46 Conduit No Cond Zero la Beta we Routing No. of .46 .46 .47 .46 .47 .47 .47 .48 .48 .49 .49 .49 .49 .49 .49 .49 .49 .49 .49	"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 (%)	01 05					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 No Cond	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 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 S/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 .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 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 .009 5251.0 183.150 .0230 7895.0 183.150 .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	018 /-		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 (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 (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 *********** 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 (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 (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 ************ *********** **********
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 Mimp. 1 Optic 74.000 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	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 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 *********** CATCHMENT 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	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 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 .187 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 n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic n 1=Trianglr; .321 .848 .542 it Length nduit defined lengthing face weighting face	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 127.000 Lengt 1.000 SCS C .101 Ia/S 8.924 Initi 0.221 .221 .194 ADD RUNOFF .221 ROUTE .000 Condu .000 No Cc .000 Sero .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. 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 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 1.36 .867 .321 Comment QUAKER RD TO .6 99999 in hectares h (PERV) metr ent (%) ent Imprivion h (IMPERV) min Hectares h (PERV) metr ent (%) ent Imprivion h (IMPERV) n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic 1.321 .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	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 Imprivion h (IMPERV) min Hectares h (PERV) metr ent (%) ent Imprivion h (IMPERV) n 1=SCS CN/C; ng "n" urve No or C Coefficient al Abstractic 1.321 .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	ces as 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 .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	ces as 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 .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

```
.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) 1	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 1	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 .000 700 700 700 700 700 700 700	.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 onduit 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 onduit 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 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 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 onduit 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 .000 .000 .000 .000 .000 .000 .000 .0	.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	
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 .000 .000 .000 .000 .000 .000 .000 .0	.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	.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 Coefficie! 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 .000 .000 .000 .000 .000 .000 .000 .0	.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	.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 EUNOFF .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	1 1 1 3	7 COMMB1 1 START 1 COMMB2 4 START 5 COMMB2 1 1 2 2 3 ****** 4 CATCE 1 2 . 686 1 34.000	.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 *** >.6 99999 in hectares th (PERV) me	.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	1 1 1 3	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 ********** 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) 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	1 1 1 3	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 Coefficies 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	1 1 1 3	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	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 Onduit defin lag weighting f ing timestep of sub-reach 1.172 Node No. 1.172 Define f comment *** Do. 6 9999 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; 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	%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 .000 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 1.(*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	n. Reserv	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	7 COMMB1 1 START 1 COMMB1 2 CATCE 1 12.000 2.686 134.000 1.000 35.000 134.000 1.000 8.924 1.000 8.924 1.000 8.924 1.000 8.924 1.000 8.924 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 *** 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 ********* FOTO TO	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 -	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 In 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 ion r; 2=Recto 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 Coefficies Initial Abstracoption 1=Triang 155 1.082 236 .874 e(s) of comment ************************************	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 -	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 Conduit Jength No Conduit Length No Conduit Jength No Conduit Length Ser Jength Tono Of Sub-rea. Description No Sub-rea. Tono Of Sub-rea. ELOPMENT NORTH OF ********** ID No Of Sub-rea. Length (PERV) Gradient (%) Per cent Imper Length (IMPERV) *Imp. with Zer. Option 1=SCS CI Manning "n" SCS Curve No Of S) 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	.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 oi Ia/S Coefficies Initial Abstract Option 1=Trians 1.082 236 .874 e(s) of comment ******** FUT ROADWAY CULVI********* Conduit Length No Conduit Length No Conduit def: Zero lag Beta weighting Routing timest No. of sub-react 1.137 ction Node No. 055 1.137	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 7.0000	.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 continual Abstract on 1=TCS (Triangl) .000 .866 .159 Do. 6 99999 in hectares th (PERV) me ient (%) *** Define Define 1.000 .866 .159 Do. 6 99999 in hectares th (PERV) me ient (%) Do. 6 99999 in hectares th (PERV) me ient (%) Dent Impervith (IMPERV)	.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 1.000 35.000 134.000 1.000 8.924 15 CATCE 13.000 6.986 216.000 7.0000	.012 .235 .UNOFF .012	1.160 .873 1.172 mit 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 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 vith Zero	.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 SCS Curve No or In/S Coefficier Initial Abstractory option 1=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 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 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 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 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 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 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 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 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 In/S Curve No or In/) o Deth 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 Deth 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 mit 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 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 vith Zero	.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 2.688 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 (%) ment Impervi curve No or Coefficient ial Abstract on 1=Triangl .000 .866 .159 o.6 99999 in hectares th (PERV) me ient (%) ent Impervi curve No or Coefficient coefficient ial Abstract on 1=Triangl .000 .866 .159 o.6 99999 in hectares th (PERV) me ient (%) cent Impervi th (IMPERV) . with Zero on the (IMPERV) . with Zero on the Jecus CN/ ing "n"	.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 Coefficier Initial Abstrac Option 1=Trians 055 1.032 236 .874 a(s) of comment ********** FUT ROADWAY CULVI ********* FUT ROADWAY CULVI ********* FOT Conduit Length No 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=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 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/ ing "n" Curve No or Coefficient ial 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 "Asstract Lag "Asstract Lag "Curve No or Coefficient Lag "Curve No or Coefficient Lag "Curve No or Coefficient Lag "Asstract Lag "Curve No or Coefficient Lag "Curve No or Coefficient Lag "Asstract Lag "Curve No or Coefficient Lag "Asstract Lag "	.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 c ion c c c c c c c c c c c c c c c c c 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

	.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 .361	.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 .00 .236 .87: ADD RUNOFF .04 .04 CATCHMENT 42.000 ID No.6 999: 12.640 Area in hect 290.000 Length (PER Cardient) 1.000 Gradient (R Cardient) 70.000 Per cent Im	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.6 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 perv/imperv/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 - OHALLTRY 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		

	.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"	.229 4.202 4.202 4.202 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	
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. F .049 .000 2.317 3.502 c.m/s</pre>	serv 3 line(s) of comment	
	.236 .873 .459 C perv/imperv/total	PROP DEVELOPMENT SOUTH OF QUAKER, EAST OF RICE - PO	NID DEO
15	ADD RUNOFF	**********	MD 130
	.049 .049 2.317 3.502 c.m/s	4 CATCHMENT	
4	CATCHMENT	52.000 ID No.ó 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 (%) 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	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt</pre>	; 4=Repeat
	<pre>1 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 1 Option 1=Trianglr: 2=Rectanglr: 3=SWM HYD	
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. F); 4=Lin. Reserv
	.452 .049 2.317 3.502 c.m/s	.236 .880 .687 C perv/imperv	r/total
	.236 .866 .772 C perv/imperv/total	15 ADD RUNOFF	,
15	ADD RUNOFF	.768 .768 4.202 4.202 c.m/s	
	.452 .494 2.317 3.502 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	.768 .768 .768 4.202 c.m/s	
	.452 .494 .494 3.502 c.m/s	17 COMBINE	
17	COMBINE	2 Junction Node No.	
	1 Junction Node No.	.768 .768 .768 c.m/s	
	.452 .494 .494 3.996 c.m/s	14 START	
14	START 1 1=Zero; 2=Define	1 1=Zero; 2=Define 4 CATCHMENT	
18	CONFLUENCE	4 CATCHMENT 53.000 ID No.6 99999	
10	1 Junction Node No.	11.340 Area in hectares	
	.452 3.996 .494 .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.6 99999	74.000 SCS Curve No or C	
-	.970 Area in hectares	74.000 SCS Curve No or C .100 Ia/S Coefficient	
-		74.000 SCS Curve No or C); 4=Lin. Reserv
-	.970 Area in hectares 80.416 Length (PERV) metres	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction); 4=Lin. Reserv
-	.970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV)	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv	
-	.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	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv	
-	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	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s	
-	.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 HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE	
-	.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	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYE 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length	
	.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 HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE	
	.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. F	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag serv .000 Beta weighting factor	
	.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 0ption 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. F .019 3.996 .494 .000 c.m/s	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag serv .000 Beta weighting factor .000 Routing timestep	
	.970 Area in hectares 80.416 Length (PERV) metres 1.000 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 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag serv .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches	
35	.970 Area in hectares 80.416 Length (PERV) metres 1.000 Per cent Impervious 80.416 Length (IMPERV) 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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag serv .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s	
	.970 Area in hectares 80.416 Length (PERV) metres 1.000 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 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag serv .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches	
	.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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Eeta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s	
35	.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. F .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 No Conduit defined .000 Sero lag .000 Esta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s	
	.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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No.	
35	.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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 1.397 1.397 .000 c.m/s	
35	.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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 1.397 1.397 .000 c.m/s	
35	.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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 Zero lag .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 JUnction Node No. 1.397 1.397 1.397 .000 c.m/s 4 CATCHMENT 54.000 ID No.6 99999	
35	.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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 Zero lag .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 JUnction Node No. 1.397 1.397 1.397 .000 c.m/s 4 CATCHMENT 54.000 ID No.6 99999	
35	.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. F .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Esta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares	
35	.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. F .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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	.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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 Zero lag .000 Zero lag serv .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMSINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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	.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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Esta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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	r/total
35 15 35	.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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 Zero lag .000 Zero lag serv .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMSINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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)	r/total
35 15 35	.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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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 Manning "n" 74.000 SCS Curve No or C	r/total
35 15 35	.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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMSINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 JUnction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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 .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient	r/total
35 15 35	.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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100	r/total
35 15 35	.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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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 .250 Manning "n" 74.000 SCS Curve No or C .100 Is/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYI	r/total
35 15 35	## 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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 JUnction Node No. 1.397 1.397 1.397 .000 c.m/s 4 CATCHMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 66.000 Per cent Impervious 92.000 Length (MPERV) .000 & Length (MPERV) .000 & Length (IMPERV) .000 & SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT .131 2.165 1.397 .000 c.m/s	r/total ; 4=Repeat ; 4=Lin. Reserv
35 15 35	## 1970 ## 2	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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 .250 Manning "n" 74.000 SCS Curve No or C .100 Is/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYI	r/total ; 4=Repeat ; 4=Lin. Reserv
35 15 35	## 1970 ## 2	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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 %IDP vib Computer Substitution (IMPERV) .000 %Imp. with Zero Dpth 1 Option l=SCS CN/C; 2=Horton; 3=Green-Ampt 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 HYT .131 2.165 1.397 .000 c.m/s	r/total ; 4=Repeat ; 4=Lin. Reserv
35 15 35	## 1.000 ##	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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 .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 HYT .131 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv	r/total ; 4=Repeat ; 4=Lin. Reserv
35 15 35	## 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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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 .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 HYT .131 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.165 1.397 .000 c.m/s	r/total ; 4=Repeat ; 4=Lin. Reserv
35 15 35	## 8.0.416	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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 .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 HYT .131 2.165 1.397 .000 c.m/s 15 ADD RUNOFF .131 2.285 1.397 .000 c.m/s 15 ADD RUNOFF .131 2.285 1.397 .000 c.m/s	r/total ; 4=Repeat ; 4=Lin. Reserv
35 15 35	## 80.416 Length (PERV) metres	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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 .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 HYT .131 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .236 .876 .620 C perv/imperv .237 HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .5982220E+04 c.m	r/total ; 4=Repeat ; 4=Lin. Reserv
35 15 35 4	## 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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 CATCHMENT 54.000 ID No.6 9999 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 .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 HYT .331 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .331 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .331 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .331 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .331 2.285 1.397 .000 c.m/s .336 .876 .620 C perv/imperv .331 2.285 1.397 .000 c.m/s .336 .876 .620 C perv/imperv .331 2.285 1.397 .000 c.m/s	r/total ; 4=Repeat ; 4=Lin. Reserv
35 15 35	## 80.416 Length (PERV) metres	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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 .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 HYT .131 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .236 .876 .620 C perv/imperv .237 HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .5982220E+04 c.m	r/total ; 4=Repeat ; 4=Lin. Reserv
35 15 35 4	## 80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth 1	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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 .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 HYT .131 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .236 .876 .620 C perv/imperv .237 HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .598220E+04 c.m 10 POND 6 Depth - Discharge - Volume sets 182.000 .000 .00	r/total ; 4=Repeat ; 4=Lin. Reserv
35 15 35 4	### 1970 ### 20	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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 .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 HYT .131 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .331 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .331 2.285 1.397 .000 c.m/s	r/total ; 4=Repeat ; 4=Lin. Reserv
35 15 35 4	## 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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 1.397 1.397 .000 c.m/s 4 CATCHMENT 54.000 ID No.6 9999 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 .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.31 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .237 HYDROGRAPH DISPLAY .238 .876 .620 C perv/imperv .239 .878 .620 C perv/imperv .230 .878 .620 C perv/imperv .231 .2255 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .237 HYDROGRAPH DISPLAY .238 .879 .000 .000 .000 .000 .000 .000 .000 .0	r/total ; 4=Repeat ; 4=Lin. Reserv
35 15 35 4	## 1970 ## 197	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 2.165 1.397 .000 c.m/s 4 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 .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 HYT .131 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv 15 ADD RUNOFF .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv 1 .311 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv 1 .311 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv 1 .311 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv 1 .311 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv 1 .311 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv 1 .311 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv 1 .311 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv 1 .311 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv 1 .331 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv 1 .331 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .331 2.285 1.397 .000 c.m/s .331 2.285 1.397 .000 c.m/s	r/total ; 4=Repeat ; 4=Lin. Reserv
35 15 35 4	## 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. F .019 3.996 .494 .000 c.m/s .236 .875 .299 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=Trianglr; 2=Rectanglr; 3=SWM HYT 1.397 .000 .768 .768 c.m/s .236 .886 .691 C perv/imperv 15 ADD RUNOFF 1.397 1.397 .768 .768 c.m/s 9 ROUTE .000 Conduit Length .000 No Conduit defined .000 Zero lag .000 Routing timestep 0 No. of sub-reaches 1.397 1.397 1.397 .768 c.m/s 17 COMBINE 2 Junction Node No. 1.397 1.397 1.397 2.165 c.m/s 18 CONFLUENCE 2 Junction Node No. 1.397 1.397 1.397 .000 c.m/s 4 CATCHMENT 54.000 ID No.6 9999 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 .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYT 1.31 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.165 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .131 2.285 1.397 .000 c.m/s .237 HYDROGRAPH DISPLAY .238 .876 .620 C perv/imperv .239 .878 .620 C perv/imperv .230 .878 .620 C perv/imperv .231 .2255 1.397 .000 c.m/s .236 .876 .620 C perv/imperv .237 HYDROGRAPH DISPLAY .238 .879 .000 .000 .000 .000 .000 .000 .000 .0	r/total ; 4=Repeat ; 4=Lin. Reserv

	Maximum Storage = 5617. c.m .131 2.285 .020	.000 c.m/s	35	COMMENT 3 line(s) of co			
17	.131 2.285 .020 COMBINE	.000 C.m/s		3 line(s) of co	Simileric		
	2 Junction Node No.			REALIGNED CHANNEL	- SEGMENT	3	
	.131 2.285 .020	.020 c.m/s		******			
14	START 1 1=Zero; 2=Define		4	CATCHMENT	00000		
35	1 1=Zero; 2=Define COMMENT			300.000 ID No.ó 3.180 Area in	hectares		
33	3 line(s) of comment				(PERV) metre	es	
	*******			.200 Gradient			
	EXISTING AREA ON QUAKER RD, EAST O	F RICE RD			t Impervious	3	
	*******			146.000 Length (
4	CATCHMENT 5.000 ID No.ó 99999				ith Zero Dpi		3=Green-Ampt; 4=Repeat
	1.870 Area in hectares			.250 Manning		Z=HOI CON;	3=Green-Ampt; 4=Repeat
	112.000 Length (PERV) metres				ve No or C		
	1.000 Gradient (%)				efficient		
	50.000 Per cent Impervious				Abstraction		
	112.000 Length (IMPERV)						lr; 3=SWM HYD; 4=Lin. Reserv
	.000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor	ton; 3=Green-Ampt; 4=Repeat		.087 4 .236	4.834 .880	.632	.000 c.m/s C perv/imperv/total
	.250 Manning "n"	con, 3-Green-Ampt, 4-Repeat	15	ADD RUNOFF	.000	.332	c perv/imperv/cocar
	74.000 SCS Curve No or C				4.921	.632	.000 c.m/s
	.100 Ia/S Coefficient		4	CATCHMENT			
	8.924 Initial Abstraction			301.000 ID No.6			
		tanglr; 3=SWM HYD; 4=Lin. Reserv			hectares		
	.153 .000 .020 .236 .873 .554	.020 c.m/s			(PERV) metre	es	
15	.236 .873 .554 ADD RUNOFF	C perv/imperv/total			t Impervious		
	.153 .153 .020	.020 c.m/s		69.000 Length (-	
9	ROUTE				ith Zero Dp	th	
	.000 Conduit Length					2=Horton;	3=Green-Ampt; 4=Repeat
	.000 No Conduit defined			.250 Manning			
	.000 Zero lag				ve No or C		
	.000 Beta weighting factor .000 Routing timestep				efficient Abstraction		
	0 No. of sub-reaches						lr; 3=SWM HYD; 4=Lin. Reserv
	.153 .153 .153	.020 c.m/s			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			4.935	.632	.000 c.m/s
18	CONFLUENCE		9	ROUTE			
	2 Junction Node No.			.000 Conduit			
25	.153 .160 .153	.000 c.m/s			it defined		
35	COMMENT 3 line(s) of comment			.000 Zero lag	g ighting fact	tor	
	**************************************				timestep	LOI	
	EXISTING AREA ON QUAKER RD, EAST O	F RICE RD			sub-reaches		
	******					4.935	.000 c.m/s
4	CATCHMENT		17	COMBINE			
	6.000 ID No.ó 99999			1 Junction Node			
	1.920 Area in hectares				4.935	1.935	4.935 c.m/s
	113.000 Length (PERV) metres		14	START			
	.200 Gradient (%)			<pre>1 1=Zero; 2=Def</pre>	fine		
	65.000 Per cent Impervious		35	1 1=Zero; 2=Def COMMENT			
	65.000 Per cent Impervious 113.000 Length (IMPERV)			<pre>1 1=Zero; 2=Def</pre>			
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth	ton; 3=Green-Ampt; 4=Repeat		1 1=Zero; 2=Def COMMENT 3 line(s) of co	omment	GMENT 3 - :	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth	ton; 3=Green-Ampt; 4=Repeat		1 1=Zero; 2=Def COMMENT 3 line(s) of co	omment	GMENT 3 - :	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor Manning "n" 74.000 SCS Curve No or C	ton; 3=Green-Ampt; 4=Repeat		1 1=Zero; 2=Def COMMENT 3 line(s) of co ************************************	omment	GMENT 3 - :	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient	ton; 3=Green-Ampt; 4=Repeat	35	1 1=Zero; 2=Def COMMENT 3 line(s) of co ************************************	omment NORTH OF SEC	GMENT 3 - :	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction		35	1 1=Zero; 2=Def COMMENT 3 line(s) of co *********** PROP DEVELOPMENT N *********** CATCHMENT 30.000 ID No.6 8.470 Area in	OMMENT NORTH OF SEC 99999 hectares		POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec	tanglr; 3=SWM HYD; 4=Lin. Reserv	35	1 1=Zero; 2=Def COMMENT 3 line(s) of co ************ PROP DEVELOPMENT N **********************************	OMMENT OF SEC 99999 hectares (PERV) metro		POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec .214 .150 .153	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s	35	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co *********** PROP DEVELOPMENT N *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient	OMMENT OF SEC 99999 hectares (PERV) metro	es	POND P30
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec .214 .150 .153	tanglr; 3=SWM HYD; 4=Lin. Reserv	35	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co *********** PROP DEVELOPMENT N *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient	Omment NORTH OF SEC 99999 hectares (PERV) metro t (%)	es	POND P30
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec .214 .150 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s	35	1 1=Zero; 2=Def COMMENT 3 line(s) of co *********** PROP DEVELOPMENT N ********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradieu .100 Per cent 238.000 Length (.000 %Imp. wi	99999 hectares (PERV) metre t (%) t Imperviour (IMPERV) tth Zero Dpi	es 3 th	
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec .214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total	35	1 1=Zero; 2=Def COMMENT 3 line(s) of co ************ PROP DEVELOPMENT N *********** CATCIMENT 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient .100 Per cent 238.000 Length (.000 %Imp. wi 1 Option 1	99999 hectares (PPEV) metro t (%) t Impervious (IMPERV) tich Zero Dpt l=SCS CN/C;	es 3 th	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=Hor .250 Manning "n 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec .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	35	1 1=Zero; 2=Def COMMENT 3 line(s) of co ************ PROP DEVELOPMENT N *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient .100 Per cent .100 Per cent .100 %Imp. wi .000 %Imp. wi .250 Manning	99999 hectares (PERV) metro t (%) t Impervious (IMPERV) th Zero Dpt L=SCS CN/C; "n"	es 3 th	
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec .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	35	1 1=Zero; 2=Def COMMENT 3 line(s) of co ************ PROP DEVELOPMENT N *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradien .100 Per cent 238.000 Length (.000 %Imp. wi 1 Option 1 .250 Manning 74.000 SCS Curv	99999 hectares (PERV) metro 1 (%) t Impervious (IMPERV) th Zero Dpt 1=SCS CN/C; "n" re No or C	es 3 th	
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor .250 Manning "n 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec .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	35	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co ************ PROP DEVELOPMENT N *********** 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient .100 Per cent 100 Per cent 238.000 Length (.000 %Imp. wi 1 Option 1 .250 Manning 74.000 SCS Curv .100 Ia/S COC	99999 hectares (PERV) metre t (%) t Impervious (IMPERV) th Zero Dpt l=SCS CN/C; "n"	es s th 2=Horton;	
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec .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	35	1 1=Zero; 2=Def COMMENT 3 line(s) of co *********** PROP DEVELOPMENT N *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient .100 Per cent .100 Per cent .100 Almp. wi 0010 Option 1 .250 Manning 74.000 SCS Curv .100 IA/S Coc 8.924 Initial	99999 hectares (PERV) metre t (%) t Impervious (IMPERV) tich Zero Dpi l=SCS CN/C; "n" ve No or C efficient Abstraction	es s th 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35	1 1=Zero; 2=Def COMMENT 3 line(s) of co *********** PROP DEVELOPMENT N *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient .100 Per cent .100 Per cent .100 Almp. wi 0010 Option 1 .250 Manning 74.000 SCS Curv .100 IA/S Coc 8.924 Initial	99999 hectares (PERV) metro to imperviour (IMPERV) tich Zero Dpi L=SCS CN/C; "n" ve No or C efficient Abstraction L=Trianglr;	es th 2=Horton; 1 2=Rectang	3=Green-Ampt; 4=Repeat
15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35	1 1=Zero; 2=Def COMMENT 3 line(s) of co ************ PROP DEVELOPMENT N *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient .100 Per cent .100 Per cent .100 Per cont .100 Length (.000 %Imp. wi 1 Option I .250 Manning 74.000 SCS Curv .100 IA/S Coc 8.924 Initial 1 Option I .057 .236	99999 hectares (PERV) metro to imperviour (IMPERV) tich Zero Dpi L=SCS CN/C; "n" ve No or C efficient Abstraction L=Trianglr;	es th 2=Horton; 1 2=Rectang 4.935	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv
15 35	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment *************** FIRST AVE FROM QUAKER RD TO CITY OF COMMENT 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	35	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co ************ PROP DEVELOPMENT N *********** 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient .100 Per cent 100 Wimp. wi 1 Option 1 .250 Manning 74.000 SCS Curv .100 Ia/S Coc 8.924 Initial 1 Option 1 .057 .236 ADD RUNOFF	999999 hectares (PERV) metre t (%) ith Zero Dpt l=SCS CN/C; "n" Abstraction =Trianglr; .000 .885	th 2=Horton; 1 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co *********** PROP DEVELOPMENT N *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient .100 Per cent .100 Per cent .100 Mimp. wi 1 Option 1 .250 Manning 74.000 SCS Curv .100 Ia/s Cos 8.924 Initial 1 Option 1 .057 .236 ADD RUNOFF .057	999999 hectares (PERV) metre t (%) ith Zero Dpt l=SCS CN/C; "n" Abstraction =Trianglr; .000 .885	es th 2=Horton; 1 2=Rectang 4.935	3=Green-Ampt; 4=Repeat lr; 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .160 .153 .236 .836 .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	35	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co ************ *********** ********** ****	omment 99999 hectares (PERV) metre t (%) t Imperviour (IMPERV) tith Zero Dpi 1=SCS CN/C; "n" ve No or C efficient Abstraction 1=Trianglr; .000 .885	th 2=Horton; 1 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co ************ PROP DEVELOPMENT N *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient .100 Per cent .100 Per cent .100 \$\text{imp. wi} 1 Option 1 .250 Manning 74.000 \$\text{CSC Unitial} 1 Option 1 .057 .236 ADD RUNOFF .057 CATCHMENT 31.000 ID No.6	omment 99999 hectares (PERV) metre t (%) t Imperviour (IMPERV) tith Zero Dpi 1=SCS CN/C; "n" ve No or C efficient Abstraction 1=Trianglr; .000 .885	th 2=Horton; 1 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment *********** FIRST AVE FROM QUAKER RD TO CITY OF CAMERICAL COMMENT 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=Hor	tanglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	35 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co ************ ********** ********** 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient .100 Per cent 100 Per cent 100 Minp. wi 1 Option 1 .250 Manning 74.000 SCS Curr .100 Ia/S Co 8.924 Initial 1 Option 1 .057 .236 ADD RUNOFF .057 CATCHMENT 31.000 ID No.6 10.420 Area in 104.000 Length (.057 CATCHMENT 31.000 ID No.6 10.420 Area in 164.400 Length (.64.900 Length (.650 Area in 164.400 Length (.661 Area in 1664.000 Length (.661 Area in 1661 Area in 166	99999 hectares (PERV) metric t (%) t Impervious (IMPERV) th Zero Dpi l=SCS CN/C; "n" ve No or C efficient Abstraction l=Trianglr; .000 .885 .057	es th 2=Horton; 1 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co ************************************	99999 hectares (PERV) metric t (%) t Impervious (IMPERV) the Zero Dpi l=SCS CN/C; "n" ve No or C efficient Abstraction l=Trianglr; .000 .885 .057 99999 hectares (PERV) metric t (%)	es s th 2=Horton; n 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co ************************************	omment 99999 hectares (PERV) metre t (%) t Imperviour (IMPERV) tith Zero Dpi L=SCS CN/C; "n" ve No or C efficient Abstraction L=Trianglr; .000 .885 .057 99999 hectares (PERV) metre t (%)	es s th 2=Horton; n 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************* FIRST AVE FROM QUAKER RD TO CITY OF COMMENT 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=Hor250 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	35 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co ************ ********** ********** 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient .100 Per cent 238.000 Length (.000 %Imp. wi 1 Option 1 .250 Manning 74.000 SCS Curv .100 IZ/SC Manning 74.000 SCS Curv .100 IZ/SC Manning 74.000 SCS Curv .100 IZ/SC Manning 74.000 Area in 1 Option 1 .057 .236 ADD RUNOFF .057 CATCHMENT 31.000 ID No.6 10.420 Area in 1264.000 Length (1.000 Gradient 75.000 Per cent	99999 hectares (PERV) metric t (%) t Impervious (IMPERV) bith Zero Dpi l=SCS CN/C; "n" ve No or C sefficient Abstraction l=Trianglr; .000 .885 .057 99999 hectares (PERV) metric t (%) t Impervious	es th 2=Horton; 1 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co ************ PROP DEVELOPMENT N *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length (.000 %Imp. wi .100 Per cent 1.000 E.051 Manning 74.000 SCS Curv .100 Ids/SCO Curv .100 ID No.6 8.924 Initial 1 Option I .057 .236 ADD RUNOFF .057 CATCHMENT 31.000 ID No.6 10.420 Area in 264.000 Length (1.000 Gradient 75.000 Per cent 264.000 Length (75.000 Per cent 264.000 Length (.000 %Imp. wi	omment 99999 hectares (PERV) metre t (%) t Impervious (IMPERV) tith Zero Dpi L=SCS CN/C; "n" Ve No or C efficient Abstraction L=Trianglr; .000 .885 .057 99999 hectares (PERV) metre t (%) t Impervious t (IMPERV) t Impervious	es th 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 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment *************** FIRST AVE FROM QUAKER RD TO CITY OF COMMENT 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 0 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec.	<pre>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</pre>	35 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of CC *********************************	99999 hectares (PERV) metre t (%) t Imperviour (IMPERV) tith Zero Dpi L=SCS CN/C; "n" ve No or C efficient Abstraction .885 .057 .057 .09999 hectares (PERV) metre t (%) t Imperviour (IMPERV) th Zero Dpi L=SCS CN/C;	es th 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co ************ PROP DEVELOPMENT N *********** CATCHMENT 30.000 ID No.6 8.470 Area in 238.000 Length (.200 Gradient .100 Per cent .100 Per cent 100 Mimp. wi 1 Option 1 .250 Manning 74.000 SCS Curv .100 IZ/S COS 8.924 Initial 1 Option 1 .057 .236 ADD RUNOFF .057 CATCHMENT 31.000 ID No.6 10.420 Area in 264.000 Length (.1000 Gradient 75.000 Per cent 1.000 Gradient 75.000 Per cent 264.000 Length (.000 %Imp. wi 1 Option 1 .250 Manning	99999 hectares (PERV) metre t (%) t Imperviour (IMPERV) tith Zero Dpi L=SCS CN/C; "n" ve No or C efficient Abstraction .885 .057 .057 .09999 hectares (PERV) metre t (%) t Imperviour (IMPERV) th Zero Dpi L=SCS CN/C;	es th 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 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of co ************* *********** **********	99999 hectares (PERV) metric t (%) t Impervious Impervious less CN/C; "n" ve No or C efficient Abstraction L=Trianglr; .000 .885 .057 99999 hectares (PERV) metric t (%) t Impervious (IMPERV) ith Zero Dpi L=SCS CN/C; "n"	es th 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 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35 4	1 1=Zero; 2=Def COMMENT S 1 line(s) of commen	omment 99999 hectares (PERV) metr. t. (%) t Impervious (IMPERV) tith Zero Dpi l=SCS CN/C; "n" Ve No or C efficient Abstraction L=Trianglr; .000 .885 .057 99999 hectares (PERV) metr. t. (%) t Impervious (IMPERV) tith Zero Dpi l=SCS CN/C; "n" Ve No or C efficient Abstraction Abstraction	es th 2=Horton; 2=Rectang 4.935 .236 4.935 es th 2=Horton;	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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of CC *********************************	99999 hectares (PERV) metre t (%) t Imperviour (IMPERV) tith Zero Dpi L=SCS CN/C; "n" ve No or C efficient Abstraction L=Trianglr; .000 .057 99999 hectares (PERV) metre t (%) int Zero Dpi L=SCS CN/C; "n" ve No or C efficient Abstraction L=Trianglr; .000 .057 .057 .057 .057 .057 .057 .057	es th 2=Horton; 2=Rectang 4.935 .236 4.935 es th 2=Horton;	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
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of CC *********************************	99999 hectares (PERV) metric t (%) t Impervious (IMPERV) test S CN/C; "n" ve No or C efficient Abstraction =Trianglr; .000 .885 .057 99999 hectares (PPRV) metric t (%) t Impervious it	as th 2=Horton; 1 2=Rectang 4.935 .236 4.935 as th 2=Horton; 1 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 lr; 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35 4 15 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of CC *********************************	99999 hectares (PERV) metre t (%) t Imperviour (IMPERV) tith Zero Dpi L=SCS CN/C; "n" ve No or C efficient Abstraction L=Trianglr; .000 .057 99999 hectares (PERV) metre t (%) int Zero Dpi L=SCS CN/C; "n" ve No or C efficient Abstraction L=Trianglr; .000 .057 .057 .057 .057 .057 .057 .057	as th 2=Horton; 1 2=Rectang 4.935 .236 4.935 as th 2=Horton; 1 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 lr; 3=SWM HYD; 4=Lin. Reserv
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************ FIRST AVE FROM QUAKER RD TO CITY O. ************ 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=Trianglr; 2=Rec259 .374 .153 .236 .868 .647 ADD RUNOFF .259 .632 .153 ROUTE .000 Conduit Length .000 Conduit Length .000 Conduit Length .000 Conduit defined .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	35 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of CC *********************************	99999 hectares (PERV) metric t (%) t Impervious (IMPERV) bith Zero Dpi =SCS CN/C; "n" ve No or C efficient Abstraction =Trianglr; 000 .885 .057 .057 .057 .070 .0886	as th 2=Horton; a 2=Rectang 4.935 .236 4.935 as th 2=Horton; a 2=Rectang 4.935 .723	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
15 35 4	65.000 Per cent Impervious 113.000 Length (Imperv) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	35 4 15 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of CC *********************************	omment 99999 hectares (PERV) metric t (%) t Impervious (IMPERV) tith Zero Dpi l=SCS CN/C; "n" ve No or C efficient Abstraction l=Trianglr; 0.000 .885 .057 99999 hectares (PERV) metric t (%) t Impervious (IMPERV) tith Zero Dpi l=SCS CN/C; "n" ve No or C efficient Abstraction l=Trianglr; .057 .886	as th 2=Horton; 1 2=Rectang 4.935 .236 4.935 as th 2=Horton; 1 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 lr; 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************ FIRST AVE FROM QUAKER RD TO CITY O. ************ 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=Trianglr; 2=Rec259 .374 .153 .236 .868 .647 ADD RUNOFF .259 .632 .153 ROUTE .000 Conduit Length .000 Conduit Length .000 Conduit Length .000 Conduit defined .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	35 4 15 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of CC *********************************	omment 99999 hectares (PERV) metre t (%) t Impervious (IMPERV) tith Zero Dpi L=SCS CN/C; "n" "e No or C efficient Abstraction L=Trianglr; .000 .057 99999 hectares (PERV) metre t (%) t Impervious (IMPERV) tith Zero Dpi L=SCS CN/C; "n" c (%) t Impervious (IMPERV) tith Zero Dpi L=SCS CN/C; "n" the Zero Dpi L=SCS CN/C; "n" 886 1.341	2=Rectang 4.935 .236 4.935 .236 4.935 .2=Horton; 12=Rectang 4.935 .723	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
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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=Def COMMENT 3 1ine(s) of CC *********************************	omment 99999 hectares (PERV) metric t (%) t Impervious (IMPERV) test Sc CN/C; "n" ve No or C efficient Abstraction =Trianglr; .000 .885 .057 99999 hectares (PPRV) metric t (%) t Impervious (IMPERV) ith Zero Dpi =SCS CN/C; "n" ve No or C efficient Abstraction =Trianglr; .000 .3885 .057 .3886 .341 ty (7) (Hydrograp)	2=Rectang 4.935 .236 4.935 .236 4.935 .2=Horton; 12=Rectang 4.935 .723	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
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .160 .153 .236 .886 .658 ADD RUNOFF .214 .374 .153 COMMENT 3 line(s) of comment ************ FIRST AVE FROM QUAKER RD TO CITY O. ************ 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 1 Option 1=Trianglr; 2=Rec259 .374 .153 .236 .868 .647 ADD RUNOFF .259 .632 .153 ROUTE .000 Conduit Length .000 No Conduit defined .000 Sero lag .000 Beta weighting factor ROUTED No. of sub-reaches .299 .632 .632 COMBINE	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	35 4 15 4	1 1=Zero; 2=Def COMMENT 3 1ine(s) of CC *********************************	omment 99999 hectares (PERV) metric t (%) t Impervious (IMPERV) lesCS CN/C; "n" we No or C efficient Abstraction 1=Trianglr; 000 .885 .057 99999 hectares (PERV) metric t (%) t Impervious (IMPERV) th Zero Dpi 1=SCS CN/C; "n" re No or C efficient Abstraction t Sefficient t Sefficient Abstraction t Sefficient t Se	2=Rectang 4.935 .236 4.935 .236 4.935 .2=Horton; 12=Rectang 4.935 .723	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
15 35 4	65.000 Per cent Impervious 113.000 Length (Imperv) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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=Def COMMENT 3 1ine(s) of CC *********************************	omment 99999 hectares (PERV) metric t (%) t Impervious (IMPERV) tith Zero Dpi l=SCS CN/C; "n" ve No or C efficient Abstraction l=Trianglr; .000 .885 .057 99999 hectares (PERV) metric t (%) t Impervious (IMPERV) tith Zero Dpi l=SCS CN/C; "n" ve No or C efficient Abstraction l=Trianglr; .057 .886 1.341 y O/Hydrograpl 07E+04 c.m 99999	2=Rectang 4.935 .236 4.935 .236 4.935 .2=Horton; 12=Rectang 4.935 .723	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
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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=Def COMMENT 3 1ine(s) of CC *********************************	omment 99999 hectares (PERV) metre t (%) t Impervious (IMPERV) tith Zero Dpi l=SCS CN/C; "n" re No or C efficient Abstraction L=Trianglr; .000 .885 .057 .99999 hectares (PERV) metre t (%) t Impervious (IMPERV) tith Zero Dpi l=SCS CN/C; "n" re No or C efficient Abstraction L=Trianglr; .057 .057 .057 .057 .057 .057 .057 .057	es th 2=Horton; 1 2=Rectang 4.935 .236 4.935 th 2=Horton; 1 2=Rectang 4.935 .723 4.935 .723	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
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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=Def COMMENT 3 line(s) of CC *********************************	omment 99999 hectares (PERV) metric t (%) t Impervious (IMPERV) th Zero Dpi l=SCS CN/C; "n" ve No or C efficient Abstraction l=Trianglr; .000 .885 .057 99999 hectares (PPRV) metric t (%) t Impervious t Imperviou	es th 2=Horton; 1 2=Rectang 4.935 .236 4.935 th 2=Horton; 1 2=Rectang 4.935 .723 4.935 .723	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
15 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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=Def COMMENT 3 line(s) of contents 1 line(s) li	omment 99999 hectares (PERV) metric t (%) t Impervious (IMPERV) tith Zero Dpi L=SCS CN/C; "n" Ve No or C efficient Abstraction L=Trianglr; .000 .885 .057 99999 hectares (PERV) metric t (%) t Impervious (IMPERV) tith Zero Dpi L=SCS CN/C; "n" Ve No or C efficient Abstraction L=Trianglr; .057 .057 .886 i.341 fo O/Hydrograpl O/TE+04 c.m 99999 hectares (PERV) metric t (%)	es th 2=Horton; 12=Rectang 4.935 .236 4.935 th 2=Horton; 12=Rectang 4.935 .723 4.935 .723 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 lr; 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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 1=Zero; 2=Def COMMENT 3 1ine(s) of CC *********************************	99999 hectares (PERV) metric t (%) t Impervious (IMPERV) bith Zero Dpi l=SCS CN/C; "n" ve No or C afficient Abstraction l=Trianglr; 000 .885 .057 .057 .000 .885 .057 .057 .057 .057 .086 .057 .086 .057 .099999 hectares (PERV) metric t (%) t Impervious L=SCS CN/C; "n" ve No or C afficient Abstraction L=SCS CN/C; "n" ve No or C afficient Abstraction L=SCS CN/C; "n" ve No or C afficient Abstraction L=SCS CN/C; "n" ve No or C afficient Abstraction L=SCS CN/C; "n" ve No or C afficient Abstraction L=Trianglr; 0/Hydrograpl 0/Te+04 c.m 99999 hectares (PERV) metric t (%) L=Trianglr; L=	es th 2=Horton; 12=Rectang 4.935 .236 4.935 th 2=Horton; 12=Rectang 4.935 .723 4.935 .723 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 lr; 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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 1=Zero; 2=Def COMMENT 3 1ine(s) of CC *********************************	omment 99999 hectares (PERV) metric (%) t Impervious (IMPERV) tith Zero Dpi =SCS CN/C; "n" ve No or C efficient Abstraction =Trianglr; .000 .885 .057 99999 hectares (PERV) metric t (%) tith Zero Dpi =SCS CN/C; "n" ve No or C efficient Abstraction =Trianglr; .057 .886 1.341 f O/Hydrograpl 07E+04 c.m 99999 hectares (PERV) metric t (%) tith Zero Dpi =Trianglr; .057 .886 1.341 f O/Hydrograpl 07E+04 c.m	as signature of the control of the c	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
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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	99999 hectares (PERV) metric t (%) ith Zero Dpi l=SCS CN/C; "n" ve No or C efficient Abstraction l=Trianglr; .000 .885 .057 99999 hectares (PERV) metric t (%) ith Zero Dpi l=Trianglr; .000 .886 .057 99999 hectares (PERV) metric t (%) ith Zero Dpi l=SCS CN/C; "n" ve No or C efficient Abstraction l=SCS CN/C; "n" ve No or C efficien	as th 2=Horton; 1 2=Rectang 4.935 .236 4.935 4.935 2=Horton; 1 2=Rectang 4.935 .723 4.935 .723 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 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=Hor250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rec214 .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	omment 99999 hectares (PERV) metric t (%) t Impervious (IMPERV) th Zero Dpi l=SCS CN/C; "n" ve No or C efficient Abstraction l=Trianglr; .000 .885 .057 99999 hectares (PPRV) metric t (%) t Impervious (IMPERV) t Sero or C efficient Abstraction l=Trianglr; .000 .885 .057 99999 hectares (PPRV) metric t (%) t Impervious (IMPERV) th Zero Dpi l=Trianglr; .057 .886 1.341 t//Hydrograpl)7E+04 c.m 99999 hectares (PERV) metric t (%) t Impervious (IMPERV) th Zero Dpi l=SCS CN/C; t Impervious (IMPERV) th Zero Dpi l=SCS CN/C;	as th 2=Horton; 1 2=Rectang 4.935 .236 4.935 4.935 2=Horton; 1 2=Rectang 4.935 .723 4.935 .723 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 lr; 3=SWM HYD; 4=Lin. Reserv 4.935 c.m/s C perv/imperv/total

```
.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	Length (. 65		
	3 lin	e(s) of comment	******		1.000	Gradient				
	10 2522		*******		10.000 82.000		Imperviou	ıs		
		STORM EVENT	*******		.000	Length (th Zero Dr	n+h		
2	STORM				1				; 3=Green-Ampt;	4=Penest
-	1	1=Chicago:2=Huff:3=Nse	er;4=Cdn1hr;5=Historic		.250	Manning		, z-Horton	, 3-Green-Ampc,	1-Kepeac
	860.000	Coefficient a	51 / 1 - Cultur / 5 - 111 5 CO 1 1 C		74.000		e No or C			
	6.500	Constant b (min)			.100	Ia/S Coe				
	.763	Exponent c			8.924	Initial .	Abstractio	on		
	.450	Fraction to peak r			1	Option 1	=Trianglr;	; 2=Rectan	glr; 3=SWM HYD;	4=Lin. Reserv
	240.000	Duration ó 240 min						1.290	1.290 c.m/s	
		51.471 mm Total dep	pth				.886	.329	C perv/imperv/	total
3	IMPERVIO			15	ADD RUNC					
	1		Horton; 3=Green-Ampt; 4=Repeat	10	POND	.024	.555	1.290	1.290 c.m/s	
	.015	Manning "n" SCS Curve No or C		10		Diashansa	Tro lumo			
	98.000 .100	Ia/S Coefficient			184.800	Discharge		.0		
	.518	Initial Abstraction			185.750	.021		1.0		
35	COMMENT	Initial Abstraction			186.000	.023		03.0		
		e(s) of comment			186.250	.026		91.0		
	******	*****			186.500	.028	0 176	65.0		
	EXISTING	RES. WEST OF SEGMENT 1			186.700	1.24	4 237	70.0		
	******	******			Peak Out	:flow =	.026	c.m/s		
4	CATCHMEN				Maximum					
	1.000	ID No.6 99999				Storage =	1229.			
	17.520	Area in hectares		17		.024	.555	.026	1.290 c.m/s	
	343.000 1.000	Length (PERV) metres		17	COMBINE 1 Jun	nction Node	**-			
	35.000	Gradient (%) Per cent Impervious					.555	.026	1.313 c.m/s	
	343.000	Length (IMPERV)		14	START	.024	• 555	.020	1.313 C.M/S	
	.000	%Imp. with Zero Dpth				Zero; 2=Def	ine			
	1		Horton; 3=Green-Ampt; 4=Repeat	18	CONFLUEN					
	.250	Manning "n"			1 Jun	nction Node	No.			
	74.000	SCS Curve No or C				.024 1	.313	.026	.000 c.m/s	
	.100	Ia/S Coefficient		35	COMMENT					
	8.924	Initial Abstraction				ne(s) of co	mment			
	1		Rectanglr; 3=SWM HYD; 4=Lin. Reserv			******				
		227 .000 .00				ED CHANNEL	- SEGMENT	1		
		267 .892 .48	86 C perv/imperv/total	_		*******				
15	ADD RUNO			4	CATCHMEN					
2.5	1.	227 1.227 .00	00 .000 c.m/s		101.000	ID No.6				
35	COMMENT 3 lin	e(s) of comment			.610 64.000	Area in	nectares PERV) metr	rod		
		******			1.000	Gradient		Les		
	REALTGNE	CHANNEL - SEGMENT 1			10.000		Imperviou	18		
		*****			64.000	Length (
4	CATCHMEN	r			.000		th Zero Dr	oth		
	100.000	ID No.ó 99999			1				; 3=Green-Ampt;	4=Repeat
	2.020	Area in hectares			.250	Manning	"n"			
	116.000	Length (PERV) metres			74.000	SCS Curv	e No or C			
	.400	Gradient (%)			.100	Ia/S Coe				
	15.000	Per cent Impervious			8.924		Abstractio			
	116.000	Length (IMPERV)			1				glr; 3=SWM HYD;	4=Lin. Reserv
	.000	%Imp. with Zero Dpth					.313	.026	.000 c.m/s	
	1		Horton; 3=Green-Ampt; 4=Repeat	15	ADD RUNC		.884	.328	C perv/imperv/	total
	.250 74.000	Manning "n" SCS Curve No or C		15			.329	.026	.000 c.m/s	
	.100	Ia/S Coefficient		9	ROUTE	.010 1	. 323	.020	.000 C.M/S	
	8.924	Initial Abstraction		•	.000	Conduit	Length			
	1		Rectanglr; 3=SWM HYD; 4=Lin. Reserv	,	.000		it defined	1		
		063 1.227 .00			.000	Zero lag				
		267 .883 .3!	59 C perv/imperv/total		.000	Beta wei	ghting fac	ctor		
35	COMMENT				.000	Routing	timestep			
		e(s) of comment			0	No. of s	ub-reaches	3		
		******				.016 1	.329	1.329	.000 c.m/s	
		FUT ROADWAY CULVERT - SI	EGMENT 1	17	COMBINE					
		******				nction Node	No.			
15	ADD RUNO									
_		?F				.016 1	.329	1.329	1.329 c.m/s	
9			00 .000 c.m/s	14	START			1.329	1.329 c.m/s	
	ROUTE	FF 063 1.290 .00	00 .000 c.m/s		START 1 1=Z	.016 1 Zero; 2=Def		1.329	1.329 c.m/s	
	ROUTE .000	FF 163 1.290 .00 Conduit Length	00 .000 c.m/s	14 35	START 1 1=Z COMMENT	Zero; 2=Def	ine	1.329	1.329 c.m/s	
	ROUTE .000 .000	FF 163 1.290 .00 Conduit Length No Conduit defined	00 .000 c.m/s		START 1 1=Z COMMENT		ine	1.329	1.329 c.m/s	
	ROUTE .000	Conduit Length No Conduit defined Zero lag			START 1 1=Z COMMENT 3 lin *******	Zero; 2=Def	ine			
	ROUTE .000 .000	FF 163 1.290 .00 Conduit Length No Conduit defined			START 1 1=Z COMMENT 3 lin ******** PROP DEV	Zero; 2=Def	ine			
	ROUTE .000 .000 .000 .000 .000	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches			START 1 1=Z COMMENT 3 lin ******** PROP DEV ******** CATCHMEN	Zero; 2=Def ne(s) of co ********** /ELOPMENT S **********	ine mment OUTH OF SE			
	ROUTE .000 .000 .000 .000 .000	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep		35	START 1 1=Z COMMENT 3 1in ********* PROP DEV ******** CATCHMEN 12.000	Zero; 2=Def ne(s) of co ******** /ELOPMENT S ******** NT ID No.6	ine mment OUTH OF SE			
17	ROUTE .000 .000 .000 .000 .000 .000	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.25		35	START 1 1=2 COMMENT 3 lin ******** PROP DEV ******** CATCHMEN 12.000 2.680	Zero; 2=Def ne(s) of co ******** ******** TID No.ó Area in :	ine mment OUTH OF SE 99999 hectares	EGMENT 1 -		
17	ROUTE .000 .000 .000 .000 .000 0 .000 0	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 ction Node No.	90 .000 c.m/s	35	START 1 1=Z COMMENT 3 lin ******** PROP DEV ******** CATCHMEN 12.000 2.680 134.000	Zero; 2=Def ne(s) of co ******** VELOPMENT S ******** NT ID No.6 Area in : Length (:	ine mment OUTH OF SE 99999 hectares PERV) metr	EGMENT 1 -		
	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.25	90 .000 c.m/s	35	START 1 1=Z COMMENT 3 lin ********* PROP DEV ********** CATCHMEN 12.000 2.680 134.000 1.000	Zero; 2=Def ne(s) of co ******** ****** ****** **** **** ***	ine mment OUTH OF SE 99999 hectares PERV) metr (%)	EGMENT 1 -		
17	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 ction Node No. 1.290 1.29	90 .000 c.m/s	35	START 1 1=Z COMMENT 3 lin ********* PROP DEV ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000	Zero; 2=Def	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou	EGMENT 1 -		
14	ROUTE	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 ction Node No.	90 .000 c.m/s	35	START 1 1=Z COMMENT 3 lin ********* PROP DEV ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000	Zero; 2=Def ne(s) of co ***********************************	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Impervious IMPERV)	EGMENT 1 - res 18		
	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 ction Node No. 1.290 1.29	90 .000 c.m/s	35	START 1 1=Z COMMENT 3 lin ********* PROP DEV ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000	Zero; 2=Def ne(s) of co ********** ********* ********* ****	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr	EGMENT 1 - ces us		4=Repeat
14	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.25 ction Node No. 1.290 1.25 cro; 2=Define	90 .000 c.m/s	35	START 1 1=Z COMMENT 3 1in ************************************	Zero; 2=Def ne(s) of co ********* ********* ********* *****	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C;	EGMENT 1 - ces us	POND P11	4=Repeat
14	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 ction Node No. 1.290 1.29 ction Sub-reaches 1.290 1.29 ction Sub-reaches 1.290 1.29 ction Sub-reaches 1.290 1.29 ction Sub-reaches	90 .000 c.m/s 90 1.290 c.m/s	35	TART 1 1=2 COMMENT 3 1in ********** PROP DEV ********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000	Zero; 2=Def ne(s) of co ********* VELOPMENT S ********** ********* ********* ****	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C;	EGMENT 1 - ces us	POND P11	4=Repeat
14	ROUTE	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 2tion Node No. 1.290 2tion Node No. 2cro; 2=Define 2(s) of comment ************************************	90 .000 c.m/s 90 1.290 c.m/s	35	START 1 1=Z COMMENT 3 1in ********** PROP DEV *********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 1000 1 1.250	Zero; 2=Def ne(s) of co ********* VELOPMENT S ********** ********* ********* ****	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C	EGMENT 1 - ces us	POND P11	4=Repeat
14	COMBINE 1 Jun. START 1 1=2. COMMENT 3 lin. ********** PROP DEV. ***********************************	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 ction Node No. 1.290 1.29 cro; 2=Define 2(s) of comment ************************************	90 .000 c.m/s 90 1.290 c.m/s	35	START 1 1-2 COMMENT 3 11m *********************************	Mero; 2=Def me(s) of co ********** ********** ********* ****	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic	esses the grant on	POND P11 ; 3=Green-Ampt;	-
14 35	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 ction Node No. 1.290 2.20 ction Signature 2.20 ction Node No. 2.30 ction Node No. 2.30 ction Node No. 3.290 3.290 .290 3.200 3.200	90 .000 c.m/s 90 1.290 c.m/s	35	TART 1 1=2 COMMENT 3 1in ********** PROP DEV *********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 11 .250 74.000 .100 8.924 1	Zero; 2=Def me(s) of co ********* FLOPMENT S ********* ID No.6 Area in length (Gradient Per cent Length (%Imp. wi Option 1 Manning SCS Curv. Ia/S Coe Initial Option 1	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic =Trianglr;	res us pth ; 2=Horton on ; 2=Rectan	POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD;	-
14 35	COMBINE 1 Jun START 1 1=Z. COMMENT 3 1113 ******************************	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 2tion Node No. 1.290 1.29 2tion Node No. 2co jero; 2=Define 2(s) of comment ************************************	90 .000 c.m/s 90 1.290 c.m/s	35	START 1 1=2 COMMENT 3 1in ************************************	Zero; 2=Def me(s) of co ********* VELOPMENT S ********* ******** ******* *******	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero DF =SCS CN/C; "n" e No or C fficient Abstractic =Trianglr; .000	res us pth pth pres 2=Horton 1.329	POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s	4=Lin. Reserv
14 35	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 ction Node No. 1	90 .000 c.m/s 90 1.290 c.m/s	35 4	START 1 1=Z COMMENT 3 1in ************************************	Zero; 2=Def me(s) of co ********* ********** ********** ****	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic =Trianglr;	res us pth ; 2=Horton on ; 2=Rectan	POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD;	4=Lin. Reserv
14 35	COMBINE 1 Jun. START 1 1=Z. COMMENT 3 lin. ************************************	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 ction Node No. 1.290 1.29 ction Node No. 2=Define 2(s) of comment ************************************	90 .000 c.m/s 90 1.290 c.m/s	35	TART 1 1=2 COMMENT 3 1in ************************************	Zero; 2=Def me(s) of co ********** ********* ******** *****	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic =Trianglr; .000 .880	res us pth ; 2=Horton on ; 2=Rectan 1.329 .481	FOND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	COMBINE 1 Jun. START 1 1=2. COMMENT 3 Lin. ***********************************	Conduit Length No Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 ction Node No. 63 1.290 1.29 cro; 2=Define 2(s) of comment ************************************	90 .000 c.m/s 90 1.290 c.m/s	35 4	START 1 1=Z COMMENT 3 1in ********* PROP DEV ********* CATCHMEN 12.000 2.680 134.000 15.000 10.000 1 .250 74.000 .100 8.924 1 ADD RUNC	Mero; 2=Def me(s) of co ********** ********** ********** ****	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic =Trianglr; .000 .880	res us pth pth pres 2=Horton 1.329	POND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s	4=Lin. Reserv
14 35	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 Stion Node No. 1.290 20 Strory 2=Define 20 20 20 20 20 20 20 20 20 20 20 20 20	90 .000 c.m/s 90 1.290 c.m/s	35 4	TART 1 1=2 COMMENT 3 1in ************************************	Zero; 2=Def me(s) of co ********** ********** ********** ****	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic =Trianglr; .000 .880	res us pth ; 2=Horton on ; 2=Rectan 1.329 .481	FOND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	ROUTE	Conduit Length No Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 Action Node No. 1.290 1.29 Action Node No. 1.290 1.29 Action North OF SEGMEN ***********************************	90 .000 c.m/s 90 1.290 c.m/s NT 1 - POND P10	35 4	TART 1 1=2 COMMENT 3 1in ********* PROP DEV ********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 14.000 .100 8.924 1 .ADD RUNC CATCHMEN 13.000	Zero; 2=Def me(s) of co ********* VELOPMENT S ********* ******* ****** ****** ****	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dg "n" e No or C fficient Abstractic =Trianglr; .000 .880 .178	res us pth ; 2=Horton on ; 2=Rectan 1.329 .481	FOND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 ction Node No. 1.290 1.29	90 .000 c.m/s 90 1.290 c.m/s	35 4	TART 1 1=Z COMMENT 3 1in ************************************	Zero; 2=Def me(s) of co ********** *********** **********	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractia =Trianglr; .000 .178 99999 hectares	res us pth ; 2=Horton on ; 2=Rectan 1.329 .481	FOND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	ROUTE	Conduit Length No Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 Action Node No. 1.290 1.29 Action Node No. 1.290 1.29 Action North OF SEGMEN ***********************************	90 .000 c.m/s 90 1.290 c.m/s NT 1 - POND P10	35 4	TART 1 1=2 COMMENT 3 1in ********* PROP DEV ********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 14.000 .100 8.924 1 .ADD RUNC CATCHMEN 13.000	Zero; 2=Def me(s) of co ********** *********** **********	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic -ETilanglr; .000 .880 .178 99999 hectares PERV) metr	res us pth ; 2=Horton on ; 2=Rectan 1.329 .481	FOND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 Stion Node No. 1.290 1.29 Stroin Pode No. 1.290 1.29 Pero; 2=Define 1.290 1.2	90 .000 c.m/s 90 1.290 c.m/s NT 1 - POND P10	35 4	TART 1 1=2 COMMENT 3 1in ************************************	Mero; 2=Def me(s) of co ***********************************	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic =Trianglr; .000 .880 .178 99999 hectares PERV) metr (%)	res us oth cy 2=Horton 1.329 .481 1.329	FOND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	COMBINE 1 Jun. START 1 1=2. COMMENT 3 lin. ***********************************	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 Stion Node No. 63 1.290 1.29 Strop 2-Define 2(s) of comment ************************************	90 .000 c.m/s 90 1.290 c.m/s NT 1 - POND P10	35 4	START 1 1=Z COMMENT 3 1in ********* PROP DEV ********* CATCHMEN 12.000 2.680 134.000 35.000 114.000 .000 1 .250 74.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000 6.980 216.000 1.000	Mero; 2=Def me(s) of co ***********************************	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic =Trianglr; .000 .178 99999 hectares PERV) metr (%) Imperviou Imperviou	res us oth cy 2=Horton 1.329 .481 1.329	FOND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	ROUTE	Conduit Length No Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 Action Node No. 1.290 1.29 Action Node No. 1.290 1.29 Action North OF SEGMEN ***********************************	90 .000 c.m/s 90 1.290 c.m/s NT 1 - POND P10	35 4 15 4	TART 1 1=Z COMMENT 3 1in ************************************	Zero; 2=Def me(s) of co ********** ********** ********** ****	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic =Trianglr; .000 .178 99999 hectares PERV) metr (%) Imperviou Imperviou	res is pth ; 2=Horton on 1.329 .481 1.329	FOND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	ROUTE	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 Stion Node No. 1.290 1.29 Stroin Node No. 20 Stroin Stroin Node No. 20	90 .000 c.m/s 90 1.290 c.m/s NT 1 - POND P10 Horton; 3=Green-Ampt; 4=Repeat Rectanglr; 3=SWM HYD; 4=Lin. Reserv 90 1.290 c.m/s	35 4 15 4	TART 1 1=2 COMMENT 3 1in ********** PROP DEV *********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000 6.980 216.000 1.000 216.000 000 1	Zero; 2=Def me(s) of co ********* /ELOPMENT S ********* ID No.6 Area in length (%Imp. wi Option 1 Manning SCS Curv. Ia/S Coe Initial option 1 178 ID No.6 Area in length (Gradient Length (%Imp. wi Option 1	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic -ETrianglr; .000 .880 .178 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C;	res us pth ; 2=Horton on ; 2=Rectan 1.329 .481 1.329 res	FOND P11 ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s C perv/imperv/	4=Lin. Reserv
14 35 4	ROUTE .000 .000 .000 .000 .000 .000 .000 .0	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 ction Node No. 163 1.290 1.29 ction Node No. 105 106 107 108 108 108 108 108 108 108 108 108 108	90 .000 c.m/s 90 1.290 c.m/s NT 1 - POND P10 Horton; 3=Green-Ampt; 4=Repeat Rectanglr; 3=SWM HYD; 4=Lin. Reserv 90 1.290 c.m/s	35 4 15 4	START 1 1=Z COMMENT 3 1in ************************************	Mero; 2=Def me(s) of co ***********************************	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic =Trianglr; .000 .880 .178 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n"	res us pth ; 2=Horton on ; 2=Rectan 1.329 .481 1.329 res	pond pll ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s C perv/imperv/ 1.329 c.m/s	4=Lin. Reserv
14 35	ROUTE	Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 ction Node No. 1.290 1.291 1	90 .000 c.m/s 90 1.290 c.m/s NT 1 - POND P10 Horton; 3=Green-Ampt; 4=Repeat Rectanglr; 3=SWM HYD; 4=Lin. Reserv 90 1.290 c.m/s 95 C perv/imperv/total	35 4 15 4	TART 1 1=Z COMMENT 3 1in ************************************	Zero; 2=Def me(s) of co ********** ********** ********** ****	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic =Trianglr; .000 .178 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" =SCS CN/C;	res us pth ; 2=Horton on ; 2=Rectan 1.329 .481 1.329 res	pond pll ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s C perv/imperv/ 1.329 c.m/s	4=Lin. Reserv
14 35 4	ROUTE	Conduit Length No Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 Stion Node No. 1.290 1.29 Stro; 2=Define (s) of comment ***********************************	90 .000 c.m/s 90 1.290 c.m/s NT 1 - POND P10 Horton; 3=Green-Ampt; 4=Repeat Rectanglr; 3=SWM HYD; 4=Lin. Reserv 90 1.290 c.m/s 95 C perv/imperv/total	35 4 15 4	TART 1 1=2 COMMENT 3 1in ************************************	Zero; 2=Def me(s) of co ********** ID No.6 Area in ilength (Gradient Per cent Length (%Imp. wi option 1 Manning SCS Curv. Id/S Coe Initial . Option 1 178 ID No.6 Area in ilength (Gradient Length (Gradient Length (Gradient Per cent Length (%Imp. wi option 1 Manning SCS Curv. Id/S Coe SC Curv. Id/S Coe SC Curv. Id/S Coe SC Curv. Id/S Coe SC Curv. Id/S Coe	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic -Trianglr; .000 .880 .178 9999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient	res us pth ; 2=Horton 1.329 .481 1.329 res us pth ; 2=Horton	pond pll ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s C perv/imperv/ 1.329 c.m/s	4=Lin. Reserv
14 35 4	ROUTE	Conduit Length No Conduit Length No Conduit defined Zero lag Beta weighting factor Routing timestep No. of sub-reaches 1.290 1.29 Stion Node No. 1.290 1.29 Stro; 2=Define (s) of comment ***********************************	90 .000 c.m/s 90 1.290 c.m/s NT 1 - POND P10 Horton; 3=Green-Ampt; 4=Repeat Rectanglr; 3=SWM HYD; 4=Lin. Reserv 90 1.290 c.m/s 95 C perv/imperv/total	35 4 15 4	TART 1 1=Z COMMENT 3 1in ************************************	Zero; 2=Def me(s) of co ********** *********** ID No.6 Area in: Length (Gradient Per cent Length (\$\text{Tmp.}\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ine mment OUTH OF SE 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic =Trianglr; .000 .880 .178 99999 hectares PERV) metr (%) Imperviou IMPERV) th Zero Dr =SCS CN/C; "n" e No or C fficient Abstractic Abstractic	res us pth ; 2=Horton 1.329 .481 1.329 res us pth ; 2=Horton	pond pll ; 3=Green-Ampt; glr; 3=SWM HYD; 1.329 c.m/s C perv/imperv/ 1.329 c.m/s	4=Lin. Reserv total 4=Repeat

	.267 .890 .703 C perv/imperv/total		74.000		ve No or C		
15	ADD RUNOFF .933 1.112 1.329 1.329 c.m/s		.100 8.924		efficient Abstractio	m	
4	CATCHMENT		1	Option 1		2=Rectang	lr; 3=SWM HYD; 4=Lin. Reserv
	14.000 ID No.6 99999			695	.051	.408	.408 c.m/s
	.670 Area in hectares 67.000 Length (PERV) metres	15	ADD RUNO	. 267 NEE	.897	.708	C perv/imperv/total
	1.000 Gradient (%)				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 No Condu	Length uit defined	ı	
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		.000	Zero la			
	.250 Manning "n"		.000		ighting fac	tor	
	74.000 SCS Curve No or C .100 Ia/S Coefficient		.000		timestep sub-reaches		
	8.924 Initial Abstraction					1.737	.408 c.m/s
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>	17	COMBINE				
	.083 1.112 1.329 1.329 c.m/s .267 .884 .637 C perv/imperv/total			ction Node		1.737	2.145 c.m/s
15	ADD RUNOFF	14	START	.095	1./3/	1./3/	2.145 C.M/S
	.083 1.177 1.329 1.329 c.m/s			Zero; 2=Dei	fine		
27	HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen	4	CATCHMEN 43.000	ID No.ó	00000		
	Volume = .3408792E+04 c.m		.330		hectares		
10	POND		47.000		(PERV) metr	es	
	5 Depth - Discharge - Volume sets 184.800 .000 .0		1.000 35.000	Gradient	t (%) t Imperviou	-	
	185.300 .0140 1142.0		47.000	Length			
	186.100 .0240 3519.0		.000	%Imp. w	ith Zero Dp		
	186.500 .287 4978.0 186.800 1.922 6222.0		.250	Option 1 Manning		2=Horton;	3=Green-Ampt; 4=Repeat
	Peak Outflow = .022 c.m/s		74.000		ve No or C		
	Maximum Depth = 185.947 metres		.100		efficient		
	Maximum Storage = 3066. c.m .083 1.177 .022 1.329 c.m/s		8.924 1		Abstractio		lr; 3=SWM HYD; 4=Lin. Reserv
35	.003 1.177 .022 1.329 C.m/s COMMENT			.026		1.737	2.145 c.m/s
	<pre>3 line(s) of comment</pre>			266	.885	.483	C perv/imperv/total
	*********	15	ADD RUNO		006		0.145/-
	FLOW U/S OF RICE RD CULVERT - OUTLET A1	4	CATCHMEN	.026 IT	.026	1.737	2.145 c.m/s
17	COMBINE	-	44.000	ID No.ó	99999		
	1 Junction Node No.	_	6.400		hectares		
14	.083 1.177 .022 1.344 c.m/s START	2	1.000	Length (Gradient	(PERV) metr	es	
	1 1=Zero; 2=Define		70.000		: Imperviou	s	
35	COMMENT	2	07.000	Length			
	<pre>3 line(s) of comment ************************************</pre>		.000		ith Zero Dp		3=Green-Ampt; 4=Repeat
	PROP DEVELOPMENT SOUTH OF QUAKER RD & WEST OF RICE RD PON		.250	Manning		z-nor con,	3-Green Ampe, 1-Repeat
	***********		74.000		ve No or C		
4	CATCHMENT 40.000 ID No.6 99999		.100 8.924		efficient Abstractio	n.	
	8.210 Area in hectares		1				lr; 3=SWM HYD; 4=Lin. Reserv
	234.000 Length (PERV) metres			854		1.737	2.145 c.m/s
	1.000 Gradient (%) 25.000 Per cent Impervious	15	ADD RUNO	267	.887	.701	C perv/imperv/total
	234.000 Length (IMPERV)	15		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 No Condu	Length uit defined	ı	
	74.000 SCS Curve No or C		.000	Zero la			
	.100 Ia/S Coefficient		.000		ighting fac	tor	
	8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		.000		timestep 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			ction Node	.874	.874	3.019 c.m/s
9	ROUTE	14	START	.031	.074	.074	3.013 C.m/ B
	.000 Conduit Length			Zero; 2=Dei	fine		
	.000 No Conduit defined .000 Zero lag	18	CONFLUEN 2 Jun	ICE action Node	a No		
	.000 Beta weighting factor				3.019	.874	.000 c.m/s
	.000 Routing timestep	4	CATCHMEN				
	0 No. of sub-reaches .408 .408 .408 1.344 c.m/s		45.000 1.030	ID No.ó	99999 hectares		
17	COMBINE		83.000		(PERV) metr	es	
	2 Junction Node No.		1.000	Gradient	t (%)		
14	.408 .408 .408 c.m/s		60.000 83.000	Per cent	t Imperviou	ıs	
	1 1=Zero; 2=Define		.000		ith Zero Dp	th	
4	CATCHMENT		1			2=Horton;	3=Green-Ampt; 4=Repeat
	41.000 ID No.6 99999 .690 Area in hectares		.250 74.000	Manning	"n" ve No or C		
	68.000 Length (PERV) metres		.100		efficient		
	1.000 Gradient (%)		8.924		Abstractio		
	35.000 Per cent Impervious 68.000 Length (IMPERV)		1		l=Trianglr; 3.019	2=Rectang .874	lr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s
	.000 %Imp. with Zero Dpth			. 267	.886		C perv/imperv/total
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat	15	ADD RUNO				
	.250 Manning "n"				3.124	.874	.000 c.m/s
	74.000 SCS Curve No or C .100 Ia/S Coefficient	27		APH DISPLAY # of Hyeto	Y o/Hydrograp	h chosen	
	8.924 Initial Abstraction		Volume		79E+04 c.m		
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv	10	POND	Dia-t			
	.051 .000 .408 .408 c.m/s .267 .884 .483 C perv/imperv/total		6 Depth -	· Discharge .00	e - Volume 00	sets .0	
15	ADD RUNOFF		186.800	.055	50 404	8.0	
	.051 .051 .408 .408 c.m/s		187.300	.073		1.0	
4	CATCHMENT 42.000 ID No.6 99999		187.500 187.800	.17		4.0	
	12.640 Area in hectares		188.000	.88			
	290.000 Length (PERV) metres		Peak Out	flow =	.129	c.m/s	
	1.000 Gradient (%) 70.000 Per cent Impervious		Maximum	Depth = Storage =			
	290.000 Length (IMPERV)				7854. 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 Jun	oction Node	No.	100	100/-

14	START		.250 Manning "n"	
2.5	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=SWM HYD: 4=Lin. Reserv
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD			.185 c.m/s
	**********			perv/imperv/total
4	CATCHMENT	15	ADD RUNOFF	
	2.000 ID No.6 99999 9.020 Area in hectares	9	.046 .123 1.185 1.	.185 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"			.185 c.m/s
	74.000 SCS Curve No or C	17	COMBINE	
	.100 Ia/S Coefficient		2 Junction Node No.	
	8.924 Initial Abstraction			.308 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 O	OF OHAKER ROAD
,	.000 Conduit Length		*****************	A QUARTER ROAD
	.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 .129 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=</pre>	:Green-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-CUM HUD. 4-Iin Decem
35	.702 .745 .702 .000 C.m/s COMMENT			.308 c.m/s
33	3 line(s) of comment			perv/imperv/total
	**************************************	15	ADD RUNOFF	rei v/ imper v/ cocar
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD			.308 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)			.308 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.	400
	.250 Manning "n"	1.4		.423 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			.000 c.m/s
	.267 .885 .514 C perv/imperv/total	35	COMMENT	000 01m, p
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 WELLA	AND 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.		.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=	Green-Ampt: 4=Repeat
14	START		.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;</pre>	
	PROP DEVELOPMENT SOUTH OF QUAKER RD, EAST OF RICE RD			.000 c.m/s
	*********			perv/imperv/total
4	CATCHMENT	15	ADD RUNOFF	000/-
	50.000 ID No.6 99999	•		.000 c.m/s
	3.420 Area in hectares	9	ROUTE .000 Conduit Length	
	151.000 Length (PERV) metres 1.000 Gradient (%)			
	1.000 Gradient (%) 10.000 Per cent Impervious		.000 No Conduit defined .000 Zero lag	
	151.000 Fer cent impervious 151.000 Length (IMPERV)		.000 Zero lag .000 Beta weighting factor	
	.000 %Imp. with Zero Dpth		.000 Routing timestep	
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		0 No. of sub-reaches	
	.250 Manning "n"			.000 c.m/s
	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>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.	
4	.077 .077 1.185 1.185 c.m/s	14	.209 2.615 2.615 3.	.959 c.m/s
4	CATCHMENT 51 000 TD No 6 99999	14		
	51.000 ID No.6 99999 1.980 Area in hectares	35	1 1=Zero; 2=Define COMMENT	
	11.980 Area in nectares 115.000 Length (PERV) metres	35	3 line(s) of comment	
	1.000 Gradient (%)		**************************************	
	10.000 Per cent Impervious		PROP DEVELOPMENT SOUTH OF QUAKER RD - QUA	ALLITY 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"		.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
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>		<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
	20.000 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 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		.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

			<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>
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 .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 (%)		.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
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		.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 .658 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)	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 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total
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 %tmp. 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 1.523 .000 .858 .858 c.m/s .267 .897 .708 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 1.523 .000 .858 .858 c.m/s .267 .897 .708 C perv/imperv/total ADD RUNOFF 1.523 1.523 .858 .858 c.m/s
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 %Tmp. 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 .1000 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
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 .1000 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
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 %tmp. 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		.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
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		.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
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 .024 4.508 .549 .000 c.m/s		.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 .000 Routing timestep
	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 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		.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 .000 Beta weighting factor .000 ROUTING Timestep 0 No. of sub-reaches
35	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 .024 4.508 .549 .000 c.m/s .267 .886 .328 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 1.523 .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 Seta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.523 1.523 1.523 .858 c.m/s
	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 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		.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 .000 Beta weighting factor .000 Routing timestep 0 No. of sub-reaches 1.523 1.523 1.523 .858 c.m/s
	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 %tmp. 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	.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 .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.
	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 (NPERV) .000 %tmp. 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	.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 .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
35	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 Ta/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	.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 No Conduit defined .000 Eeta 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
	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 %tmp. 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	.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 No Conduit defined .000 Seta 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 CONFLUENCE 2 Junction Node No.
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 1.523 .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 CONFLUENCE 2 Junction Node No. 1.523 2.381 1.523 .000 c.m/s
35	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 %tmp. 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	.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 No Conduit defined .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 CONFIJUENCE 2 Junction Node No. 1.523 2.381 1.523 .000 c.m/s CAACHEMENT
35	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 %tmp. 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	.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 .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 CONFLUENCE 2 Junction Node No. 1.523 2.381 1.523 .000 c.m/s
35	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 .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	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 1.523 .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 2 Junction Node No. 1.523 2.381 1.523 .000 c.m/s 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 1.523 .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 Sero 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 2.381 c.m/s CONFIUENCE 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
35	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 %tmp. 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	.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 Sero 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 2 Junction Node No. 1.523 2.381 1.523 2.381 c.m/s CATCIMMENT 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 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 %tmp, 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	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 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 2.381 c.m/s CONFLUENCE 2 Junction Node No. 1.523 2.381 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 92.000 Length (PERV) metres 1.000 Gradient (%)
35 15 35	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 .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	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 1.523 .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 Sero 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 2.381 c.m/s CONFIUENCE 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 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 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 .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	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 1.523 .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 No Conduit defined .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 2 Junction Node No. 1.523 2.381 1.523 2.381 c.m/s CONFIUENCE 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 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
35 15 35	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 %tmp, 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	.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 .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 2.381 c.m/s CONFLUENCE 2 Junction Node No. 1.523 2.381 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 92.000 Length (FPRV) 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	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 .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	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 1.523 .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 Sero 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 2 Junction Node No. 1.523 2.381 1.523 0.000 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 Fer 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
35 15 35	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 %tmp, with Zero Dpth .000 %tmp, 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	.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 .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 CONFIJUENCE 2 Junction Node No. 1.523 2.381 1.523 2.381 c.m/s CONFIJUENCE 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 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	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 .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	.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 Sero 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 2 Junction Node No. 1.523 2.381 1.523 2.381 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
35 15 35	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 .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	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 1.523 .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 Set a 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 2 Junction Node No. 1.523 2.381 1.523 2.381 c.m/s CONFIUENCE 2 Junction Node No. 1.523 2.381 1.523 .000 c.m/s CATCIMMENT 54.000 ID No.6 99999 1.280 Area in hectares 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Fer cent Impervious 92.000 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
35 15 35	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 %tmp, 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 .024 4.508 .549 .000 c.m/s .267 .886 .328 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	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 1.523 .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 CONFLUENCE 2 Junction Node No. 1.523 2.381 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 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 .149 2.381 1.523 .000 c.m/s
35 15 35	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 Ta/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	.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 .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 2 Junction Node No. 1.523 2.381 1.523 0.000 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 Fer cent Impervious 92.000 Length (IMPERV) .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 .149 2.381 1.523 .000 c.m/s Ceff .887 .639 C perv/imperv/total
35 15 35	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 .000 %Imp, with Zero Dpth .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	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1
35 15 35	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 %tmp. with Zero Dpth .000 %tmp. 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	.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 .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 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 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 In/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .149 2.381 1.523 .000 c.m/s .267 .887 .639 C perv/imperv/total ADD RUNOFF .149 2.514 1.523 .000 c.m/s
35 15 35	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 .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	.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 .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 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 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .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 .149 2.381 1.523 .000 c.m/s ADD RUNOFF .250 NADD RUNOFF .149 2.514 1.523 .000 c.m/s
35 15 35	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 .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	.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 .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 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 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .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 .149 2.381 1.523 .000 c.m/s ADD RUNOFF .267 .887 .639 C perv/imperv/total ADD RUNOFF .4 HYDROGRAPH DISPLAY
35 15 35	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 %tmp, 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	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1
35 15 35 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 Ta/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	.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 Sero 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 CONFLIENCE 2 Junction Node No. 1.523 2.381 1.523 0.000 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=Frianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .149 2.381 1.523 .000 c.m/s ADD RUNOFF .149 2.514 1.523 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .6870401E+O4 c.m
35 15 35 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 %tmp. with Zero Dpth .000 %tmp. 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	.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 .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 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 92.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .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 .149 2.381 1.523 .000 c.m/s ADD RUNOFF .267 .887 .639 C perv/imperv/total ADD RUNOFF .149 2.514 1.523 .000 c.m/s I #YDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .6870401E+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
35 15 35 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 .024	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 1.523 .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 CONFLURNCE 2 Junction Node No. 1.523 2.381 1.523 0.000 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 .149 2.381 1.523 .000 c.m/s ADD RUNOFF .149 2.514 1.523 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .6870401E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .0190 5251.0 183.150 .0230 7895.0
35 15 35 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 %tmp, with Zero Dpth .000 %tmp, 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	.250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1
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 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 CONFLUENCE 2 Junction Node No. 1.523 2.381 1.523 .000 c.m/s CATCIMENT 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 In/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .149 2.381 1.523 .000 c.m/s ADD RUNOFF .149 2.514 1.523 .000 c.m/s ADD RUNOFF .149 2.514 1.523 .000 c.m/s ADD RUNOFF .149 2.514 1.523 .000 c.m/s 149 2.514 1.523 .000 c.m/s POND 6 Depth - Discharge - Volume sets 182.000 .000 .0 182.800 .0190 5.251.0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .238 10751.0
35 15 35 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 %tmp, with Zero Dpth .000 %tmp, 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	.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 .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 COMFLUENCE 2 Junction Node No. 1.523 2.381 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 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 .149 2.381 1.523 .000 c.m/s ADD RUNOFF .149 2.514 1.523 .000 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .6870401E+04 c.m POND 6 Depth - Discharge - Volume sets 182.000 .000 .00 182.800 .0190 5251.0 183.500 .238 10751.0 183.500 .238 10751.0 184.000 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 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 CONFLUENCE 2 Junction Node No. 1.523 2.381 1.523 .000 c.m/s CATCIMENT 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 In/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .149 2.381 1.523 .000 c.m/s ADD RUNOFF .149 2.514 1.523 .000 c.m/s ADD RUNOFF .149 2.514 1.523 .000 c.m/s ADD RUNOFF .149 2.514 1.523 .000 c.m/s 149 2.514 1.523 .000 c.m/s POND 6 Depth - Discharge - Volume sets 182.000 .000 .0 182.800 .0190 5.251.0 183.150 .0230 7895.0 183.150 .0230 7895.0 183.150 .238 10751.0

	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			.000 %Imp. with Zero Dpth	
	5.000 ID No.6 99999			<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R</pre>	lepeat
	1.870 Area in hectares			.250 Manning "n"	
	112.000 Length (PERV) metres 1.000 Gradient (%)			74.000 SCS Curve No or C .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=L	in. Reserv
	.000 %Imp. with Zero Dpth			.099 5.467 .705 .000 c.m/s	
	1 Option 1=SCS CN/C; 2=Horto	n; 3=Green-Ampt; 4=Repeat		.267 .894 .361 C perv/imperv/tota	1
	.250 Manning "n"		15	ADD RUNOFF	
	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 1 Option 1=Trianglr; 2=Recta	nglr; 3=SWM HYD; 4=Lin. Reserv		301.000 ID No.6 99999 .720 Area in hectares	
	.175 .000 .021	.021 c.m/s		.720 Area in hectares 69.000 Length (PERV) metres	
	.267 .885 .576	C perv/imperv/total		.200 Gradient (%)	
15	ADD RUNOFF	o polit, impolit, dodal		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; 4=R</pre>	tepeat
	.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			.100 Ia/S Coefficient 8.924 Initial Abstraction	
	0 No. of sub-reaches			1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=L	in. Reserv
	.175 .175 .175	.021 c.m/s		.016 5.566 .705 .000 c.m/s	III. Kebel v
17	COMBINE	1021 0111/10		.267 .876 .328 C perv/imperv/tota	1
	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	
	.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	
	<pre>3 line(s) of comment ************************************</pre>			.000 Beta weighting factor .000 Routing timestep	
	EXISTING AREA ON QUAKER RD, EAST OF	RICE BD		0 No. of sub-reaches	
	**********	1102 10		.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	
			14	START	
	113.000 Length (PERV) metres				
	.200 Gradient (%)		25	1 1=Zero; 2=Define	
	.200 Gradient (%) 65.000 Per cent Impervious		35	1 1=Zero; 2=Define COMMENT	
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV)		35	1 1=Zero; 2=Define	
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth	n: 3=Green-Ampt: 4=Repeat	35	1 1=Zero; 2=Define COMMENT 3 line(s) of comment *********	
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV)	n; 3=Green-Ampt; 4=Repeat	35	1 l=Zero; 2=Define COMMENT 3 line(s) of comment	
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C	n; 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	
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient	n; 3=Green-Ampt; 4=Repeat		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	
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .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	
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta	nglr; 3=SWM HYD; 4=Lin. Reserv		1 1=Zero; 2=Define COMMENT 3 line(s) of comment *********** PROF DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************ CATCHMENT 30.000 ID No.6 99999 8.4770 Area in hectares 238.000 Length (PERV) metres	
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient Initial Abstraction Option 1=Trianglr; 2=Recta .240 .180 .175	nglr; 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 .200 Gradient (%)	
15	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676	nglr; 3=SWM HYD; 4=Lin. Reserv		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	
15	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total		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)	
15 35	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF	nglr; 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 (%) .100 Per cent Impervious	Lepeat
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175	nglr; 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	depeat
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment	nglr; 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 l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .250 Manning "n" 74.000 SCS Curve No or C	Lepeat
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/c; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 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 (NPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient	repeat
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		1	
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 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; 4=R .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=E	
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 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; 4=R .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=L .077 .000 5.582 5.582 c.m/s	in. Reserv
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s		1	in. Reserv
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s	4	1	in. Reserv
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 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 l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota ADD RUNOFF .077 .077 5.582 5.582 c.m/s CATCHMENT	in. Reserv
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Iz/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 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; 4-R .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-L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota ADD RUNOFF .077 .077 5.582 5.582 c.m/s CATCHMENT 31.000 ID No.6 99999	in. Reserv
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning 'n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s 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; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota ADD RUNOFF .077 .077 5.582 5.582 c.m/s .077 .077 5.582 5.582 c.m/s CATCHMENT 31.000 ID No.6 99999 10.420 Area in hectares	in. Reserv
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA	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 CNC; 2-Horton; 3-Green-Ampt; 4-R .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-E .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota ADD RUNOFF .077 .077 5.582 5.582 c.m/s CATCHENNT 31.000 ID No.6 99999 10.420 Area in hectares 264.000 Length (PERV) metres	in. Reserv
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s 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; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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 (%)	in. Reserv
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s 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 l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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 264.000 Length (PERV) metres 1.000 Gradient (%) 75.000 Per cent Impervious	in. Reserv
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s 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; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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 (%)	in. Reserv
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 3=SWM HYD; 4=Lin. Reserv	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 CNC; 2=Horton; 3=Green-Ampt; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota ADD RUNOFF .077 .077 5.582 5.582 c.m/s CATCHENNT 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; 4=R	in. Reserv
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota ADD RUNOFF .077 .077 5.582 5.582 c.m/s CATCHMENT 31.000 ID No.6 9999 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; 4=R .250 Manning "n"	in. Reserv
4	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 3=SWM HYD; 4=Lin. Reserv	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 l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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 264.000 Length (PERV) metres 1.000 Gradient (%) 75.000 Per cent Impervious 264.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R 74.000 SCS Curve No or C	in. Reserv
	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************* 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=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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; 4=R .250 Manning "n" 74.000 SCS Curve No or C .100 IA/S Coefficient	in. Reserv
15	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/s Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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; 4=R .250 Manning "n" 74.000 SCS Curve No or C .100 IA/S Coefficient 8.924 Initial Abstraction	in. Reserv .1
4	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************** 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 l=SCS CON/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota ADD RUNOFF .077 .077 5.582 5.582 c.m/s CATCHENNT 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 l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .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=L	in. Reserv .1
15	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************** 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 l=SCS CON/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota ADD RUNOFF .077 .077 5.582 5.582 c.m/s CATCHENNT 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 l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .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=L	in. Reserv
15	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************* 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=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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; 4=R .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=L 1.498 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF	in. Reserv
15	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Iz/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************* 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; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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; 4=R .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=L 1.498 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 1.509 5.582 5.582 c.m/s	in. Reserv
15	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************************************	in. Reserv
15	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************* ************ **********	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************* 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; 4-R .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-L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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; 4-R .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-L .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-L 1.498 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 1.509 5.582 5.582 c.m/s by Hydrograph Display 5 is # of Hyeto/Hydrograph chosen	in. Reserv
35 4 15 9	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hortor .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************* PROP DEVELOPMENT NORTH OF SEGMENT 3 - POND P30 ************* 30.00 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-R .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-L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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; 4-R .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-L .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-L .1498 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 1.509 5.582 5.582 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .512908E+04 c.m	in. Reserv
15	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************ 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; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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; 4=R .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=L .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=L .498 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 .077 5.582 5.582 c.m/s HYDROGRAPH DISSLAY 5 is # of Hyeto/Hydrograph chosen Volume = .5129908E+04 c.m CATCHMENT	in. Reserv
35 4 15 9	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hortor .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************* 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; 4-R .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-L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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; 4-R .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-L 1.498 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 1.509 5.582 5.582 c.m/s 1.498 1.509 5.582 5.582 c.m/s ***********************************	in. Reserv
35 4 15 9	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Iz/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************* 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 l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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 (PERV) metres 1.000 Mimp. with Zero Dpth 1 Option l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .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=L .1.98 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 .077 5.582 5.582 c.m/s ADD RUNOFF 1.498 1.509 5.582 5.582 c.m/s	in. Reserv
35 4 15 9	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 *************** 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 l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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 l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=SCS CN/C; 2=Horton; 3=SWM HYD; 4=L .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=L .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=L .498 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 .077 5.582 5.582 c.m/s PYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .5129908E+04 c.m CATCHMENT 32.000 ID No.6 99999 .650 Area in hectares	in. Reserv
35 4 15 9	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hortor .250 Manning "n" 74.000 SCS Curve No or C .100 Iz/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************* 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; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota ADD RUNOFF .077 .077 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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; 4=R .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=L .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=L .250 MST .5582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 .077 5.582 5.582 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .5129908E+04 c.m CATCHMENT 32.000 ID No.6 99999 .690 Area in hectares 68.000 Length (PERV) metres	in. Reserv
35 4 15 9	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hortor .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************* 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; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota ADD RUNOFF .077 .077 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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; 4=R .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=L .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=L .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 1.509 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 1.509 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 1.509 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota .2000 ID No.6 99999 .690 Area in hectares 68.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 68.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious	in. Reserv
35 4 15 9	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 *************** 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 l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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 l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .498 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 1.509 5.582 5.582 c.m/s PYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .5129908E+04 c.m CATCHMENT 32.000 ID No.6 99999 .690 Area in hectares 68.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 68.000 Length (PERV) metres	din. Reserv
35 4 15 9	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Hortor .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 ************* 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; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota ADD RUNOFF .077 .077 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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; 4=R .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=L 1.498 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 1.509 5.582 5.582 c.m/s HYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .5129908E+04 c.m CATCHENT 32.000 ID No.6 99999 .690 Area in hectares 68.000 Length (PERV) metres 1.000 Gradient (%) 690 Area in hectares 68.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 68.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 68.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 68.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 68.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 68.000 Length (PERV) metres	din. Reserv
35 4 15 9	.200 Gradient (%) 65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth 1 Option 1=SCS CN/C; 2=Horto .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option 1=Trianglr; 2=Recta .240 .180 .175 .267 .896 .676 ADD RUNOFF .240 .418 .175 COMMENT 3 line(s) of comment ************************************	nglr; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s C perv/imperv/total .000 c.m/s WELLAND MUNICIPAL BOUNDA n; 3=Green-Ampt; 4=Repeat nglr; 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 *************** 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 l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .077 .000 5.582 5.582 c.m/s .267 .896 .267 C perv/imperv/tota 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 l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .250 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient 8.924 Initial Abstraction 1 Option l=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=R .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=L .498 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 .077 5.582 5.582 c.m/s .267 .897 .739 C perv/imperv/tota ADD RUNOFF 1.498 1.509 5.582 5.582 c.m/s PYDROGRAPH DISPLAY 5 is # of Hyeto/Hydrograph chosen Volume = .5129908E+04 c.m CATCHMENT 32.000 ID No.6 99999 .690 Area in hectares 68.000 Length (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 68.000 Length (PERV) metres	din. 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 1.5
HYDROGRAPH DISPLAY
                             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					82.000	Length				
	3 line	e(s) of comment				1.000	Gradien				
	******		******	******		10.000		t Impervio	us		
		STORM EVENT	******	******		82.000 .000		(IMPERV) ith Zero D	n+h		
2	STORM					.000				; 3=Green-Ampt;	4=Penest
-	1	1=Chicago:2=Hu	ff:3=IIger:4=Co	dn1hr;5=Historic		.250	Manning		, z-Horcon	, 3-Green-Ampc,	1-Kepeac
	900.000	Coefficient a				74.000		ve No or C			
	5.200	Constant b	(min)			.100		efficient			
	.745	Exponent c				8.924	Initial	Abstraction	on		
	.450	Fraction to pe	ak r			1	Option :	l=Trianglr	; 2=Rectan	glr; 3=SWM HYD;	4=Lin. Reserv
	240.000	Duration ó 24					.033	.612	1.522	1.522 c.m/s	
			otal depth				.308	.898	.367	C perv/imperv/	total
3	IMPERVIO				15	ADD RUNG					
	1		N/C; 2=Horton;	; 3=Green-Ampt; 4=Repeat	10		.033	.644	1.522	1.522 c.m/s	
	.015	Manning "n"	4		10	POND	D41				
	98.000 .100	SCS Curve No o				184.800	Discharge .0		.0		
	.518	Initial Abstra				185.750	.02		1.0		
35	COMMENT	Initial Abbila	CCION			186.000	.02		03.0		
-		e(s) of comment				186.250			91.0		
		*****				186.500			65.0		
	EXISTING	RES. WEST OF SE	GMENT 1			186.700			70.0		
	******	*****				Peak Out	tflow =	.027	c.m/s		
4	CATCHMEN'	T				Maximum	Depth =	186.413	metres		
	1.000	ID No.ó 99999				Maximum	Storage =	1531.	c.m		
	17.520	Area in hectar					.033	.644	.027	1.522 c.m/s	
	343.000	Length (PERV)	metres		17	COMBINE					
	1.000	Gradient (%)					nction Node				
	35.000 343.000	Per cent Imper			14	START	.033	.644	.027	1.546 c.m/s	
	.000	Length (IMPERV %Imp. with Zer			14		Zero; 2=De:	e			
	1			; 3=Green-Ampt; 4=Repeat	18	CONFLUEN		Line			
	.250	Manning "n"	M/C/ Z-HOICON	, 3-dieen Ampe, 4-Kepeac	10		nction Node	e No.			
	74.000	SCS Curve No o	r C					1.546	.027	.000 c.m/s	
	.100	Ia/S Coefficie			35	COMMENT					
	8.924	Initial Abstra				3 lir	ne(s) of c	omment			
	1	Option 1=Trian	glr; 2=Rectang	glr; 3=SWM HYD; 4=Lin. Rese	erv		******				
	1.	445 .000	.000	.000 c.m/s		REALIGNE	ED CHANNEL	- SEGMENT	1		
		308 .909	.518	C perv/imperv/total			******				
15	ADD RUNO				4	CATCHMEN					
	1.	445 1.445	.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 - SEGM *****	ENT I			10.000		t Impervio	us		
4	CATCHMEN'					64.000 .000		(IMPERV)			
*	100.000	ID No.6 99999				1		ith Zero D		; 3=Green-Ampt;	4=Bonost
	2.020	Area in hectar	es			.250	Manning		, z-norcon	, s-dreen Ampe,	1-Kepeac
	116.000	Length (PERV)				74.000		ve No or C			
	.400	Gradient (%)				.100		efficient			
	15.000	Per cent Imper	vious			8.924		Abstraction	on		
	116.000	Length (IMPERV				1				glr; 3=SWM HYD;	4=Lin. Reserv
	.000	%Imp. with Zer	o Dpth				.023	1.546	.027	.000 c.m/s	
	1			; 3=Green-Ampt; 4=Repeat			.308	.899	.367	C perv/imperv/	total
	.250	Manning "n"			15	ADD RUNG	OFF				
	74.000	SCS Curve No o					.023	1.567	.027	.000 c.m/s	
	.100	Ia/S Coefficie			9	ROUTE					
	8.924	Initial Abstra				.000	Conduit				
	1			glr; 3=SWM HYD; 4=Lin. Rese	erv	.000		uit define	d		
			.000	.000 c.m/s		.000	Zero la	g ighting fa			
35	COMMENT	308 .891	.396	C perv/imperv/total		.000		timestep	ctor		
33		e(s) of comment				0		sub-reache	8		
		*******						1.567	1.567	.000 c.m/s	
		FUT ROADWAY CULV	ERT - SEGMENT	1	17	COMBINE		1.507	1.507	.000 C.M/B	
		*****		_	=-		nction Node	e No.			
15	ADD RUNO	FF						1.567	1.567	1.567 c.m/s	
		077 1.522	.000	.000 c.m/s	14	START					
9	ROUTE						Zero; 2=De:	e 1			
	.000	Conduit Length						rine			
	.000	No Conduit dos			35	COMMENT		rine			
		No Conduit def			35						
	.000	Zero lag	ined		35	3 lir	ne(s) of c	omment			
	.000	Zero lag Beta weighting	ined		35	3 lir ******** PROP DE\	ne(s) of co	omment	EGMENT 1 -	POND P11	
	.000	Zero lag Beta weighting Routing timest	ined factor ep			3 lir ********* PROP DEV	ne(s) of co	omment	EGMENT 1 -	POND P11	
	.000 .000 0	Zero lag Beta weighting Routing timest No. of sub-rea	ined factor ep ches	200 - 1	35 4	3 lir ******** PROP DEV ********	ne(s) of co ********* VELOPMENT : *******	omment	EGMENT 1 -	POND P11	
1	.000	Zero lag Beta weighting Routing timest	ined factor ep	.000 c.m/s		3 lir ********* PROP DEV ******** CATCHMEN 12.000	ne(s) of co	omment SOUTH OF S	EGMENT 1 -	POND P11	
17	.000 .000 0 .0 COMBINE	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522	ined factor ep ches	.000 c.m/s		3 lir ********* PROP DEV ******** CATCHMEN 12.000 2.680	ne(s) of co	SOUTH OF S		POND P11	
17	.000 .000 0 COMBINE 1 June	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No.	factor ep ches 1.522			3 lir ********* PROP DEV ********* CATCHMEN 12.000 2.680 134.000	ne(s) of co	SOUTH OF S		POND P11	
	.000 .000 0 .0 COMBINE 1 June	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522	ined factor ep ches	.000 c.m/s 1.522 c.m/s		3 lir ********** PROP DEV ************************************	ne(s) of co	SOUTH OF S 99999 hectares (PERV) met:	res	POND P11	
17 14	.000 .000 0 .0 COMBINE 1 June START	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522	factor ep ches 1.522			3 lir ********* PROP DEV ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000	ne(s) of c ************************************	omment SOUTH OF S 99999 hectares (PERV) met	res	POND P11	
14	.000 .000 0 COMBINE 1 June START 1 1=Ze	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No.	factor ep ches 1.522			3 lir ********* PROP DEV ******* CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000	ne(s) of co	SOUTH OF SE 99999 hectares (PERV) met: t (%) t Impervion (IMPERV)	res	POND P11	
	.000 .000 0 .COMBINE 1 June START 1 1=Z. COMMENT	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522	factor ep ches 1.522			3 lir ********* PROP DEV ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000	ne(s) of c ************************************	OMMENT SOUTH OF S: 99999 hectares (PERV) met: t (%) t Imperviou (IMPERV) ith Zero Di	res us pth	POND P11	4=Repeat
14	.000 .000 0 COMBINE 1 June START 1 1=ZC COMMENT 3 line	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define	factor ep ches 1.522			3 lir ********* PROP DEV ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000	ne(s) of c ************************************	99999 hectares (PERV) met: t (%) t Impervior (IMPERV) ith Zero D l=SCS CN/C	res us pth		4=Repeat
14	.000 .000 0 COMBINE 1 Jun START 1 1=Z COMMENT 3 lin ************************************	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ************************************	factor ep ches 1.522	1.522 c.m/s		3 lir ******** PROP DEC ********* CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 1 .250 74.000	ne(s) of comments	99999 hectares (PERV) met: t (%) t Impervior (IMPERV) ith Zero D 1=SCS CN/C "n"	res us pth ; 2=Horton		4=Repeat
14	.000 .000 0 COMBINE 1 June START 1 1=Zr COMMENT 3 line ************************************	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ************************************	factor ep ches 1.522	1.522 c.m/s		3 lir *********** PROP DEC ********** 12.000 2.680 134.000 1.000 35.000 134.000 .000 1 .250 74.000 .100	ne(s) of continuous co	99999 hectares (PERV) met: t (%) t Impervior (IMPERV) ith Zero D 1=SCS CN/C "n" ve No or C	res us pth ; 2=Horton		4=Repeat
14	.000 .000 0 COMBINE 1 Jun. START 1 1=Z. COMMENT 3 lin. ************************************	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ********* ELOPMENT NORTH C **************** T	factor ep ches 1.522	1.522 c.m/s		3 lir ******** PROP DET ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000 11 .250 74.000 .100 8.924	ne(s) of continuous co	99999 hectares (PERV) met: t (%) ti Impervior (IMPERV) ith Zero D; l=SCS CN/C "n" ve No or C efficient Abstractic	res us pth ; 2=Horton	; 3=Green-Ampt;	
14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ************************************	factor ep cches 1.522 1.522	1.522 c.m/s		3 lir ******** PROP DEV ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000 14.000 .000 1 .250 74.000 .100 8.924 1	ne(s) of Comments	omment SOUTH OF S: 99999 hectares (PERV) met: t (%) t Impervio: (IMPERV) ith Zero D; l=SCS CN/C "n" ve No or C efficient Abstractic l=Trianglr	res us pth ; 2=Horton on ; 2=Rectan	; 3=Green-Ampt; glr; 3=SWM HYD;	: 4=Repeat : 4=Lin. Reserv
14 35	.000 .000 0 	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ******** ELOPMENT NORTH C ********* T ID No.6 99999 Area in hectar	factor ep ches 1.522 1.522	1.522 c.m/s		3 lir ******** PROP DEV ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 10.000 11.000 8.924 1	ne(s) of comments	SOUTH OF S: 99999 hectares (PERV) met: t (%) t Impervior ith Zero D; 1=SCS CN/C "n" ve No or C efficient Abstractic 1=Trianglr .000	res pth ; 2=Horton on ; 2=Rectan 1.567	; 3=Green-Ampt; glr; 3=SWM HYD; 1.567 c.m/s	; 4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2-Define e(s) of comment ******** ELOPMENT NORTH C ******** T ID No.6 99999 Area in hectar Length (PERV)	factor ep ches 1.522 1.522	1.522 c.m/s	4	3 lir ******** PROP DEV ******** CATCHMER 12.000 2.680 134.000 1.000 35.000 11 .250 74.000 .100 8.924	ne(s) of comments	omment SOUTH OF S: 99999 hectares (PERV) met: t (%) t Impervio: (IMPERV) ith Zero D; l=SCS CN/C "n" ve No or C efficient Abstractic l=Trianglr	res us pth ; 2=Horton on ; 2=Rectan	; 3=Green-Ampt; glr; 3=SWM HYD;	; 4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ************************************	factor ep sches 1.522 1.522 F SEGMENT 1 -	1.522 c.m/s		3 lir ******** PROP DEN ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 1 .250 74.000 .100 8.924 1 ADD RUNC	ne(s) of Comments	99999 hectares (PERV) met: t (%) it Impervior (IMPERV) ith Zero D l=SCS CN/C "n" ve No or C efficient Abstractic 1-trianglr .000 .897	res pth ; 2=Horton on ; 2=Rectan 1.567 .514	glr; 3=SWM HYD; 1.567 c.m/s C perv/imperv/	; 4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ******** ELOPMENT NORTH C ********* T ID No.6 99999 Area in hectar Length (PERV) Gradient (%) Per cent Imper	factor ep ches 1.522 1.522 F SEGMENT 1 - es metres vious	1.522 c.m/s	4	3 lir ******** PROP DET ********* 12.000 2.680 134.000 1.000 35.000 134.000 .000 1 .250 74.000 .100 8.924 1 ADD RUNC	ne(s) of control of co	SOUTH OF S: 99999 hectares (PERV) met: t (%) t Impervior ith Zero D; 1=SCS CN/C "n" ve No or C efficient Abstractic 1=Trianglr .000	res pth ; 2=Horton on ; 2=Rectan 1.567	; 3=Green-Ampt; glr; 3=SWM HYD; 1.567 c.m/s	; 4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2-Define e(s) of comment ********* ******** ******* ****** *****	factor ep sches 1.522 1.522 1.522 f SEGMENT 1 - es metres vious)	1.522 c.m/s	4	3 lir ******* PROP DEV ******** CATCHMED 12.000 2.680 134.000 1.000 35.000 134.000 .000 1 .250 74.000 .100 8.924 1 ADD RUNC CATCHMED	ne(s) of companies	99999 hectares (PERV) met: t (%) t Impervior (IMPERV) ith Zero D; l=SCS CN/C "n" ve No or C efficient Abstractic 1=Trianglr .000 .897	res pth ; 2=Horton on ; 2=Rectan 1.567 .514	glr; 3=SWM HYD; 1.567 c.m/s C perv/imperv/	; 4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ********* T ID No.6 99999 Area in hectar Length (PERV) Gradient (%) Per cent Imper Length (IMPERV Length (HEREY) Elength (HEREY) Wilmp. with Zer	factor ep cches 1.522 1.522 F SEGMENT 1 - es metres vious o Dpth	1.522 c.m/s POND P10	4	3 lir ******** PROP DEV ******** CATCHMEN 12.000 2.680 134.000 134.000 .000 10.250 74.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000	ne(s) of control of co	99999 hectares (PERV) met: t (%) t Impervior ith Zero D l=SCS CN/C "n" ve No or C efficient Abstractic l=Trianglr .000 .897 .209	res pth ; 2=Horton on ; 2=Rectan 1.567 .514	glr; 3=SWM HYD; 1.567 c.m/s C perv/imperv/	; 4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ******** ELOPMENT NORTH C ********* T ID No.6 99999 Area in hectar Length (PERV) Gradient (%) Per cent Imper Length (IMPERV %Imp. with Zer Option 1=SCS C	factor ep cches 1.522 1.522 F SEGMENT 1 - es metres vious o Dpth	1.522 c.m/s	4	3 lir ******** PROP DEV ******** CATCHMER 12.000 2.680 134.000 1.000 35.000 11 .250 74.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000 6.980	ne(s) of control of co	99999 hectares (PERV) met: t (%) t Impervior (IMPERV) ith Zero D 1=SCS CN/C "n" ve No or C sfficient Abstracti 1=Trianglr .000 .897 .209 99999 hectares	res pth ; 2=Horton on ; 2=Rectan 1.567 .514	glr; 3=SWM HYD; 1.567 c.m/s C perv/imperv/	; 4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ************************************	factor ep sches 1.522 1.522 1.522 F SEGMENT 1 - es metres vious) o Dpth N/C; 2=Horton;	1.522 c.m/s POND P10	4	3 lir ******** PROP DEN ********* CATCHMEN 12.000 2.680 134.000 1.000 35.000 14.000 .000 10.250 74.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000 6.980 216.000	ne(s) of Comments	99999 hectares (PERV) met: t (%) t Impervio: (IMPERV) ith Zero D; l=SCS CN/C "n" ve No or C efficient Abstractic 1=Trianglr .000 .897 .209 99999 hectares (PERV) met:	res pth ; 2=Horton on ; 2=Rectan 1.567 .514	glr; 3=SWM HYD; 1.567 c.m/s C perv/imperv/	; 4=Lin. Reserv
14 35	.000 .000 0 COMBINE 1 Jun. START 1 1=2. COMMENT 3 lin. ********* PROP DEVI ********** CATCHMEN 10.000 4.050 164.000 1.000 70.000 164.000 .000 1 .250 74.000	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ******** T ID No.6 99999 Area in hectar Length (PERV) Gradient (%) Per cent Imper Length (IMPERV XIMP. with Zer Option 1=SCS C Manning "n" SCS Curve No o	factor ep ches 1.522 1.522 1.522 F SEGMENT 1 - es metres vious o Dpth N/C; 2=Horton; or C	1.522 c.m/s POND P10	4	3 lir ******** PROP DEV ******** CATCHMER 12.000 2.680 134.000 1.000 35.000 11 .250 74.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000 6.980	ne(s) of control of co	99999 hectares (PERV) met: t (%) t Impervior (IMPERV) ith Zero D 1=SCS CN/C "n" ve No or C efficient Abstracti 1=Trianglr .000 .897 .209 99999 hectares (PERV) met: t (%)	res pth ; 2=Horton ; 2=Rectan 1.567 .514 1.567	glr; 3=SWM HYD; 1.567 c.m/s C perv/imperv/	; 4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ******** ELOPMENT NORTH C ******** T T T T T T T T T T T T T T T	factor ep sches 1.522 1.522 1.522 fr SEGMENT 1 - es metres vious o Dpth nn/C; 2=Horton; or C	1.522 c.m/s POND P10	4	3 lir ******** PROP DEV ******** 12.000 2.680 134.000 1.000 35.000 134.000 .000 100 8.924 1 ADD RUNC CATCHMER 13.000 6.980 216.000 1.000	ne(s) of continuous co	99999 hectares (PERV) met: t (%) t Imperviol (IMPERV) ith Zero D 1=SCS CN/C "n" ve No or C efficient Abstract 1=Trianglr .000 .897 .209 99999 hectares (PERV) met: t (%)	res pth ; 2=Horton ; 2=Rectan 1.567 .514 1.567	glr; 3=SWM HYD; 1.567 c.m/s C perv/imperv/	; 4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-res 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ********* T ID No.6 99999 Area in hectar Length (PERV) Gradient (%) Per cent Imper Length (IMPERV KIMP. with Zer Option 1=SCS C Manning "n" SCS Curve No c Ia/S Coefficie Initial Abstra	factor ep ches 1.522 1.522 1.522 F SEGMENT 1 - es metres vious) o Dpth N/C; 2=Horton; or C int cition	1.522 c.m/s POND P10	15 4	3 lir ********* PROP DEV ********* CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 10.250 74.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000 6.980 216.000 1.000 70.000	ne(s) of control of co	99999 hectares (PERV) met: t (%) t Impervior (IMPERV) ith Zero D 1=SCS CN/C "n" ve No or C efficient Abstracti 1=Trianglr .000 .897 .209 99999 hectares (PERV) met: t (%)	res pth ; 2=Horton on ; 2=Rectan 1.567 .514 1.567 res	glr; 3=SWM HYD; 1.567 c.m/s C perv/imperv/	; 4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-res 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ********* T ID No.6 99999 Area in hectar Length (PERV) Gradient (%) Per cent Imper Length (IMPERV KIMP. with Zer Option 1=SCS C Manning "n" SCS Curve No c Ia/S Coefficie Initial Abstra	factor ep ches 1.522 1.522 1.522 F SEGMENT 1 - es metres vious) o Dpth N/C; 2=Horton; or C int cition	1.522 c.m/s POND P10 ; 3=Green-Ampt; 4=Repeat	15 4	3 lir ******** PROP DEN ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 10.000 250 74.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000 6.980 216.000 1.000 70.000 216.000	ne(s) of control of co	99999 hectares (PERV) met: t (%) t Impervior (IMPERV) ith Zero D 1=SCS CN/C "n" ve No or C efficient Abstracti 1=Trianglr .000 .897 .209 99999 hectares (PERV) met: t (%) t Impervior (IMPERV) it impervior (IMPERV) ith Zero D	pth; 2=Horton on; 2=Rectan 1.567 .514 1.567 res	glr; 3=SWM HYD; 1.567 c.m/s C perv/imperv/	; 4=Lin. Reserv /total
14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ******** T ID No.6 99999 Area in hectar Length (PERV) Gradient (%) Per cent Imper Length (IMPERV XIMP. with Zer Option 1=SCS C Manning "n" SCS Curve No c Ia/S Coefficier Option 1=Trian 612 .000 308 .889	factor ep cches 1.522 1.522 1.522 0F SEGMENT 1 - es metres vious 0 Dpth mN/C; 2=Horton; or C ent cction egglr; 2=Rectang	1.522 c.m/s POND P10 ; 3=Green-Ampt; 4=Repeat glr; 3=SWM HYD; 4=Lin. Rese	15 4	3 lir ********** PROP DEV ********** CATCHMER 12.000 2.680 134.000 1.000 35.000 11.000 374.000 10.000 10.000 4.000 10.000 10.000 10.000 216.000 10.000 10.000 216.000 10.000 216.000 10.000 216.000 10.000	ne(s) of control of co	99999 hectares (PERV) met: t (%) t Impervio: (IMPERV) ich Zero D 1=SCS CN/C "n" ve No or C efficient Abstractic 1=Trianglr .000 .897 .209 99999 hectares (PERV) met: t (%) t Impervio: (IMPERV) ich Zero D 1=SCS CN/C	pth; 2=Horton on; 2=Rectan 1.567 .514 1.567 res	; 3=Green-Ampt; glr; 3=SWM HYD; 1.567 c.m/s C perv/imperv/ 1.567 c.m/s	; 4=Lin. Reserv /total
14 35	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest NO. of sub-res 1077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ************************************	factor ep sches 1.522 1.522 1.522 1.522 0F SEGMENT 1 - es metres vious) o Dpth int(C; 2=Horton) or C int sction igglr; 2=Rectang 1.522 .715	1.522 c.m/s POND P10 ; 3=Green-Ampt; 4=Repeat glr; 3=SWM HYD; 4=Lin. Rese 1.522 c.m/s C perv/imperv/total	15 4	3 lir ********* PROP DEV ********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 14.000 .000 10.250 74.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000 6.980 216.000 1.000 70.000 216.000 .000 1.250 74.000	ne(s) of control of co	99999 hectares (PERV) met: t (%) t Impervior (IMPERV) ith Zero D 1=SCS CN/C "n" ve No or C efficient Abstractic 1=Trianglr .000 .897 .209 99999 hectares (PERV) met: t (%) t Impervior (IMPERV) ith Zero D 1=SCS CN/C "n" ve No or C	res us pth ; 2=Horton on ; 2=Rectan 1.567 .514 1.567 res us pth ; 2=Horton	; 3=Green-Ampt; glr; 3=SWM HYD; 1.567 c.m/s C perv/imperv/ 1.567 c.m/s	; 4=Lin. Reserv /total
14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ********** T ID No.6 99999 Area in hectar Length (PERV) Gradient (%) Per cent Imper Length (IMPERV %Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No co In/S Coefficie	factor ep sches 1.522 1.522 1.522 1.522 0F SEGMENT 1 - es metres vious n) o Dpth N/C; 2=Horton or C int sction glr; 2=Rectang 1.522	1.522 c.m/s POND P10 ; 3=Green-Ampt; 4=Repeat glr; 3=SWM HYD; 4=Lin. Reseat	15 4	3 lir ******** PROP DEN ******** CATCHMEN 12.000 134.000 134.000 10.000 11.250 74.000 100 8.924 1 ADD RUNC CATCHMEN 13.000 6.980 216.000 1.000 216.000 1.000 70.000 2250 74.000 1.000 1.000 1.000 70.000 216.000 1.000	ne(s) of control of co	99999 hectares (PERV) met: t (%) t Impervio ith Zero D i=SCS CN/C "n" ve No or C efficient 209 99999 hectares (PERV) met: t (%) t Impervio ith Zero D i=Trianglr .000 .897 .209 99999 hectares (PERV) met: t (%) t Impervio ith Zero D or C efficient	res pth ; 2=Horton pn 1.567 .514 1.567 res us pth ; 2=Horton	; 3=Green-Ampt; glr; 3=SWM HYD; 1.567 c.m/s C perv/imperv/ 1.567 c.m/s	; 4=Lin. Reserv /total
14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	Zero lag Beta weighting Routing timest No. of sub-rea 077 1.522 ction Node No. 077 1.522 ero; 2=Define e(s) of comment ********** T ID No.6 99999 Area in hectar Length (PERV) Gradient (%) Per cent Imper Length (IMPERV %Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No co In/S Coefficie	factor ep sches 1.522 1.522 1.522 1.522 0F SEGMENT 1 - es metres vious) o Dpth int(C; 2=Horton) or C int sction igglr; 2=Rectang 1.522 .715	1.522 c.m/s POND P10 ; 3=Green-Ampt; 4=Repeat glr; 3=SWM HYD; 4=Lin. Rese 1.522 c.m/s C perv/imperv/total	15 4	3 lir ********* PROP DEV ********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 14.000 .000 10.250 74.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000 6.980 216.000 1.000 70.000 216.000 .000 1.250 74.000	ne(s) of control of co	99999 hectares (PERV) met: t (%) t Impervior (IMPERV) ith Zero D 1=SCS CN/C "n" ve No or C efficient Abstracti 1=Trianglr .000 .897 .209 99999 hectares (PERV) met: t (%) t Impervior (IMPERV) ith Zero D 1=SCS CN/C "n" ve No or C efficient Abstracti Abstracti Abstracti Abstracti Abstracti Abstracti Abstracti Abstracti Abstracti	pth ; 2=Horton on .514 1.567 res us pth ; 2=Horton	glr; 3=SWM HYD; 1.567 c.m/s C perv/imperv/ 1.567 c.m/s	; 4=Lin. Reserv /total

	.308	.897	.721	C perv/imperv/total		74.000		ve No or (2	
15	ADD RUNOFF 1.083	1.292	1.567	1.567 c.m/s		.100 8.924		efficient Abstract:	lon	
4	CATCHMENT	1.232	1.307	1.507 C.M/S		1				glr; 3=SWM HYD; 4=Lin. Reserv
		No.ó 99999					.980	.061	.484	.484 c.m/s
		a in hectare					.308	.910	.729	C perv/imperv/total
		ngth (PERV) m	etres		15	ADD RUNO			.484	
		dient (%) cent Imperv	ious		9	ROUTE 1.	.980	2.030	.484	.484 c.m/s
		ngth (IMPERV)	2005		-	.000	Conduit	Length		
		np. with Zero				.000		uit define	ed	
		ion 1=SCS CN ning "n"	/C; 2=Horto	n; 3=Green-Ampt; 4=Repeat		.000	Zero lag	g ighting fa	ator	
		Curve No or	С			.000		timestep	ICCOL	
	.100 Ia	S Coefficien				0	No. of	sub-reach	es	
		tial Abstrac					.980	2.030	2.030	.484 c.m/s
	1 Op:	ion l=Triang. 1.292	1r; 2=Recta 1.567	nglr; 3=SWM HYD; 4=Lin. Reserv 1.567 c.m/s	17	COMBINE 2 Jun	nction Node	e No		
	.308	.898	.662	C perv/imperv/total				2.030	2.030	2.514 c.m/s
15	ADD RUNOFF				14	START				
	.099	1.367	1.567	1.567 c.m/s	_		Zero; 2=De	fine		
27	HYDROGRAPH D: 5 is # of	SPLAY Hyeto/Hydrog:	ranh chosen		4	CATCHMEN 43.000	NT ID No.ó	99999		
	Volume = .					.330		hectares		
10	POND					47.000		(PERV) me	res	
	5 Depth - Disc					1.000	Gradient			
	184.800 185.300	.000 .0140	.0 1142.0			35.000 47.000		t Impervio (IMPERV)	ous	
	186.100		3519.0			.000		ith Zero 1	Opth	
	186.500		4978.0			1	Option :	1=SCS CN/		; 3=Green-Ampt; 4=Repeat
	186.800		6222.0			.250	Manning		_	
	Peak Outflow Maximum Deptl		48 c.m/s 36 metres			74.000 .100		ve No or (efficient	3	
	Maximum Store		0. c.m			8.924		Abstract:	ion	
	.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
	3 line(s)	of comment			15	ADD RUNO	.308	.898	.515	C perv/imperv/total
		RICE RD CULVE	RT - OUTLET	A1	13		.031	.031	2.030	2.514 c.m/s
	*******	****			4	CATCHMEN				
17	COMBINE					44.000	ID No.ó			
	1 Junction	1.367	.048	1.583 c.m/s		6.400 207.000		hectares (PERV) me		
14	START	1.307	.040	1.565 C.M/B		1.000	Gradien		res	
		2=Define				70.000		t Impervi	ous	
35	COMMENT					207.000		(IMPERV)		
	3 line(s)	of comment				.000		ith Zero 1		; 3=Green-Ampt; 4=Repeat
			OUAKER RD	& WEST OF RICE RD PON		.250	Manning		2; Z=HOICON;	; 5=Green-Ampt; 4=Repeat
	*******		~-			74.000		ve No or (2	
4	CATCHMENT					.100		efficient		
		No.ó 99999 a in hectare	_			8.924 1		Abstract:		glr; 3=SWM HYD; 4=Lin. Reserv
		gth (PERV) m					.990	.031	2.030	2.514 c.m/s
		dient (%)					.308	.896	.719	C perv/imperv/total
		cent Imperv	ious		15	ADD RUNO				
		ngth (IMPERV) mp. with Zero	Destala		9	ROUTE	.990	1.014	2.030	2.514 c.m/s
				n; 3=Green-Ampt; 4=Repeat	,	.000	Conduit	Length		
	.250 Man	ning "n"				.000	No Cond	uit define	ed	
		Curve No or				.000	Zero la			
		'S Coefficien tial Abstrac				.000		ighting fa timestep	ictor	
				nglr; 3=SWM HYD; 4=Lin. Reserv		0		sub-reach	es	
	.484	.000	.048	1.583 c.m/s			.990	1.014	1.014	2.514 c.m/s
15	.308 ADD RUNOFF	.902	.457	C perv/imperv/total	17	COMBINE 2 Jun	nction Node	- **-		
13	.484	.484	.048	1.583 c.m/s				1.014	1.014	3.528 c.m/s
9	ROUTE				14	START				
		duit Length					Zero; 2=Dei	fine		
		Conduit define conduit	ned		18	CONFLUEN 2 Jun	NCE nction Node	o No		
		a weighting :	factor					3.528	1.014	.000 c.m/s
	.000 Ros	ting timester	p		4	CATCHMEN				
	0 No	of sub-reach	hes			45.000	ID No.ó			
17	.484	.484	.484	1.583 c.m/s		1.030 83.000		hectares (PERV) me	res	
		Node No.				1.000	Gradien		- 30	
	.484	.484	.484	.484 c.m/s		60.000	Per cent	t Impervi	ous	
14	START	2-Defi				83.000		(IMPERV)		
4	1 1=Zero; CATCHMENT	2=Define				.000 1		ith Zero 1 1=SCS CN/0		; 3=Green-Ampt; 4=Repeat
-		No.ó 99999				.250	Manning			,
	.690 Are	a in hectare				74.000		ve No or	2	
		ngth (PERV) m ndient (%)	etres			.100 8.924		efficient Abstract:	lon	
		dient (%) cent Imperv	ious			8.924				glr; 3=SWM HYD; 4=Lin. Reserv
	68.000 Le	gth (IMPERV)					.147	3.528	1.014	.000 c.m/s
	.000 %II	np. with Zero					.308	.899	.662	C perv/imperv/total
	1 Opt	ion 1=SCS CN ning "n"	/C; Z=Horto	n; 3=Green-Ampt; 4=Repeat	15	ADD RUNO		3.648	1.014	.000 c.m/s
	. 250 Mas				27		APH DISPLA		1.011	. 550 C.M/B
		Curve No or	C				# of Hyeto		anh ahoaon	
	74.000 SC:	S Coefficien	t							
	74.000 SC: .100 Ia. 8.924 In:	S Coefficient	t tion	ngly. 2-dim into 4-74- 5-	. 10	Volume	= .112098			
	74.000 SC: .100 Ia: 8.924 In: 1 Op:	S Coefficient tial Abstraction 1=Triang	t tion lr; 2=Recta	nglr; 3=SWM HYD; 4=Lin. Reserv .484 c.m/s	. 10	Volume POND	= .112098	83E+05 c.	n	
	74.000 SC: .100 Ia. 8.924 In:	S Coefficient	t tion	nglr; 3=SWM HYD; 4=Lin. Reserv .484 c.m/s C perv/imperv/total	10	Volume POND		83E+05 c.1 e - Volume	n	
15	74.000 SC: .100 Ia. 8.924 In: 1 Op: .061 .308 ADD RUNOFF	S Coefficient tial Abstraction 1=Triang .000 .898	t tion lr; 2=Recta .484 .515	.484 c.m/s C perv/imperv/total	10	Volume POND 6 Depth - 186.000 186.800	= .112098 - Discharge .00	83E+05 c.m e - Volume 00 50 4	n sets .0	
	74.000 SC: .100 Ia 8.924 In: 1 Op: .061 .308 ADD RUNOFF	'S Coefficien tial Abstraction 1=Triang .000	t tion lr; 2=Recta .484	.484 c.m/s	10	Volume POND 6 Depth - 186.000 186.800 187.300	= .112098 - Discharge .00 .059	83E+05 C.1 e - Volume 00 50 40 30 70	n sets .0 048.0 091.0	
15 4	74.000 SC: .100 Ia. 8.924 In: .061 .308 ADD RUNOFF .061 CATCHMENT	S Coefficient tial Abstraction 1=Triang .000 .898	t tion lr; 2=Recta .484 .515	.484 c.m/s C perv/imperv/total	10	Volume POND 6 Depth - 186.000 186.800	= .112098 - Discharge .00 .059	83E+05 c.i e - Volume 00 50 4 30 70 70 8	n sets .0	
	74.000 SC: .100 Ia. 8.924 In. 1 Op: .061 .308 ADD RUNOFF .061 CATCHMENT 42.000 ID	S Coefficiential Abstraction 1=Triang .000 .898	t tion lr; 2=Recta .484 .515	.484 c.m/s C perv/imperv/total	. 10	Volume POND 6 Depth - 186.000 186.800 187.300 187.500	= .112098 - Discharge .00 .059	83E+05 c.1 e - Volume 00 50 41 30 70 70 86 57 10	n sets .0 048.0 091.0	
	74.000 SC: .100 Ia. 8.924 In001 .308 ADD RUNOFF .061 CATCHMENT 42.000 ID 12.640 Ar. 290.000 Lei	S Coefficiential Abstraction 1=Triang000898061 No.6 99999 ea in hectare: ggth (PERV) m	t tion 1r; 2=Recta .484 .515 .484	.484 c.m/s C perv/imperv/total	10	Volume POND 6 Depth - 186.000 187.300 187.500 187.800 188.000 Peak Out	= .112098 - Discharge .00 .055 .075 .11 .22 .88	83E+05 c.1 e - Volume 00 50 41 30 70 70 88 57 10 80 120	n sets .0 048.0 091.0 424.0 5552.0 094.0 8 c.m/s	
	74.000 SC: .100 Ia. 8.924 In061 .308 ADD RUNOFF .061 CATCHMENT 42.000 ID 12.640 Ar. 290.000 Len 1.000 Gr.	S Coefficiential Abstraction 1=Triang000898061 No.6 99999 ha in hectare: gth (PERV) middient (%)	t tion lr; 2=Recta .484 .515 .484	.484 c.m/s C perv/imperv/total	. 10	Volume POND 6 Depth - 186.000 187.300 187.500 187.800 188.000 Peak Out	= .112096 - Discharge	83E+05 c.1 e - Volume 00 50 4 30 70 70 8 57 10 80 12 187.59	n e sets .0 048.0 091.0 424.0 552.0 094.0 3 c.m/s	
	74.000 SC: .100 Ia. 8.924 In. 2061 .308 ADD RUNOFF .061 CATCHMENT 42.000 ID. 12.640 Ar. 290.000 Let 1.000 Pe: 70.000 Pe:	S Coefficiential Abstraction 1=Triang .000 .898 .061 No.6 99999 as in hectare .gth (PERV) medient (%) cent Imperv.	t tion lr; 2=Recta .484 .515 .484	.484 c.m/s C perv/imperv/total	. 10	Volume POND 6 Depth - 186.000 187.300 187.500 187.800 188.000 Peak Out Maximum	= .112096 - Discharge	83E+05 c.1 e - Volume 00 50 4 30 70 70 8 57 10 80 12 187.59	n sets .0 048.0 091.0 424.0 5552.0 094.0 8 c.m/s	.000 c.m/s
	74.000 SC: .100 Ia. 8.924 In. 200 10308 ADD RUNOFF .061 CATCHMENT 42.000 ID 12.640 Ar 290.000 Le 1.000 GP: .70.000 Pe: .290.000 Le	S Coefficiential Abstraction 1=Triang000898061 No.6 99999 ha in hectare: gth (PERV) middient (%)	ttion lr; 2=Recta .484 .515 .484 s etres ious	.484 c.m/s C perv/imperv/total	10	Volume POND 6 Depth - 186.000 187.300 187.500 187.800 188.000 Peak Out Maximum	= .112096 - Discharge	83E+05 c.1 e - Volume 00 50 4 30 7 70 8 57 10 80 12 187.59 9121	n sets .0 048.0 091.0 424.0 0552.0 094.0 3 c.m/s 3 metres	.000 c.m/s

14	START		.250	Manning '				
2.5	1 1=Zero; 2=Define		74.000	SCS Curve		:		
35	COMMENT 3 line(s) of comment		.100 8.924	Initial A		OT		
	**************************************		1				anglr; 3=SWM HYD; 4=Lin	n. Reserv
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD		.0		.097	1.392	1.392 c.m/s	
	***********		.30		.899	.367	C perv/imperv/total	
4	CATCHMENT	15	ADD RUNOF					
	2.000 ID No.6 99999	_	.0	59 .	156	1.392	1.392 c.m/s	
	9.020 Area in hectares	9	ROUTE	a 4 4 - 1				
	245.000 Length (PERV) metres 1.000 Gradient (%)		.000	Conduit I		.d		
	40.000 Per cent Impervious		.000	Zero lag	c derine	···		
	245.000 Length (IMPERV)		.000	Beta weig	hting fa	ctor		
	.000 %Imp. with Zero Dpth		.000	Routing t				
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		0	No. of st	b-reache	s		
	.250 Manning "n"			59 .	156	.156	1.392 c.m/s	
	74.000 SCS Curve No or C	17	COMBINE					
	.100 Ia/S Coefficient			tion 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:	ro. 2-Dof	no			
	.308 .904 .547 C perv/imperv/total	35	COMMENT	ro; 2=Defi	me			
15	ADD RUNOFF			(s) of cor	ment			
	.824 .824 .198 .198 c.m/s			******				
9	ROUTE		EXISTING A	AREA WEST	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.6				
	.000 Beta weighting factor		13.940	Area in l				
	.000 Routing timestep		305.000	Length (I		res		
	0 No. of sub-reaches .824 .824 .198 c.m/s		1.000 40.000	Gradient Per cent				
17	.024 .024 .190 C.M/S COMBINE		305.000	Length (ous		
Ι/	2 Junction Node No.		.000	%Imp. wit		mth		
	.824 .824 .824 .877 c.m/s		1				on; 3=Green-Ampt; 4=Rep	neat
14	START		.250	Manning '		., 2-11010	on, 3-dreen Ampe, 4-ke	peac
	1 1=Zero; 2=Define		74.000	SCS Curve				
18	CONFLUENCE		.100	Ia/S Coef				
	2 Junction Node No.		8.924	Initial A		.on		
	.824 .877 .824 .000 c.m/s		1	Option 1=	Trianglr	; 2=Recta	anglr; 3=SWM HYD; 4=Lin	n. Reserv
35	COMMENT		1.2	70 .	.000	.156	1.548 c.m/s	
	<pre>3 line(s) of comment</pre>		.30	08 .	910	.549	C perv/imperv/total	
	**********	15	ADD RUNOF					
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD		1.2	70 1.	270	.156	1.548 c.m/s	
	**********	9	ROUTE					
4	CATCHMENT		.000	Conduit I		_		
	3.000 ID No.6 99999		.000	No Condu	t define	ed		
	5.680 Area in hectares 195.000 Length (PERV) metres		.000	Zero lag				
	1.000 Gradient (%)		.000	Beta weight		CCOL		
	40.000 Per cent Impervious		0	No. of st		s		
	195.000 Length (IMPERV)		1.2		270	1.270	1.548 c.m/s	
	.000 %Imp. with Zero Dpth	17	COMBINE					
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>			tion Node	No.			
	.250 Manning "n"		1.2	70 1.	270	1.270	2.818 c.m/s	
	74.000 SCS Curve No or C	14	START					
	.100 Ia/S Coefficient		1 1=Zer	ro; 2=Defi	ne			
	8.924 Initial Abstraction	18	CONFLUENCE					
	Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv			tion Node				
	.515 .877 .824 .000 c.m/s		1.2	70 2.	818	1.270	.000 c.m/s	
	.308 .894 .543 C perv/imperv/total	35	COMMENT					
15	ADD RUNOFF		3 line	(s) of cor	ment			
9	.515 1.392 .824 .000 c.m/s ROUTE				יים מם משי	י מדייע הפ	WELLAND MUNICIPAL BOUR	NTD X
,	.000 Conduit Length		******		CER KD IC	CIII OF	WELLAND MONICIPAL BOOK	NDA
	.000 No Conduit defined	4	CATCHMENT					
	.000 Zero lag		501.000	ID No.6	9999			
	.000 Beta weighting factor		1.570	Area in h				
	.000 Routing timestep		102.000	Length (I	PERV) met	res		
	0 No. of sub-reaches		1.000	Gradient	(%)			
	.515 1.392 1.392 .000 c.m/s		70.000	Per cent		ous		
17	COMBINE		102.000	Length (1				
	2 Junction Node No.		.000	%Imp. wit				
	.515 1.392 1.392 c.m/s		1			; 2=Hort	on; 3=Green-Ampt; 4=Rep	peat
14	START 1 1=Zero; 2=Define		.250 74.000	Manning '				
35	COMMENT		.100	Ia/S Coef		-		
	3 line(s) of comment		8.924	Initial A		.on		
	**********		1				anglr; 3=SWM HYD; 4=Lin	n. Reserv
	PROP DEVELOPMENT SOUTH OF QUAKER RD, EAST OF RICE RD		. 2	50 2	818	1.270	.000 c.m/s	
	*********		.30	. 80	901	.723	C perv/imperv/total	
4	CATCHMENT	15	ADD RUNOF	F				
	50.000 ID No.6 99999			50 3.	.038	1.270	.000 c.m/s	
	3.420 Area in hectares	9	ROUTE					
	151.000 Length (PERV) metres		.000	Conduit I				
	1.000 Gradient (%)		.000	No Condui	t define	ed		
	10.000 Per cent Impervious 151.000 Length (IMPERV)		.000	Zero lag	htir- f-	ator		
	151.000 Length (IMPERV) .000 %Imp. with Zero Dpth		.000	Beta weig		CLUI		
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		.000	No. of su		s		
	.250 Manning "n"		-		.038	3.038	.000 c.m/s	
	74.000 SCS Curve No or C	35	COMMENT				· · · · · ·	
	.100 Ia/S Coefficient			(s) of cor	ment			
	8.924 Initial Abstraction		******	******				
	<pre>Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>			OF RICE RI	CULVERI	- OUTLE	T A2	
	.097 .000 1.392 1.392 c.m/s		******	*****				
	.308 .892 .367 C perv/imperv/total	17	COMBINE					
15	ADD RUNOFF			tion Node		2 022	4 601 - '	
4	.097 .097 1.392 1.392 c.m/s	14	.2	50 3.	.038	3.038	4.621 c.m/s	
-	51.000 ID No.6 99999	14		ro; 2=Defi	ne			
	1.980 Area in hectares	35	COMMENT	,				
	115.000 Length (PERV) metres	23		(s) of cor	ment			
	1.000 Gradient (%)		*****		-			
	10.000 Per cent Impervious				OUTH OF C	UAKER RD	- QUALLITY CONTROL ON	LY
	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	9999			

	.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.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>
	.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 200.000 ID No.6 99999		.250 Manning "n"
	970 Area in hectares		74.000 SCS Curve No or C
	.970 Area in hectares 80.416 Length (PERV) metres		.100 Ia/S Coefficient
	.970 Area in hectares 80.416 Length (PERV) metres 1.000 Gradient (%)		
	80.416 Length (PERV) metres		.100 Ia/S Coefficient 8.924 Initial Abstraction
	80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV)		.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
	80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth	15	.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
	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		.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
	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	.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
	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 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
	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"		.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
	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	9	1.100
	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. Reserv032 5.253 .639 .000 c.m/s	9	1.100
	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 Mamning "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 .030 .000 cm/s .308 .898 .367 C perv/imperv/total	9	1.00 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
35	80.416 Length (PERV) metres 1.000 Gradient (%) 10.000 Per cent Impervious 80.416 Length (IMPERV) .000 %Imp. with Zero Dpth .0ption 1=5CS 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 .032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT	9	1.100
35	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 Mamning "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 .030 .000 cm/s .308 .898 .367 C perv/imperv/total	9	1.100
35	80.416	9	1.00 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
	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	1.00 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 COMENINE 2 Junction Node No. 1.776 1.776 1.776 2.771 c.m/s CONFIUENCE
35	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9	1.100
15	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 .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ***********************************	9 17 18	1.00
	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	1.100
15	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 17 18	1.00
15	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=5CS 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 17 18	1.00
15	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 17 18	1.00 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
15	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 17 18	1.00 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 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 (PERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious
15 35	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1.00 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 2.771 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)
15 35	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 17 18	1.00 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 (FERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth
15 35	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1.00 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 CATCHRENT 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
15 35	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 17 18	1.00 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 (FERV) metres 1.000 Gradient (%) 60.000 Per cent Impervious 92.000 Length (IMPERV) .000 %Imp. with Zero Dpth
15 35	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1.00 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 2.771 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 .100 II S/S Coefficient
15 35	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1.00 Ia/S Coefficient 8.924 Initial Abstraction 1
15 35	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18	1.00 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 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
15 35	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 17 18	1.00 Ia/S Coefficient 8.924 Initial Abstraction 1
15 35	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 17 18	1.00 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 CATCHRENT 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
15 35	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	1.00 Ia/S Coefficient 8.924 Initial Abstraction 1
15 35	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1.00 Ia/S Coefficient 8.924 Initial Abstraction 1
15 35	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 17 18 4	1.00 Ia/S Coefficient 8.924 Initial Abstraction 1
15 35 4	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 17 18 4	1.100 Ia/S Coefficient 8.924 Initial Abstraction 1
15 35	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1.100 Ia/S Coefficient 8.924 Initial Abstraction 1
15 35 4	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1.100 Ia/S Coefficient 8.924 Initial Abstraction 1
15 35 4	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1.00 IA/S Coefficient 8.924 Initial Abstraction 1
15 35 4	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1.100 IA/S Coefficient 8.924 Initial Abstraction 1
15 35 4	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. Reservence	9 17 18 4	1.00 IA/S Coefficient 8.924 Initial Abstraction 1
15 35 4	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1.100 Ia/S Coefficient 8.924 Initial Abstraction 1
15 35 4	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1.100 IA/S Coefficient 8.924 Initial Abstraction 1
15 35 4	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. Reserv032 5.253 .639 .000 c.m/s .308 .898 .367 C perv/imperv/total COMMENT 3 line(s) of comment ************************************	9 17 18 4	1.100 Ia/S Coefficient 8.924 Initial Abstraction 1

	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		238.000 Length (PERV) metres .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

```
.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
```

```
.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
```

35	COMMENT					82.000		PERV) met	Les		
	3 line	e(s) of comment	*******	*****		1.000 10.000	Gradient	(%) Impervio			
	100-YEAR	STORM EVENT				82.000	Length (45		
			******	******		.000		th Zero D	pth		
2	STORM					1			; 2=Horton	; 3=Green-Ampt;	4=Repeat
	1		ff;3=User;4=Cdn1l	hr;5=Historic		.250	Manning				
	1020.000 4.700	Coefficient a Constant b	(min)			74.000 .100		e No or C			
	.731	Exponent c	(mili)			8.924		Abstraction	on		
	.450	Fraction to pe	ak r			1				glr; 3=SWM HYD;	4=Lin. Reserv
	240.000	Duration ó 24					.054	.735	1.832	1.832 c.m/s	
_			otal depth				. 367	.912	.422	C perv/imperv/	total
3	IMPERVIO		N/C. 2-Horton. 2	=Green-Ampt; 4=Repeat	15	ADD RUNC	054	.783	1.832	1.832 c.m/s	
	.015	Manning "n"	N/C, Z-HOICOII, 3	-Green-Ampt, 4-Repeat	10	POND .	.034	.703	1.032	1.032 C.III/S	
	98.000	SCS Curve No o	r C			6 Depth -	- Discharge	- Volume	sets		
	.100	Ia/S Coefficie				184.800	.00	0	.0		
	.518	Initial Abstra	ction			185.750	.021		1.0		
35	COMMENT	. (-) - 6				186.000 186.250	.023		03.0		
		e(s) of comment				186.500	.026		91.0 65.0		
	EXISTING	RES. WEST OF SE	GMENT 1			186.700	1.24		70.0		
	******	*****				Peak Out	flow =	.105	c.m/s		
4	CATCHMENT					Maximum					
	1.000	ID No.6 99999					Storage =	1804.			
	17.520 343.000	Area in hectar Length (PERV):			17	COMBINE	.054	.783	.105	1.832 c.m/s	
	1.000	Gradient (%)	mecres		-,		nction Node	No.			
	35.000	Per cent Imper	vious				.054	.783	.105	1.857 c.m/s	
	343.000	Length (IMPERV			14	START					
	.000	%Imp. with Zer					Zero; 2=Def	ine			
	.250	Option 1=SCS C Manning "n"	N/C; 2=Horton; 3:	=Green-Ampt; 4=Repeat	18	CONFLUEN 1 Jun	NCE nction Node	No.			
	74.000	SCS Curve No o	r C					.857	.105	.000 c.m/s	
	.100	Ia/S Coefficie			35	COMMENT			.205	1000 01111, 15	
	8.924	Initial Abstra	ction			3 lir	ne(s) of co	mment			
	1			; 3=SWM HYD; 4=Lin. Reserv			******				
		731 .000		.000 c.m/s			ED CHANNEL	- SEGMENT	1		
15	ADD RUNO	368 .925	.563 C 1	perv/imperv/total	4	CATCHMEN					
13		731 1.731	.000	.000 c.m/s	-	101.000	ID No.ó	99999			
35	COMMENT					.610		hectares			
		e(s) of comment				64.000		PERV) met	res		
		*****				1.000	Gradient				
		D CHANNEL - SEGM ******	ENT 1			10.000		Imperviou	us		
4	CATCHMEN					64.000 .000	Length (IMPERV) th Zero D			
-	100.000	ID No.6 99999				1				; 3=Green-Ampt;	4=Repeat
	2.020	Area in hectar	es			.250	Manning		•		
	116.000	Length (PERV)	metres			74.000		e No or C			
	.400	Gradient (%)				.100		fficient			
	15.000	Per cent Imper				8.924 1		Abstraction		-1 2 grav ram	4 Tites - December -
	116.000 .000	Length (IMPERV %Imp. with Zer				_		.=Triangir 857	; 2=Rectan	glr; 3=SWM HYD; .000 c.m/s	4=Lin. Reserv
	1			=Green-Ampt; 4=Repeat			.367	.914	.422	C perv/imperv/	total
	.250	Manning "n"	,, .		15	ADD RUNC				- F	
	74.000	SCS Curve No o					.038 1	.890	.105	.000 c.m/s	
	.100	Ia/S Coefficie			9	ROUTE					
	8.924 1	Initial Abstra				.000	Conduit				
		101 1.731		; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s		.000	Zero lag	it defined	1		
		368 .905		perv/imperv/total		.000		ghting fac	ctor		
35	COMMENT			• • • • • • • • • • • • • • • • • • • •		.000		timestep			
		e(s) of comment				0		ub-reaches			
		*****					.038 1	.890	1.890	.000 c.m/s	
		FUT ROADWAY CULV	ERT - SEGMENT 1		17	COMBINE 1 Jun	nction Node	No.			
15	ADD RUNOI							.890	1.890	1.890 c.m/s	
		101 1.832	.000	.000 c.m/s	14	START	1		1.000	C-III/ B	
9	ROUTE	-									
	.000						Zero; 2=Def	ine			
		Conduit Length			35	COMMENT					
	.000	No Conduit def			35	COMMENT	Zero; 2=Def				
	.000	No Conduit def Zero lag	ined		35	COMMENT 3 lin	ne(s) of co	mment	PCMENT 1	DOND D11	
	.000 .000	No Conduit def	ined		35	COMMENT 3 lin ******* PROP DEV		mment	EGMENT 1 -	POND P11	
	.000 .000 .000 .000	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea	ined factor ep ches		35 4	COMMENT 3 lin ****** PROP DEV ******* CATCHMEN	ne(s) of co ********** /ELOPMENT S *******	omment	EGMENT 1 -	POND P11	
	.000 .000 .000 .000	No Conduit def Zero lag Beta weighting Routing timest	ined factor ep ches	.000 c.m/s		COMMENT 3 lin ******* PROP DEV ******* CATCHMEN 12.000	ne(s) of co	omment OUTH OF SI	EGMENT 1 -	POND P11	
17	.000 .000 .000 .000 0	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832	ined factor ep ches	.000 c.m/s		COMMENT 3 lin ******* PROP DEV ******* CATCHMEN 12.000 2.680	ne(s) of co	omment OUTH OF SI 99999 hectares		POND P11	
17	.000 .000 .000 .000 0 .: COMBINE	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832	ined factor ep ches 1.832			COMMENT 3 lin ******** PROP DEV ******** CATCHMEN 12.000 2.680 134.000	ne(s) of co	OUTH OF SI 99999 hectares PERV) met		POND P11	
	.000 .000 .000 .000 0 COMBINE 1 June	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832	ined factor ep ches 1.832	.000 c.m/s .832 c.m/s		COMMENT 3 lin ********* PROP DEV ******** CATCHMEN 12.000 2.680 134.000 1.000	ne(s) of co	99999 hectares PERV) met:	res	POND P11	
17 14	.000 .000 .000 .000 0 COMBINE 1 June START	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832	ined factor ep ches 1.832			COMMENT 3 lin ******** PROP DEV ******** CATCHMEN 12.000 2.680 134.000	ne(s) of co	OUTH OF SI 99999 hectares PERV) metr : (%)	res	POND P11	
	.000 .000 .000 .000 0 COMBINE 1 June START	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No.	ined factor ep ches 1.832			COMMENT 3 lir ******* PROP DEV ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000	ne(s) of co	OUTH OF SI 99999 hectares PERV) metr : (%)	res	POND P11	
14	.000 .000 .000 .000 0 .: COMBINE 1 Jun .: START 1 1=Zc	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No.	ined factor ep ches 1.832			COMMENT 3 lin ******** PROP DEV ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000	ne(s) of co	omment OUTH OF SI 99999 hectares PERV) metric (%) Impervious IMPERV) th Zero Di	res us pth	POND P11 ; 3=Green-Ampt;	4=Repeat
14	.000 .000 .000 .000 0 COMBINE 1 Jun. .: START 1 1=Z. COMMENT 3 line	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment	ined factor ep ches 1.832 1.832 1	.832 c.m/s		COMMENT 3 lin ********* PROP DEV ********* CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 1 .250	ne(s) of co	99999 hectares PERV) metric (%): Imperviot IMPERV) th Zero Dj =SCS CN/C	res us pth ; 2=Horton		4=Repeat
14	.000 .000 .000 .000 0 COMBINE 1 Jun. .: START 1 1=Z. COMMENT 3 line	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment	ined factor ep ches 1.832	.832 c.m/s		COMMENT 3 lir ********* PROP DEV ********* CATCHMEN 12.000 2.680 134.000 1.000 35.000 1.000 1.000 1.000 74.000 74.000	ne(s) of co	99999 hectares PERV) metri (%) Impervious th Zero Di =SCS CN/C "n" e No or C	res us pth ; 2=Horton		4=Repeat
14	.000 .000 .000 .000 .000 	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment ************************************	ined factor ep ches 1.832 1.832 1	.832 c.m/s		COMMENT 3 lin ********* PROP DEV ********* CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 1 .250	ne(s) of co	99999 hectares PERV) metric (%): Imperviot IMPERV) th Zero Dj =SCS CN/C	res us pth ; 2=Horton		4=Repeat
14 35	.000 .000 .000 .000 .000 .000 COMBINE 1 June START 1 1=Ze COMMENT 3 1 int PROP DEVI	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment ************************************	ined factor ep ches 1.832 1.832 1	.832 c.m/s		COMMENT 3 lir ******** PROP DEV ******** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 11 .250 74.000 .100	ne(s) of co	99999 hectares PERV) met: (%) : Imperviou IMPERV) th Zero Dj =SCS CN/C "n" e No or C fficient Abstractic	res us pth ; 2=Horton		-
14 35	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment ************************************	factor ep ches 1.832 1.832 1 F SEGMENT 1 - POI	.832 c.m/s		COMMENT 3 ******* PROP DEV ********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 114.000 .000 1250 74.000 .100 8.924 1	ne(s) of cc ******** ******* ******* ****** ****	mment OUTH OF SI 99999 hectares PERV) metr (%) Impervion HMPERV) th Zero Dp =SCS CM/C "n" e No or C ffficient Abstractic =Triangir000	res pth ; 2=Horton on ; 2=Rectan 1.890	; 3=Green-Ampt; glr; 3=SWM HYD; 1.890 c.m/s	4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 aro; 2=Define a(s) of comment ********** I D No.6 99999 Area in hectar Length (PERV) : Length (PERV) :	factor ep ches 1.832 1.832 1 F SEGMENT 1 - POI	.832 c.m/s	4	COMMENT 3 lir ******** PROP DEV ********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 1 .250 74.000 .100 8.924	ne(s) of co	99999 hectares PERV) metric (%) (S) SCS CN/C "n" e No or C ffficient Abstractic =Trianglr	res us pth ; 2=Horton on ; 2=Rectan	; 3=Green-Ampt; glr; 3=SWM HYD;	4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment ************************************	ined factor ep ches 1.832 1.832 1 F SEGMENT 1 - POI es metres	.832 c.m/s		COMMENT 3 lir ******** PROF DEV ********* CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 1 .250 74.000 .100 8.924 1 ADD RUNC	ne(s) of co	mment OUTH OF SI 99999 hectares PERV) metri (%) Impervior IMPERV) th Zero Dr =SCS CN/C "n" e No or C ffficient Abstractic =Trianglr .000 .914	pth; 2=Horton on; 2=Rectan 1.890 .559	glr; 3=SWM HYD; 1.890 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment ************************************	factor ep ches 1.832 1.832 1 F SEGMENT 1 - POI es metres vious	.832 c.m/s	4	COMMENT 3 lir ******** PROP DEV ********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 1 .250 74.000 .100 8.924 1 .ADD RUNC	ne(s) of co	mment OUTH OF SI 99999 hectares PERV) metr (%) Impervion HMPERV) th Zero Dp =SCS CM/C "n" e No or C ffficient Abstractic =Triangir000	res pth ; 2=Horton on ; 2=Rectan 1.890	; 3=Green-Ampt; glr; 3=SWM HYD; 1.890 c.m/s	4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define a(s) of comment ********** I D No.6 99999 Area in hectar Length (PERV) Gradient (%) Per cent Imper Length (IMPERV	ined factor ep ches 1.832 1.832 1 F SEGMENT 1 - POI es metres vious)	.832 c.m/s	4	COMMENT 3 lir ******** PROF DEV ********* CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 1 .250 74.000 .100 8.924 1 ADD RUNC	ne(s) of co	99999 hectares PERV) metri (%) Impervious IMPERV) th Zero Dy =SCS CN/C "n" e No or C fficient Abstractic =Trianglr .000 .914	pth; 2=Horton on; 2=Rectan 1.890 .559	glr; 3=SWM HYD; 1.890 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment ******************* I D No.6 99999 Area in hectar Length (PERV); Gradient (%) Per cent Imper Length (IMPERV Almp. with Zer	factor ep ches 1.832 1.832 1 F SEGMENT 1 - POI es metres vious) o Dpth	.832 c.m/s	4	COMMENT 3 lir ******** PROP DEV ********** CATCHMEN 1.2.000 2.680 1.34.000 1.000 35.000 1.000 250 74.000 .100 8.924 1 ADD RUNC CATCHMEN	ne(s) of co	99999 hectares PERV) metri (%) Impervious IMPERV) th Zero Dy =SCS CN/C "n" e No or C fficient Abstractic =Trianglr .000 .914	pth; 2=Horton on; 2=Rectan 1.890 .559	glr; 3=SWM HYD; 1.890 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment ******************* I D No.6 99999 Area in hectar Length (PERV); Gradient (%) Per cent Imper Length (IMPERV Almp. with Zer	factor ep ches 1.832 1.832 1 F SEGMENT 1 - POI es metres vious) o Dpth	.832 c.m/s	4	COMMENT 3 1ir ******** PROP DEV ********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 10.250 74.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000	ne(s) of co	mment OUTH OF SI 99999 hectares PERV) metr (%) Impervion IMPERV) th Zero Di =SCS CN/C "n" e No or C ffficient Abstractic =Trianglr .000 .914 .262	res pth ; 2=Horton on; 2=Rectan 1.890 .559	glr; 3=SWM HYD; 1.890 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment ********** I ID No.6 99999 Area in hectar Length (PERV): Gradient (PERV): Per cent Imper Length (IMPERV) XImp. with Zer Option 1=SCS C Manning "n" SCS Curve No o	factor ep ches 1.832 1.832 1 F SEGMENT 1 - POI es metres vious) o Dpth N/C; 2=Horton; 3:	.832 c.m/s	4	COMMENT 3 1ir ******** PROP DEV ********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 1 .250 74.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000 6.980 216.000 1.000	ne(s) of co	mment 99999 hectares PERV) metri (%) Impervior IMPERV) th Zero Dj =SCS CN/C "n" ee No or C fficient Abstractic =Trianglr .000 .914 .262 99999 hectares PERV) metri (%)	pth ; 2=Horton on :; 2=Rectan 1.890 .559	glr; 3=SWM HYD; 1.890 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment ********* I D No.6 99999 Area in hectar Length (PERV): Gradient (%) Per cent Imper Length (IMPERV % Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No o Ia/S Coefficie	ined factor ep ches 1.832 1.832 1 Pr SEGMENT 1 - POI es metres vious) o Dpth N/C; 2=Horton; 3: r C nt	.832 c.m/s	4	COMMENT 3 lir ******** PROP DEV ********** CATCHMEN 1.2.000 2.680 1.34.000 1.000 35.000 1.000 1.000 74.000 1.000 4.924 1 ADD RUNC CATCHMEN 13.000 6.980 216.000 1.000 70.000	ne(s) of co	99999 hectares PERV) metri (%) Impervious IMPERV) th Zero Di =SCS CN/C "n" e No or C fficient Abstracti. =Trianglr000 .914 .262 99999 hectares PERV) metri (%) Impervious Impervious Impervious Impervious	pth ; 2=Horton on :; 2=Rectan 1.890 .559	glr; 3=SWM HYD; 1.890 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment ************ I D No.6 99999 Area in hectar Length (PERV); Gradient (%) Per cent Imper Length (IMPERV %Imp. with Zer Option 1=SCS C CManning "n" SCS Curve No o Ia/S Coefficie Initial Abstra	factor ep ches 1.832 1.832 1 F SEGMENT 1 - POI es metres vious) o Dpth N/C; 2=Horton; 3: r C nt ction	.832 c.m/s ND P10 =Green-Ampt; 4=Repeat	4	COMMENT 3 1ir ******** PROP DEV ********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 134.000 .000 1 .250 74.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000 6.980 216.000 1.000 70.000 216.000	ne(s) of continued to the continued to t	mment 99999 hectares PERV) metri (%) Impervio Impervio Impervio Inficient Abstractic =Trianglr .000 .914 .262 99999 hectares PERV) metri (%) Impervio Impervio Impervio	res pth ; 2=Horton on ; 2=Rectan 1.890 .559 1.890 res	glr; 3=SWM HYD; 1.890 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 aro; 2=Define a(s) of comment ********* ID No.6 99999 Area in hectar Length (PERV): Gradient (%) Per cent Imper Length (IMPERV) %Timp. with Zer Option 1=SCS C Manning "n" SCS Curve No o Ia/S Coefficie Initial Abstra Option 1=Trian	ined factor ep ches 1.832 1.832 1.832 1 F SEGMENT 1 - POI es metres vious) o Dpth N/C; 2=Horton; 3: or C nt ction glr; 2=Rectanglr	.832 c.m/s ND pl0 =Green-Ampt; 4=Repeat ; 3=SWM HYD; 4=Lin. Reserv	4	COMMENT 3 lir ******** PROP DEV ********** CATCHMEN 1.2.000 2.680 1.34.000 1.000 35.000 1.000 1.000 74.000 1.000 4.924 1 ADD RUNC CATCHMEN 13.000 6.980 216.000 1.000 70.000	ne(s) of co	mment OUTH OF SI 99999 hectares PERV) metri (%) Impervion IMPERV) th Zero Dj =SCS CN/C "n" e No or C fficient Abstractic =Trianglr .000 .914 .262 99999 hectares PERV) metri (%) Impervion IMPERV) th Zero Dj IMPERV)	pth ; 2=Horton on ; 2=Rectan 1.890 .559 1.890 res	; 3=Green-Ampt; glr; 3=SWM HYD; 1.890 c.m/s C perv/imperv/ 1.890 c.m/s	4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment ************ I D No.6 99999 Area in hectar Length (PERV); Gradient (%) Per cent Imper Length (IMPERV %Imp. with Zer Option 1=SCS C CManning "n" SCS Curve No o Ia/S Coefficie Initial Abstra	factor ep ches 1.832 1.832 1 F SEGMENT 1 - POI es metres vious) o Dpth N/C; 2=Horton; 3: r C nt ction glr; 2=Rectanglr 1.832 1	.832 c.m/s ND P10 =Green-Ampt; 4=Repeat	4	COMMENT 3 1ir ********* PROP DEV *********** CATCHMEN 12.000 2.680 134.000 1.000 35.000 1.000 1.255 74.000 .100 8.924 1 ADD RUNC CATCHMEN 13.000 6.980 216.000 1.000 70.000 216.000 .0000	ne(s) of co	99999 hectares PERV) metri (%) Impervious IMPERV) th Zero Dy =SCS CN/C, "n" e No or C ffficient Abstractic =Trianglr000 .914 .262 99999 hectares PERV) metri (%) Impervious IMPERV) th Zero Dy =SCS CN/C	pth ; 2=Horton on ; 2=Rectan 1.890 .559 1.890 res	glr; 3=SWM HYD; 1.890 c.m/s C perv/imperv/	4=Lin. Reserv
14 35	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment ********* I D No.6 99999 Area in hectar Length (PERV): Gradient (%) Per cent Imper Length (IMPERV % Imp. with Zer Option 1=SCS C Manning "n" SCS Curve No o Ia/S Coefficie Initial Abstra Option 1=Trian 735 .000 367 .909 FFF	ined factor ep ches 1.832 1.832 1.832 1 F SEGMENT 1 - POI es metres vious) o Dpth N/C; 2=Horton; 3: r C nt ction glr; 2=Rectanglr 1.832 1.747 C;	.832 c.m/s ND P10 =Green-Ampt; 4=Repeat ; 3=SWM HYD; 4=Lin. Reserv. 832 c.m/s perv/imperv/total	4	COMMENT 3 1ir ************************************	ne(s) of co	99999 hectares PERV) metri (%) Impervious IMPERV) th Zero Di =SCS CN/C, "n" e No or C fficient Abstractic =Trianglr .000 .262 99999 hectares PERV) metri (%) Impervious IMPERV) th Zero Di =SCS CN/C, "n" e No or C	pth ; 2=Horton on ; 2=Rectan 1.890 .559 1.890 res	; 3=Green-Ampt; glr; 3=SWM HYD; 1.890 c.m/s C perv/imperv/ 1.890 c.m/s	4=Lin. Reserv
14 35 4	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment *********** IT ID No.6 99999 Area in hectar Length (PERV); Gradient (%) Per cent Imper Length (IMPERV) %Imp. with Zer Option 1=SCS CC Manning "n" SCS Curve No or Ia/S Coefficio Initial Abstra Option 1=Trian 0ption 1=Trian 735 .000 367 .909 FFF 735 .735	ined factor ep ches 1.832 1.832 1.832 1 F SEGMENT 1 - POI es metres vious) o Dpth N/C; 2=Horton; 3: r C nt ction glr; 2=Rectanglr 1.832 1.747 C;	.832 c.m/s ND P10 =Green-Ampt; 4=Repeat ; 3=SWM HYD; 4=Lin. Reserv .832 c.m/s	4	COMMENT 3 1ir ************************************	ne(s) of co	mment GOUTH OF SI 99999 hectares PERV) meti (%) Impervio Impervio Impervio Impervio Imparvio Imparvio Imparvio Imparvio Imparvio Imparvio Imparvio Impervio Impervi	res pth ; 2=Horton pn 1.890 .559 1.890 res us pth ; 2=Horton	; 3=Green-Ampt; glr; 3=SWM HYD; 1.890 c.m/s C perv/imperv/ 1.890 c.m/s	4=Lin. Reserv
114 35 4	.000 .000 .000 .000 .000 .000 .000 .00	No Conduit def Zero lag Beta weighting Routing timest No. of sub-rea 101 1.832 ction Node No. 101 1.832 ero; 2=Define e(s) of comment *********** IT ID No.6 99999 Area in hectar Length (PERV); Gradient (%) Per cent Imper Length (IMPERV) %Imp. with Zer Option 1=SCS CC Manning "n" SCS Curve No or Ia/S Coefficio Initial Abstra Option 1=Trian 0ption 1=Trian 735 .000 367 .909 FFF 735 .735	ined factor ep ches 1.832 1.832 1.832 1 F SEGMENT 1 - POI es metres vious) o Dpth N/C; 2=Horton; 3: r C nt ction glr; 2=Rectanglr 1.832 1.747 C;	.832 c.m/s ND P10 =Green-Ampt; 4=Repeat ; 3=SWM HYD; 4=Lin. Reserv. 832 c.m/s perv/imperv/total	4	COMMENT 3 1ir ************************************	ne(s) of co	mment OUTH OF SI 99999 hectares PERV) metric (%) Impervior IMPERV) th Zero Dj =SCS CN/C "n" e No or C fficient Abstractic =Trianglr .000 .914 .262 99999 hectares PERV) metric (%) Impervior IMPERV) th Zero Dj =SCS CN/C "n" e No or C fficient Abstractic	pth ; 2=Horton on .559 1.890 res us	; 3=Green-Ampt; glr; 3=SWM HYD; 1.890 c.m/s C perv/imperv/ 1.890 c.m/s	4=Lin. Reserv

	.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
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv .124 1.567 1.890 1.890 c.m/s</pre>	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>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 .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 .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	Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv
	68.000 Length (IMPERV)	.184 4.308 1.226 .000 c.m/s
	.000 %Imp. with Zero Dpth 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 Manufactus and Control 3-diedi-Ampt, 1-Repeat	104 A A E 2 420 420

14	START		.250	Manning				
2.5	1 1=Zero; 2=Define		74.000		ve No or (efficient	2		
35	COMMENT 3 line(s) of comment		.100 8.924		Abstracti	ion		
	**************************************		1				anglr; 3=SWM HYD; 4=Lin	. Reserv
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD		.0	92	.148	1.706	1.706 c.m/s	
	***********		.3		.916	.422	C perv/imperv/total	
4	CATCHMENT	15	ADD RUNOF					
	2.000 ID No.6 99999	_		92	.240	1.706	1.706 c.m/s	
	9.020 Area in hectares	9	ROUTE	a a i	T 1-			
	245.000 Length (PERV) metres 1.000 Gradient (%)		.000	Conduit	Length uit define			
	40.000 Per cent Impervious		.000	Zero la		sa		
	245.000 Length (IMPERV)		.000		s ighting fa	actor		
	.000 %Imp. with Zero Dpth		.000		timestep	ac cor		
	1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat		0		sub-reache	es		
	.250 Manning "n"		.0	92	.240	.240	1.706 c.m/s	
	74.000 SCS Curve No or C	17	COMBINE					
	.100 Ia/S Coefficient		2 June	tion Node	e No.			
	8.924 Initial Abstraction		.0	92	.240	.240	1.925 c.m/s	
	<pre>1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv</pre>	14	START					
	1.013 .000 .430 .430 c.m/s			ro; 2=De:	fine			
	.368 .912 .586 C perv/imperv/total	35	COMMENT					
15	ADD RUNOFF		3 line	(s) of c				
_	1.013 1.013 .430 .430 c.m/s					DD 3300 G	on oursen nosn	
9	ROUTE .000 Conduit Length		EXISTING .			RD AND S	OUTH OF QUAKER ROAD	
	.000 No Conduit defined	4	CATCHMENT					
	.000 Zero lag	4	4.000	ID No.ó	99999			
	.000 Beta weighting factor		13.940		hectares			
	.000 Routing timestep		305.000		(PERV) met	tres		
	0 No. of sub-reaches		1.000	Gradien				
	1.013 1.013 1.013 .430 c.m/s		40.000		t Impervio	ous		
17	COMBINE		305.000	Length				
	2 Junction Node No.		.000		ith Zero I	Opth		
	1.013 1.013 1.013 1.074 c.m/s		1				on; 3=Green-Ampt; 4=Rep	eat
14	START		.250	Manning	"n"			
	1 1=Zero; 2=Define		74.000		ve No or (2		
18	CONFLUENCE		.100		efficient			
	2 Junction Node No.		8.924		Abstracti			
	1.013 1.074 1.013 .000 c.m/s		1				anglr; 3=SWM HYD; 4=Lin	. Reserv
35	COMMENT		1.5		.000	.240	1.925 c.m/s	
	3 line(s) of comment	15	ADD RUNOF		.923	.590	C perv/imperv/total	
	EXISTING AREA ON QUAKER RD, WEST OF RICE RD	13	1.5		1.566	.240	1.925 c.m/s	
	**************************************	9	ROUTE		1.300	.240	1.925 C.M/S	
4	CATCHMENT	,	.000	Conduit	Length			
-	3.000 ID No.6 99999		.000		uit define	ed		
	5.680 Area in hectares		.000	Zero la		.		
	195.000 Length (PERV) metres		.000		ighting fa	actor		
	1.000 Gradient (%)		.000		timestep			
	40.000 Per cent Impervious		0		sub-reache	es		
	195.000 Length (IMPERV)		1.5	66	1.566	1.566	1.925 c.m/s	
	.000 %Imp. with Zero Dpth	17	COMBINE					
	<pre>1 Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		2 June	tion Node	e No.			
	.250 Manning "n"		1.5	66	1.566	1.566	3.491 c.m/s	
	74.000 SCS Curve No or C	14	START					
	.100 Ia/S Coefficient			ro; 2=De:	fine			
	8.924 Initial Abstraction	18	CONFLUENC					
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv			tion Node				
	.632 1.074 1.013 .000 c.m/s .367 .903 .582 C perv/imperv/total	35	1.5	66 .	3.491	1.566	.000 c.m/s	
1 =	.367 .903 .582 C perv/imperv/total ADD RUNOFF	35	COMMENT	(=) == =				
15			3 line	(s) of c	omment			
9	.632 1.706 1.013 .000 c.m/s				איי מם משעג	ים מדידע הי	WELLAND MUNICIPAL BOUND	D.X
,	.000 Conduit Length		******		AKEK KD IC	J CIII OF	WELLAND MONICIPAL BOOM	DA.
	.000 No Conduit defined	4	CATCHMENT					
	.000 Zero lag		501.000	ID No.ó	99999			
	.000 Beta weighting factor		1.570		hectares			
	.000 Routing timestep		102.000		(PERV) met	tres		
	0 No. of sub-reaches		1.000	Gradien				
	.632 1.706 1.706 .000 c.m/s		70.000	Per cen	t Impervio	ous		
17	COMBINE		102.000	Length				
	2 Junction Node No.		.000		ith Zero I			
	.632 1.706 1.706 c.m/s		1			C; 2=Hort	on; 3=Green-Ampt; 4=Rep	eat
14	START		.250	Manning		_		
	1 1=Zero; 2=Define		74.000		ve No or (2		
35	COMMENT		.100		efficient			
	3 line(s) of comment		8.924 1		Abstracti			
	PROP DEVELOPMENT SOUTH OF QUAKER RD, EAST OF RICE RD		.3		ı=Triangii 3.491	1.566	anglr; 3=SWM HYD; 4=Lin	. Keserv
	**************************************		.3		.915	.751	C perv/imperv/total	
4	CATCHMENT	15	ADD RUNOF		•525	• / 52	c port/import/cocur	
•	50.000 ID No.6 99999				3.754	1.566	.000 c.m/s	
	3.420 Area in hectares	9	ROUTE					
	151.000 Length (PERV) metres		.000	Conduit	Length			
	1.000 Gradient (%)		.000		uit define	ed		
	10.000 Per cent Impervious		.000	Zero la	3			
	151.000 Length (IMPERV)		.000		ighting fa	actor		
	.000 %Imp. with Zero Dpth		.000		timestep			
	<pre>Option 1=SCS CN/C; 2=Horton; 3=Green-Ampt; 4=Repeat</pre>		0		sub-reache			
	.250 Manning "n"			14	3.754	3.754	.000 c.m/s	
	74.000 SCS Curve No or C	35	COMMENT	, , -				
	.100 Ia/S Coefficient		3 line	(s) of c	omment			
	8.924 Initial Abstraction		******	^ * * * * * * *	nn		m 3.2	
	1 Option 1=Trianglr; 2=Rectanglr; 3=SWM HYD; 4=Lin. Reserv		FLOW D/S (KD CULVERI	r - OUTLE	T AZ	
	.148 .000 1.706 1.706 c.m/s	1.7		. * * * * * *				
1 F	.367 .912 .422 C perv/imperv/total ADD RUNOFF	17	COMBINE	+10	o No			
15	ADD RUNOFF .148 .148 1.706 1.706 c.m/s			tion Nod	e No. 3.754	3.754	5.662 c.m/s	
4	CATCHMENT	14	START		J./JI	3./34	J.002 C.M/S	
-	51.000 ID No.6 99999			ro; 2=De:	fine			
	1.980 Area in hectares	35	COMMENT	-, <u>-</u> e				
	115.000 Length (PERV) metres			(s) of c	omment			
	1.000 Gradient (%)		******					
	10.000 Per cent Impervious				SOUTH OF Q	QUAKER RD	- QUALLITY CONTROL ONL	Y
	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. ó	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		<pre>3 line(s) of comment ***********</pre>
	.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 .087 3.754 5.662 c.m/s .368 .913 .831 C perv/imperv/total	15	.368 .906 .744 C perv/imperv/total ADD RUNOFF
15	ADD RUNOFF	15	ADD RUNOFF 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.
1,	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.ó 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>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 COMMENT		0 No. of sub-reaches 2.157 2.157 2.157 1.198 c.m/s
55	3 line(s) of comment	17	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	3 line(s) of comment	*	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 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"
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 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
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 20.000 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) 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	15	60.000 Per cent Impervious 2.000 Length (IMPERV) .000 %Imp, with Zero Dpth 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 .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
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 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 .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 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
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	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 .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 = .1040810E+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 %Tmp. 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 = .1040810B+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 Hyetc/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 %Tmp. 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 = .1040810B+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 .238 10751.0

	Maximum Storage = 9342. c225 3.539	.m .132	.000 c.m/s	35	COMMENT 3 line(s)) of gor	mont		
17	.225 3.539 . COMBINE	.132	.000 C.m/s		*******) of con	imieric		
	2 Junction Node No.				REALIGNED CH	HANNEL -	- SEGMENT 3	3	
		.132	.132 c.m/s		*******				
14	START 1 1=Zero; 2=Define			4	CATCHMENT 300.000 II	D No.ó 9	0000		
35	COMMENT					rea in h			
	<pre>3 line(s) of comment</pre>						PERV) metre	es	
	******					radient			
	EXISTING AREA ON QUAKER RD, EA	AST OF RICE	E RD				Impervious	3	
4	CATCHMENT					ength (]	IMPERV) th Zero Dpt	-h	
•	5.000 ID No.6 99999								3=Green-Ampt; 4=Repeat
	1.870 Area in hectares					anning '		•	2.,
	112.000 Length (PERV) metres	s					e No or C		
	1.000 Gradient (%)					a/S Coef			
	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 II	D No.ó 9	0000		
			; 3=SWM HYD; 4=Lin. Reserv			rea in h			
		.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					anning '		2-1102 00117	5-62 con impo, i-nopouc
	.000 Zero lag						e No or C		
	.000 Beta weighting factor	or				a/S Coef			
	.000 Routing timestep						Abstraction		
	0 No. of sub-reaches	.266	132 g m/g		1 Or		=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 I			
35	.266 .274 COMMENT	.266	.000 c.m/s			o Condui ero 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.ó 99999			17	COMBINE 1 Junctio	on Node	No.		
	1.920 Area in hectares				.030			3.057	8.057 c.m/s
	113.000 Length (PERV) metres	s		14	START				
	.200 Gradient (%)				1 1=Zero	; 2=Defi	ine		
						,	LIIG		
	65.000 Per cent Impervious			35	COMMENT				
	65.000 Per cent Impervious 113.000 Length (IMPERV)			35	COMMENT 3 line(s)) of con			
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth	h	B=Green-Ampt: 4=Repeat	35	COMMENT 3 line(s) of con	mment	*MENT 3 - 1	POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dpth	h	B=Green-Ampt; 4=Repeat	35	COMMENT 3 line(s)) of con	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; 2 Manning "n" 74.000 SCS Curve No or C	h	B=Green-Ampt; 4=Repeat	35 4	COMMENT 3 line(s *********** PROP DEVELOI *********** CATCHMENT) of con	mment ORTH OF SEG	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; 2 .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 DEVELOI *********** CATCHMENT 30.000 II) 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 Manning "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 DEVELOI ********* CATCHMENT 30.000 II 8.470 AI) of com PMENT NO D No.6 9 rea in h	mment ORTH OF SEG 99999 nectares		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 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 DEVELOI ********* CATCHMENT 30.000 II 8.470 Az 238.000 Le) of compMENT NO D No.6 9 rea in hength (F	mment ORTH OF SEG 99999 nectares PERV) metre		POND P30
	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; 2 Manning "n" 74.000 SCS Curve No or C .100 Ia/S Coefficient Initial Abstraction 1 Option 1=Trianglr; 2 .339 .274	h 2=Horton; 3 2=Rectangl:			COMMENT 3 line(s: *********** PROP DEVELOI *********** CATCHMENT 30.000 II 8.470 Ar 238.000 Le .200 Gr) of com PMENT NO D No.6 9 rea in h ength (F	mment ORTH OF SEG 99999 nectares PERV) metre	es	POND P30
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; 2 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	2=Rectangl: .266	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total		COMMENT 3 line(s ********** PROP DEVELOU ********** CATCHMENT 30.000 II 8.470 Au 238.000 Le .200 Ge .100 Ge 238.000 Le) of com PMENT NO D No.6 9 rea in hength (Fradient er cent ength (I	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious IMPERV)	es	POND P30
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	h 2=Horton; 3 2=Rectangl:	r; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s		COMMENT 3 line(s) ********** PROP DEVELOU *********** CATCHMENT 30.000 kl 8.470 An 238.000 kg .100 Pe 238.000 kg .100 Pe 238.000 kg .100 Pe .3000 kg .000 %) of com PMENT NO D No.6 S rea in hength (Hength center center center) ength (Hength center center center) Imp. with	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Impervious the Zero Dpt	es 3	
	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	2=Rectangl: .266	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total		COMMENT 3 line(s) ********** PROP DEVELOI *********** CATCHMENT 30.000 II 8.470 A 238.000 L 200 G 1.100 P 238.000 L 200 G 1.00 P 238.000 L 1 O 1 O 1) of com PMENT NO D No.6 S rea in hength (Hength (Heng	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C;	es 3	POND P30 3=Green-Ampt; 4=Repeat
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	2=Rectangl: .266	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total		COMMENT 3 line(s ********** PROP DEVELOR *********** ********** CATCHIMENT 30.000 II 8.470 Ai 238.000 Le .200 Ge .100 Ge .200 Ge .200 Ge .000 %; 1 000 Ge .250 Me) of com PMENT No D No.6 9 rea in h ength (H radient er cent ength (I Imp. wit ption 1=	mment ORTH OF SEG 99999 mectares PERV) metre (%) Impervious IMPERV) th Zero Dpt =SCS CN/C; "n"	es 3	
15	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 Option 1=SCS CN/C; 2 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	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: *********** PROF DEVELOI *********** CATCHMENT 30.000 line 8.470 Aa 238.000 cin .200 cin .100 pe .238.000 kin .100 pe .238.000 kin .200 sin) of com PMENT No D No.6 9 rea in h ength (H radient er cent ength (I Imp. wit ption 1=	mment ORTH OF SEG 99999 mectares pervious Impervious Impervious CMPERV) th Zero Dpt SCS CN/C; """	es 3	
15	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 ************************************	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 DEVELOI ********** CATCHMENT 30.000 81 8.470 A1 238.000 L200 G0 .100 Pc 238.000 L200 G0 .100 Pc 238.000 M8 .100 M8 .250 M8 .250 M8 .250 M8) of com PMENT NO D No.6 9 rea in h ength (I radient er cent ength (I Imp. wit ption l= anning ' CS Curve a/S Coef nitial 3	mment ORTH OF SEG 99999 mectares PERV) metre (%) Impervious IMPERV) th Zero Dpt SCS CN/C; "" a No or C fficient Abstraction	es ; ; th 2=Horton;	3=Green-Ampt; 4=Repeat
15 35	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 .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 DEVELOI *********** CATCHMENT 30.000 kl 8.470 As 238.000 kc .200 Gs .100 Pc .238.000 kc .100 Pc .238.000 kc .100 Sc) of com PMENT NO D No.6 9 rea in 1 ength (I radient er cent ength (I Imp. wit pution 1= anning ' CS Curve a/S Coef nitial I pution 1=	mment ORTH OF SEG 99999 nectares 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
15 35	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 .339 .274 .339 .594 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************* FIRST AVE FROM QUAKER RD TO C: *************** CATCHMENT 201.000 ID No.6 99999	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 DEVELOU ********** CATCHMENT 30.000 II 8.470 Ji 238.000 Le .200 G .100 G .100 G .200 G .100 F .250 Ma 74.000 S .100 II 8.924 II 1 O .188	D No.6 Stree in he ength (I radient er cent ength (I Imp. with ption 1= anning 'C S Curve a/S Coef nitial # ption 1=	mment ORTH OF SEC 99999 mectares EERV) metre (%) Impervious IMPERV) th Zero Dpt SCS CN/C; "n" a 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
15 35	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 .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 DEVELOI *********** CATCHMENT 30.000 kl 8.470 As 238.000 kc .200 Gs .100 Pc .238.000 kc .100 Pc .238.000 kc .100 Sc	D No.6 Stree in he ength (I radient er cent ength (I Imp. with ption 1= anning 'C S Curve a/S Coef nitial # ption 1=	mment ORTH OF SEG 99999 nectares 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
15 35	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 .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 DEVELOU *********** CATCHMENT 30.000 81 8.470 A2 238.000 G2 100 P6 238.000 82 100 P6 250 M2 74.000 S6 100 100 P6 250 M2 74.000 S6 100 100 100 100 100 100 100 100 100 100	D No.6 S rea in hength (E radient er cent ength (E radient er cent ength (I Imp. wit ption l- anning ' CS Curve a/S Coef nitial A ption l-	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious IMPERV) th Zero Dpt sCS CN/C; "n" a No or C fficient abstraction "rianglr; .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
15 35	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	; 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s	4	COMMENT 3 line(s: *********** PROP DEVELOI *********** CATCHMENT 30.000 kl 8.470 As 238.000 Lc .2000 Gs .100 Pc .238.000 kl .2000 %s .1 OI .250 Mm 74.000 SS .100 Ls .100 Ls .250 Mm 74.000 SS .100 Ls) of com PMENT NO D No.6 S rea in h ength (F radient er cent ength (I Imp. wii ption 1= anning * CS Curve a/S Coef nitial f ption 1=	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious IMPERV) ch Zero Dpt SCS CN/C; "n" e No or C fficient Abstraction -Trianglr; .000 8 .916	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
15 35	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 .368 .914 .368 .914 .368 .914 .369 .914 .369 .914 .369 .914 .369 .914 .369 .914 .370 COMMENT 3 line(s) of comment ************************************	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) *********** PROF DEVELOI *********** CATCIMENT 30.000 li 8.470 An 238.000 Le .000 %: 1.00 Le .000 %: 1.00 In .250 Mm 74.000 Si .100 In 8.924 In 1.00 In 8.924 In 8.924 In 1.00 In 8.924 In 8.924 In 9.188 In 9.18) of com PMENT NO D No.6 S rea in P ength (P readient er cent er cent er cent getion 1= anning 'CS Curve a/S Coef nitial P ption 1=	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Impervious Impervious Impervious Enteron a No or C Efficient abstraction Trianglr; 000 8 916 188 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
15 35	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 ************************************	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 DEVELOI ************ CATCHMENT 30.000 kl. 8.470 As 238.000 kc100 Pe 238.000 kc100 Pe .238.000 kc100 Sc100 Sc100 Sc100 Sc100 Line .250 Ma .74.000 Sc100 Line .250 Ma .250 M) of com PMENT NO D No.6 9 rea in hength (I radient radient Imp. with the ption 1 anning 'CS Curve a/S Coef notial 2 ption 1 - D No.6 9 rea in h	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious IMPERV) th Zero Dpt SCS CN/C; "n" e No or C fficient Abstraction =Trianglr; .000 8 .916 .188 8	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
15 35	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 ************************************	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) ************************************) of com PMENT NO D No.6 S rea in P ength (P radient er cent continue gradient ength (I Imp. wiid ption 1= ption 1= D No.6 S rea in P ength (I D No.6 S	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious IMPERV) ch Zero Dpt =SCS CN/C; 'n' e No or C efficient Abstraction -Trianglr; .000 8 .188 8 99999 nectares EERV) 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
15 35	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) *********** PROF DEVELOI *********** CATCHMENT 30.000 gl. 8.470 Aa 238.000 Le200 Gg100 Pe. 238.000 kg100 Pe250 Ms. 1 Oi .250 Ms100 Sg100 Is250 Ms100 Is188 ADD RUNOFF .188 ADD RUNOFF .188 CATCHMENT 31.000 Is. 110.420 Aa 264.000 Le. 1.000 Gg.	D No.6 Stream In the stream In	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious IMPERV) ch Zero Dpt SCS CN/C; "n" e No or C efficient Abstraction Trianglr; .000 8 .916 .188 8 8 99999 nectares PERV) metre (%) Impervious	2=Rectang: 1.057 .057	3=Green-Ampt; 4=Repeat lr; 3=SWM HYD; 4=Lin. Reserv 8.057 c.m/s C perv/imperv/total
15 35	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) metres 127.000 Length (PERV) metres 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 .100 Ia/S Coefficient	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) *********** PROF DEVELOI *********** CATCIMENT 30.000 kl 238.000 kc .000 %c .100 kc .000 %c .100 sc	D No.6 Stream in Fength (I radient anning) CS Curve and Screen in Fength (I radient anning) CS Curve and Screen in Fength (I radient andient andient andient andient andient angth (I radient a	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Impervious Impervious Company a No or C fficient Abstraction Trianglr; 000 8 916 188 8 99999 nectares PERV) metre (%) Impervious Impervious 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
15 35	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 DEVELOI ************ CATCHMENT 30.000 kl. 8.470 As 238.000 kc100 Pe 238.000 kc100 Pe 250 Ms 74.000 SS 74.000 SS 74.000 SS .100 Ls 1 OO .250 Ms .100 Ls 1 OO .250 Ms .25	PMENT NO D No.6 S rea in h ength (I radient radient gradient gradient cont er cent er cent er cent granning CS Curve a/S Coef nnitial 2 ption 1= cont cont cont cont cont cont cont cont	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious IMPERV) th Zero Dpt SCS CN/C; "n" e No or C fficient Abstraction Trianglr; .000 8 .916 .188 8 99999 nectares PERV) metre (%) Impervious Impervious IMPERV)	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
15 35	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 0ption 1=Trianglr; 2 .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 DEVELOI ************ CATCHMENT 30.000 LI 38.470 AB 238.000 LC .200 GB .100 PC .238.000 LC .200 SC .100 PC .2550 Mm 74.000 SC .100 LB .250 Mm 74.000 SC .100 LB .100 LB .100 LB .100 LB .1250 Mm .100 LB .1250 Mm .100 LB .	D No.6 Stream Information Info	property of the control of the contr	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
15 35	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 ************************************	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) *********** PROP DEVELOU *********** CATCHMENT 30.000 sl. 8.470 As 238.000 Le100 Pe 238.000 ks 1 0, .250 Ms 74.000 Sc .100 ls 1 0, .250 Ms 74.000 Sc .100 ls 8.924 Is 8.924 Is 1 0, .250 Ms 74.000 Sc .100 ls 1 0, .250 Ms 74.000 Sc .100 Sc .100 ls 1 0, .250 Ms .368 ADD RUNOFF 31.88 CATCHMENT 31.000 Is 10.420 As 264.000 Ls 10.000 Sc .75.000 Pe 264.000 Ls .000 %: .1000 %: .1000 %: .1000 %: .1000 %: .250 Ms	D No.6 Srea in Pength (I radient er cent ength (I mp. wit ption 1 anning 'C C Curve a / S Coef no in tial 2 ption 1 ength (I radient er cent ength (I mp. wit ption 1 ength (I radient er cent ength (I mp. wit ption 1 ength (I mp. wit ption 1 ength (I mp. wit ption 1 enning 'C C C C C C C C C C C C C C C C C C C	mment ORTH OF SEG 99999 mectares PERV) metre (%) Impervious IMPERV) a No or C efficient abstraction Trianglr; 000 916 188 8 99999 mectares PERV) metre (%) Impervious I	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
15 35	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 .368 .914 .368 .914 .369 .914 .369 .914 .369 .914 .369 .914 .369 .914 .370 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) metrer 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 .100 Ia/S Coefficient 1 Option 1=Trianglr; 2 .433 .594 .367 .915 .4DD RUNOFF	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 .000 c.m/s .000 c.m/s .000 MUNICIPAL BOUNDA B=Green-Ampt; 4=Repeat .000 c.m/s .000 c.m/s perv/imperv/total	4	COMMENT 3 line(s) *********** PROF DEVELOI *********** CATCIMENT 30.000 kl 238.000 kc .000 %c .100 kc .000 %c .100 sc	D No.6 Stream in Female 1 PMENT NO D No.6 Stream in Female 1 Pment No. 1 Pment	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Impervious Impervious Impervious End Orthory Impervious Impervious Impervious Impervious Inserticient Seg 188 88 99999 nectares PERV) metre (%) Impervious Impervio	2=Rectang: 3.057 .368 (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
15 35 4	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 .3399 .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: ************************************	PMENT NO D No.6 S rea in hength (I radient radient radient graph (I radient cont er cent er cent er cent er cent er cent er cent ption l= anning ' CS Curve an's Coef no l= anning ' CS Curve as's Coef anning ' CS Curve as's Coef anning ' CS Curve as's Coef noticial 2 second	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Impervious Impervious SC CN/C; "n" e No or C fficient Abstraction Trianglr; .000 8 .916 .188 8 99999 nectares PERV) metre (%) Impervious Impe	es in 2=Horton; 2=Rectang: 1.057 .368 3.057 es in 2=Horton;	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
15 35 4	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=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 .000 c.m/s .000 c.m/s .000 MUNICIPAL BOUNDA B=Green-Ampt; 4=Repeat .000 c.m/s .000 c.m/s perv/imperv/total	4	COMMENT 3 line(s: ************************************	D No.6 Stream In Imp. with perion 1 anning 'C Curve in Imp. with pitch in Imp. with pitch in Imp. with perion 1 anning 'C Curve in Imp. with perion 1 anning in Imp. with perion 1 anning 'C Curve in Imp. with perion 1 anning 'C Curve a/S Coefinitial Imp. with perion 1 anning 'C C Curve a/S Coefinitial Imp. with perion 1 anning 'C Curve a/S Coefinitial Imp. with perion 1 anning 'C Curve a/S Coefinitial Imp. with perion 1 anning 'C Curve a/S Coefinitial Imp. with perion 1 anning 'C Curve a/S Coefinitial Imp. with perion 1 anning 'C Curve a/S Coefinitial Imp. with perion 1 anning 'C C Curve a/S Coefinitial Imp. with perion 1 anning 'C C Curve a/S Coefinitial Imp. with perion 1 anning 'C C Curve a/S Coefinitial Imp. with perion 1 anning 'C C Curve a/S Coefinitial Imp. with perion 1 anning 'C C Curve anning 'C C C Curve a/S Coefinitial Imp. with perion 1 anning 'C C C C C C C C C C C C C C C C C C C	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Interes PERV) metre (%) Impervious Impervio	2=Rectang: 3.057 .368 .3.057 .2=Horton;	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 35 4	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 ************************************	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 .000 c.m/s .000 c.m/s .000 MUNICIPAL BOUNDA B=Green-Ampt; 4=Repeat .000 c.m/s .000 c.m/s perv/imperv/total	4	COMMENT 3 line(s) ************ PROP DEVELOU ************ CATCHMENT 30.000 kl .8.470 Aa 238.000 kc .100 pc .250 Ma .74.000 SC .100 lc .250 Ma .74.000 lc .100 l	D No.6 Srea in Pength (I radient radie	mment ORTH OF SEG 99999 mectares EERV) metre (%) Impervious Impervious Impervious Fficient Abstraction Trianglr; (000 9916 188 89999 mectares EERV) metre (%) Impervious Imperv	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 35 4	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=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 .000 c.m/s .000 c.m/s .000 MUNICIPAL BOUNDA B=Green-Ampt; 4=Repeat .000 c.m/s .000 c.m/s perv/imperv/total	4	COMMENT 3 line(s: ************************************	D No.6 Srea in Pength (I radient radie	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Interes PERV) metre (%) Impervious Impervio	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 35 4	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 ************************************	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 .000 c.m/s .000 c.m/s .000 MUNICIPAL BOUNDA B=Green-Ampt; 4=Repeat .000 c.m/s .000 c.m/s perv/imperv/total	4 15 4	COMMENT 3 line(s) *********** PROP DEVELOU ************ CATCHMENT 30.000 gl. 38.470 Aa 238.000 Le000 %c .100 Pe 238.000 ls100 ls1	PMENT NO D No.6 S rea in hength (I radient er cent er cent er cent er cent er cent er cent ption 1= anning CS Curve a/S Coef nitial 2 ption 1= cent er cent e	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Impervious Impervious Infiervi a No or C fficient abstraction Trianglr; 000 188 8 99999 nectares PERV) metre (%) Impervious Imperv	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 35 4	65.000 Per cent Impervious 113.000 Length (IMPERV) .000 %Imp. with Zero Dptl 1 option 1=SCS CN/C;250 Manning "n" .250 Manning "n" .250 Manning "n" .250 Manning "n" .274.000 SCS Curve No or C .100 Ia/S Coefficient .274.000 SCS Curve No or C .274.000 Per Cent Impervious .274.000 SCS Curve No or C .275 Manning "n" .276 March (PERV) March (PERV) .277	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 .000 c.m/s .000 c.m/s .000 MUNICIPAL BOUNDA B=Green-Ampt; 4=Repeat .000 c.m/s .000 c.m/s perv/imperv/total	15 4	COMMENT 3 line(s) ************ PROF DEVELOI 30.000 sl. 8.470 Aa 238.000 c200 cs100 pe. 238.000 k100 pe250 Max 74.000 SS100 re250 Max .100 re188 ADD RUNOFF .188 CATCHMENT 31.000 sl. 11 01 .188 CATCHMENT 31.000 sl. 11 01 .250 Max .264.000 k100 ge264.000 k100 ge264.000 sl264.000 sl264.000 sl264.000 sl250 Max .250 max .2	D No.6 Stream in the most of t	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Impervious Impervious Impervious Impervious Impervious Impervious Impervious End Impervious Impervious Insulation Insulation Insulation Impervious Impervi	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 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
15 35 4	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 ************************************	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	4 15 4	COMMENT 3 line(s) ************ PROP DEVELOID ************ CATCHMENT 30.000 gl .8.470 Aa 238.000 Le .200 Gc .100 Pc 238.000 Le .250 Ma 74.000 SC .100 II 1 0,0 255 Ma 74.000 II 1 0,1 8 ADD RUNOFF 264.000 Le .000 %: 100 Gc 1.000 G	D No.6 Srea in Pength (I radient radie	mment ORTH OF SEG 99999 mectares EERV) metre (%) Impervious Impervious Interpress a No or C efficient Abstraction Trianglr; 000 916 188 8 99999 mectares EERV) metre (%) Impervious Im	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 35 4	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 .3368 .914 ADD RUNOFF .339 .594 COMMENT 3 line(s) of comment ************************************	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 .000 c.m/s .000 c.m/s .000 MUNICIPAL BOUNDA B=Green-Ampt; 4=Repeat .000 c.m/s .000 c.m/s perv/imperv/total	4 15 4	COMMENT 3 line(s: ************************************	D No.6 Srea in Pength (I radient radie	mment ORTH OF SEG 99999 mectares EERV) metre (%) Impervious Impervious Interpress a No or C efficient Abstraction Trianglr; 000 916 188 8 99999 mectares EERV) metre (%) Impervious Im	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 35 4	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 ************************************	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	4 15 4	COMMENT 3 line(s) *********** PROF DEVELOI *********** CATCIMENT 30.000 gl. 238.000 Le. 238.000 Le. 200 G100 P. 238.000 Le. 250 Me. 74.000 SC100 II. 8.924 II. 1 0,00 II. 1.88 ADD RUNOFF .188 CATCHMENT 31.000 II. 1.000 G. 75.000 Pe. 264.000 Le000 SC100 II1000 G1000 G10	D No.6 Srea in Pength (I radient radie	DRTH OF SEG	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 35 4	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 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	4 15 4	COMMENT 3 line(s) *********** PROP DEVELOI 30.000 sl. 34.470 Aa 238.000 c. 238.000 c. 100 pe. 238.000 sl. 100 pe. 238.000 sl. 100 pe. 238.000 sl. 100 pe. 24 line 36 ADD RUNOFF ABOR CATCHMENT 31.000 sl. 1100.20 sl. 18.24 in 1 columnia 1.1000 sl. 1.10000	D No.6 Stream in Female 1 PMENT NO No.6 Stre	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Impervious Impervious SCS CN/C; "n" a No or C fficient abstraction Trianglr; 000 9916 188 8 99999 nectares PERV) metre (%) Impervious Impervi	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 35 4	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 ************************************	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	4 15 4	COMMENT 3 line(s) *********** PROP DEVELOI *********** CATCHMENT 30.000 kl .8.470 Aa 238.000 Le .000 % .100 Pc 238.000 Le .000 % .100 In .10	D No.6 Srea in Pength (I mength (I m	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Impervious Impervious Impervious Impervious Impervious Impervious Pricianglr; 000 916 188 8 99999 nectares PERV) metre (%) Impervious Impervi	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
15 35 4	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 .336 .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	4 15 4	COMMENT 3 line(s: ************************************	D No.6 Srea in hength (Imp. with the sent the se	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Impervious Impervious Seg No or C fficient Abstraction Trianglr; 1000 8 188 8 99999 nectares PERV) metre (%) Impervious	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
15 35 4	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 .368 .914 .368 .914 .368 .914 .369 .914 .369 .914 .369 .914 .370 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 3=Green-Ampt; 4=Repeat 3: 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s	4 15 4	COMMENT 3 line(s) *********** PROF DEVELOI ************ CATCIMENT 30.000 gl .8.470 Aa 238.000 Le .200 Gg .100 Pe 238.000 Le .000 % .100 li .8.924 li .8.924 li .8.924 li .9.000 li .8.924 li .9.000 gg .75.000 pe 264.000 Le .000 gg .75.000 pe 264.000 Le .000 gg .100 gg .250 gg .	D No.6 Srea in Fernancial Fraction In Part of the Internation Inte	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Impervious Infiervious Fficient Abstraction Trianglr; 000 188 8 99999 nectares PERV) metre (%) Impervious	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
15 35 4	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 .336 .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 3=Green-Ampt; 4=Repeat 3: 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s	4 15 4	COMMENT 3 line(s) *********** PROP DEVELOU ************ CATCHMENT 30.000 gl. 8.470 As 238.000 Le000 %c .100 Pe 238.000 Le000 %c .100 Is 8.924 Is 1 Ol. 8.924 Is 1 Ol. 1.88 ADD RUNOFF 264.000 Le .000 %c .100 Gl. 75.000 Pe 264.000 Le .000 %c .100 Is 10.420 As 264.000 Le .000 %c .100 Is .367 ADD RUNOFF 2.113 ADD RUNOFF 2.114 ADD RUNOFF 2.115 ADD RUNOFF 2.116 ADD RUNOFF 2.117 ADD RUNOFF 2.118 A	PMENT NO D No.6 S rea in hength (I radient er cent er	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious Inpervious 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
15 35 4	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 3=Green-Ampt; 4=Repeat 3: 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s	4 15 4	COMMENT 3 line(s) ************ PROP DEVELOID ************ CATCHMENT 30.000 gi .8.470 As 238.000 Lc .000 gi .100 Pc 238.000 kc .100 Pc .250 Ms 74.000 Sc .100 ls .250 Ms 74.000 Sc .100 ls .250 Ms .100 ls .250 Ms .368 ADD RUNOFF 11 0; .188 CATCHMENT 31.000 ls .100 cs .100 cs .100 cs .100 cs .100 ls .250 Ms .250	D No.6 Stream in Hength (I radient ength (I Imp. with prior I land) and some stream in Hength (I Imp. with prior I land) and some some some some some some some some	mment ORTH OF SEG 99999 nectares PERV) metre (%) Impervious MARCH OF SEG 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	
15 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 3=Green-Ampt; 4=Repeat 3: 3=SWM HYD; 4=Lin. Reserv .000 c.m/s perv/imperv/total .000 c.m/s .000 c.m/s	4 15 4	COMMENT 3 line(s) *********** PROP DEVELOID ************* CATCHMENT 30.000 gl. 38.470 As 238.000 Le000 %100 Pr 238.000 ls100 Pr 250 Ms 74.000 SS .100 Pr 8.924 II 1 00 .100 Pr 8.924 II 1 00 .100 Es .188 CATCIMENT 31.000 ls. 100.420 As 264.000 Ls .1000 %100 SS .1000 SS .100 SS .1000 SS .10	PMENT NO D No.6 S rea in hength (I radient radient radient radient cont ength (I mp. wit ption 1= anning CS Curve a/S Coef nnitial 2 ption 1= cont radient radient cont ength (I mp. wit ption 1= cont cont cont cont cont cont cont cont	mment ORTH OF SEG 99999 mectares EERV) metre (%) Impervious Impervious Intervious	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

```
.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
```

```
.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
```