

Final Bradford Bypass Stormwater Management Plan

Highway 400 - Highway 404 Link (Bradford Bypass)
Town of Bradford West Gwillimbury, Township of King and Town of East Gwillimbury – Assignment # 2019-E-0048

Ministry of Transportation of Ontario

60636190

September 28, 2023

Statement of Qualifications and Limitations

The attached Report (the "Report") has been prepared by AECOM Canada Ltd. ("AECOM") for the benefit of the Client ("Client") in accordance with the agreement between AECOM and Client, including the scope of work detailed therein (the "Agreement").

The information, data, recommendations and conclusions contained in the Report (collectively, the "Information"):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the "Limitations");
- represents AECOM's professional judgement in light of the Limitations and industry standards for the preparation of similar reports;
- may be based on information provided to AECOM which has not been independently verified;
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued;
- must be read as a whole and sections thereof should not be read out of such context;
- was prepared for the specific purposes described in the Report and the Agreement; and
- in the case of subsurface, environmental or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

AECOM shall be entitled to rely upon the accuracy and completeness of information that was provided to it and has no obligation to update such information. AECOM accepts no responsibility for any events or circumstances that may have occurred since the date on which the Report was prepared and, in the case of subsurface, environmental or geotechnical conditions, is not responsible for any variability in such conditions, geographically or over time.

AECOM agrees that the Report represents its professional judgement as described above and that the Information has been prepared for the specific purpose and use described in the Report and the Agreement, but AECOM makes no other representations, or any guarantees or warranties whatsoever, whether express or implied, with respect to the Report, the Information or any part thereof.

Without in any way limiting the generality of the foregoing, any estimates or opinions regarding probable construction costs or construction schedule provided by AECOM represent AECOM's professional judgement in light of its experience and the knowledge and information available to it at the time of preparation. Since AECOM has no control over market or economic conditions, prices for construction labour, equipment or materials or bidding procedures, AECOM, its directors, officers and employees are not able to, nor do they, make any representations, warranties or guarantees whatsoever, whether express or implied, with respect to such estimates or opinions, or their variance from actual construction costs or schedules, and accept no responsibility for any loss or damage arising therefrom or in any way related thereto. Persons relying on such estimates or opinions do so at their own risk.

Except (1) as agreed to in writing by AECOM and Client; (2) as required by-law; or (3) to the extent used by governmental reviewing agencies for the purpose of obtaining permits or approvals, the Report and the Information may be used and relied upon only by Client.

AECOM accepts no responsibility, and denies any liability whatsoever, to parties other than Client who may obtain access to the Report or the Information for any injury, loss or damage suffered by such parties arising from their use of, reliance upon, or decisions or actions based on the Report or any of the Information ("improper use of the Report"), except to the extent those parties have obtained the prior written consent of AECOM to use and rely upon the Report and the Information. Any injury, loss or damages arising from improper use of the Report shall be borne by the party making such use.

This Statement of Qualifications and Limitations is attached to and forms part of the Report and any use of the Report is subject to the terms hereof.

AECOM: 2015-04-13 © 2009-2015 AECOM Canada Ltd. All Rights Reserved.

Ref: 60636190 AECOM

Quality Information

H&H Modeling and Report Preparation

Melanie Ego, B.Sc.(Eng.) Water Resources, Water



Reviewed and Verified by

, September 28, 2023

Jhalmar Maltez, M.Eng., P.Eng.

Senior Water Resources Engineer, Project Manager

Distribution List

# Hard Copies	PDF Required	Association / Company Name
	✓	Ministry of Transportation of Ontario
	✓	AECOM Canada Ltd.

Table of Contents

1.	Intro	oduction	5
	1.1	Stormwater Management Objectives	5
	1.2	Policy Framework	
	1.3	Ontario Regulation 697/21	
	1.4	Review of Background Documents	
	1.5	Study Area	8
2.	Des	ign Criteria	10
	2.1	Stormwater Management (SWM) Plan	10
	2.2	Flat Bottom Grassed Swales	
	2.3	Stormwater Management Ponds	10
	2.4	LSRCA and NVCA SWM and Erosion Requirements	11
3.	Oth	er Design Considerations	12
	3.1	Fish and Fish Habitat	
	3.2	Fluvial – Channel Realignment	
	3.3	Salt Management	13
4.	Exis	sting Drainage Condition	16
5.	Pro	posed Drainage Condition	17
	5.1	Overview	17
	5.2	Hydrologic Assessment - Culverts	
6.	Stor	rmwater Management Plan	21
	6.1	Flat Bottom Grassed Swales – MECP Standards	21
	6.2	MECP Stormwater Management (SWM) Ponds	
	6.3	Flow Comparison - Controlled vs. Uncontrolled	34
7.	Ope	eration, Maintenance and Monitoring	36
	7.1	Inspections	36
	7.2	Maintenance – Flat Bottom Grassed Swales	36
	7.3	Maintenance – SWM Ponds	37
8.	Mon	nitoring	38
9.	Tem	nporary Works During Construction	38
10.	Eros	sion and Sediment Control	39
	10.1	Overview	
	10.2	Supervision, Inspection and Maintenance	
11.	Sun	nmary and Conclusions	41

Tables

Table 1:	Ontario Regulation 697/21 – Addressing SWM Requirements	7
Table 2:	Rainfall IDF Parameters – MTO IDF Online Tool (2097)	17
Table 3:	Proposed Drainage Conditions – Peak Flows	18
Table 4:	Proposed Flat Bottom Grassed Swales – Preliminary Locations	24
Table 5:	Proposed SWM Ponds – Preliminary Characteristics	33
Table 6:	Comparison between Existing and Proposed Uncontrolled Peak Flows	35
Table 7:	Comparison between Existing and Proposed Controlled Peak Flows	35
Table 8:	Minimum Return Period for Temporary Drainage Works	39
List of	f Figures	
Exhibit 1.1	l: Study Area	g
	,	

REST OF FIGURES PROVIDED AT THE END OF THE REPORT

Appendices

Appendix A.	Full Version of the Ontario Regulation 697/21
Appendix B.	Existing Hydrologic Model – Peak Flows at Pour Point (for peak flows comparison)
Appendix C.	Flat Bottom Grassed Swales – Water Quality and Erosion Potential Calculations
Appendix D.	Proposed Hydrologic Model – Uncontrolled Peak Flows (without SWM ponds)
Appendix E.1.	Proposed Hydrologic Model – Controlled Peak Flows (with SWM ponds)
Appendix E.2.	Proposed Hydrologic Model Schematic – Controlled Peak Flows (with SWM ponds)
Appendix F.	Table 6.1 and Table 6.2 (from MECP Manual)
Appendix G.	Locations of SPS's IPZ, HVA and SGRAs within the Study Area

Ref: 60636190 RPT_2023-09-28_(GWP 2008-21-00) BBP_SWM Plan_60636190.Docx

1. Introduction

The Ontario Ministry of Transportation (MTO) has retained AECOM Canada Ltd. (AECOM) to undertake a Preliminary Design (PD) and project-specific assessment of environmental impacts for the proposed Highway 400 – Highway 404 Link (Bradford Bypass).

The purpose of this Stormwater Management Plan is to document the Stormwater Management (SWM) strategy that is proposed for the Bradford Bypass Project and ensure it addresses the SWM Requirements outlined on the Ontario Regulation 697/21.

This Plan includes a summary of the SWM Criteria, the hydrologic and hydraulic assessments of the existing and proposed drainage systems and the SWM strategy recommended for the Bradford Bypass Project. For additional information about the hydrologic and hydraulic assessments of the existing and proposed drainage system, refer to the *Drainage, Hydraulic and Stormwater Management (SWM) Report – Highway 400- Highway 404 Link (The Bradford Bypass) (GWP 2008-21-00),* (AECOM, July 21, 2023), herein referred to as the Drainage Report. This report is available upon request.

1.1 Stormwater Management Objectives

To achieve the purpose of this SWM Plan objectives have been identified that shall setup the approach to complete the required tasks and verify the assessments and design are in line with the main purpose of the improvement highway works. The SWM objectives are listed below:

- Assess the required drainage infrastructure to accommodate the Bradford Bypass and compare the assessment results to applicable Design Criteria,
- Complete the hydrology and hydraulics analyses to confirm adequacy of the proposed drainage structures and to identify potential impacts to the existing drainage system and infrastructure,
- Identify SWM measures to mitigate potential adverse impact in terms of higher flood levels, increased peak flow, flow velocities and erosion potential,
- Identify suitable Erosion and Sediment Control measures, and
- Verify positive drainage is provided for runoff generated within upstream lands across the Bradford Bypass - to receiving water bodies.

1.2 Policy Framework

The following design guidelines were used in the assessment of the existing and proposed drainage systems and in the development of the SWM Plan and Erosion and Sediment Control Plan (ESCP):

- Ontario Regulation 697/21 made under the Environmental Assessment Act for the Bradford Bypass Project, October 7, 2021;
- Ministry of Environment, Conservation and Parks (MECP) Stormwater Management Planning and Design Manual, March 2003;
- LSRCA Technical Guidelines for Stormwater Management Submissions, April 2022;
- NVCA Stormwater Technical Guidelines, December 2013;
- South Georgian Bay Lake Simcoe Source Protection Plan (Amended June 16, 2021);
- MTO Environmental Guide for Erosion and Sediment Control during Construction of Highway Projects, September 2015;
- MTO Drainage Management Manual, 1997; and
- MTO Highway Drainage Design Standards, January 2008.

Ref: 60636190 AECOM

1.3 Ontario Regulation 697/21

The proposed SWM Plan that shall provide water quality and quantity control of runoff for the Bradford Bypass has been developed to address SWM requirements outlined in the Ontario Regulation 697/21. Ontario Regulation 697/21 provides a defined framework for the proponent to follow to conduct assessment and decision-making surrounding the potential environmental impacts of the Bradford Bypass project.

MTO is required to complete all regulatory requirements set forth in Ontario Regulation 697/21, such as carrying out consultation, and obtaining permits and approvals for the Bradford Bypass project.

The regulation outlines requirements applicable to the SWM Plan, which includes actions to monitor and verify the effectiveness of the SWM measures. **Table 1** provides the SWM requirements of the SWM Plan outlined in the Ontario Regulation 697/21 and includes the section in this Plan where the requirements are addressed.

Ref: 60636190 AECOM

Table 1: Ontario Regulation 697/21 - Addressing SWM Requirements

Section No.	SWM Requirement	SWM Requirement Addressed in Section No. of the SWM Plan	
22. (1)	The proponent shall prepare a SWM Plan for the Bradford Bypass Project in accordance with this section.	-	
22. (2)	The SWM Plan shall, at a minimum, include,	-	
(2) (a)	plans and descriptions showing the type of stormwater management to be provided for all components of the Bradford Bypass Project, including components not being drained to a stormwater management wet pond;	See Section 6 and Exhibits 7.1, 7.2, 7.3 & 7.4	
(2) (b)	a description of the water features that would receive stormwater from the Bradford Bypass Project, including the characteristics, flow and ecological conditions and whether species protected under the <i>Endangered Species Act, 2007</i> are known to be present;	See Section 3	
(2) (c)	an operation and maintenance plan for the proposed SWM facilities; and	See Section 7	
(2) (d)	a monitoring plan to evaluate the performance of SWM facilities against the Design Criteria and objectives and to verify receiving surface waters are protected.	See Section 8	
(3)	The proponent shall develop the SWM Plan in accordance with,	-	
(3) (a)	the proponent's guidelines; and		
(3) (b)	the document entitled "SWM Planning and Design Manual", dated March 2003, published by the Ministry and available on the Government of Ontario website.	See Section 2	
(4)	The proponent shall submit the SWM Plan to the following for review and comment:	-	
(4) (1)	The Ministry of Northern Development, Mines, Natural Resources and Forestry.		
(4) (2)	The Lake Simcoe Region Conservation Authority.	Draft Stormwater Management was provided	
(4) (3)	Fisheries and Oceans Canada.	on March 22, 2023, for review until April 12, 2023.	
(4) (4)	The Ministry of the Environment, Conservation and Parks.		
(5)	The proponent shall consider any comments provided on the SWM Plan.	Comments on the SWM Plan shall be considered in the Final SWM Plan.	
(6)	The proponent shall provide the final SWM Plan to the Director of the Ministry's Environmental Assessment Branch	The Final SWM Plan shall be submitted as required	
(7)	The proponent shall publish the final SWM Plan on the Project website.	The Final SWM Plan shall be published in the Project Website	

Appendix A includes a full version of the Ontario Regulation 697/21 for the Bradford Bypass Project.

Review of Background Documents 1.4

The following information sources were reviewed in preparation of this SWM Plan:

Ref: 60636190 AECOM Highway 400 - Highway 404 Link (Bradford Bypass)

- Drainage, Hydraulic and Stormwater Management (SWM) Report (AECOM, July 21, 2023), hereafter called as the Drainage Report;
- Fish and Fish Habitat Existing Conditions and Impact Assessment Report (AECOM, June 2023) hereafter called as the Fish Report;
- Fluvial Geomorphological Assessment Report Bradford Bypass Crossings (AECOM, July 20, 2023) hereafter called as the Fluvial Report;
- Ontario Base Mapping (OBM);
- The latest topographic base map and survey (Nov. 2021);
- Hydrologic and Hydraulic modeling for West Holland River, East Holland River and Maskinonge River Watersheds, prepared by CCL, July 2005;
- Watershed Hydrology Study for Nottawasaga, Pretty and Batteaux Rivers, Black Ash, Silver and Sturgeon Creeks, prepared by MacLaren Plan search, May 1988;
- Lake Simcoe Region Conservation Authority (LSRCA) Innisfil Creek Subwatershed Study, April 2013;
- LSRCA Technical Guidelines for Stormwater Management Submissions (April 2022);
- Nottawasaga Valley Watershed, Health Check 2018;
- MTO Contract Drawings at Highway 400 and 404;
- Metrolinx Barrie Go Line Expansion SWM Report (2018);
- MRC, Environmental Assessment Report Route Planning and EA Study, Highway 400 Highway 404 Extension Link (Bradford Bypass), Dec. 1997.

1.5 Study Area

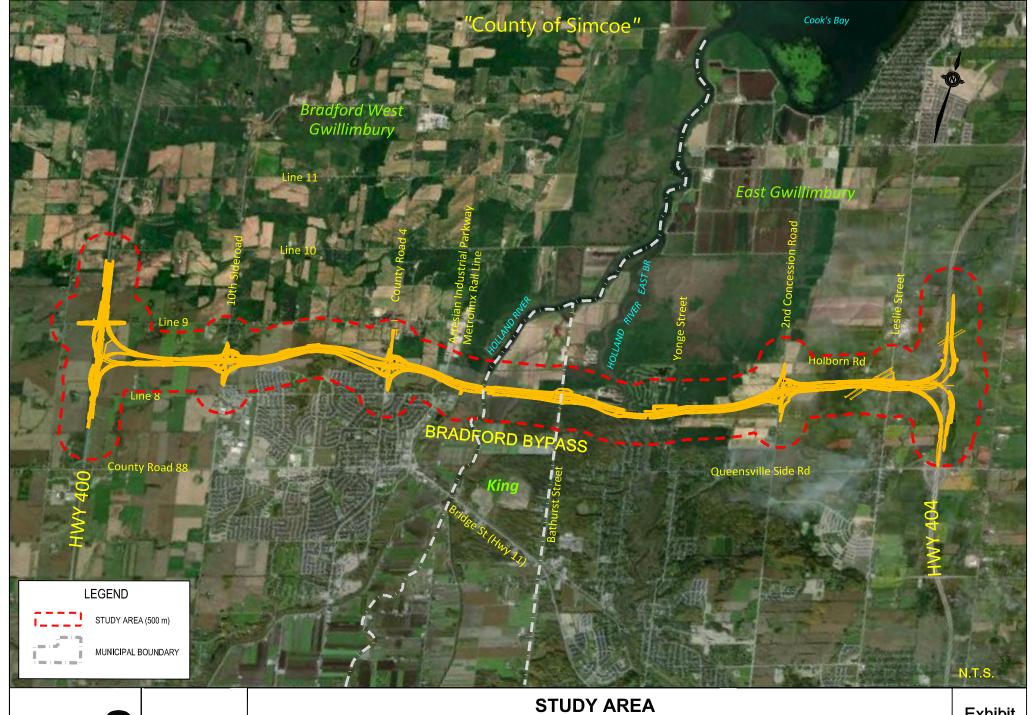
As shown on **Exhibit 1.1**, the Bradford Bypass project is a new 16.3 kilometre (km) controlled access freeway. The proposed highway will extend from Highway 400 between 8th Line and 9th Line in Bradford West Gwillimbury, cross a small portion of King Township and connect to Highway 404 between Queensville Sideroad and Holborn Road in East Gwillimbury (Regional Municipality of York). See **Section 5** for information related to the proposed Bradford Bypass works.

The Ministry is considering an interim four-lane configuration and an ultimate eight-lane design for the Bradford Bypass. The interim condition shall include two general purpose lanes in each direction and the ultimate condition shall include four lanes in each direction (one high-occupancy vehicle lane and three general purpose travel lanes in each direction).

The west limits of the Study Area, including Highway 400, falls within the Penville Creek watershed (Innisfil Creek) which is under the jurisdiction of the Nottawasaga Valley Conservation Authority (NVCA). The remainder of the Study Area falls within the Holland River and Holland River East Branch watersheds which are within the jurisdiction of the Lake Simcoe Region Conservation Authority (LSRCA). The limits of the Study Area are summarized below:

- West Limit is Highway 400 between 8th Line and 9th Line, and
- East Limit is Highway 404 between Queensville Sideroad and south of Holborn Road.

The land use consists of agricultural lands with some rural low-density residential and residential lands located south of Bradford Bypass between 10th Sideroad and the Holland River, and between Bathurst Street and 2nd Concession Road. Rural residential areas are encountered around the intersection between Leslie Street and Queensville Side Road. The topography of the site generally slopes towards the Holland River and Holland River East Branch. The predominant surficial soils, west of Holland River, are Loam, Gravelly Loam Sand, and Silty Clay Loam. To the east of Holland River, the predominant soils are Sandy Loan, Gravelly Loam, and Silt Loam. The soil types were obtained from the Soil Survey Map of Simcoe County, Soil Survey Report No. 29 and the Soil Survey Map of York County, Soil Survey Report No. 19.



Ontario 😚



Exhibit

HIGHWAY 400-404 LINK - BRADFORD BYPASS (GWP 2008-21-00)

1.1

2. **Design Criteria**

The Design Criteria used to complete the hydrologic and hydraulic assessments of the existing and proposed drainage systems are provided in the Drainage Report that was referred to in Section 1.

Stormwater Management (SWM) Plan 2.1

The design standards and criteria used in the design and assessment of temporary and permanent SWM facilities are based on the criteria outlined in the MECP Stormwater Management Planning and Design Manual (March 2003). The MTO Highway Drainage Design Standards (2008) provides additional recommendations that can be used in the design of roadside ditches intended to provide quality control of runoff. The LSRCA Technical Guidelines for Stormwater Management Submissions, April 2022, and the NVCA Stormwater Technical Guidelines, December 2013, were consulted to identify additional SWM and Erosion Control requirements. The specific design standards and criteria used for the design of the SWM plan for Bradford Bypass Project are summarized below.

2.2 Flat Bottom Grassed Swales

Flat-bottom grassed swales are recommended where feasible to provide additional water quality treatment of runoff. The March 2003 MECP design manual identifies flat-bottom grassed swales as an acceptable stormwater management practice for water quality enhancement provided that certain Design Criteria are met. Flat-bottom grassed swales are most effective for water quality treatment and quality enhancement when the depth of flow and longitudinal slope are minimized, and the bottom width is maximized. As per the 2003 MECP design manual, the Design Criteria for flat-bottom grassed swales are:

- The flow from the 4-hour 25 mm Chicago design storm shall be ≤ 0.15 m3/s,
- The velocity from the 4-hour 25 mm Chicago design storm shall be ≤ 0.50 m/s,
- Grassed swales are most effective when depth of flow is minimized. The flow depth for the 4-hour 25 mm Chicago design storm shall be ≤ 0.25 m,
- The longitudinal slope of the swale shall be less than 1.0%,
- The swale bottom width shall be, at a minimum, 0.75 m,
- The velocity generated by the 100-year design storm shall not exceed 1.5 m/s (at which point, rock protection shall be provided along the swale to prevent erosion potential), and
- The contributing drainage area shall be ≤ 2 ha (35% of imperviousness).

Typically, uncontrolled erosion can result in a loss of topsoil, a disruption of nearby watercourses due to sedimentation and high flow velocities ($V_{100} > 1.5$ m/s) resulting in a degradation of downstream water quality. An assessment of the flow velocities along the grassed swales during the 100-year design storm shall be completed during the detail design stage to identify where rock protection is required to prevent erosion potential. In addition, the use of permanent rock flow check dams (i.e., OPSD 219.210) shall reduce flow velocities, encourage runoff infiltration and shall minimize erosion potential.

Stormwater Management Ponds 2.3

Stormwater management (SWM) ponds are proposed where applicable to provide additional water quality treatment of runoff and to provide quantity control of peak flows. SWM ponds shall be designed as per the MECP design manual during the next design phase, assuming more information is available and appropriate. The design criteria for SWM ponds are summarized below:

- Minimum drainage area of 5 hectares.
- Permanent pool volume for wet ponds sized to provide Enhanced Level Quality Control (80% removal of Total Suspended Solids) as per Table 3.2 of the MECP design manual,

Ref: 60636190 AECOM

- Active storage detention for water quality and erosion control with a minimum drawdown time of 24 hours.
- Active storage sized to provide control of proposed condition peak flows to existing peak flow rates for storm events from 2-year and up to the 100-year design storms,
- A summary of design guidance for SWM Wet Ponds is provided in **Table 4.6** Wet Ponds Summary of Design Guidance in the MECP manual.

The LSRCA SWM Guidelines recommends the following standards:

- The post-development peak flow rates are not to exceed the corresponding pre-development peak flow rates for the 2-year and up to the 100-year design storm events (Unless specified otherwise by a subwatershed study or fluvial geomorphic analysis);
- Every effort must be made to maintain existing watershed boundaries and existing drainage patterns.
 As a rule, significant changes in drainage boundaries are not permitted. Pre-consultation is mandatory for any proposed change in drainage boundaries;
- Infiltration measures may be considered for peak flow control credits, subject to the conditions as described in Appendix B of the LSRCA's Technical Guidelines for SWM Submissions (April 2022). Preconsultation with the MECP, local municipality and the Authority is required;
- If a site is not accounted for within a downstream SWM facility than quantity control shall be required as per this section. Additionally, this may require over-control such as controlling the flows to a minimum of the 2-year pre-development flow rate OR the specified municipal allowable flow rate OR an approved governing master drainage studies / document;
- Where there is an external drainage area flowing through a site, it is the developer's responsibility to demonstrate safe conveyance of the Regulatory Storm, through the development site to a sufficient outlet:
- For additional design requirements applicable to SWM ponds, see Section 6.4.2 in the LSRCA's Technical Guidelines for SWM Submissions (i.e., emergency overflow weir, outlet control structure, outlet headwall, safety features, maintenance access, warning signs, vegetative planting, freeboard, erosion protection, etc.).

2.4 LSRCA and NVCA SWM and Erosion Requirements

The LSRCA and NVCA guidelines provide requirements for SWM submissions that are consistent with the MECP Stormwater Management Planning and Design Manual (March 2003), South Georgian Bay Lake Simcoe Source Protection Plan, and Erosion and Sediment Control Guideline for Urban Construction (2006). In addition, the LSRCA guidelines require that SWM submissions also be consistent with the Lake Simcoe Protection Plan (2009).

Consideration shall be given to the LSRCA's Stormwater Management criteria related to water quantity (Section 3.2.1), water quality (Section 3.3.1), volume control (Section 3.2.4) and erosion control (Section 3.4). In addition, LSRCA Ontario Regulation 179/06 Implementation Guidelines shall be considered in association with new upgraded, and/or replacement crossings (i.e., culverts, bridges, etc.). The Ontario Regulation provides additional detail pertaining to complete submissions, criteria, cut/fill balances, minimizing fill, hydraulic, hydrology, floodplain mapping etc.

Ref: 60636190

3. Other Design Considerations

Other disciplines were involved in this Project and had an impact on the drainage design. Input from other teams is summarized in the sections below.

3.1 Fish and Fish Habitat

The fisheries assessment included water features detected through background information review and field investigations within 250 metres (50 metres upstream, 200 metres downstream – where property access was allowed) of the Ministry of Transportation project Right-of-Way (ROW), AECOM ecologists conducted a detailed fish and fish habitat assessment of the water features in the vicinity of the Study Area between September 14 to 18, 2020 (i.e., the summer assessments), with spring field investigations occurring over multiple days in June 2021. Field investigations were also completed in spring of 2022 (May 19 and June 9) due to changes to the Study Area boundary that required further review for potential fish habitat.

Fifty-one (51) crossings were assessed along thirty-four (34) watercourses as part of this preliminary impact assessment. All the crossings that contain fish habitat in the East Holland River Subwatershed, West Holland River Subwatershed and the Maskinonge Subwatershed support warmwater fish communities. Only the crossings in the Innisfil Creek Subwatershed support coolwater fish communities. The East and West Holland River crossings (20-A-1 and 17-A-1, respectively), as well as C16-A-1, are known spawning habitat for muskellunge species.

Through the background information review, consultation with MNRF, and fish habitat and fish community assessments, it was determined that 17 crossings were permanent features that provided direct fish habitat,5 were intermittent features that provided direct fish habitat, 6 were intermittent and provided indirect habitat, and 2 were ephemeral and provided indirect habitat. Of the remaining 21 aquatic features, 20 were ephemeral and did not provide habitat, and 1 crossing was permanent but did not provide habitat.

Critical Habitat (SARA) was not identified at any site; however, C17-A-1 and C20-A-1 act as migratory corridors for fish to reach upstream spawning habitat and are specialized habitats that fish use for spawning and nursery. These two crossings, as well as C16-A-1, are also spawning habitat for muskellunge species. A full description of existing conditions is available in the Environmental Conditions Report: Preliminary Design and project-specific assessment of environmental impacts in accordance with Ontario Regulation 697/21 (W.O.#19 -2001) (AECOM, 2022).

In total, 23 crossings have been identified may require in-water works such as like-for-like replacement, grading, culvert extension, new culvert installation, watercourse realignment, and new bridge construction. It was noted in discussion with William Treaties First Nations on December 1, 2022, that they had observed both American Eel (*Anguilla rostrata;* Endangered Species Act – Endangered, Species at Risk Act – Not at Risk) and Northern Sunfish (*Lepomis peltastes*; Endangered Species Act – Special Concern, Species at Risk Act – Special Concern) in the Holland River

Subsequently, the Project Team consulted with the Ministry of the Environment, Conservation and Parks, in March 2023 and was advised that the Ministry of Environment, Conservation and Parks records have no documented observances of the American Eel or Northern Sunfish in the Study Area. They also noted that the Northern Sunfish is a species of special concern and does not have a permitting status with the Ministry of the Environment, Conservation and Parks, and therefore would not be reported.

No records of aquatic Species at Risk that are afforded protection under the Species at Risk Act or Endangered Species Act are known to occur in the watercourses where culverts are anticipated to be installed. The presence or absence of Species at Risk shall be re-confirmed in subsequent design phases.

The proposed new in-water works cannot be completed under the MTO Routine Works. However, riparian vegetation removal, like-for-like culvert replacements, and culvert cleanout work can likely follow existing Best

Ref: 60636190 AECOM

Management Practices (BMPs). All other proposed works were carried to Step 4 of the Fisheries Assessment Process. AECOM Fisheries Biologists certified in the MTO Registry, Appraisal and Qualification System (RAQS) as Fisheries Assessment Specialists have assessed the potential negative impacts of the proposed work and recommended appropriate mitigation measures to avoid or negate these impacts. Although a permanent alteration of direct and indirect fish habitat is anticipated from the proposed works, mitigation and environmental provisions have been described to reduce the impacts to fish habitat and facilitate the restoration and/or improvement of habitat at each proposed crossing. Proposed works that shall be submitted to DFO for review are outlined in the Fish Report – Highway 400-Highway 404 Link (Bradford Bypass) (GWP 2008-21-00) (AECOM, June 2023).

Refer to the AECOM Fish Report (AECOM, June 2023). for further information related to fish habitat requirements.

3.2 Fluvial – Channel Realignment

The following general fluvial geomorphology realignment recommendations shall be considered during the Detail Design stages of the project:

- Channel realignment shall be designed in accordance with Natural Channel Design principles and shall be in compliance with LSRCA Guidelines 9.1 & 9.2, including Guideline 9.2.1 and NVCA Guideline 4.6.3.1.
- Maintain bankfull channel dimensions, hydraulics, and floodplain connectivity. Assume existing bankfull width and depth to be maintained with further assessment completed at the Detail Design stage.
- Maintain meandering channel planform, where required.
- Reduce impacts to infrastructure in close proximity. Watercourse shall be located away from highway embankment to avoid erosion at the embankment.
- Improve physical habitat conditions for fish. This includes a low flow channel to improve connectivity during low flows and incorporating habitat features.
- Maintain continuity of channel form and process. This includes an appropriate tie-in to the longitudinal profile and channel planform.
- Minimize the loss of channel length. There shall be no net loss of channel length unless an increase in channel slope is beneficial to the overall design.
- Channel shall flow perpendicularly through the crossing structure with a straighter path to the culvert which shall eliminate erosion risk to the culvert inlet.

A table summarizing the expected realignment work has been included in the Fluvial Geomorphology Impact Assessment Report. Additional and final details shall be confirmed in subsequent Detail Design phases.

3.3 Salt Management

The MTO Provincial Salt Management Plan contains best management practices to facilitate the optimal rate, timing, and location of salt application. MTO effectively incorporates such that the Salt Management Plan meets the objectives of Environment Canada's Code of Practice for Environmental Management of Road Salts. The MTO Salt Management Plan incorporate the best available winter maintenance practices are implemented to provide safe driving conditions on the provincial highway network while minimizing environmental impacts. Road salt best management practices have been developed by government and industry, primarily through the Transportation Association of Canada's Syntheses of Best Practices: Road Salt Management framework, and Environment and Climate Change Canada's Code of Practice for the Environmental Management of Road Salts. The best management practices typically included in a Road Salt Management Plan are proven and science-based.

The last review update was completed in 2017. Future reviews of MTO's Salt Management Plan shall be undertaken at significant milestones including ECCC's release of the next five-year review in 2022 of the Code,

AE AE 60636190

Ministry of Transportation of Ontario

Final Bradford Bypass Stormwater Management Plan Highway 400 - Highway 404 Link (Bradford Bypass)

significant updates in BMP's etc. Future plan updates shall be undertaken as needed ensuring consistency with industry standards.

The Ministry works with stakeholders across Ontario, Canada and the United States to invest in research to understand new products and practices to deliver snow and ice control that reduce road salt usage and mitigate environmental impacts while maintaining public mobility and safety on provincial highways. The Ministry has conducted extensive research into winter materials over many years that has led to changes in winter maintenance standards and best practices. In addition, the ministry actively tracks the research undertaken in other jurisdictions.

The Ministry is an engaged member of the Source Water Protection Government Review Team to review, provide comment towards, and revise Source Protection policies within plans. MTO reports annually to MECP on the status of implementation of the policies in Source Protection plans.

Consult the Lakes Simcoe and Couchiching / Black River Source Protection Area (LSCSPA) to identify applicable water quality policies and requirements for sensitive areas to chlorine within the Bradford Bypass project limits.

Snow removal and disposal shall be completed in accordance with guidelines on Snow Disposal and De-icing Operations in Ontario and the Ministry of the Environment, Conservation and Parks (MECP) guidelines. Examples of snow removal and de-icing include:

- Plowing, spreading of sand, salt, anti-icing liquid, wet salt, and/or other chemicals and substances to
 provide safe vehicle traction and to melt ice and snow, application rates for the above chemicals and
 substances, salt management, and clean-up, and
- Appropriate precautions to prevent salt and treated sand from entering watercourses and salt-sensitive areas shall be undertaken.

Consultation with applicable municipalities (i.e., Bradford West Gwillimbury, East Gwillimbury and King Township) in the Lake Simcoe watershed is recommended as they as these municipalities have developed Salt Management Plans to help navigate the balance between environmental protection and public safety. Municipalities have identified areas where the greatest impact to aquatic habitats are occurring, and that might require appropriate precautions to prevent salt and treated sand from entering watercourses and salt-sensitive areas are proposed.

Appropriate precautions include:

- Directing stormwater flows from highway paved areas to proposed SWM facilities for water quality treatment.
- Lining ditch bottoms with Geosynthetic Clay Liners (GCLs) or similar material which offer a long-lasting resistance to physical or chemical break-down elements, while the bentonite's high swelling capacity and low permeability provide an effective hydraulic seal, which shall reduce infiltration of salt laden. runoff.
- Protecting sensitive ground water recharge areas such as avoiding direct infiltration.
- No direct discharge of flows from highway areas and side ditches to chloride sensitive receiving water bodies.
- Protecting streams that support fish habitat through enhanced grassed swale retention and quality treatments.
- Utilizing landscape design and snowdrift mitigation strategies to optimize salt application.
- Identifying Water Quality Objective/Requirements policies (i.e., Chloride) applicable to the Bradford Bypass.
- Preparation and use of MTO Salt Management Plans (SMP) which outline salt management operational practices and strategies and Best Management Practices (BMP), in terms of Equipment, Best Practices, Material, Storage, Testing, Storm Response, Application Rates, Snow & Ice Control Trainings, Snow Removal & Disposal, and Technology Review. This includes implementing a balanced

Ministry of Transportation of Ontario

Final Bradford Bypass Stormwater Management Plan

Highway 400 - Highway 404 Link (Bradford Bypass)

approach (use less salt and yet maintain the same level of public safety) to the highway salt application based on the amount of snow precipitation and highway conditions.

- Areas that are particularly sensitive to road salts where additional salt management measures may be necessary to mitigate the environmental effects of road salts in that area. This is done in accordance with the study objectives and utilizing the Code of Practice for the Environmental Management of Road Salts released by Environment Canada.
- In addition, snow removal and disposal would be utilized in accordance with the Ministry of the Environment, Conservation and Parks (MECP) guidelines, Guidelines on Snow Disposal and De-icing Operations in Ontario.

Ref: 60636190 RPT_2023-09-28_(GWP 2008-21-00) BBP_SWM Plan_60636190.Docx Highway 400 - Highway 404 Link (Bradford Bypass)

4. Existing Drainage Condition

As illustrated in **Exhibits 3.1 to Exhibit 3.7** (provided at the back of this SWM Plan), the existing drainage system along Highway 400, Highway 404 and sideroads is accomplish by roadside ditches, transverse and sideroad culverts, catchbasins located along municipal roads and localized ditch inlets that collect water from the ditch inlets, watercourses and roadside ditches.

As shown in **Exhibits 3.8 and 3.9**, runoff generated within the Study Area drains to the three main drainage features that cross the proposed Bradford Bypass alignment. Runoff from the western portion of the Study Area is conveyed westerly to Penville Creek by the existing culverts located under Highway 400 (EX-CL-400-1, EX-CL-400-2, and EX-CL-400-3). EX-CL-400-4 has been abandoned. These culverts discharge to a tributary of Penville Creek that runs southerly along the east side of Highway 400. Flows along the tributary drains westerly across the highway through Culvert EX-CL-400-5 to Penville Creek, which is withing the Innisfil Creek Watershed and in the jurisdiction of the Nottawasaga Valley Conservation Authority (NVC). In addition, **Figure 3.9** shows the location of the existing culverts under Highway 400. Runoff generated within the center portion of the Study Area, which represents more than 90% of the project drainage areas, drains to Holland River and Holland River East Branch. These rivers run northerly and ultimately discharge to Lake Simcoe.

Figure 3.8 shows that existing Culvert EX-CL-404-2 (4880 mm x 3050 mm structural concrete) drains an approximate area of 36.35 ha from a west area of Highway 404 to Maskinonge River, which drains northerly to Lake Simcoe. The Holland River, Holland River East Branch and Maskinonge River are located within the jurisdiction of Lake Simcoe Region Conservation Authority (LSRCA).

The Holland River subwatershed (**Exhibit 3.8**) is drained by the Holland River, which flows in a northeast direction into Cook's Bay (Lake Simcoe). The main tributaries of the Holland River include: Ansnorveldt Creek, Glenville Creek, East Kettleby Creek, 400 Creek, Pottageville Creek, South Schomberg River, North Schomberg River, Fraser Creek, Scanlon Creek, William Neeley Creek, Coulson's Creek, and the Holland Marsh and its extensive canal and Municipal Drain system (LSRCA, 2010).

The Holland River East Branch flows generally in a northerly direction into Cook's Bay (Lake Simcoe). The main tributaries of the Holland River East Branch include the Main Branch, flowing westward from a point west of Musselman's Lake, the Aurora Branch, Wesley Corners Creek, and Bogart Creek (LRSCA, 2010). The Main Branch and the Aurora Branch join north of the Town of Aurora to form the Holland River East Branch and continue to flow north to discharge into Cook's Bay (LSRCA, 2010).

Tributaries of the Maskinonge River begin in agricultural areas in the eastern half of the subwatershed and flow west towards Lake Simcoe. The Maskinonge River's northern and main Branches (closer to Lake Simcoe) are classified as warmwater habitat; however, the more southern tributaries (i.e., within the Study Area) are classified as cold to coolwater (LRSCA, 2010). Geographically, this subwatershed exists in a small portion of the Oak Ridges Moraine, limiting the amount of its tributaries influenced by groundwater and thus coldwater habitat is rare. Land use in the subwatershed is dominated by agriculture with natural areas interspersed throughout (LRSCA, 2010).

For additional information about the characteristics of the existing culverts and their hydrologic and hydraulic assessments including the hydraulic assessment of the Holland River and Holland River East Branch refer to the Drainage Report (AECOM, July 21, 2023).

Appendix B includes the existing hydrologic model that was revised for consistency between hydrologic points of interest (pour points) and the proposed SWM pond locations. Completing this task allows the comparison of existing (pour points) and proposed peak flows at SWM ponds. The appendix includes input parameters, data and output files.

Ref: 60636190

5. Proposed Drainage Condition

5.1 Overview

The Ontario Ministry of Transportation (the Ministry) has retained AECOM Canada Ltd. (AECOM) to undertake a Preliminary Design and project-specific assessment of environmental impacts for the proposed Highway 400 – Highway 404 Link (Bradford Bypass). The Bradford Bypass (the project) is being assessed in accordance with Ontario Regulation 697/21 (the Regulation) (October 7, 2021).

The project is a new 16.3 kilometre (km) controlled access freeway. The proposed highway will extend from Highway 400 between 8th Line and 9th Line in Bradford West Gwillimbury, cross a small portion of King Township, and connect to Highway 404 between Queensville Sideroad and Holborn Road in East Gwillimbury. There are proposed full and partial interchanges, as well as grade separated crossings at intersecting municipal roads and watercourses, including the Holland River and Holland River East Branch. This project will also include the design integration for the replacement of the 9th Line structure on Highway 400, which will accommodate the proposed future ramps north of the Bradford Bypass corridor. The Ministry is considering an interim four-lane configuration and an ultimate eight-lane design for the Bradford Bypass. The interim condition shall include two general purpose lanes in each direction and the ultimate condition shall include four lanes in each direction (one high-occupancy vehicle lane and three general purpose travel lanes in each direction). This Report and its findings are based on the project footprint identified within this Report. Should the footprint change or be modified in any way, a review of the changes shall be undertaken, and the Report shall be updated to reflect the changes, impacts, mitigation measures, and any commitments to future work.

The Overall Proposed Conditions Drainage Mosaic are shown on **Exhibits 5.1** and **5.2** (provided at the back of this report). These exhibits show the location of the proposed culverts and the drainage areas to each culvert. Additionally, these exhibits show the locations of the pour points (or hydrologic points of interest) where existing peak flows are compared to proposed peak flows to identify where existing flow rates are exceeded.

Where existing flow rates are exceeded, SWM measures are applied to reduce future peak flows to existing flow rates. This includes reduction of flow velocities and minimizing erosion potential. The development of the hydrologic model used to assess the proposed SWM strategy is summarized in the following section.

5.2 Hydrologic Assessment - Culverts

The hydrologic assessment of the proposed drainage system was completed using the MTO 2097 IDF Curves corresponding to the 75 years service life of the Bradford Bypass proposed drainage system including proposed culverts, flat bottom grassed swales, enhanced grassed swales and SWM Wet Ponds. **Table 2** summarizes the IDF parameters that were input into the hydrologic model to generate the 2-year and up to the 100-year design peak flows based on the 24-hour SCS Rainfall distribution.

Table 2: Rainfall IDF Parameters – MTO IDF Online Tool (2097)

Parameter	ameter 2-year		10-year	25-year	50-year	100-year
Α	388.05	511.48	592.99	694.44	773.49	844.22
В	B 0.043		0.051	0.051	0.053	0.052
С	0.676	0.682	0.685	0.686	0.688	0.688

The peak flows for the 2-year and up to the 100-year design storms are depicted in Table 3.

Table 3: Proposed Drainage Conditions – Peak Flows

Culvert I.D.	Total Drainage	Chainage (m)				Flows (m³/s) GCS Type II			Remarks		
Guivert i.B.	Area (ha)	Onamage (m)	2-year	5-year	10-year 25-year		50-year 100-year		Remarks		
Proposed Highway	400 Culverts										
PR-CL-400-1	3.9	18+595	0.18	0.32	0.41	0.53	0.64	0.73			
PR-CL-400-2	279.7	17+800	2.149	3.792	4.955	6.394	7.402	8.523	Structural Culvert. Span recommended by Fluvial.		
Bradford Bypass &	. Highway 400 Inter	rchange – Propos	ed Ramp Culve	erts							
PR-R-BBP-1A	8.6	10+096	0.169	0.304	0.400	0.523	0.631	0.720			
PR-R-BBP-1B	11.2	10+950	0.232	0.403	0.523	0.676	0.809	0.920			
PR-R-BBP-2	11.1	10+357	0.267	0.479	0.628	0.818	0.986	1.124			
PR-R-BBP-3	2.4	10+471	0.086	0.156	0.205	0.268	0.324	0.370			
PR-R-BBP-4	226.5	10+700	1.622	2.773	3.582	4.619	5.418	6.264	Structural Culvert. Span recommended by Fluvial.		
PR-R-BBP-5	2.2	11+171	0.055	0.099	0.130	0.169	0.204	0.233			
PR-R-BBP-6A	554.4	10+077 / 11+068	0.839	1.784	2.508	3.493	4.397	5.166	Structural Culvert. Span recommended by Fluvial.		
PR-R-BBP-6B	550.1	10+774	0.850	1.803	2.533	3.524	4.433	5.207	Structural Culvert. Span recommended by Fluvial.		
PR-R-BBP-7	1.8	11+000	0.081	0.145	0.190	0.248	0.299	0.341			
PR-R-BBP-8	85.4	10+346	0.18	0.40	0.56	0.80	1.05	1.20	Structural Culvert. Span recommended by Fluvial.		
PR-R-BBP-9A	5.4	11+619	0.14	0.27	0.34	0.46	0.56	0.64			
PR-R-BBP-9B	12.2	11+040	0.16	0.30	0.39	0.52	0.62	0.70			
PR-R-BBP-10	270.2	10+206	2.009	3.525	4.597	5.933	6.865	7.913	Structural Culvert. Span recommended by Fluvial.		
PR-R-BBP-11	295.0	12+190	2.394	4.244	5.559	7.168	8.306	9.539	Structural Culvert. Span recommended by Fluvial.		
Proposed Bradford	Bypass Transvers	se Culverts									
PR-CL-BBP-1	4.9	12+340	0.13	0.20	0.27	0.35	0.43	0.50			
PR-CL-BBP-2	78.6	13+663	0.654	1.227	1.638	2.174	2.652	3.052			
PR-CL-BBP-3	20.5	14+190	0.34	0.61	0.80	1.05	1.26	1.44			
PR-CL-BBP-4	20.5	15+514	0.34	0.61	0.80	1.05	1.26	1.44			
PR-CL-BBP-5	26.9	16+337	0.277	0.532	0.722	0.973	1.198	1.385			
PR-CL-BBP-6A	-	18+448	-	_	_	_	_	-	Culverts PR-CL-BBP-6A, PR-CL-BBP-6B and PR-CL-BBP-6C are located along a prividrainage systems. Design requirements of these drains shall be confirmed in future desistages and in consultation with the town's drainage superintendent.		
PR-CL-BBP-6B	_	18+448	-	-	-	_	_	_			
PR-CL-BBP-6C	_	18+448	-	_	-	_	_	-			
PR-CL-BBP-7	4.2	18+807	0.253	0.398	0.497	0.620	0.728	0.811			
PR-CL-BBP-8	5.7	19+103	0.236	0.358	0.444	0.548	0.646	0.714			

Table 3: Proposed Drainage Conditions – Peak Flows

Culvert I.D.	Total Drainage	Chainage (m)	Total Peak Flows (m³/s) 24-hour SCS Type II						Remarks
ouiveit i.b.	Area (ha)	Onamage (m)	2-year	5-year	10-year	25-year	50-year	100-year	Kemarks
PR-CL-BBP-9	_	21+483	-	_	_	_	-	-	Overflow Culvert. Located between Yonge Street and 2 nd Concession Road
PR-CL-BBP-10	_	21+877	-	_	_	_	_	_	Overflow Culvert. Located between Yonge Street and 2 nd Concession Road
PR-CL-BBP-11	_	-	-	_	_	_	_	-	Proposed bridge structure at the existing pond. Located approx. 902 m west of 2 nd Concession Road.
PR-CL-BBP-12	4.6	23+142	0.455	0.691	0.858	1.070	1.243	1.394	
PR-CL-BBP-13	30.8	23+272	0.328	0.493	0.616	0.765	0.911	1.020	
PR-CL-BBP-14	32.7	24+636	0.25	0.51	0.71	0.97	1.21	1.40	
PR-CL-BBP-15	45.6	25+071	0.24	0.49	0.69	0.95	1.18	1.38	
PR-CL-BBP-16	10.0	25+200	0.109	0.175	0.229	0.316	0.394	0.461	
PR-CL-BBP-17	22.0	25+328	0.230	0.461	0.631	0.854	1.054	1.222	
Proposed Sideroad	d Culverts – 9 th Line	9							
PR-CL-1	5.2	9+912	0.14	0.24	0.31	0.40	0.48	0.55	
PR-CL-2	221.5	10+110	1.560	2.650	3.412	4.389	5.244	6.075	Located under 9 th Line. Structural Culvert. Span recommended by Fluvial.
Bradford Bypass &	10th Sideroad Inte	erchange - Propos	sed Ramp Culv	erts					
PR-R-10IC-1	3.6	9+540	0.05	0.122	0.17	0.24	0.31	0.36	
PR-R-10IC-2	4.50	10+250	0.238	0.363	0.454	0.577	0.687	0.775	
PR-R-10IC-3	1.40	9+883	0.030	0.059	0.079	0.106	0.129	0.149	
PR-R-10IC-4	6.2	9+894	0.14	0.24	0.32	0.42	0.51	0.60	
PR-R-10IC-5	8.9	10+130	0.28	0.44	0.58	0.75	0.91	1.05	
PR-R-10IC-6	4.9	9+730	0.44	0.64	0.77	0.94	1.08	1.22	
PR-R-10IC-7	1.3	9+711	0.02	0.05	0.06	0.09	0.10	0.12	
PR-R-10IC-8	0.4	9+290	0.01	0.02	0.025	0.03	0.04	0.05	
Bradford Bypass &	Bradford Bypass	Interchange - Pro	posed Ramp C	ulverts					
PR-R-C4IC-1	17.5	9+691	0.16	0.35	0.50	0.69	1.01	0.778	
PR-R-C4IC-2A	0.6	9+860	0.04	0.06	0.07	0.09	0.11	0.12	
PR-R-C4IC-2B	1.7	9+954	0.11	0.16	0.20	0.25	0.30	0.33	
PR-R-C4IC-3	24.4	9+773	0.69	1.06	1.34	1.70	2.02	2.29	
PR-R-C4IC-4	2.50	9+820	0.268	0.382	0.458	0.554	0.640	0.708	
PR-R-C4IC-5	0.40	9+788	0.014	0.027	0.037	0.049	0.060	0.069	
PR-R-C4IC-6	1.7	9+940	0.029	0.060	0.083	0.114	0.142	0.165	
PR-R-C4IC-7	4.8	10+160	0.243	0.373	0.467	0.592	0.709	0.799	
radford Bypass &	Bathurst Street In	terchange - Propo	osed Ramp Cul	lverts					
PR-R-BST-1	2.20	9+818	0.085	0.150	0.194	0.251	0.301	0.341	

Table 3: Proposed Drainage Conditions – Peak Flows

Culvert I.D.	Total Drainage	Chainage (m)	Total Peak Flows (m³/s) nage (m) 24-hour SCS Type II						Remarks
	Area (ha)		2-year	5-year	10-year	25-year	50-year	100-year	
PR-R-BST-2	6.2	10+230	0.428	0.661	0.822	1.020	1.206	1.326	
PR-R-BST-3	3.60	10+163	0.070	0.126	0.166	0.217	0.262	0.299	
PR-R-BST-4	7.7	9+863	0.418	0.634	0.788	0.970	1.147	1.270	
Bradford Bypass & 2nd Concession Road Interchange - Proposed Ramp Culverts									
PR-R-2CON-1	9.2	9+680	0.97	1.45	1.78	2.21	2.56	2.85	
PR-R-2CON-2	3.0	9+920	0.27	0.42	0.52	0.66	0.77	0.88	
PR-R-2CON-3	243.60	9+732	1.061	2.054	2.780	3.736	4.593	5.310	
PR-R-2CON-4	27.8	9+657	0.124	0.264	0.370	0.512	0.641	0.750	
PR-R-2CON-5	32.3	9+893	0.461	0.705	0.887	1.093	1.303	1.459	
PR-R-2CON-6	35.3	10+206	0.770	1.165	1.460	1.796	2.134	2.383	
Bradford Bypass &	Leslie Street Inter	change - Propose	ed Ramp Culve	rts					
PR-R-LST-1	43.4	10+084	0.24	0.52	0.73	1.01	1.26	1.48	
PR-R-LST-2	8.8	10+228	0.066	0.147	0.208	0.291	0.366	0.429	
PR-R-LST-3	11.1	9+718	0.200	0.305	0.381	0.485	0.578	0.657	
Bradford Bypass &	Highway 404 Inter	change – Propos	ed Ramp Culve	erts					
PR-R-404-1	121.2	11+445	0.437	0.901	1.250	1.717	2.140	2.498	
PR-R-404-2	119.4	25+636 / 10+146	0.433	0.894	1.241	1.705	2.126	2.481	Structural Culvert. Span recommended by Fluvial. Chapman Pond (Irrigation Pond)
PR-R-404-3	118.5	10+130	0.432	0.891	1.237	1.699	2.119	2.474	
PR-R-404-4	3.6	10+318	0.04	0.085	0.12	0.17	0.21	0.24	
PR-R-404-5	8.3	10+333	0.06	0.14	0.20	0.27	0.34	0.40	
PR-R-404-6	12.0	11+208	0.11	0.23	0.33	0.45	0.57	0.66	
PR-R-404-7	7.2	10+567	0.06	0.12	0.17	0.23	0.29	0.34	
PR-R-404-8A	1.7	10+250	0.02	0.04	0.06	0.08	0.10	0.12	
PR-R-404-8B	2.9	11+420	0.034	0.07	0.10	0.13	0.16	0.19	
PR-R-404-9	1.8	10+400	0.029	0.062	0.086	0.118	0.148	0.172	
PR-R-404-10	39.6	10+293	0.23	0.51	0.72	1.00	1.26	1.50	NEW CULVERT. The culvert size shall match the existing upstream culvert size of 4880 x 3050mm Con-Span.
PR-R-404-11	30.2	10+960	0.163	0.357	0.506	0.706	0.889	1.043	NEW CULVERT. The culvert size shall match the existing downstream culvert size of 4880 x 3050mm Con-Span.

PR-R-404-11 – Denotes Proposed "Structural" Culvert

PR-R-404-5 – Denotes Proposed Non-structural Culvert

6. Stormwater Management Plan

Typically, without SWM treatment of runoff, erosion and sedimentation, and highway improvement works can contribute to a rise in runoff volumes and peak flows. In turn, this can lead to flooding, degraded water quality, and the destruction of aquatic and terrestrial habitat. To address these concerns, it is proposed to treat runoff from the paved areas of the Bradford Bypass corridor with advanced and effective SWM runoff treatments. MTO is committed to the protection of the natural environment, re-establishment of the benefits of rainfall precipitation, and the protection and enhancement of water quality in the surrounding areas of the Bradford Bypass where achievable.

The SWM strategy is depicted on **Exhibits 7.1** to **7.4** (provided at the back of this SWM Plan) The overall objective of the Stormwater Management (SWM) Plan is to minimize impacts to the existing drainage system and surrounding natural environment in terms of degradation of water quality, increased runoff volumes and minimizing erosion potential. It must be noted that SWM measures do not exist under existing drainage conditions along the BBP with the exception of a few scattered ponds along the corridor. However, most of these ponds function as irrigation ponds and/or recreation purposes. As shown on **Exhibit 5.1** two existing ponds (R-Ex Pond 1 and R-Ex Pond 2) shall be relocated. Given that the area around the ponds is undeveloped, it is assumed that these two ponds do not function as SWM ponds per MECP requirements.

The SWM strategy for the Bradford Bypass project includes flat-bottom grassed swales to be located along the north and south sides of the Bradford Bypass where longitudinal slopes satisfy MECP requirements of 1% or less. Enhanced grassed swales (wider swales) are recommended along side ditches that shall discharge wetlands, marshes, and fish sensitive areas to prevent that untreated runoff from discharging directly to these areas.

MTO Highway Drainage Design Standards (HDDS, Feb. 2008), and the Ministry of the Environment, Conservation and Parks (MECP) Stormwater Management Planning and Design Manual (March 2003) provided the design standards for the selection and preliminary design of the SWM facilities that are required to mitigate the potential impacts of the proposed highway works. Additionally, the Lake Simcoe Region Conservation Authority (LSRCA) SWM Guidelines provided additional design standards and recommendations applied to the proposed SWM facilities.

MECP guidelines includes provision of grassed swales for slopes up to 4%, despite the flat bottom swales not meeting the required longitudinal slope of "less that 1.0%". However, the MECP guidelines state that "Grassed swales with a slope up to 4% can be used for water quality purposes, but effectiveness diminishes as velocity increases". A summary of the proposed stormwater measures is provided below.

The locations of the Flat Bottom Grassed Swales and Stormwater Management Ponds within the Study Area in relation to vulnerable areas Intake Protection Zones (IPZ), Highly Vulnerable Aquifers (HVA) and Significant Groundwater Recharge Areas (GWRA) are provided in **Appendix G**. The figures provided in this appendix are based on information obtained from the Lakes Simcoe and Couchiching / Black River Source Protection Area (SPA).

6.1 Flat Bottom Grassed Swales – MECP Standards

As shown in **Table 4**, 15,225 metres of MECP's flat bottom grassed swales are proposed along the Braford Bypass north and south side ditches and along highway ramps. The swales have been designed for the ultimate conditions. These swales shall provide water quality treatment of runoff generated within the paved areas of the Bradford Bypass. The grassed swales shall reduce flow velocities and promote infiltration where permitted by the characteristics of the soil. The grassed swales are particularly ideal for highway applications due to their linear nature. However, specific MECP Design Criteria must be achieved. Proposed flow rates and velocities are

Ref: 60636190 AECOM

Highway 400 - Highway 404 Link (Bradford Bypass)

determined along the swales to provide the required water quality and erosion criteria. The flat bottom grassed swales included in **Table 4** meet the MECP longitudinal slope requirement of 1% or less.

To maintain the swale within the highway ROW, the bottom widths has been sized based on the available land, road slope and grading constraints. Based on findings from future geotechnical investigations, in areas where the groundwater elevation is high and closed to the ground, the swale shall be designed as shallow as possible to minimize adverse impacts to ground water levels and quality and to protect ground water recharge areas.

Permanent rock flow check dams (i.e., OPSD 219.210) are proposed along the flat bottom grassed swales where longitudinal profile allows it. The permanent flow check dams shall further slow down flow velocities, provide some measure of flood attenuation (quantity control) and shall promote runoff infiltration and ground water recharge.

For illustrative purposes, **Figure 3A** shows a typical flat bottom grassed swale with permanent rock flow check dams. As an alternative, **Figure 3B** shows an enhanced grassed swale (wider swale) with concrete weir (dams) for flow attenuation, runoff infiltration and reduction of erosion potential. **Figure 4** presents a concept of the flow check dams spacing along flat bottom and enhanced grassed swales. Enhanced grassed swales are proposed to be installed along the side ditches that discharge to sensitive areas and/or areas that support fish habitat (i.e., flows discharging to Holland River and Holland River East Branch).



Figure 3A - Location of Permanent Flow Check Dams along a Flat Bottom Grassed Swale

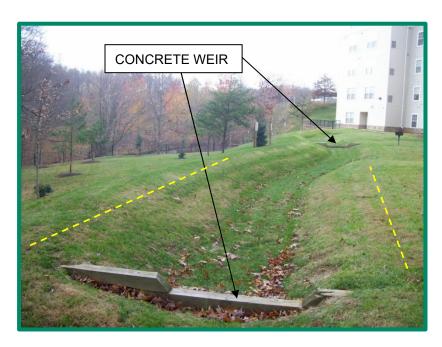


Figure 3B - Enhanced Grassed Swale with Concrete Weirs (dams)

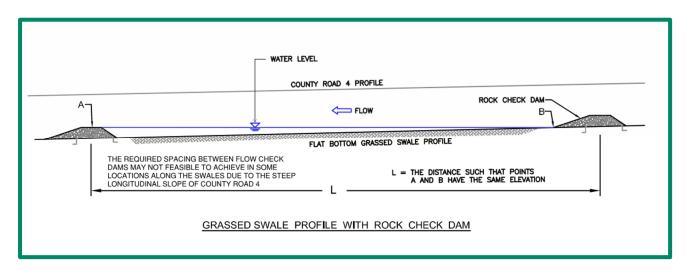


Figure 4 - Conceptual locations of flow check dams along flat bottom grassed swales

The Bradford Bypass corridor is proposed to feature over 15,200 metres of flat bottom grassed swales that shall provide water quality treatment of runoff generated within the paved areas, not already treated by the proposed nine (9) SWM ponds. The ponds shall provide enhanced protection level (80% long-term Suspended Solids removal) or greater. This demonstrates the Ministry's commitment to delivering robust water quality and quantity treatment facilities within the Bradford Bypass corridor. Where additional opportunities are present, both treatments are proposed to occur concurrently.

Appendix C provides the calculations for the Water Quality Analysis during the 4 hour 25mm Chicago Storm, and the Erosion Potential Analysis during the 100 year Design Storm. The calculations document the hydraulic performance of the proposed flat-bottom grassed swales and their compliance with the water quality and erosion potential design criteria from MECP.

Table 4: Proposed Flat Bottom Grassed Swales - Preliminary Locations

Swale Location	Chaina	Chainage (m) ¹		Average	Swale	Swale Side		
	From	То	Swale Length (m)	Longitudinal Slope (%)	Bottom Width (m)	Slopes	Swale Outlet to:	Remarks
roposed Bradford By	pass – West o	f Holland Riv	ver					
Right Ditch	11+760	11+720	40	0.35	1.2	3:1	Downstream flat bottom swale	
Left Ditch	12+015	12+000	15	0.84	1.2	3:1	Downstream flat bottom swale	10 th Sideroad interchange
Right Ditch	12+100	12+120	20	0.92	1.2	3:1	SWM Pond P-SWM P-3	10 th Sideroad interchange
Right Ditch	12+300	12+260	40	0.90	1.2	3:1	SWM Pond P-SWM P-3	10 th Sideroad interchange
Left Ditch	12+390	12+260	130	0.80	1.2	3:1	Culvert PR-R-10IC-7	10 th Sideroad interchange
Right Ditch	12+440	12+540	100	0.60	1.2	3:1	Downstream flat bottom swale	10 th Sideroad interchange
Right Ditch	12+560	12+740	180	0.60	1.2	3:1	Culvert PR-R-10IC-5	10 th Sideroad interchange
Right Ditch	12+740	13+080	340	0.60	1.2	3:1	Downstream flat bottom swale	10 th Sideroad interchange
Left Ditch	12+440	12+480	40	0.60	1.2	3:1	SWM Pond R-EX Pond-1	10 th Sideroad interchange
Left Ditch	12+550	12+720	170	0.70	1.2	3:1	SWM Pond R-Ex Pond-2	10 th Sideroad interchange
Left Ditch	12+820	12+880	60	0.80	1.2	3:1	Downstream flat bottom swale	10 th Sideroad interchange
Left Ditch	12+980	13+100	120	0.85	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	13+340	13+380	40	0.50	1.2	3:1	Downstream flat bottom swale	-
Left Ditch	13+400	13+420	20	0.64	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	13+460	13+500	40	0.30	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	13+710	13+670	40	0.40	1.2	3:1	Culvert PR-CL-BBP-2	-
Left Ditch	13+710	13+660	50	0.65	1.2	3:1	Culvert PR-CL-BBP-2	-
Left Ditch	13+740	13+720	20	0.60	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	13+760	13+740	20	0.40	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	13+780	14+020	240	0.50	1.2	3:1	Downstream flat bottom swale	-
Left Ditch	13+820	13+780	40	0.74	1.2	3:1	Downstream flat bottom swale	-
Left Ditch	13+820	13+920	100	0.50	1.2	3:1	Downstream flat bottom swale	-

	Chaina	Chainage (m) ¹		Average	Swale	Swale Side		
Swale Location	From	То	Swale Length (m)	Longitudinal Slope (%)	Bottom Width (m)	Slopes	Swale Outlet to:	Remarks
Left Ditch	13+960	14+060	100	0.45	1.2	3:1	Downstream flat bottom swale	-
Left Ditch	14+100	14+140	40	0.60	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	14+320	14+220	100	0.45	1.2	3:1	Culvert PR-CL-BBP-3	-
Left Ditch	14+200	14+260	60	0.60	1.2	3:1	Culvert PR-CL-BBP-3	-
Left Ditch	14+280	14+260	20	0.68	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	14+350	14+600	250	0.60	1.2	3:1	Downstream flat bottom swale	-
Left Ditch	14+350	14+600	250	0.60	1.2	3:1	Downstream flat bottom swale	-
Left Ditch	14+700	14+720	20	0.96	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	14+880	14+980	100	0.40	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	15+100	15+260	160	0.35	1.2	3:1	Downstream flat bottom swale	County Road 4 Interchange
Left Ditch	15+135	15+165	30	0.30	1.2	3:1	Downstream flat bottom swale	County Road 4 Interchange
Left Ditch	15+660	15+680	20	0.90	1.2	3:1	SWM Pond P-SWM P-5	County Road 4 Interchange
Left Ditch	15+840	15+880	40	0.60	1.2	3:1	Culvert PR-R-C4IC-7	County Road 4 Interchange
Right Ditch	16+320	16+340	20	0.97	1.2	3:1	Culvert PR-R-BBP-5	-
Left Ditch	16+320	16+340	20	0.56	1.2	3:1	Culvert PR-R-BBP-5	-
Right Ditch	16+380	16+550	170	0.36	1.2	3:1	Downstream flat bottom swale	-
Left Ditch	16+440	16+500	60	0.75	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	16+760	16+875	115	0.34	1.2	3:1	Downstream flat bottom swale	-
Left Ditch	16+740	16+840	100	0.30	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	16+980	17+025	45	0.45	1.2	3:1	Downstream flat bottom swale	-
Left Ditch	16+940	17+025	85	0.33	1.2	3:1	Downstream flat bottom swale	-
Proposed Bradford Byp	ass – East of	Yonge Stree	et					
Right Ditch	21+280	21+140	140	0.20	1.2	3:1	Downstream flat bottom swale	-
Left Ditch	21+295	21+160	135	0.16	1.2	3:1	Downstream flat bottom swale	-

	Chainage (m) ¹		Swale Length	Average	Swale	Swale Side		
Swale Location	From	То	(m)	Longitudinal Slope (%)	Bottom Width (m)	Slopes	Swale Outlet to:	Remarks
Right Ditch	21+280	21+480	200	0.15	1.2	3:1	Culvert PR-CL-BBP-9	-
Left Ditch	21+300	21+480	180	0.16	1.2	3:1	Culvert PR-CL-BBP-9	-
Right Ditch	21+660	21+480	180	0.35	1.2	3:1	Culvert PR-CL-BBP-9	-
Left Ditch	21+600	21+480	120	0.50	1.2	3:1	Culvert PR-CL-BBP-9	-
Left Ditch	21+680	21+600	80	0.30	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	21+800	21+660	140	0.20	1.2	3:1	Downstream flat bottom swale	-
Left Ditch	21+820	21+680	140	0.20	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	21+800	21+880	80	0.25	1.2	3:1	Culvert PR-CL-BBP-10	-
Right Ditch	21+940	21+880	60	0.25	1.2	3:1	Culvert PR-CL-BBP-10	-
Left Ditch	21+820	22+020	200	0.25	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	22+020	21+940	80	0.60	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	22+080	22+265	185	0.30	1.2	3:1	Bridge PR-CL-BBP-11	-
Left Ditch	22+020	22+280	260	0.22	1.2	3:1	Bridge PR-CL-BBP-11	-
Right Ditch	22+445	22+285	160	0.35	1.2	3:1	Bridge PR-CL-BBP-11	-
Right Ditch	22+880	22+485	395	0.15	1.2	3:1	Downstream flat bottom swale	2 nd Concession Interchange
Right Ditch	22+920	22+990	70	0.15	1.2	3:1	SWM Pond P-SWM P-6	2 nd Concession Interchange
Left Ditch	23+160	22+305	855	0.20	1.2	3:1	Bridge PR-CL-BBP-11	2 nd Concession Interchange
Right Ditch	23+900	23+345	555	0.30	1.2	3:1	Culvert PR-R-2CON-4	2 nd Concession Interchange
Left Ditch	23+860	23+250	610	0.25	1.2	3:1	2 nd Concession roadside ditch	2 nd Concession Interchange
Right Ditch	24+380	24+560	180	0.45	1.2	3:1	Culvert PR-CL-BBP-14	-
Left Ditch	24+380	24+575	195	0.45	1.2	3:1	Culvert PR-CL-BBP-14	-
Right Ditch	24+620	24+700	80	0.40	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	24+770	24+880	110	0.40	1.2	3:1	Downstream flat bottom swale	-
Left Ditch	24+755	24+840	85	0.35	1.2	3:1	Downstream flat bottom swale	-

	Chainage (m) ¹		Swale Length	Average	Swale	Swale Side		
Swale Location	From	То	(m)	Longitudinal Slope (%)	Bottom Width (m)	Slopes	Swale Outlet to:	Remarks
Left Ditch	24+840	24+915	75	0.50	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	24+895	24+965	70	0.55	1.2	3:1	Downstream flat bottom swale	-
Right Ditch	25+090	25+155	65	0.25	1.2	3:1	Culvert PR-CL-BBP-16	-
Left Ditch	25+125	25+155	30	0.35	1.2	3:1	Culvert PR-CL-BBP-16	-
Right Ditch	25+260	25+200	60	0.30	1.2	3:1	Culvert PR-CL-BBP-16	-
Left Ditch	25+255	25+210	45	0.70	1.2	3:1	Culvert PR-CL-BBP-16	-
Right Ditch	25+295	25+315	20	0.45	1.2	3:1	Culvert PR-CL-BBP-17	-
Left Ditch	25+355	25+335	20	0.45	1.2	3:1	Culvert PR-CL-BBP-17	-
Left Ditch	25+305	25+335	30	0.45	1.2	3:1	Culvert PR-CL-BBP-17	-
Proposed Bradford Bypa	ass & Highwa	ay 400 Interc	hange					
E-N Ramp, Right Ditch	10+400	10+120	280	1.00	1.2	3:1	Downstream flat bottom swale	-
E-N Ramp, Left Ditch	10+400	10+140	260	1.00	1.2	3:1	Downstream flat bottom swale	-
E-N Ramp, Right Ditch	10+660	10+580	80	0.30	1.2	3:1	Downstream flat bottom swale	-
E-N Ramp, Right Ditch	10+680	10+700	20	0.70	1.2	3:1	Culvert PR-R-BBP-4	-
E-N Ramp, Left Ditch	10+680	10+700	20	0.64	1.2	3:1	Watercourse	-
E-N Ramp, Right Ditch	10+820	10+740	80	0.36	1.2	3:1	Downstream flat bottom swale	-
E-N Ramp, Right Ditch	10+910	10+840	70	0.40	1.2	3:1	Downstream flat bottom swale	-
E-N Ramp, Left Ditch	10+860	10+880	20	0.90	1.2	3:1	Downstream flat bottom swale	-
E-N Ramp, Right Ditch	11+080	11+000	80	0.80	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Left Ditch	10+360	10+345	15	0.76	1.2	3:1	Culvert PR-R-BBP-8	-
E-S Ramp, Right Ditch	10+420	10+380	40	0.50	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Left Ditch	10+400	10+380	20	1.01	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Left Ditch	10+400	10+420	20	0.32	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Right Ditch	10+540	11+000	460	0.75	1.2	3:1	Downstream flat bottom swale	-

	Chaina	ge (m) ¹	Swale Length	Average	Swale	Swale Side		
Swale Location	From	То	(m)	Longitudinal Slope (%)	Bottom Width (m)	Slopes	Swale Outlet to:	Remarks
E-S Ramp, Left Ditch	10+540	10+710	170	0.75	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Left Ditch	10+810	10+715	95	0.75	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Left Ditch	10+820	10+900	80	0.75	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Left Ditch	10+960	10+980	20	0.68	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Right Ditch	11+260	11+120	140	0.40	1.2	3:1	Culvert PR-R-BBP-5	-
E-S Ramp, Left Ditch	11+320	11+160	160	0.50	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Right Ditch	11+420	11+440	20	0.36	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Left Ditch	11+440	11+420	20	1.00	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Right Ditch	12+120	12+140	20	0.77	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Right Ditch	12+320	12+190	130	0.31	1.2	3:1	Watercourse	-
E-S Ramp, Left Ditch	12+265	12+245	20	0.36	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Right Ditch	12+390	12+415	25	0.75	1.2	3:1	Downstream flat bottom swale	-
E-S Ramp, Right Ditch	12+475	12+490	15	0.75	1.2	3:1	Downstream flat bottom swale	-
N-E Ramp, Right Ditch	10+000	10+190	190	0.35	1.2	3:1	Culvert PR-R-BBP1A	-
N-E Ramp, Left Ditch	10+260	10+355	95	0.70	1.2	3:1	Culvert PR-R-BBP-2	-
N-E Ramp, Right Ditch	10+300	10+320	20	0.61	1.2	3:1	Downstream flat bottom swale	-
N-E Ramp, Right Ditch	10+440	10+420	20	0.50	1.2	3:1	Downstream flat bottom swale	-
N-E Ramp, Right Ditch	10+540	10+520	20	0.14	1.2	3:1	Downstream flat bottom swale	-
N-E Ramp, Right Ditch	10+540	10+640	100	0.35	1.2	3:1	Downstream flat bottom swale	-
N-E Ramp, Left Ditch	10+540	10+580	40	0.12	1.2	3:1	Downstream flat bottom swale	-
N-E Ramp, Left Ditch	10+990	11+020	30	0.65	1.2	3:1	Culvert PR-R-BBP-9B	-
N-E Ramp, Left Ditch	11+460	11+235	225	0.40	1.2	3:1	Downstream flat bottom swale	-
S-E Ramp, Right Ditch	10+060	10+020	40	0.40	1.2	3:1	Downstream flat bottom swale	-
S-E Ramp, Right Ditch	10+060	10+100	40	0.40	1.2	3:1	Culvert PR-CL-400-2	-

	Chaina	ge (m) ¹	Swale Length	Average	Swale	Swale Side		
Swale Location	From	То	(m)	Longitudinal Slope (%)	Bottom Width (m)	Slopes	Swale Outlet to:	Remarks
S-E Ramp, Right Ditch	10+140	10+100	40	0.40	1.2	3:1	Culvert PR-CL-400-2	-
S-E Ramp, Right Ditch	10+220	10+200	20	0.90	1.2	3:1	Downstream flat bottom swale	-
S-E Ramp, Right Ditch	10+380	10+360	20	0.81	1.2	3:1	Downstream flat bottom swale	-
S-E Ramp, Left Ditch	10+380	10+340	40	0.80	1.2	3:1	SWM Pond P-SWM P-2	-
S-E Ramp, Left Ditch	10+510	10+480	30	0.35	1.2	3:1	Downstream flat bottom swale	-
S-E Ramp, Right Ditch	10+520	10+500	20	0.77	1.2	3:1	Downstream flat bottom swale	-
S-E Ramp, Right Ditch	10+560	10+540	20	0.89	1.2	3:1	Downstream flat bottom swale	-
S-E Ramp, Right Ditch	10+720	10+580	140	0.40	1.2	3:1	Downstream flat bottom swale	-
S-E Ramp, Right Ditch	10+760	10+740	20	0.70	1.2	3:1	Downstream flat bottom swale	-
S-E Ramp, Right Ditch	10+760	10+780	20	0.30	1.2	3:1	Downstream flat bottom swale	-
S-E Ramp, Right Ditch	10+820	10+785	35	0.30	1.2	3:1	Watercourse	-
S-E Ramp, Right Ditch	10+980	10+860	120	0.30	1.2	3:1	Downstream flat bottom swale	-
Proposed Bradford Bypa	ass & Highwa	ay 404 Interc	hange					
N-W Ramp, Right Ditch	10+080	10+100	20	0.27	1.2	3:1	Downstream flat bottom swale	-
N-W Ramp, Right Ditch	10+120	10+180	60	0.40	1.2	3:1	Downstream flat bottom swale	-
N-W Ramp, Right Ditch	10+180	10+220	40	0.45	1.2	3:1	Downstream flat bottom swale	-
N-W Ramp, Right Ditch	10+240	10+260	20	0.45	1.2	3:1	Downstream flat bottom swale	-
N-W Ramp, Right Ditch	10+620	10+700	80	0.80	1.2	3:1	Downstream flat bottom swale	-
N-W Ramp, Right Ditch	10+700	10+765	65	0.05	1.2	3:1	SWM Pond P-SWM P-8	-
W-N Ramp, Right Ditch	10+320	10+295	25	0.35	1.2	3:1	Downstream flat bottom swale	-
W-N Ramp, Left Ditch	10+260	10+340	80	0.50	1.2	3:1	Culvert PR-R-404-6	-
W-N Ramp, Left Ditch	10+380	10+340	40	0.50	1.2	3:1	Culvert PR-R-404-6	-
W-N Ramp, Left Ditch	11+120	11+170	50	0.70	1.2	3:1	Downstream flat bottom swale	-
W-N Ramp, Right Ditch	11+180	11+160	20	0.20	1.2	3:1	Downstream flat bottom swale	-

	Chaina	ıge (m) ¹	Swale Length	Average	Swale	Swale Side		
Swale Location	From	То	(m)	Longitudinal Slope (%)	Bottom Width (m)	Slopes	Swale Outlet to:	Remarks
W-N Ramp, Right Ditch	11+280	11+340	60	0.35	1.2	3:1	Downstream flat bottom swale	-
W-N Ramp, Left Ditch	11+360	11+425	65	0.30	1.2	3:1	Downstream flat bottom swale	-
W-N Ramp, Left Ditch	11+425	11+500	75	0.30	1.2	3:1	Downstream flat bottom swale	-
W-N Ramp, Right Ditch	11+400	11+500	100	0.55	1.2	3:1	Downstream flat bottom swale	-
S-W Ramp, Right Ditch	10+000	10+040	40	0.53	1.2	3:1	Downstream flat bottom swale	-
S-W Ramp, Right Ditch	10+140	10+220	80	0.63	1.2	3:1	Downstream flat bottom swale	-
S-W Ramp, Right Ditch	10+355	10+400	45	0.10	1.2	3:1	Watercourse	-
S-W Ramp, Right Ditch	10+440	10+400	40	0.20	1.2	3:1	Watercourse	-
S-W Ramp, Left Ditch	10+480	10+440	40	0.75	1.2	3:1	Culvert PR-R-404-9	-
S-W Ramp, Right Ditch	10+520	10+500	20	0.70	1.2	3:1	Downstream flat bottom swale	-
S-W Ramp, Right Ditch	10+800	10+830	30	0.40	1.2	3:1	Downstream flat bottom swale	-
S-W Ramp, Left Ditch	10+840	10+800	40	0.03	1.2	3:1	Downstream flat bottom swale	-
S-W Ramp, Left Ditch	11+140	11+210	70	0.40	1.2	3:1	Culvert PR-R-404-6	-
S-W Ramp, Left Ditch	11+210	11+300	90	0.40	1.2	3:1	Culvert PR-R-404-6	-
W-S Ramp, Right Ditch	10+040	10+000	40	0.75	1.2	3:1	Downstream flat bottom swale	-
W-S Ramp, Right Ditch	10+100	10+120	20	0.82	1.2	3:1	Downstream flat bottom swale	-
W-S Ramp, Right Ditch	10+270	10+320	50	0.34	1.2	3:1	Culvert PR-R-404-4	-
W-S Ramp, Left Ditch	10+280	10+320	40	0.40	1.2	3:1	Culvert PR-R-404-4	-
W-S Ramp, Right Ditch	10+360	10+340	20	0.55	1.2	3:1	Culvert PR-R-404-4	-
W-S Ramp, Right Ditch	10+680	10+580	100	0.50	1.2	3:1	Downstream flat bottom swale	-
W-S Ramp, Left Ditch	10+630	10+580	50	0.50	1.2	3:1	Downstream flat bottom swale	-
W-S Ramp, Right Ditch	10+680	10+780	100	0.55	1.2	3:1	Downstream flat bottom swale	-
W-S Ramp, Left Ditch	10+635	10+780	145	0.55	1.2	3:1	Downstream flat bottom swale	-
W-S Ramp, Left Ditch	10+800	10+820	20	0.67	1.2	3:1	Downstream flat bottom swale	-

Ministry of Transportation of Ontario

Final Bradford Bypass Stormwater Management Plan

Highway 400 - Highway 404 Link (Bradford Bypass)

	Chaina	ge (m) ¹	Swale Length	Average	Swale	Swale Side		
Swale Location	From	То	(m)	Longitudinal Slope (%)	Bottom Width (m)	Slopes	Swale Outlet to:	Remarks
W-S Ramp, Left Ditch	10+840	10+860	20	0.10	1.2	3:1	Downstream flat bottom swale	-
W-S Ramp, Right Ditch	10+860	10+900	40	0.80	1.2	3:1	Downstream flat bottom swale	-
W-S Ramp, Right Ditch	tight Ditch 10+960 10+980		20	0.42	1.2	3:1	Culvert PR-R-404-11	-
TOTAL LENGTH ² (m)		15,225						

Notes: 1. Chainage based on high point to low point

- 2. Total swale length at interchanges is 6,020 m.
- 3. Dimensions and outlet point of the swales shown in this table shall be reviewed and confirmed during the detailed design phase.

Ref: 60636190 RPT_2023-09-28_(GWP 2008-21-00) BBP_SWM Plan_60636190.Docx

6.2 MECP Stormwater Management (SWM) Ponds

Exhibits 7.1 to **7.4** (provided at the back of this report), show the location of the proposed nine (9) SWM ponds that shall provide quantity and quality control of runoff for an area of 130.0 hectares that drains toward the Bradford Bypass. The ponds shall provide enhanced protection levels (80% long-term S.S. removal) or greater. The ponds shall not provide water quality treatment for flows generated within external drainage areas. The ponds has been designed for the ultimate conditions.

Table 5 provides the characteristics of the SWM ponds, including their drainage area, pond dimensions, elevations for the different zones within the ponds (top and bottom elevations of the pond, and the permanent pool elevation). The permanent pool in the pond is the amount of runoff volume estimated based on water quality requirements included in the MECP guidelines.

Additionally, **Table 5** provides the required 100-year runoff volume versus the provided storage capacity in the ponds. It should be noted that the provided storage capacity in the ponds exceeds the required 100-year runoff volume. The required land area to accommodate the pond is included.

The pond characteristics (i.e., area, side slope, depth, etc.) are based on the MECP Stormwater Management Planning and Design Manual (March 2003), and the LSRCA Technical Guidelines for Stormwater Management Submissions (Sept. 1, 2016).

The MECP's Table 3.2 (Water Quality Storage Requirements based on Receiving Waters), provides storage requirements for drainage areas with a minimum percentage of imperviousness of 35%. The impervious value of 35% was adopted for the ponds with drainage areas with less than this minimum threshold.

Pond P-SWM P-1, shall provide water quality and quantity control of runoff for a drainage area of 14.50 ha with a percentage of imperviousness of 35% (actual 11% imperviousness). This pond shall discharge to the upstream end of proposed Culvert PR-R-BBP-11.

Pond P-SWM P-2, shall provide water quality and quantity control of runoff for a drainage area of 15.90 ha with a percentage of imperviousness of 35% (actual 10% imperviousness). This pond shall discharge to the upstream end of proposed Culvert PR-R-BBP-10.

Pond P-SWM P-3, shall provide water quality and quantity control of runoff for a drainage area of 11.0 ha with a percentage of imperviousness of 35%. This pond shall discharge to the upstream end of proposed Culvert PR-R-10IC-4 located at the Bradford Bypass and 10th Sideroad interchange.

Pond P-SWM P-4, shall provide water quality and quantity control of runoff for a drainage area of 20.80 ha with a percentage of imperviousness of 38%. This pond shall discharge to the upstream end of proposed Culvert PR-R-C4IC-3 located at the Bradford Bypass and County Road 4 interchange. To create this pond, a berm shall be constructed at the downstream end of the pond to provide positive drainage to Culvert PR-R-C4IC-3.

Pond P-SWM P-5, shall provide water quality and quantity control of runoff for a drainage area of 4.80 ha with a percentage of imperviousness of 40%. This pond shall discharge to the upstream end of proposed Culvert PR-R-10IC-7 located at the Bradford Bypass and County Road 4 interchange.

Pond P-SWM P-6, shall provide water quality and quantity control of runoff for a drainage area of 7.60 ha with a percentage of imperviousness of 37%. This pond shall discharge to a channel with an approximate bottom elevation of 220.0 (to be confirmed in future design stages). A berm shall be required to provide the required positive drainage for outflows from the pond to the downstream channel. The pond is located at the Bradford Bypass and 2nd Concession Road interchange.

ef: 60636190 AECOM

Table 5: Proposed SWM Ponds – Preliminary Characteristics

OWN David ID 1	Pond		nension (Pond (m)	at Top of	Side	Pond	Elevations	(m)	100-year Volum		Surface	Based on 1 (MECP Gui		Don't Dischause to
SWM Pond ID ¹	Drainage Area (ha)	Length	Width	Depth ²	Slopes (5:1) ³	Approximate Ground	Pond Bottom	Permanent Pool	Required ⁴	Provided	Area (m²) ⁵	Imperviousness (%)	Required Volume (m³)	Pond Discharges to:
Bradford Bypass	s & Highway 4	00 Interch	ange											
P-SWM P-1	14.50	66.0	35.0	2.50	5:1	254.0	251.50	252.50	2875	3141	2310	35	2030	Upstream end (Inv=252.35) of proposed Culvert PR-R-BBP-11
P-SWM P-2	15.90	75.0	45.0	2.50	5.1	256.10	253.60	254.60	5200	5211	3375	35	2226	Upstream end (Inv=253.30) of proposed Culvert PR-R-BBP-10
Bradford Bypass	s & 10 th Sidero	ad Interch	ange											
P-SWM P-3	8.90	41.0	33.0	2.40	5:1	283.50	281.0	282.0	1542	1578	1353	35	1246	Upstream end (Inv=279.60) of proposed Culvert PR-R-10IC-4
Bradford Bypas	s & County Ro	ad 4 Interd	change											
P-SWM P-4	24.40	41.50	35.0	2.50	5:1	252.0	249.50	250.50	1738	1762	1423	38	2440	Upstream end (Inv=249.88) of proposed Culvert PR-R-C4IC-3. Flows from an external area to the pond shall be redirected so that its flows shall bypass the pond to reduce the pond's storage volume requirements
P-SWM P-5	4.80	36.0	30.0	2.50	5:1	248.0	245.50	246.50	1127	1159	1080	40	732	Upstream end (Inv=246.0) of proposed Culvert PR-R-C4IC-7
Bradford Bypass	s & 2nd Conce	ssion Roa	d Interch	ange										
P-SWM P-6	9.20	43.0	38.0	2.50	5:1	221.85	219.35	220.35	2000	2006	1594	37	1334	Upstream end (Inv=220.15) of proposed Culvert PR-R-2CON-1
P-SWM P-7	35.30	43.0	31.0	2.50	5:1	222.15	219.65	220.65	1400	1453	1333	43	4236	Upstream end (Inv=220.60) of proposed Culvert PR-R-2CON-6. Flows from an external area to the pond shall be redirected so that its flows shall bypass the pond to reduce the pond's storage volume requirements
Bradford Bypass	s & Highway 4	04 Interch	ange			_								
P-SWM P-8	13.10	37.0	32.0	2.50	5:1	246.20	243.70	244.70	1300	1325	1184	38	1932	Downstream watercourse. Approximate bottom elevation 244.50
P-SWM P-9	7.20	36.0	30.0	2.50	5:1	252.0	249.50	250.50	1112	1159	1080	35	1008	Upstream end (Inv=249.75) of proposed Culvert PR-R-404-7

Notes: A total area of approximately 130.0 ha shall be treated by the proposed SWM ponds (excluding the existing ponds to be relocated and the proposed ponds to treat bridge deck areas).

- 1. SWM Ponds shall provide an Enhanced Level of water quality treatment (80% TSS Removal) based on MECP requirements. P-SWM P-1 denotes: Proposed SWM Pond number 1
- 2. Depth from bottom of weir elevation to pond bottom. Bottom of weir set at the 100-yr Water Level in the pond. Top of berm elevation equals bottom of weir plus 0.30m freeboard.
- 3. Side slopes (5:1) based on MECP standards.
- 4. Required 100-year storage volume from SWMHYMO hydrologic model output file.
- 5. Based on dimensions of the pond. No safety factor has been included.
- 6. Based on Enhanced Protection Level (80% Long Term S.S. Removal). To be confirmed at future design stages.

Pond P-SWM P-7, shall provide water quality and quantity control of runoff for a drainage area of 35.50 ha with an imperviousness of 43%. This pond shall discharge to the upstream end of proposed Culvert PR-R-2CON-6 located at the Bradford Bypass and 2nd Concession Road interchange. A berm shall be required to create this pond and to provide positive drainage to the proposed culvert.

Pond P-SWM P-8, shall provide water quality and quantity control of runoff for a drainage area of 13.10 ha with an imperviousness of 38%. This pond shall discharge to a watercourse located approximately 14 meters from the pond. The bottom elevation of the watercourse at the outlet point is approximately 244.50. The pond shall be located just north of Ramp N-W of the Bradford Bypass and Highway 404 interchange.

Pond P-SWM P-9, shall provide water quality and quantity control of runoff for a drainage area of 6.50 ha with an imperviousness of 35%(actual 12% imperviousness). This pond shall discharge to the upstream end of proposed Culvert PR-R-404-7 located at the Bradford Bypass and Highway 404 interchange.

In addition to the proposed ponds, existing ponds (R-EX Pond-1 and R-EX-Pond 2) shall be relocated and shall provide quality and quantity control of runoff for an area of 1.40 ha and 4.5 ha respectively. These two ponds are located at the Bradford Bypass and 10th Sideroad interchange.

As depicted in **Exhibits 7.1, 7.2** and **7.3** the highway areas that shall not be treated by the proposed SWM ponds shall be treated by 15,225 metres of flat bottom grassed swales and enhanced grassed swales. These swales shall be designed according to MECP design criteria.

As shown in **Exhibit 7.4**, four (4) pocket ponds (HR-POND-1 to HR-POND-4) shall provide water quality treatment of runoff generated within the deck areas of the proposed Holland River and Holland River East Branch bridge structures. In addition, these pocket ponds shall provide protection to wetlands, marshes and sensitive areas located in the vicinity of the Holland Rivers. **Exhibit 7.4** provides a conceptual design of the pocket ponds.

The four (4) pocket ponds (HR-POND-1 to HR-POND-4) located near Holland River and Holland River East Brach are located outside the limits of the Provincially Significant Wetlands (PSW). It is recommended to maintain these ponds outside the limits of the PSW.

Additional geotechnical investigations shall be carried out in subsequent design phases to satisfy the technical information and data that is required to facilitate the Detail Design of facilities such as ponds.

6.3 Flow Comparison - Controlled vs. Uncontrolled

This section documents the results from comparing the existing peak flows at pour point locations and the proposed peak flows at the SWM pond locations. An effort has been made to identify existing pour point locations that match the locations of the ponds; otherwise, the comparison of flows is not possible.

Table 6 provides the results from the comparison between existing and proposed <u>uncontrolled</u> peak flows. The results presented in this table indicate that the proposed flows are higher than existing flow rates due to an increase in paved areas. **Appendix D** provides the hydrologic model (data and output files) that was used to estimate the proposed peak flows without the SWM ponds quantity control.

The locations of the existing condition hydrologic points of interest (pour points) are depicted in **Exhibits 3.1** to **3.7**; whereas the proposed SWM pond locations are presented in **Exhibits 5.1** and **5.2**.

Table 7 provides the results from the comparison between existing and proposed <u>controlled</u> peak flows. The results presented in this table indicate that the quantity control provided by the proposed SWM ponds reduce proposed peak flows to existing flow rates or less. **Appendix E.1** includes the hydrologic model (data and output files) for the controlled peak flows. **Appendix E.2** includes the SWMHYMO Schematics for the controlled peak flows.

AECOM

Ref: 60636190

Table 6: Comparison between Existing and Proposed Uncontrolled Peak Flows

Pour (Hydraulic Po	Point int of Interest)								Pea	ak Flows Co 24-hr SC	mparison (r S Type II	m³/s)							
			2 -year		5 -year			10 -year			25 -year				50 -year		100 -year		
Existing	Proposed	Existing	Proposed Uncontrolled	Difference	Existing	Proposed Uncontrolled	Difference	Existing	Proposed Uncontrolled	Difference	Existing	Proposed Uncontrolled	Difference	Existing	Proposed Uncontrolled	Difference	Existing	Proposed Uncontrolled	Difference
C10-A-5	P-SWM P-1	0.17	0.28	+0.11	0.38	0.51	+.0.13	0.53	0.67	+0.14	0.73	0.87	+0.14	0.73	1.05	+0.13	1.08	1.20	+0.12
EX-CL-400-5	P-SWM P-2	0.32	0.40	+0.08	0.58	0.71	+0.13	0.77	0.93	+0.16	1.01	1.21	+0.20	1.01	1.50	+0.28	1.40	1.66	+0.26
C11-B-1	P-SWM P-3	0.25	0.34	+0.09	0.45	0.54	+0.09	0.60	0.70	+0.10	0.78	0.92	+0.14	0.78	1.11	+0.16	1.08	1.28	+0.20
C11-B-2	R-Ex Pond-2 (PR-R-10IC-2)	0.15	0.24	+0.09	0.31	0.36	+0.05	0.42	0.45	+0.03	0.57	0.58	+0.01	0.70	0.69	-0.01	0.81	0.78	-0.03
C-15-A-1	P-SWM P-4	0.40	0.60	+0.20	0.69	0.91	+0.22	0.90	1.14	+0.24	1.18	1.45	+0.27	1.18	1.73	+0.31	1.63	1.96	+0.33
C15-B-1	P-SWM P-5	0.18	0.24	+0.06	0.31	0.37	+0.06	0.39	0.47	+0.08	0.50	0.60	+0.10	0.50	0.71	+0.11	0.68	0.80	+0.12
C23-B-1	P-SWM P-6	0.42	0.55	+0.13	0.70	0.87	+0.17	0.90	1.08	+0.18	1.15	1.36	+0.21	1.15	1.62	+0.25	1.55	1.83	+0.28
C23-B-2	P-SWM P-7	0.51	0.77	+0.26	0.87	1.17	+0.30	1.13	1.46	+0.33	1.45	1.80	+0.35	1.45	2.13	+0.39	2.0	2.38	+0.38
C25-B-1	P-SWM P-8	0.09	0.12	+0.03	0.19	0.25	+0.06	0.26	0.36	+0.10	0.36	0.50	+0.14	0.36	0.62	+0.16	0.53	0.72	+0.19
C25-B-2	P-SWM P-9	0.046	0.05	+0.01	0.09	0.11	+0.02	0.13	0.15	+0.02	0.19	0.21	+0.02	0.19	0.27	+0.03	0.28	0.31	+0.03

Table 7: Comparison between Existing and Proposed Controlled Peak Flows

	r Point pint of Interest)	Peak Flows Comparison (m³/s) 24-hr SCS Type II																	
	Proposed	2 -year			5 -year			10 -year			25 -year			50 -year			100 -year		
Existing		Existing	Controlled Proposed	Proposed Exceeds Exist. Flow Rate?	Existing	Controlled Proposed	Proposed Exceeds Exist. Flow Rate?	Existing	Controlled Proposed	Proposed Exceeds Exist. Flow Rate?	Existing	Controlled Proposed		Existing	Controlled Proposed	Proposed Exceeds Exist. Flow Rate?	Existing	Controlled Proposed	Proposed Exceeds Exist. Flow Rate?
C10-A-5	P-SWM P-1	0.17	-	-	0.38	0.31	No	0.53	0.32	No	0.73	0.33	No	0.73	0.34	No	1.08	0.34	No
EX-CL-400-5	P-SWM P-2	0.32	0.09	No	0.58	0.10	No	0.77	0.11	No	1.01	0.12	No	1.01	0.13	No	1.40	0.13	No
C11-B-1	P-SWM P-3	0.25	0.25	No	0.45	0.26	No	0.60	0.26	No	0.78	0.27	No	0.78	0.27	No	1.08	0.28	No
C11-B-2	R-Ex Pond-2 (PR-R-10IC-2)	0.15	0.11	No	0.31	0.11	No	0.42	0.11	No	0.57	0.12	No	0.57	0.12	No	0.81	0.14	No
C-15-A-1	P-SWM P-4	0.40	0.32	No	0.69	0.34	No	0.90	0.36	No	1.18	0.38	No	1.18	0.40	No	1.63	0.42	No
C15-B-1	P-SWM P-5	0.18	0.08	No	0.31	0.08	No	0.39	0.08	No	0.50	0.09	No	0.50	0.08	No	0.68	0.08	No
C23-B-1	P-SWM P-6	0.42	0.41	No	0.70	0.42	No	0.90	0.43	No	1.15	0.45	No	1.15	0.46	No	1.55	0.47	No
C23-B-2	P-SWM P-7	0.51	0.51	No	0.87	0.53	No	1.13	0.55	No	1.45	0.56	No	1.45	0.60	No	2.0	0.60	No
C25-B-1	P-SWM P-8	0.09	0.10	No	0.19	0.12	No	0.26	0.13	No	0.36	0.14	No	0.36	0.14	No	0.53	0.14	No
C25-B-2	P-SWM P-9	0.046	0.05	No	0.09	0.07	No	0.13	0.07	No	0.19	0.08	No	0.19	0.07	No	0.28	0.08	No

7. Operation, Maintenance and Monitoring

The *Ministry of the Environment's Stormwater Management Planning and Design Manual, March 2003* (Section 6) provides guidelines for operation, maintenance and monitoring the performance of the proposed SWM facilities. Regular inspection and maintenance is recommended for the proposed SWM Plan (flat bottom grassed swales, and SWM facilities) of the Bradford Bypass to keep the system operating as designed.

7.1 Inspections

Regular inspection is essential to assess the condition of the site, provide clean up and maintenance solutions and set goals for the upcoming year, including security fence maintenance and repairs, locking mechanism, inspection and maintenance of the access road to the SWM facilities.

7.2 Maintenance – Flat Bottom Grassed Swales

For the flat bottom grass swales with permanent flow check dams, five main operation and maintenance activities shall be completed, which are explained below.

- Grass cutting: For flat bottom grass swales, longer grass is more beneficial for quality control of runoff; however, the aesthetics of the property is usually of some concern to the nearby residence. Grass-cutting is provided mainly to keep the property looking neat and tidy but shall be limited if at all possible. Appropriate equipment shall be identified based on the presence of hills and valley that may restrict the use of the equipment. Maintenance access to provide the required maintenance shall be factored into the design.
- <u>Minor landscaping:</u> to restore seasonal vegetation loss, maintain desired planting densities along side slopes, remove undesirable plant species and improve aesthetics.
- Weed control: Weeds are referred to as unwanted vegetation species which could be invasive to adjacent areas if it is not controlled or have negative impacts on the SWM facility operation. Weed control may be required annually.
- Removal of accumulated sediment: Sediment removal for grassed swales is required when the aesthetic attributes of the swale indicate so. Discoloration of the soil or the buildup of a "crust" may indicate the need for sediment cleanout. The frequency of sediment removal depends on the drainage catchment area and level of imperviousness. The initial inspections shall provide guidance on future removal schedules. The upstream side of flow check dams shall be a focus of the inspections as this is likely where sediment buildup shall occur. MECP sediment disposal requirements shall be consulted for information pertaining to the exact parameters and acceptable levels for different disposal options.
- <u>Trash removal</u>: Trash removal is an integral part of the SWM facility maintenance. Generally, a "spring cleanup" is needed to remove trash and debris from all surface SWM ponds. Trash removal is then performed as required based on observations during regular inspections.

All Remedial Works shall need to be performed within the MTO ROW. Additional monitoring events and/or an increase in inspection frequency may be required to verify the effectiveness of the proposed maintenance program and monitoring works.

Specific inspection guidelines for check dams include the following:

ef: 60636190 AECOM

Ministry of Transportation of Ontario

Final Bradford Bypass Stormwater Management Plan

Highway 400 - Highway 404 Link (Bradford Bypass)

- Regular inspections shall be made to ensure that the center of the dam is lower than the edges.
- Check the structural integrity of the check dams shape, anchoring, and overall condition.
- Look for scour underneath the check dam and bypasses on the sides.
- Note the amount of sediment deposited upstream of the check dams.
- Observe erosion of swale segments between check dams downcutting and side scour.

Specific maintenance guidelines for check dams include the following:

- Remove sediment adjacent to and accumulated behind check dams before it reaches halfway to the top of the dam.
- Restore displaced or washed out check dams to their original configuration.
- Fill in or otherwise repair areas where check dam undercutting or bypasses have occurred.
- Add stones to rock check dams as needed to maintain design height and cross section. Use larger stone, if necessary, to counter higher-than-expected flow velocities.
- Repair swale areas where excessive downcutting or side scour have occurred.
- If the selected configuration is not preventing channel erosion, consider other materials or closer spacing in areas experiencing the most problems.
- If significant erosion occurs between dams, install a protective turf reinforcement mat or section of riprap liner in that portion of the channel.

7.3 Maintenance – SWM Ponds

Maintenance requirements shall be identified and scheduled based on observations made during both scheduled inspections and visits to the ponds to collect monitoring data. The types of maintenance activities needed and the frequency with which they are performed should provide the basis for scheduling long-term maintenance operations. Anticipated maintenance requirements have been classified as routine maintenance operations, sediment removal and disposal operations, and remedial works.

Maintenance activities classified as Routine Maintenance Operations include, but are not limited to:

- Removal of trash and debris from inside and surrounding the ponds;
- Check for blocked inlet and outlets;
- Check for security fences and maintenance/repair of locks on gates;
- Trimming and/or clearing of vegetation along both the internal access roads and the adjacent rear property lines:
- Minor landscaping to restore seasonal vegetation loss, maintain desired planting densities along side slopes, remove undesirable plant species and improve aesthetics;
- Removal of sediment and biological accumulations from outlet structures including aquatic plant and algae growth;
- Minor structural repairs to pond inlet headwalls and components of the outlet structures;
- Include the use of larvicides to control mosquito growth.

Appendix F includes **Table 6.1** and **Table 6.2** obtained from the MECP manual. **Table 6.1** provides information about the operation and maintenance activities that are applicable to different SWM facilities including flat bottom grassed swales and SWM Wet ponds. **Table 6.2** provides potential inspection routine questions for SWM Facilities including flat bottom grassed swales and SWM Wet ponds.

ef: 60636190 AECOM

8. Monitoring

All monitoring and maintenance activities shall be recorded in a logbook (as a deliverable during a future maintenance contract) kept by the proponent, also including but not limited to, the name of the designated inspector and a record of all activities related to inspection, monitoring and maintenance.

For the grassed swales proposed for the Study Area, during the inspection it shall be verified that the grading and vegetation are as designed, and that stormwater shall be conveyed where and how it was intended.

The following principles are proposed as the basis of the monitoring framework.

- Monitoring must be directed at fulfilling one or more objective sets, be subject to analysis and lead to potential actions.
- Monitoring of receiving watercourses shall be for identifying problems, establishing a background reference, and evaluating the effectiveness of controls.
- Technology performance monitoring shall be used to confirm that the SWM facility operates as designed, if not, determine if remedial design improvements are needed, or if it needs maintenance. This shall assist in improving future designs.
- The strategy shall recognize and incorporate existing monitoring programs.
- Reporting on results and taking appropriate follow-up action is a key component that fulfils due diligence expectations.

Recommendations for the subsequent design phase.

- The proponent shall collect water samples at the inlet and outlet points of the flat bottom grassed swales to estimate the removal efficiency of the swales in terms of concentration of total suspended solids (TSS).
- The proponent shall propose the water quality target/protection level based on the receiver sensitivity and the MECP's manual when preparing a SWM plan. The proponent may also need to consult the local conservation authority to determine which water quality/quantity target is required to protect the receiving water body.
- Once the water quantity/quality target/protection level has been determined, the proponent shall demonstrate in the SWM plan that the proposed SWM facility is able to achieve the defined "target".
- As a minimum, the treated effluent shall meet a TSS concentration of 25 mg/L before discharging into the receiving water body.

9. Temporary Works During Construction

Temporary drainage works shall abide to MTO's Highway Drainage Design Standards TW-1, TW-2 and all the OPSS and MTO specifications. Standard TW-1 provides guidance related to the minimum return period to be used for temporary drainage works during construction. Standard TW-2 provides highway drainage management for temporary works.

Table 68 (copied from Standard TW-1) summarizes the minimum return period for temporary drainage works.

ef: 60636190 AECOM

Table 8: Minimum Return Period for Temporary Drainage Works

Duration of Construction	Return Period (Years)		
	Consequence:		
	Low	Medium	High
Less than 2 months	2	2	2
Up to 4 months	2	5	5
Up to 8 months	5	5	10
Up to 12 months	5	5	20
Up to 18 months	5	10	25
Greater than 18 months	10	10	25

As shown in Standard TW-1, consequence ratings are identified based on public safety, traffic delays, damage due to flooding, impacts to natural habitat for typical temporary measures, such as, temporary culvert / bridges and diversion channels.

10. Erosion and Sediment Control

10.1 Overview

Construction shall require clearing of vegetation, topsoil stripping and earth grading that leaves exposed soils vulnerable to wind and water erosion. Stringent sediment and erosion control measures shall need to be implemented to ensure that the receiving storm drainage system or watercourse is not negatively impacted by construction practices. Sediment release due to construction activities is not only detrimental to the health of the receiving system but shall also result in costly future maintenance work of the existing downstream drainage infrastructure.

Prior to construction, the objectives of the ESCP are to protect the environmental features, water resources and receiving water bodies located within the Study Area; such as the tributary of the West Branch of Holland River where runoff from the County Road 4 drainage areas discharge into.

During construction, erosion and sedimentation control measures shall be implemented to prevent the migration of soils from the site. The following recommendations shall be considered when developing the detailed Erosion and Sedimentation Control Plan:

- Minimize erosion potential by implementing effective measures, procedural Best Management Practices (BMPs) and SWM BMPs; and
- Apply sediment control measures (BMPs) to prevent off-site sediment release in the event of sediment mobilization.

The following OPSSs and MTO SPs are recommended for inclusion in the contract documents.

- Environmental Protection During Work in Watercourses and on Watercourse Banks in accordance with OPSS 182;
- Construction Specification for Low Flow Channel (OPSS 823);
- Construction Specifications for Temporary Erosion Control (OPSS 804, April 2021);

Ref: 60636190 RPT_2023-09-28_(GWP 2008-21-00) BBP_SWM Plan_60636190.Docx

Final Bradford Bypass Stormwater Management Plan Highway 400 - Highway 404 Link (Bradford Bypass)

- Temporary Erosion Control in accordance with OPSS 804, and Temporary Sediment Control in accordance with OPSS 805:
- Environmental Incident Management Under Legislation Protecting the Environment and Natural Resources in accordance with OPSS 100;
- Management of Excess Materials in accordance with OPSS 180;
- General Environmental Protection in accordance with MTO NSSP;
- Maintenance of Existing Drainage in accordance with MTO NSSP;
- Spill Prevention and Response Contingency Plan in accordance with MTO NSSP;
- Timing of in-water Work in accordance with SSP101F23;
- Construction Specification for Dewatering in accordance with OPSS 517;
- Placement of Aggregates in Waterbodies in accordance with OPSS.PROV 825; and
- Material Specification for Aggregates Streambed Material with OPSS.PROV 1005.

Vegetative:

- All areas not subject to active construction for 30 days the area grading shall be top soiled and seeded as per Special Provision 572S01 Oct. 2002 immediately after completion of such grading; and
- Immediately following seed application, a straw erosion control blanket (or equivalent) shall be installed on any exposed slopes adjacent to sensitive features, as per OPSS 572.05.07, 572.05.08 and 572.07.04.05.

Structural:

- As construction proceeds, diversion swales shall be graded where needed along the ROW boundaries to intercept drainage from external areas and direct it away from exposed surfaces;
- Temporary sedimentation traps shall be sized based on 125 cubic metres per hectare of drainage area;
- All culvert works shall be conducted "in the dry";
- All dewatering for culvert installation shall be directed to a sediment/dewatering trap;
- The locations of sediment/dewatering traps shall be confirmed in the field by the on-site inspector and environmental inspector:
- Temporary silt fencing shall be installed around sensitive vegetative features and approximately 2 metres from the final toe-of-slope for the roadway embankment widening areas;
- Rock checks dams shall be provided in roadside ditches. Rock check dams detain runoff, promote sedimentation, and reduce channel flow velocities thereby reducing potential for channel erosion;
- Runoff from excavated areas or unvegetated soil shall not be permitted to discharge off site or directly into active or temporary watercourses or any natural areas; and
- The contractor shall abide by the requirements set out in the Greater Golden Horseshoe Area Conservation Authorities Erosion and Sediment Guideline for Urban Construction (December 2006).

10.2 Supervision, Inspection and Maintenance

To ensure that the intent of the ESCP is maintained, and that erosion potential and sedimentation is minimized until the development areas have been stabilized, the following actions are recommended:

- The construction of the erosion control works shall be carefully supervised;
- Inspection of proposed measures shall be completed after periods of excessive precipitation (i.e., rainfall depths exceeding 15 millimetres);

Ref: 60636190 AECOM

Final Bradford Bypass Stormwater Management Plan Highway 400 - Highway 404 Link (Bradford Bypass)

- Bi-weekly inspection reports prepared by the engineer responsible for the project shall be submitted to the contract administrator during construction until the development area has been stabilized;
- Control features that fail shall be repaired immediately and an evaluation shall be completed to determine whether additional measures are required; and
- Prior to removal of controls, the contractor, and the engineer responsible for the project shall conduct a joint inspection of the development area.

11. Summary and Conclusions

The SWM Plan to address SWM requirements outlined in the Ontario Regulation 697/21 for the Bradford Bypass involved completion of the following tasks:

- A description of the type of SWM application proposed for the project
- Characteristics of the receiving watercourse and ecological conditions
- Development of an operation and maintenance plan for the proposed SWM measures
- Recommendations for a monitoring plan for the proposed SWM measures

SWM Measures

The MECP, MTO, LSRCA and NVCA design guidelines were referenced to establish the Design Criteria for the project. Nine (9) SWM ponds shall provide quality and quantity control of runoff for an approximate area of 130.0 ha. Considering the space along the ROW and the proposed design, flat-bottom grassed swales were selected as the optimal mitigation measure for stormwater quality control. The swales can be constructed to treat runoff during construction as well as once its complete. Flow check dams are proposed along the swales to improve infiltration, slow flow velocities, and improve water quality.

Environment, Ecology and Fisheries

The fisheries assessment included water features detected through background information review and field investigations within 250 metres (50 metres upstream, 200 metres downstream – where property access was allowed) of the Ministry of Transportation project Right-of-Way (ROW), AECOM ecologists conducted a detailed fish and fish habitat assessment of the water features in the vicinity of the Study Area between September 14 to 18, 2020 (i.e., the summer assessments), with spring field investigations occurring over multiple days in June 2021. Field investigations were also completed in spring of 2022 (May 19 and June 9) due to changes to the Study Area boundary that required further review for potential fish habitat.

Fifty-one (51) crossings were assessed along thirty-four (34) watercourses as part of this preliminary impact assessment. All the crossings that contain fish habitat in the East Holland River Subwatershed, West Holland River Subwatershed and the Maskinonge Subwatershed support warmwater fish communities. Only the crossings in the Innisfil Creek Subwatershed support coolwater fish communities. The Holland River East Brach and Holland River crossings (20-A-1 and 17-A-1 respectively) as well as C16-A-1 are known spawning habitat for muskellunge species.

Through the background information review, consultation with MNRF, and fish habitat and fish community assessments, it was determined that 17 watercourses were permanent features that provide direct fish habitat, 5 were intermittent features that provide direct fish habitat, 6 were intermittent and provided indirect habitat, and 2 were ephemeral and provided indirect habitat. Of the remaining 21 aquatic features, 20 were ephemeral and did not provide habitat, one was permanent and did not provide habitat, and one was intermittent and did not provide habitat.

Critical Habitat (SARA) was not identified at any site; however, C17-A-1 and C20-A-1 act as migratory corridors for fish to reach upstream spawning habitat and are specialized habitats that fish use for spawning and nursery. These two crossings, as well as C16-A-1, are also spawning habitat for muskellunge species. A full description of existing

Ref: 60636190 AECOM

Ministry of Transportation of Ontario

Final Bradford Bypass Stormwater Management Plan Highway 400 - Highway 404 Link (Bradford Bypass)

conditions is available in the Environmental Conditions Report: Preliminary Design and project-specific assessment of environmental impacts in accordance with Ontario Regulation 697/21 (W.O.#19 -2001) (AECOM, 2022).

Refer to the Fish Report (AECOM, June 2023). for further information related to fish habitat requirements.

Operation and Maintenance

Once the design and construction of the Study Area is complete, regular maintenance is essential to ensure its intended and efficient operation. Several considerations for maintaining the site were included in the operation and maintenance plan, including:

- Inspection
- Grass cutting
- Minor landscaping
- Weed control
- Removal of accumulated sediment
- Trash removal
- Larvicides to control mosquito growth

The frequency of maintenance depends on the Study Area. For the first two years after construction is complete it is recommended that an inspection and maintenance be complete after every major storm event. Observations shall be documented to determine an inspection frequency plan for the following year. Every year the inspection plan shall be adjusted based on the observations from the previous inspection. It shall be noted that all Remedial Works shall need to be approved by the Town of Bradford West Gwillimbury and the Town of East Gwillimbury.

Monitoring

Monitoring the efficiency of grassed swales can be challenging. Logbooks shall be maintained to document observations made during inspections. For the grassed swales proposed for the Study Area, during the inspection it shall be verified that the grading and vegetation are as designed, and that stormwater shall be conveyed where and how it was intended. Basic principles of the monitoring framework listed within the report shall be adhered to.

Erosion and Sediment Control

An ESCP is included in Section 9 intended to address all concerns that may result from the Bradford Bypass proposed Works. Refers to Section 9 in this report for additional information about the proposed Erosion and Sediment Control Plan (ESCP). In addition, the Erosion and Sediment Overview Risk Assessment (ESORA) report (to be provided) shall document recommendations on Erosion and Sediment Control measures to protect areas along the Bradford Bypass that have been identified in the Fish, Terrestrial and Fluvial reports to be environmental sensitive.



Exhibits

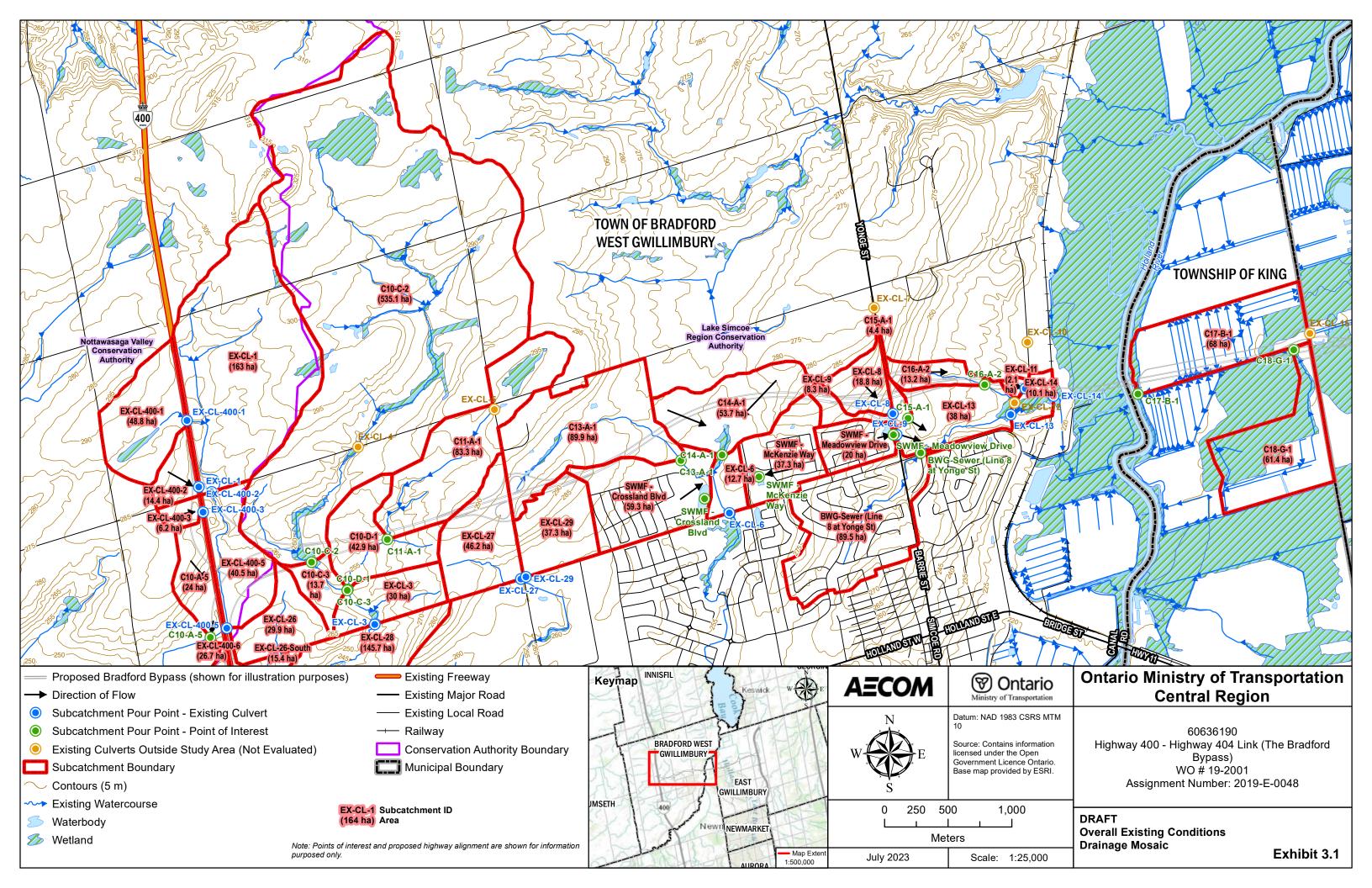
Exhibits 3.1 to 3.7: Existing Drainage Mosaic

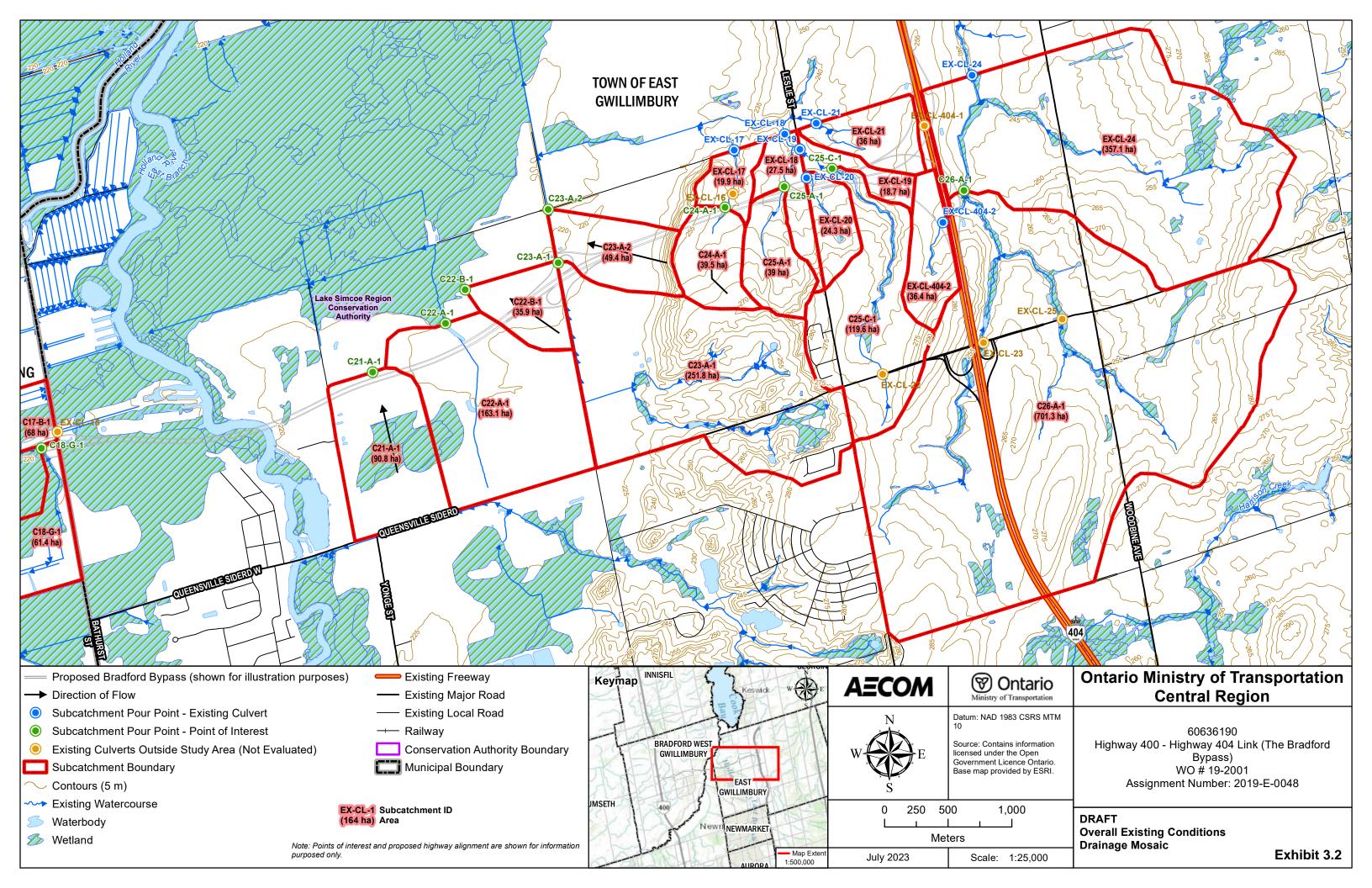
Exhibit 3.8: Study Årea three River Watersheds

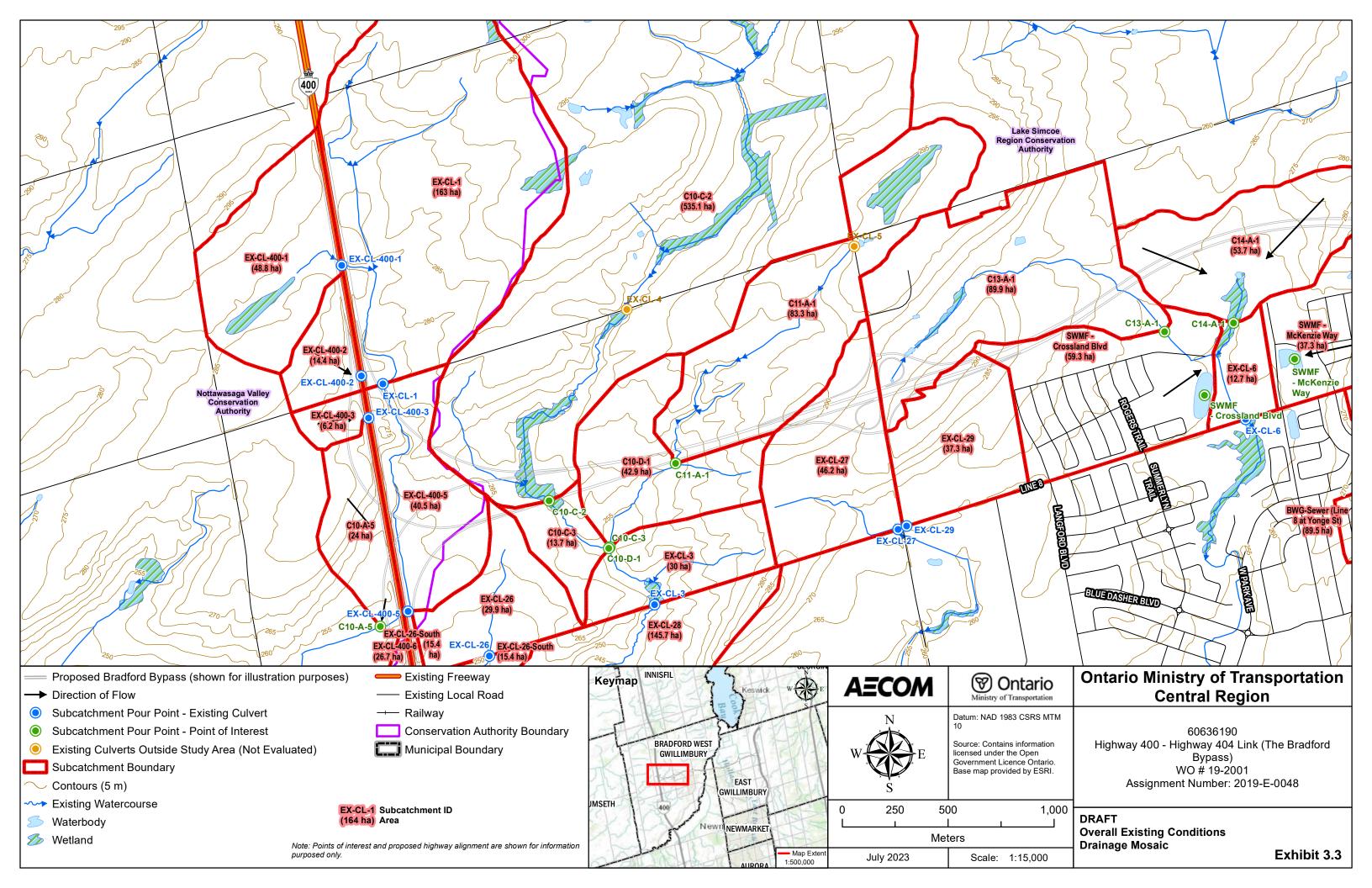
Exhibit 3.9: Penville Creek Tributary Location

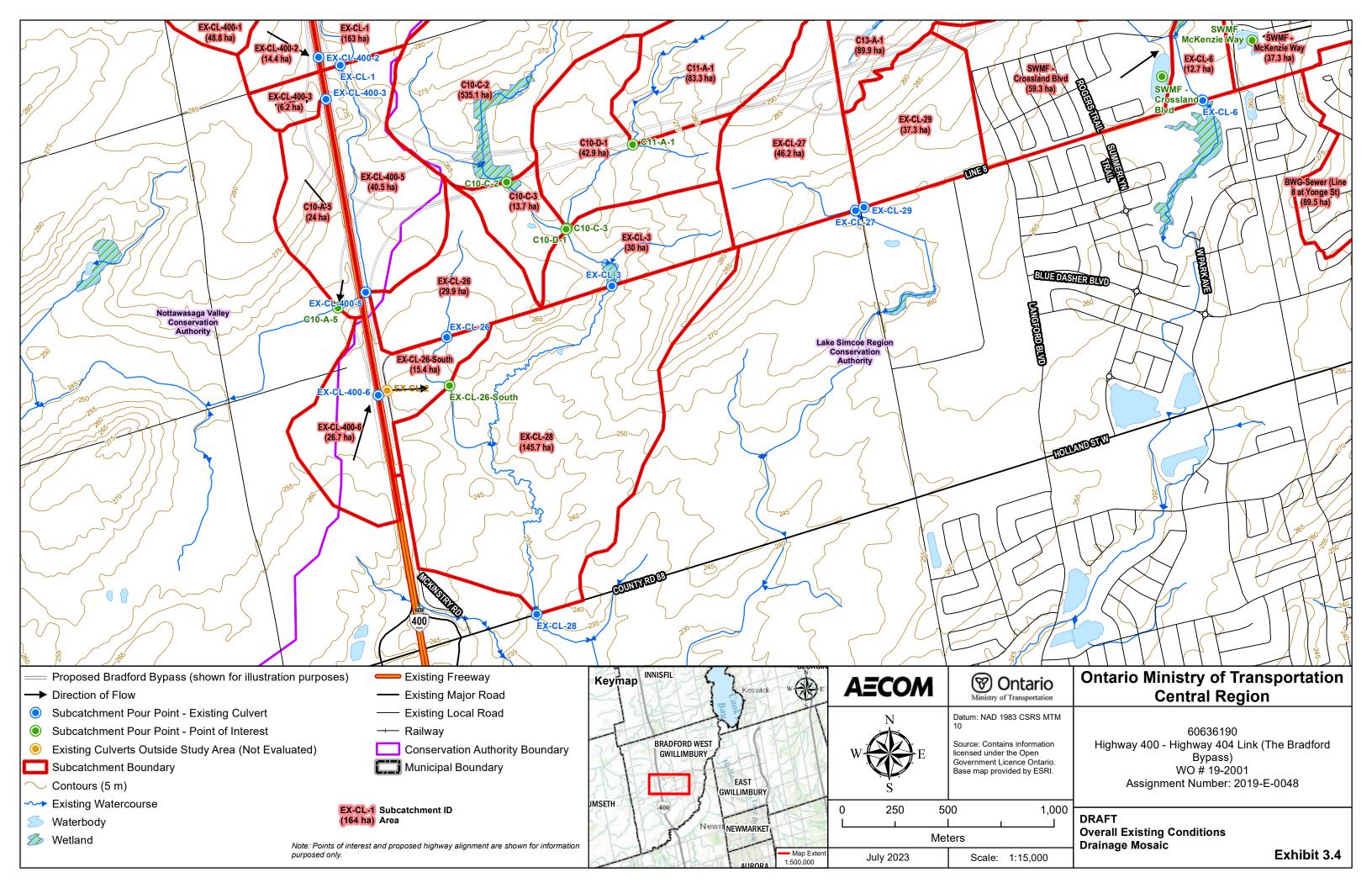
Exhibits 5.1 to 5.2: Proposed Drainage Mosaic

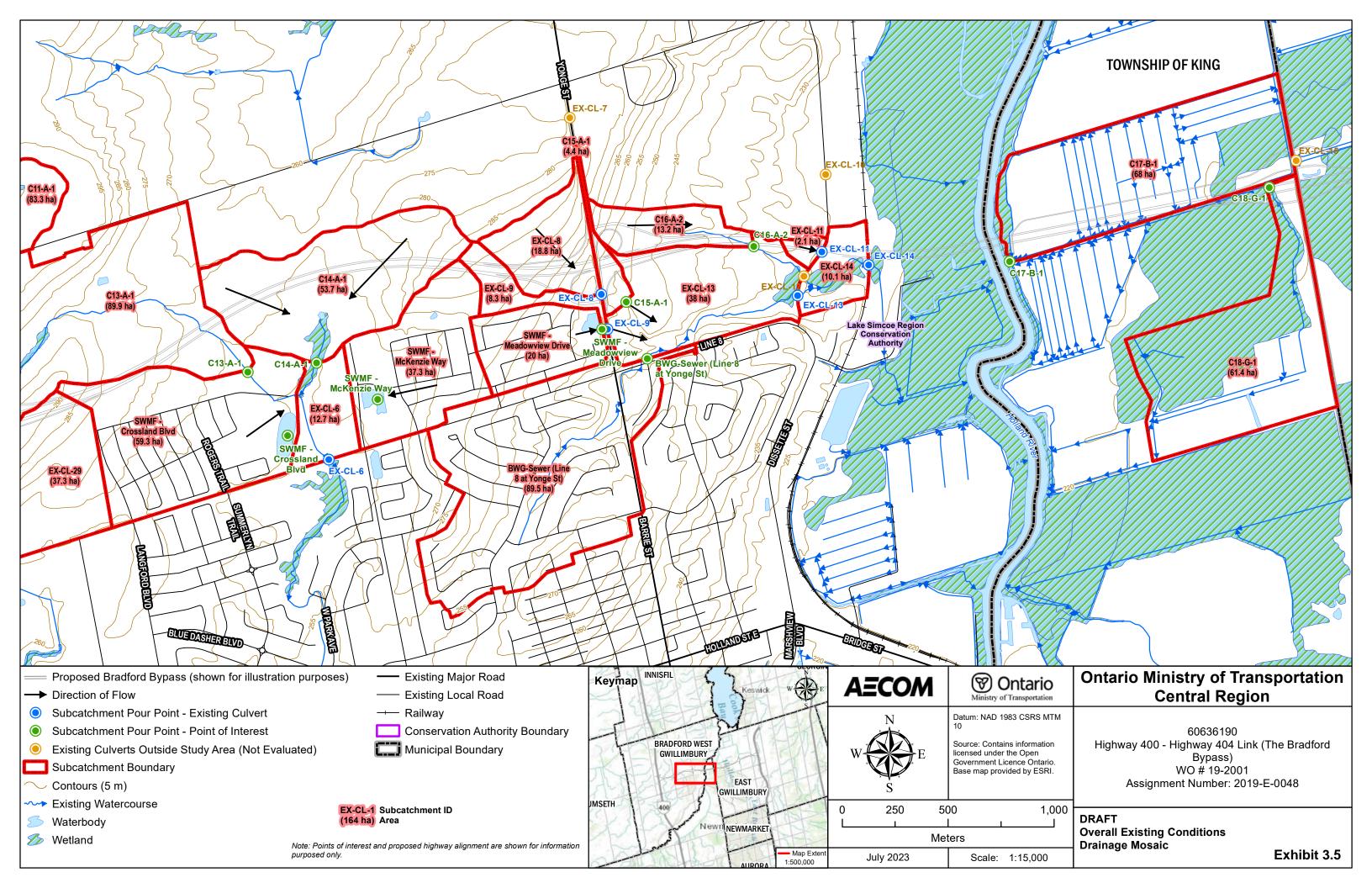
Exhibits 7.1 to 7.4: Stormwater Management (SWM) Plan

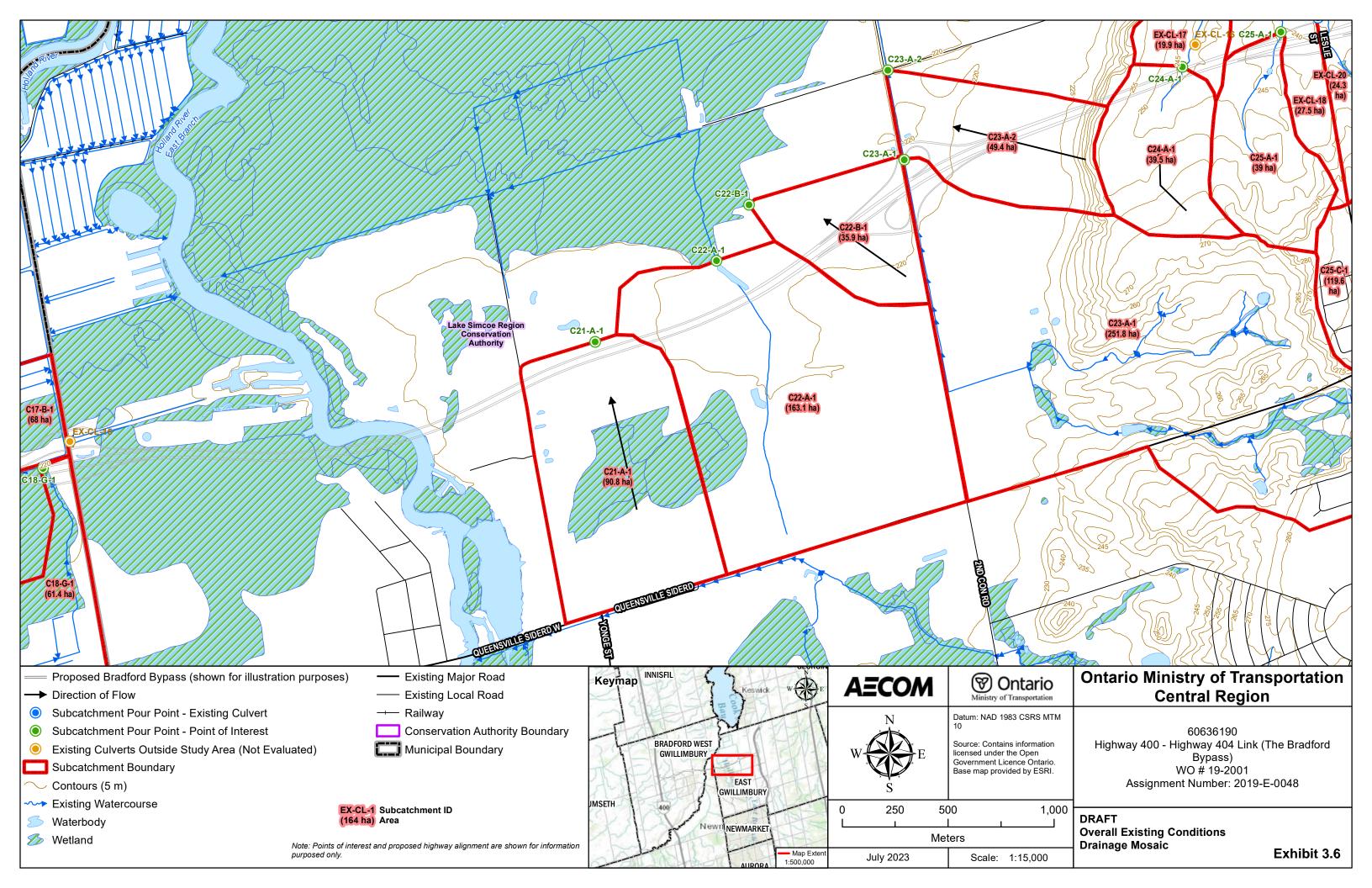


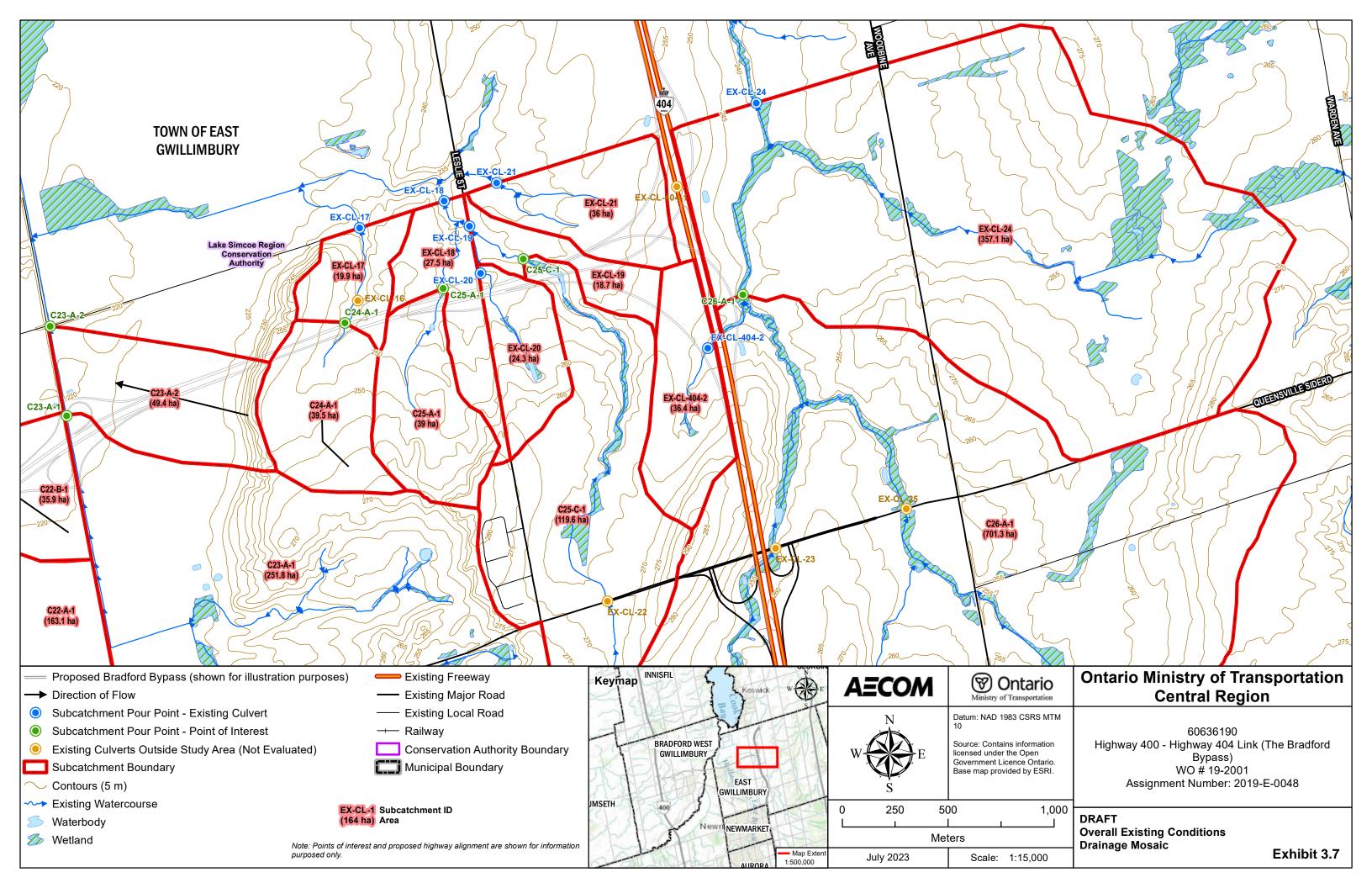


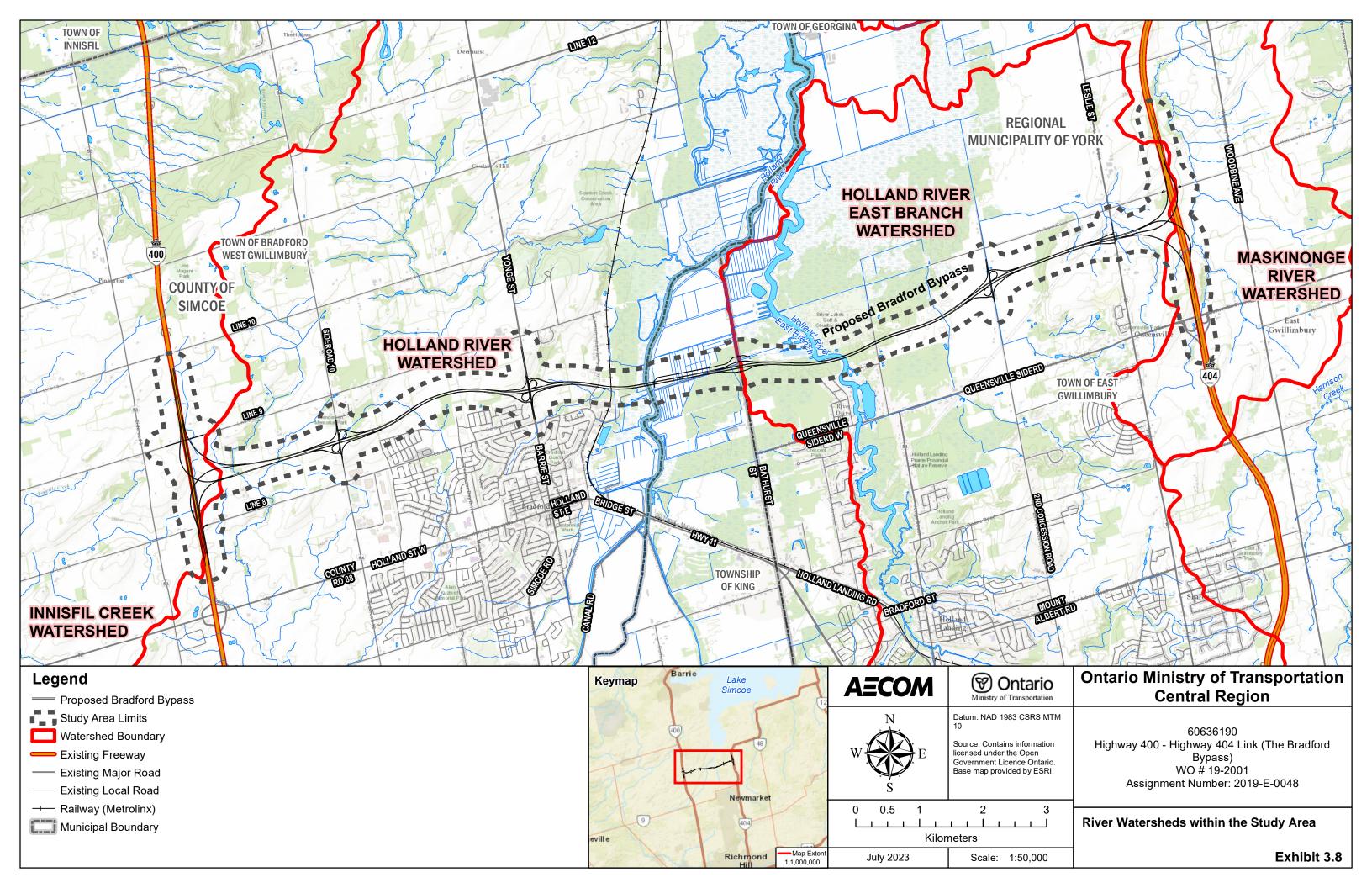












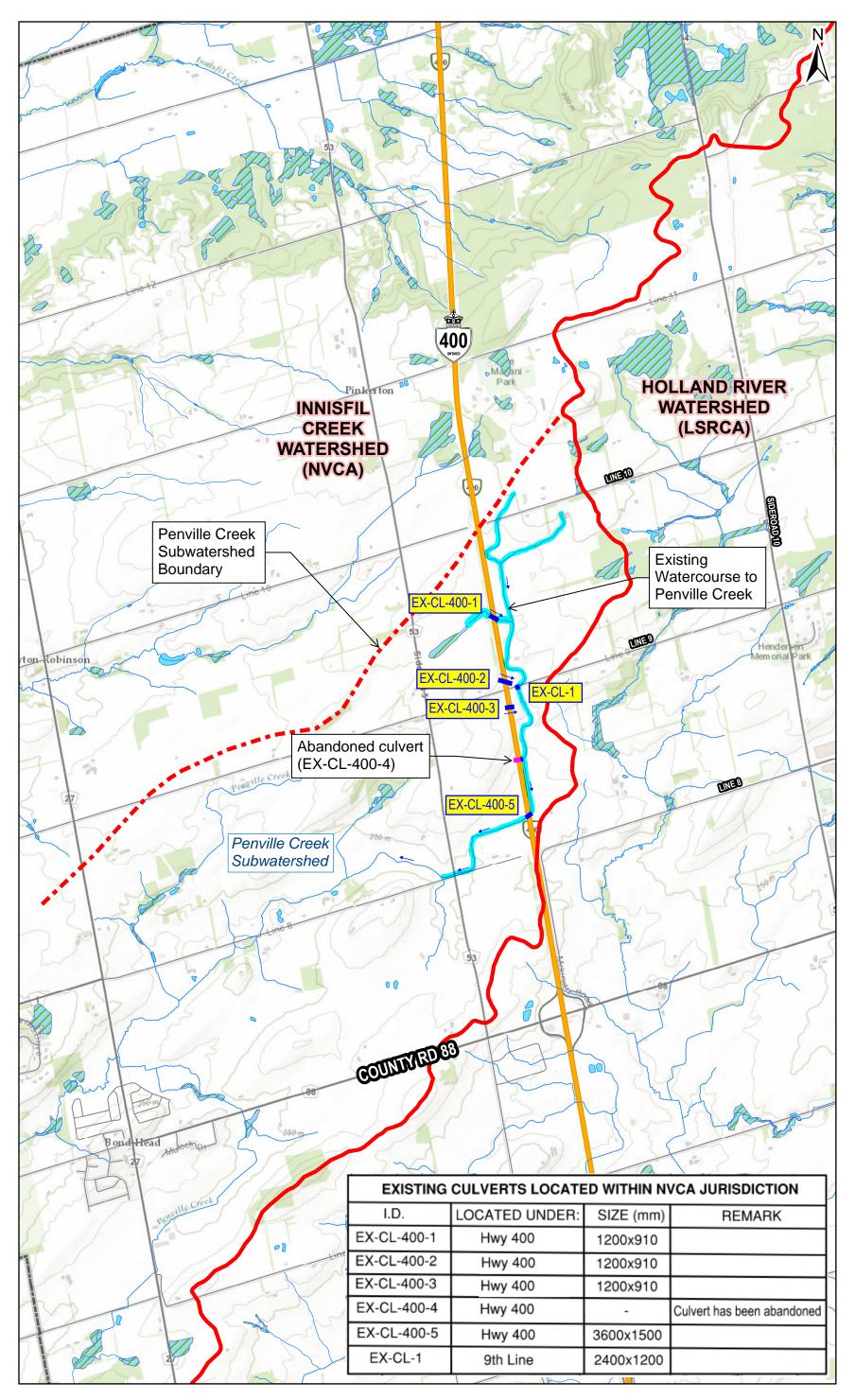
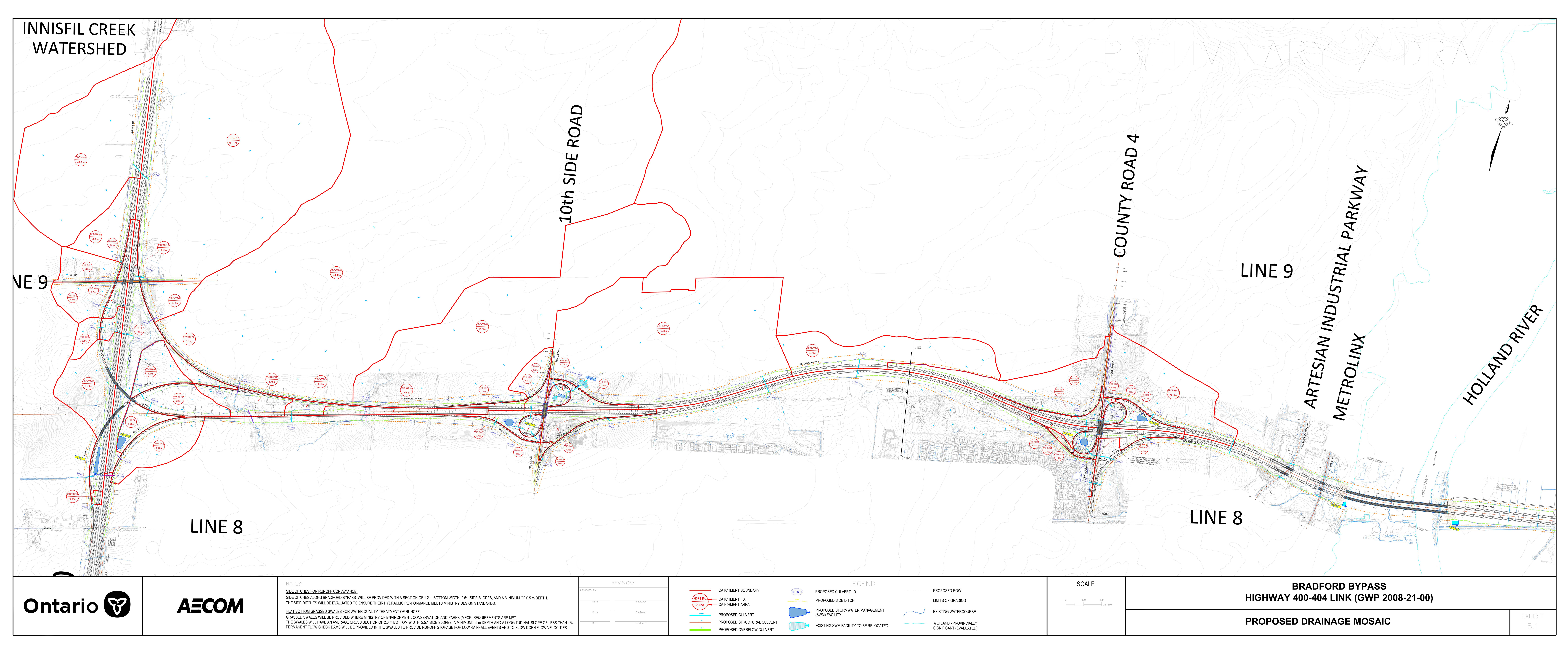
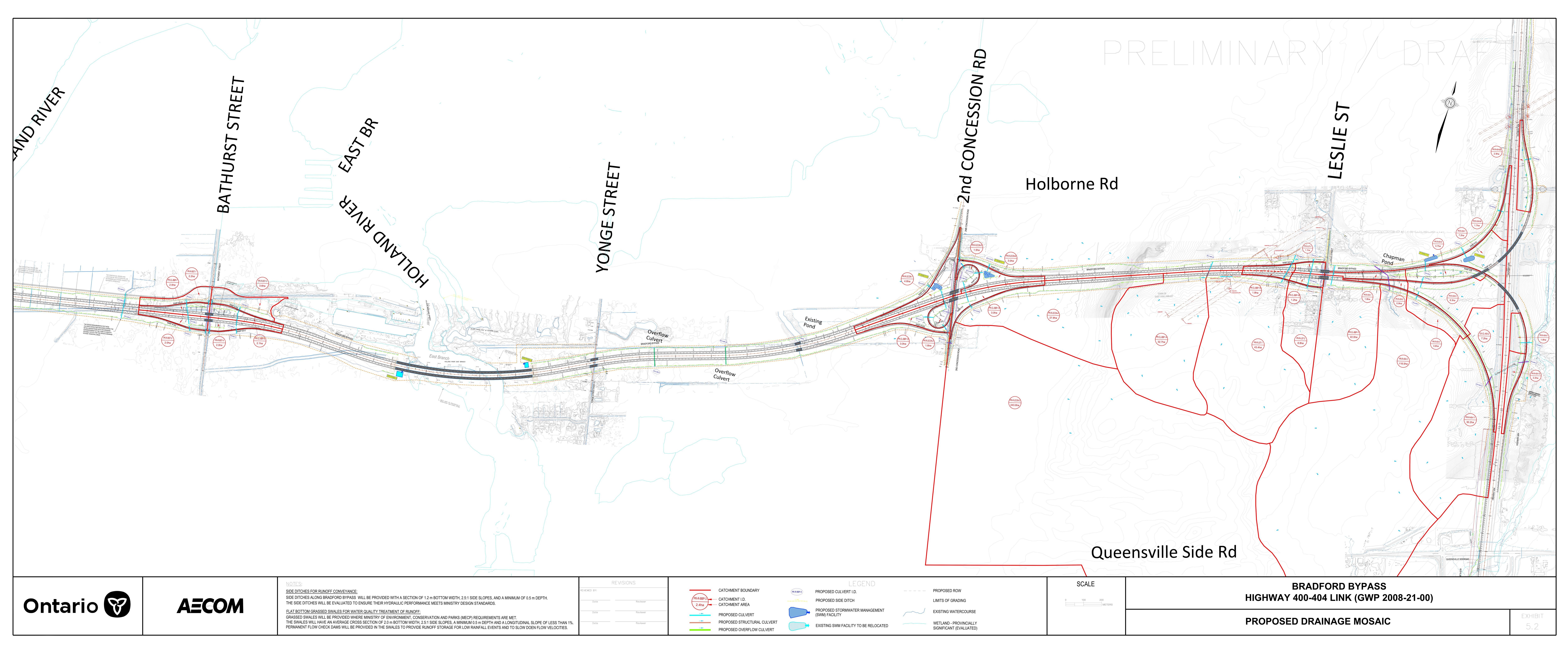
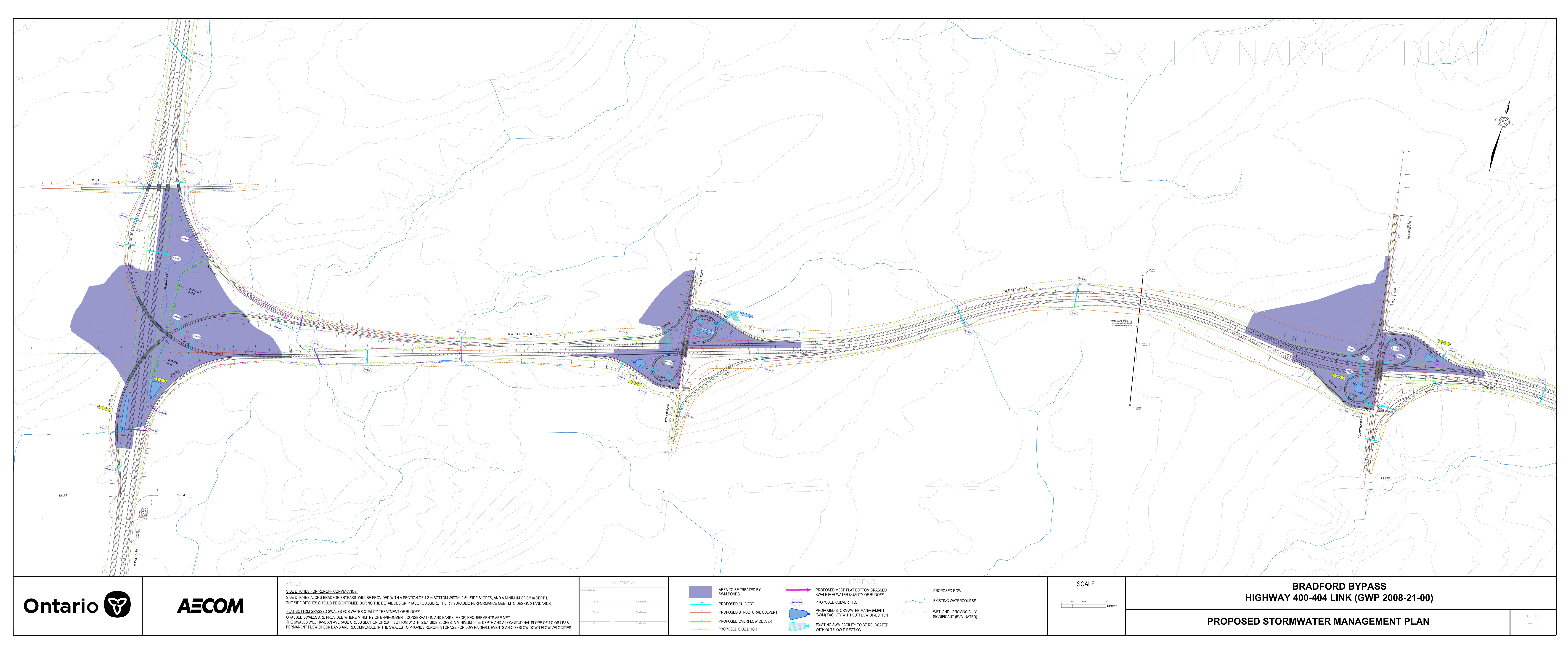
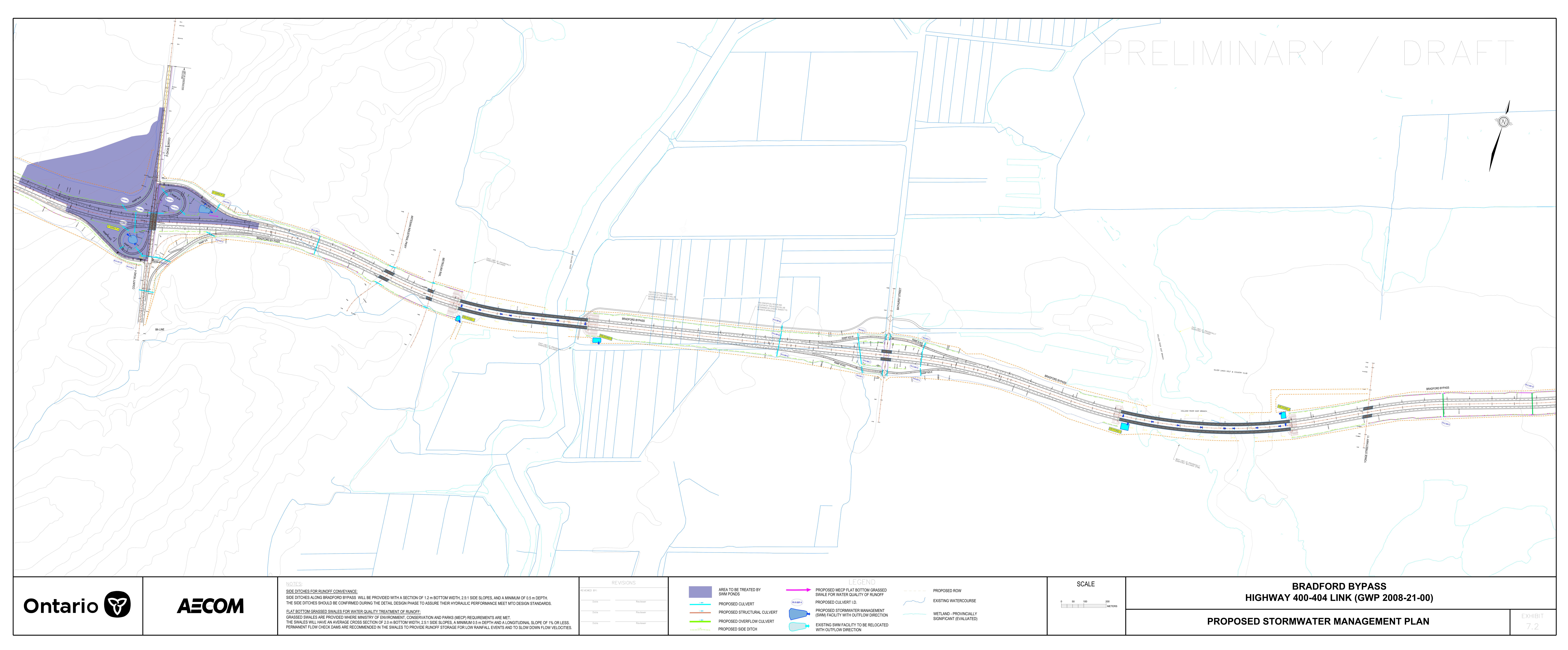


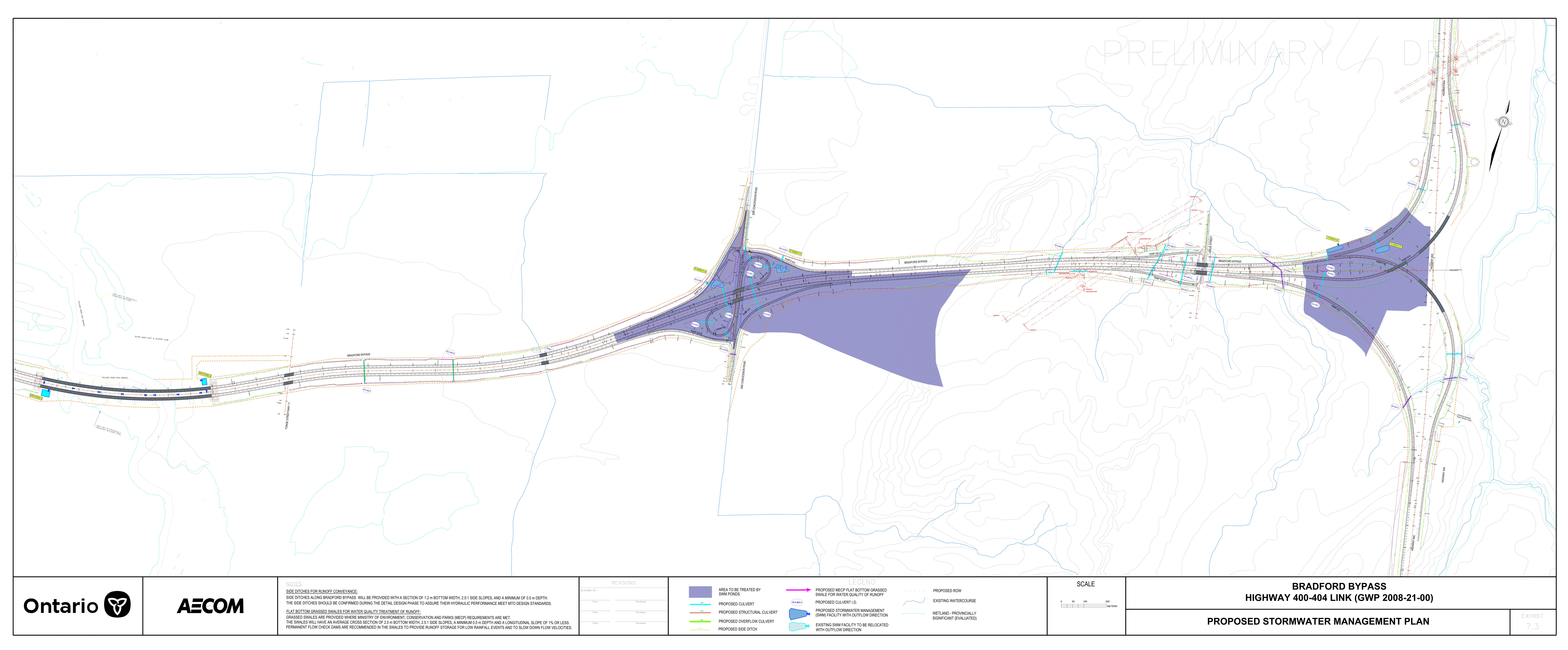
Exhibit 3.9

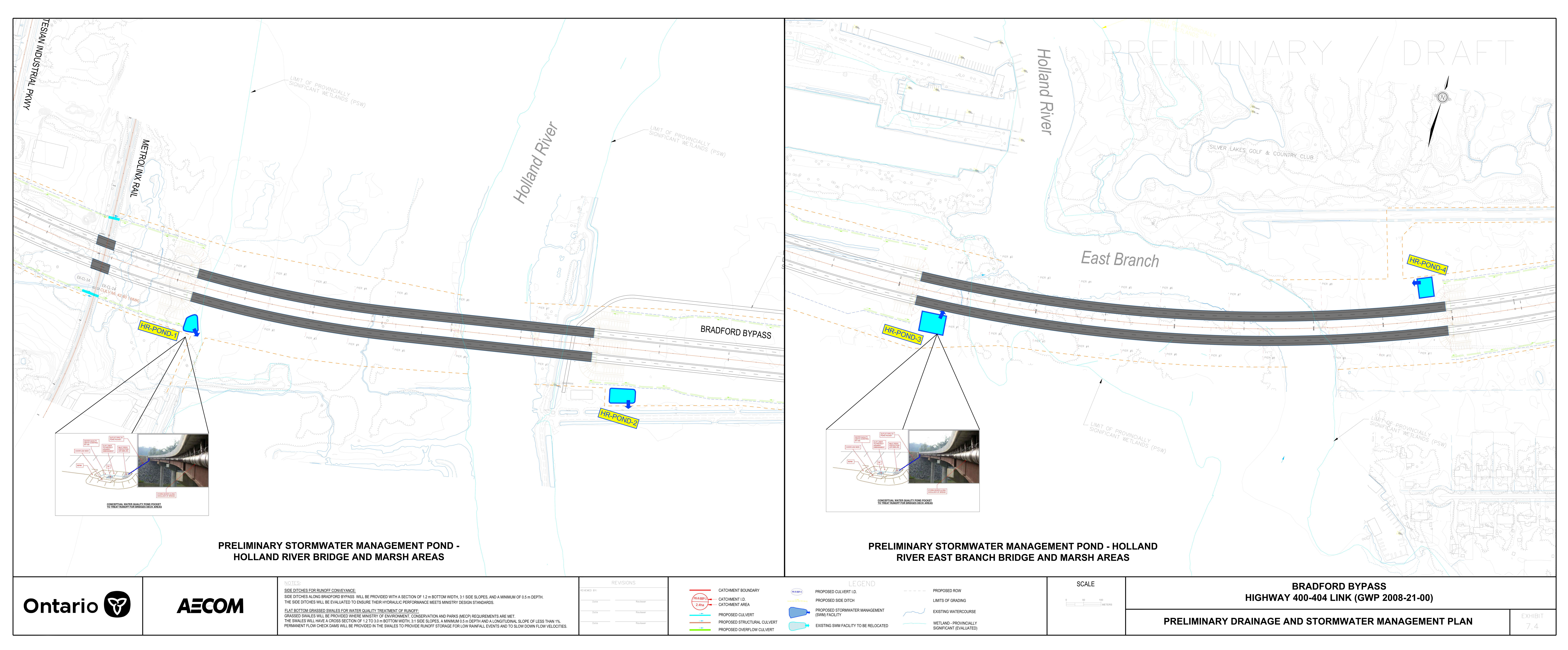














Appendix A

Full Version of the Ontario Regulation 697/21

Bradford Bypass Project, O Reg 697/21

Document Versions (1) Enabling statute (1) Amendments (0) Cited by (0)

Current version: as posted on Oct 11, 2021

Link to the latest version https://canlii.ca/t/bb3n
Stable link to this version https://canlii.ca/t/555zh

Citation to this version: Bradford Bypass Project, O Reg 697/21, https://canlii.ca/t/555zh retrieved on 2022-02-08

Currency: Last updated from the e-Laws site on 2022-02-07

SHOW TABLE OF CONTENTS

Environmental Assessment Act

ONTARIO REGULATION 697/21

BRADFORD BYPASS PROJECT

Consolidation Period: From October 7, 2021 to the e-Laws currency date.

No amendments.

This is the English version of a bilingual regulation.

DEFINITIONS

Definitions

- 1. In this Regulation,
 - "Bradford Bypass Environmental Assessment" means the report entitled "Highway 400-Highway 404 Extension Link (Bradford Bypass) Environmental Assessment Report, One-Stage Submission", dated December 1997 and available on a website of the Government of Ontario, including all submissions from the Ministry of Transportation included in Appendix C and D of the Government Review, dated May 2001; ("évaluation environnementale de la voie de contournement de Bradford")
 - "Bradford Bypass Project" means,
 - (a) an enterprise or activity that is the designing, establishing, constructing, operating, maintaining, changing or retiring of a freeway connecting Highway 400 in the Town of Bradford West Gwillimbury (County of Simcoe) to Highway 404 in the Town of East Gwillimbury (Regional Municipality of York), located north of and parallel to Simcoe County Road 88 in the Town of Bradford West Gwillimbury and Queensville Sideroad (York Road 77) in East Gwillimbury, with the route traversing a small segment of the Township of King in York Region, or
 - (b) a proposal, plan or program in respect of an enterprise or activity described in clause (a); ("projet de voie de contournement de Bradford")
 - "Bradford Bypass Project assessment process" means the process set out in sections 15 to 29; ("processus d'évaluation du projet de voie de contournement de Bradford")
 - "Class Environmental Assessment" means the Class Environmental Assessment for Provincial Transportation Facilities approved by the Lieutenant Governor in Council on October 6, 1999 under Order in Council 1653/1999, as it may be amended from time to time; ("évaluation environnementale de portée générale")
 - "early works" means the following components of the Bradford Bypass Project if the proponent proposes to proceed with them before the completion of the Bradford Bypass Project assessment process:
 - 1. The design, construction and operation of a bridge and associated roadway construction for a future interchange on County Road 4, at a location between 8th Line and 9th Line and within the technically preferred route, that is part of the Bradford Bypass Project.
 - 2. Any applicable activities that are required to support the completion of the bridge and roadway described in paragraph 1 and that are to be carried out within the study area; ("travaux préliminaires")
 - "early works assessment process" means the process set out in sections 4 to 14 and section 29; ("processus d'évaluation des travaux préliminaires")
 - "noise protocols" means,
 - (a) the document entitled "Environmental Guide for Noise" prepared by the Ministry of Transportation, dated October 2006 and published on a website of the Government of Ontario, as it may be amended from time to time, and
 - (b) the document entitled "Environmental Noise Guideline Stationary and Transportation Sources Approval and Planning (NPC-300)", published on a website of the Government of Ontario, as it may be amended from time to time; ("protocoles sur le bruit")

- "Project website" means a website of the Government of Ontario that is established for the purpose of publicly sharing information on the Bradford Bypass Project; ("site Web du projet")
- "study area" means the area of study set out in Exhibit 3-16 of Section 3.5.3 of the Bradford Bypass Environmental Assessment as the Bradford Corridor and as described in section 4.1 of that Assessment for specific components of the environment; ("zone d'étude")
- "technically preferred route" means the preferred route for the Bradford Bypass Project as set out in the conceptual design identified in Exhibit 5-1 in Section 5 of the Bradford Bypass Environmental Assessment, and includes the proposed interchanges and configurations and right of way requirements; ("tracé privilégié sur le plan technique")
- "updated study area" means the study area, subject to, as applicable,
- (a) any proposed changes set out in the final environmental conditions report published under section 19, or
- (b) any proposed changes set out in the draft environmental impact assessment report distributed under section 25; ("zone d'étude mise à jour")
- "updated technically preferred route" means the technically preferred route, subject to, as applicable,
- (a) any proposed changes set out in the final environmental conditions report published under section 19, or
- (b) any proposed changes set out in the draft environmental impact assessment report distributed under section 25. ("tracé privilégié sur le plan technique mis à jour")

EXEMPTIONS

Exemptions

- 2. (1) The Bradford Bypass Project, other than early works, is exempt from the Act if the proponent complies with section 3 and the Bradford Bypass Project assessment process.
- (2) Early works are exempt from the Act if the proponent complies with section 3 and the early works assessment process.
- (3) Subsections 12.2 (2) and (6) and subsections 15.1.2 (2) and (6) of the Act do not apply to,
 - (a) the Minister of the Environment, Conservation and Parks with respect to any permit that Minister may issue under section 17 of the *Endangered Species Act, 2007* related to the Bradford Bypass Project; and
 - (b) the Minister of Heritage, Sport, Tourism and Culture Industries with respect to any consent that Minister may issue for the purpose of compliance with subsection 25.2 (6) of the *Ontario Heritage Act* related to the Bradford Bypass Project.

IMPLEMENTATION OF BRADFORD BYPASS ENVIRONMENTAL ASSESSMENT

Implementation of Bradford Bypass Environmental Assessment

- 3. If the proponent proceeds with the Bradford Bypass Project, it shall implement the Project in accordance with the Bradford Bypass Environmental Assessment, except,
 - (a) where modifications are required to comply with another Act, a regulation made under another Act, or an order, permit, approval or other instrument issued under another Act; and
 - (b) as may be modified through the early works assessment process and the Bradford Bypass Project assessment process.

EARLY WORKS ASSESSMENT PROCESS

Early works Indigenous Consultation Plan

- 4. (1) Before preparing the draft early works report, the proponent shall prepare an early works Indigenous Consultation Plan that includes,
 - (a) a list of Indigenous communities that have or may have existing aboriginal or treaty rights, as recognized and affirmed in section 35 of the *Constitution Act, 1982*, that may be impacted by the early works;
 - (b) a list of Indigenous communities that may otherwise be interested in the early works; and
 - (c) the plan for consulting with Indigenous communities set out in clauses (a) and (b) throughout the early works assessment process.
- (2) The proponent shall circulate the early works Indigenous Consultation Plan with the communities listed in subsection (1).
- (3) After circulating the early works Indigenous Consultation Plan in accordance with subsection (2), the proponent shall provide the early works Indigenous Consultation Plan to the Director of the Ministry's Environmental Assessment Branch.
- (4) If the proponent proceeds with the early works assessment process, it shall do so in accordance with the early works Indigenous Consultation Plan and any changes made in compliance with subsection (5).
- (5) If the proponent makes any changes to the early works Indigenous Consultation Plan, the proponent shall circulate the changes with the communities listed in subsection (1) and provide a copy to the Director of the Ministry's Environmental Assessment Branch.

Draft early works report

- 5. (1) The proponent may prepare a draft early works report in accordance with subsection (2).
- (2) The draft early works report must contain the following:
 - A description of the early works, including a description of the alternatives that were considered or a description of why alternatives were not considered.
 - 2. The rationale for proceeding with the early works and a summary of background information relating to them.
 - 3. A map showing the area of study for the early works described under paragraph 1, along with a rationale for the proponent's selection of the boundaries for the area of study.
 - 4. An update to the description of the local environmental conditions within the area of study for the early works.
 - 5. A description of all studies undertaken in relation to the early works, including the studies required by sections 6 to 9, which

must set out,

- i. a summary of all data collected or reviewed, and
- ii. a summary of all results and conclusions.
- 6. The proponent's assessment and evaluation of the impacts that the preferred method of carrying out the early works and other methods might have on the environment, and the proponent's criteria for assessment and evaluation of those impacts.
- 7. A description of any measures proposed by the proponent for mitigating any negative impacts that the preferred method of carrying out the early works might have on the environment.
- 8. A description of the means the proponent proposes to use to monitor and verify the effectiveness of the mitigation measures proposed under paragraph 7, including a plan to make the results of the monitoring and verification available on the Project website.
- 9. A description of any municipal, provincial, federal or other approvals or permits that may be required for the early works.
- 10. A consultation record, including,
 - i. a description of the consultations carried out with Indigenous communities, in accordance with the early works Indigenous Consultation Plan prepared under section 4, and with other interested persons,
 - ii. a list of the Indigenous communities and interested persons who participated in the consultations,
 - iii. summaries of the comments submitted by Indigenous communities and interested persons,
 - iv. a summary of discussions that the proponent had with Indigenous communities, and copies of all written comments submitted by Indigenous communities,
 - v. a description of what the proponent did to respond to concerns expressed by Indigenous communities and interested persons, and
 - vi. any commitments made by the proponent to Indigenous communities and interested persons in respect of the early works.

Early works Stage III Archaeological Assessment

- 6. (1) In accordance with subsection (2), the proponent shall complete a Stage III Archaeological Assessment for any areas of the area of study that are identified as having archaeological potential in accordance with a Stage II Archaeological Assessment.
- (2) Any Stage III Archaeological Assessment shall be completed in accordance with the Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists.

Early works Stormwater Management Plan

- 7. (1) The proponent shall prepare a Stormwater Management Plan for the early works in accordance with this section.
- (2) The Stormwater Management Plan shall, at a minimum, include,
 - (a) plans and descriptions showing the type of stormwater management to be provided for the early works, including the portions not being drained to a stormwater management wet pond;
 - (b) a description of the receiving water features that would receive stormwater from the early works, including the characteristics, flow and ecological conditions and whether species protected under the *Endangered Species Act, 2007* are known to be present;
 - (c) an operation and maintenance plan for the proposed stormwater management facilities; and
 - (d) a monitoring plan to evaluate the performance of stormwater management facilities against the design criteria and objectives and to verify receiving surface waters are protected.
- (3) The proponent shall develop the Stormwater Management Plan in accordance with,
 - (a) the proponent's guidelines; and
 - (b) the document entitled "Stormwater Management Planning and Design Manual, 2003", dated March 2003, published by the Ministry and available on a Government of Ontario website.
- (4) The proponent shall submit the Stormwater Management Plan to the following for review and comment:
 - 1. The Ministry of Northern Development, Mines, Natural Resources and Forestry.
 - 2. The Lake Simcoe Region Conservation Authority.
 - 3. Fisheries and Oceans Canada.
 - 4. The Ministry of the Environment, Conservation and Parks.
- (5) The proponent shall consider any comments provided on the Stormwater Management Plan.
- (6) The proponent shall provide the final Stormwater Management Plan to the Director of the Ministry's Environmental Assessment Branch.
- (7) The proponent shall publish the final Stormwater Management Plan on the Project website.

Early works Groundwater Protection and Well Monitoring Plan

- 8. (1) The proponent shall prepare a Groundwater Protection and Well Monitoring Plan for the early works in accordance with this section.
- (2) The Groundwater Protection and Well Monitoring Plan shall, at a minimum, include,

- (a) the identification of all areas where the early works may directly or indirectly affect groundwater;
- (b) a groundwater monitoring program for the identified areas;
- (c) a description of the locations and parameters for the monitoring of groundwater quality and quantity;
- (d) the proposed start date and frequency of groundwater monitoring; and
- (e) a well water survey, including plans to collect appropriate water quality and quantity information as determined by the proponent.
- (3) The proponent shall distribute the Groundwater Protection and Well Monitoring Plan to the following for review and comment:
 - 1. The Director of the Ministry's Central Regional Office.
 - 2. The Director of the Ministry's Conservation and Source Protection Branch.
 - 3. The Lake Simcoe Region Conservation Authority.
 - 4. The Ministry of Northern Development, Mines, Natural Resources and Forestry.
 - 5. The York Regional Health Unit.
 - 6. The Simcoe Muskoka District Health Unit.
 - 7. The Town of Bradford West Gwillimbury.
 - 8. The Town of East Gwillimbury.
 - 9. The Town of Newmarket.
 - 10. The County of Simcoe.
 - 11. The Township of King.
 - 12. The Regional Municipality of York.
 - 13. Any other municipalities considered appropriate by the proponent.
 - 14. Every assessed owner of land within the area of study for the early works and within 500 metres of the borders of the area of study for the early works.
- (4) The proponent shall consider any comments provided on the Groundwater Protection and Well Monitoring Plan.
- (5) The proponent shall provide the final Groundwater Protection and Well Monitoring Plan to the Director of the Ministry's Environmental Assessment Branch.
- (6) The proponent shall publish the final Groundwater Protection and Well Monitoring Plan on the Project website.

Early works noise report

- 9. (1) The proponent shall prepare a noise report for the early works in accordance with the noise protocols.
- (2) The proponent shall distribute the noise report to the Director of the Ministry's Environmental Assessment Branch for review and comment.
- (3) The proponent shall consider any comments provided by the Director of the Ministry's Environmental Assessment Branch.
- (4) The proponent shall provide the final noise report to the Director of the Ministry's Environmental Assessment Branch.

Notice of draft early works report

- 10. (1) The proponent shall prepare a notice of publication of draft early works report that complies with subsection (2) and distribute it as described in subsection (3).
- (2) The notice shall include the following information:
 - 1. The Project website.
 - 2. The name and phone number and email address of a person who may be contacted on behalf of the proponent.
 - 3. A description of the early works.
 - 4. A statement that the environmental impacts of the early works are being assessed in accordance with this Regulation.
 - 5. A map showing the area of study for the early works described under paragraph 3.
 - 6. Information on how to obtain a copy of the draft early works report.
 - 7. Information about any opportunities the proponent is providing for consultation about the draft early works report.
 - 8. Information on how comments about the draft early works report can be submitted to the proponent.
- (3) The proponent shall distribute the notice by,
 - (a) giving a copy of the notice to,
 - (i) every assessed owner of land within the area of study for the early works and within 500 metres of the borders of the area of study for the early works,
 - (ii) the Director of the Ministry's Environmental Assessment Branch,
 - (iii) every Indigenous community that is identified in the early works Indigenous Consultation Plan prepared under section 4,
 - (iv) the Director of the Ministry's Central Region Office,
 - (v) the Town of Bradford West Gwillimbury,
 - (vi) the Town of East Gwillimbury,

- (vii) the Town of Newmarket,
- (viii) the County of Simcoe,
- (ix) the Township of King,
- (x) the Regional Municipality of York,
- (xi) any other municipalities considered appropriate by the proponent,
- (xii) any provincial and federal ministries and agencies with policies or legislative requirements applicable to the early works, and
- (xiii) any other person who, in the opinion of the proponent, may be interested in the early works;
- (b) publishing the notice in a manner that will promptly bring the notice to the attention of the public in the area of study for the early works; and
- (c) publishing the notice on the Project website.

Consultation and issues resolution for early works report

- 11. (1) The proponent shall provide all of the persons to whom a copy of the notice under clause 10 (3) (a) is given an opportunity to participate in the consultation.
- (2) Subject to subsections (3) and (4), the consultation shall be conducted in the way the proponent considers appropriate.
- (3) As part of the consultation, the proponent shall ensure that all of the persons and Indigenous communities to whom a copy of the notice under clause 10 (3) (a) is given are provided with access to a copy of the draft early works report.
- (4) The proponent shall establish an issues resolution process to attempt to resolve any concerns raised by Indigenous communities and interested persons related to early works.

Final early works report

- 12. (1) After publishing the notice of publication of the draft early works report pursuant to clauses 10 (3) (b) and (c), the proponent shall,
 - (a) complete the consultation and issues resolution process under section 11;
 - (b) update the draft early works report, including by adding,
 - (i) a description of the issues resolution process employed by the proponent in respect of any concerns raised by Indigenous communities and interested persons,
 - (ii) a description of the concerns raised by Indigenous communities and interested persons in the issues resolution process and of the outcome of the process, including what, if anything, the proponent did or will do in respect of the concerns raised, and
 - (iii) a description of any changes to the early works as a result of addressing concerns raised through consultation under this section; and
 - (c) publish the final early works report on the Project website.
- (2) The proponent shall ensure that all of the persons and Indigenous communities to whom a copy of the notice under clause 10 (3)
- (a) is given are notified of the publication of the final early works report and are provided with access to a copy of it.

Early works statement of completion

- 13. (1) After publishing the final early works report, the proponent shall provide a statement of completion of the early works assessment process to the Director of the Ministry's Environmental Assessment Branch.
- (2) The statement of completion of the early works assessment process shall indicate that the proponent intends to proceed with the early works in accordance with the final early works report.
- (3) The proponent shall post the statement of completion on the Project website.
- (4) Subject to subsection 29 (17), if the proponent proceeds with the early works, it shall proceed in accordance with the final early works report.

Timing for early works assessment process

- 14. (1) The proponent may carry out the early works assessment process only until the notice of publication of the draft environmental impact assessment report has been distributed in accordance with subsection 25 (3).
- (2) Once the notice of publication of the draft environmental impact assessment report has been distributed, the proponent shall immediately cease the early works assessment process if it is underway.
- (3) Subsections (1) and (2) do not apply to the early works assessment process for proposed changes pursuant to section 29.

BRADFORD BYPASS PROJECT ASSESSMENT PROCESS

Indigenous Consultation Plan

- 15. (1) Before preparing the draft environmental conditions report, the proponent shall prepare an Indigenous Consultation Plan that includes,
 - (a) a list of Indigenous communities that have or may have existing aboriginal or treaty rights, as recognized and affirmed in section 35 of the *Constitution Act, 1982*, that may be impacted by the Bradford Bypass Project;
 - (b) a list of Indigenous communities that may otherwise be interested in the Bradford Bypass Project; and
 - (c) the plan for consulting with Indigenous communities set out in clauses (a) and (b) throughout the Bradford Bypass Project assessment process.

- (2) The proponent shall circulate the Indigenous Consultation Plan with the communities listed in subsection (1).
- (3) The proponent shall provide the Indigenous Consultation Plan to the Director of the Ministry's Environmental Assessment Branch.
- (4) If the proponent proceeds with the Bradford Bypass Project assessment process, it shall do so in accordance with the Indigenous Consultation Plan and any changes made in compliance with subsection (5).
- (5) If the proponent makes any changes to the Indigenous Consultation Plan, the proponent shall circulate the changes with the communities listed in subsection (1) and provide a copy to the Director of the Ministry's Environmental Assessment Branch.

Environmental Conditions Report

Draft environmental conditions report

- 16. (1) The proponent shall prepare a draft environmental conditions report in accordance with subsections (2) and (3).
- (2) The draft environmental conditions report must contain the following:
 - 1. A map showing the study area and the technically preferred route.
 - 2. An update to the description of the environmental conditions in the Bradford Bypass Environmental Assessment, including any updates from the early works report, if any.
 - 3. A description of all studies undertaken in relation to updating the environmental conditions in the study area, including,
 - i. a summary of all data collected or reviewed, and
 - ii. a summary of all results and conclusions.
 - 4. An identification of,
 - i. any changes to the environmental conditions identified in paragraph 2,
 - ii. any changes to the technically preferred route as a result of the changes to the environmental conditions identified in paragraph 2, and
 - iii. at least two alternatives for any changes identified to the technically preferred route identified in subparagraph ii.
 - 5. A description of the changes identified in accordance with paragraph 4, if any, to the technically preferred route and the reasons for the change.
 - 6. If there are proposed changes to the technically preferred route identified in accordance with paragraph 4, the contents required by clause (3) (a).
 - 7. A description of the proposed updated technically preferred route, subject to the results of the process required by clause (3) (b), if any.
 - 8. A consultation record for preparation of the draft environmental conditions report, including,
 - i. a description of the consultations carried out with Indigenous communities, in accordance with the Indigenous Consultation Plan prepared under section 15, and with other interested persons,
 - ii. a list of the Indigenous communities and interested persons who participated in the consultations,
 - iii. summaries of the comments submitted by Indigenous communities and interested persons,
 - iv. a summary of discussions that the proponent had with Indigenous communities, and copies of all written comments submitted by Indigenous communities,
 - v. a description of what the proponent did to respond to concerns expressed by Indigenous communities and interested persons, and
 - vi. any commitments made by the proponent to Indigenous communities and interested persons in respect of the Bradford Bypass Project.
- (3) If the proponent determines that changes to the technically preferred route are necessary based on the evaluation in paragraph 4 of subsection (2),
 - (a) for any proposed changes within the study area, the draft environmental conditions report must contain,
 - (i) the proponent's assessment and evaluation of any impacts that the change might have on the environment, and
 - (ii) a description of any measures proposed by the proponent for mitigating any negative impacts that the change might have on the environment; and
 - (b) for any proposed changes outside of the study area, the proponent must,
 - (i) evaluate those changes in accordance with the Class Environmental Assessment, and
 - (ii) incorporate the results of the Class Environmental Assessment process into the draft environmental conditions report or the draft environmental impact assessment report to reflect any changes to the technically preferred route.

Notice of publication

- 17. (1) The proponent shall prepare a notice of publication of the draft environmental conditions report that complies with subsection
- (2) and distribute it as described in subsection (3).
- (2) The notice shall include the following information:
- The Project website.

- 2. The name and phone number and email address of a person who may be contacted on behalf of the proponent.
- 3. A description of the technically preferred route and any proposed changes.
- 4. A statement that the environmental impacts of the Bradford Bypass Project are being assessed in accordance with this Regulation.
- 5. A map showing the study area and the technically preferred route, including any proposed changes to it, in respect of the Bradford Bypass Project.
- 6. Information on how to obtain a copy of the draft environmental conditions report.
- 7. Information about any opportunities the proponent is providing for consultation about the draft environmental conditions report.
- 8. Information on how comments about the draft environmental conditions report can be submitted to the proponent.
- (3) The proponent shall distribute the notice by,
 - (a) giving a copy of the notice to,
 - (i) every assessed owner of land within the study area and within 500 metres of the borders of the study area,
 - (ii) the Director of the Ministry's Environmental Assessment Branch,
 - (iii) every Indigenous community that is identified in the Indigenous Consultation Plan prepared under section 15,
 - (iv) the Director of the Ministry's Central Region Office,
 - (v) the Town of Bradford West Gwillimbury,
 - (vi) the Town of East Gwillimbury,
 - (vii) the Town of Newmarket,
 - (viii) the County of Simcoe,
 - (ix) the Township of King,
 - (x) the Regional Municipality of York,
 - (xi) any other municipalities considered appropriate by the proponent,
 - (xii) any provincial and federal ministries and agencies with policies or legislative requirements applicable to the Bradford Bypass Project, and
 - (xiii) any other person who, in the opinion of the proponent, may be interested in the Bradford Bypass Project;
 - (b) publishing the notice in a manner that, in the opinion of the proponent, will promptly bring the notice to the attention of interested persons in the study area; and
 - (c) publishing the notice on the Project website.

Consultation on environmental conditions report

- 18. (1) The proponent shall, in accordance with subsection (2), consult with,
 - (a) every Indigenous community that is identified in the Indigenous Consultation Plan; and
 - (b) persons who, in the opinion of the proponent, may be interested in the Bradford Bypass Project.
- (2) The proponent shall provide all of the Indigenous communities and persons to whom a copy of the notice under clause 17 (3) (a) is given with an opportunity to participate in the consultation.
- (3) Subject to subsection (4), the consultation shall be conducted in the way the proponent considers appropriate.
- (4) As part of the consultation, the proponent shall ensure that all of the persons and Indigenous communities to whom a copy of the notice under clause 17 (3) (a) is given are provided with access to a copy of the draft environmental conditions report.

Final environmental conditions report

- 19. (1) Following the consultation described in section 18, the proponent shall,
 - (a) update the draft environmental conditions report, including by adding,
 - (i) a description of any concerns raised by Indigenous communities and interested persons,
 - (ii) a description of what, if anything, the proponent did or will do in respect of the concerns raised, and
 - (iii) a description of any changes to the environmental conditions report as a result of addressing concerns raised during consultation under section 18; and
 - (b) publish a final environmental conditions report on the Project website.
- (2) The proponent shall ensure that all of the persons and Indigenous communities to whom a copy of the notice under clause 17 (3)
- (a) is given are notified of the publication of the final environmental conditions report and are provided with access to a copy of it.

Environmental Impact Assessment Report

Draft environmental impact assessment report

- 20. (1) The proponent shall prepare a draft environmental impact assessment report in accordance with subsection (2).
- (2) The draft environmental impact assessment report must contain the following:
 - 1. A statement of the purpose of the Bradford Bypass Project and a summary of background information relating to the Bradford Bypass Project.
 - 2. The final description of the updated technically preferred route from the environmental conditions report and from the Class Environmental Assessment process, if applicable, in accordance with clause 16 (3) (b).
 - 3. The assessment and comparison of at least two potential alternative alignment options for the Bradford Bypass Project that are

- within the updated technically preferred route as set out in paragraph 2, and the selection of a preferred alignment.
- 4. A map showing the preferred alignment and the updated technically preferred route.
- 5. A description of the local environmental conditions at the updated technically preferred route.
- 6. The assessment and comparison of at least two potential alternatives to the design options for each of the components of the preferred alignment for the Bradford Bypass Project, and a selection of the preferred design from those options, taking into account the comparisons.
- 7. A description of all studies, including the studies set out in sections 21 to 24, undertaken in relation to the Bradford Bypass Project, which must set out,
 - i. a summary of all data collected or reviewed, and
 - ii. a summary of all results and conclusions.
- 8. The proponent's assessment and evaluation of the impacts that the preferred alignment and preferred design for the Bradford Bypass Project might have on the environment, and the proponent's criteria for assessment and evaluation of those impacts.
- 9. A description of any measures proposed by the proponent for mitigating any negative impacts that the preferred alignment and preferred design for the Bradford Bypass Project might have on the environment.
- 10. A description of the means the proponent proposes to use to monitor and verify the effectiveness of the mitigation measures proposed under paragraph 9, including a plan to make the results of the monitoring and verification available on the Project website.
- 11. A description of any municipal, provincial, federal or other approvals or permits that may be required for the Bradford Bypass Project.
- 12. A consultation record, including,
 - i. a description of the consultations carried out with Indigenous communities, in accordance with the Indigenous Consultation Plan prepared under section 15, and with other interested persons,
 - ii. a list of the Indigenous communities and interested persons who participated in the consultations,
 - iii. summaries of the comments submitted by Indigenous communities and interested persons,
 - iv. a summary of discussions that the proponent had with Indigenous communities, and copies of all written comments submitted by Indigenous communities,
 - v. a description of what the proponent did to respond to concerns expressed by Indigenous communities and interested persons, and
 - vi. any commitments made by the proponent to Indigenous communities and interested persons in respect of the Bradford Bypass Project.

Stage III Archaeological Assessment

- 21. (1) In accordance with subsection (2), the proponent shall complete a Stage III Archaeological Assessment for areas of the updated study area that are identified as having archaeological potential in accordance with a Stage II Archaeological Assessment.
- (2) Any Stage III Archaeological Assessment shall be completed in accordance with the Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists.

Stormwater Management Plan

- 22. (1) The proponent shall prepare a Stormwater Management Plan for the Bradford Bypass Project in accordance with this section.
- (2) The Stormwater Management Plan shall, at a minimum, include,
 - (a) plans and descriptions showing the type of stormwater management to be provided for all components of the Bradford Bypass Project, including components not being drained to a stormwater management wet pond;
 - (b) a description of the water features that would receive stormwater from the Bradford Bypass Project, including the characteristics, flow and ecological conditions and whether species protected under the *Endangered Species Act, 2007* are known to be present;
 - (c) an operation and maintenance plan for the proposed stormwater management facilities; and
 - (d) a monitoring plan to evaluate the performance of stormwater management facilities against the design criteria and objectives and to verify receiving surface waters are protected.
- (3) The proponent shall develop the stormwater management plan in accordance with,
 - (a) the proponent's guidelines; and
 - (b) the document entitled "Stormwater Management Planning and Design Manual, 2003", dated March 2003, published by the Ministry and available on a Government of Ontario website.
- (4) The proponent shall submit the Stormwater Management Plan to the following for review and comment:
 - 1. The Ministry of Northern Development, Mines, Natural Resources and Forestry.
 - 2. The Lake Simcoe Region Conservation Authority.
 - 3. Fisheries and Oceans Canada.
 - 4. The Ministry of the Environment, Conservation and Parks.
- (5) The proponent shall consider any comments provided on the Stormwater Management Plan.

- (6) The proponent shall provide the final Stormwater Management Plan to the Director of the Ministry's Environmental Assessment Branch.
- (7) The proponent shall publish the final Stormwater Management Plan on the Project website.

Groundwater Protection and Well Monitoring Plan

- 23. (1) The proponent shall prepare a Groundwater Protection and Well Monitoring Plan for the Bradford Bypass Project in accordance with this section.
- (2) The Groundwater Protection and Well Monitoring Plan shall, at a minimum, include,
 - (a) the identification of all areas where the Bradford Bypass Project may directly or indirectly affect groundwater;
 - (b) a groundwater monitoring program for the identified areas;
 - (c) a description of the locations and parameters for the monitoring of groundwater quality and quantity;
 - (d) the proposed start date and frequency of groundwater monitoring; and
 - (e) a well water survey, including plans to collect appropriate water quality and quantity information as determined by the proponent.
- (3) The proponent shall distribute the Groundwater Protection and Well Monitoring Plan to the following for review and comment:
 - 1. The Director of the Ministry's Central Regional Office.
 - 2. The Director of the Ministry's Conservation and Source Protection Branch.
 - 3. The Lake Simcoe Region Conservation Authority.
 - 4. The Nottawasaga Valley Conservation Authority.
 - 5. The Ministry of Northern Development, Mines, Natural Resources and Forestry.
 - 6. The York Regional Health Unit.
 - 7. The Simcoe Muskoka District Health Unit.
 - 8. The Town of Bradford West Gwillimbury.
 - 9. The Town of East Gwillimbury.
 - 10. The Town of Newmarket.
 - 11. The County of Simcoe.
 - 12. The Township of King.
 - 13. The Regional Municipality of York.
 - 14. Any other municipalities considered appropriate by the proponent.
 - 15. Every assessed owner of land within the updated study area and within 500 metres of the borders of the updated study area.
- (4) The proponent shall consider any comments provided on the Groundwater Protection and Well Monitoring Plan.
- (5) The proponent shall provide the final Groundwater Protection and Well Monitoring Plan to the Director of the Ministry's Environmental Assessments Branch.
- (6) The proponent shall publish the final Groundwater Protection and Well Monitoring Plan on the Project website.

Noise report

- 24. (1) The proponent shall prepare a noise report in accordance with the noise protocols.
- (2) The proponent shall distribute the noise report to the Director of the Ministry's Environmental Assessment Branch for review and comment.
- (3) The proponent shall consider any comments provided by the Director of the Ministry's Environmental Assessment Branch.
- (4) The proponent shall provide the final noise report to the Director of the Ministry's Environmental Assessment Branch.

Notice of draft environmental impact assessment report

- 25. (1) The proponent shall prepare a notice of publication of the draft environmental impact assessment report that complies with subsection (2) and distribute it as described in subsection (3).
- (2) The notice shall include the following information:
 - 1. The Project website.
 - 2. The name and phone number and email address of a person who may be contacted on behalf of the proponent.
 - 3. A description of the environmental impact assessment of the Bradford Bypass Project.
 - 4. A statement that the environmental impacts of the Bradford Bypass Project are being assessed in accordance with this Regulation.
 - 5. A map showing the updated study area for the Bradford Bypass Project.
 - 6. Information on how to obtain a copy of the draft environmental impact assessment report.
 - 7. Information about any opportunities the proponent is providing for consultation about the draft environmental impact assessment report.
 - 8. Information on how comments about the draft environmental impact assessment report can be submitted to the proponent.

- (3) The proponent shall distribute the notice by,
 - (a) giving a copy of the notice to,
 - (i) every assessed owner of land within the updated study area and within 500 metres of the borders of the updated study
 - (ii) the Director of the Ministry's Environmental Assessment Branch,
 - (iii) every Indigenous community that is identified in the Indigenous Consultation Plan prepared under section 15,
 - (iv) the Director of the Ministry's Central Region Office,
 - (v) the Town of Bradford West Gwillimbury,
 - (vi) the Town of East Gwillimbury,
 - (vii) the Town of Newmarket,
 - (viii) the County of Simcoe,
 - (ix) the Township of King,
 - (x) the Regional Municipality of York,
 - (xi) any other municipalities considered appropriate by the proponent,
 - (xii) any provincial and federal ministries and agencies with policies or legislative requirements applicable to the Bradford Bypass Project, and
 - (xiii) any other person who, in the opinion of the proponent, may be interested in the Bradford Bypass Project;
 - (b) publishing the notice in a manner that, in the opinion of the proponent, will promptly bring the notice to the attention of the public in the updated study area for the Bradford Bypass Project; and
 - (c) publishing the notice on the Project website.

Consultation and issues resolution for environmental impact assessment report

- 26. (1) The proponent shall provide all of the Indigenous communities and persons to whom a copy of the notice under clause 25 (3)
- (a) is given with an opportunity to participate in the consultation.
- (2) Subject to subsections (3) and (4), the consultation shall be conducted in the way the proponent considers appropriate.
- (3) As part of the consultation, the proponent shall ensure that all of the persons and Indigenous communities to whom a copy of the notice under clause 25 (3) (a) is given are provided with access to a copy of the draft environmental impact assessment report.
- (4) The proponent shall establish an issues resolution process to attempt to resolve any concerns raised by Indigenous communities and interested persons related to the Bradford Bypass Project.

Final environmental impact assessment report

- 27. (1) After publishing the notice of publication of the draft environmental impact assessment report pursuant to clauses 25 (3) (b) and (c), the proponent shall,
 - (a) complete the consultation and issues resolution process under section 26;
 - (b) update the draft environmental impact assessment report, including by adding,
 - (i) a description of the issues resolution process employed by the proponent in respect of any concerns raised by Indigenous communities and interested persons,
 - (ii) a description of the concerns raised by Indigenous communities and interested persons in the issues resolution process and of the outcome of the process, including what, if anything, the proponent did or will do in respect of the concerns raised, and
 - (iii) a description of any changes to the preferred alignment and preferred design as a result of addressing concerns raised during consultation under section 26; and
 - (c) publish the final environmental impact assessment report on the Project website.
- (2) The proponent shall ensure that all of the persons and Indigenous communities to whom a copy of the notice under clause 25 (3)
- (a) is given are notified of the publication of the final environmental impact assessment report and are provided with access to a copy of it.

Bradford Bypass Project statement of completion

- 28. (1) The proponent shall provide a statement of completion of the Bradford Bypass Project assessment process to the Director of the Ministry's Environmental Assessment Branch after meeting the requirements in section 27.
- (2) The statement of completion of the Bradford Bypass Project assessment process shall indicate that the proponent intends to proceed with the Bradford Bypass Project in accordance with the final environmental impact assessment report.
- (3) The proponent shall post the statement of completion on the Project website.
- (4) Subject to subsection 29 (17), if the proponent proceeds with the Bradford Bypass Project, it shall proceed in accordance with the final environmental impact assessment report.

PROJECT CHANGES

Project changes

29. (1) If, after providing a statement of completion of the early works assessment process or the Bradford Bypass Project assessment process, the proponent wishes to make a change to the early works or the Bradford Bypass Project that is inconsistent with the final early works report or the final environmental impact assessment report, the proponent shall prepare an addendum to the applicable report that contains the following information:

- and although a the common and a common and a
 - 1. A description of the change.
 - 2. The reasons for the change.
 - 3. Identification of the area within the updated technically preferred route to be studied for the purposes of assessing the change.
 - 4. The assessment and comparison of at least two potential alternative options to implement the change within the area of study, and a selection of a preferred option to implement the change.
 - 5. The proponent's assessment and evaluation of any impacts that the preferred alternative might have on the environment.
 - 6. A description of any measures proposed by the proponent for mitigating any negative impacts that the preferred alternative might have on the environment.
 - 7. A description of the means the proponent proposes to use to monitor and verify the effectiveness of the mitigation measures proposed under paragraph 6, including a plan to make the results of the monitoring and verification available on the Project website.
 - 8. A statement of whether the proponent is of the opinion that the change is a significant change to the early works or the Bradford Bypass Project, as applicable, and the reasons for the opinion, taking into account the results of paragraphs 4 to 7.
 - 9. A consultation record, including,
 - i. a description of the consultations carried out with Indigenous communities, in accordance with the early works Indigenous Consultation Plan prepared under section 4 or the Indigenous Consultation Plan prepared under section 15, as applicable, and with other interested persons,
 - ii. a list of the Indigenous communities and interested persons who participated in the consultations,
 - iii. summaries of the comments submitted by Indigenous communities and interested persons,
 - iv. a summary of discussions that the proponent had with Indigenous communities, and copies of all written comments submitted by Indigenous communities,
 - v. a description of what the proponent did to respond to concerns expressed by Indigenous communities and interested persons, and
 - vi. any commitments made by the proponent to Indigenous communities and interested persons in respect of the Bradford Bypass Project.
- (2) The addendum described in subsection (1) is not required for a change that is required to comply with another Act, a regulation made under another Act, or an order, permit, approval or other instrument issued under another Act.
- (3) If the proponent is of the opinion that a change described in an addendum prepared under subsection (1) is not a significant change to the early works or the Bradford Bypass Project, the proponent shall publish the addendum on the Project website.
- (4) If the proponent is of the opinion that a change described in an addendum prepared under subsection (1) is a significant change to the early works or the Bradford Bypass Project, the proponent shall prepare a notice of addendum in accordance with subsection (5).
- (5) The notice of addendum shall contain the following:
 - 1. A description of the change.
 - 2. The reasons for the change.
 - 3. A map showing the location of the change.
 - 4. Information as to where and how members of the public may examine the addendum to the final early works report or the final environmental impact assessment report and obtain copies.
 - 5. Information on how members of the public and Indigenous communities can provide comments to the proponent in respect of the addendum to the final early works report or final environmental impact assessment report.
- (6) The proponent shall distribute the notice of addendum by,
 - (a) giving a copy of the notice to,
 - (i) every assessed owner of land within the updated study area and within 500 metres of the borders of the updated study area,
 - (ii) the Director of the Ministry's Environmental Assessment Branch,
 - (iii) every Indigenous community that is identified in the early works Indigenous Consultation Plan prepared under section 4 or the Indigenous Consultation Plan prepared under section 15, as applicable,
 - (iv) the Director of the Ministry's Central Region Office,
 - (v) the Town of Bradford West Gwillimbury,
 - (vi) the Town of East Gwillimbury,
 - (vii) the Town of Newmarket,
 - (viii) the County of Simcoe,
 - (ix) the Township of King,
 - (x) the Regional Municipality of York,
 - (xi) any other municipalities considered appropriate by the proponent,
 - (xii) any provincial and federal ministries and agencies with policies or legislative requirements applicable to the Bradford Bypass Project, and

- (xiii) any other person who, in the opinion of the proponent, may be interested in the Bradford Bypass Project;
- (b) publishing the notice in a manner that, in the opinion of the proponent, will promptly bring the notice to the attention of interested persons in the site of the change to the early works or Bradford Bypass Project; and
- (c) publishing the notice on the Project website.
- (7) The proponent shall provide all of the persons to whom a copy of the notice under clause (6) (a) is given an opportunity to participate in the consultation.
- (8) Subject to subsections (9) and (10), the proponent shall consult with Indigenous communities and interested persons in the way the proponent considers appropriate.
- (9) The proponent shall ensure that all of the persons and Indigenous communities to whom a copy of the notice under clause (6) (a) is given are provided with access to a copy of the addendum to the final early works report or final environmental impact assessment report.
- (10) The proponent shall establish an issues resolution process to attempt to resolve any concerns raised by Indigenous communities or interested persons related to the change.
- (11) After publishing the notice of addendum to the final early works report or to the final environmental impact assessment report pursuant to clauses (6) (b) and (c), the proponent shall,
 - (a) complete the consultation and issues resolution under this section;
 - (b) update the addendum to the final early works report or final environmental impact assessment report, including by adding,
 - (i) a description of the issues resolution process employed by the proponent in respect of any concerns raised by Indigenous communities and interested persons,
 - (ii) a description of the concerns raised by Indigenous communities and interested persons in the issues resolution process and of the outcome of the process, including what, if anything, the proponent did or will do in respect of the concerns raised, and
 - (iii) a description of any changes to the early works or Bradford Bypass Project as a result of addressing concerns raised through consultation under this section; and
 - (c) publish the addendum to the final early works report or final environmental impact assessment report or, as updated in accordance with clause (b), on the Project website.
- (12) The proponent shall ensure that all of the persons and Indigenous communities to whom a copy of the notice under clause (6) (a) is given are notified of the updated addendum to the final early works report or final environmental impact assessment report or that is published.
- (13) After completing the requirements in subsection (11), the proponent shall provide a statement of completion of the change process to the Director of the Ministry's Environmental Assessment Branch.
- (14) The statement of completion of the change process shall indicate that the proponent intends to proceed with the change to the early works or Bradford Bypass Project in accordance with the updated addendum to the final early works report or final environmental impact assessment report or that is published pursuant to clause (11) (c).
- (15) The proponent shall post the statement of completion on the Project website.
- (16) The proponent shall not, after providing a statement of completion pursuant to section 13 or 28, make a change to the early works or Bradford Bypass Project that is inconsistent with the final early works report or final environmental impact assessment report referred to in that statement, unless,
 - (a) the change is required to comply with another Act, a regulation made under another Act, or an order, permit, approval or other instrument issued under another Act; or
 - (b) the proponent has prepared an addendum to the final early works report or final environmental impact assessment report in accordance with subsection (1) that describes the change and,
 - (i) the proponent is of the opinion that the change is not a significant change to the early works or Bradford Bypass Project, or
 - (ii) the proponent is of the opinion that the change is a significant change to the early works or the Bradford Bypass Project and complies with the requirements in subsections (4) to (15).
- (17) If the proponent proceeds with a change to the early works or the Bradford Bypass Project, it shall do so in accordance with the updated addendum to the final early works report or final environmental impact assessment report in respect of the change that is published pursuant to subsection (3) or clause (11) (c), as applicable.
- 30. Omitted (provides for coming into force of provisions of this Regulation).

ABOUT
What is CanLII
Board of Directors
Contact and Feedback

INFORMATION Terms of Use Privacy Policy

Primary Law Databases

TOOLS RSS Feeds APIs

Lexbox

HELP
Frequently Asked Questions
Search Help

Reflex Citator



Appendix **B**

Existing Hydrologic Model – Peak Flows at Pour Point (for peak flow comparison)

Summary of Hydrologic Modelling Parameters Existing Drainage Conditions - Existing Culverts and Pour Points

VO Model ID	Catchment ID	Culvert ID	Hydrograph Classification	Total Drainage Area (ha)	IA* (mm)	Weighted Runoff Coeff.	Modified CN Value (CN*)	CN*III	Time to ¹ Peak, T _P (hr)	TIMP %	XIMP%
207	BWG-Sewer (Line 8 at Yonge St)	n/a	STANDHYD	89.51	1.50	0.90	79	90	- (117)	99.72%	7.8%
102	C10-A-5	n/a	NASHYD	23.94	16.20		61		0.70	_	-
104	C10-C-2	n/a	NASHYD	535.05	5.00	0.21	62	79	5.29	-	
105	C10-C-3	n/a	NASHYD	13.71	5.00	0.53	79	91	0.29	_	
107	C10-D-1	n/a	NASHYD	42.92	5.00	0.54	79	91	0.40	_	-
106	C11-A-1	n/a	NASHYD	83.25	5.00	0.25	61	78	2.03	_	-
1061	C11-B-1	n/a	NASHYD	10.80	10.00	0.20	70		0.37	-	-
1111	C11-B-2	n/a	NASHYD	6.70	14.00		64		0.20	_	-
111	C13-A-1	n/a	NASHYD	89.88	5.00	0.55	79	91	0.82	-	-
113	C14-A-1	n/a	NASHYD	53.66	5.00	0.48	77	89	0.53	-	
116	C15-A-1	n/a	NASHYD	18.80	5.00	0.46	65	09	0.35	-	-
1171	C15-B-1	n/a	NASHYD	3.20	5.00		70		0.10	-	-
117	C16-A-2	n/a	NASHYD	13.20	5.00	0.34	71	85	0.46	-	-
122	C17-B-1	n/a	NASHYD	68.03	5.00	0.47	79	91	1.83	-	-
121	C18-G-1	n/a	NASHYD	61.39	5.00	0.26	62	80	1.90	-	-
123	C21-A-1	n/a	NASHYD	90.79	5.00	0.29	62	80	2.84	-	-
124	C22-A-1	n/a	NASHYD	162.88	5.00	0.47	79	90	2.34	-	-
125	C22-B-1	n/a	NASHYD	35.90	5.00	0.56	86	95	0.89	-	-
126	C23-A-1	n/a	NASHYD	251.54	5.00	0.36	71	85	0.75	-	-
127	C23-A-2	n/a	NASHYD	49.37	5.00	0.50	84	94	0.75	-	-
1251	C23-B-1	n/a	NASHYD	7.60	5.00		70		0.12	-	_
1271	C23-B-2	n/a	NASHYD	29.00	5.00		68		0.63	-	-
128	C24-A-1	n/a	NASHYD	39.54	5.00	0.35	72	87	0.68	-	-
130	C25-A-1	n/a	NASHYD	39.01	5.00	0.35	72	87	0.62	-	-
133	C25-C-1	n/a	STANDHYD	119.59	1.50	0.46	67	83	-	22%	2%
1351	C25-B-1	n/a	NASHYD	13.10	16.20		61		0.80	-	-
1352	C25-B-2	n/a	NASHYD	6.50	18.50		60		0.68		
137	C26-A-1	n/a	NASHYD	701.30	5.00	0.35	77	89	4.01	-	-
201	EX-CL-1	EX-CL-1	NASHYD	163.02	13.70		65		3.38	-	-
119	EX-CL-11	EX-CL-11	STANDHYD	2.06	1.50	0.76	71	86	-	75%	3%
118	EX-CL-13	EX-CL-13	NASHYD	37.96	5.00	0.38	72	87	0.65	-	-
120	EX-CL-14	EX-CL-14	STANDHYD	10.13	1.50	0.39	57	75	-	24%	1%
129	EX-CL-17	EX-CL-17	NASHYD	19.93	5.00	0.36	73	88	0.51	-	-
131	EX-CL-18	EX-CL-18	NASHYD	27.50	5.00	0.38	73	88	0.70	-	-
134	EX-CL-19	EX-CL-19	NASHYD	18.71	5.00	0.36	73	88	0.69	-	-
132	EX-CL-20	EX-CL-20	NASHYD	24.34	5.00	0.37	73	88	0.52	-	-
135	EX-CL-21	EX-CL-21	NASHYD	35.98	5.00	0.35	71	85	0.68	-	-
138	EX-CL-24	EX-CL-24	NASHYD	357.11	5.00	0.32	73	88	1.24	-	-
109	EX-CL-26	EX-CL-26	NASHYD	29.94	5.00	0.56	82	92	0.48	-	-
2021	EX-CL-26-South	EX-CL-26-South	NASHYD	15.42	5.00	0.62	86	95	0.50	-	-
1091	EX-CL-27	EX-CL-27	NASHYD	46.17	5.00	0.37	73	88	1.08	-	-
203	EX-CL-28	EX-CL-28	NASHYD	145.67	5.00	0.54	79	91	1.22	-	-
110	EX-CL-29	EX-CL-29	NASHYD	37.30	5.00	0.45	79	91	0.70	-	-
204	EX-CL-3	EX-CL-3	NASHYD	30.05	5.00	0.53	79	91	0.40	-	-
200	EX-CL-400-1	EX-CL-400-1	NASHYD	48.85	10.90		70		1.25	-	-
100	EX-CL-400-2	EX-CL-400-2	NASHYD	14.38	9.90		72		0.53	-	-
101	EX-CL-400-3	EX-CL-400-3	NASHYD	6.24	10.40		71		0.40	-	-
103	EX-CL-400-5	EX-CL-400-5	NASHYD	14.40	10.40		71		0.40	-	-
108	EX-CL-400-6	EX-CL-400-6	NASHYD	26.66	5.00	0.55	79	91	0.47	-	-
136	EX-CL-404-2	EX-CL-404-2	NASHYD	36.35	5.00	0.34	67	84	0.58	-	-
202	EX-CL-6	EX-CL-6	STANDHYD	12.71	1.50	0.66	67	83	-	51%	0%
115	EX-CL-8	EX-CL-8	NASHYD	18.78	16.20		61		0.50	-	-
114	EX-CL-9	EX-CL-9	STANDHYD	8.29	1.50	0.49	63	80	-	30%	2%
112	SWM Pond - Crossland Blvd	SWM Pond - Crossland Blvd	STANDHYD	59.34	1.50	0.82	75	88	-	80%	7%
205	SWM Pond - McKenzie Way	SWM Pond - McKenzie Way	STANDHYD	37.27	1.50	0.72	71	86	-	68%	6%
206	SWM Pond - Meadowview Drive	SWM Pond - Meadowiew Drive	STANDHYD	20.02	1.50	0.90	#DIV/0!	#DIV/0!	-	100%	8%

```
3
4
   V V I SSSSS U U A L (v 5.2.2003)
   6
  V V I SS U U AAAAA L
7
  8
  VV I SSSSS UUUUU A A LLLLL
9
  OOO TTTTT TTTTT H H Y Y M M OOO TM
10
  11
  12
   T H H H Y M OOO
13
14
  Developed and Distributed by Civica Infrastructure
15
  Copyright 2007 - 2019 Civica Infrastructure
16
  All rights reserved.
17
18
19
  ***** S U M M A R Y O U T P U T *****
20
21
22
  Input filename: C:\Program Files (x86)\Visual OTTHYMO
    5.2\V02\voin.dat
2.3
  Output filename:
    a8-4f8f-b926-47f111dfab14\scenari
24
  Summary filename:
    C:\Users\egom\AppData\Local\Civica\VH5\b2d85e16-498c-4e29-be5e-65c1b0654079\c2b0e1f2-1a
    a8-4f8f-b926-47f111dfab14\scenari
25
26
27
  DATE: 01-31-2023 TIME: 03:18:01
28
  USER:
29
30
31
32
  COMMENTS: __
33
34
  *************
3.5
  36
  37
38
39
  W/E COMMAND HYD ID DT AREA ' Qpeak Tpeak R.V. R.C. Qbase
  min · · · · ha · · · · · · · · mm · · · · cms · · · hrs · · · · mm · · · · · · cms
40
41
  START @ 0.00 hrs
42
   43
44
  READ STORM 6.0
45
  [ Ptot=124.80 mm ]
46
  fname :
     C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
     77d-bc3d-14b2c4
  remark:
47
     24hr_SCS_TypeII_100YR
48
49
   ** CALIB NASHYD 0100 1 5.0 14.38 1.17 12.42 61.78 0.50 0.000
50
   [CN=72.0]
51
  [N = 3.0:Tp 0.53]
52
5.3
  READ STORM 6.0
54
  [ Ptot=124.80 mm ]
55
  fname :
     C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
     77d-bc3d-14b2c4
56
  remark:
     24hr_SCS_TypeII_100YR
```

```
57
58
    ** CALIB NASHYD 0200 1 5.0 48.85 1.95 13.25 58.24 0.47 0.000
59
    [CN=70.0]
60
    [N = 3.0:Tp 1.25]
61
62
    CHANNEL[ 2: 0200] 0174 1 5.0 48.85 1.93 13.33 58.24 n/a 0.000
63
64
    READ STORM 6.0
65
    [ Ptot=124.80 mm ]
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
    remark:
67
       24hr_SCS_TypeII_100YR
68
69
    ** CALIB NASHYD 0201 1 5.0 163.02 2.52 15.92 49.79 0.40 0.000
70
    [CN=65.0]
71
    [N = 3.0:Tp 3.38]
72
73
    ADD [ 0100+ 0174] 0142 3 5.0 63.23 2.53 12.92 59.04 n/a 0.000
74
75
    ADD [ 0142+ 0201] 0142 1 5.0 226.25 3.82 13.92 52.38 n/a 0.000
76
77
    CHANNEL[ 2: 0142] 0144 1 5.0 226.25 3.82 14.08 52.38 n/a 0.000
78
79
    READ STORM 6.0
80
    [ Ptot=124.80 mm ]
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
    remark:
       24hr_SCS_TypeII_100YR
83
84
    ** CALIB NASHYD 0101 1 5.0 6.24 0.60 12.25 59.98 0.48 0.000
85
    [CN=71.0]
86
    [N = 3.0:Tp 0.40]
87
88
    CHANNEL[ 2: 0101] 0175 1 5.0 6.24 0.50 12.50 59.94 n/a 0.000
89
90
    READ STORM 6.0
91
    [ Ptot=124.80 mm ]
    fname :
92
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
93
    remark:
       24hr_SCS_TypeII_100YR
94
95
    ** CALIB NASHYD 0103 1 5.0 40.51 1.38 13.67 59.99 0.48 0.000
96
    [CN=71.0]
97
    [N = 3.0:Tp 1.60]
98
99
    ADD [ 0103+ 0144] 0049 3 5.0 266.76 5.17 13.92 53.53 n/a 0.000
100
101
    ADD [ 0049+ 0175] 0049 1 5.0 273.00 5.29 13.75 53.68 n/a 0.000
102
103
    CHANNEL[ 2: 0049] 0176 1 5.0 273.00 5.29 13.75 53.68 n/a 0.000
104
105
    READ STORM 6.0
106
    [ Ptot=124.80 mm ]
107
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
108
    remark:
```

24hr_SCS_TypeII_100YR

```
109
    ** CALIB NASHYD 0102 1 5.0 23.94 1.08 12.67 43.52 0.35 0.000
110
    [CN=61.0]
111
112
    [N = 3.0:Tp 0.70]
113
114
    ADD [ 0102+ 0176] 0044 3 5.0 296.94 5.88 13.42 52.86 n/a 0.000
115
116
    READ STORM 6.0
117
    [ Ptot=124.80 mm ]
118
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
    remark:
119
       24hr_SCS_TypeII_100YR
120
    ** CALIB NASHYD 0104 1 5.0 535.05 6.11 18.17 52.10 0.42 0.000
121
    [CN=62.0]
122
    [N = 3.0:Tp 5.29]
123
124
125
    CHANNEL[ 2: 0104] 0177 1 5.0 535.05 6.11 18.17 52.10 n/a 0.000
126
127
    READ STORM 6.0
128
    [ Ptot=124.80 mm ]
129
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
130
    remark:
       24hr_SCS_TypeII_100YR
131
132
    ** CALIB NASHYD 0106 1 5.0 83.25 1.95 14.17 50.86 0.41 0.000
    [CN=61.0]
134
    [N = 3.0:Tp 2.03]
135
136
    CHANNEL[ 2: 0106] 0178 1 5.0 83.25 1.95 14.25 50.86 n/a 0.000
137
    READ STORM 6.0
138
139
    [ Ptot=124.80 mm ]
    fname :
140
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
141
       24hr_SCS_TypeII_100YR
142
143
    ** CALIB NASHYD 0107 1 5.0 42.92 5.35 12.25 76.61 0.61 0.000
144
    [CN=79.0]
145
    [N = 3.0:Tp 0.40]
146
147
    READ STORM 6.0
148
    [ Ptot=124.80 mm ]
149
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
150
    remark:
       24hr_SCS_TypeII_100YR
151
152
    ** CALIB NASHYD 0105 1 5.0 13.71 2.12 12.17 76.58 0.61 0.000
    [CN=79.0]
153
    [N = 3.0:Tp 0.29]
154
155
156
    ADD [ 0105+ 0107] 0037 3 5.0 56.63 7.31 12.25 76.60 n/a 0.000
157
158
    ADD [ 0037+ 0177] 0037 1 5.0 591.68 7.76 12.25 54.44 n/a 0.000
159
160
    ADD [ 0037+ 0178] 0037 3 5.0 674.93 8.18 12.25 54.00 n/a 0.000
```

```
162
    CHANNEL[ 2: 0037] 0179 1 5.0 674.93 7.99 12.33 54.00 n/a 0.000
163
164
    READ STORM 6.0
165
    [ Ptot=124.80 mm ]
166
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
167
    remark:
       24hr_SCS_TypeII_100YR
168
    ** CALIB NASHYD 0204 1 5.0 30.05 3.75 12.25 76.61 0.61 0.000
169
170
    [CN=79.0]
171
    [N = 3.0:Tp 0.40]
172
173
    ADD [ 0179+ 0204] 0153 3 5.0 704.98 11.65 12.25 54.96 n/a 0.000
174
175
    CHANNEL[ 2: 0153] 0405 1 5.0 704.98 9.09 12.58 54.96 n/a 0.000
176
177
    READ STORM 6.0
178
    [ Ptot=124.80 mm ]
179
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
180
    remark:
       24hr_SCS_TypeII_100YR
181
182
    ** CALIB NASHYD 0109 1 5.0 29.94 3.51 12.33 81.74 0.66 0.000
183
    [CN=82.0]
    [N = 3.0:Tp 0.48]
184
185
186
    CHANNEL[ 2: 0109] 0181 1 5.0 29.94 3.48 12.42 81.74 n/a 0.000
187
    READ STORM 6.0
188
    [ Ptot=124.80 mm ]
189
    fname :
190
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
191
    remark:
       24hr_SCS_TypeII_100YR
192
193
    ** CALIB NASHYD 0108 1 5.0 26.66 2.96 12.33 76.61 0.61 0.000
194
    [CN=79.0]
195
    [N = 3.0:Tp 0.47]
196
    CHANNEL[ 2: 0108] 0180 1 5.0 26.66 2.95 12.33 76.61 n/a 0.000
197
198
199
    READ STORM 6.0
200
    [ Ptot=124.80 mm ]
    fname :
201
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
202
    remark:
       24hr_SCS_TypeII_100YR
203
204
    ** CALIB NASHYD 2021 1 5.0 15.42 1.92 12.33 89.05 0.71 0.000
205
    [CN=86.0]
206
    [N = 3.0:Tp 0.50]
207
208
    ADD [ 0180+ 0181] 0036 3 5.0 56.60 6.42 12.42 79.32 n/a 0.000
209
210
    ADD [ 0036+ 2021] 0036 1 5.0 72.02 8.33 12.33 81.41 n/a 0.000
211
212
    CHANNEL[ 2: 0036] 0155 1 5.0 72.02 7.02 12.58 81.40 n/a 0.000
213
```

READ STORM 6.0

```
215
    [ Ptot=124.80 mm ]
    fname :
216
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
217
    remark:
       24hr_SCS_TypeII_100YR
2.18
219
    ** CALIB NASHYD 0203 1 5.0 145.67 7.91 13.17 76.61 0.61 0.000
220
    [CN=79.0]
221
    [N = 3.0:Tp 1.22]
222
223
    ADD [ 0155+ 0203] 0041 3 5.0 217.69 14.03 12.75 78.20 n/a 0.000
224
    ADD [ 0041+ 0405] 0041 1 5.0 922.67 22.89 12.67 60.44 n/a 0.000
225
226
    READ STORM 6.0
227
228
    [ Ptot=124.80 mm ]
229
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
230
    remark:
       24hr_SCS_TypeII_100YR
231
232
    ** CALIB NASHYD 1091 1 5.0 46.17 2.38 13.00 67.14 0.54 0.000
2.3.3
    [CN=73.0]
234
    [N = 3.0:Tp 1.08]
235
236
    READ STORM 6.0
    [ Ptot=124.80 mm ]
237
238
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
239
    remark:
       24hr_SCS_TypeII_100YR
240
241
    ** CALIB NASHYD 0110 1 5.0 37.30 3.09 12.58 76.61 0.61 0.000
242
    [CN=79.0]
243
    [N = 3.0:Tp 0.70]
244
245
    READ STORM 6.0
246
    [ Ptot=124.80 mm ]
    fname :
2.47
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
248
    remark:
       24hr_SCS_TypeII_100YR
249
250
    ** CALIB NASHYD 0111 1 5.0 89.88 6.60 12.75 76.61 0.61 0.000
251
    [CN=79.0]
252
    [N = 3.0:Tp 0.82]
253
254
    CHANNEL[ 2: 0111] 0182 1 5.0 89.88 6.59 12.75 76.61 n/a 0.000
255
    READ STORM 6.0
256
    [ Ptot=124.80 mm ]
257
258
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
259
    remark:
       24hr_SCS_TypeII_100YR
260
261
    ** CALIB NASHYD 0113 1 5.0 53.66 5.20 12.42 73.34 0.59 0.000
    [CN=77.0]
262
    [N = 3.0:Tp 0.53]
263
```

```
264
265
          CHANNEL[ 2: 0113] 0183 1 5.0 53.66 5.21 12.42 73.34 n/a 0.000
266
267
          ADD [ 0182+ 0183] 0184 3 5.0 143.54 11.26 12.58 75.39 n/a 0.000
268
269
          CHANNEL[ 2: 0184] 0185 1 5.0 143.54 11.11 12.67 75.39 n/a 0.000
270
271
          READ STORM 6.0
272
         [ Ptot=124.80 mm ]
273
          fname :
                C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
                 77d-bc3d-14b2c4
          remark:
2.74
                 24hr_SCS_TypeII_100YR
275
          * CALIB STANDHYD 0112 1 5.0 59.34 17.99 12.00 109.65 0.88 0.000
276
277
          [I%= 7.0:S%= 2.00]
2.78
          ** Reservoir
279
280
          OUTFLOW: 0501 1 5.0 59.34 7.89 12.25 109.65 n/a 0.000
281
282
          READ STORM 6.0
283
          [ Ptot=124.80 mm ]
284
          fname :
                 C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
                 77d-bc3d-14b2c4
285
          remark:
                 24hr_SCS_TypeII_100YR
286
287
          * CALIB STANDHYD 0202 1 5.0 12.71 3.08 12.00 83.03 0.67 0.000
288
          [I%= 0.0:S%= 2.00]
289
290
          ADD [ 0185+ 0202] 0046 3 5.0 156.25 11.53 12.67 76.01 n/a 0.000
291
292
          ADD [ 0046+ 0501] 0046 1 5.0 215.59 18.41 12.50 85.27 n/a 0.000
293
294
          READ STORM 6.0
295
          [ Ptot=124.80 mm ]
296
          fname :
                  \texttt{C:} \\ \textbf{Users} \\ \textbf{AppData} \\ \textbf{Local} \\ \textbf{Temp} \\ \textbf{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \textbf{15f69b2a-3c31-4bea-cbea-469d-8254-9051b6b5885e} \\ \textbf{15f69b2a-3c31-4bea-cbea-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660baa-660ba
                77d-bc3d-14b2c4
2.97
          remark:
                 24hr_SCS_TypeII_100YR
298
299
          * CALIB STANDHYD 0205 1 5.0 37.27 10.37 12.00 98.40 0.79 0.000
300
          [I%= 6.0:S%= 2.00]
301
302
          ** Reservoir
303
          OUTFLOW: 0502 1 5.0 37.27 9.16 12.08 97.68 n/a 0.000
304
305
         READ STORM 6.0
          [ Ptot=124.80 mm ]
306
307
          fname :
                 C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
                 77d-bc3d-14b2c4
308
          remark:
                 24hr_SCS_TypeII_100YR
309
310
          * CALIB NASHYD 0115 1 5.0 18.78 1.09 12.42 43.52 0.35 0.000
311
          [CN=61.0]
312
          [N = 3.0:Tp 0.50]
313
          CHANNEL[ 2: 0115] 0187 1 5.0 18.78 1.09 12.42 43.52 n/a 0.000
314
315
```

READ STORM 6.0

```
[ Ptot=124.80 mm ]
317
318
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
319
    remark:
       24hr_SCS_TypeII_100YR
320
321
    * CALIB NASHYD 0116 1 5.0 4.35 0.64 12.00 49.30 0.40 0.000
322
    [CN=65.0]
323
    [N = 3.0:Tp 0.15]
324
325
    ADD [ 0116+ 0187] 0013 3 5.0 23.13 1.31 12.17 44.60 n/a 0.000
326
    CHANNEL[ 2: 0013] 0188 1 5.0 23.13 1.32 12.17 44.60 n/a 0.000
327
328
    READ STORM 6.0
329
330
    [ Ptot=124.80 mm ]
331
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
332
    remark:
       24hr_SCS_TypeII_100YR
333
334
    * CALIB STANDHYD 0114 1 5.0 8.29 1.44 12.08 67.62 0.54 0.000
335
    [I%= 2.0:S%= 2.00]
336
337
    READ STORM 6.0
338
    [ Ptot=124.80 mm ]
339
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
340
    remark:
       24hr_SCS_TypeII_100YR
341
342
    * CALIB STANDHYD 0206 1 5.0 20.02 7.90 11.92 124.72 1.00 0.000
343
    [I%= 8.0:S%= 2.00]
344
345
    ** Reservoir
346
    OUTFLOW: 0503 1 5.0 20.02 4.11 12.08 124.65 n/a 0.000
347
348
    ADD [ 0114+ 0503] 0190 3 5.0 28.31 5.54 12.08 107.95 n/a 0.000
349
350
    CHANNEL[ 2: 0190] 0191 1 5.0 28.31 5.56 12.08 107.95 n/a 0.000
351
    READ STORM 6.0
352
353
    [ Ptot=124.80 mm ]
354
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
355
    remark:
       24hr_SCS_TypeII_100YR
356
357
    * CALIB STANDHYD 0207 1 5.0 89.51 29.21 12.00 124.53 1.00 0.000
358
    [I%= 7.8:S%= 2.00]
359
360
    ADD [ 0188+ 0191] 0192 3 5.0 51.44 6.82 12.08 79.47 n/a 0.000
361
362
    ADD [ 0192+ 0207] 0192 1 5.0 140.95 34.57 12.00 108.08 n/a 0.000
363
364
    CHANNEL[ 2: 0192] 0193 1 5.0 140.95 30.05 12.08 108.08 n/a 0.000
365
366
    READ STORM 6.0
367
    [ Ptot=124.80 mm ]
    fname :
368
```

C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4

```
77d-bc3d-14b2c4
369
    remark:
       24hr_SCS_TypeII_100YR
370
    ** CALIB NASHYD 0117 1 5.0 13.20 1.23 12.33 64.19 0.51 0.000
371
372
    [CN=71.0]
373
    [N = 3.0:Tp 0.46]
374
375
    CHANNEL[ 2: 0117] 0189 1 5.0 13.20 1.21 12.33 64.19 n/a 0.000
376
377
    READ STORM 6.0
    [ Ptot=124.80 mm ]
378
    fname :
379
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
380
    remark:
       381
382
    ** CALIB NASHYD 0118 1 5.0 37.96 2.80 12.50 65.66 0.53 0.000
383
    [CN=72.0]
384
    [N = 3.0:Tp 0.65]
385
386
    ADD [ 0118+ 0189] 0014 3 5.0 51.16 3.97 12.50 65.28 n/a 0.000
387
388
    ADD [ 0014+ 0193] 0014 1 5.0 192.11 32.53 12.08 96.68 n/a 0.000
389
    CHANNEL[ 2: 0014] 0160 1 5.0 192.11 31.69 12.17 96.68 n/a 0.000
390
391
392
    READ STORM 6.0
393
    [ Ptot=124.80 mm ]
394
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
395
    remark:
       24hr_SCS_TypeII_100YR
396
397
    * CALIB STANDHYD 0119 1 5.0 2.06 0.68 12.00 103.04 0.83 0.000
398
    [I%= 3.0:S%= 2.00]
399
400
    READ STORM 6.0
401
    [ Ptot=124.80 mm ]
402
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
403
    remark:
       24hr_SCS_TypeII_100YR
404
405
    * CALIB STANDHYD 0120 1 5.0 10.13 1.44 12.08 57.14 0.46 0.000
406
    [I%= 1.0:S%= 2.00]
407
408
    ADD [ 0119+ 0120] 0162 3 5.0 12.19 1.98 12.00 64.90 n/a 0.000
409
410
    ADD [ 0162+ 0160] 0162 1 5.0 204.30 33.27 12.17 94.79 n/a 0.000
411
412
    READ STORM 6.0
413
    [ Ptot=124.80 mm ]
    fname :
414
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
415
    remark:
       24hr_SCS_TypeII_100YR
416
417
    * CALIB NASHYD 0122 1 5.0 68.03 2.70 13.83 76.61 0.61 0.000
418
    [CN=79.0]
```

```
419
    [N = 3.0:Tp 1.83]
420
421
    READ STORM 6.0
422
    [ Ptot=124.80 mm ]
423
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
424
    remark:
       24hr_SCS_TypeII_100YR
425
    * CALIB NASHYD 0121 1 5.0 61.39 1.56 14.00 52.10 0.42 0.000
426
427
    [CN=62.0]
428
    [N = 3.0:Tp 1.90]
429
430
    CHANNEL[ 2: 0121] 0164 1 5.0 61.39 1.33 14.67 52.06 n/a 0.000
431
    ADD [ 0122+ 0164] 0163 3 5.0 129.42 3.93 14.08 64.97 n/a 0.000
432
433
434
    READ STORM 6.0
435
    [ Ptot=124.80 mm ]
436
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
437
    remark:
       24hr_SCS_TypeII_100YR
438
    * CALIB NASHYD 0123 1 5.0 90.79 1.69 15.17 52.10 0.42 0.000
439
440
    [CN=62.0]
441
    [N = 3.0:Tp 2.84]
442
443
    READ STORM 6.0
444
    [ Ptot=124.80 mm ]
445
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
446
    remark:
       24hr_SCS_TypeII_100YR
447
448
    * CALIB NASHYD 0124 1 5.0 162.88 5.33 14.42 76.61 0.61 0.000
449
    [CN=79.0]
450
    [N = 3.0:Tp 2.34]
451
    READ STORM 6.0
452
453
    [ Ptot=124.80 mm ]
454
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
455
    remark:
       24hr_SCS_TypeII_100YR
456
    * CALIB NASHYD 0125 1 5.0 35.90 2.92 12.75 89.06 0.71 0.000
457
458
    [CN=86.0]
459
    [N = 3.0:Tp 0.89]
460
    READ STORM 6.0
461
462
    [ Ptot=124.80 mm ]
    fname :
463
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
464
    remark:
       24hr_SCS_TypeII_100YR
465
466
    * CALIB NASHYD 0126 1 5.0 251.54 16.29 12.67 64.20 0.51 0.000
467
    [CN=71.0]
```

```
468
    [N = 3.0:Tp 0.75]
469
470
    CHANNEL[ 2: 0126] 0194 1 5.0 251.54 15.94 12.75 64.20 n/a 0.000
471
472
    READ STORM 6.0
473
    [ Ptot=124.80 mm ]
474
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
475
    remark:
       24hr_SCS_TypeII_100YR
476
477
    ** CALIB NASHYD 0127 1 5.0 49.37 4.36 12.58 85.33 0.68 0.000
478
    [CN=84.0]
479
    [N = 3.0:Tp 0.75]
480
481
    ADD [ 0127+ 0194] 0025 3 5.0 300.91 20.23 12.75 67.66 n/a 0.000
482
483
    READ STORM 6.0
484
    [ Ptot=124.80 mm ]
485
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
486
    remark:
       24hr_SCS_TypeII_100YR
487
488
    ** CALIB NASHYD 0128 1 5.0 39.54 2.83 12.58 65.66 0.53 0.000
489
    [CN=72.0]
490
    [N = 3.0:Tp 0.68]
491
492
    CHANNEL[ 2: 0128] 0195 1 5.0 39.54 2.81 12.67 65.66 n/a 0.000
493
    READ STORM 6.0
494
    [ Ptot=124.80 mm ]
495
    fname :
496
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
497
    remark:
       24hr_SCS_TypeII_100YR
498
499
    ** CALIB NASHYD 0129 1 5.0 19.93 1.80 12.42 67.14 0.54 0.000
500
    [CN=73.0]
501
    [N = 3.0:Tp 0.51]
502
503
    ADD [ 0129+ 0195] 0026 3 5.0 59.47 4.49 12.50 66.15 n/a 0.000
504
505
    READ STORM 6.0
506
    [ Ptot=124.80 mm ]
507
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
    remark:
508
       24hr_SCS_TypeII_100YR
509
510
    ** CALIB NASHYD 0130 1 5.0 39.01 2.99 12.50 65.66 0.53 0.000
511
    [CN=72.0]
512
    [N = 3.0:Tp 0.62]
513
514
    CHANNEL[ 2: 0130] 0196 1 5.0 39.01 2.97 12.58 65.66 n/a 0.000
515
516
    READ STORM 6.0
517
    [ Ptot=124.80 mm ]
    fname :
518
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
```

```
519
    remark:
       24hr_SCS_TypeII_100YR
520
521
    ** CALIB NASHYD 0131 1 5.0 27.50 1.97 12.58 67.14 0.54 0.000
522
    [CN=73.0]
523
    [N = 3.0:Tp 0.70]
524
525
    READ STORM 6.0
526
    [ Ptot=124.80 mm ]
527
       77d-bc3d-14b2c4
    remark:
528
       24hr_SCS_TypeII_100YR
529
530
    ** CALIB NASHYD 0134 1 5.0 18.71 1.36 12.58 67.14 0.54 0.000
5.31
    [CN=73.0]
532
    [N = 3.0:Tp 0.69]
533
534
    READ STORM 6.0
535
    [ Ptot=124.80 mm ]
536
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
537
    remark:
       24hr_SCS_TypeII_100YR
538
    ** CALIB NASHYD 0132 1 5.0 24.34 2.17 12.42 67.14 0.54 0.000
539
540
    [CN=73.0]
541
    [N = 3.0:Tp 0.52]
542
543
    CHANNEL[ 2: 0132] 0197 1 5.0 24.34 2.18 12.42 67.14 n/a 0.000
544
    READ STORM 6.0
545
546
    [ Ptot=124.80 mm ]
547
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
548
    remark:
       24hr_SCS_TypeII_100YR
549
    * CALIB STANDHYD 0133 1 5.0 119.59 18.76 12.08 69.56 0.56 0.000
550
551
    [I%= 2.0:S%= 2.00]
552
553
    CHANNEL[ 2: 0133] 0198 1 5.0 119.59 18.34 12.17 69.56 n/a 0.000
554
555
    ADD [ 0134+ 0197] 0170 3 5.0 43.05 3.48 12.50 67.14 n/a 0.000
556
    ADD [ 0170+ 0198] 0170 1 5.0 162.64 21.09 12.17 68.92 n/a 0.000
557
558
559
    CHANNEL[ 2: 0170] 0199 1 5.0 162.64 21.13 12.17 68.92 n/a 0.000
560
561
    ADD [ 0131+ 0196] 0027 3 5.0 66.51 4.94 12.58 66.27 n/a 0.000
562
563
    ADD [ 0027+ 0199] 0027 1 5.0 229.15 24.45 12.17 68.15 n/a 0.000
564
565
    READ STORM 6.0
566
    [ Ptot=124.80 mm ]
567
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
568
    remark:
       24hr_SCS_TypeII_100YR
```

```
570
    ** CALIB NASHYD 0135 1 5.0 35.98 2.51 12.58 64.20 0.51 0.000
571
    [CN=71.0]
572
    [N = 3.0:Tp 0.68]
573
574
    READ STORM 6.0
    [ Ptot=124.80 mm ]
575
576
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
577
    remark:
       24hr_SCS_TypeII_100YR
578
579
    ** CALIB NASHYD 0136 1 5.0 36.35 2.57 12.50 58.60 0.47 0.000
580
    [CN=67.0]
581
    [N = 3.0:Tp 0.58]
582
    CHANNEL[ 2: 0136] 0209 1 5.0 36.35 2.58 12.50 58.60 n/a 0.000
583
584
585
    READ STORM 6.0
586
    [ Ptot=124.80 mm ]
587
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
588
    remark:
       24hr_SCS_TypeII_100YR
589
590
    ** CALIB NASHYD 0137 1 5.0 701.30 14.32 16.42 73.34 0.59 0.000
591
    [CN=77.0]
592
    [N = 3.0:Tp 4.01]
593
594
    ADD [ 0137+ 0209] 0033 3 5.0 737.65 14.55 16.42 72.62 n/a 0.000
595
596
    CHANNEL[ 2: 0033] 0172 1 5.0 737.65 14.52 16.67 72.62 n/a 0.000
597
598
    READ STORM 6.0
599
    [ Ptot=124.80 mm ]
600
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
601
    remark:
       24hr_SCS_TypeII_100YR
602
603
    ** CALIB NASHYD 0138 1 5.0 357.11 16.57 13.17 67.14 0.54 0.000
604
    [CN=73.0]
605
    [N = 3.0:Tp 1.24]
606
607
    ADD [ 0138+ 0172] 0034 3 5.0 1094.76 23.87 13.50 70.83 n/a 0.000
608
609
    READ STORM 6.0
610
    [ Ptot=124.80 mm ]
611
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
       77d-bc3d-14b2c4
    remark:
612
       24hr_SCS_TypeII_100YR
613
614
    ** CALIB NASHYD 1061 1 5.0 10.80 1.08 12.25 58.91 0.47 0.000
615
    [CN=70.0]
616
    [N = 3.0:Tp 0.37]
617
618
    READ STORM 6.0
619
    [ Ptot=124.80 mm ]
620
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
```

77d-bc3d-14b2c4

```
621
          remark:
                 24hr_SCS_TypeII_100YR
622
623
          ** CALIB NASHYD 1111 1 5.0 6.70 0.81 12.08 48.30 0.39 0.000
624
          [CN=64.0]
625
          [N = 3.0:Tp 0.20]
626
62.7
         READ STORM 6.0
628
          [ Ptot=124.80 mm ]
629
          fname :
                C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
                77d-bc3d-14b2c4
630
          remark:
                 24hr_SCS_TypeII_100YR
631
632
          ** CALIB NASHYD 1271 1 5.0 29.00 1.99 12.50 59.96 0.48 0.000
          [CN=68.0]
633
634
          [N = 3.0:Tp 0.63]
635
636
          READ STORM 6.0
637
          [ Ptot=124.80 mm ]
638
          fname :
                C:\Users\geq0m\LambdappData\LambdaLocal\Lambdaem\Lambdaber0.5d3ab7ea-cbea-469d-8254-9051b6b5885e\Lambda5f69b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b2a-3c31-469b040-469b2a-3c31-46000-46000-46000-46000-46000-46000-46000-46000-46000-46000-46000-460
                77d-bc3d-14b2c4
639
          remark:
                24hr_SCS_TypeII_100YR
640
641
         ** CALIB NASHYD 1031 1 5.0 14.40 1.40 12.25 59.98 0.48 0.000
642
         [CN=71.0]
643
         [N = 3.0:Tp 0.40]
644
          READ STORM 6.0
645
          [ Ptot=124.80 mm ]
646
647
          fname :
                C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
                77d-bc3d-14b2c4
648
          remark:
                24hr_SCS_TypeII_100YR
649
          ** CALIB NASHYD 1172 1 5.0 3.20 0.68 12.00 61.13 0.49 0.000
650
651
         [CN=70.0]
652
          [N = 3.0:Tp 0.10]
653
          READ STORM 6.0
654
655
          [ Ptot=124.80 mm ]
          fname :
656
                77d-bc3d-14b2c4
657
          remark:
                24hr_SCS_TypeII_100YR
658
659
          ** CALIB NASHYD 1252 1 5.0 7.60 1.55 12.00 61.93 0.50 0.000
660
          [CN=70.0]
661
          [N = 3.0:Tp 0.12]
662
663
          READ STORM 6.0
664
          [ Ptot=124.80 mm ]
665
          fname :
                77d-bc3d-14b2c4
666
          remark:
                24hr_SCS_TypeII_100YR
```

```
** CALIB NASHYD 1353 1 5.0 13.10 0.53 12.75 43.52 0.35 0.000
668
669
   [CN=61.0]
670
   [N = 3.0:Tp 0.80]
671
   READ STORM 6.0
672
673
   [ Ptot=124.80 mm ]
674
   fname :
      77d-bc3d-14b2c4
675
   remark:
      24hr_SCS_TypeII_100YR
676
677
   ** CALIB NASHYD 1354 1 5.0 6.50 0.28 12.58 40.99 0.33 0.000
678
    [CN=60.0]
679
   [N = 3.0:Tp 0.68]
680
   READ STORM 6.0
681
   [ Ptot=124.80 mm ]
682
683
   fname :
      C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\15f69b2a-3c31-4
      77d-bc3d-14b2c4
684
   remark:
      24hr_SCS_TypeII_100YR
685
686
    ** CALIB NASHYD 1151 1 5.0 18.78 1.63 12.25 50.85 0.41 0.000
687
   [CN=61.0]
688
   [N = 3.0:Tp 0.35]
689
690
   ______
   _____
691
692
693
   V V I SSSSS U U A L (v 5.2.2003)
694
    V V V I SS U U U A A A L
    V V I SS U U AAAAA L
695
696
    V V I SS U U A A L
697
    VV I SSSSS UUUUU A A LLLLL
698
699
   OOO TTTTT TTTTT H H Y Y M M OOO TM
700
   701
   702
   703
   Developed and Distributed by Civica Infrastructure
704
   Copyright 2007 - 2019 Civica Infrastructure
705
   All rights reserved.
706
707
708
   ***** S U M M A R Y O U T P U T *****
709
710
711
   Input filename: C:\Program Files (x86)\Visual OTTHYMO
     5.2\VO2\voin.dat
712
   Output filename:
     C:\Users\egom\AppData\Local\Civica\VH5\b2d85e16-498c-4e29-be5e-65c1b0654079\d3b2c117-9b
     19-4e16-82f5-668fb89c6780\scenari
713
   Summary filename:
     C:\Users\egom\AppData\Local\Civica\VH5\b2d85e16-498c-4e29-be5e-65c1b0654079\d3b2c117-9b
     19-4e16-82f5-668fb89c6780\scenari
714
715
716
   DATE: 01-31-2023 TIME: 03:18:06
717
718
719
720
721
   COMMENTS:
```

```
723
724
        ***************
725
         ** SIMULATION : 24hr_SCSII_10YR
         726
727
728
        W/E COMMAND HYD ID DT AREA ' Qpeak Tpeak R.V. R.C. Qbase
729
        with the contraction of the cont
730
731
        START @ 0.00 hrs
        732
        READ STORM 6.0
733
734
        [ Ptot= 88.80 mm ]
        fname :
735
              068-a429-ce6bda
736
         remark:
              24hr_SCS_TypeII_10YR
737
738
        ** CALIB NASHYD 0100 1 5.0 14.38 0.65 12.42 35.03 0.39 0.000
739
        [CN=72.0]
740
        [N = 3.0:Tp 0.53]
741
742
         READ STORM 6.0
743
         [ Ptot= 88.80 mm ]
744
         fname :
              C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
              068-a429-ce6bda
745
        remark:
              24hr_SCS_TypeII_10YR
746
747
        ** CALIB NASHYD 0200 1 5.0 48.85 1.06 13.25 32.49 0.37 0.000
748
        [CN=70.0]
749
        [N = 3.0:Tp 1.25]
750
751
         CHANNEL[ 2: 0200] 0174 1 5.0 48.85 1.05 13.42 32.49 n/a 0.000
752
753
        READ STORM 6.0
754
         [ Ptot= 88.80 mm ]
755
        fname :
              068-a429-ce6bda
756
        remark:
              24hr_SCS_TypeII_10YR
757
758
         ** CALIB NASHYD 0201 1 5.0 163.02 1.31 16.00 26.62 0.30 0.000
759
        [CN=65.0]
760
         [N = 3.0:Tp 3.38]
761
762
        ADD [ 0100+ 0174] 0142 3 5.0 63.23 1.36 13.00 33.07 n/a 0.000
763
764
         ADD [ 0142+ 0201] 0142 1 5.0 226.25 2.03 14.00 28.42 n/a 0.000
765
766
        CHANNEL[ 2: 0142] 0144 1 5.0 226.25 2.02 14.17 28.42 n/a 0.000
767
768
         READ STORM 6.0
769
         [ Ptot= 88.80 mm ]
770
         fname :
              068-a429-ce6bda
771
        remark:
              24hr_SCS_TypeII_10YR
772
773
         ** CALIB NASHYD 0101 1 5.0 6.24 0.33 12.25 33.74 0.38 0.000
774
         [CN=71.0]
775
         [N = 3.0:Tp 0.40]
```

```
776
777
                   CHANNEL[ 2: 0101] 0175 1 5.0 6.24 0.26 12.50 33.69 n/a 0.000
778
779
                   READ STORM 6.0
780
                   [ Ptot= 88.80 mm ]
781
                  fname :
                               C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                              068-a429-ce6bda
782
                  remark:
                               24hr_SCS_TypeII_10YR
783
                   ** CALIB NASHYD 0103 1 5.0 40.51 0.76 13.67 33.74 0.38 0.000
784
785
                   [CN=71.0]
786
                   [N = 3.0:Tp 1.60]
787
                  ADD [ 0103+ 0144] 0049 3 5.0 266.76 2.76 13.92 29.23 n/a 0.000
788
789
790
                  ADD [ 0049+ 0175] 0049 1 5.0 273.00 2.84 13.83 29.33 n/a 0.000
791
792
                  CHANNEL[ 2: 0049] 0176 1 5.0 273.00 2.84 13.83 29.33 n/a 0.000
793
794
                  READ STORM 6.0
795
                  [ Ptot= 88.80 mm ]
796
                   fname :
                               C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                              068-a429-ce6bda
797
                  remark:
                               24hr_SCS_TypeII_10YR
798
799
                  ** CALIB NASHYD 0102 1 5.0 23.94 0.53 12.67 22.43 0.25 0.000
800
                  [CN=61.0]
801
                  [N = 3.0:Tp 0.70]
802
803
                   ADD [ 0102+ 0176] 0044 3 5.0 296.94 3.11 13.58 28.78 n/a 0.000
804
805
                   READ STORM 6.0
806
                   [ Ptot= 88.80 mm ]
807
                  fname :
                               \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b6885e} \\ \texttt{a8f9958d-fc0b-4b6b6885e} \\ \texttt{a8f9958d-fc0b-4b6b68696e} \\ \texttt{a8f9958d-fc0b-4b6b68696e} \\ \texttt{a8f9958d-fc0b-4b68696e} \\ \texttt{a8f9958d-fc0b-4b68696e
                              068-a429-ce6bda
 808
                  remark:
                              24hr_SCS_TypeII_10YR
809
                   ** CALIB NASHYD 0104 1 5.0 535.05 3.41 18.25 29.32 0.33 0.000
810
811
                   [CN=62.0]
812
                   [N = 3.0:Tp 5.29]
813
814
                  CHANNEL[ 2: 0104] 0177 1 5.0 535.05 3.41 18.33 29.32 n/a 0.000
815
816
                  READ STORM 6.0
817
                  [ Ptot= 88.80 mm ]
                               \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4bea} \\ \texttt{basebase} \\ \texttt{a8f9958d-fc0b-4bea} 
                              068-a429-ce6bda
                  remark:
 819
                               24hr_SCS_TypeII_10YR
820
821
                   ** CALIB NASHYD 0106 1 5.0 83.25 1.08 14.17 28.52 0.32 0.000
822
                  [CN=61.0]
823
                  [N = 3.0:Tp 2.03]
824
825
                   CHANNEL[ 2: 0106] 0178 1 5.0 83.25 1.08 14.25 28.52 n/a 0.000
826
827
                    READ STORM 6.0
 828
                   [ Ptot= 88.80 mm ]
```

```
829
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
       068-a429-ce6bda
830
    remark:
       24hr_SCS_TypeII_10YR
831
    ** CALIB NASHYD 0107 1 5.0 42.92 3.22 12.25 46.40 0.52 0.000
832
833
    [CN=79.0]
834
    [N = 3.0:Tp 0.40]
835
836
    READ STORM 6.0
    [ Ptot= 88.80 mm ]
837
    fname :
838
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
       068-a429-ce6bda
839
    remark:
       24hr_SCS_TypeII_10YR
840
841
    ** CALIB NASHYD 0105 1 5.0 13.71 1.28 12.17 46.39 0.52 0.000
842
    [CN=79.0]
843
    [N = 3.0:Tp 0.29]
844
845
    ADD [ 0105+ 0107] 0037 3 5.0 56.63 4.40 12.25 46.40 n/a 0.000
846
847
    ADD [ 0037+ 0177] 0037 1 5.0 591.68 4.61 12.25 30.96 n/a 0.000
848
849
    ADD [ 0037+ 0178] 0037 3 5.0 674.93 4.81 12.25 30.66 n/a 0.000
850
851
    CHANNEL[ 2: 0037] 0179 1 5.0 674.93 4.69 12.33 30.66 n/a 0.000
852
853
    READ STORM 6.0
    [ Ptot= 88.80 mm ]
854
855
    fname :
       068-a429-ce6bda
856
    remark:
       24hr_SCS_TypeII_10YR
857
858
    ** CALIB NASHYD 0204 1 5.0 30.05 2.25 12.25 46.40 0.52 0.000
859
    [CN=79.0]
    [N = 3.0:Tp 0.40]
860
861
862
    ADD [ 0179+ 0204] 0153 3 5.0 704.98 6.89 12.33 31.33 n/a 0.000
863
    CHANNEL[ 2: 0153] 0405 1 5.0 704.98 5.12 12.67 31.33 n/a 0.000
864
865
866
    READ STORM 6.0
867
    [ Ptot= 88.80 mm ]
868
    fname :
       068-a429-ce6bda
869
    remark:
       24hr_SCS_TypeII_10YR
870
871
    ** CALIB NASHYD 0109 1 5.0 29.94 2.15 12.33 50.32 0.57 0.000
872
    [CN=82.0]
873
    [N = 3.0:Tp 0.48]
874
875
    CHANNEL[ 2: 0109] 0181 1 5.0 29.94 2.13 12.42 50.31 n/a 0.000
876
877
    READ STORM 6.0
878
    [ Ptot= 88.80 mm ]
879
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
       068-a429-ce6bda
```

```
880
               remark:
                          24hr_SCS_TypeII_10YR
881
882
                ** CALIB NASHYD 0108 1 5.0 26.66 1.78 12.33 46.40 0.52 0.000
883
               [CN=79.0]
884
               [N = 3.0:Tp 0.47]
885
886
               CHANNEL[ 2: 0108] 0180 1 5.0 26.66 1.77 12.42 46.40 n/a 0.000
887
888
               READ STORM 6.0
889
               [ Ptot= 88.80 mm ]
               fname :
890
                           \texttt{C:} \\ \textbf{Users} \\ \textbf{a} \\ \textbf{b} \\ \textbf{a} \\ \textbf{b} \\ \textbf{a} \\ \textbf{b} \\ \textbf{a} \\ \textbf{f} \\ \textbf{o} \\ \textbf{b} \\ \textbf{d} \\ \textbf{f} \\ \textbf{c} \\ \textbf{o} \\ \textbf{b} \\ \textbf{d} \\ \textbf{f} \\ \textbf{o} \\ \textbf{b} \\ \textbf{d} \\ \textbf{f} \\ \textbf{o} \\ \textbf{f} \\ \textbf{o} \\ \textbf{b} \\ \textbf{d} \\ \textbf{f} \\ \textbf{o} \\ \textbf{o} \\ \textbf{f} \\ \textbf{o} \\ \textbf
                          068-a429-ce6bda
891
                remark:
                          24hr_SCS_TypeII_10YR
892
893
               ** CALIB NASHYD 2021 1 5.0 15.42 1.21 12.33 56.11 0.63 0.000
894
               [CN=86.0]
895
               [N = 3.0:Tp 0.50]
896
                ADD [ 0180+ 0181] 0036 3 5.0 56.60 3.90 12.42 48.47 n/a 0.000
897
898
899
                ADD [ 0036+ 2021] 0036 1 5.0 72.02 5.10 12.42 50.11 n/a 0.000
900
               CHANNEL[ 2: 0036] 0155 1 5.0 72.02 4.19 12.67 50.10 n/a 0.000
901
902
903
               READ STORM 6.0
              [ Ptot= 88.80 mm ]
904
905
                         C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                          068-a429-ce6bda
906
               remark:
                          24hr_SCS_TypeII_10YR
907
908
                ** CALIB NASHYD 0203 1 5.0 145.67 4.74 13.17 46.41 0.52 0.000
909
               [CN=79.0]
910
               [N = 3.0:Tp 1.22]
911
912
                ADD [ 0155+ 0203] 0041 3 5.0 217.69 8.42 12.83 47.63 n/a 0.000
913
914
               ADD [ 0041+ 0405] 0041 1 5.0 922.67 13.42 12.75 35.17 n/a 0.000
915
916
                READ STORM 6.0
917
                [ Ptot= 88.80 mm ]
918
                fname :
                          068-a429-ce6bda
919
               remark:
                          24hr_SCS_TypeII_10YR
920
921
               ** CALIB NASHYD 1091 1 5.0 46.17 1.38 13.00 39.51 0.44 0.000
922
               [CN=73.0]
923
               [N = 3.0:Tp 1.08]
924
925
               READ STORM 6.0
               [ Ptot= 88.80 mm ]
926
927
                fname :
                          C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                          068-a429-ce6bda
928
               remark:
                          24hr_SCS_TypeII_10YR
929
                ** CALIB NASHYD 0110 1 5.0 37.30 1.86 12.58 46.41 0.52 0.000
930
```

```
931
                       [CN=79.0]
932
                        [N = 3.0:Tp 0.70]
933
                         READ STORM 6.0
934
 935
                         [ Ptot= 88.80 mm ]
936
                        fname :
                                         \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b6885e} \\ \texttt{a8f9958d-fc0b-4b6b6885e} \\ \texttt{a8f9958d-fc0b-4b6b6869} \\ \texttt{a8f9958d-fc0b-4b6b6869} \\ \texttt{a8f9958d-fc0b-4b6b6869} \\ \texttt{a8f9958d-fc0b-4b6869} \\ \texttt{a8f99
                                        068-a429-ce6bda
 937
                       remark:
                                         24hr_SCS_TypeII_10YR
938
                         ** CALIB NASHYD 0111 1 5.0 89.88 3.96 12.75 46.41 0.52 0.000
939
940
                         [CN=79.0]
941
                         [N = 3.0:Tp 0.82]
942
 943
                        CHANNEL[ 2: 0111] 0182 1 5.0 89.88 3.96 12.75 46.41 n/a 0.000
944
945
                        READ STORM 6.0
946
                        [ Ptot= 88.80 mm ]
947
                        fname :
                                        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                                        068-a429-ce6bda
948
                        remark:
                                         24hr_SCS_TypeII_10YR
 949
950
                         ** CALIB NASHYD 0113 1 5.0 53.66 3.09 12.42 43.98 0.50 0.000
951
                        [CN=77.0]
952
                        [N = 3.0:Tp 0.53]
953
954
                        CHANNEL[ 2: 0113] 0183 1 5.0 53.66 3.09 12.42 43.98 n/a 0.000
955
956
                        ADD [ 0182+ 0183] 0184 3 5.0 143.54 6.72 12.58 45.50 n/a 0.000
957
958
                         CHANNEL[ 2: 0184] 0185 1 5.0 143.54 6.63 12.67 45.50 n/a 0.000
959
 960
                         READ STORM 6.0
961
                         [ Ptot= 88.80 mm ]
962
                        fname :
                                         \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b586e} \\ \texttt{a8f9958d-fc0b-4b6b686e} \\ \texttt{a8f9958d-fc0b-4b6b686e} \\ \texttt{a8f9958d-fc0b-4b686e} \\ \texttt{a8f9958d-fc0b-4b686e} \\ \texttt{a8f9958d-fc0b-4b686e} \\ \texttt{a8f9958d-fc0b-4b686e} \\ \texttt{a8f9958d-fc0b686e} \\ \texttt{a8f9958d-fc0b68
                                        068-a429-ce6bda
 963
                        remark:
                                        24hr_SCS_TypeII_10YR
964
965
                         * CALIB STANDHYD 0112 1 5.0 59.34 10.82 12.08 74.38 0.84 0.000
966
                          [I%= 7.0:S%= 2.00]
 967
968
                        ** Reservoir
969
                        OUTFLOW: 0501 1 5.0 59.34 5.81 12.33 74.38 n/a 0.000
970
 971
                        READ STORM 6.0
 972
                        [ Ptot= 88.80 mm ]
 973
                                         \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b685e} \\ \texttt{a8f9
                                         068-a429-ce6bda
 974
                         remark:
                                         24hr_SCS_TypeII_10YR
 975
 976
                         * CALIB STANDHYD 0202 1 5.0 12.71 1.69 12.08 51.92 0.58 0.000
 977
                        [I%= 0.0:S%= 2.00]
 978
979
                         ADD [ 0185+ 0202] 0046 3 5.0 156.25 6.97 12.67 46.02 n/a 0.000
 980
981
                         ADD [ 0046+ 0501] 0046 1 5.0 215.59 12.28 12.50 53.83 n/a 0.000
 982
                         READ STORM 6.0
 983
```

```
984
                                [ Ptot= 88.80 mm ]
     985
                                fname :
                                                     C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                                                     068-a429-ce6bda
      986
                                  remark:
                                                     24hr_SCS_TypeII_10YR
    987
                                * CALIB STANDHYD 0205 1 5.0 37.27 5.89 12.08 64.54 0.73 0.000
     988
     989
                                [I%= 6.0:S%= 2.00]
     990
     991
                                  ** Reservoir
                                OUTFLOW: 0502 1 5.0 37.27 5.41 12.17 63.82 n/a 0.000
     992
     993
     994
                                   READ STORM 6.0
     995
                                   [ Ptot= 88.80 mm ]
                                  fname :
    996
                                                     \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b6885e} \\ \texttt{a8f9958d-fc0b-4b6b6885e} \\ \texttt{a8f9958d-fc0b-4b6b6869} \\ \texttt{a8f9958d-fc0b-4b6b6869} \\ \texttt{a8f9958d-fc0b-4b6b6869} \\ \texttt{a8f9958d-fc0b-4b6869} \\ \texttt{a8f99
                                                    068-a429-ce6bda
     997
                                  remark:
                                                     24hr_SCS_TypeII_10YR
    998
    999
                                  * CALIB NASHYD 0115 1 5.0 18.78 0.53 12.42 22.43 0.25 0.000
 1000
                                   [CN=61.0]
1001
                                   [N = 3.0:Tp 0.50]
1002
                                  CHANNEL[ 2: 0115] 0187 1 5.0 18.78 0.54 12.42 22.43 n/a 0.000
1003
1004
1005
                                READ STORM 6.0
1006
                               [ Ptot= 88.80 mm ]
1007
                                                    C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                                                    068-a429-ce6bda
1008
                                  remark:
                                                      24hr_SCS_TypeII_10YR
1009
1010
                                  * CALIB NASHYD 0116 1 5.0 4.35 0.33 12.00 26.29 0.30 0.000
1011
                                  [CN=65.0]
1012
                                  [N = 3.0:Tp 0.15]
1013
1014
                                  ADD [ 0116+ 0187] 0013 3 5.0 23.13 0.64 12.25 23.15 n/a 0.000
1015
1016
                                  CHANNEL[ 2: 0013] 0188 1 5.0 23.13 0.65 12.17 23.15 n/a 0.000
1017
1018
                                   READ STORM 6.0
1019
                                   [ Ptot= 88.80 mm ]
1020
                                   fname :
                                                     \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b6885e} \\ \texttt{a8f9958d-fc0b-4b6b6885e} \\ \texttt{a8f9958d-fc0b-4b6b6869} \\ \texttt{a8f9958d-fc0b-4b6b6869} \\ \texttt{a8f9958d-fc0b-4b6b6869} \\ \texttt{a8f9958d-fc0b-4b6869} \\ \texttt{a8f99
                                                    068-a429-ce6bda
1021
                                 remark:
                                                     24hr_SCS_TypeII_10YR
1022
1023
                                  * CALIB STANDHYD 0114 1 5.0 8.29 0.80 12.08 40.58 0.46 0.000
1024
                                 [I%= 2.0:S%= 2.00]
1025
                                   READ STORM 6.0
1026
1027
                                   [ Ptot= 88.80 mm ]
                                  fname :
1028
                                                      \texttt{C:} \\ \textbf{Users} \\ \textbf{a} \\ \textbf{b} \\ \textbf{a} \\ \textbf{b} \\ \textbf{a} \\ \textbf{b} \\ \textbf{a} \\ \textbf{f} \\ \textbf{9} \\ \textbf{5} \\ \textbf{d} \\ \textbf{a} \\ \textbf{f} \\ \textbf{9} \\ \textbf{5} \\ \textbf{d} \\ \textbf{a} \\ \textbf{f} \\ \textbf{9} \\ \textbf{5} \\ \textbf{d} \\ \textbf{a} \\ \textbf{f} \\ \textbf{9} \\ \textbf{5} \\ \textbf{d} \\ \textbf{a} \\ \textbf{f} \\ \textbf{9} \\ \textbf{5} \\ \textbf{d} \\ \textbf{a} \\ \textbf{f} \\ \textbf{9} \\ \textbf{5} \\ \textbf{d} \\ \textbf{d} \\ \textbf{f} \\ \textbf{c} \\ \textbf{0} \\ \textbf{b} \\ \textbf{d} \\ \textbf{f} \\ \textbf{o} \\ \textbf{b} \\ \textbf{d} \\ \textbf{f} \\ \textbf{o} \\ \textbf{b} \\ \textbf{d} \\ \textbf{f} \\ \textbf{o} \\ \textbf{f} \\ \textbf{o} \\ \textbf{b} \\ \textbf{d} \\ \textbf{f} \\ \textbf{o} \\ \textbf{o} \\ \textbf{f} \\ \textbf{o} \\ \textbf{o} \\ \textbf{f} \\ \textbf{o} \\ \textbf
                                                    068-a429-ce6bda
1029
                                  remark:
                                                     24hr_SCS_TypeII_10YR
1030
                                   * CALIB STANDHYD 0206 1 5.0 20.02 5.27 12.00 88.72 1.00 0.000
1031
1032
                                  [I%= 8.0:S%= 2.00]
```

```
1033
                    ** Reservoir
1034
                     OUTFLOW: 0503 1 5.0 20.02 2.12 12.17 88.65 n/a 0.000
1035
1036
1037
                     ADD [ 0114+ 0503] 0190 3 5.0 28.31 2.85 12.17 74.57 n/a 0.000
1038
1039
                    CHANNEL[ 2: 0190] 0191 1 5.0 28.31 2.82 12.17 74.57 n/a 0.000
1040
1041
                    READ STORM 6.0
1042
                    [ Ptot= 88.80 mm ]
1043
                                C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                                068-a429-ce6bda
                     remark:
1044
                                24hr_SCS_TypeII_10YR
1045
1046
                    * CALIB STANDHYD 0207 1 5.0 89.51 18.35 12.08 88.53 1.00 0.000
1047
                    [I%= 7.8:S%= 2.00]
1048
1049
                     ADD [ 0188+ 0191] 0192 3 5.0 51.44 3.47 12.17 51.45 n/a 0.000
1050
1051
                     ADD [ 0192+ 0207] 0192 1 5.0 140.95 21.41 12.08 75.00 n/a 0.000
1052
1053
                     CHANNEL[ 2: 0192] 0193 1 5.0 140.95 19.42 12.17 75.00 n/a 0.000
1054
1055
                    READ STORM 6.0
1056
                    [ Ptot= 88.80 mm ]
1057
                   fname :
                                C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                                068-a429-ce6bda
1058
                  remark:
                                24hr_SCS_TypeII_10YR
1059
1060
                     ** CALIB NASHYD 0117 1 5.0 13.20 0.71 12.33 37.44 0.42 0.000
1061
                     [CN=71.0]
1062
                     [N = 3.0:Tp 0.46]
1063
1064
                    CHANNEL[ 2: 0117] 0189 1 5.0 13.20 0.70 12.42 37.44 n/a 0.000
1065
1066
                    READ STORM 6.0
1067
                    [ Ptot= 88.80 mm ]
1068
                    fname :
                                \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4bea} \\ \texttt{a8f9958d-fc0b-4b
                               068-a429-ce6bda
1069
                     remark:
                                24hr_SCS_TypeII_10YR
1070
1071
                     ** CALIB NASHYD 0118 1 5.0 37.96 1.62 12.58 38.46 0.43 0.000
1072
                    [CN=72.0]
1073
                    [N = 3.0:Tp 0.65]
1074
1075
                     ADD [ 0118+ 0189] 0014 3 5.0 51.16 2.29 12.50 38.20 n/a 0.000
1076
1077
                     ADD [ 0014+ 0193] 0014 1 5.0 192.11 21.15 12.17 65.20 n/a 0.000
1078
1079
                     CHANNEL[ 2: 0014] 0160 1 5.0 192.11 20.65 12.25 65.20 n/a 0.000
1080
1081
                    READ STORM 6.0
1082
                    [ Ptot= 88.80 mm ]
1083
                    fname :
                                 \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b685e} \\ \texttt{a8f9
                                068-a429-ce6bda
1084
                    remark:
                                24hr_SCS_TypeII_10YR
```

```
1086
                    * CALIB STANDHYD 0119 1 5.0 2.06 0.44 12.00 68.48 0.77 0.000
1087
                    [I%= 3.0:S%= 2.00]
1088
                    READ STORM 6.0
1089
1090
                    [ Ptot= 88.80 mm ]
1091
                   fname :
                                C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                                068-a429-ce6bda
1092
                   remark:
                                24hr_SCS_TypeII_10YR
1093
                     * CALIB STANDHYD 0120 1 5.0 10.13 0.77 12.08 33.27 0.37 0.000
1094
1095
                    [I%= 1.0:S%= 2.00]
1096
1097
                    ADD [ 0119+ 0120] 0162 3 5.0 12.19 1.13 12.08 39.22 n/a 0.000
1098
                    ADD [ 0162+ 0160] 0162 1 5.0 204.30 21.34 12.25 63.65 n/a 0.000
1099
1100
1101
                    READ STORM 6.0
1102
                    [ Ptot= 88.80 mm ]
1103
                    fname :
                                 \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b6885e} \\ \texttt{a8f9958d-fc0b-4b6b6885e} \\ \texttt{a8f9958d-fc0b-4b6b68696e} \\ \texttt{a8f9958d-fc0b-4b6b68696e} \\ \texttt{a8f9958d-fc0b-4b68696e} \\ \texttt{a8f9958d-fc0b-4b68696e
                               068-a429-ce6bda
1104
                    remark:
                                24hr_SCS_TypeII_10YR
1105
                    * CALIB NASHYD 0122 1 5.0 68.03 1.62 13.92 46.41 0.52 0.000
1106
1107
                   [CN=79.0]
                   [N = 3.0:Tp 1.83]
1108
1109
1110
                  READ STORM 6.0
1111
                    [ Ptot= 88.80 mm ]
1112
                    fname :
                                068-a429-ce6bda
1113
                    remark:
                                24hr_SCS_TypeII_10YR
1114
1115
                    * CALIB NASHYD 0121 1 5.0 61.39 0.86 14.08 29.32 0.33 0.000
1116
                   [CN=62.0]
1117
                    [N = 3.0:Tp 1.90]
1118
1119
                     CHANNEL[ 2: 0121] 0164 1 5.0 61.39 0.71 14.75 29.29 n/a 0.000
1120
                     ADD [ 0122+ 0164] 0163 3 5.0 129.42 2.26 14.17 38.29 n/a 0.000
1121
1122
1123
                   READ STORM 6.0
1124
                   [ Ptot= 88.80 mm ]
                   fname :
1125
                                 \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b69d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b69d-8254-9051b6b586} \\ \texttt{a8f9958d-fc0b-4b69d-8254-9051b6} \\ \texttt{a8f99
                                068-a429-ce6bda
1126
                   remark:
                                24hr_SCS_TypeII_10YR
1127
1128
                     * CALIB NASHYD 0123 1 5.0 90.79 0.94 15.17 29.32 0.33 0.000
1129
                    [CN=62.0]
1130
                    [N = 3.0:Tp 2.84]
1131
                   READ STORM 6.0
1132
1133
                    [ Ptot= 88.80 mm ]
1134
                    fname :
                                C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                                068-a429-ce6bda
1135
                    remark:
```

```
1136
1137
             * CALIB NASHYD 0124 1 5.0 162.88 3.20 14.50 46.41 0.52 0.000
1138
             [CN=79.0]
1139
             [N = 3.0:Tp 2.34]
1140
1141
            READ STORM 6.0
1142
            [ Ptot= 88.80 mm ]
1143
           fname :
                    C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                    068-a429-ce6bda
1144
            remark:
                    24hr_SCS_TypeII_10YR
1145
1146
             * CALIB NASHYD 0125 1 5.0 35.90 1.84 12.75 56.11 0.63 0.000
             [CN=86.0]
1147
1148
             [N = 3.0:Tp 0.89]
1149
1150
            READ STORM 6.0
1151
             [ Ptot= 88.80 mm ]
1152
            fname :
                    C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                    068-a429-ce6bda
1153
             remark:
                    24hr_SCS_TypeII_10YR
1154
            * CALIB NASHYD 0126 1 5.0 251.54 9.37 12.67 37.44 0.42 0.000
1155
1156
            [CN=71.0]
1157
             [N = 3.0:Tp 0.75]
1158
1159
             CHANNEL[ 2: 0126] 0194 1 5.0 251.54 9.20 12.75 37.44 n/a 0.000
1160
             READ STORM 6.0
1161
             [ Ptot= 88.80 mm ]
1162
             fname :
1163
                    C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                    068-a429-ce6bda
1164
             remark:
                    24hr_SCS_TypeII_10YR
1165
             ** CALIB NASHYD 0127 1 5.0 49.37 2.71 12.67 53.13 0.60 0.000
1166
1167
            [CN=84.0]
1168
             [N = 3.0:Tp 0.75]
1169
1170
             ADD [ 0127+ 0194] 0025 3 5.0 300.91 11.87 12.75 40.01 n/a 0.000
1171
1172
            READ STORM 6.0
1173
            [ Ptot= 88.80 mm ]
1174
            fname :
                     \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b685e} 
                    068-a429-ce6bda
1175
            remark:
                    24hr_SCS_TypeII_10YR
1176
1177
             ** CALIB NASHYD 0128 1 5.0 39.54 1.63 12.58 38.46 0.43 0.000
1178
             [CN=72.0]
1179
             [N = 3.0:Tp 0.68]
1180
1181
             CHANNEL[ 2: 0128] 0195 1 5.0 39.54 1.62 12.67 38.46 n/a 0.000
1182
1183
             READ STORM 6.0
1184
             [ Ptot= 88.80 mm ]
1185
             fname :
                    C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
```

068-a429-ce6bda

```
1186
                           remark:
                                             24hr_SCS_TypeII_10YR
 1187
 1188
                             ** CALIB NASHYD 0129 1 5.0 19.93 1.05 12.42 39.51 0.44 0.000
 1189
                            [CN=73.0]
1190
                             [N = 3.0:Tp 0.51]
1191
1192
                            ADD [ 0129+ 0195] 0026 3 5.0 59.47 2.59 12.50 38.81 n/a 0.000
1193
1194
                            READ STORM 6.0
1195
                            [ Ptot= 88.80 mm ]
1196
                            fname :
                                             068-a429-ce6bda
 1197
                              remark:
                                             24hr_SCS_TypeII_10YR
1198
1199
                           ** CALIB NASHYD 0130 1 5.0 39.01 1.73 12.50 38.46 0.43 0.000
1200
                           [CN=72.0]
1201
                             [N = 3.0:Tp 0.62]
1202
                             CHANNEL[ 2: 0130] 0196 1 5.0 39.01 1.72 12.58 38.46 n/a 0.000
1203
1204
1205
                              READ STORM 6.0
 1206
                             [ Ptot= 88.80 mm ]
                            fname :
 1207
                                              \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b685e} \\ \texttt{a8f9
                                            068-a429-ce6bda
1208
                           remark:
                                             24hr_SCS_TypeII_10YR
1209
1210
                             ** CALIB NASHYD 0131 1 5.0 27.50 1.14 12.58 39.51 0.44 0.000
1211
                              [CN=73.0]
1212
                             [N = 3.0:Tp 0.70]
1213
1214
                            READ STORM 6.0
1215
                             [ Ptot= 88.80 mm ]
1216
                             fname :
                                             \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4bea} \\ \texttt{basebase} \\ \texttt{a8f9958d-fc0b-4bea} 
                                            068-a429-ce6bda
1217
                            remark:
                                             24hr_SCS_TypeII_10YR
 1218
 1219
                             ** CALIB NASHYD 0134 1 5.0 18.71 0.79 12.58 39.51 0.44 0.000
 1220
                             [CN=73.0]
 1221
                             [N = 3.0:Tp 0.69]
 1222
1223
                         READ STORM 6.0
                         [ Ptot= 88.80 mm ]
1224
1225
                                              \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b685e} 
                                             068-a429-ce6bda
1226
                             remark:
                                             24hr_SCS_TypeII_10YR
 1227
 1228
                              ** CALIB NASHYD 0132 1 5.0 24.34 1.26 12.42 39.51 0.44 0.000
                             [CN=73.0]
1229
1230
                             [N = 3.0:Tp 0.52]
1231
1232
                             CHANNEL[ 2: 0132] 0197 1 5.0 24.34 1.26 12.42 39.51 n/a 0.000
1233
1234
                             READ STORM 6.0
1235
                              [ Ptot= 88.80 mm ]
```

fname :

```
C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
        068-a429-ce6bda
1237
     remark:
        24hr_SCS_TypeII_10YR
1238
1239
     * CALIB STANDHYD 0133 1 5.0 119.59 9.81 12.17 41.94 0.47 0.000
1240
     [I%= 2.0:S%= 2.00]
1241
1242
     CHANNEL[ 2: 0133] 0198 1 5.0 119.59 9.73 12.17 41.94 n/a 0.000
1243
1244
     ADD [ 0134+ 0197] 0170 3 5.0 43.05 2.02 12.50 39.51 n/a 0.000
1245
1246
     ADD [ 0170+ 0198] 0170 1 5.0 162.64 11.30 12.17 41.29 n/a 0.000
1247
1248
     CHANNEL[ 2: 0170] 0199 1 5.0 162.64 11.34 12.25 41.29 n/a 0.000
1249
     ADD [ 0131+ 0196] 0027 3 5.0 66.51 2.86 12.58 38.89 n/a 0.000
1250
1251
1252
     ADD [ 0027+ 0199] 0027 1 5.0 229.15 13.56 12.25 40.60 n/a 0.000
1253
1254
     READ STORM 6.0
1255
     [ Ptot= 88.80 mm ]
1256
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
        068-a429-ce6bda
1257
     remark:
        24hr_SCS_TypeII_10YR
1258
    * CALIB NASHYD 0135 1 5.0 35.98 1.44 12.58 37.44 0.42 0.000
1259
1260
    [CN=71.0]
1261
     [N = 3.0:Tp 0.68]
1262
     READ STORM 6.0
1263
     [ Ptot= 88.80 mm ]
1264
     fname :
1265
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
        068-a429-ce6bda
1266
     remark:
        24hr_SCS_TypeII_10YR
1267
1268
     * CALIB NASHYD 0136 1 5.0 36.35 1.45 12.50 33.61 0.38 0.000
1269
     [CN=67.0]
1270
     [N = 3.0:Tp 0.58]
1271
1272
     CHANNEL[ 2: 0136] 0209 1 5.0 36.35 1.46 12.50 33.61 n/a 0.000
1273
1274
     READ STORM 6.0
1275
     [ Ptot= 88.80 mm ]
1276
    fname :
        068-a429-ce6bda
1277
    remark:
        24hr_SCS_TypeII_10YR
1278
1279
     * CALIB NASHYD 0137 1 5.0 701.30 8.51 16.50 43.98 0.50 0.000
1280
     [CN=77.0]
1281
     [N = 3.0:Tp 4.01]
1282
1283
     ADD [ 0137+ 0209] 0033 3 5.0 737.65 8.64 16.50 43.47 n/a 0.000
1284
1285
     CHANNEL[ 2: 0033] 0172 1 5.0 737.65 8.62 16.75 43.47 n/a 0.000
1286
1287
     READ STORM 6.0
1288
     [ Ptot= 88.80 mm ]
     fname :
```

```
C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                                               068-a429-ce6bda
 1290
                              remark:
                                               24hr_SCS_TypeII_10YR
 1291
 1292
                              ** CALIB NASHYD 0138 1 5.0 357.11 9.62 13.25 39.51 0.44 0.000
1293
                             [CN=73.0]
1294
                              [N = 3.0:Tp 1.24]
1295
                              ADD [ 0138+ 0172] 0034 3 5.0 1094.76 13.86 13.58 42.18 n/a 0.000
1296
1297
                              READ STORM 6.0
1298
1299
                               [ Ptot= 88.80 mm ]
                               fname :
 1300
                                               C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                                               068-a429-ce6bda
 1301
                              remark:
                                               24hr_SCS_TypeII_10YR
1302
1303
                              ** CALIB NASHYD 1061 1 5.0 10.80 0.60 12.25 33.08 0.37 0.000
1304
                             [CN=70.0]
1305
                              [N = 3.0:Tp 0.37]
1306
1307
                               READ STORM 6.0
 1308
                              [ Ptot= 88.80 mm ]
                             fname :
 1309
                                               \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6866e} \\ \texttt{a8f9958d-fc0b-4b686e} \\ \texttt{a8f9958d-fc0b686e} \\ \texttt
                                              068-a429-ce6bda
 1310
                             remark:
                                               24hr_SCS_TypeII_10YR
1311
1312
                              ** CALIB NASHYD 1111 1 5.0 6.70 0.42 12.08 25.65 0.29 0.000
1313
                               [CN=64.0]
1314
                              [N = 3.0:Tp 0.20]
 1315
 1316
                             READ STORM 6.0
 1317
                              [ Ptot= 88.80 mm ]
1318
                              fname :
                                               \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6866e} \\ \texttt{a8f9958d-fc0b-4b686e} \\ \texttt{a8f9958d-fc0b686e} \\ \texttt
                                              068-a429-ce6bda
 1319
                             remark:
                                               24hr_SCS_TypeII_10YR
 1320
 1321
                               ** CALIB NASHYD 1271 1 5.0 29.00 1.13 12.50 34.54 0.39 0.000
 1322
                              [CN=68.0]
 1323
                              [N = 3.0:Tp 0.63]
 1324
 1325
                          READ STORM 6.0
                           [ Ptot= 88.80 mm ]
1326
 1327
                                                \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b685e} 
                                               068-a429-ce6bda
1328
                              remark:
                                                24hr_SCS_TypeII_10YR
1329
 1330
                               ** CALIB NASHYD 1031 1 5.0 14.40 0.77 12.25 33.74 0.38 0.000
1331
                              [CN=71.0]
1332
                              [N = 3.0:Tp 0.40]
1333
1334
                              READ STORM 6.0
1335
                              [ Ptot= 88.80 mm ]
                              fname :
 1336
                                                C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                                               068-a429-ce6bda
```

```
1337
             remark:
                     24hr_SCS_TypeII_10YR
1338
1339
              ** CALIB NASHYD 1172 1 5.0 3.20 0.39 12.00 35.50 0.40 0.000
1340
              [CN=70.0]
1341
             [N = 3.0:Tp 0.10]
1342
1343
             READ STORM 6.0
1344
             [ Ptot= 88.80 mm ]
1345
             fname :
                     C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                     068-a429-ce6bda
1346
              remark:
                      24hr_SCS_TypeII_10YR
1347
1348
              ** CALIB NASHYD 1252 1 5.0 7.60 0.90 12.00 35.96 0.40 0.000
1349
             [CN=70.0]
1350
              [N = 3.0:Tp 0.12]
1351
1352
              READ STORM 6.0
1353
              [ Ptot= 88.80 mm ]
1354
              fname :
                     068-a429-ce6bda
1355
              remark:
                     24hr_SCS_TypeII_10YR
1356
             ** CALIB NASHYD 1353 1 5.0 13.10 0.26 12.75 22.43 0.25 0.000
1357
1358
             [CN=61.0]
1359
             [N = 3.0:Tp 0.80]
1360
              READ STORM 6.0
1361
              [ Ptot= 88.80 mm ]
1362
              fname :
1363
                     C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\a8f9958d-fc0b-4
                     068-a429-ce6bda
1364
              remark:
                     24hr_SCS_TypeII_10YR
1365
1366
              ** CALIB NASHYD 1354 1 5.0 6.50 0.13 12.67 20.62 0.23 0.000
1367
             [CN=60.0]
1368
              [N = 3.0:Tp 0.68]
1369
              READ STORM 6.0
1370
1371
              [ Ptot= 88.80 mm ]
1372
              fname :
                      \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{a8f9958d-fc0b-4b6b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b6b685e} \\ \texttt{a8f9958d-fc0b-4b685e} 
                     068-a429-ce6bda
1373
             remark:
                     24hr_SCS_TypeII_10YR
1374
              ** CALIB NASHYD 1151 1 5.0 18.78 0.90 12.25 28.52 0.32 0.000
1375
1376
              [CN=61.0]
1377
              [N = 3.0:Tp 0.35]
1378
1379
              FINISH
1380
1381
              ______
              ______
1382
1383
1384
```

```
1386
    V V I SSSSS U U A L (v 5.2.2003)
1387
    V V I SS U U A A L
1388
    V V I SS U U AAAAA L
1389
    V V I SS U U A A L
1390
    VV I SSSSS UUUUU A A LLLLL
1391
1392
    OOO TTTTT TTTTT H Y Y M M OOO TM
    1393
    1394
1395
    Developed and Distributed by Civica Infrastructure
1396
1397
    Copyright 2007 - 2019 Civica Infrastructure
1398
    All rights reserved.
1399
1400
1401
    ***** S U M M A R Y O U T P U T *****
1402
1403
1404
    Input filename: C:\Program Files (x86)\Visual OTTHYMO
      5.2\V02\voin.dat
1405
    Output filename:
      C:\Users\eqom\AppData\Local\Civica\VH5\b2d85e16-498c-4e29-be5e-65c1b0654079\c2f1bfbd-f7
      2d-4577-9c47-0d9b296be163\scenari
1406
    Summary filename:
      C:\Users\egom\AppData\Local\Civica\VH5\b2d85e16-498c-4e29-be5e-65c1b0654079\c2f1bfbd-f7
      2d-4577-9c47-0d9b296be163\scenari
1407
1408
1409
    DATE: 01-31-2023 TIME: 03:18:03
1410
    USER:
1411
1412
1413
1414
    COMMENTS: ____
1415
1416
    ***************
1417
    ** SIMULATION : 24hr_SCSII_25YR **
1418
    1419
1420
1421
    W/E COMMAND HYD ID DT AREA ' Qpeak Tpeak R.V. R.C. Qbase
    min · · · · ha · · · · · · · · · mm · · · · · cms · · · hrs · · · · mm · · · · · · · cms
1422
1423
1424
    START @ 0.00 hrs
1425
    READ STORM 6.0
1426
1427
    [ Ptot=103.20 mm ]
    fname :
1428
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
1429
    remark:
       24hr_SCS_TypeII_25YR
1430
    ** CALIB NASHYD 0100 1 5.0 14.38 0.85 12.42 45.32 0.44 0.000
1431
1432
    [CN=72.0]
1433
    [N = 3.0:Tp 0.53]
1434
    READ STORM 6.0
1435
1436
    [ Ptot=103.20 mm ]
    fname :
1437
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
1438
    remark:
       24hr_SCS_TypeII_25YR
1439
    ** CALIB NASHYD 0200 1 5.0 48.85 1.40 13.25 42.35 0.41 0.000
1440
    [CN=70.0]
1441
```

```
[N = 3.0:Tp 1.25]
1442
1443
     CHANNEL[ 2: 0200] 0174 1 5.0 48.85 1.39 13.42 42.35 n/a 0.000
1444
1445
1446
    READ STORM 6.0
1447
    [ Ptot=103.20 mm ]
1448
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
1449
    remark:
       24hr_SCS_TypeII_25YR
1450
     ** CALIB NASHYD 0201 1 5.0 163.02 1.77 16.00 35.40 0.34 0.000
1451
1452
     [CN=65.0]
1453
    [N = 3.0:Tp 3.38]
1454
    ADD [ 0100+ 0174] 0142 3 5.0 63.23 1.81 13.00 43.03 n/a 0.000
1455
1456
1457
     ADD [ 0142+ 0201] 0142 1 5.0 226.25 2.71 13.92 37.53 n/a 0.000
1458
1459
     CHANNEL[ 2: 0142] 0144 1 5.0 226.25 2.70 14.08 37.53 n/a 0.000
1460
     READ STORM 6.0
1461
1462
     [ Ptot=103.20 mm ]
1463
     fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
1464
    remark:
       1465
1466
    ** CALIB NASHYD 0101 1 5.0 6.24 0.44 12.25 43.81 0.42 0.000
1467
    [CN=71.0]
1468
    [N = 3.0:Tp 0.40]
1469
     CHANNEL[ 2: 0101] 0175 1 5.0 6.24 0.36 12.50 43.76 n/a 0.000
1470
1471
1472
    READ STORM 6.0
1473
    [ Ptot=103.20 mm ]
1474
    fname :
       5e2-aa65-2efe04
1475
    remark:
       24hr_SCS_TypeII_25YR
1476
     ** CALIB NASHYD 0103 1 5.0 40.51 1.00 13.67 43.82 0.42 0.000
1477
1478
    [CN=71.0]
1479
     [N = 3.0:Tp 1.60]
1480
1481
    ADD [ 0103+ 0144] 0049 3 5.0 266.76 3.68 13.92 38.49 n/a 0.000
1482
1483
    ADD [ 0049+ 0175] 0049 1 5.0 273.00 3.77 13.83 38.61 n/a 0.000
1484
1485
    CHANNEL[ 2: 0049] 0176 1 5.0 273.00 3.77 13.83 38.61 n/a 0.000
1486
1487
     READ STORM 6.0
     [ Ptot=103.20 mm ]
1488
1489
     fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
    remark:
1490
       24hr_SCS_TypeII_25YR
1491
1492
    ** CALIB NASHYD 0102 1 5.0 23.94 0.73 12.67 30.35 0.29 0.000
1493
     [CN=61.0]
1494
     [N = 3.0:Tp 0.70]
```

```
1495
     ADD [ 0102+ 0176] 0044 3 5.0 296.94 4.16 13.50 37.94 n/a 0.000
1496
1497
1498
     READ STORM 6.0
1499
     [ Ptot=103.20 mm ]
1500
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1.501
     remark:
        24hr_SCS_TypeII_25YR
1502
1503
     ** CALIB NASHYD 0104 1 5.0 535.05 4.44 18.25 37.98 0.37 0.000
1504
     [CN=62.0]
1505
     [N = 3.0:Tp 5.29]
1506
     CHANNEL[ 2: 0104] 0177 1 5.0 535.05 4.44 18.25 37.98 n/a 0.000
1507
1508
1509
     READ STORM 6.0
1510
     [ Ptot=103.20 mm ]
1511
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1512
     remark:
        24hr_SCS_TypeII_25YR
1513
     ** CALIB NASHYD 0106 1 5.0 83.25 1.41 14.17 37.01 0.36 0.000
1514
1515
     [CN=61.0]
1516
     [N = 3.0:Tp 2.03]
1517
1518
     CHANNEL[ 2: 0106] 0178 1 5.0 83.25 1.41 14.25 37.01 n/a 0.000
1519
1520
     READ STORM 6.0
     [ Ptot=103.20 mm ]
1521
1522
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1523
     remark:
        1524
1525
     ** CALIB NASHYD 0107 1 5.0 42.92 4.05 12.25 58.18 0.56 0.000
1526
     [CN=79.0]
1527
     [N = 3.0:Tp 0.40]
1528
1529
     READ STORM 6.0
1530
     [ Ptot=103.20 mm ]
1531
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1532
     remark:
        24hr_SCS_TypeII_25YR
1533
1534
     ** CALIB NASHYD 0105 1 5.0 13.71 1.61 12.17 58.17 0.56 0.000
1535
     [CN=79.0]
1536
     [N = 3.0:Tp 0.29]
1537
1538
     ADD [ 0105+ 0107] 0037 3 5.0 56.63 5.54 12.25 58.18 n/a 0.000
1539
1540
     ADD [ 0037+ 0177] 0037 1 5.0 591.68 5.83 12.25 39.92 n/a 0.000
1541
1542
     ADD [ 0037+ 0178] 0037 3 5.0 674.93 6.11 12.25 39.56 n/a 0.000
1543
1544
     CHANNEL[ 2: 0037] 0179 1 5.0 674.93 5.96 12.33 39.56 n/a 0.000
1545
1546
     READ STORM 6.0
1547
     [ Ptot=103.20 mm ]
```

```
1548
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1549
     remark:
        24hr_SCS_TypeII_25YR
1550
     ** CALIB NASHYD 0204 1 5.0 30.05 2.84 12.25 58.18 0.56 0.000
1551
1552
     [CN=79.0]
1553
     [N = 3.0:Tp 0.40]
1554
1555
     ADD [ 0179+ 0204] 0153 3 5.0 704.98 8.73 12.33 40.35 n/a 0.000
1556
1557
     CHANNEL[ 2: 0153] 0405 1 5.0 704.98 6.65 12.58 40.35 n/a 0.000
1558
1559
     READ STORM 6.0
1560
     [ Ptot=103.20 mm ]
1561
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1562
     remark:
        24hr_SCS_TypeII_25YR
1563
1564
     ** CALIB NASHYD 0109 1 5.0 29.94 2.69 12.33 62.63 0.61 0.000
1565
     [CN=82.0]
1566
     [N = 3.0:Tp 0.48]
1567
1568
     CHANNEL[ 2: 0109] 0181 1 5.0 29.94 2.66 12.42 62.63 n/a 0.000
1569
1570
    READ STORM 6.0
1571
     [ Ptot=103.20 mm ]
1572
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1573
     remark:
        24hr_SCS_TypeII_25YR
1574
1575
     ** CALIB NASHYD 0108 1 5.0 26.66 2.24 12.33 58.19 0.56 0.000
1576
     [CN=79.0]
1577
     [N = 3.0:Tp 0.47]
1578
1579
     CHANNEL[ 2: 0108] 0180 1 5.0 26.66 2.23 12.33 58.19 n/a 0.000
1580
     READ STORM 6.0
1581
1582
     [ Ptot=103.20 mm ]
     fname :
1583
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1584
     remark:
        24hr_SCS_TypeII_25YR
1585
     ** CALIB NASHYD 2021 1 5.0 15.42 1.49 12.33 69.10 0.67 0.000
1586
1587
     [CN=86.0]
1588
     [N = 3.0:Tp 0.50]
1589
1590
     ADD [ 0180+ 0181] 0036 3 5.0 56.60 4.89 12.42 60.54 n/a 0.000
1591
1592
     ADD [ 0036+ 2021] 0036 1 5.0 72.02 6.37 12.42 62.37 n/a 0.000
1593
1594
     CHANNEL[ 2: 0036] 0155 1 5.0 72.02 5.30 12.67 62.36 n/a 0.000
1595
1596
     READ STORM 6.0
1597
     [ Ptot=103.20 mm ]
     fname :
1598
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
```

```
1599
    remark:
       24hr_SCS_TypeII_25YR
1600
1601
     ** CALIB NASHYD 0203 1 5.0 145.67 5.98 13.17 58.19 0.56 0.000
1602
    [CN=79.0]
1603
    [N = 3.0:Tp 1.22]
1604
1605
    ADD [ 0155+ 0203] 0041 3 5.0 217.69 10.61 12.83 59.57 n/a 0.000
1606
    ADD [ 0041+ 0405] 0041 1 5.0 922.67 17.10 12.75 44.89 n/a 0.000
1607
1608
    READ STORM 6.0
1609
     [ Ptot=103.20 mm ]
1610
     fname :
1611
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
1612
    remark:
       1613
    ** CALIB NASHYD 1091 1 5.0 46.17 1.77 13.00 50.19 0.49 0.000
1615
    [CN=73.0]
1616
    [N = 3.0:Tp 1.08]
1617
1618
     READ STORM 6.0
1619
    [ Ptot=103.20 mm ]
    fname :
1620
       5e2-aa65-2efe04
1621
    remark:
       24hr_SCS_TypeII_25YR
1622
1623
    ** CALIB NASHYD 0110 1 5.0 37.30 2.34 12.58 58.19 0.56 0.000
     [CN=79.0]
1624
1625
    [N = 3.0:Tp 0.70]
1626
1627
    READ STORM 6.0
1628
    [ Ptot=103.20 mm ]
1629
    fname :
       5e2-aa65-2efe04
1630
    remark:
       24hr_SCS_TypeII_25YR
1631
     ** CALIB NASHYD 0111 1 5.0 89.88 4.99 12.75 58.19 0.56 0.000
1632
1633
    [CN=79.0]
1634
    [N = 3.0:Tp 0.82]
1635
1636
    CHANNEL[ 2: 0111] 0182 1 5.0 89.88 4.99 12.75 58.19 n/a 0.000
1637
1638
    READ STORM 6.0
    [ Ptot=103.20 mm ]
1639
1640
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
1641
    remark:
       24hr_SCS_TypeII_25YR
1642
1643
    ** CALIB NASHYD 0113 1 5.0 53.66 3.91 12.42 55.40 0.54 0.000
1644
    [CN=77.0]
1645
    [N = 3.0:Tp 0.53]
1646
1647
     CHANNEL[ 2: 0113] 0183 1 5.0 53.66 3.92 12.42 55.40 n/a 0.000
1648
```

ADD [0182+ 0183] 0184 3 5.0 143.54 8.49 12.58 57.15 n/a 0.000

```
1650
1651
     CHANNEL[ 2: 0184] 0185 1 5.0 143.54 8.39 12.67 57.15 n/a 0.000
1652
1653
     READ STORM 6.0
1654
     [ Ptot=103.20 mm ]
1655
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1656
     remark:
        24hr_SCS_TypeII_25YR
1657
     * CALIB STANDHYD 0112 1 5.0 59.34 12.86 12.08 88.44 0.86 0.000
1658
1659
     [I%= 7.0:S%= 2.00]
1660
     ** Reservoir
1661
     OUTFLOW: 0501 1 5.0 59.34 6.61 12.33 88.44 n/a 0.000
1662
1663
1664
     READ STORM 6.0
1665
     [ Ptot=103.20 mm ]
1666
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1667
     remark:
        24hr_SCS_TypeII_25YR
1668
1669
     * CALIB STANDHYD 0202 1 5.0 12.71 2.30 12.00 64.11 0.62 0.000
1670
     [I%= 0.0:S%= 2.00]
1671
1672
     ADD [ 0185+ 0202] 0046 3 5.0 156.25 8.74 12.67 57.71 n/a 0.000
1673
1674
     ADD [ 0046+ 0501] 0046 1 5.0 215.59 14.73 12.50 66.17 n/a 0.000
1675
1676
     READ STORM 6.0
     [ Ptot=103.20 mm ]
1677
     fname :
1678
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1679
     remark:
        1680
     * CALIB STANDHYD 0205 1 5.0 37.27 7.24 12.08 77.96 0.76 0.000
1681
1682
     [I%= 6.0:S%= 2.00]
1683
1684
     ** Reservoir
     OUTFLOW: 0502 1 5.0 37.27 6.63 12.17 77.23 n/a 0.000
1685
1686
1687
     READ STORM 6.0
1688
     [ Ptot=103.20 mm ]
1689
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1690
     remark:
        24hr_SCS_TypeII_25YR
1691
1692
     * CALIB NASHYD 0115 1 5.0 18.78 0.74 12.42 30.35 0.29 0.000
1693
     [CN=61.0]
1694
     [N = 3.0:Tp 0.50]
1695
1696
     CHANNEL[ 2: 0115] 0187 1 5.0 18.78 0.74 12.42 30.35 n/a 0.000
1697
1698
     READ STORM 6.0
1699
     [ Ptot=103.20 mm ]
     fname :
1700
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
```

```
1701
     remark:
        24hr_SCS_TypeII_25YR
1702
1703
     * CALIB NASHYD 0116 1 5.0 4.35 0.45 12.00 35.01 0.34 0.000
1704
     [CN=65.0]
1705
     [N = 3.0:Tp 0.15]
1706
1707
     ADD [ 0116+ 0187] 0013 3 5.0 23.13 0.90 12.17 31.23 n/a 0.000
1708
     CHANNEL[ 2: 0013] 0188 1 5.0 23.13 0.90 12.17 31.22 n/a 0.000
1709
1710
     READ STORM 6.0
1711
     [ Ptot=103.20 mm ]
1712
1713
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1714
     remark:
        1715
     * CALIB STANDHYD 0114 1 5.0 8.29 1.04 12.08 51.03 0.49 0.000
1716
1717
     [I%= 2.0:S%= 2.00]
1718
1719
     READ STORM 6.0
1720
     [ Ptot=103.20 mm ]
1721
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1722
     remark:
        24hr_SCS_TypeII_25YR
1723
1724
     * CALIB STANDHYD 0206 1 5.0 20.02 6.17 12.00 103.12 1.00 0.000
1725
     [I%= 8.0:S%= 2.00]
1726
1727
     ** Reservoir
1728
     OUTFLOW: 0503 1 5.0 20.02 2.88 12.17 103.05 n/a 0.000
1729
1730
     ADD [ 0114+ 0503] 0190 3 5.0 28.31 3.80 12.17 87.82 n/a 0.000
1731
1732
     CHANNEL[ 2: 0190] 0191 1 5.0 28.31 3.86 12.17 87.82 n/a 0.000
1733
1734
     READ STORM 6.0
1735
     [ Ptot=103.20 mm ]
1736
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1737
     remark:
        24hr_SCS_TypeII_25YR
1738
1739
     * CALIB STANDHYD 0207 1 5.0 89.51 23.56 12.00 102.93 1.00 0.000
1740
     [I%= 7.8:S%= 2.00]
1741
1742
     ADD [ 0188+ 0191] 0192 3 5.0 51.44 4.76 12.17 62.37 n/a 0.000
1743
1744
     ADD [ 0192+ 0207] 0192 1 5.0 140.95 26.60 12.00 88.13 n/a 0.000
1745
1746
     CHANNEL[ 2: 0192] 0193 1 5.0 140.95 23.56 12.08 88.13 n/a 0.000
1747
1748
     READ STORM 6.0
1749
     [ Ptot=103.20 mm ]
1750
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1751
     remark:
        24hr_SCS_TypeII_25YR
```

```
1752
1753
     ** CALIB NASHYD 0117 1 5.0 13.20 0.91 12.33 47.75 0.46 0.000
1754
     [CN=71.0]
1755
     [N = 3.0:Tp 0.46]
1756
1757
     CHANNEL[ 2: 0117] 0189 1 5.0 13.20 0.90 12.42 47.75 n/a 0.000
1758
1759
     READ STORM 6.0
1760
    [ Ptot=103.20 mm ]
1761
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
     remark:
1762
        24hr_SCS_TypeII_25YR
1763
     ** CALIB NASHYD 0118 1 5.0 37.96 2.07 12.50 48.96 0.47 0.000
1764
     [CN=72.0]
1765
     [N = 3.0:Tp 0.65]
1766
1767
1768
     ADD [ 0118+ 0189] 0014 3 5.0 51.16 2.94 12.50 48.64 n/a 0.000
1769
1770
     ADD [ 0014+ 0193] 0014 1 5.0 192.11 25.36 12.08 77.61 n/a 0.000
1771
1772
     CHANNEL[ 2: 0014] 0160 1 5.0 192.11 24.65 12.17 77.61 n/a 0.000
1773
1774
     READ STORM 6.0
1775
     [ Ptot=103.20 mm ]
1776
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1777
     remark:
        24hr_SCS_TypeII_25YR
1778
1779
     * CALIB STANDHYD 0119 1 5.0 2.06 0.54 12.00 82.21 0.80 0.000
1780
     [I%= 3.0:S%= 2.00]
1781
1782
     READ STORM 6.0
1783
     [ Ptot=103.20 mm ]
1784
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1785
     remark:
        24hr_SCS_TypeII_25YR
1786
1787
     * CALIB STANDHYD 0120 1 5.0 10.13 1.02 12.08 42.40 0.41 0.000
1788
     [I%= 1.0:S%= 2.00]
1789
1790
     ADD [ 0119+ 0120] 0162 3 5.0 12.19 1.45 12.00 49.13 n/a 0.000
1791
1792
     ADD [ 0162+ 0160] 0162 1 5.0 204.30 25.83 12.17 75.91 n/a 0.000
1793
1794
     READ STORM 6.0
1795
     [ Ptot=103.20 mm ]
1796
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1797
     remark:
        24hr_SCS_TypeII_25YR
1798
1799
     * CALIB NASHYD 0122 1 5.0 68.03 2.04 13.92 58.19 0.56 0.000
1800
     [CN=79.0]
     [N = 3.0:Tp 1.83]
1801
1802
1803
     READ STORM 6.0
1804
     [ Ptot=103.20 mm ]
```

```
1805
    fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1806
     remark:
        24hr_SCS_TypeII_25YR
1807
    * CALIB NASHYD 0121 1 5.0 61.39 1.13 14.00 37.98 0.37 0.000
1808
1809
    [CN=62.0]
1810
     [N = 3.0:Tp 1.90]
1811
1812
     CHANNEL[ 2: 0121] 0164 1 5.0 61.39 0.94 14.75 37.95 n/a 0.000
1813
1814
     ADD [ 0122+ 0164] 0163 3 5.0 129.42 2.90 14.17 48.59 n/a 0.000
1815
1816
     READ STORM 6.0
     [ Ptot=103.20 mm ]
1817
1818
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
1819
    remark:
        24hr_SCS_TypeII_25YR
1820
1821
     * CALIB NASHYD 0123 1 5.0 90.79 1.22 15.17 37.98 0.37 0.000
1822
     [CN=62.0]
1823
     [N = 3.0:Tp 2.84]
1824
1825
    READ STORM 6.0
1826
    [ Ptot=103.20 mm ]
1827
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1828
    remark:
        24hr_SCS_TypeII_25YR
1829
1830
     * CALIB NASHYD 0124 1 5.0 162.88 4.03 14.50 58.19 0.56 0.000
1831
     [CN=79.0]
1832
     [N = 3.0:Tp 2.34]
1833
1834
    READ STORM 6.0
1835
     [ Ptot=103.20 mm ]
1836
     fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1837
     remark:
        24hr_SCS_TypeII_25YR
1838
1839
     * CALIB NASHYD 0125 1 5.0 35.90 2.26 12.75 69.10 0.67 0.000
1840
    [CN=86.0]
1841
    [N = 3.0:Tp 0.89]
1842
1843
     READ STORM 6.0
1844
     [ Ptot=103.20 mm ]
1845
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1846
     remark:
        1847
1848
     * CALIB NASHYD 0126 1 5.0 251.54 12.03 12.67 47.75 0.46 0.000
1849
     [CN=71.0]
1850
     [N = 3.0:Tp 0.75]
1851
1852
     CHANNEL[ 2: 0126] 0194 1 5.0 251.54 11.77 12.83 47.75 n/a 0.000
1853
```

```
1854
    READ STORM 6.0
1855
     [ Ptot=103.20 mm ]
1856
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1857
     remark:
        1858
    ** CALIB NASHYD 0127 1 5.0 49.37 3.36 12.67 65.79 0.64 0.000
1859
    [CN=84.0]
1860
1861
     [N = 3.0:Tp 0.75]
1862
1863
     ADD [ 0127+ 0194] 0025 3 5.0 300.91 15.08 12.75 50.71 n/a 0.000
1864
     READ STORM 6.0
1865
     [ Ptot=103.20 mm ]
1866
1867
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1868
     remark:
        24hr_SCS_TypeII_25YR
1869
1870
     ** CALIB NASHYD 0128 1 5.0 39.54 2.09 12.58 48.96 0.47 0.000
1871
     [CN=72.0]
1872
     [N = 3.0:Tp 0.68]
1873
1874
     CHANNEL[ 2: 0128] 0195 1 5.0 39.54 2.08 12.67 48.96 n/a 0.000
1875
1876
    READ STORM 6.0
1877
    [ Ptot=103.20 mm ]
     fname :
1878
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1879
     remark:
        24hr_SCS_TypeII_25YR
1880
1881
     ** CALIB NASHYD 0129 1 5.0 19.93 1.34 12.42 50.19 0.49 0.000
1882
     [CN=73.0]
     [ N = 3.0:Tp 0.51]
1883
1884
1885
     ADD [ 0129+ 0195] 0026 3 5.0 59.47 3.32 12.50 49.37 n/a 0.000
1886
     READ STORM 6.0
1887
1888
     [ Ptot=103.20 mm ]
     fname :
1889
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1890
     remark:
        24hr_SCS_TypeII_25YR
1891
     ** CALIB NASHYD 0130 1 5.0 39.01 2.21 12.50 48.96 0.47 0.000
1892
1893
     [CN=72.0]
1894
     [ N = 3.0:Tp 0.62]
1895
1896
     CHANNEL[ 2: 0130] 0196 1 5.0 39.01 2.20 12.58 48.96 n/a 0.000
1897
1898
     READ STORM 6.0
1899
     [ Ptot=103.20 mm ]
1900
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1901
     remark:
        24hr_SCS_TypeII_25YR
```

```
1903
     ** CALIB NASHYD 0131 1 5.0 27.50 1.46 12.58 50.19 0.49 0.000
1904
     [CN=73.0]
1905
     [N = 3.0:Tp 0.70]
1906
1907
     READ STORM 6.0
1908
     [ Ptot=103.20 mm ]
1909
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1910
     remark:
        24hr_SCS_TypeII_25YR
1911
     ** CALIB NASHYD 0134 1 5.0 18.71 1.01 12.58 50.19 0.49 0.000
1912
1913
     [CN=73.0]
1914
     [N = 3.0:Tp 0.69]
1915
1916
     READ STORM 6.0
1917
     [ Ptot=103.20 mm ]
1918
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1919
     remark:
        24hr_SCS_TypeII_25YR
1920
1921
     ** CALIB NASHYD 0132 1 5.0 24.34 1.61 12.42 50.19 0.49 0.000
1922
     [CN=73.0]
1923
     [N = 3.0:Tp 0.52]
1924
1925
     CHANNEL[ 2: 0132] 0197 1 5.0 24.34 1.62 12.42 50.19 n/a 0.000
1926
1927
     READ STORM 6.0
     [ Ptot=103.20 mm ]
1928
1929
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1930
     remark:
        24hr_SCS_TypeII_25YR
1931
1932
     * CALIB STANDHYD 0133 1 5.0 119.59 12.76 12.17 52.63 0.51 0.000
1933
     [I%= 2.0:S%= 2.00]
1934
1935
     CHANNEL[ 2: 0133] 0198 1 5.0 119.59 12.68 12.17 52.63 n/a 0.000
1936
1937
     ADD [ 0134+ 0197] 0170 3 5.0 43.05 2.58 12.50 50.19 n/a 0.000
1938
1939
     ADD [ 0170+ 0198] 0170 1 5.0 162.64 14.70 12.17 51.98 n/a 0.000
1940
1941
     CHANNEL[ 2: 0170] 0199 1 5.0 162.64 14.64 12.25 51.98 n/a 0.000
1942
1943
     ADD [ 0131+ 0196] 0027 3 5.0 66.51 3.66 12.58 49.46 n/a 0.000
1944
     ADD [ 0027+ 0199] 0027 1 5.0 229.15 17.52 12.25 51.25 n/a 0.000
1945
1946
1947
     READ STORM 6.0
1948
     [ Ptot=103.20 mm ]
1949
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
        5e2-aa65-2efe04
1950
     remark:
        24hr_SCS_TypeII_25YR
1951
     * CALIB NASHYD 0135 1 5.0 35.98 1.85 12.58 47.75 0.46 0.000
1952
1953
     [CN=71.0]
1954
     [N = 3.0:Tp 0.68]
1955
```

```
1956
            READ STORM 6.0
1957
            [ Ptot=103.20 mm ]
1958
            fname :
                   C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
                   5e2-aa65-2efe04
1959
            remark:
                   24hr_SCS_TypeII_25YR
1960
            * CALIB NASHYD 0136 1 5.0 36.35 1.88 12.50 43.18 0.42 0.000
1961
            [CN=67.0]
1962
1963
            [N = 3.0:Tp 0.58]
1964
1965
             CHANNEL[ 2: 0136] 0209 1 5.0 36.35 1.89 12.50 43.18 n/a 0.000
1966
             READ STORM 6.0
1967
1968
             [ Ptot=103.20 mm ]
            fname :
1969
                   C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
                   5e2-aa65-2efe04
1970
            remark:
                   24hr_SCS_TypeII_25YR
1971
1972
             * CALIB NASHYD 0137 1 5.0 701.30 10.76 16.50 55.40 0.54 0.000
1973
             [CN=77.0]
1974
             [N = 3.0:Tp 4.01]
1975
1976
            ADD [ 0137+ 0209] 0033 3 5.0 737.65 10.94 16.42 54.80 n/a 0.000
1977
            CHANNEL[ 2: 0033] 0172 1 5.0 737.65 10.91 16.67 54.80 n/a 0.000
1978
1979
1980
            READ STORM 6.0
1981
            [ Ptot=103.20 mm ]
1982
            fname :
                   C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
                   5e2-aa65-2efe04
1983
             remark:
                    24hr_SCS_TypeII_25YR
1984
1985
            ** CALIB NASHYD 0138 1 5.0 357.11 12.30 13.25 50.19 0.49 0.000
1986
            [CN=73.0]
1987
            [N = 3.0:Tp 1.24]
1988
1989
             ADD [ 0138+ 0172] 0034 3 5.0 1094.76 17.76 13.50 53.29 n/a 0.000
1990
1991
             READ STORM 6.0
1992
            [ Ptot=103.20 mm ]
1993
            fname :
                    \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{cb1bb225-d369-4b69d-8254-9051b6b5885e} \\ \texttt{cb1bb225-d369-4b69d-9051b6b5885e} \\ \texttt{cb1bb225-d369-4b69d-9051b6b5885e} \\ \texttt{cb1bb225-d369-4b69d-9051b6b586} \\ \texttt{cb1bb225-d369-4b69d-9051b6b586} \\ \texttt{cb1bb225-d369-4b69d-9051b6b586} \\ \texttt{cb1bb225-d369-4b69d-9051b69d-9051b6} \\ \texttt{cb1bb225-d369-4b69d-9051b69d-9051b6} \\ \texttt{cb1bb225-d369-4b69d-9051b6} \\ \texttt{cb1bb225-d3
                   5e2-aa65-2efe04
1994
            remark:
                   24hr_SCS_TypeII_25YR
1995
1996
             ** CALIB NASHYD 1061 1 5.0 10.80 0.78 12.25 42.98 0.42 0.000
1997
             [CN=70.0]
             [N = 3.0:Tp 0.37]
1998
1999
            READ STORM 6.0
2000
2001
            [ Ptot=103.20 mm ]
2002
            fname :
                   5e2-aa65-2efe04
2003
            remark:
                   24hr_SCS_TypeII_25YR
```

```
** CALIB NASHYD 1111 1 5.0 6.70 0.57 12.08 34.22 0.33 0.000
2005
2006
    [CN=64.0]
2007
    [N = 3.0:Tp 0.20]
2008
2009
    READ STORM 6.0
2010
    [ Ptot=103.20 mm ]
2011
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
2012
    remark:
       24hr_SCS_TypeII_25YR
2013
    ** CALIB NASHYD 1271 1 5.0 29.00 1.45 12.50 44.29 0.43 0.000
2014
2015
     [CN=68.0]
2016
    [N = 3.0:Tp 0.63]
2017
2018
    READ STORM 6.0
2019
    [ Ptot=103.20 mm ]
2020
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
2021
    remark:
       24hr_SCS_TypeII_25YR
2022
2023
    ** CALIB NASHYD 1031 1 5.0 14.40 1.01 12.25 43.81 0.42 0.000
2024
    [CN=71.0]
2025
    [N = 3.0:Tp 0.40]
2026
2027
    READ STORM 6.0
2028
    [ Ptot=103.20 mm ]
2029
    fname :
       5e2-aa65-2efe04
2030
    remark:
       24hr_SCS_TypeII_25YR
2031
2032
    ** CALIB NASHYD 1172 1 5.0 3.20 0.50 12.00 45.36 0.44 0.000
2033
    [CN=70.0]
2034
    [N = 3.0:Tp 0.10]
2035
2036
    READ STORM 6.0
2037
    [ Ptot=103.20 mm ]
2038
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
2039
    remark:
       24hr_SCS_TypeII_25YR
2040
2041
    ** CALIB NASHYD 1252 1 5.0 7.60 1.15 12.00 45.95 0.45 0.000
2042
    [CN=70.0]
    [N = 3.0:Tp 0.12]
2043
2044
2045
    READ STORM 6.0
2046
    [ Ptot=103.20 mm ]
2047
     fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
2048
     remark:
       24hr_SCS_TypeII_25YR
2049
    ** CALIB NASHYD 1353 1 5.0 13.10 0.36 12.75 30.35 0.29 0.000
2050
2051
    [CN=61.0]
2052
     [N = 3.0:Tp 0.80]
```

```
2054
    READ STORM 6.0
2055
    [ Ptot=103.20 mm ]
2056
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
2057
    remark:
       2058
    ** CALIB NASHYD 1354 1 5.0 6.50 0.19 12.67 28.24 0.27 0.000
2059
    [CN=60.0]
2060
2061
    [N = 3.0:Tp 0.68]
2062
    READ STORM 6.0
2063
    [ Ptot=103.20 mm ]
2064
    fname :
2065
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\cb1bb225-d369-4
       5e2-aa65-2efe04
    remark:
2066
       24hr_SCS_TypeII_25YR
2067
2068
    ** CALIB NASHYD 1151 1 5.0 18.78 1.18 12.25 37.00 0.36 0.000
    [CN=61.0]
2069
2070
    [N = 3.0:Tp 0.35]
2071
2072
2073
2074
2075
    V V I SSSSS U U A L (v 5.2.2003)
2076
    V V I SS U U AA L
2077
    V V I SS U U AAAAA L
    SS - U - A - A - L
2078
2079
    VV I SSSSS UUUUU A A LLLLL
2080
    TTTTT H H Y Y M M OOO TM
2081
2082
    2083
    2084
2085
    Developed and Distributed by Civica Infrastructure
2086
    Copyright 2007 - 2019 Civica Infrastructure
2087
    All rights reserved.
2088
2089
    2090
2091
2092
2093
    Input filename: C:\Program Files (x86)\Visual OTTHYMO
     5.2\V02\voin.dat
2094
    Output filename:
     C:\Users\egom\AppData\Local\Civica\VH5\b2d85e16-498c-4e29-be5e-65c1b0654079\a38e83bd-d9
     c9-4fa2-9dd6-2836784160d0\scenari
2095
    Summary filename:
     C:\Users\egom\AppData\Local\Civica\VH5\b2d85e16-498c-4e29-be5e-65c1b0654079\a38e83bd-d9
     c9-4fa2-9dd6-2836784160d0\scenari
2096
2097
2098
    DATE: 01-31-2023 TIME: 03:18:00
2099
2100
2101
2102
2103
2104
2105
    2106
2107
    ** SIMULATION : 24hr_SCSII_2YR **
    *************
2108
```

```
2109
2110
    W/E COMMAND HYD ID DT AREA ' Qpeak Tpeak R.V. R.C. Qbase
    .....ha.....ha.....ha.....ha.....hrs.....mm.......cms
2111
2112
2113
    START @ 0.00 hrs
2114
    . . . . . . . ------
2115
    READ STORM 6.0
2116
    [ Ptot= 57.59 mm ]
2117
   fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
       7e1-a170-0ea2d4
    remark:
2.118
       24hr_SCS_TypeII_2YR
2119
2120
    ** CALIB NASHYD 0100 1 5.0 14.38 0.27 12.42 15.53 0.27 0.000
    [CN=72.0]
2121
2122
    [N = 3.0:Tp 0.53]
2123
2124
    READ STORM 6.0
2125
    [ Ptot= 57.59 mm ]
2126
    fname :
       7e1-a170-0ea2d4
2127
    remark:
       24hr_SCS_TypeII_2YR
2128
2129
    ** CALIB NASHYD 0200 1 5.0 48.85 0.43 13.33 14.02 0.24 0.000
2130
    [CN=70.0]
2131
    [N = 3.0:Tp 1.25]
2132
2133
    CHANNEL[ 2: 0200] 0174 1 5.0 48.85 0.42 13.58 14.02 n/a 0.000
2134
2135
    READ STORM 6.0
    [ Ptot= 57.59 mm ]
2136
    fname :
2137
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
       7e1-a170-0ea2d4
2138
    remark:
       2139
    ** CALIB NASHYD 0201 1 5.0 163.02 0.50 16.33 10.66 0.19 0.000
2140
2141
    [CN=65.0]
2142
    [N = 3.0:Tp 3.38]
2143
2144
    ADD [ 0100+ 0174] 0142 3 5.0 63.23 0.54 13.17 14.36 n/a 0.000
2145
2146
    ADD [ 0142+ 0201] 0142 1 5.0 226.25 0.80 14.08 11.70 n/a 0.000
2147
2148
    CHANNEL[ 2: 0142] 0144 1 5.0 226.25 0.80 14.33 11.70 n/a 0.000
2149
2150
    READ STORM 6.0
    [ Ptot= 57.59 mm ]
2151
2152
       7e1-a170-0ea2d4
2153
    remark:
       24hr_SCS_TypeII_2YR
2154
2155
    ** CALIB NASHYD 0101 1 5.0 6.24 0.14 12.33 14.75 0.26 0.000
    [CN=71.0]
2156
2157
    [N = 3.0:Tp 0.40]
2158
2159
    CHANNEL[ 2: 0101] 0175 1 5.0 6.24 0.08 12.67 14.71 n/a 0.000
2160
    READ STORM 6.0
2161
```

```
2162
            [ Ptot= 57.59 mm ]
2163
            fname :
                       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
                       7e1-a170-0ea2d4
2164
              remark:
                      24hr_SCS_TypeII_2YR
2165
2166
             ** CALIB NASHYD 0103 1 5.0 40.51 0.31 13.83 14.76 0.26 0.000
2167
             [CN=71.0]
2168
              [N = 3.0:Tp 1.60]
2169
              ADD [ 0103+ 0144] 0049 3 5.0 266.76 1.10 14.08 12.16 n/a 0.000
2170
2171
2172
               ADD [ 0049+ 0175] 0049 1 5.0 273.00 1.14 14.00 12.22 n/a 0.000
2173
              CHANNEL[ 2: 0049] 0176 1 5.0 273.00 1.14 14.00 12.22 n/a 0.000
2174
2175
              READ STORM 6.0
2176
2177
              [ Ptot= 57.59 mm ]
2178
             fname :
                      C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
                      7e1-a170-0ea2d4
2179
              remark:
                       2180
              ** CALIB NASHYD 0102 1 5.0 23.94 0.17 12.75 8.41 0.15 0.000
2181
2182
              [CN=61.0]
2183
              [N = 3.0:Tp 0.70]
2184
2185
              ADD [ 0102+ 0176] 0044 3 5.0 296.94 1.23 13.83 11.91 n/a 0.000
2186
2187
              READ STORM 6.0
              [ Ptot= 57.59 mm ]
2188
              fname :
2189
                       7e1-a170-0ea2d4
2190
              remark:
                       2191
2192
              ** CALIB NASHYD 0104 1 5.0 535.05 1.53 18.42 13.28 0.23 0.000
2193
              [CN=62.0]
2194
              [N = 3.0:Tp 5.29]
2195
2196
               CHANNEL[ 2: 0104] 0177 1 5.0 535.05 1.53 18.50 13.28 n/a 0.000
2197
2198
              READ STORM 6.0
2199
              [ Ptot= 57.59 mm ]
2200
             fname :
                      7e1-a170-0ea2d4
              remark:
                       24hr_SCS_TypeII_2YR
2202
2203
              ** CALIB NASHYD 0106 1 5.0 83.25 0.48 14.25 12.87 0.22 0.000
2204
               [CN=61.0]
2205
              [N = 3.0:Tp 2.03]
2206
              CHANNEL[ 2: 0106] 0178 1 5.0 83.25 0.48 14.33 12.87 n/a 0.000
2207
2208
2209
              READ STORM 6.0
2210
              [ Ptot= 57.59 mm ]
2211
                       \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-4ba1} \\ \texttt{c:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-4ba1} \\ \texttt{cocal} \\ \texttt{c
                      7e1-a170-0ea2d4
2212
              remark:
```

```
24hr_SCS_TypeII_2YR
2213
     ** CALIB NASHYD 0107 1 5.0 42.92 1.56 12.25 23.03 0.40 0.000
2214
2215
     [CN=79.0]
2216
     [N = 3.0:Tp 0.40]
2217
2218
    READ STORM 6.0
2219
    [ Ptot= 57.59 mm ]
2220
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
       7e1-a170-0ea2d4
     remark:
2.2.2.1
       24hr_SCS_TypeII_2YR
2222
     ** CALIB NASHYD 0105 1 5.0 13.71 0.62 12.17 23.02 0.40 0.000
2223
     [CN=79.0]
2224
     [N = 3.0:Tp 0.29]
2225
2226
2227
     ADD [ 0105+ 0107] 0037 3 5.0 56.63 2.15 12.25 23.02 n/a 0.000
2228
2229
     ADD [ 0037+ 0177] 0037 1 5.0 591.68 2.20 12.25 14.21 n/a 0.000
2230
2231
     ADD [ 0037+ 0178] 0037 3 5.0 674.93 2.26 12.25 14.05 n/a 0.000
2232
2233
     CHANNEL[ 2: 0037] 0179 1 5.0 674.93 2.17 12.33 14.05 n/a 0.000
2234
2235
    READ STORM 6.0
2236
    [ Ptot= 57.59 mm ]
2237
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
       7e1-a170-0ea2d4
    remark:
2238
       24hr_SCS_TypeII_2YR
2239
2240
     ** CALIB NASHYD 0204 1 5.0 30.05 1.09 12.25 23.03 0.40 0.000
2241
     [CN=79.0]
2242
     [N = 3.0:Tp 0.40]
2243
2244
     ADD [ 0179+ 0204] 0153 3 5.0 704.98 3.25 12.33 14.43 n/a 0.000
2245
     CHANNEL[ 2: 0153] 0405 1 5.0 704.98 2.20 12.75 14.43 n/a 0.000
2246
2247
2248
     READ STORM 6.0
2249
     [ Ptot= 57.59 mm ]
2250
     fname :
       7e1-a170-0ea2d4
2251
     remark:
       24hr_SCS_TypeII_2YR
2252
     ** CALIB NASHYD 0109 1 5.0 29.94 1.07 12.33 25.53 0.44 0.000
2253
2254
     [CN=82.0]
2255
     [N = 3.0:Tp 0.48]
2256
2257
     CHANNEL[ 2: 0109] 0181 1 5.0 29.94 1.06 12.42 25.53 n/a 0.000
2258
2259
     READ STORM 6.0
2260
     [ Ptot= 57.59 mm ]
2261
     fname :
       7e1-a170-0ea2d4
2262
     remark:
       24hr_SCS_TypeII_2YR
```

```
2264
              ** CALIB NASHYD 0108 1 5.0 26.66 0.86 12.33 23.03 0.40 0.000
2265
              [CN=79.0]
2266
               [N = 3.0:Tp 0.47]
2267
2268
               CHANNEL[ 2: 0108] 0180 1 5.0 26.66 0.86 12.42 23.03 n/a 0.000
2269
2270
             READ STORM 6.0
              [ Ptot= 57.59 mm ]
2271
2272
             fname :
                      C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
                      7e1-a170-0ea2d4
              remark:
2273
                       2274
2275
               ** CALIB NASHYD 2021 1 5.0 15.42 0.63 12.33 29.44 0.51 0.000
               [CN=86.0]
2276
2277
               [N = 3.0:Tp 0.50]
2278
2279
               ADD [ 0180+ 0181] 0036 3 5.0 56.60 1.92 12.42 24.35 n/a 0.000
2280
2281
               ADD [ 0036+ 2021] 0036 1 5.0 72.02 2.55 12.42 25.44 n/a 0.000
2282
2283
               CHANNEL[ 2: 0036] 0155 1 5.0 72.02 1.95 12.75 25.43 n/a 0.000
2284
2285
               READ STORM 6.0
2286
               [ Ptot= 57.59 mm ]
2287
              fname :
                       \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-4ba1} \\ \texttt{c:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-4ba1} \\ \texttt{cocal} \\ \texttt{c
                      7e1-a170-0ea2d4
2288
              remark:
                       24hr_SCS_TypeII_2YR
2289
2290
               ** CALIB NASHYD 0203 1 5.0 145.67 2.30 13.25 23.03 0.40 0.000
2291
               [CN=79.0]
2292
               [N = 3.0:Tp 1.22]
2293
2294
               ADD [ 0155+ 0203] 0041 3 5.0 217.69 4.06 12.92 23.82 n/a 0.000
2295
2296
               ADD [ 0041+ 0405] 0041 1 5.0 922.67 6.23 12.83 16.65 n/a 0.000
2297
2298
               READ STORM 6.0
2299
               [ Ptot= 57.59 mm ]
              fname :
2300
                       7e1-a170-0ea2d4
2301
               remark:
                       24hr_SCS_TypeII_2YR
2302
2303
              ** CALIB NASHYD 1091 1 5.0 46.17 0.64 13.08 18.88 0.33 0.000
2304
             [CN=73.0]
2305
              [N = 3.0:Tp 1.08]
2306
2307
              READ STORM 6.0
2308
               [ Ptot= 57.59 mm ]
               fname :
2309
                       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
                       7e1-a170-0ea2d4
               remark:
2310
                       24hr_SCS_TypeII_2YR
2311
2312
               ** CALIB NASHYD 0110 1 5.0 37.30 0.90 12.58 23.03 0.40 0.000
              [CN=79.0]
2313
2314
               [N = 3.0:Tp 0.70]
2315
               READ STORM 6.0
2316
```

```
[ Ptot= 57.59 mm ]
2317
2318
    fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
        7e1-a170-0ea2d4
2319
     remark:
        24hr_SCS_TypeII_2YR
2320
2321
     ** CALIB NASHYD 0111 1 5.0 89.88 1.93 12.75 23.03 0.40 0.000
2322
     [CN=79.0]
2323
     [N = 3.0:Tp 0.82]
2324
2325
     CHANNEL[ 2: 0111] 0182 1 5.0 89.88 1.92 12.83 23.03 n/a 0.000
2326
     READ STORM 6.0
2327
2328
     [ Ptot= 57.59 mm ]
     fname :
2329
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
        7e1-a170-0ea2d4
2330
     remark:
        24hr_SCS_TypeII_2YR
2331
2332
     ** CALIB NASHYD 0113 1 5.0 53.66 1.48 12.42 21.53 0.37 0.000
2333
     [CN=77.0]
2334
     [N = 3.0:Tp 0.53]
2335
2336
     CHANNEL[ 2: 0113] 0183 1 5.0 53.66 1.48 12.42 21.53 n/a 0.000
2337
2338
     ADD [ 0182+ 0183] 0184 3 5.0 143.54 3.22 12.58 22.47 n/a 0.000
2339
2340
     CHANNEL[ 2: 0184] 0185 1 5.0 143.54 3.15 12.75 22.47 n/a 0.000
2341
2342
     READ STORM 6.0
     [ Ptot= 57.59 mm ]
2343
2344
     fname :
        7e1-a170-0ea2d4
2345
     remark:
        24hr_SCS_TypeII_2YR
2346
2347
     * CALIB STANDHYD 0112 1 5.0 59.34 6.14 12.08 44.37 0.77 0.000
2348
     [I%= 7.0:S%= 2.00]
2349
     ** Reservoir
2350
2351
     OUTFLOW: 0501 1 5.0 59.34 3.39 12.33 44.37 n/a 0.000
2352
2353
     READ STORM 6.0
2354
     [ Ptot= 57.59 mm ]
2355
     fname :
        7e1-a170-0ea2d4
2356
     remark:
        24hr_SCS_TypeII_2YR
2357
2358
     * CALIB STANDHYD 0202 1 5.0 12.71 0.81 12.08 27.36 0.48 0.000
2359
     [I%= 0.0:S%= 2.00]
2360
2361
     ADD [ 0185+ 0202] 0046 3 5.0 156.25 3.36 12.67 22.87 n/a 0.000
2362
2363
     ADD [ 0046+ 0501] 0046 1 5.0 215.59 6.41 12.42 28.79 n/a 0.000
2364
2365
     READ STORM 6.0
2366
     [ Ptot= 57.59 mm ]
2367
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
```

7e1-a170-0ea2d4

```
2368
               remark:
                         24hr_SCS_TypeII_2YR
2369
2370
                * CALIB STANDHYD 0205 1 5.0 37.27 3.16 12.08 36.54 0.63 0.000
2371
                [I%= 6.0:S%= 2.00]
2372
               ** Reservoir
2373
2374
               OUTFLOW: 0502 1 5.0 37.27 2.89 12.17 35.82 n/a 0.000
2375
2376
               READ STORM 6.0
2377
               [ Ptot= 57.59 mm ]
               fname :
2378
                         C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
                         7e1-a170-0ea2d4
2379
                remark:
                         24hr_SCS_TypeII_2YR
2380
2381
               * CALIB NASHYD 0115 1 5.0 18.78 0.17 12.50 8.41 0.15 0.000
2382
               [CN=61.0]
2383
               [N = 3.0:Tp 0.50]
2384
2385
                CHANNEL[ 2: 0115] 0187 1 5.0 18.78 0.18 12.50 8.41 n/a 0.000
2386
2387
                READ STORM 6.0
2388
                [ Ptot= 57.59 mm ]
               fname :
2389
                         \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-4ba1} \\ \texttt{c:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-4ba1} \\ \texttt{cocal} \\ \texttt{c
                        7e1-a170-0ea2d4
2390
               remark:
                         24hr_SCS_TypeII_2YR
2391
2392
               * CALIB NASHYD 0116 1 5.0 4.35 0.12 12.00 10.48 0.18 0.000
2393
                [CN=65.0]
               [N = 3.0:Tp 0.15]
2394
2395
2396
               ADD [ 0116+ 0187] 0013 3 5.0 23.13 0.21 12.33 8.80 n/a 0.000
2397
2398
               CHANNEL[ 2: 0013] 0188 1 5.0 23.13 0.22 12.33 8.80 n/a 0.000
2399
2400
               READ STORM 6.0
2401
               [ Ptot= 57.59 mm ]
2402
                         7e1-a170-0ea2d4
2403
                remark:
                         24hr_SCS_TypeII_2YR
2404
2405
               * CALIB STANDHYD 0114 1 5.0 8.29 0.33 12.17 20.33 0.35 0.000
2406
               [I%= 2.0:S%= 2.00]
2407
               READ STORM 6.0
2408
2409
               [ Ptot= 57.59 mm ]
2410
               fname :
                         C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
                         7e1-a170-0ea2d4
2411
                remark:
                         24hr_SCS_TypeII_2YR
2412
               * CALIB STANDHYD 0206 1 5.0 20.02 3.33 12.00 57.51 1.00 0.000
2413
2414
               [I%= 8.0:S%= 2.00]
2415
2416
                ** Reservoir
2417
                OUTFLOW: 0503 1 5.0 20.02 1.04 12.25 57.45 n/a 0.000
```

```
ADD [ 0114+ 0503] 0190 3 5.0 28.31 1.35 12.17 46.58 n/a 0.000
2419
2420
     CHANNEL[ 2: 0190] 0191 1 5.0 28.31 1.36 12.25 46.58 n/a 0.000
2421
2422
2423
     READ STORM 6.0
    [ Ptot= 57.59 mm ]
2424
2425
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
       7e1-a170-0ea2d4
2426
    remark:
       24hr_SCS_TypeII_2YR
2427
     * CALIB STANDHYD 0207 1 5.0 89.51 11.30 12.08 57.32 1.00 0.000
2428
2429
     [I%= 7.8:S%= 2.00]
2430
     ADD [ 0188+ 0191] 0192 3 5.0 51.44 1.58 12.25 29.59 n/a 0.000
2431
2432
2433
     ADD [ 0192+ 0207] 0192 1 5.0 140.95 12.56 12.08 47.20 n/a 0.000
2434
2435
     CHANNEL[ 2: 0192] 0193 1 5.0 140.95 11.72 12.17 47.20 n/a 0.000
2436
2437
     READ STORM 6.0
2438
     [ Ptot= 57.59 mm ]
2439
     fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
       7e1-a170-0ea2d4
2440
     remark:
       24hr_SCS_TypeII_2YR
2441
2442
    * CALIB NASHYD 0117 1 5.0 13.20 0.33 12.33 17.69 0.31 0.000
2443
    [CN=71.0]
2444
    [N = 3.0:Tp 0.46]
2445
2446
     CHANNEL[ 2: 0117] 0189 1 5.0 13.20 0.32 12.42 17.69 n/a 0.000
2447
2448
     READ STORM 6.0
2449
     [ Ptot= 57.59 mm ]
2450
    fname :
       7e1-a170-0ea2d4
2451
     remark:
       24hr_SCS_TypeII_2YR
2452
     * CALIB NASHYD 0118 1 5.0 37.96 0.75 12.58 18.27 0.32 0.000
2453
2454
     [CN=72.0]
2455
     [N = 3.0:Tp 0.65]
2456
2457
     ADD [ 0118+ 0189] 0014 3 5.0 51.16 1.06 12.50 18.12 n/a 0.000
2458
2459
     ADD [ 0014+ 0193] 0014 1 5.0 192.11 12.48 12.17 39.46 n/a 0.000
2460
     CHANNEL[ 2: 0014] 0160 1 5.0 192.11 12.15 12.17 39.46 n/a 0.000
2461
2462
2463
     READ STORM 6.0
2464
     [ Ptot= 57.59 mm ]
2465
     fname :
       7e1-a170-0ea2d4
     remark:
2466
       24hr_SCS_TypeII_2YR
2467
     * CALIB STANDHYD 0119 1 5.0 2.06 0.24 12.00 39.51 0.69 0.000
2468
2469
     [I%= 3.0:S%= 2.00]
2470
2471
     READ STORM 6.0
```

```
2472
           [ Ptot= 57.59 mm ]
2473
           fname :
                   C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
                   7e1-a170-0ea2d4
2474
            remark:
                   24hr_SCS_TypeII_2YR
2475
2476
            * CALIB STANDHYD 0120 1 5.0 10.13 0.31 12.17 16.06 0.28 0.000
2477
            [I%= 1.0:S%= 2.00]
2478
            ADD [ 0119+ 0120] 0162 3 5.0 12.19 0.49 12.08 20.02 n/a 0.000
2479
2480
2481
            ADD [ 0162+ 0160] 0162 1 5.0 204.30 12.59 12.17 38.30 n/a 0.000
2482
2483
            READ STORM 6.0
            [ Ptot= 57.59 mm ]
2484
2485
            fname :
                   C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
                   7e1-a170-0ea2d4
2486
            remark:
                   24hr_SCS_TypeII_2YR
2487
2488
            * CALIB NASHYD 0122 1 5.0 68.03 0.79 13.92 23.03 0.40 0.000
2489
            [CN=79.0]
2490
            [N = 3.0:Tp 1.83]
2491
2492
           READ STORM 6.0
2493
           [ Ptot= 57.59 mm ]
2494
           fname :
                    \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-9051b6b586} \\ \texttt{bb147fe5-652c-469d-9051b6b586} \\ \texttt{bb147fe5-652c-469d-9051b6b586} \\ \texttt{bb147fe5-652c-469d-9051b6b586} \\ \texttt{bb147fe5-652c-469d-9051b6b586} \\ \texttt{bb147fe5-652c-469d-9051b6b58} \\ \texttt{bb147fe5-652c-469d-9051b6b} \\ \texttt{bb147fe5-652c-469d-9051b6b}
                   7e1-a170-0ea2d4
2495
            remark:
                   2496
2497
            * CALIB NASHYD 0121 1 5.0 61.39 0.38 14.08 13.28 0.23 0.000
2498
            [CN=62.0]
2499
            [N = 3.0:Tp 1.90]
2500
2501
            CHANNEL[ 2: 0121] 0164 1 5.0 61.39 0.30 15.00 13.24 n/a 0.000
2502
2503
            ADD [ 0122+ 0164] 0163 3 5.0 129.42 1.05 14.25 18.39 n/a 0.000
2504
2505
            READ STORM 6.0
2506
            [ Ptot= 57.59 mm ]
            fname :
2507
                   7e1-a170-0ea2d4
2508
            remark:
                   24hr_SCS_TypeII_2YR
2509
            * CALIB NASHYD 0123 1 5.0 90.79 0.42 15.25 13.28 0.23 0.000
2510
2511
            [CN=62.0]
2512
            [N = 3.0:Tp 2.84]
2513
            READ STORM 6.0
2514
2515
            [ Ptot= 57.59 mm ]
            fname :
2516
                   7e1-a170-0ea2d4
2517
            remark:
                   24hr_SCS_TypeII_2YR
2518
            * CALIB NASHYD 0124 1 5.0 162.88 1.56 14.58 23.03 0.40 0.000
2519
            [CN=79.0]
2520
```

```
2521
                     [N = 3.0:Tp 2.34]
2522
2523
                      READ STORM 6.0
2524
                      [ Ptot= 57.59 mm ]
2525
                      fname :
                                 C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
                                 7e1-a170-0ea2d4
2526
                   remark:
                                 24hr_SCS_TypeII_2YR
2527
                    2528
2529
                     [CN=86.0]
2530
                     [N = 3.0:Tp 0.89]
2531
                     READ STORM 6.0
2532
                     [ Ptot= 57.59 mm ]
2533
2534
                     fname :
                                 7e1-a170-0ea2d4
2535
                     remark:
                                  24hr_SCS_TypeII_2YR
2536
2537
                      * CALIB NASHYD 0126 1 5.0 251.54 4.32 12.67 17.69 0.31 0.000
2538
                      [CN=71.0]
2539
                      [N = 3.0:Tp 0.75]
2540
2541
                     CHANNEL[ 2: 0126] 0194 1 5.0 251.54 4.20 12.83 17.69 n/a 0.000
2542
2543
                   READ STORM 6.0
2544
                   [ Ptot= 57.59 mm ]
                     fname :
2545
                                  \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-9051b6b586e} \\ \texttt{bb147fe5-652c-469d-9051b6b} \\ \texttt{bb147fe5-652c-469d-9051
                                  7e1-a170-0ea2d4
2546
                     remark:
                                  24hr_SCS_TypeII_2YR
2547
2548
                      * CALIB NASHYD 0127 1 5.0 49.37 1.37 12.67 27.39 0.48 0.000
2549
                     [CN=84.0]
2550
                     [N = 3.0:Tp 0.75]
2551
2552
                     ADD [ 0127+ 0194] 0025 3 5.0 300.91 5.56 12.75 19.28 n/a 0.000
2553
2554
                      READ STORM 6.0
2555
                      [ Ptot= 57.59 mm ]
2556
                      fname :
                                  7e1-a170-0ea2d4
2557
                     remark:
                                  24hr_SCS_TypeII_2YR
2558
                      * CALIB NASHYD 0128 1 5.0 39.54 0.76 12.58 18.27 0.32 0.000
2559
2560
                     [CN=72.0]
2561
                     [N = 3.0:Tp 0.68]
2562
2563
                      CHANNEL[ 2: 0128] 0195 1 5.0 39.54 0.75 12.67 18.27 n/a 0.000
2564
2565
                     READ STORM 6.0
2566
                     [ Ptot= 57.59 mm ]
2567
                     fname :
                                  \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-4ba1} \\ \texttt{c:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-4ba1} \\ \texttt{cocal} \\ \texttt{c
                                 7e1-a170-0ea2d4
2568
                     remark:
                                  24hr_SCS_TypeII_2YR
```

```
2570
    * CALIB NASHYD 0129 1 5.0 19.93 0.49 12.42 18.87 0.33 0.000
2571
    [CN=73.0]
2572
    [N = 3.0:Tp 0.51]
2573
2574
    ADD [ 0129+ 0195] 0026 3 5.0 59.47 1.20 12.58 18.47 n/a 0.000
2575
2576
    READ STORM 6.0
2577
    [ Ptot= 57.59 mm ]
2578
    fname :
      C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
      7e1-a170-0ea2d4
2579
    remark:
       24hr_SCS_TypeII_2YR
2.580
2581
    * CALIB NASHYD 0130 1 5.0 39.01 0.80 12.50 18.27 0.32 0.000
    [CN=72.0]
2582
    [N = 3.0:Tp 0.62]
2583
2584
2585
    CHANNEL[ 2: 0130] 0196 1 5.0 39.01 0.79 12.58 18.27 n/a 0.000
2586
2587
    READ STORM 6.0
2588
    [ Ptot= 57.59 mm ]
2589
    fname :
       7e1-a170-0ea2d4
2590
    remark:
       24hr_SCS_TypeII_2YR
2591
    * CALIB NASHYD 0131 1 5.0 27.50 0.53 12.58 18.88 0.33 0.000
2592
2593
    [CN=73.0]
2594
    [N = 3.0:Tp 0.70]
2595
    READ STORM 6.0
2596
    [ Ptot= 57.59 mm ]
2597
    fname :
2598
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
       7e1-a170-0ea2d4
2599
    remark:
       24hr_SCS_TypeII_2YR
2600
2601
    * CALIB NASHYD 0134 1 5.0 18.71 0.37 12.58 18.88 0.33 0.000
2602
    [CN=73.0]
2603
    [N = 3.0:Tp 0.69]
2604
    READ STORM 6.0
2605
2606
    [ Ptot= 57.59 mm ]
2607
    fname :
       7e1-a170-0ea2d4
2608
    remark:
       24hr_SCS_TypeII_2YR
2609
2610
    * CALIB NASHYD 0132 1 5.0 24.34 0.59 12.42 18.87 0.33 0.000
2611
    [CN=73.0]
    [N = 3.0:Tp 0.52]
2612
2613
2614
    CHANNEL[ 2: 0132] 0197 1 5.0 24.34 0.59 12.42 18.87 n/a 0.000
2615
2616
    READ STORM 6.0
2617
    [ Ptot= 57.59 mm ]
2618
    fname :
       7e1-a170-0ea2d4
2619
    remark:
       24hr_SCS_TypeII_2YR
```

```
2620
2621
     * CALIB STANDHYD 0133 1 5.0 119.59 4.14 12.25 21.12 0.37 0.000
2622
     [I%= 2.0:S%= 2.00]
2623
2624
     CHANNEL[ 2: 0133] 0198 1 5.0 119.59 4.08 12.25 21.12 n/a 0.000
2625
2626
     ADD [ 0134+ 0197] 0170 3 5.0 43.05 0.94 12.50 18.88 n/a 0.000
2627
2628
     ADD [ 0170+ 0198] 0170 1 5.0 162.64 4.94 12.33 20.52 n/a 0.000
2629
2630
     CHANNEL[ 2: 0170] 0199 1 5.0 162.64 4.98 12.33 20.52 n/a 0.000
2631
2632
     ADD [ 0131+ 0196] 0027 3 5.0 66.51 1.32 12.58 18.52 n/a 0.000
2633
2634
     ADD [ 0027+ 0199] 0027 1 5.0 229.15 6.11 12.33 19.94 n/a 0.000
2635
2636
     READ STORM 6.0
2637
     [ Ptot= 57.59 mm ]
2638
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
        7e1-a170-0ea2d4
2639
     remark:
        24hr_SCS_TypeII_2YR
2640
2641
     * CALIB NASHYD 0135 1 5.0 35.98 0.66 12.58 17.69 0.31 0.000
2642
     [CN=71.0]
2643
     [N = 3.0:Tp 0.68]
2644
2645
    READ STORM 6.0
2646
    [ Ptot= 57.59 mm ]
2647
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
        7e1-a170-0ea2d4
     remark:
2648
        24hr_SCS_TypeII_2YR
2649
2650
     * CALIB NASHYD 0136 1 5.0 36.35 0.66 12.50 15.57 0.27 0.000
2651
     [CN=67.0]
2652
     [N = 3.0:Tp 0.58]
2653
     CHANNEL[ 2: 0136] 0209 1 5.0 36.35 0.66 12.50 15.57 n/a 0.000
2654
2655
     READ STORM 6.0
2656
2657
     [ Ptot= 57.59 mm ]
2658
     fname :
        7e1-a170-0ea2d4
2659
     remark:
        24hr_SCS_TypeII_2YR
2660
     * CALIB NASHYD 0137 1 5.0 701.30 4.09 16.67 21.53 0.37 0.000
2661
2662
     [CN=77.0]
2663
     [N = 3.0:Tp 4.01]
2664
2665
     ADD [ 0137+ 0209] 0033 3 5.0 737.65 4.16 16.67 21.24 n/a 0.000
2666
2667
     CHANNEL[ 2: 0033] 0172 1 5.0 737.65 4.15 16.83 21.24 n/a 0.000
2668
2669
     READ STORM 6.0
2670
     [ Ptot= 57.59 mm ]
2671
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
        7e1-a170-0ea2d4
2672
     remark:
```

24hr_SCS_TypeII_2YR

```
2673
2674
                     * CALIB NASHYD 0138 1 5.0 357.11 4.49 13.25 18.88 0.33 0.000
2675
                     [CN=73.0]
2676
                     [N = 3.0:Tp 1.24]
2677
2678
                    ADD [ 0138+ 0172] 0034 3 5.0 1094.76 6.40 13.67 20.47 n/a 0.000
2679
2680
                   READ STORM 6.0
2681
                    [ Ptot= 57.59 mm ]
2682
                                C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
                                7e1-a170-0ea2d4
                     remark:
2683
                                 24hr_SCS_TypeII_2YR
2684
2685
                    * CALIB NASHYD 1061 1 5.0 10.80 0.25 12.25 14.48 0.25 0.000
2686
                    [CN=70.0]
2687
                    [N = 3.0:Tp 0.37]
2688
2689
                    READ STORM 6.0
2690
                    [ Ptot= 57.59 mm ]
2691
                    fname :
                                7e1-a170-0ea2d4
2692
                    remark:
                                24hr_SCS_TypeII_2YR
2693
                   * CALIB NASHYD 1111 1 5.0 6.70 0.15 12.08 10.17 0.18 0.000
2694
2695
                   [CN=64.0]
2696
                   [N = 3.0:Tp 0.20]
2697
                    READ STORM 6.0
2698
                     [ Ptot= 57.59 mm ]
2699
                     fname :
2700
                                C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
                                7e1-a170-0ea2d4
2701
                    remark:
                                2702
2703
                    * CALIB NASHYD 1271 1 5.0 29.00 0.51 12.58 16.07 0.28 0.000
2704
                    [CN=68.0]
2705
                    [N = 3.0:Tp 0.63]
2706
                     READ STORM 6.0
2707
2708
                    [ Ptot= 57.59 mm ]
2709
                    fname :
                                 \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-9051b6b5885e} \\ \texttt{bb147fe5-652c-469d-9051b6b586e} \\ \texttt{bb147fe5-652c-469d-9051b6b} \\ \texttt{bb147fe5-652c-469d-9051
                                7e1-a170-0ea2d4
2710
                    remark:
                                24hr_SCS_TypeII_2YR
2711
2712
                     * CALIB NASHYD 1031 1 5.0 14.40 0.32 12.33 14.75 0.26 0.000
2713
                     [CN=71.0]
2714
                     [N = 3.0:Tp 0.40]
2715
                    READ STORM 6.0
2716
2717
                     [ Ptot= 57.59 mm ]
2718
                    fname :
                                 \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{bb147fe5-652c-4ba147ba254-9051b6b5885e} \\ \texttt{bb147fe5-652c-4ba147ba254-9051b6b5886e} \\ \texttt{bb147fe5-652c-4ba147ba254-9051b6b5886e} \\ \texttt{bb147fe5-652c-4ba147ba254-9051b6b586e} \\ \texttt{bb147fe5-652c-4ba147b66} \\ \texttt{bb147fe5-652c-4ba147b66} \\ \texttt{bb147fe6-652c-4ba147b66} \\ \texttt{bb147fe6-652
                                7e1-a170-0ea2d4
2719
                    remark:
                                24hr_SCS_TypeII_2YR
```

```
2721
   * CALIB NASHYD 1172 1 5.0 3.20 0.18 12.00 16.69 0.29 0.000
2722
   [CN=70.0]
2723
   [N = 3.0:Tp 0.10]
2724
2725
   READ STORM 6.0
   [ Ptot= 57.59 mm ]
2726
2727
   fname :
     7e1-a170-0ea2d4
2728
   remark:
     24hr_SCS_TypeII_2YR
2729
   * CALIB NASHYD 1252 1 5.0 7.60 0.42 12.00 16.90 0.29 0.000
2730
2731
   [CN=70.0]
2732
   [N = 3.0:Tp 0.12]
2733
   READ STORM 6.0
2734
2735
   [ Ptot= 57.59 mm ]
2736
   fname :
     C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\bb147fe5-652c-4
     7e1-a170-0ea2d4
2737
   remark:
     24hr_SCS_TypeII_2YR
2738
2739
   * CALIB NASHYD 1353 1 5.0 13.10 0.09 12.83 8.41 0.15 0.000
2740
   [CN=61.0]
2741
   [N = 3.0:Tp 0.80]
2742
2743
   READ STORM 6.0
2744
   [ Ptot= 57.59 mm ]
2745
   fname :
     7e1-a170-0ea2d4
2746
   remark:
     24hr_SCS_TypeII_2YR
2747
2748
   * CALIB NASHYD 1354 1 5.0 6.50 0.04 12.75 7.33 0.13 0.000
2749
   [CN=60.0]
2750
   [N = 3.0:Tp 0.68]
2751
2752
   READ STORM 6.0
2753
   [ Ptot= 57.59 mm ]
2754
   fname :
     7e1-a170-0ea2d4
2755
   remark:
     24hr_SCS_TypeII_2YR
2756
   * CALIB NASHYD 1151 1 5.0 18.78 0.40 12.25 12.86 0.22 0.000
2757
2758
   [CN=61.0]
2759
   [N = 3.0:Tp 0.35]
2760
2761
   ______
   ============
2762
2763
2764
   V V I SS U U A A L
2765
   V V I SS U U AAAAA L
2766
2767
   V V I SS U U A A L
2768
   VV I SSSSS UUUUU A A LLLLL
2769
2770
   OOO TTTTT TTTTT H Y Y Y M M OOO TM
2771
   2772
```

```
2773
    OOO T T H H Y M M OOO
2.774
    Developed and Distributed by Civica Infrastructure
2775
    Copyright 2007 - 2019 Civica Infrastructure
2776
    All rights reserved.
2777
2778
    2779
2780
2781
2782
    Input filename: C:\Program Files (x86)\Visual OTTHYMO
     5.2\V02\voin.dat
2783
    Output filename:
     e3-4c7a-bc46-8bf7961bbdd6\scenari
2784
    Summary filename:
     C:\Users\egom\AppData\Local\Civica\VH5\b2d85e16-498c-4e29-be5e-65c1b0654079\83ffeff0-8d
     e3-4c7a-bc46-8bf7961bbdd6\scenari
2785
2786
2787
    DATE: 01-31-2023 TIME: 03:17:58
2788
2789
2790
2791
2792
    COMMENTS: __
2793
2794
    2795
2796
    ***************
2797
2798
2799
    W/E COMMAND HYD ID DT AREA ' Qpeak Tpeak R.V. R.C. Qbase
2800
    min ha 'cms hrs mm cms
2801
2802
    START @ 0.00 hrs
2803
    READ STORM 6.0
2804
2805
    [ Ptot=115.20 mm ]
2806
    fname :
      C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
      ad5-aead-2ecb54
2807
    remark:
      24hr_SCS_TypeII_50YR
2808
2809
    ** CALIB NASHYD 0100 1 5.0 14.38 1.03 12.42 54.33 0.47 0.000
2810
    [CN=72.0]
2811
    [N = 3.0:Tp 0.53]
2812
2813
    READ STORM 6.0
2814
    [ Ptot=115.20 mm ]
2815
    fname :
      C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
      ad5-aead-2ecb54
    remark:
      24hr_SCS_TypeII_50YR
2817
2818
    2819
    [CN=70.0]
2820
    [N = 3.0:Tp 1.25]
2821
2822
    CHANNEL[ 2: 0200] 0174 1 5.0 48.85 1.69 13.42 51.04 n/a 0.000
2823
2824
    READ STORM 6.0
2825
    [ Ptot=115.20 mm ]
2826
    fname :
      C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
```

ad5-aead-2ecb54

```
2827
     remark:
        24hr_SCS_TypeII_50YR
2828
2829
     ** CALIB NASHYD 0201 1 5.0 163.02 2.18 15.92 43.24 0.38 0.000
2830
     [CN=65.0]
2831
     [N = 3.0:Tp 3.38]
2832
2833
     ADD [ 0100+ 0174] 0142 3 5.0 63.23 2.20 12.92 51.79 n/a 0.000
2834
     ADD [ 0142+ 0201] 0142 1 5.0 226.25 3.31 13.92 45.63 n/a 0.000
2835
2836
2837
     CHANNEL[ 2: 0142] 0144 1 5.0 226.25 3.31 14.08 45.63 n/a 0.000
2838
2839
     READ STORM 6.0
2840
     [ Ptot=115.20 mm ]
     fname :
2841
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
2842
     remark:
        24hr_SCS_TypeII_50YR
2843
2844
     ** CALIB NASHYD 0101 1 5.0 6.24 0.53 12.25 52.66 0.46 0.000
2845
     [CN=71.0]
2846
     [N = 3.0:Tp 0.40]
2847
     CHANNEL[ 2: 0101] 0175 1 5.0 6.24 0.44 12.50 52.61 n/a 0.000
2848
2849
2850
     READ STORM 6.0
2851
     [ Ptot=115.20 mm ]
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
2853
     remark:
        24hr_SCS_TypeII_50YR
2854
2855
     ** CALIB NASHYD 0103 1 5.0 40.51 1.21 13.67 52.67 0.46 0.000
2856
     [CN=71.0]
2857
     [N = 3.0:Tp 1.60]
2858
2859
     ADD [ 0103+ 0144] 0049 3 5.0 266.76 4.49 13.83 46.70 n/a 0.000
2860
2861
     ADD [ 0049+ 0175] 0049 1 5.0 273.00 4.59 13.75 46.83 n/a 0.000
2862
     CHANNEL[ 2: 0049] 0176 1 5.0 273.00 4.60 13.83 46.83 n/a 0.000
2863
2864
2865
     READ STORM 6.0
2866
     [ Ptot=115.20 mm ]
2867
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
     remark:
        24hr_SCS_TypeII_50YR
2869
2870
     ** CALIB NASHYD 0102 1 5.0 23.94 0.92 12.67 37.50 0.33 0.000
2871
     [CN=61.0]
2872
     [N = 3.0:Tp 0.70]
2873
2874
     ADD [ 0102+ 0176] 0044 3 5.0 296.94 5.10 13.42 46.08 n/a 0.000
2875
2876
     READ STORM 6.0
2877
     [ Ptot=115.20 mm ]
2878
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
```

remark:

```
24hr_SCS_TypeII_50YR
2880
     ** CALIB NASHYD 0104 1 5.0 535.05 5.35 18.17 45.68 0.40 0.000
2881
2882
     [CN=62.0]
2883
     [N = 3.0:Tp 5.29]
2884
2885
     CHANNEL[ 2: 0104] 0177 1 5.0 535.05 5.35 18.33 45.68 n/a 0.000
2886
2887
     READ STORM 6.0
     [ Ptot=115.20 mm ]
2888
2889
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
     remark:
2.890
        24hr_SCS_TypeII_50YR
2891
2892
     ** CALIB NASHYD 0106 1 5.0 83.25 1.71 14.17 44.55 0.39 0.000
2893
     [CN=61.0]
2894
     [N = 3.0:Tp 2.03]
2895
2896
     CHANNEL[ 2: 0106] 0178 1 5.0 83.25 1.70 14.25 44.55 n/a 0.000
2897
2898
     READ STORM 6.0
2899
     [ Ptot=115.20 mm ]
2900
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
2901
     remark:
        24hr_SCS_TypeII_50YR
2902
     ** CALIB NASHYD 0107 1 5.0 42.92 4.77 12.25 68.33 0.59 0.000
2903
2904
     [CN=79.0]
     [N = 3.0:Tp 0.40]
2905
2906
2907
     READ STORM 6.0
2908
     [ Ptot=115.20 mm ]
2909
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
2910
     remark:
        24hr_SCS_TypeII_50YR
2911
2912
     ** CALIB NASHYD 0105 1 5.0 13.71 1.89 12.17 68.30 0.59 0.000
2913
     [CN=79.0]
2914
     [N = 3.0:Tp 0.29]
2915
2916
     ADD [ 0105+ 0107] 0037 3 5.0 56.63 6.52 12.25 68.32 n/a 0.000
2917
2918
     ADD [ 0037+ 0177] 0037 1 5.0 591.68 6.89 12.25 47.84 n/a 0.000
2919
2920
     ADD [ 0037+ 0178] 0037 3 5.0 674.93 7.25 12.25 47.44 n/a 0.000
2921
2922
     CHANNEL[ 2: 0037] 0179 1 5.0 674.93 7.08 12.33 47.44 n/a 0.000
2923
2924
     READ STORM 6.0
2925
     [ Ptot=115.20 mm ]
     fname :
2926
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
2927
     remark:
        24hr_SCS_TypeII_50YR
2928
2929
     ** CALIB NASHYD 0204 1 5.0 30.05 3.34 12.25 68.33 0.59 0.000
     [CN=79.0]
2930
```

```
[N = 3.0:Tp 0.40]
2931
2932
2933
     ADD [ 0179+ 0204] 0153 3 5.0 704.98 10.33 12.25 48.33 n/a 0.000
2934
2935
     CHANNEL[ 2: 0153] 0405 1 5.0 704.98 7.99 12.58 48.33 n/a 0.000
2936
2937
     READ STORM 6.0
     [ Ptot=115.20 mm ]
2938
2939
    fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
2940
     remark:
        24hr_SCS_TypeII_50YR
2941
2942
     ** CALIB NASHYD 0109 1 5.0 29.94 3.14 12.33 73.17 0.64 0.000
     [CN=82.0]
2943
2944
     [N = 3.0:Tp 0.48]
2945
2946
     CHANNEL[ 2: 0109] 0181 1 5.0 29.94 3.12 12.42 73.17 n/a 0.000
2947
2948
     READ STORM 6.0
2949
     [ Ptot=115.20 mm ]
2950
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
2951
     remark:
        24hr_SCS_TypeII_50YR
2952
     ** CALIB NASHYD 0108 1 5.0 26.66 2.64 12.33 68.33 0.59 0.000
2953
2954
     [CN=79.0]
2955
     [N = 3.0:Tp 0.47]
2956
2957
     CHANNEL[ 2: 0108] 0180 1 5.0 26.66 2.62 12.33 68.33 n/a 0.000
2958
2959
     READ STORM 6.0
2960
     [ Ptot=115.20 mm ]
2961
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
2962
     remark:
        24hr_SCS_TypeII_50YR
2963
     ** CALIB NASHYD 2021 1 5.0 15.42 1.73 12.33 80.13 0.70 0.000
2964
2965
     [CN=86.0]
2966
      [N = 3.0:Tp 0.50]
2967
2968
     ADD [ 0180+ 0181] 0036 3 5.0 56.60 5.73 12.42 70.89 n/a 0.000
2969
2970
     ADD [ 0036+ 2021] 0036 1 5.0 72.02 7.45 12.33 72.87 n/a 0.000
2971
2972
     CHANNEL[ 2: 0036] 0155 1 5.0 72.02 6.25 12.67 72.86 n/a 0.000
2973
2974
     READ STORM 6.0
2975
     [ Ptot=115.20 mm ]
     fname :
2976
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
2977
     remark:
        24hr_SCS_TypeII_50YR
2978
2979
     ** CALIB NASHYD 0203 1 5.0 145.67 7.04 13.17 68.33 0.59 0.000
     [CN=79.0]
2980
2981
     [N = 3.0:Tp 1.22]
2982
```

ADD [0155+ 0203] 0041 3 5.0 217.69 12.49 12.75 69.83 n/a 0.000

```
2984
     ADD [ 0041+ 0405] 0041 1 5.0 922.67 20.27 12.75 53.40 n/a 0.000
2985
2986
2987
     READ STORM 6.0
2988
     [ Ptot=115.20 mm ]
2989
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
2.990
    remark:
        24hr_SCS_TypeII_50YR
2991
2992
     ** CALIB NASHYD 1091 1 5.0 46.17 2.10 13.00 59.49 0.52 0.000
2993
     [CN=73.0]
2994
     [N = 3.0:Tp 1.08]
2995
     READ STORM 6.0
2996
2997
     [ Ptot=115.20 mm ]
2998
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
2999
     remark:
        24hr_SCS_TypeII_50YR
3000
3001
     ** CALIB NASHYD 0110 1 5.0 37.30 2.75 12.58 68.33 0.59 0.000
3002
     [CN=79.0]
3003
     [N = 3.0:Tp 0.70]
3004
    READ STORM 6.0
3005
3006
    [ Ptot=115.20 mm ]
3007
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3008
     remark:
        24hr_SCS_TypeII_50YR
3009
3010
     ** CALIB NASHYD 0111 1 5.0 89.88 5.88 12.75 68.33 0.59 0.000
3011
     [CN=79.0]
3012
     [N = 3.0:Tp 0.82]
3013
3014
     CHANNEL[ 2: 0111] 0182 1 5.0 89.88 5.87 12.75 68.33 n/a 0.000
3015
3016
     READ STORM 6.0
3017
     [ Ptot=115.20 mm ]
3018
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3019
     remark:
        24hr_SCS_TypeII_50YR
3020
3021
     ** CALIB NASHYD 0113 1 5.0 53.66 4.62 12.42 65.26 0.57 0.000
     [CN=77.0]
3022
3023
     [N = 3.0:Tp 0.53]
3024
3025
     CHANNEL[ 2: 0113] 0183 1 5.0 53.66 4.63 12.42 65.26 n/a 0.000
3026
3027
     ADD [ 0182+ 0183] 0184 3 5.0 143.54 10.01 12.58 67.19 n/a 0.000
3028
3029
     CHANNEL[ 2: 0184] 0185 1 5.0 143.54 9.90 12.67 67.19 n/a 0.000
3030
3031
     READ STORM 6.0
3032
     [ Ptot=115.20 mm ]
3033
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3034
     remark:
```

```
24hr_SCS_TypeII_50YR
3035
3036
     * CALIB STANDHYD 0112 1 5.0 59.34 14.69 12.08 100.22 0.87 0.000
3037
     [1\% = 7.0:S\% = 2.00]
3038
3039
     ** Reservoir
3040
     OUTFLOW: 0501 1 5.0 59.34 7.29 12.33 100.21 n/a 0.000
3041
3042
     READ STORM 6.0
3043
     [ Ptot=115.20 mm ]
3044
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
     remark:
3045
        24hr_SCS_TypeII_50YR
3046
3047
     * CALIB STANDHYD 0202 1 5.0 12.71 2.72 12.00 74.54 0.65 0.000
3048
     [I%= 0.0:S%= 2.00]
3049
3050
     ADD [ 0185+ 0202] 0046 3 5.0 156.25 10.28 12.67 67.78 n/a 0.000
3051
3052
     ADD [ 0046+ 0501] 0046 1 5.0 215.59 16.87 12.50 76.71 n/a 0.000
3053
3054
     READ STORM 6.0
3055
     [ Ptot=115.20 mm ]
     fname :
3056
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3057
     remark:
        24hr_SCS_TypeII_50YR
3058
3059
     * CALIB STANDHYD 0205 1 5.0 37.27 8.39 12.08 89.28 0.77 0.000
3060
     [I%= 6.0:S%= 2.00]
3061
3062
     ** Reservoir
3063
     OUTFLOW: 0502 1 5.0 37.27 7.67 12.17 88.55 n/a 0.000
3064
3065
     READ STORM 6.0
3066
     [ Ptot=115.20 mm ]
3067
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3068
     remark:
        24hr_SCS_TypeII_50YR
3069
3070
     * CALIB NASHYD 0115 1 5.0 18.78 0.93 12.42 37.49 0.33 0.000
3071
     [CN=61.0]
3072
     [N = 3.0:Tp 0.50]
3073
3074
     CHANNEL[ 2: 0115] 0187 1 5.0 18.78 0.93 12.42 37.49 n/a 0.000
3075
3076
     READ STORM 6.0
3077
     [ Ptot=115.20 mm ]
     fname :
3078
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3079
     remark:
        24hr_SCS_TypeII_50YR
3080
3081
     * CALIB NASHYD 0116 1 5.0 4.35 0.55 12.00 42.79 0.37 0.000
     [CN=65.0]
3082
3083
     [N = 3.0:Tp 0.15]
3084
```

ADD [0116+ 0187] 0013 3 5.0 23.13 1.12 12.17 38.49 n/a 0.000

```
3086
     CHANNEL[ 2: 0013] 0188 1 5.0 23.13 1.12 12.17 38.49 n/a 0.000
3087
3088
3089
     READ STORM 6.0
3090
     [ Ptot=115.20 mm ]
3091
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3092
     remark:
        24hr_SCS_TypeII_50YR
3093
3094
     * CALIB STANDHYD 0114 1 5.0 8.29 1.26 12.08 60.13 0.52 0.000
3095
     [I%= 2.0:S%= 2.00]
3096
3097
     READ STORM 6.0
3098
     [ Ptot=115.20 mm ]
3099
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3100
     remark:
        24hr_SCS_TypeII_50YR
3101
3102
     * CALIB STANDHYD 0206 1 5.0 20.02 7.24 11.92 115.12 1.00 0.000
3103
     [I%= 8.0:S%= 2.00]
3104
3105
     ** Reservoir
3106
     OUTFLOW: 0503 1 5.0 20.02 3.60 12.08 115.05 n/a 0.000
3107
3108
     ADD [ 0114+ 0503] 0190 3 5.0 28.31 4.86 12.08 98.97 n/a 0.000
3109
3110
     CHANNEL[ 2: 0190] 0191 1 5.0 28.31 4.82 12.08 98.97 n/a 0.000
3111
3112
     READ STORM 6.0
     [ Ptot=115.20 mm ]
3113
     fname :
3114
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3115
     remark:
        24hr_SCS_TypeII_50YR
3116
     * CALIB STANDHYD 0207 1 5.0 89.51 26.69 12.00 114.93 1.00 0.000
3117
3118
     [I%= 7.8:S%= 2.00]
3119
3120
     ADD [ 0188+ 0191] 0192 3 5.0 51.44 5.89 12.08 71.78 n/a 0.000
3121
3122
     ADD [ 0192+ 0207] 0192 1 5.0 140.95 31.20 12.00 99.18 n/a 0.000
3123
3124
     CHANNEL[ 2: 0192] 0193 1 5.0 140.95 27.04 12.08 99.18 n/a 0.000
3125
3126
     READ STORM 6.0
3127
     [ Ptot=115.20 mm ]
3128
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
     remark:
3129
        24hr_SCS_TypeII_50YR
3130
3131
     ** CALIB NASHYD 0117 1 5.0 13.20 1.08 12.33 56.76 0.49 0.000
3132
     [CN=71.0]
3133
     [N = 3.0:Tp 0.46]
3134
3135
     CHANNEL[ 2: 0117] 0189 1 5.0 13.20 1.07 12.42 56.76 n/a 0.000
3136
3137
     READ STORM 6.0
3138
     [ Ptot=115.20 mm ]
```

```
3139
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3140
     remark:
        24hr_SCS_TypeII_50YR
3141
     ** CALIB NASHYD 0118 1 5.0 37.96 2.47 12.50 58.11 0.50 0.000
3142
3143
     [CN=72.0]
3144
     [N = 3.0:Tp 0.65]
3145
3146
     ADD [ 0118+ 0189] 0014 3 5.0 51.16 3.50 12.50 57.76 n/a 0.000
3147
3148
     ADD [ 0014+ 0193] 0014 1 5.0 192.11 29.21 12.08 88.15 n/a 0.000
3149
3150
     CHANNEL[ 2: 0014] 0160 1 5.0 192.11 28.48 12.17 88.15 n/a 0.000
3151
3152
     READ STORM 6.0
3153
     [ Ptot=115.20 mm ]
3154
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3155
     remark:
        24hr_SCS_TypeII_50YR
3156
3157
     * CALIB STANDHYD 0119 1 5.0 2.06 0.62 12.00 93.76 0.81 0.000
3158
     [I%= 3.0:S%= 2.00]
3159
3160
     READ STORM 6.0
3161
     [ Ptot=115.20 mm ]
3162
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3163
     remark:
        24hr_SCS_TypeII_50YR
3164
3165
     * CALIB STANDHYD 0120 1 5.0 10.13 1.25 12.08 50.45 0.44 0.000
3166
     [I%= 1.0:S%= 2.00]
3167
3168
     ADD [ 0119+ 0120] 0162 3 5.0 12.19 1.74 12.00 57.77 n/a 0.000
3169
3170
     ADD [ 0162+ 0160] 0162 1 5.0 204.30 29.88 12.17 86.34 n/a 0.000
3171
3172
     READ STORM 6.0
3173
     [ Ptot=115.20 mm ]
3174
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3175
     remark:
        24hr_SCS_TypeII_50YR
3176
     * CALIB NASHYD 0122 1 5.0 68.03 2.40 13.83 68.33 0.59 0.000
3177
3178
     [CN=79.0]
3179
     [N = 3.0:Tp 1.83]
3180
     READ STORM 6.0
3181
3182
     [ Ptot=115.20 mm ]
3183
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3184
     remark:
        24hr_SCS_TypeII_50YR
3185
3186
     * CALIB NASHYD 0121 1 5.0 61.39 1.36 14.00 45.68 0.40 0.000
3187
     [CN=62.0]
```

```
[N = 3.0:Tp 1.90]
3188
3189
3190
     CHANNEL[ 2: 0121] 0164 1 5.0 61.39 1.15 14.67 45.64 n/a 0.000
3191
3192
     ADD [ 0122+ 0164] 0163 3 5.0 129.42 3.46 14.17 57.57 n/a 0.000
3193
3194
     READ STORM 6.0
3195
    [ Ptot=115.20 mm ]
3196
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3197
     remark:
        24hr_SCS_TypeII_50YR
3198
3199
     * CALIB NASHYD 0123 1 5.0 90.79 1.47 15.17 45.68 0.40 0.000
     [CN=62.0]
3200
     [N = 3.0:Tp 2.84]
3201
3202
3203
    READ STORM 6.0
3204
     [ Ptot=115.20 mm ]
3205
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3206
     remark:
        24hr_SCS_TypeII_50YR
3207
     * CALIB NASHYD 0124 1 5.0 162.88 4.75 14.42 68.33 0.59 0.000
3208
3209
    [CN=79.0]
3210
     [N = 3.0:Tp 2.34]
3211
3212
     READ STORM 6.0
3213
     [ Ptot=115.20 mm ]
3214
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3215
     remark:
        24hr_SCS_TypeII_50YR
3216
3217
     * CALIB NASHYD 0125 1 5.0 35.90 2.63 12.75 80.13 0.70 0.000
3218
     [CN=86.0]
     [N = 3.0:Tp 0.89]
3219
3220
     READ STORM 6.0
3221
3222
     [ Ptot=115.20 mm ]
     fname :
3223
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3224
     remark:
        24hr_SCS_TypeII_50YR
3225
     * CALIB NASHYD 0126 1 5.0 251.54 14.36 12.67 56.76 0.49 0.000
3226
3227
     [CN=71.0]
3228
     [N = 3.0:Tp 0.75]
3229
3230
     CHANNEL[ 2: 0126] 0194 1 5.0 251.54 14.10 12.75 56.76 n/a 0.000
3231
3232
     READ STORM 6.0
3233
     [ Ptot=115.20 mm ]
3234
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3235
     remark:
        24hr_SCS_TypeII_50YR
```

```
** CALIB NASHYD 0127 1 5.0 49.37 3.91 12.67 76.58 0.66 0.000
3237
3238
    [CN=84.0]
3239
     [N = 3.0:Tp 0.75]
3240
3241
     ADD [ 0127+ 0194] 0025 3 5.0 300.91 17.95 12.75 60.01 n/a 0.000
3242
3243
    READ STORM 6.0
3244
    [ Ptot=115.20 mm ]
3245
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
       ad5-aead-2ecb54
3246
    remark:
       24hr_SCS_TypeII_50YR
3247
3248
     ** CALIB NASHYD 0128 1 5.0 39.54 2.49 12.58 58.11 0.50 0.000
     [CN=72.0]
3249
     [N = 3.0:Tp 0.68]
3250
3251
3252
     CHANNEL[ 2: 0128] 0195 1 5.0 39.54 2.48 12.67 58.11 n/a 0.000
3253
3254
     READ STORM 6.0
3255
     [ Ptot=115.20 mm ]
3256
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
       ad5-aead-2ecb54
3257
     remark:
       24hr_SCS_TypeII_50YR
3258
3259
    ** CALIB NASHYD 0129 1 5.0 19.93 1.59 12.42 59.49 0.52 0.000
3260
    [CN=73.0]
    [N = 3.0:Tp 0.51]
3261
3262
3263
     ADD [ 0129+ 0195] 0026 3 5.0 59.47 3.97 12.50 58.57 n/a 0.000
3264
3265
     READ STORM 6.0
3266
     [ Ptot=115.20 mm ]
3267
     fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
       ad5-aead-2ecb54
3268
     remark:
       24hr_SCS_TypeII_50YR
3269
     ** CALIB NASHYD 0130 1 5.0 39.01 2.64 12.50 58.11 0.50 0.000
3270
3271
     [CN=72.0]
3272
     [N = 3.0:Tp 0.62]
3273
3274
     CHANNEL[ 2: 0130] 0196 1 5.0 39.01 2.62 12.58 58.11 n/a 0.000
3275
3276
    READ STORM 6.0
    [ Ptot=115.20 mm ]
3277
3278
       ad5-aead-2ecb54
3279
     remark:
       24hr_SCS_TypeII_50YR
3280
3281
     ** CALIB NASHYD 0131 1 5.0 27.50 1.74 12.58 59.49 0.52 0.000
     [CN=73.0]
3282
3283
     [N = 3.0:Tp 0.70]
3284
3285
     READ STORM 6.0
3286
     [ Ptot=115.20 mm ]
     fname :
3287
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
       ad5-aead-2ecb54
```

```
3288
     remark:
        24hr_SCS_TypeII_50YR
3289
3290
     ** CALIB NASHYD 0134 1 5.0 18.71 1.20 12.58 59.49 0.52 0.000
3291
     [CN=73.0]
3292
     [N = 3.0:Tp 0.69]
3293
3294
     READ STORM 6.0
3295
     [ Ptot=115.20 mm ]
3296
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
     remark:
3297
        24hr_SCS_TypeII_50YR
3298
3299
     ** CALIB NASHYD 0132 1 5.0 24.34 1.92 12.42 59.49 0.52 0.000
3300
     [CN=73.0]
3301
     [N = 3.0:Tp 0.52]
3302
3303
     CHANNEL[ 2: 0132] 0197 1 5.0 24.34 1.92 12.42 59.49 n/a 0.000
3304
     READ STORM 6.0
3305
3306
     [ Ptot=115.20 mm ]
3307
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3308
     remark:
        24hr_SCS_TypeII_50YR
3309
3310
     * CALIB STANDHYD 0133 1 5.0 119.59 15.39 12.17 61.92 0.54 0.000
3311
     [I%= 2.0:S%= 2.00]
3312
3313
     CHANNEL[ 2: 0133] 0198 1 5.0 119.59 15.32 12.17 61.92 n/a 0.000
3314
3315
     ADD [ 0134+ 0197] 0170 3 5.0 43.05 3.07 12.50 59.49 n/a 0.000
3316
3317
     ADD [ 0170+ 0198] 0170 1 5.0 162.64 17.74 12.17 61.28 n/a 0.000
3318
3319
     CHANNEL[ 2: 0170] 0199 1 5.0 162.64 17.77 12.25 61.28 n/a 0.000
3320
3321
     ADD [ 0131+ 0196] 0027 3 5.0 66.51 4.36 12.58 58.68 n/a 0.000
3322
3323
     ADD [ 0027+ 0199] 0027 1 5.0 229.15 21.23 12.25 60.52 n/a 0.000
3324
     READ STORM 6.0
3325
3326
     [ Ptot=115.20 mm ]
3327
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3328
     remark:
        24hr_SCS_TypeII_50YR
3329
     ** CALIB NASHYD 0135 1 5.0 35.98 2.21 12.58 56.76 0.49 0.000
3330
3331
     [CN=71.0]
3332
     [N = 3.0:Tp 0.68]
3333
3334
     READ STORM 6.0
3335
     [ Ptot=115.20 mm ]
3336
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3337
     remark:
        24hr_SCS_TypeII_50YR
```

```
3339
    ** CALIB NASHYD 0136 1 5.0 36.35 2.26 12.50 51.61 0.45 0.000
    [CN=67.0]
3340
3341
     [N = 3.0:Tp 0.58]
3342
3343
     CHANNEL[ 2: 0136] 0209 1 5.0 36.35 2.26 12.50 51.61 n/a 0.000
3344
3345
    READ STORM 6.0
3346
    [ Ptot=115.20 mm ]
3347
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
       ad5-aead-2ecb54
3348
    remark:
       24hr_SCS_TypeII_50YR
3349
3350
     ** CALIB NASHYD 0137 1 5.0 701.30 12.72 16.42 65.27 0.57 0.000
    [CN=77.0]
3351
3352
    [N = 3.0:Tp 4.01]
3353
3354
    ADD [ 0137+ 0209] 0033 3 5.0 737.65 12.93 16.42 64.59 n/a 0.000
3355
3356
     CHANNEL[ 2: 0033] 0172 1 5.0 737.65 12.89 16.67 64.59 n/a 0.000
3357
     READ STORM 6.0
3358
3359
     [ Ptot=115.20 mm ]
3360
     fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
       ad5-aead-2ecb54
3361
    remark:
       24hr_SCS_TypeII_50YR
3362
3363
    ** CALIB NASHYD 0138 1 5.0 357.11 14.63 13.17 59.49 0.52 0.000
3364
    [CN=73.0]
    [N = 3.0:Tp 1.24]
3365
3366
     ADD [ 0138+ 0172] 0034 3 5.0 1094.76 21.15 13.42 62.93 n/a 0.000
3367
3368
3369
    READ STORM 6.0
3370
    [ Ptot=115.20 mm ]
3371
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
       ad5-aead-2ecb54
    remark:
3372
       24hr_SCS_TypeII_50YR
3373
     ** CALIB NASHYD 1061 1 5.0 10.80 0.95 12.25 51.69 0.45 0.000
3374
3375
    [CN=70.0]
3376
    [N = 3.0:Tp 0.37]
3377
3378
    READ STORM 6.0
    [ Ptot=115.20 mm ]
3379
3380
       ad5-aead-2ecb54
3381
    remark:
       24hr_SCS_TypeII_50YR
3382
3383
     ** CALIB NASHYD 1111 1 5.0 6.70 0.70 12.08 41.88 0.36 0.000
3384
    [CN=64.0]
3385
    [N = 3.0:Tp 0.20]
3386
3387
    READ STORM 6.0
3388
    [ Ptot=115.20 mm ]
    fname :
3389
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
```

ad5-aead-2ecb54

```
3390
     remark:
        24hr_SCS_TypeII_50YR
3391
3392
     ** CALIB NASHYD 1271 1 5.0 29.00 1.74 12.50 52.86 0.46 0.000
3393
     [CN=68.0]
3394
     [N = 3.0:Tp 0.63]
3395
3396
     READ STORM 6.0
3397
     [ Ptot=115.20 mm ]
3398
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
     remark:
3399
        24hr_SCS_TypeII_50YR
3400
3401
     ** CALIB NASHYD 1031 1 5.0 14.40 1.22 12.25 52.66 0.46 0.000
3402
     [CN=71.0]
3403
     [N = 3.0:Tp 0.40]
3404
3405
     READ STORM 6.0
3406
     [ Ptot=115.20 mm ]
3407
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3408
     remark:
        24hr_SCS_TypeII_50YR
3409
     ** CALIB NASHYD 1172 1 5.0 3.20 0.60 12.00 54.00 0.47 0.000
3410
3411
     [CN=70.0]
3412
     [N = 3.0:Tp 0.10]
3413
     READ STORM 6.0
3414
     [ Ptot=115.20 mm ]
3415
     fname :
3416
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3417
     remark:
        24hr_SCS_TypeII_50YR
3418
     ** CALIB NASHYD 1252 1 5.0 7.60 1.37 12.00 54.70 0.47 0.000
3419
3420
     [CN=70.0]
3421
     [N = 3.0:Tp 0.12]
3422
     READ STORM 6.0
3423
3424
     [ Ptot=115.20 mm ]
     fname :
3425
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3426
     remark:
        24hr_SCS_TypeII_50YR
3427
3428
     ** CALIB NASHYD 1353 1 5.0 13.10 0.46 12.75 37.50 0.33 0.000
3429
     [CN=61.0]
3430
     [N = 3.0:Tp 0.80]
3431
3432
     READ STORM 6.0
3433
     [ Ptot=115.20 mm ]
3434
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
        ad5-aead-2ecb54
3435
     remark:
        24hr_SCS_TypeII_50YR
```

```
** CALIB NASHYD 1354 1 5.0 6.50 0.24 12.58 35.15 0.31 0.000
3437
    [CN=60.0]
3438
3439
    [N = 3.0:Tp 0.68]
3440
    READ STORM 6.0
3441
3442
    [ Ptot=115.20 mm ]
3443
   fname :
      C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\412e0495-3ca7-4
      ad5-aead-2ecb54
3444
    remark:
       24hr_SCS_TypeII_50YR
3445
3446
    ** CALIB NASHYD 1151 1 5.0 18.78 1.42 12.25 44.54 0.39 0.000
3447
    [CN=61.0]
3448
    [N = 3.0:Tp 0.35]
3449
3450
    ______
    _____
3451
3452
3453
    V····V···I····SSSS··U···U····A····L··········(v·5.2.2003)
    V V I SS U U A A L
3454
    V V I SS U U AAAAA L
3455
    V V I SS U U A A L
3456
    VV I SSSSS UUUUU A A LLLLL
3457
3458
3459
    OOO TTTTT TTTTT H H Y Y M M OOO TM
3460
    3461
3462
    3463
    Developed and Distributed by Civica Infrastructure
3464
    Copyright 2007 - 2019 Civica Infrastructure
3465
    All rights reserved.
3466
3467
3468
    ***** S U M M A R Y O U T P U T *****
3469
3470
3471
    Input filename: C:\Program Files (x86)\Visual OTTHYMO
     5.2\V02\voin.dat
3472
    Output filename:
     C:\Users\egom\AppData\Local\Civica\VH5\b2d85e16-498c-4e29-be5e-65c1b0654079\04687756-de
     89-48b1-bd8e-e12407528f82\scenari
3473
    Summary filename:
     C:\Users\egom\AppData\Local\Civica\VH5\b2d85e16-498c-4e29-be5e-65c1b0654079\04687756-de
     89-48b1-bd8e-e12407528f82\scenari
3474
3475
3476
    DATE: 01-31-2023 TIME: 03:17:57
3477
    USER:
3478
3479
3480
3481
    COMMENTS: ____
3482
3483
3484
    ***************
    ** SIMULATION : 24hr_SCSII_5YR **
3485
    3486
3487
3488
    W/E COMMAND HYD ID DT AREA ' Qpeak Tpeak R.V. R.C. Qbase
    .....ha.....ha.....ha.....ha.....hrs.....mm..........cms
3489
3490
3491
    START @ 0.00 hrs
    3492
3493
    READ STORM 6.0
3494
    [ Ptot= 76.80 mm ]
    fname :
3495
```

```
28c-a059-23eeb0
3496
             remark:
                     24hr_SCS_TypeII_5YR
3497
3498
             ** CALIB NASHYD 0100 1 5.0 14.38 0.50 12.42 27.02 0.35 0.000
3499
             [CN=72.0]
3500
             [N = 3.0:Tp 0.53]
3501
3502
             READ STORM 6.0
3503
             [ Ptot= 76.80 mm ]
             fname :
3504
                     C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
                     28c-a059-23eeb0
3505
             remark:
                     24hr_SCS_TypeII_5YR
3506
3507
             ** CALIB NASHYD 0200 1 5.0 48.85 0.80 13.33 24.85 0.32 0.000
3508
             [CN=70.0]
3509
             [N = 3.0:Tp 1.25]
3510
3511
             CHANNEL[ 2: 0200] 0174 1 5.0 48.85 0.79 13.50 24.85 n/a 0.000
3512
3513
             READ STORM 6.0
3514
             [ Ptot= 76.80 mm ]
             fname :
3515
                     \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{247c2b1d-b035-4b6b5885e} \\ \texttt{247c2b1d-b035-4b6b5886e} \\ \texttt{247c2b1d-b035-4b6b586e} \\ \texttt{247c2b1d-b035-4b666e} \\ \texttt{247c2b1d-
                    28c-a059-23eeb0
3516
             remark:
                     24hr_SCS_TypeII_5YR
3517
3518
             ** CALIB NASHYD 0201 1 5.0 163.02 0.97 16.08 19.92 0.26 0.000
3519
              [CN=65.0]
3520
             [N = 3.0:Tp 3.38]
3521
3522
             ADD [ 0100+ 0174] 0142 3 5.0 63.23 1.02 13.08 25.34 n/a 0.000
3523
3524
             ADD [ 0142+ 0201] 0142 1 5.0 226.25 1.51 14.00 21.44 n/a 0.000
3525
3526
             CHANNEL[ 2: 0142] 0144 1 5.0 226.25 1.51 14.25 21.44 n/a 0.000
3527
3528
             READ STORM 6.0
3529
             [ Ptot= 76.80 mm ]
3530
             fname :
                     C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
                    28c-a059-23eeb0
3531
             remark:
                     24hr_SCS_TypeII_5YR
3532
3533
             ** CALIB NASHYD 0101 1 5.0 6.24 0.25 12.25 25.91 0.34 0.000
             [CN=71.0]
3535
             [N = 3.0:Tp 0.40]
3536
3537
             CHANNEL[ 2: 0101] 0175 1 5.0 6.24 0.19 12.58 25.87 n/a 0.000
3538
3539
             READ STORM 6.0
3540
             [ Ptot= 76.80 mm ]
3541
             fname :
                     C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
                    28c-a059-23eeb0
3542
             remark:
                     24hr_SCS_TypeII_5YR
3543
             ** CALIB NASHYD 0103 1 5.0 40.51 0.57 13.75 25.92 0.34 0.000
3544
```

```
3545
     [CN=71.0]
3546
     [N = 3.0:Tp 1.60]
3547
     ADD [ 0103+ 0144] 0049 3 5.0 266.76 2.06 14.00 22.12 n/a 0.000
3548
3549
3550
     ADD [ 0049+ 0175] 0049 1 5.0 273.00 2.13 13.92 22.20 n/a 0.000
3551
     CHANNEL[ 2: 0049] 0176 1 5.0 273.00 2.13 13.92 22.20 n/a 0.000
3552
3553
3554
    READ STORM 6.0
    [ Ptot= 76.80 mm ]
3555
3556
    fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
     remark:
3557
        24hr_SCS_TypeII_5YR
3558
3559
     ** CALIB NASHYD 0102 1 5.0 23.94 0.38 12.67 16.47 0.21 0.000
3560
     [CN=61.0]
3561
     [N = 3.0:Tp 0.70]
3562
3563
     ADD [ 0102+ 0176] 0044 3 5.0 296.94 2.32 13.58 21.74 n/a 0.000
3564
3565
     READ STORM 6.0
3566
     [ Ptot= 76.80 mm ]
3567
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3568
    remark:
        24hr_SCS_TypeII_5YR
3569
3570
     ** CALIB NASHYD 0104 1 5.0 535.05 2.63 18.33 22.66 0.30 0.000
3571
     [CN=62.0]
     [N = 3.0:Tp 5.29]
3572
3573
3574
     CHANNEL[ 2: 0104] 0177 1 5.0 535.05 2.63 18.42 22.66 n/a 0.000
3575
3576
     READ STORM 6.0
3577
     [ Ptot= 76.80 mm ]
3578
    fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3579
     remark:
        24hr_SCS_TypeII_5YR
3580
3581
     ** CALIB NASHYD 0106 1 5.0 83.25 0.83 14.25 22.01 0.29 0.000
3582
     [CN=61.0]
3583
     [N = 3.0:Tp 2.03]
3584
3585
     CHANNEL[ 2: 0106] 0178 1 5.0 83.25 0.83 14.33 22.01 n/a 0.000
3586
     READ STORM 6.0
3587
3588
     [ Ptot= 76.80 mm ]
3589
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3590
     remark:
        24hr_SCS_TypeII_5YR
3591
3592
     ** CALIB NASHYD 0107 1 5.0 42.92 2.55 12.25 37.00 0.48 0.000
3593
     [CN=79.0]
3594
     [N = 3.0:Tp 0.40]
3595
3596
     READ STORM 6.0
3597
     [ Ptot= 76.80 mm ]
```

```
3598
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
3599
     remark:
       24hr_SCS_TypeII_5YR
3600
    ** CALIB NASHYD 0105 1 5.0 13.71 1.02 12.17 36.99 0.48 0.000
3601
3602
    [CN=79.0]
3603
    [N = 3.0:Tp 0.29]
3604
3605
    ADD [ 0105+ 0107] 0037 3 5.0 56.63 3.50 12.25 37.00 n/a 0.000
3606
3607
     ADD [ 0037+ 0177] 0037 1 5.0 591.68 3.63 12.25 24.04 n/a 0.000
3608
3609
     ADD [ 0037+ 0178] 0037 3 5.0 674.93 3.78 12.25 23.79 n/a 0.000
3610
3611
    CHANNEL[ 2: 0037] 0179 1 5.0 674.93 3.68 12.33 23.79 n/a 0.000
3612
3613
    READ STORM 6.0
3614
    [ Ptot= 76.80 mm ]
3615
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
3616
    remark:
       24hr_SCS_TypeII_5YR
3617
3618
    ** CALIB NASHYD 0204 1 5.0 30.05 1.78 12.25 37.00 0.48 0.000
3619
    [CN=79.0]
    [N = 3.0:Tp 0.40]
3620
3621
3622
    ADD [ 0179+ 0204] 0153 3 5.0 704.98 5.43 12.33 24.35 n/a 0.000
3623
3624
     CHANNEL[ 2: 0153] 0405 1 5.0 704.98 3.91 12.67 24.35 n/a 0.000
3625
3626
     READ STORM 6.0
3627
     [ Ptot= 76.80 mm ]
3628
     fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
3629
    remark:
       24hr_SCS_TypeII_5YR
3630
     ** CALIB NASHYD 0109 1 5.0 29.94 1.72 12.33 40.42 0.53 0.000
3631
3632
     [CN=82.0]
3633
     [N = 3.0:Tp 0.48]
3634
3635
    CHANNEL[ 2: 0109] 0181 1 5.0 29.94 1.71 12.42 40.42 n/a 0.000
3636
3637
    READ STORM 6.0
    [ Ptot= 76.80 mm ]
3638
3639
       28c-a059-23eeb0
3640
    remark:
       3641
3642
     ** CALIB NASHYD 0108 1 5.0 26.66 1.41 12.33 37.00 0.48 0.000
3643
    [CN=79.0]
3644
    [N = 3.0:Tp 0.47]
3645
3646
     CHANNEL[ 2: 0108] 0180 1 5.0 26.66 1.40 12.42 37.00 n/a 0.000
3647
3648
     READ STORM 6.0
3649
     [ Ptot= 76.80 mm ]
```

fname :

```
28c-a059-23eeb0
3651
     remark:
        24hr_SCS_TypeII_5YR
3652
3653
     ** CALIB NASHYD 2021 1 5.0 15.42 0.98 12.33 45.56 0.59 0.000
3654
     [CN=86.0]
3655
     [N = 3.0:Tp 0.50]
3656
     ADD [ 0180+ 0181] 0036 3 5.0 56.60 3.11 12.42 38.81 n/a 0.000
3657
3658
     ADD [ 0036+ 2021] 0036 1 5.0 72.02 4.08 12.42 40.25 n/a 0.000
3659
3660
3661
     CHANNEL[ 2: 0036] 0155 1 5.0 72.02 3.28 12.67 40.24 n/a 0.000
3662
     READ STORM 6.0
3663
3664
     [ Ptot= 76.80 mm ]
3665
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
     remark:
3666
        24hr_SCS_TypeII_5YR
3667
3668
     ** CALIB NASHYD 0203 1 5.0 145.67 3.76 13.17 37.01 0.48 0.000
3669
     [CN=79.0]
3670
     [N = 3.0:Tp 1.22]
3671
3672
     ADD [ 0155+ 0203] 0041 3 5.0 217.69 6.66 12.83 38.08 n/a 0.000
3673
3674
     ADD [ 0041+ 0405] 0041 1 5.0 922.67 10.47 12.75 27.59 n/a 0.000
3675
3676
     READ STORM 6.0
3677
     [ Ptot= 76.80 mm ]
3678
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3679
     remark:
        24hr_SCS_TypeII_5YR
3680
3681
     ** CALIB NASHYD 1091 1 5.0 46.17 1.08 13.08 31.11 0.41 0.000
     [CN=73.0]
3682
3683
     [N = 3.0:Tp 1.08]
3684
3685
     READ STORM 6.0
3686
     [ Ptot= 76.80 mm ]
3687
     fname :
        28c-a059-23eeb0
3688
     remark:
        24hr_SCS_TypeII_5YR
3689
3690
     ** CALIB NASHYD 0110 1 5.0 37.30 1.47 12.58 37.01 0.48 0.000
3691
     [CN=79.0]
3692
     [N = 3.0:Tp 0.70]
3693
3694
     READ STORM 6.0
3695
     [ Ptot= 76.80 mm ]
3696
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3697
     remark:
        24hr_SCS_TypeII_5YR
3698
     ** CALIB NASHYD 0111 1 5.0 89.88 3.14 12.75 37.01 0.48 0.000
3699
```

```
3700
     [CN=79.0]
3701
     [N = 3.0:Tp 0.82]
3702
3703
     CHANNEL[ 2: 0111] 0182 1 5.0 89.88 3.13 12.75 37.01 n/a 0.000
3704
3705
     READ STORM 6.0
3706
     [ Ptot= 76.80 mm ]
3707
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
3708
     remark:
        24hr_SCS_TypeII_5YR
3709
3710
     ** CALIB NASHYD 0113 1 5.0 53.66 2.44 12.42 34.91 0.45 0.000
3711
     [CN=77.0]
     [N = 3.0:Tp 0.53]
3712
3713
3714
     CHANNEL[ 2: 0113] 0183 1 5.0 53.66 2.44 12.42 34.91 n/a 0.000
3715
3716
     ADD [ 0182+ 0183] 0184 3 5.0 143.54 5.30 12.58 36.22 n/a 0.000
3717
3718
     CHANNEL[ 2: 0184] 0185 1 5.0 143.54 5.19 12.67 36.22 n/a 0.000
3719
3720
     READ STORM 6.0
3721
     [ Ptot= 76.80 mm ]
3722
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3723
     remark:
        24hr_SCS_TypeII_5YR
3724
3725
     * CALIB STANDHYD 0112 1 5.0 59.34 8.99 12.08 62.76 0.82 0.000
3726
     [I%= 7.0:S%= 2.00]
3727
3728
     ** Reservoir
3729
     OUTFLOW: 0501 1 5.0 59.34 5.15 12.33 62.76 n/a 0.000
3730
3731
     READ STORM 6.0
3732
     [ Ptot= 76.80 mm ]
3733
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3734
     remark:
        24hr_SCS_TypeII_5YR
3735
3736
     * CALIB STANDHYD 0202 1 5.0 12.71 1.34 12.08 42.12 0.55 0.000
3737
     [I%= 0.0:S%= 2.00]
3738
3739
     ADD [ 0185+ 0202] 0046 3 5.0 156.25 5.48 12.67 36.70 n/a 0.000
3740
3741
     ADD [ 0046+ 0501] 0046 1 5.0 215.59 10.06 12.42 43.87 n/a 0.000
3742
3743
     READ STORM 6.0
     [ Ptot= 76.80 mm ]
3744
3745
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3746
     remark:
        24hr_SCS_TypeII_5YR
3747
3748
     * CALIB STANDHYD 0205 1 5.0 37.27 4.79 12.08 53.57 0.70 0.000
3749
     [I%= 6.0:S%= 2.00]
3750
3751
     ** Reservoir
```

OUTFLOW: 0502 1 5.0 37.27 4.41 12.17 52.84 n/a 0.000

```
3753
3754
     READ STORM 6.0
3755
     [ Ptot= 76.80 mm ]
3756
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3757
     remark:
        24hr_SCS_TypeII_5YR
3758
     * CALIB NASHYD 0115 1 5.0 18.78 0.38 12.42 16.47 0.21 0.000
3759
3760
     [CN=61.0]
3761
     [N = 3.0:Tp 0.50]
3762
3763
     CHANNEL[ 2: 0115] 0187 1 5.0 18.78 0.38 12.42 16.47 n/a 0.000
3764
3765
     READ STORM 6.0
3766
     [ Ptot= 76.80 mm ]
     fname :
3767
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3768
     remark:
        24hr_SCS_TypeII_5YR
3769
3770
     * CALIB NASHYD 0116 1 5.0 4.35 0.24 12.00 19.65 0.26 0.000
3771
     [CN=65.0]
3772
     [N = 3.0:Tp 0.15]
3773
3774
     ADD [ 0116+ 0187] 0013 3 5.0 23.13 0.47 12.17 17.07 n/a 0.000
3775
3776
     CHANNEL[ 2: 0013] 0188 1 5.0 23.13 0.47 12.25 17.07 n/a 0.000
3777
3778
     READ STORM 6.0
     [ Ptot= 76.80 mm ]
3779
3780
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3781
     remark:
        24hr_SCS_TypeII_5YR
3782
3783
     * CALIB STANDHYD 0114 1 5.0 8.29 0.61 12.08 32.35 0.42 0.000
3784
     [I%= 2.0:S%= 2.00]
3785
     READ STORM 6.0
3786
3787
     [ Ptot= 76.80 mm ]
     fname :
3788
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3789
     remark:
        24hr_SCS_TypeII_5YR
3790
     * CALIB STANDHYD 0206 1 5.0 20.02 4.52 12.00 76.72 1.00 0.000
3791
3792
     [I%= 8.0:S%= 2.00]
3793
3794
     ** Reservoir
3795
     OUTFLOW: 0503 1 5.0 20.02 1.57 12.17 76.66 n/a 0.000
3796
3797
     ADD [ 0114+ 0503] 0190 3 5.0 28.31 2.13 12.17 63.68 n/a 0.000
3798
3799
     CHANNEL[ 2: 0190] 0191 1 5.0 28.31 2.11 12.17 63.68 n/a 0.000
3800
3801
     READ STORM 6.0
3802
     [ Ptot= 76.80 mm ]
3803
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
```

```
3804
     remark:
        24hr_SCS_TypeII_5YR
3805
3806
     * CALIB STANDHYD 0207 1 5.0 89.51 15.61 12.08 76.53 1.00 0.000
3807
     [1\% = 7.8:S\% = 2.00]
3808
3809
     ADD [ 0188+ 0191] 0192 3 5.0 51.44 2.57 12.17 42.72 n/a 0.000
3810
3811
     ADD [ 0192+ 0207] 0192 1 5.0 140.95 17.91 12.08 64.19 n/a 0.000
3812
3813
     CHANNEL[ 2: 0192] 0193 1 5.0 140.95 16.16 12.17 64.19 n/a 0.000
3814
     READ STORM 6.0
3815
3816
     [ Ptot= 76.80 mm ]
     fname :
3817
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3818
     remark:
        24hr_SCS_TypeII_5YR
3819
3820
     ** CALIB NASHYD 0117 1 5.0 13.20 0.55 12.33 29.37 0.38 0.000
3821
     [CN=71.0]
3822
     [N = 3.0:Tp 0.46]
3823
3824
     CHANNEL[ 2: 0117] 0189 1 5.0 13.20 0.54 12.42 29.37 n/a 0.000
3825
3826
     READ STORM 6.0
3827
     [ Ptot= 76.80 mm ]
3828
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3829
     remark:
        24hr_SCS_TypeII_5YR
3830
     ** CALIB NASHYD 0118 1 5.0 37.96 1.26 12.58 30.22 0.39 0.000
3831
3832
     [CN=72.0]
     [N = 3.0:Tp 0.65]
3833
3834
3835
     ADD [ 0118+ 0189] 0014 3 5.0 51.16 1.79 12.50 30.00 n/a 0.000
3836
     ADD [ 0014+ 0193] 0014 1 5.0 192.11 17.50 12.17 55.09 n/a 0.000
3837
3838
3839
     CHANNEL[ 2: 0014] 0160 1 5.0 192.11 17.23 12.25 55.09 n/a 0.000
3840
3841
     READ STORM 6.0
3842
     [ Ptot= 76.80 mm ]
3843
     fname :
        28c-a059-23eeb0
3844
     remark:
        24hr_SCS_TypeII_5YR
3845
     * CALIB STANDHYD 0119 1 5.0 2.06 0.36 12.00 57.18 0.74 0.000
3846
3847
     [I%= 3.0:S%= 2.00]
3848
3849
     READ STORM 6.0
3850
     [ Ptot= 76.80 mm ]
3851
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
3852
     remark:
        24hr_SCS_TypeII_5YR
3853
     * CALIB STANDHYD 0120 1 5.0 10.13 0.58 12.08 26.19 0.34 0.000
3854
```

```
3855
     [I%= 1.0:S%= 2.00]
3856
3857
     ADD [ 0119+ 0120] 0162 3 5.0 12.19 0.88 12.08 31.43 n/a 0.000
3858
3859
     ADD [ 0162+ 0160] 0162 1 5.0 204.30 17.79 12.25 53.68 n/a 0.000
3860
3861
    READ STORM 6.0
3862
    [ Ptot= 76.80 mm ]
3863
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
3864
    remark:
       24hr_SCS_TypeII_5YR
3865
3866
     * CALIB NASHYD 0122 1 5.0 68.03 1.28 13.92 37.01 0.48 0.000
     [CN=79.0]
3867
3868
     [N = 3.0:Tp 1.83]
3869
3870
    READ STORM 6.0
3871
     [ Ptot= 76.80 mm ]
3872
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
3873
     remark:
       24hr_SCS_TypeII_5YR
3874
    * CALIB NASHYD 0121 1 5.0 61.39 0.66 14.08 22.66 0.30 0.000
3875
3876
    [CN=62.0]
3877
     [N = 3.0:Tp 1.90]
3878
3879
     CHANNEL[ 2: 0121] 0164 1 5.0 61.39 0.54 14.83 22.63 n/a 0.000
3880
3881
     ADD [ 0122+ 0164] 0163 3 5.0 129.42 1.77 14.17 30.19 n/a 0.000
3882
3883
     READ STORM 6.0
3884
     [ Ptot= 76.80 mm ]
3885
     fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
3886
     remark:
       24hr_SCS_TypeII_5YR
3887
3888
     * CALIB NASHYD 0123 1 5.0 90.79 0.72 15.25 22.66 0.30 0.000
3889
     [CN=62.0]
3890
     [N = 3.0:Tp 2.84]
3891
3892
    READ STORM 6.0
3893
    [ Ptot= 76.80 mm ]
3894
    fname :
       28c-a059-23eeb0
3895
    remark:
       24hr_SCS_TypeII_5YR
3896
3897
     * CALIB NASHYD 0124 1 5.0 162.88 2.54 14.50 37.01 0.48 0.000
3898
     [CN=79.0]
3899
     [N = 3.0:Tp 2.34]
3900
    READ STORM 6.0
3901
3902
     [ Ptot= 76.80 mm ]
3903
     fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
3904
    remark:
       24hr_SCS_TypeII_5YR
```

```
3905
3906
            * CALIB NASHYD 0125 1 5.0 35.90 1.49 12.83 45.56 0.59 0.000
3907
            [CN=86.0]
3908
            [N = 3.0:Tp 0.89]
3909
3910
           READ STORM 6.0
3911
           [ Ptot= 76.80 mm ]
3912
          fname :
                   C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
                   28c-a059-23eeb0
3913
           remark:
                   3914
3915
            * CALIB NASHYD 0126 1 5.0 251.54 7.29 12.67 29.37 0.38 0.000
            [CN=71.0]
3916
            [N = 3.0:Tp 0.75]
3917
3918
3919
            CHANNEL[ 2: 0126] 0194 1 5.0 251.54 7.16 12.83 29.37 n/a 0.000
3920
3921
            READ STORM 6.0
3922
            [ Ptot= 76.80 mm ]
3923
            fname :
                   C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
                   28c-a059-23eeb0
3924
            remark:
                   24hr_SCS_TypeII_5YR
3925
3926
           ** CALIB NASHYD 0127 1 5.0 49.37 2.18 12.67 42.90 0.56 0.000
3927
           [CN=84.0]
3928
            [N = 3.0:Tp 0.75]
3929
3930
            ADD [ 0127+ 0194] 0025 3 5.0 300.91 9.31 12.75 31.59 n/a 0.000
3931
3932
            READ STORM 6.0
3933
            [ Ptot= 76.80 mm ]
3934
            fname :
                    \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{247c2b1d-b035-4b6b6b6885e} \\ \texttt{247c2b1d-b035-4b6b6885e} \\ \texttt{247c2b1d-b035-4b6b6885e} \\ \texttt{247c2b1d-b035-4b6b6885e} \\ \texttt{247c2b1d-b035-4b6b6885e} \\ \texttt{247c2b1d-b035-4b6b6885e} \\ \texttt{247c2b1d-b035-4b6b6885e} \\ \texttt{247c2b1d-b035-4b68686e} \\ \texttt{247c2b1d-b035-4b68686e} \\ \texttt{247c2b1d-b035-4b68686e} \\ \texttt{247c2b1d-b035-4b68686e} \\ \texttt{247c2b1d-b035-4b68686e} \\ \texttt{247c2b1d-b035-4b6866e} \\ \texttt{247c2b1d-b035-4b68666e} \\ \texttt{247c2b1d-b035-4b6866e} \\ \texttt{247c2b1d-b035-4
                   28c-a059-23eeb0
3935
            remark:
                   24hr_SCS_TypeII_5YR
3936
3937
            ** CALIB NASHYD 0128 1 5.0 39.54 1.27 12.58 30.22 0.39 0.000
3938
            [CN=72.0]
3939
            [N = 3.0:Tp 0.68]
3940
3941
            CHANNEL[ 2: 0128] 0195 1 5.0 39.54 1.27 12.67 30.22 n/a 0.000
3942
3943
           READ STORM 6.0
3944
           [ Ptot= 76.80 mm ]
3945
                   28c-a059-23eeb0
3946
            remark:
                   3947
3948
            ** CALIB NASHYD 0129 1 5.0 19.93 0.82 12.42 31.10 0.40 0.000
3949
            [CN=73.0]
3950
            [N = 3.0:Tp 0.51]
3951
3952
            ADD [ 0129+ 0195] 0026 3 5.0 59.47 2.02 12.58 30.52 n/a 0.000
3953
3954
            READ STORM 6.0
3955
            [ Ptot= 76.80 mm ]
```

fname :

```
C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
3957
     remark:
       24hr_SCS_TypeII_5YR
3958
3959
     ** CALIB NASHYD 0130 1 5.0 39.01 1.35 12.50 30.22 0.39 0.000
3960
    [CN=72.0]
3961
     [N = 3.0:Tp 0.62]
3962
     CHANNEL[ 2: 0130] 0196 1 5.0 39.01 1.34 12.58 30.22 n/a 0.000
3963
3964
     READ STORM 6.0
3965
3966
     [ Ptot= 76.80 mm ]
     fname :
3967
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
3968
     remark:
       24hr_SCS_TypeII_5YR
3969
3970
     ** CALIB NASHYD 0131 1 5.0 27.50 0.89 12.58 31.11 0.41 0.000
3971
     [CN=73.0]
3972
     [N = 3.0:Tp 0.70]
3973
     READ STORM 6.0
3974
3975
     [ Ptot= 76.80 mm ]
3976
    fname :
       28c-a059-23eeb0
3977
    remark:
       24hr_SCS_TypeII_5YR
3978
3979
     ** CALIB NASHYD 0134 1 5.0 18.71 0.62 12.58 31.11 0.40 0.000
3980
     [CN=73.0]
     [N = 3.0:Tp 0.69]
3981
3982
3983
    READ STORM 6.0
3984
     [ Ptot= 76.80 mm ]
3985
     fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
3986
    remark:
       24hr_SCS_TypeII_5YR
3987
3988
     ** CALIB NASHYD 0132 1 5.0 24.34 0.99 12.42 31.10 0.40 0.000
3989
     [CN=73.0]
3990
     [N = 3.0:Tp 0.52]
3991
3992
    CHANNEL[ 2: 0132] 0197 1 5.0 24.34 0.99 12.42 31.10 n/a 0.000
3993
3994
    READ STORM 6.0
3995
    [ Ptot= 76.80 mm ]
3996
     fname :
       28c-a059-23eeb0
3997
     remark:
        24hr_SCS_TypeII_5YR
3998
3999
     * CALIB STANDHYD 0133 1 5.0 119.59 7.54 12.17 33.50 0.44 0.000
4000
     [I%= 2.0:S%= 2.00]
4001
4002
     CHANNEL[ 2: 0133] 0198 1 5.0 119.59 7.48 12.17 33.50 n/a 0.000
4003
     ADD [ 0134+ 0197] 0170 3 5.0 43.05 1.58 12.50 31.11 n/a 0.000
4004
4005
```

```
4006
     ADD [ 0170+ 0198] 0170 1 5.0 162.64 8.72 12.25 32.86 n/a 0.000
4007
4008
     CHANNEL[ 2: 0170] 0199 1 5.0 162.64 8.79 12.25 32.86 n/a 0.000
4009
4010
     ADD [ 0131+ 0196] 0027 3 5.0 66.51 2.23 12.58 30.59 n/a 0.000
4011
4012
     ADD [ 0027+ 0199] 0027 1 5.0 229.15 10.49 12.25 32.20 n/a 0.000
4013
4014
    READ STORM 6.0
4015
     [ Ptot= 76.80 mm ]
4016
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
     remark:
4017
        24hr_SCS_TypeII_5YR
4018
4019
     * CALIB NASHYD 0135 1 5.0 35.98 1.12 12.58 29.37 0.38 0.000
     [CN=71.0]
4020
4021
     [N = 3.0:Tp 0.68]
4022
4023
     READ STORM 6.0
4024
     [ Ptot= 76.80 mm ]
4025
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
4026
     remark:
        24hr_SCS_TypeII_5YR
4027
    * CALIB NASHYD 0136 1 5.0 36.35 1.13 12.50 26.18 0.34 0.000
4028
4029
    [CN=67.0]
4030
     [N = 3.0:Tp 0.58]
4031
4032
     CHANNEL[ 2: 0136] 0209 1 5.0 36.35 1.13 12.50 26.18 n/a 0.000
4033
4034
     READ STORM 6.0
4035
     [ Ptot= 76.80 mm ]
4036
     fname :
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
        28c-a059-23eeb0
4037
     remark:
        24hr_SCS_TypeII_5YR
4038
4039
     * CALIB NASHYD 0137 1 5.0 701.30 6.72 16.58 34.91 0.45 0.000
4040
     [CN=77.0]
4041
     [N = 3.0:Tp 4.01]
4042
     ADD [ 0137+ 0209] 0033 3 5.0 737.65 6.83 16.50 34.48 n/a 0.000
4043
4044
4045
     CHANNEL[ 2: 0033] 0172 1 5.0 737.65 6.81 16.75 34.48 n/a 0.000
4046
4047
    READ STORM 6.0
    [ Ptot= 76.80 mm ]
4048
4049
     fname :
        28c-a059-23eeb0
4050
     remark:
        24hr_SCS_TypeII_5YR
4051
4052
     * CALIB NASHYD 0138 1 5.0 357.11 7.52 13.25 31.11 0.41 0.000
4053
     [CN=73.0]
4054
     [N = 3.0:Tp 1.24]
4055
4056
     ADD [ 0138+ 0172] 0034 3 5.0 1094.76 10.81 13.58 33.38 n/a 0.000
4057
```

READ STORM 6.0

```
4059
    [ Ptot= 76.80 mm ]
4060
    fname :
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
4061
     remark:
       24hr_SCS_TypeII_5YR
4062
4063
    * CALIB NASHYD 1061 1 5.0 10.80 0.45 12.25 25.40 0.33 0.000
4064
    [CN=70.0]
4065
    [N = 3.0:Tp 0.37]
4066
     READ STORM 6.0
4067
     [ Ptot= 76.80 mm ]
4068
     fname :
4069
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
4070
     remark:
       24hr_SCS_TypeII_5YR
4071
     * CALIB NASHYD 1111 1 5.0 6.70 0.31 12.08 19.14 0.25 0.000
4072
4073
    [CN=64.0]
4074
     [N = 3.0:Tp 0.20]
4075
4076
     READ STORM 6.0
4077
     [ Ptot= 76.80 mm ]
     fname :
4078
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
4079
    remark:
       24hr_SCS_TypeII_5YR
4080
4081
     * CALIB NASHYD 1271 1 5.0 29.00 0.87 12.50 26.95 0.35 0.000
     [CN=68.0]
4082
     [N = 3.0:Tp 0.63]
4083
4084
4085
     READ STORM 6.0
4086
     [ Ptot= 76.80 mm ]
4087
     fname :
       28c-a059-23eeb0
4088
     remark:
       24hr_SCS_TypeII_5YR
4089
     * CALIB NASHYD 1031 1 5.0 14.40 0.58 12.25 25.91 0.34 0.000
4090
4091
     [CN=71.0]
4092
     [N = 3.0:Tp 0.40]
4093
4094
    READ STORM 6.0
    [ Ptot= 76.80 mm ]
4095
4096
       C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
       28c-a059-23eeb0
4097
     remark:
       4098
4099
     * CALIB NASHYD 1172 1 5.0 3.20 0.31 12.00 27.80 0.36 0.000
4100
     [CN=70.0]
4101
     [N = 3.0:Tp 0.10]
4102
4103
     READ STORM 6.0
4104
     [ Ptot= 76.80 mm ]
     fname :
4105
        C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
```

28c-a059-23eeb0

```
4106
               remark:
                         24hr_SCS_TypeII_5YR
4107
4108
                * CALIB NASHYD 1252 1 5.0 7.60 0.70 12.00 28.16 0.37 0.000
4109
                [CN=70.0]
4110
                [N = 3.0:Tp 0.12]
4111
               READ STORM 6.0
4112
4113
               [ Ptot= 76.80 mm ]
4114
                          \texttt{C:} \\ \texttt{Users} \\ \texttt{egom} \\ \texttt{AppData} \\ \texttt{Local} \\ \texttt{Temp} \\ \texttt{5d3ab7ea-cbea-469d-8254-9051b6b5885e} \\ \texttt{247c2b1d-b035-4b6b6b6885e} \\ \texttt{247c2b1d-b035-4b6b6885e} \\ \texttt{247c2b1d-b035-4b6885e} \\ \texttt{247c2b1d-b035-4b686} \\ 
                         28c-a059-23eeb0
4115
                remark:
                         24hr_SCS_TypeII_5YR
4116
4117
                * CALIB NASHYD 1353 1 5.0 13.10 0.19 12.83 16.47 0.21 0.000
4118
                [CN=61.0]
                [N = 3.0:Tp 0.80]
4119
4120
4121
                READ STORM 6.0
4122
                [ Ptot= 76.80 mm ]
4123
                fname :
                         C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
                         28c-a059-23eeb0
4124
                remark:
                         24hr_SCS_TypeII_5YR
4125
              * CALIB NASHYD 1354 1 5.0 6.50 0.09 12.67 14.93 0.19 0.000
4126
4127
              [CN=60.0]
4128
               [N = 3.0:Tp 0.68]
4129
                READ STORM 6.0
4130
                [ Ptot= 76.80 mm ]
4131
                 fname :
4132
                         C:\Users\egom\AppData\Local\Temp\5d3ab7ea-cbea-469d-8254-9051b6b5885e\247c2b1d-b035-4
                         28c-a059-23eeb0
4133
                remark:
                         24hr_SCS_TypeII_5YR
4134
4135
                * CALIB NASHYD 1151 1 5.0 18.78 0.69 12.25 22.01 0.29 0.000
4136
                [CN=61.0]
4137
                [N = 3.0:Tp 0.35]
4138
4139
```



Appendix C

Flat Bottom Grassed Swales Calculations

- Water Quality Analysis 4 Hour 25mm Chicago Storm
- Erosion Potential Analysis 100 year Design Storm

(GWP 2008-21-00) Highway 400 - Highway 404 - The Bradford Bypass Link BBP North Side - Water Quality Analysis - 4 Hour 25mm Chicago Storm

Runoff Coefficient	Pavement	Ditch + Others	
С	0.95	0.4	<- C10-Year

Design Storm	Rai	infall Parameters		Based on 209	7 MTO IDF Curves
Design Storm	Α	В	С	Depth (mm) ->	25
4 hour 25 mm Chicago	254.071	0.04	0.676		•

	Chaina	age (m)	Curals In all			Runoff Calcula	ations						Wa	ater Quality	Analysis					MECF	Criteria Sa	atisfied?
Swale I.D.	(Along	BBP)	Swale length	Time of Concentration	Pavement	Ditch + Others	AxC	Intensity	Flow		Flat-E	ottom Grassed	Swale Charac	teristics			Veloc	ity Calculation		D ≤ 0.25 m	V ≤ 0.50 m/s	$Q \le 0.15 \text{ m}^3/\text{s}$
	From Sta.	To Sta.	(m)	(min)	A (ha)	A (ha)	(ha)	(mm/hr)	(m ³ /s)	Manning's n	Slope (%)	Base Width (m)	Depth (m)	Left (1:V)	Right (1:V)	A (m ³ /m)	P (m)	Wet. Cap. (m ³ /s)	V (m/s)		(Yes / No)	
SW1	12+015	12+000	15	10.0	0.05	0.05	0.070	53.4	0.010	0.045	0.84	1.20	0.04	3	3	0.05	1.44	0.011	0.22	Yes	Yes	Yes
	12+390	12+260	130	10.0	0.36	0.40	0.504	53.4	0.075	0.045	0.80	1.20	0.12	3	3	0.18	1.94	0.075	0.41	Yes	Yes	Yes
	12+440	12+480	40	10.0	0.13	0.12	0.172	53.4	0.026	0.045	0.60	1.20	0.07	3	3	0.10	1.64	0.025	0.26	Yes	Yes	Yes
	12+550	12+720	170	10.0	0.47	0.53	0.659	53.4	0.099	0.045	0.70	1.20	0.14	3	3	0.23	2.10	0.099	0.43	Yes	Yes	Yes
	12+820	12+880	60	10.0	0.14	0.19	0.211	53.4	0.032	0.045	0.80	1.20	0.07	3	3	0.10	1.66	0.032	0.31	Yes	Yes	Yes
	12+980	13+100	120	10.0	0.29	0.37	0.422	53.4	0.063	0.045	0.85	1.20	0.10	3	3	0.16	1.86	0.063	0.40	Yes	Yes	Yes
	13+400	13+420	20	10.0	0.05	0.06	0.070	53.4	0.011	0.045	0.64	1.20	0.04	3	3	0.06	1.47	0.012	0.20	Yes	Yes	Yes
	13+660	13+710	50	10.0	0.12	0.16	0.176	53.4	0.026	0.045	0.65	1.20	0.07	3	3	0.10	1.63	0.026	0.27	Yes	Yes	Yes
	13+740	13+720	20	10.0	0.05	0.06	0.070	53.4	0.011	0.045	0.60	1.20	0.04	3	3	0.06	1.48	0.011	0.20	Yes	Yes	Yes
	13+820	13+780	40	10.0	0.10	0.12	0.141	53.4	0.021	0.045	0.74	1.20	0.06	3	3	0.08	1.57	0.021	0.26	Yes	Yes	Yes
	13+820	13+920	100	10.0	0.24	0.31	0.352	53.4	0.053	0.045	0.50	1.20	0.11	3	3	0.17	1.90	0.053	0.31	Yes	Yes	Yes
	13+960	14+060	100	10.0	0.24	0.31	0.352	53.4	0.053	0.045	0.45	1.20	0.11	3	3	0.17	1.92	0.053	0.30	Yes	Yes	Yes
	14+100	14+140	40	10.0	0.10	0.12	0.141	53.4	0.021	0.045	0.60	1.20	0.06	3	3	0.09	1.59	0.021	0.25	Yes	Yes	Yes
	14+260	14+200	60	10.0	0.14	0.19	0.211	53.4	0.032	0.045	0.60	1.20	0.08	3	3	0.11	1.70	0.032	0.28	Yes	Yes	Yes
	14+280	14+260	20	10.0	0.05	0.06	0.070	53.4	0.011	0.045	0.68	1.20	0.04	3	3	0.06	1.47	0.012	0.21	Yes	Yes	Yes
	14+350	14+600	250	10.0	0.60	0.78	0.880	53.4	0.132	0.045	0.60	1.20	0.17	3	3	0.30	2.30	0.132	0.44	Yes	Yes	Yes
	14+700	14+720	20	10.0	0.05	0.06	0.070	53.4	0.011	0.045	0.96	1.20	0.04	3	3	0.05	1.44	0.011	0.23	Yes	Yes	Yes
	15+135	15+165	30	10.0	0.10	0.09	0.129	53.4	0.019	0.045	0.30	1.20	0.07	3	3	0.10	1.65	0.019	0.19	Yes	Yes	Yes
	15+660	15+680	20	10.0	0.06	0.06	0.086	53.4	0.013	0.045	0.90	1.20	0.04	3	3	0.06	1.46	0.013	0.24	Yes	Yes	Yes
	15+840	15+880	40	10.0	0.10	0.12	0.141	53.4	0.021	0.045	0.60	1.20	0.06	3	3	0.09	1.59	0.021	0.25	Yes	Yes	Yes
	16+320	16+340	20	10.0	0.06	0.06	0.078	53.4	0.012	0.045	0.56	1.20	0.05	3	3	0.06	1.50	0.013	0.20	Yes	Yes	Yes
	16+440	16+500	60	10.0	0.17	0.19	0.233	53.4	0.035	0.045	0.75	1.20	0.08	3	3	0.11	1.69	0.035	0.31	Yes	Yes	Yes
	16+740	16+840	100	10.0	0.24	0.31	0.352	53.4	0.053	0.045	0.30	1.20	0.13	3	3	0.20	2.01	0.053	0.26	Yes	Yes	Yes
	16+940	17+025	85	10.0	0.20	0.26	0.299	53.4	0.045	0.045	0.33	1.20	0.11	3	3	0.17	1.91	0.045	0.26	Yes	Yes	Yes
	21+295	21+160	135	10.0	0.32	0.42	0.475	53.4	0.071	0.045	0.16	1.20	0.18	3	3	0.31	2.32	0.071	0.23	Yes	Yes	Yes
	21+300	21+480	180	10.0	0.43	0.56	0.634	53.4	0.095	0.045	0.16	1.20	0.21	3	3	0.38	2.52	0.095	0.25	Yes	Yes	Yes
	21+600	21+480	120	10.0	0.29	0.37	0.422	53.4	0.063	0.045	0.50	1.20	0.12	3	3	0.19	1.97	0.063	0.33	Yes	Yes	Yes
	21+680	21+600	80	10.0	0.19	0.25	0.282	53.4	0.042	0.045	0.30	1.20	0.11	3	3	0.17	1.91	0.042	0.24	Yes	Yes	Yes
	21+820	21+680	140	10.0	0.34	0.43	0.493	53.4	0.074	0.045	0.20	1.20	0.17	3	3	0.29	2.28	0.074	0.25	Yes	Yes	Yes
	21+820	22+020	200	10.0	0.48	0.62	0.704	53.4	0.105	0.045	0.25	1.20	0.19	3	3	0.35	2.43	0.105	0.30	Yes	Yes	Yes
	22+020	22+280	260	10.0	0.62	0.81	0.915	53.4	0.137	0.045	0.22	1.20	0.23	3	3	0.44	2.66	0.137	0.31	Yes	Yes	Yes
	23+160	22+305	855	10.0	3.08	2.65	3.984	53.4	0.596	0.045	0.20	1.20	0.49	3	3	1.32	4.32	0.596	0.45	No	Yes	No
	23+860	23+250	610	10.0	2.20	1.89	2.843	53.4	0.425	0.045	0.25	1.20	0.40	3	3	0.95	3.71	0.425	0.45	No	Yes	No
	24+380	24+575	195	10.0	0.54	0.60	0.756	53.4	0.113	0.045	0.45	1.20	0.17	3	3	0.30	2.29	0.113	0.38	Yes	Yes	Yes
	24+755	24+840	85	10.0	0.24	0.26	0.329	53.4	0.049	0.045	0.35	1.20	0.12	3	3	0.18	1.94	0.049	0.27	Yes	Yes	Yes
	24+840	24+915	75	10.0	0.24	0.23	0.323	53.4	0.048	0.045	0.50	1.20	0.10	3	3	0.16	1.86	0.048	0.30	Yes	Yes	Yes
	25+125	25+155	30	10.0	0.11	0.09	0.140	53.4	0.021	0.045	0.35	1.20	0.07	3	3	0.10	1.66	0.021	0.21	Yes	Yes	Yes
	25+255	25+210	45	10.0	0.16	0.14	0.210	53.4	0.031	0.045	0.70	1.20	0.07	3	3	0.11	1.67	0.031	0.29	Yes	Yes	Yes
	25+355	25+335	20	10.0	0.06	0.06	0.078	53.4	0.012	0.045	0.45	1.20	0.05	3	3	0.06	1.49	0.011	0.18	Yes	Yes	Yes
	25+305	25+335	30	10.0	0.08	0.09	0.116	53.4	0.017	0.045	0.45	1.20	0.06	3	3	0.08	1.57	0.016	0.20	Yes	Yes	Yes

(GWP 2008-21-00) Highway 400 - Highway 404 - The Bradford Bypass Link BBP North Side - Erosion Potential Analysis - 100-Year Design Storm

Runoff Coefficient	Pavement	Ditch + Others	1
С	0.95	0.50	<- C100-Year = C10-Year x 1.25

Design Storm	Ra	infall Parameters		Based on 2097 MTO IDF Curves
Design Storm	Α	В	С	
100-Year Design Storm	844.220	0.052	0.688	

Swale I.D.	Chaina	ige (m)	Swale length			Runoff Calcula	tions						Eros	sion Potentia	al Analysis					MECP Criteria Satisfied?
Owale I.D.				Time of Concentration	Pavement	Ditch + Others	AxC	Intensity	Flow		Flat-E	Sottom Grassed	Swale Charact	eristics			Veloc	ity Calculation		V ₁₀₀ ≤ 1.50 m/s
	From Sta.	To Sta.	(m)	(min)	A (ha)	A (ha)	(ha)	(mm/hr)	(m ³ /s)	Manning's n	Slope (%)	Base Width (m)	Depth (m)	Left (1:V)	Right (1:V)	A (m ³ /m)	P (m)	Wet. Cap. (m ³ /s)	V (m/s)	(Yes / No)
SW1	12+015	12+000	15	10.0	0.05	0.05	0.075	172.5	0.036	0.045	0.84	1.20	0.08	3	3	0.11	1.69	0.036	0.33	Yes
	12+390	12+260	130	10.0	0.36	0.40	0.544	172.5	0.263	0.045	0.80	1.20	0.23	3	3	0.44	2.67	0.263	0.60	Yes
	12+440	12+480	40	10.0	0.13	0.12	0.185	172.5	0.089	0.045	0.60	1.20	0.14	3	3	0.23	2.09	0.089	0.39	Yes
	12+550	12+720	170	10.0	0.47	0.53	0.712	172.5	0.344	0.045	0.70	1.20	0.28	3	3	0.56	2.95	0.345	0.61	Yes
	12+820	12+880	60	10.0	0.14	0.19	0.230	172.5	0.111	0.045	0.80	1.20	0.15	3	3	0.24	2.12	0.111	0.46	Yes
	12+980	13+100	120	10.0	0.29	0.37	0.460	172.5	0.222	0.045	0.85	1.20	0.21	3	3	0.38	2.52	0.221	0.58	Yes
	13+400	13+420	20	10.0	0.05	0.06	0.077	172.5	0.037	0.045	0.64	1.20	0.08	3	3	0.12	1.73	0.037	0.30	Yes
	13+660	13+710	50	10.0	0.12	0.16	0.192	172.5	0.093	0.045	0.65	1.20	0.14	3	3	0.23	2.09	0.093	0.41	Yes
	13+740	13+720	20	10.0	0.05	0.06	0.077	172.5	0.037	0.045	0.60	1.20	0.09	3	3	0.12	1.74	0.037	0.30	Yes
	13+820	13+780	40	10.0	0.10	0.12	0.153	172.5	0.074	0.045	0.74	1.20	0.12	3	3	0.19	1.95	0.074	0.40	Yes
	13+820	13+920	100	10.0	0.24	0.31	0.383	172.5	0.185	0.045	0.50	1.20	0.22	3	3	0.41	2.58	0.185	0.46	Yes
	13+960	14+060	100	10.0	0.24	0.31	0.383	172.5	0.185	0.045	0.45	1.20	0.22	3	3	0.42	2.62	0.184	0.44	Yes
	14+100	14+140	40	10.0	0.10	0.12	0.153	172.5	0.074	0.045	0.60	1.20	0.13	3	3	0.20	2.00	0.074	0.37	Yes
	14+260	14+200	60	10.0	0.14	0.19	0.230	172.5	0.111	0.045	0.60	1.20	0.16	3	3	0.26	2.20	0.111	0.42	Yes
	14+280	14+260	20	10.0	0.05	0.06	0.077	172.5	0.037	0.045	0.68	1.20	0.08	3	3	0.12	1.72	0.037	0.31	Yes
	14+350	14+600	250	10.0	0.60	0.78	0.958	172.5	0.463	0.045	0.60	1.20	0.33	3	3	0.73	3.31	0.463	0.63	Yes
	14+700	14+720	20	10.0	0.05	0.06	0.077	172.5	0.037	0.045	0.96	1.20	0.07	3	3	0.11	1.67	0.037	0.35	Yes
	15+135	15+165	30	10.0	0.10	0.09	0.138	172.5	0.067	0.045	0.30	1.20	0.15	3	3	0.24	2.12	0.067	0.28	Yes
	15+660	15+680	20	10.0	0.06	0.06	0.092	172.5	0.045	0.045	0.90	1.20	0.08	3	3	0.12	1.73	0.044	0.36	Yes
	15+840	15+880	40	10.0	0.10	0.12	0.153	172.5	0.074	0.045	0.60	1.20	0.13	3	3	0.20	2.00	0.074	0.37	Yes
	16+320	16+340	20	10.0	0.06	0.06	0.084	172.5	0.040	0.045	0.56	1.20	0.09	3	3	0.13	1.78	0.040	0.30	Yes
	16+440	16+500	60	10.0	0.17	0.19	0.251	172.5	0.121	0.045	0.75	1.20	0.16	3	3	0.26	2.19	0.121	0.47	Yes
	16+740	16+840	100	10.0	0.24	0.31	0.383	172.5	0.185	0.045	0.30	1.20	0.25	3	3	0.48	2.78	0.184	0.38	Yes
	16+940	17+025	85	10.0	0.20	0.26	0.326	172.5	0.157	0.045	0.33	1.20	0.22	3	3	0.42	2.61	0.156	0.38	Yes
	21+295	21+160	135	10.0	0.32	0.42	0.517	172.5	0.250	0.045	0.16	1.20	0.34	3	3	0.76	3.36	0.250	0.33	Yes
	21+300	21+480	180	10.0	0.43	0.56	0.689	172.5	0.333	0.045	0.16	1.20	0.39	3	3	0.94	3.69	0.333	0.36	Yes
	21+600	21+480	120	10.0	0.29	0.37	0.460	172.5	0.222	0.045	0.50	1.20	0.24	3	3	0.46	2.72	0.222	0.48	Yes
	21+680	21+600	80	10.0	0.19	0.25	0.306	172.5	0.148	0.045	0.30	1.20	0.22	3	3	0.41	2.60	0.147	0.36	Yes
	21+820	21+680	140	10.0	0.34	0.43	0.536	172.5	0.259	0.045	0.20	1.20	0.33	3	3	0.72	3.28	0.259	0.36	Yes
	21+820	22+020	200	10.0	0.48	0.62	0.766	172.5	0.370	0.045	0.25	1.20	0.37	3	3	0.86	3.55	0.370	0.43	Yes
	22+020	22+280	260	10.0	0.62	0.81	0.996	172.5	0.481	0.045	0.22	1.20	0.43	3	3	1.09	3.95	0.480	0.44	Yes
	23+160	22+305	855	10.0	3.08	2.65	4.249	172.5	2.053	0.045	0.20	1.20	0.87	3	3	3.31	6.69	2.053	0.62	Yes
	23+860	23+250	610	10.0	2.20	1.89	3.032	172.5	1.465	0.045	0.25	1.20	0.71	3	3	2.37	5.69	1.465	0.62	Yes
	24+380	24+575	195	10.0	0.54	0.60	0.816	172.5	0.394	0.045	0.45	1.20	0.33	3	3	0.73	3.29	0.395	0.54	Yes
	24+755	24+840	85	10.0	0.24	0.26	0.356	172.5	0.172	0.045	0.35	1.20	0.23	3	3	0.44	2.66	0.172	0.39	Yes
	24+840	24+915	75	10.0	0.24	0.23	0.346	172.5	0.172	0.045	0.50	1.20	0.21	3	3	0.38	2.51	0.167	0.44	Yes
	25+125	25+155	30	10.0	0.24	0.23	0.149	172.5	0.072	0.045	0.35	1.20	0.14	3	3	0.30	2.12	0.072	0.44	Yes
	25+255	25+210	45	10.0	0.11	0.09	0.149	172.5	0.108	0.045	0.33	1.20	0.14	3	3	0.24	2.12	0.072	0.31	Yes
	25+355	25+335	20	10.0	0.06	0.14	0.224	172.5	0.040	0.045	0.70	1.20	0.10	3	3	0.23	1.81	0.109	0.44	Yes
	25+305	25+335	30	10.0	0.08	0.00	0.064	172.5	0.040	0.045	0.45	1.20	0.10	3	3	0.14	1.98	0.040	0.20	Yes

(GWP 2008-21-00) Highway 400 - Highway 404 - The Bradford Bypass Link BBP South Side - Water Quality Analysis - 4 Hour 25mm Chicago Storm

Runoff Coefficient	Pavement	Ditch + Others	
С	0.95	0.4	<- C10-Yea

Design Storm	Ra	infall Parameters		Based on 209	7 MTO IDF Curves
Design Storm	Α	В	С	Depth (mm) ->	25
4 hour 25 mm Chicago	254.071	0.04	0.676		

	Chaina	ige (m)	Curala langeth			Runoff Calcula	itions						W	ater Quality	Analysis					MECI	Criteria Sa	itisfied?
Swale I.D.	(Along	BBP)	Swale length	Time of Concentration	Pavement	Ditch + Others	AxC	Intensity	Flow		Flat-l	Bottom Grassed	Swale Charac	teristics			Veloc	city Calculation		D ≤ 0.25 m	V ≤ 0.50 m/s	$Q \le 0.15 \text{ m}^3/\text{s}$
	From Sta.	To Sta.	(m)	(min)	A (ha)	A (ha)	(ha)	(mm/hr)	(m ³ /s)	Manning's n	Slope (%)	Base Width (m)	Depth (m)	Left (1:V)	Right (1:V)	A (m ³ /m)	P (m)	Wet. Cap. (m3/s)	V (m/s)		(Yes / No)	
SW1	11+760	11+720	40	10.0	0.11	0.12	0.155	53.4	0.023	0.045	0.35	1.20	0.08	3	3	0.11	1.68	0.023	0.21	Yes	Yes	Yes
	12+100	12+120	20	10.0	0.05	0.06	0.070	53.4	0.011	0.045	0.92	1.20	0.04	3	3	0.05	1.44	0.011	0.23	Yes	Yes	Yes
	12+300	12+260	40	10.0	0.10	0.12	0.141	53.4	0.021	0.045	0.90	1.20	0.06	3	3	0.08	1.55	0.022	0.28	Yes	Yes	Yes
	12+440	12+540	100	10.0	0.28	0.31	0.388	53.4	0.058	0.045	0.60	1.20	0.11	3	3	0.17	1.90	0.058	0.34	Yes	Yes	Yes
	12+560	13+740	180	10.0	0.65	0.56	0.839	53.4	0.125	0.045	0.60	1.20	0.17	3	3	0.29	2.27	0.126	0.44	Yes	Yes	Yes
	12+740	13+080	340	10.0	1.22	1.05	1.584	53.4	0.237	0.045	0.60	1.20	0.24	3	3	0.45	2.70	0.237	0.52	Yes	No	No
	13+340	13+380	40	10.0	0.11	0.12	0.155	53.4	0.023	0.045	0.50	1.20	0.07	3	3	0.10	1.63	0.023	0.24	Yes	Yes	Yes
	13+460	13+500	40	10.0	0.11	0.12	0.155	53.4	0.023	0.045	0.30	1.20	0.08	3	3	0.11	1.70	0.023	0.20	Yes	Yes	Yes
	13+710	13+670	40	10.0	0.10	0.12	0.141	53.4	0.021	0.045	0.40	1.20	0.07	3	3	0.10	1.64	0.021	0.21	Yes	Yes	Yes
	13+760	13+740	20	10.0	0.05	0.06	0.070	53.4	0.011	0.045	0.40	1.20	0.05	3	3	0.07	1.52	0.012	0.18	Yes	Yes	Yes
	13+780	14+020	240	10.0	0.58	0.74	0.845	53.4	0.126	0.045	0.50	1.20	0.18	3	3	0.31	2.32	0.125	0.41	Yes	Yes	Yes
	14+320	14+220	100	10.0	0.24	0.31	0.352	53.4	0.053	0.045	0.45	1.20	0.11	3	3	0.17	1.92	0.053	0.30	Yes	Yes	Yes
	14+350	14+600	250	10.0	0.60	0.78	0.880	53.4	0.132	0.045	0.60	1.20	0.17	3	3	0.30	2.30	0.132	0.44	Yes	Yes	Yes
	14+880	14+980	100	10.0	0.28	0.31	0.388	53.4	0.058	0.045	0.40	1.20	0.12	3	3	0.19	1.98	0.058	0.30	Yes	Yes	Yes
	15+100	15+260	160	10.0	0.52	0.50	0.689	53.4	0.103	0.045	0.35	1.20	0.18	3	3	0.30	2.31	0.103	0.34	Yes	Yes	Yes
	16+320	16+340	20	10.0	0.06	0.06	0.078	53.4	0.012	0.045	0.97	1.20	0.04	3	3	0.05	1.43	0.011	0.23	Yes	Yes	Yes
	16+380	16+550	170	10.0	0.47	0.53	0.659	53.4	0.099	0.045	0.36	1.20	0.17	3	3	0.29	2.28	0.099	0.34	Yes	Yes	Yes
	16+760	16+875	115	10.0	0.28	0.36	0.405	53.4	0.061	0.045	0.34	1.20	0.13	3	3	0.21	2.04	0.061	0.29	Yes	Yes	Yes
	16+980	17+025	45	10.0	0.11	0.14	0.158	53.4	0.024	0.045	0.45	1.20	0.07	3	3	0.10	1.66	0.024	0.23	Yes	Yes	Yes
	21+280	21+140	140	10.0	0.34	0.43	0.493	53.4	0.074	0.045	0.20	1.20	0.17	3	3	0.29	2.28	0.074	0.25	Yes	Yes	Yes
	21+280	21+480	200	10.0	0.48	0.62	0.704	53.4	0.105	0.045	0.15	1.20	0.22	3	3	0.42	2.61	0.105	0.25	Yes	Yes	Yes
	21+660	21+480	180	10.0	0.43	0.56	0.634	53.4	0.095	0.045	0.35	1.20	0.17	3	3	0.29	2.27	0.096	0.33	Yes	Yes	Yes
	21+800	21+660	140	10.0	0.34	0.43	0.493	53.4	0.074	0.045	0.20	1.20	0.17	3	3	0.29	2.28	0.074	0.25	Yes	Yes	Yes
	21+800	21+880	80	10.0	0.19	0.25	0.282	53.4	0.042	0.045	0.25	1.20	0.12	3	3	0.18	1.94	0.042	0.23	Yes	Yes	Yes
	21+880	21+940	60	10.0	0.14	0.19	0.211	53.4	0.032	0.045	0.25	1.20	0.10	3	3	0.15	1.84	0.032	0.21	Yes	Yes	Yes
	22+020	21+940	80	10.0	0.19	0.25	0.282	53.4	0.042	0.045	0.60	1.20	0.09	3	3	0.14	1.79	0.043	0.31	Yes	Yes	Yes
	22+080	22+265	185	10.0	0.44	0.57	0.651	53.4	0.097	0.045	0.30	1.20	0.18	3	3	0.31	2.32	0.096	0.32	Yes	Yes	Yes
	22+445	22+285	160	10.0	0.44	0.50	0.620	53.4	0.093	0.045	0.35	1.20	0.17	3	3	0.28	2.25	0.093	0.33	Yes	Yes	Yes
	22+880	22+485	395	10.0	1.27	1.22	1.700	53.4	0.254	0.045	0.15	1.20	0.35	3	3	0.79	3.41	0.254	0.32	No	Yes	No
	22+920	22+990	70	10.0	0.17	0.22	0.246	53.4	0.037	0.045	0.15	1.20	0.13	3	3	0.20	2.00	0.037	0.19	Yes	Yes	Yes
	23+900	23+345	555	10.0	1.79	1.72	2.389	53.4	0.357	0.045	0.30	1.20	0.35	3	3	0.78	3.40	0.357	0.46	No	Yes	No
	24+380	24+560	180	10.0	0.43	0.56	0.634	53.4	0.095	0.045	0.45	1.20	0.16	3	3	0.26	2.19	0.094	0.36	Yes	Yes	Yes
	24+620	24+700	80	10.0	0.19	0.25	0.282	53.4	0.042	0.045	0.40	1.20	0.10	3	3	0.16	1.86	0.043	0.27	Yes	Yes	Yes
	24+770	24+880	110	10.0	0.31	0.34	0.426	53.4	0.064	0.045	0.40	1.20	0.13	3	3	0.21	2.03	0.064	0.31	Yes	Yes	Yes
	24+895	24+965	70	10.0	0.23	0.22	0.301	53.4	0.045	0.045	0.55	1.20	0.10	3	3	0.15	1.82	0.045	0.31	Yes	Yes	Yes
	25+090	25+155	65	10.0	0.21	0.20	0.280	53.4	0.042	0.045	0.25	1.20	0.12	3	3	0.18	1.94	0.042	0.23	Yes	Yes	Yes
	25+260	25+200	60	10.0	0.19	0.19	0.258	53.4	0.039	0.045	0.30	1.20	0.11	3	3	0.16	1.88	0.039	0.24	Yes	Yes	Yes
	25+315	25+295	20	10.0	0.06	0.06	0.086	53.4	0.013	0.045	0.45	1.20	0.05	3	3	0.07	1.52	0.013	0.19	Yes	Yes	Yes

(GWP 2008-21-00) Highway 400 - Highway 404 - The Bradford Bypass Link BBP South Side - Erosion Potential Analysis - 100-Year Design Storm

 Runoff Coefficient
 Pavement
 Ditch + Others

 C
 0.95
 0.50

<- C100-Year = C10-Year x 1.25</p>

ı	_			
ľ				
ı	Di 04	Ra	infall Parameters	Based on 2097 MTO IDF Curves

Danima Starm	Ra	infall Parameters		Based on 2097 MTO IDF Curves
Design Storm	Α	В	С	
100-Year Design Storm	844.220	0.052	0.688	

Swale I.D.	Chaina	ge (m)	Swale length			Runoff Calcula	tions						Eros	ion Potenti	al Analysis					MECP Criteria Satisfied?
Swale I.D.				Time of Concentration	Pavement	Ditch + Others	AxC	Intensity	Flow		Flat-B	ottom Grassed	Swale Charact	eristics			Veloc	ity Calculation		V ₁₀₀ ≤ 1.50 m/s
	From Sta.	To Sta.	(m)	(min)	A (ha)	A (ha)	(ha)	(mm/hr)	(m³/s)	Manning's n	Slope (%)	Base Width (m)	Depth (m)	Left (1:V)	Right (1:V)	A (m ³ /m)	P (m)	Wet. Cap. (m ³ /s)	V (m/s)	(Yes / No)
SW1	11+760	11+720	40	10.0	0.11	0.12	0.167	172.5	0.081	0.045	0.80	1.20	0.12	3	3	0.19	1.98	0.081	0.42	Yes
	12+100	12+120	20	10.0	0.05	0.06	0.077	172.5	0.037	0.045	0.92	1.20	0.08	3	3	0.11	1.68	0.037	0.34	Yes
	12+300	12+260	40	10.0	0.10	0.12	0.153	172.5	0.074	0.045	0.90	1.20	0.11	3	3	0.17	1.91	0.074	0.43	Yes
	12+440	12+540	100	10.0	0.28	0.31	0.419	172.5	0.202	0.045	0.60	1.20	0.22	3	3	0.40	2.58	0.202	0.50	Yes
	12+560	12+740	180	10.0	0.65	0.56	0.895	172.5	0.432	0.045	0.60	1.20	0.32	3	3	0.70	3.24	0.432	0.62	Yes
	12+740	13+080	340	10.0	1.22	1.05	1.690	172.5	0.816	0.045	0.60	1.20	0.44	3	3	1.11	3.99	0.817	0.73	Yes
	13+340	13+380	40	10.0	0.11	0.12	0.167	172.5	0.081	0.045	0.50	1.20	0.14	3	3	0.23	2.09	0.081	0.36	Yes
	13+460	13+500	40	10.0	0.11	0.12	0.167	172.5	0.081	0.045	0.30	1.20	0.16	3	3	0.27	2.22	0.081	0.30	Yes
	13+710	13+670	40	10.0	0.10	0.12	0.153	172.5	0.074	0.045	0.40	1.20	0.14	3	3	0.23	2.09	0.074	0.32	Yes
	13+760	13+740	20	10.0	0.05	0.06	0.077	172.5	0.037	0.045	0.40	1.20	0.10	3	3	0.14	1.81	0.037	0.26	Yes
	13+780	14+020	240	10.0	0.58	0.74	0.919	172.5	0.444	0.045	0.50	1.20	0.34	3	3	0.76	3.36	0.444	0.58	Yes
	14+320	14+220	100	10.0	0.24	0.31	0.383	172.5	0.185	0.045	0.45	1.20	0.22	3	3	0.42	2.62	0.184	0.44	Yes
	14+350	14+600	250	10.0	0.60	0.78	0.958	172.5	0.463	0.045	0.60	1.20	0.33	3	3	0.73	3.31	0.463	0.63	Yes
	14+880	14+980	100	10.0	0.28	0.31	0.419	172.5	0.202	0.045	0.40	1.20	0.24	3	3	0.47	2.73	0.202	0.43	Yes
	15+100	15+260	160	10.0	0.52	0.50	0.738	172.5	0.357	0.045	0.35	1.20	0.34	3	3	0.74	3.32	0.357	0.48	Yes
	16+320	16+340	20	10.0	0.06	0.06	0.084	172.5	0.040	0.045	0.97	1.20	0.08	3	3	0.11	1.69	0.040	0.36	Yes
	16+380	16+550	170	10.0	0.47	0.53	0.712	172.5	0.344	0.045	0.36	1.20	0.33	3	3	0.71	3.27	0.345	0.48	Yes
	16+760	16+875	115	10.0	0.28	0.36	0.440	172.5	0.213	0.045	0.34	1.20	0.26	3	3	0.51	2.84	0.212	0.41	Yes
	16+980	17+025	45	10.0	0.11	0.14	0.172	172.5	0.083	0.045	0.45	1.20	0.15	3	3	0.24	2.12	0.083	0.35	Yes
	21+280	21+140	140	10.0	0.34	0.43	0.536	172.5	0.259	0.045	0.20	1.20	0.33	3	3	0.72	3.27	0.258	0.36	Yes
	21+280	21+480	200	10.0	0.48	0.62	0.766	172.5	0.370	0.045	0.15	1.20	0.42	3	3	1.03	3.86	0.370	0.36	Yes
	21+660	21+480	180	10.0	0.43	0.56	0.689	172.5	0.333	0.045	0.35	1.20	0.32	3	3	0.70	3.25	0.334	0.47	Yes
	21+800	21+660	140	10.0	0.34	0.43	0.536	172.5	0.259	0.045	0.20	1.20	0.33	3	3	0.72	3.27	0.258	0.36	Yes
	21+800	21+880	80	10.0	0.19	0.25	0.306	172.5	0.148	0.045	0.25	1.20	0.23	3	3	0.44	2.67	0.147	0.33	Yes
	21+880	21+940	60	10.0	0.14	0.19	0.230	172.5	0.111	0.045	0.25	1.20	0.20	3	3	0.36	2.46	0.111	0.31	Yes
	22+020	21+940	80	10.0	0.19	0.25	0.306	172.5	0.148	0.045	0.60	1.20	0.18	3	3	0.32	2.37	0.147	0.46	Yes
	22+080	22+265	185	10.0	0.44	0.57	0.709	172.5	0.342	0.045	0.30	1.20	0.34	3	3	0.76	3.36	0.342	0.45	Yes
	22+445	22+285	160	10.0	0.44	0.50	0.670	172.5	0.324	0.045	0.35	1.20	0.32	3	3	0.69	3.22	0.325	0.47	Yes
	22+880	22+485	395	10.0	1.27	1.22	1.822	172.5	0.880	0.045	0.15	1.20	0.63	3	3	1.96	5.20	0.880	0.45	Yes
	22+920	22+990	70	10.0	0.17	0.22	0.268	172.5	0.130	0.045	0.15	1.20	0.25	3	3	0.48	2.77	0.130	0.27	Yes
	23+900	23+345	555	10.0	1.79	1.72	2.561	172.5	1.237	0.045	0.30	1.20	0.63	3	3	1.95	5.19	1.236	0.63	Yes
	24+380	24+560	180	10.0	0.43	0.56	0.689	172.5	0.333	0.045	0.45	1.20	0.30	3	3	0.64	3.12	0.333	0.52	Yes
	24+620	24+700	80	10.0	0.19	0.25	0.306	172.5	0.148	0.045	0.40	1.20	0.21	3	3	0.37	2.50	0.147	0.40	Yes
	24+770	24+880	110	10.0	0.31	0.34	0.460	172.5	0.222	0.045	0.40	1.20	0.25	3	3	0.50	2.81	0.222	0.44	Yes
	24+895	24+965	70	10.0	0.23	0.22	0.323	172.5	0.156	0.045	0.55	1.20	0.19	3	3	0.35	2.43	0.156	0.45	Yes
	25+090	25+155	65	10.0	0.21	0.20	0.300	172.5	0.145	0.045	0.25	1.20	0.23	3	3	0.44	2.66	0.146	0.33	Yes
	25+260	25+200	60	10.0	0.19	0.19	0.277	172.5	0.134	0.045	0.30	1.20	0.21	3	3	0.39	2.53	0.134	0.35	Yes
	25+200	25+295	20	10.0	0.19	0.19	0.092	172.5	0.134	0.045	0.30	1.20	0.10	3	3	0.39	1.85	0.134	0.33	Yes

(GWP 2008-21-00) Highway 400 - Highway 404 - The Bradford Bypass Link BBP Interchanges at Highway 400 & Highway 404 - Water Quality Analysis - 4 Hour 25mm Chicago Storm

July 19, 2023

 Runoff Coefficient
 Pavement
 Ditch + Others

 C
 0.95
 0.4

<- C10-Y</p>

Design Storm	Ra	infall Parameters		Based on 209	7 MTO IDF Curves
Design Storm	Α	В	С	Depth (mm) ->	25
4 hour 25 mm Chicago	254.071	0.04	0.676		

	T			Thou 20 him chicago		Runoff Calcula	tions	•					\A/	ater Quality	Analysis					MECE	Criteria Sa	ticfied?
Swale I.D.		age (m) ı Ramp)	Swale length	Time of Concentration	Pavement	l	l	Intensity	Flow		Flat-F	Bottom Grassed			Allalysis		Veloc	ity Calculation				
	From Sta.	To Sta.	(m)	Time of Concentration (min)	A (ha)	Ditch + Others A (ha)	AxC (ha)	Intensity (mm/hr)	(m ³ /s)	Manning's n	Slope (%)		Depth (m)	Left (1:V)	Right (1:V)	A (m ³ /m)	P (m)	Wet. Cap. (m ³ /s)	V (m/s)	D = 0.20 III	(Yes / No)	Q = 0.15 111 /3
Proposed Bradford Byp	ass & Highway	400 Interchange		T			I	1	, ,		1	1	I	1	I	1		, , ,	I	1		
E-N Ramp, Right Ditch	10+400	10+120	280	10.0	0.18	0.70	0.446	53.4	0.067	0.045	1.00	1.20	0.10	3	3	0.16	1.86	0.067	0.43	Yes	Yes	Yes
E-N Ramp, Left Ditch	10+400	10+140	260	10.0	0.12	0.65	0.377	53.4	0.056	0.045	1.00	1.20	0.09	3	3	0.14	1.79	0.056	0.40	Yes	Yes	Yes
E-N Ramp, Right Ditch	10+660	10+580	80	10.0	0.05	0.20	0.128	53.4	0.019	0.045	0.30	1.20	0.07	3	3	0.10	1.65	0.019	0.19	Yes	Yes	Yes
E-N Ramp, Right Ditch	10+680	10+700	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.70	1.20	0.03	3	3	0.03	1.37	0.005	0.16	Yes	Yes	Yes
E-N Ramp, Left Ditch	10+680	10+700	20	10.0	0.01	0.05	0.029	53.4	0.004	0.045	0.64	1.20	0.02	3	3	0.03	1.35	0.004	0.14	Yes	Yes	Yes
E-N Ramp, Right Ditch	10+820	10+740	80	10.0	0.05	0.20	0.128	53.4	0.019	0.045	0.36	1.20	0.07	3	3	0.10	1.63	0.019	0.20	Yes	Yes	Yes
E-N Ramp, Right Ditch	10+910	10+840	70	10.0	0.04	0.18	0.112	53.4	0.017	0.045	0.40	1.20	0.06	3	3	0.09	1.60	0.018	0.20	Yes	Yes	Yes
E-N Ramp, Left Ditch	10+860	10+880	20	10.0	0.01	0.05	0.029	53.4	0.004	0.045	0.90	1.20	0.02	3	3	0.03	1.34	0.004	0.16	Yes	Yes	Yes
E-N Ramp, Right Ditch	11+080	11+000	80	10.0	0.05	0.20	0.128	53.4	0.019	0.045	0.80	1.20	0.05	3	3	0.07	1.54	0.019	0.26	Yes	Yes	Yes
E-S Ramp, Left Ditch	10+360	10+345	15	10.0	0.01	0.04	0.022	53.4	0.003	0.045	0.76	1.20	0.02	3	3	0.03	1.33	0.003	0.14	Yes	Yes	Yes
E-S Ramp, Right Ditch	10+420	10+380	40	10.0	0.03	0.10	0.064	53.4	0.010	0.045	0.50	1.20	0.04	3	3	0.06	1.47	0.010	0.18	Yes	Yes	Yes
E-S Ramp, Left Ditch	10+400	10+380	20	10.0	0.01	0.05	0.029	53.4	0.004	0.045	1.01	1.20	0.02	3	3	0.03	1.33	0.004	0.17	Yes	Yes	Yes
E-S Ramp, Left Ditch	10+400	10+420	20	10.0	0.01	0.05	0.029	53.4	0.004	0.045	0.32	1.20	0.03	3	3	0.04	1.40	0.005	0.12	Yes	Yes	Yes
E-S Ramp, Right Ditch	10+540	11+000	460	10.0	0.29	1.15	0.733	53.4	0.110	0.045	0.75	1.20	0.15	3	3	0.24	2.14	0.110	0.45	Yes	Yes	Yes
E-S Ramp, Left Ditch	10+540	10+710	170	10.0	0.08	0.43	0.247	53.4	0.037	0.045	0.75	1.20	0.08	3	3	0.12	1.71	0.038	0.32	Yes	Yes	Yes
E-S Ramp, Left Ditch	10+810	10+715	95	10.0	0.05	0.24	0.138	53.4	0.021	0.045	0.75	1.20	0.06	3	3	0.08	1.57	0.021	0.26	Yes	Yes	Yes
E-S Ramp, Left Ditch	10+820	10+900	80	10.0	0.04	0.20	0.116	53.4	0.017	0.045	0.75	1.20	0.05	3	3	0.07	1.53	0.017	0.25	Yes	Yes	Yes
E-S Ramp, Left Ditch	10+960	10+980	20	10.0	0.01	0.05	0.029	53.4	0.004	0.045	0.68	1.20	0.02	3	3	0.03	1.35	0.004	0.14	Yes	Yes	Yes
E-S Ramp, Right Ditch	11+260	11+120	140	10.0	0.09	0.35	0.223	53.4	0.033	0.045	0.40	1.20	0.09	3	3	0.13	1.77	0.033	0.25	Yes	Yes	Yes
E-S Ramp, Left Ditch	11+320	11+160	160	10.0	0.08	0.40	0.232	53.4	0.035	0.045	0.50	1.20	0.09	3	3	0.13	1.75	0.035	0.27	Yes	Yes	Yes
E-S Ramp, Right Ditch	11+420	11+440	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.36	1.20	0.03	3	3	0.04	1.41	0.006	0.13	Yes	Yes	Yes
E-S Ramp, Left Ditch	11+440	11+420	20	10.0	0.01	0.05	0.029	53.4	0.004	0.045	1.00	1.20	0.02	3	3	0.03	1.33	0.004	0.16	Yes	Yes	Yes
E-S Ramp, Right Ditch	12+120	12+140	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.77	1.20	0.03	3	3	0.03	1.36	0.005	0.16	Yes	Yes	Yes
E-S Ramp, Right Ditch	12+320	12+190	130	10.0	0.08	0.33	0.207	53.4	0.031	0.045	0.31	1.20	0.09	3	3	0.14	1.79	0.031	0.22	Yes	Yes	Yes
E-S Ramp, Left Ditch	12+265	12+245	20	10.0	0.01	0.05	0.029	53.4	0.004	0.045	0.36	1.20	0.03	3	3	0.04	1.38	0.004	0.12	Yes	Yes	Yes
E-S Ramp, Right Ditch	12+390	12+415	25	10.0	0.02	0.06	0.040	53.4	0.006	0.045	0.75	1.20	0.03	3	3	0.04	1.38	0.006	0.17	Yes	Yes	Yes
E-S Ramp, Right Ditch	12+475	12+490	15	10.0	0.01	0.04	0.024	53.4	0.004	0.045	0.75	1.20	0.02	3	3	0.03	1.34	0.004	0.15	Yes	Yes	Yes
N-E Ramp, Right Ditch	10+000	10+190	190	10.0	0.12	0.48	0.303	53.4	0.045	0.045	0.35	1.20	0.11	3	3	0.17	1.90	0.045	0.26	Yes	Yes	Yes
N-E Ramp, Left Ditch	10+260	10+355	95	10.0	0.05	0.24	0.138	53.4	0.021	0.045	0.70	1.20	0.06	3	3	0.08	1.58	0.022	0.26	Yes	Yes	Yes
N-E Ramp, Right Ditch	10+300	10+320	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.61	1.20	0.03	3	3	0.03	1.37	0.005	0.15	Yes	Yes	Yes
N-E Ramp, Right Ditch	10+440	10+420	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.50	1.20	0.03	3	3	0.04	1.38	0.005	0.14	Yes	Yes	Yes
N-E Ramp, Right Ditch	10+540	10+520	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.14	1.20	0.04	3	3	0.06	1.47	0.005	0.09	Yes	Yes	Yes
N-E Ramp, Right Ditch	10+560	10+640	80	10.0	0.05	0.20	0.128	53.4	0.019	0.045	0.35	1.20	0.07	3	3	0.10	1.63	0.019	0.20	Yes	Yes	Yes
			1	1		1		1		1		1	1	1	1		1		1			4

(GWP 2008-21-00) Highway 400 - Highway 404 - The Bradford Bypass Link BBP Interchanges at Highway 400 & Highway 404 - Water Quality Analysis - 4 Hour 25mm Chicago Storm

Runoff Coefficient	Pavement	Ditch + Others	
С	0.95	0.4	<- C10-Year

Design Storm	Ra	infall Parameters		Based on 209	7 MTO IDF Curves
Design Storm	Α	В	С	Depth (mm) ->	25
4 hour 25 mm Chicago	254.071	0.04	0.676		

	Chaina	age (m)				Runoff Calcula	itions						W	ater Quality	Analysis					MECP	Criteria Sa	atisfied?
Swale I.D.		Ramp)	Swale length	Time of Concentration	Pavement	Ditch + Others	AxC	Intensity	Flow		Flat-E	Bottom Grassed					Veloci	ity Calculation		D ≤ 0.25 m		$Q \le 0.15 \text{ m}^3/\text{s}$
	From Sta.	To Sta.	(m)	(min)	A (ha)	A (ha)	(ha)	(mm/hr)	(m ³ /s)	Manning's n	Slope (%)	Base Width (m)	Depth (m)	Left (1:V)	Right (1:V)	A (m ³ /m)	P (m)	Wet. Cap. (m ³ /s)	V (m/s)		(Yes / No)	
N-E Ramp, Left Ditch	10+540	10+580	40	10.0	0.02	0.10	0.058	53.4	0.009	0.045	0.12	1.20	0.06	3	3	0.09	1.59	0.009	0.11	Yes	Yes	Yes
N-E Ramp, Left Ditch	11+020	10+990	30	10.0	0.01	0.08	0.044	53.4	0.007	0.045	0.65	1.20	0.03	3	3	0.04	1.40	0.007	0.17	Yes	Yes	Yes
N-E Ramp, Left Ditch	11+460	11+235	225	10.0	0.11	0.56	0.327	53.4	0.049	0.045	0.40	1.20	0.11	3	3	0.17	1.91	0.049	0.28	Yes	Yes	Yes
S-E Ramp, Right Ditch	10+140	10+020	120	10.0	0.08	0.30	0.191	53.4	0.029	0.045	0.40	1.20	0.08	3	3	0.12	1.73	0.029	0.24	Yes	Yes	Yes
S-E Ramp, Right Ditch	10+220	10+200	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.90	1.20	0.02	3	3	0.03	1.35	0.005	0.17	Yes	Yes	Yes
S-E Ramp, Right Ditch	10+380	10+360	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.81	1.20	0.03	3	3	0.03	1.36	0.005	0.16	Yes	Yes	Yes
S-E Ramp, Left Ditch	10+380	10+340	40	10.0	0.02	0.10	0.058	53.4	0.009	0.045	0.80	1.20	0.03	3	3	0.05	1.42	0.009	0.20	Yes	Yes	Yes
S-E Ramp, Left Ditch	10+510	10+480	30	10.0	0.01	0.08	0.044	53.4	0.007	0.045	0.35	1.20	0.04	3	3	0.05	1.45	0.008	0.14	Yes	Yes	Yes
S-E Ramp, Right Ditch	10+520	10+500	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.77	1.20	0.03	3	3	0.03	1.36	0.005	0.16	Yes	Yes	Yes
S-E Ramp, Right Ditch	10+560	10+540	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.89	1.20	0.02	3	3	0.03	1.36	0.005	0.17	Yes	Yes	Yes
S-E Ramp, Right Ditch	10+720	10+580	140	10.0	0.09	0.35	0.223	53.4	0.033	0.045	0.40	1.20	0.09	3	3	0.13	1.77	0.033	0.25	Yes	Yes	Yes
S-E Ramp, Right Ditch	10+760	10+740	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.70	1.20	0.03	3	3	0.03	1.37	0.005	0.16	Yes	Yes	Yes
S-E Ramp, Right Ditch	10+760	10+780	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.30	1.20	0.04	3	3	0.05	1.42	0.006	0.12	Yes	Yes	Yes
S-E Ramp, Right Ditch	10+820	10+785	35	10.0	0.02	0.09	0.056	53.4	0.008	0.045	0.30	1.20	0.04	3	3	0.06	1.48	0.008	0.14	Yes	Yes	Yes
S-E Ramp, Right Ditch	10+980	10+860	120	10.0	0.08	0.30	0.191	53.4	0.029	0.045	0.30	1.20	0.09	3	3	0.13	1.78	0.029	0.22	Yes	Yes	Yes
Proposed Bradford Bypa	ass & Highway 4	04 Interchange										· 	I		1	1	1 1		T	ı		
N-W Ramp, Right Ditch	10+080	10+100	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.27	1.20	0.03	3	3	0.05	1.42	0.005	0.12	Yes	Yes	Yes
N-W Ramp, Right Ditch	10+120	10+180	60	10.0	0.04	0.15	0.096	53.4	0.014	0.045	0.40	1.20	0.06	3	3	0.08	1.55	0.014	0.19	Yes	Yes	Yes
N-W Ramp, Right Ditch	10+180	10+220	40	10.0	0.03	0.10	0.064	53.4	0.010	0.045	0.45	1.20	0.04	3	3	0.06	1.48	0.010	0.17	Yes	Yes	Yes
N-W Ramp, Right Ditch	10+240	10+260	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.45	1.20	0.03	3	3	0.04	1.40	0.006	0.14	Yes	Yes	Yes
N-W Ramp, Right Ditch	10+620	10+700	80	10.0	0.05	0.20	0.128	53.4	0.019	0.045	0.80	1.20	0.05	3	3	0.07	1.54	0.019	0.26	Yes	Yes	Yes
N-W Ramp, Right Ditch	10+700	10+765	65	10.0	0.04	0.16	0.104	53.4	0.015	0.045	0.05	1.20	0.10	3	3	0.16	1.86	0.015	0.10	Yes	Yes	Yes
W-N Ramp, Right Ditch	10+320	10+295	25	10.0	0.02	0.06	0.040	53.4	0.006	0.045	0.35	1.20	0.04	3	3	0.05	1.42	0.006	0.13	Yes	Yes	Yes
W-N Ramp, Left Ditch	10+260	10+340	80	10.0	0.04	0.20	0.116	53.4	0.017	0.045	0.50	1.20	0.06	3	3	0.08	1.57	0.017	0.22	Yes	Yes	Yes
W-N Ramp, Left Ditch	10+380	10+340	40	10.0	0.02	0.10	0.058	53.4	0.009	0.045	0.50	1.20	0.04	3	3	0.05	1.46	0.010	0.18	Yes	Yes	Yes
W-N Ramp, Left Ditch	11+120	11+170	50	10.0	0.02	0.13	0.073	53.4	0.011	0.045	0.70	1.20	0.04	3	3	0.06	1.46	0.012	0.21	Yes	Yes	Yes
W-N Ramp, Right Ditch	11+180	11+160	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.20	1.20	0.04	3	3	0.05	1.45	0.006	0.11	Yes	Yes	Yes
W-N Ramp, Right Ditch	11+280	11+340	60	10.0	0.04	0.15	0.096	53.4	0.014	0.045	0.35	1.20	0.06	3	3	0.08	1.57	0.014	0.18	Yes	Yes	Yes
W-N Ramp, Left Ditch	11+360	11+425	65	10.0	0.03	0.16	0.094	53.4	0.014	0.045	0.30	1.20	0.06	3	3	0.08	1.57	0.013	0.17	Yes	Yes	Yes
W-N Ramp, Left Ditch	11+425	11+500	75	10.0	0.04	0.19	0.109	53.4	0.016	0.045	0.30	1.20	0.06	3	3	0.09	1.61	0.016	0.18	Yes	Yes	Yes
W-N Ramp, Right Ditch	11+400	11+500	100	10.0	0.06	0.25	0.159	53.4	0.024	0.045	0.55	1.20	0.07	3	3	0.10	1.63	0.024	0.25	Yes	Yes	Yes
S-W Ramp, Right Ditch	10+000	10+040	40	10.0	0.03	0.10	0.064	53.4	0.010	0.045	0.53	1.20	0.04	3	3	0.06	1.47	0.010	0.18	Yes	Yes	Yes
S-W Ramp, Right Ditch	10+140	10+220	80	10.0	0.05	0.20	0.128	53.4	0.019	0.045	0.63	1.20	0.06	3	3	0.08	1.57	0.019	0.24	Yes	Yes	Yes
S-W Ramp, Right Ditch	10+355	10+400	45	10.0	0.03	0.11	0.072	53.4	0.011	0.045	0.10	1.20	0.07	3	3	0.10	1.66	0.011	0.11	Yes	Yes	Yes
S-W Ramp, Right Ditch	10+440	10+400	40	10.0	0.03	0.10	0.064	53.4	0.010	0.045	0.20	1.20	0.06	3	3	0.08	1.57	0.011	0.14	Yes	Yes	Yes

(GWP 2008-21-00) Highway 400 - Highway 404 - The Bradford Bypass Link BBP Interchanges at Highway 400 & Highway 404 - Water Quality Analysis - 4 Hour 25mm Chicago Storm

July 19, 2023

Runoff Coefficient	Pavement	Ditch + Others	
С	0.95	0.4	<- C10-Year

 Design Storm
 Rainfall Parameters
 Based on 2097 MTO IDF Curves

 A
 B
 C
 Depth (mm) ->
 25

 4 hour 25 mm Chicago
 254.071
 0.04
 0.676

	Chaina	age (m)	Curala lan ::#:			Runoff Calcula	itions						Wa	ater Quality	Analysis					MECP	Criteria Sa	itisfied?
Swale I.D.	(Along		Swale length	Time of Concentration	Pavement	Ditch + Others	AxC	Intensity	Flow		Flat-E	Bottom Grassed	Swale Characte	eristics			Veloc	ity Calculation		D ≤ 0.25 m	V ≤ 0.50 m/s	$Q \le 0.15 \text{ m}^3/\text{s}$
	From Sta.	To Sta.	(m)	(min)	A (ha)	A (ha)	(ha)	(mm/hr)	(m ³ /s)	Manning's n	Slope (%)	Base Width (m)	Depth (m)	Left (1:V)	Right (1:V)	A (m ³ /m)	P (m)	Wet. Cap. (m ³ /s)	V (m/s)		(Yes / No)	
S-W Ramp, Left Ditch	10+480	10+440	40	10.0	0.02	0.10	0.058	53.4	0.009	0.045	0.75	1.20	0.04	3	3	0.05	1.43	0.009	0.20	Yes	Yes	Yes
S-W Ramp, Right Ditch	10+520	10+500	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.70	1.20	0.03	3	3	0.03	1.36	0.005	0.16	Yes	Yes	Yes
S-W Ramp, Right Ditch	10+800	10+830	30	10.0	0.02	0.08	0.048	53.4	0.007	0.045	0.40	1.20	0.04	3	3	0.05	1.43	0.007	0.15	Yes	Yes	Yes
S-W Ramp, Left Ditch	10+840	10+800	40	10.0	0.02	0.10	0.058	53.4	0.009	0.045	0.03	1.20	0.09	3	3	0.14	1.78	0.009	0.07	Yes	Yes	Yes
S-W Ramp, Left Ditch	11+140	11+210	70	10.0	0.03	0.18	0.102	53.4	0.015	0.045	0.40	1.20	0.06	3	3	0.08	1.57	0.015	0.19	Yes	Yes	Yes
S-W Ramp, Left Ditch	11+210	11+300	90	10.0	0.04	0.23	0.131	53.4	0.020	0.045	0.40	1.20	0.07	3	3	0.10	1.63	0.020	0.21	Yes	Yes	Yes
W-S Ramp, Right Ditch	10+040	10+000	40	10.0	0.03	0.10	0.064	53.4	0.010	0.045	0.75	1.20	0.04	3	3	0.05	1.44	0.010	0.20	Yes	Yes	Yes
W-S Ramp, Right Ditch	10+100	10+120	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.82	1.20	0.02	3	3	0.03	1.36	0.005	0.16	Yes	Yes	Yes
W-S Ramp, Right Ditch	10+270	10+320	50	10.0	0.03	0.13	0.080	53.4	0.012	0.045	0.34	1.20	0.05	3	3	0.07	1.53	0.012	0.17	Yes	Yes	Yes
W-S Ramp, Left Ditch	10+280	10+320	40	10.0	0.02	0.10	0.058	53.4	0.009	0.045	0.40	1.20	0.04	3	3	0.06	1.47	0.009	0.16	Yes	Yes	Yes
W-S Ramp, Right Ditch	10+360	10+340	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.55	1.20	0.03	3	3	0.04	1.39	0.006	0.15	Yes	Yes	Yes
W-S Ramp, Right Ditch	10+680	10+580	100	10.0	0.06	0.25	0.159	53.4	0.024	0.045	0.50	1.20	0.07	3	3	0.10	1.65	0.024	0.24	Yes	Yes	Yes
W-S Ramp, Left Ditch	10+630	10+580	50	10.0	0.02	0.13	0.073	53.4	0.011	0.045	0.50	1.20	0.05	3	3	0.06	1.49	0.011	0.19	Yes	Yes	Yes
W-S Ramp, Right Ditch	10+680	10+780	100	10.0	0.06	0.25	0.159	53.4	0.024	0.045	0.55	1.20	0.07	3	3	0.10	1.63	0.024	0.25	Yes	Yes	Yes
W-S Ramp, Left Ditch	10+635	10+780	145	10.0	0.07	0.36	0.210	53.4	0.031	0.045	0.55	1.20	0.08	3	3	0.11	1.70	0.031	0.27	Yes	Yes	Yes
W-S Ramp, Left Ditch	10+800	10+820	20	10.0	0.01	0.05	0.029	53.4	0.004	0.045	0.67	1.20	0.02	3	3	0.03	1.35	0.004	0.14	Yes	Yes	Yes
W-S Ramp, Left Ditch	10+840	10+860	20	10.0	0.01	0.05	0.029	53.4	0.004	0.045	0.10	1.20	0.04	3	3	0.05	1.46	0.004	0.08	Yes	Yes	Yes
W-S Ramp, Right Ditch	10+860	10+900	40	10.0	0.03	0.10	0.064	53.4	0.010	0.045	0.80	1.20	0.04	3	3	0.05	1.44	0.010	0.21	Yes	Yes	Yes
W-S Ramp, Right Ditch	10+960	10+980	20	10.0	0.01	0.05	0.032	53.4	0.005	0.045	0.42	1.20	0.03	3	3	0.04	1.40	0.006	0.14	Yes	Yes	Yes

(GWP 2008-21-00) Highway 400 - Highway 404 - The Bradford Bypass Link BBP Interchanges at Highway 400 & Highway 404 - Erosion Potential Analysis - 100-Year Design Storm

July 19, 2023

Runoff Coefficient	Pavement	Ditch + Others	
С	0.95	0.50	<-

<- C100-Year = C10-Year x 1.25

Design Storm	Ra	infall Parameters		Based on 2097 MTO IDF Curves
Design Storm	Α	В	С	
100-Year Design Storm	844.220	0.052	0.688	

Swale I.D.	Chaina	ige (m)	Swale length			Runoff Calcula	tions						Ero	sion Potenti	al Analysis					MECP Criteria Satisfied?
Giraio i.b.				Time of Concentration	Pavement	Ditch + Others	AxC	Intensity	Flow		Flat-E	Bottom Grassed	Swale Charact	eristics			Veloc	ity Calculation		V ₁₀₀ ≤ 1.50 m/s
Down and Downsternal Down	From Sta.	To Sta.	(m)	(min)	A (ha)	A (ha)	(ha)	(mm/hr)	(m ³ /s)	Manning's n	Slope (%)	Base Width (m)	Depth (m)	Left (1:V)	Right (1:V)	A (m ³ /m)	P (m)	Wet. Cap. (m ³ /s)	V (m/s)	(Yes / No)
Proposed Bradford Bypa: E-N Ramp, Right Ditch	10+400	10+120	280	10.0	0.18	0.70	0.516	172.5	0.249	0.045	1.00	1.20	0.21	3	3	0.39	2.55	0.249	0.64	Yes
E-N Ramp, Left Ditch	10+400	10+140	260	10.0	0.12	0.65	0.442	172.5	0.214	0.045	1.00	1.20	0.20	3	3	0.35	2.44	0.214	0.61	Yes
E-N Ramp, Right Ditch	10+660	10+580	80	10.0	0.05	0.20	0.148	172.5	0.071	0.045	0.30	1.20	0.15	3	3	0.25	2.14	0.071	0.29	Yes
E-N Ramp, Right Ditch	10+680	10+700	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.70	1.20	0.05	3	3	0.07	1.54	0.018	0.25	Yes
E-N Ramp, Left Ditch	10+680	10+700	20	10.0	0.01	0.05	0.034	172.5	0.016	0.045	0.64	1.20	0.05	3	3	0.07	1.53	0.016	0.23	Yes
E-N Ramp, Right Ditch	10+820	10+740	80	10.0	0.05	0.20	0.148	172.5	0.071	0.045	0.36	1.20	0.14	3	3	0.23	2.10	0.071	0.31	Yes
E-N Ramp, Right Ditch	10+910	10+840	70	10.0	0.04	0.18	0.129	172.5	0.062	0.045	0.40	1.20	0.13	3	3	0.20	2.01	0.062	0.30	Yes
E-N Ramp, Left Ditch	10+860	10+880	20	10.0	0.01	0.05	0.034	172.5	0.016	0.045	0.90	1.20	0.05	3	3	0.06	1.50	0.016	0.26	Yes
E-N Ramp, Right Ditch	11+080	11+000	80	10.0	0.05	0.20	0.148	172.5	0.071	0.045	0.80	1.20	0.11	3	3	0.18	1.92	0.071	0.40	Yes
E-S Ramp, Left Ditch	10+360	10+345	15	10.0	0.01	0.04	0.026	172.5	0.012	0.045	0.76	1.20	0.04	3	3	0.06	1.47	0.013	0.22	Yes
E-S Ramp, Right Ditch	10+420	10+380	40	10.0	0.03	0.10	0.074	172.5	0.036	0.045	0.50	1.20	0.09	3	3	0.13	1.76	0.036	0.28	Yes
E-S Ramp, Left Ditch	10+400	10+380	20	10.0	0.01	0.05	0.034	172.5	0.016	0.045	1.01	1.20	0.05	3	3	0.06	1.49	0.016	0.27	Yes
E-S Ramp, Left Ditch	10+400	10+420	20	10.0	0.01	0.05	0.034	172.5	0.016	0.045	0.32	1.20	0.06	3	3	0.09	1.61	0.016	0.18	Yes
E-S Ramp, Right Ditch	10+540	11+000	460	10.0	0.29	1.15	0.848	172.5	0.410	0.045	0.75	1.20	0.30	3	3	0.62	3.08	0.410	0.66	Yes
E-S Ramp, Left Ditch	10+540	10+710	170	10.0	0.08	0.43	0.289	172.5	0.140	0.045	0.75	1.20	0.17	3	3	0.29	2.27	0.140	0.49	Yes
E-S Ramp, Left Ditch	10+810	10+715	95	10.0	0.05	0.24	0.162	172.5	0.078	0.045	0.75	1.20	0.12	3	3	0.19	1.97	0.078	0.41	Yes
E-S Ramp, Left Ditch	10+820	10+900	80	10.0	0.04	0.20	0.136	172.5	0.066	0.045	0.75	1.20	0.11	3	3	0.17	1.90	0.065	0.38	Yes
E-S Ramp, Left Ditch	10+960	10+980	20	10.0	0.01	0.05	0.034	172.5	0.016	0.045	0.68	1.20	0.05	3	3	0.07	1.52	0.016	0.23	Yes
E-S Ramp, Right Ditch	11+260	11+120	140	10.0	0.09	0.35	0.258	172.5	0.125	0.045	0.40	1.20	0.19	3	3	0.33	2.39	0.125	0.38	Yes
E-S Ramp, Left Ditch	11+320	11+160	160	10.0	0.08	0.40	0.272	172.5	0.132	0.045	0.50	1.20	0.18	3	3	0.32	2.35	0.132	0.41	Yes
E-S Ramp, Right Ditch	11+420	11+440	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.36	1.20	0.07	3	3	0.09	1.62	0.018	0.20	Yes
E-S Ramp, Left Ditch	11+440	11+420	20	10.0	0.01	0.05	0.034	172.5	0.016	0.045	1.00	1.20	0.05	3	3	0.06	1.49	0.016	0.27	Yes
E-S Ramp, Right Ditch	12+120	12+140	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.77	1.20	0.05	3	3	0.07	1.53	0.018	0.25	Yes
E-S Ramp, Right Ditch	12+320 12+265	12+190 12+245	130	10.0	0.08	0.33	0.240	172.5 172.5	0.116	0.045 0.045	0.31	1.20	0.19	3	3	0.34	2.42 1.59	0.116	0.34	Yes Yes
E-S Ramp, Left Ditch E-S Ramp, Right Ditch	12+265	12+245	25	10.0	0.01	0.05	0.034	172.5	0.016	0.045	0.36	1.20	0.06	3	3	0.09	1.59	0.016	0.19	Yes
E-S Ramp, Right Ditch E-S Ramp, Right Ditch	12+390	12+415	25 15	10.0	0.02	0.06	0.046	172.5	0.022	0.045	0.75	1.20	0.06	3	3	0.08	1.59	0.023	0.27	Yes
N-E Ramp, Right Ditch	10+000	10+190	190	10.0	0.01	0.04	0.028	172.5	0.013	0.045	0.75	1.20	0.04	3	3	0.06	2.65	0.169	0.23	Yes
N-E Ramp, Left Ditch	10+260	10+355	95	10.0	0.12	0.46	0.330	172.5	0.103	0.045	0.70	1.20	0.23	3	3	0.43	1.99	0.169	0.39	Yes
N-E Ramp, Right Ditch	10+300	10+333	20	10.0	0.03	0.05	0.102	172.5	0.078	0.045	0.70	1.20	0.12	3	3	0.20	1.56	0.018	0.40	Yes
N-E Ramp, Right Ditch	10+440	10+420	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.50	1.20	0.06	3	3	0.08	1.59	0.019	0.22	Yes
N-E Ramp, Right Ditch	10+540	10+520	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.14	1.20	0.09	3	3	0.13	1.74	0.018	0.14	Yes
N-E Ramp, Right Ditch	10+560	10+640	80	10.0	0.05	0.20	0.148	172.5	0.071	0.045	0.35	1.20	0.14	3	3	0.23	2.11	0.071	0.30	Yes
	.0.000	.5.010	l ss	.5.0		5.20	010	2.0	1 5.01.	5.010	0.00	20	\$.	L		1		1	0.00	

(GWP 2008-21-00) Highway 400 - Highway 404 - The Bradford Bypass Link BBP Interchanges at Highway 400 & Highway 404 - Erosion Potential Analysis - 100-Year Design Storm

July 19, 2023

Runoff Coefficient	Pavement	Ditch + Others
С	0.95	0.50

<- C100-Year = C10-Year x 1.25

Design Storm	Ra	infall Parameters		Based on 2097 MTO IDF Curves
Design Storm	Α	В	С	
100-Year Design Storm	844.220	0.052	0.688	

Swale I.D.	Chainage (m)		Swale length	Runoff Calculations						Erosion Potential Analysis									MECP Criteria Satisfied?	
Swale I.D.				Time of Concentration	Pavement	Ditch + Others	AxC	Intensity Flow		Flat-Bottom Grassed Swale Characteristics						Velocity Calculation				V ₁₀₀ ≤ 1.50 m/s
	From Sta.	To Sta.	(m)	(min)	A (ha)	A (ha)	(ha)	(mm/hr)	(m ³ /s)	Manning's n	Slope (%)	Base Width (m)	Depth (m)	Left (1:V)	Right (1:V)	A (m ³ /m)	P (m)	Wet. Cap. (m ³ /s)	V (m/s)	(Yes / No)
N-E Ramp, Left Ditch	10+540	10+580	40	10.0	0.02	0.10	0.068	172.5	0.033	0.045	0.12	1.20	0.13	3	3	0.20	2.01	0.034	0.17	Yes
N-E Ramp, Left Ditch	11+020	10+990	30	10.0	0.01	0.08	0.051	172.5	0.025	0.045	0.65	1.20	0.07	3	3	0.09	1.62	0.025	0.27	Yes
N-E Ramp, Left Ditch	11+460	11+235	225	10.0	0.11	0.56	0.383	172.5	0.185	0.045	0.40	1.20	0.23	3	3	0.44	2.66	0.185	0.42	Yes
S-E Ramp, Right Ditch	10+140	10+020	120	10.0	0.08	0.30	0.221	172.5	0.107	0.045	0.40	1.20	0.17	3	3	0.30	2.30	0.107	0.36	Yes
S-E Ramp, Right Ditch	10+220	10+200	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.90	1.20	0.05	3	3	0.07	1.52	0.018	0.27	Yes
S-E Ramp, Right Ditch	10+380	10+360	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.81	1.20	0.05	3	3	0.07	1.53	0.018	0.26	Yes
S-E Ramp, Left Ditch	10+380	10+340	40	10.0	0.02	0.10	0.068	172.5	0.033	0.045	0.80	1.20	0.07	3	3	0.11	1.67	0.033	0.31	Yes
S-E Ramp, Left Ditch	10+510	10+480	30	10.0	0.01	0.08	0.051	172.5	0.025	0.045	0.35	1.20	0.08	3	3	0.12	1.71	0.025	0.22	Yes
S-E Ramp, Right Ditch	10+520	10+500	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.77	1.20	0.05	3	3	0.07	1.53	0.018	0.25	Yes
S-E Ramp, Right Ditch	10+560	10+540	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.89	1.20	0.05	3	3	0.07	1.52	0.018	0.27	Yes
S-E Ramp, Right Ditch	10+720	10+580	140	10.0	0.09	0.35	0.258	172.5	0.125	0.045	0.40	1.20	0.19	3	3	0.33	2.39	0.125	0.38	Yes
S-E Ramp, Right Ditch	10+760	10+740	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.70	1.20	0.05	3	3	0.07	1.54	0.018	0.25	Yes
S-E Ramp, Right Ditch	10+760	10+780	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.30	1.20	0.07	3	3	0.10	1.64	0.018	0.19	Yes
S-E Ramp, Right Ditch	10+820	10+785	35	10.0	0.02	0.09	0.065	172.5	0.031	0.045	0.30	1.20	0.09	3	3	0.14	1.80	0.031	0.22	Yes
S-E Ramp, Right Ditch	10+980	10+860	120	10.0	0.08	0.30	0.221	172.5	0.107	0.045	0.30	1.20	0.19	3	3	0.33	2.38	0.107	0.32	Yes
Proposed Bradford Bypa:	ss & Highway 4	04 Interchange								1	1			1					1	
N-W Ramp, Right Ditch	10+080	10+100	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.27	1.20	0.07	3	3	0.10	1.66	0.019	0.18	Yes
N-W Ramp, Right Ditch	10+120	10+180	60	10.0	0.04	0.15	0.111	172.5	0.053	0.045	0.40	1.20	0.12	3	3	0.18	1.95	0.053	0.29	Yes
N-W Ramp, Right Ditch	10+180	10+220	40	10.0	0.03	0.10	0.074	172.5	0.036	0.045	0.45	1.20	0.09	3	3	0.14	1.78	0.036	0.27	Yes
N-W Ramp, Right Ditch	10+240	10+260	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.45	1.20	0.06	3	3	0.09	1.60	0.019	0.21	Yes
N-W Ramp, Right Ditch	10+620	10+700	80	10.0	0.05	0.20	0.148	172.5	0.071	0.045	0.80	1.20	0.11	3	3	0.18	1.92	0.071	0.40	Yes
N-W Ramp, Right Ditch	10+700	10+765	65	10.0	0.04	0.16	0.120	172.5	0.058	0.045	0.05	1.20	0.22	3	3	0.40	2.57	0.057	0.14	Yes
W-N Ramp, Right Ditch	10+320	10+295	25	10.0	0.02	0.06	0.046	172.5	0.022	0.045	0.35	1.20	0.08	3	3	0.11	1.68	0.023	0.21	Yes
W-N Ramp, Left Ditch	10+260	10+340	80	10.0	0.04	0.20	0.136	172.5	0.066	0.045	0.50	1.20	0.12	3	3	0.20	1.99	0.066	0.34	Yes
W-N Ramp, Left Ditch	10+380	10+340	40	10.0	0.02	0.10	0.068	172.5	0.033	0.045	0.50	1.20	0.08	3	3	0.12	1.74	0.033	0.27	Yes
W-N Ramp, Left Ditch	11+120	11+170	50	10.0	0.02	0.13	0.085	172.5	0.041	0.045	0.70	1.20	0.09	3	3	0.13	1.75	0.041	0.32	Yes
W-N Ramp, Right Ditch	11+180	11+160	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.20	1.20	0.08	3	3	0.11	1.70	0.018	0.16	Yes
W-N Ramp, Right Ditch	11+280	11+340	60	10.0	0.04	0.15	0.111	172.5	0.053	0.045	0.35	1.20	0.12	3	3	0.19	1.98	0.054	0.28	Yes
W-N Ramp, Left Ditch	11+360	11+425	65	10.0	0.03	0.16	0.111	172.5	0.053	0.045	0.30	1.20	0.13	3	3	0.20	2.01	0.053	0.26	Yes
W-N Ramp, Left Ditch	11+425	11+500	75	10.0	0.04	0.19	0.128	172.5	0.062	0.045	0.30	1.20	0.14	3	3	0.23	2.08	0.063	0.28	Yes
W-N Ramp, Right Ditch	11+400	11+500	100	10.0	0.06	0.25	0.184	172.5	0.089	0.045	0.55	1.20	0.14	3	3	0.23	2.11	0.089	0.38	Yes
S-W Ramp, Right Ditch	10+000	10+040	40	10.0	0.03	0.10	0.074	172.5	0.036	0.045	0.53	1.20	0.09	3	3	0.13	1.75	0.036	0.28	Yes
S-W Ramp, Right Ditch	10+140	10+220	80	10.0	0.05	0.20	0.148	172.5	0.071	0.045	0.63	1.20	0.12	3	3	0.19	1.98	0.072	0.37	Yes
S-W Ramp, Right Ditch	10+355	10+400	45	10.0	0.03	0.11	0.083	172.5	0.040	0.045	0.10	1.20	0.15	3	3	0.24	2.13	0.040	0.16	Yes

(GWP 2008-21-00) Highway 400 - Highway 404 - The Bradford Bypass Link BBP Interchanges at Highway 400 & Highway 404 - Erosion Potential Analysis - 100-Year Design Storm

July 19, 2023

Runoff Coefficient	Pavement	Ditch + Others
С	0.95	0.50

<- C100-Year = C10-Year x 1.25

Design Storm	Ra	infall Parameters	Based on 2097 MTO IDF Curves	
Design Storm	Α	В	С	
100-Year Design Storm	844.220	0.052	0.688	

Г	1		1																	
Swale I.D.	Chainage (m)		Swale length	Runoff Calculations						Erosion Potential Analysis									MECP Criteria Satisfied?	
Swale I.D.				Time of Concentration	Pavement	Ditch + Others	AxC	Intensity Flow	Flat-Bottom Grassed Swale Characteristics						Velocity Calculation				V ₁₀₀ ≤ 1.50 m/s	
	From Sta.	To Sta.	(m)	(min)	A (ha)	A (ha)	(ha)	(mm/hr)	(m ³ /s)	Manning's n	Slope (%)	Base Width (m)	Depth (m)	Left (1:V)	Right (1:V)	A (m ³ /m)	P (m)	Wet. Cap. (m ³ /s)	V (m/s)	(Yes / No)
S-W Ramp, Right Ditch	10+440	10+400	40	10.0	0.03	0.10	0.074	172.5	0.036	0.045	0.20	1.20	0.12	3	3	0.18	1.93	0.036	0.20	Yes
S-W Ramp, Left Ditch	10+480	10+440	40	10.0	0.02	0.10	0.068	172.5	0.033	0.045	0.75	1.20	0.08	3	3	0.11	1.68	0.033	0.31	Yes
S-W Ramp, Right Ditch	10+520	10+500	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.70	1.20	0.05	3	3	0.07	1.54	0.018	0.25	Yes
S-W Ramp, Right Ditch	10+800	10+830	30	10.0	0.02	0.08	0.055	172.5	0.027	0.045	0.40	1.20	0.08	3	3	0.12	1.71	0.027	0.23	Yes
S-W Ramp, Left Ditch	10+840	10+800	40	10.0	0.02	0.10	0.068	172.5	0.033	0.045	0.03	1.20	0.19	3	3	0.33	2.38	0.034	0.10	Yes
S-W Ramp, Left Ditch	11+140	11+210	70	10.0	0.03	0.18	0.119	172.5	0.058	0.045	0.40	1.20	0.12	3	3	0.20	1.99	0.059	0.30	Yes
S-W Ramp, Left Ditch	11+210	11+300	90	10.0	0.04	0.23	0.153	172.5	0.074	0.045	0.40	1.20	0.14	3	3	0.23	2.09	0.074	0.32	Yes
W-S Ramp, Right Ditch	10+040	10+000	40	10.0	0.03	0.10	0.074	172.5	0.036	0.045	0.75	1.20	0.08	3	3	0.12	1.71	0.037	0.32	Yes
W-S Ramp, Right Ditch	10+100	10+120	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.82	1.20	0.05	3	3	0.07	1.53	0.018	0.26	Yes
W-S Ramp, Right Ditch	10+270	10+320	50	10.0	0.03	0.13	0.092	172.5	0.045	0.045	0.34	1.20	0.11	3	3	0.17	1.90	0.044	0.26	Yes
W-S Ramp, Left Ditch	10+280	10+320	40	10.0	0.02	0.10	0.068	172.5	0.033	0.045	0.40	1.20	0.09	3	3	0.13	1.77	0.033	0.25	Yes
W-S Ramp, Right Ditch	10+360	10+340	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.55	1.20	0.06	3	3	0.08	1.58	0.019	0.23	Yes
W-S Ramp, Right Ditch	10+680	10+580	100	10.0	0.06	0.25	0.184	172.5	0.089	0.045	0.50	1.20	0.15	3	3	0.24	2.13	0.089	0.37	Yes
W-S Ramp, Left Ditch	10+630	10+580	50	10.0	0.02	0.13	0.085	172.5	0.041	0.045	0.50	1.20	0.10	3	3	0.14	1.80	0.041	0.29	Yes
W-S Ramp, Right Ditch	10+680	10+780	100	10.0	0.06	0.25	0.184	172.5	0.089	0.045	0.55	1.20	0.14	3	3	0.23	2.11	0.089	0.38	Yes
W-S Ramp, Left Ditch	10+635	10+780	145	10.0	0.07	0.36	0.247	172.5	0.119	0.045	0.55	1.20	0.17	3	3	0.29	2.26	0.119	0.41	Yes
W-S Ramp, Left Ditch	10+800	10+820	20	10.0	0.01	0.05	0.034	172.5	0.016	0.045	0.67	1.20	0.05	3	3	0.07	1.53	0.016	0.23	Yes
W-S Ramp, Left Ditch	10+840	10+860	20	10.0	0.01	0.05	0.034	172.5	0.016	0.045	0.10	1.20	0.09	3	3	0.13	1.76	0.016	0.12	Yes
W-S Ramp, Right Ditch	10+860	10+900	40	10.0	0.03	0.10	0.074	172.5	0.036	0.045	0.80	1.20	0.08	3	3	0.11	1.70	0.037	0.33	Yes
W-S Ramp, Right Ditch	10+960	10+980	20	10.0	0.01	0.05	0.037	172.5	0.018	0.045	0.42	1.20	0.06	3	3	0.09	1.60	0.018	0.21	Yes



Appendix D

Proposed Hydrologic Model – Uncontrolled Peak Flows (without SWM ponds)

```
Metric units
   *#*********************
2
3
   *# Project Name: BRADFORD BYPASS
                                          JOB NUMBER: [60636190] *
   *#
          : Jan. 20, 2023
4
             : [jrm]
5
   *#
      Modeller
   *#
      Company
             : AECOM
      License # : 1281254
8
   *#
   *#
9
10
   *#
     Notes: This hydrologic model was developed for the BBP ultimate conditions
11
   *#
           A new Berm is proposed to isolate flows draining to P-SWM P-2 and
   *#
           the tributary of Penville Creek.
12
1.3
   *#
   *#
               PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
14
1.5
   *#
                    FOR PROPOSED SWM PONDS (UNCONTROLLED)
   *#
16
                      Proposed Drainage Conditions
17
   *#
                2-YEAR TO 100-YEAR 24-hour SCS TYPE II STORM
18
19
2.0
21
   22
23
2.4
   START
                 TZERO=[0.0], METOUT=[0], NSTORM=[1], NRUN=[002]
25
                 24SCS002.stm
26
                 "STORM.001"
27
   READ STORM
2.8
   29
30
              PROPOSED SWM POND 1 - STORAGE VOLUME ESTIMATION
                       (BBP & HIGHWAY 400)
31
   32
33
   *$**********************
34
                        ** PR-R-BBP-11 **
35
   *$**********************
36
37
38
   CALIB NASHYD
                 NHYD = [8], NHYD = ["PR - R - BBP - 11"], DT = [1]min, AREA = [14.5] (ha),
39
                 DWF = [0.00] (cms), CN/C = [73], IA = [9.4] (mm),
40
                 N=[3], TP=[0.55]hrs,
41
                 END=-1
42
     *******************
43
44
                   ** REOUIRED VOLUME - P-SWM P-1 **
45
                  (Assuming a release rate of 0.5 cms)
46
               (THIS FLOW IS USED TO SIZE CULVERT PR-R-BBP-11)
47
48
49
   COMPUTE VOLUME
                 ID=[8], STRATE=[-100] (cms), RELRATE=[0.5] (cms)
50
51
52
53
   54
               PROPOSED SWM POND 2 - STORAGE VOLUME ESTIMATION
55
                       (BBP & HIGHWAY 400)
56
   57
58
59
                          ** PR-R-BBP-9A **
   *$*********************
60
61
62
   CALIB NASHYD
                 NHYD=[1], NHYD=["PR-R-BBP-9A"], DT=[1]min, AREA=[5.40] (ha),
63
                 DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
64
                 N=[3], TP=[0.38]hrs,
65
                 END=-1
66
   67
68
                          ** PR-R-BBP-9B **
   *$***********************
69
```

```
70
71
                NHYD=[2], NHYD=["PR-R-BBP-9B"], DT=[1]min, AREA=[6.60] (ha),
   CALIB NASHYD
72
                DWF = [0.00] (cms), CN/C = [72], IA = [10.0] (mm),
73
                 N=[3], TP=[0.40]hrs,
74
                END=-1
75
   *$*********************
76
77
                 ** TOTAL FLOW AT PR-R-BBP-9B **
   *$**********************
78
79
            IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
80
   ADD HYD
81
    *$********************
82
83
    *$*********************
84
                        ** P-SWM P-2 **
85
    *$**********************
86
87
               NHYD=[4], NHYD=["P-SWM P-2"], DT=[1]min, AREA=[3.90] (ha),
88
   CALIB NASHYD
89
                DWF = [0.00] (cms), CN/C = [74], IA = [8.9] (mm),
90
                N=[3], TP=[0.37]hrs,
91
                END=-1
92
     *********************
93
                   ** TOTAL FLOW AT P-SWM P-2 **
94
   *$********************
95
96
97
                IDsum=[8], NHYD=["TOT"], IDs to add=[3+4]
   ADD HYD
98
   *$********************
99
100
   *$*********************
101
                  ** REOUIRED VOLUME - P-SWM P-2 **
102
103
                  (Assuming a release rate of 0.05 cms)
104
105
   COMPUTE VOLUME ID=[8], STRATE=[-100](cms), RELRATE=[0.05](cms)
106
107
108
    *$*************************
109
110
    111
                   ESTIMATING TOTAL FLOW AT PR-CL-400-2
112
                       (CULVERT UNDER HIGHWAY 400)
   113
114
115
116
                       ** EX-CL-400-1 **
117
118
   *$***********************
119
120
   CALIB NASHYD
                NHYD=[1], NHYD=["EX-CL-400-1"], DT=[1]min, AREA=[49.0] (ha),
121
                DWF = [0.00] (cms), CN/C = [79], IA = [5.0] (mm),
122
                 N=[3], TP=[0.53]hrs,
123
                 END=-1
124
125
   126
                     ** ROUTED FLOW TO PR-CL-2 **
127
    *$**************************
128
                IDOUT=2 NHYD="to PR-CL-2" IDIN=1 DT=1.00min
129
   ROUTE CHANNEL
130
                 CHLGTH=825.0 CHSLOPE=0.85% FPSLOPE=0.85%
131
                 VSN=9999 NSEG=1
132
                     MANNING'S 'n'
                               DISTANCE
133
                      -0.070
                                10.0
134
                      DISTANCE
                               ELEVATION
135
                        0.0
                                183.5
136
                        1.5
                                183.11
137
                        3.0
                                183.05
                                182.0
138
                        4.0
```

```
139
                          4.5
                                  181.0
                          5.5
140
                                  181.0
141
                          6.0
                                  182.0
142
                          7.0
                                  183.05
143
                          8.5
                                  183.15
144
                         10.0
                                  183.5
145
    *$**********************
146
                         ** PR-R-BBP-1A **
147
    *$*********************
148
149
150
    CALIB NASHYD
                  NHYD=[3], NHYD=["PR-R-BBP-1A"], DT=[1]min, AREA=[8.80](ha),
                  DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
1.5.1
152
                  N=[3], TP=[0.53]hrs,
153
                  END=-1
154
    *$***********************
155
156
                         ** EX-CL-400-2 **
    *$***********************
157
158
159
    CALIB NASHYD
                 NHYD=[4], NHYD=["EX-CL-400-2"], DT=[1]min, AREA=[1.30] (ha),
160
                  DWF = [0.00] (cms), CN/C = [79], IA = [5.0] (mm),
161
                  N=[3], TP=[0.40]hrs,
162
                  END=-1
163
    *$*********************
164
165
                         ** PR-R-BBP-1B **
    *$***********************
166
167
                  ID=[5], NHYD=["PR-R-BBP-1B"], DT=[1]min, Area=[1.30](ha),
168
    CALIB STANDHYD
169
                  XIMP=[0.55], TIMP=[0.55], DWF=[0] (cms), LOSS=[2],
170
                  SCS curve number CN=[70],
                  Pervious surfaces: IAper=[10.9](mm), SLPP=[65](%),
171
172
                                LGP=[8] (m), MNP=[0.35], SCP=[0] (min),
173
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
174
                                LGI=[93] (m), MNI=[0.015], SCI=[0] (min),
175
                  END = -1
176
177
    *$**********************
178
                     ** TOTAL FLOW AT PR-R-BBP-1B **
179
    *$***********************
180
181
                 IDsum=[1], NHYD=["TOT"], IDs to add=[3+4+5]
182
183
    *$***********************
184
185
                           ** PR-CL-2 **
186
    *$*********************
187
188
189
    CALIB NASHYD
                  NHYD=[6], NHYD=["PR-CL-2"], DT=[1]min, AREA=[161.70] (ha),
190
                  DWF = [0.00] (cms), CN/C = [65], IA = [13.7] (mm),
191
                  N=[3], TP=[3.38]hrs,
192
                  END=-1
193
194
    195
                      ** TOTAL FLOW AT PR-CL-2 **
196
    *$***********************
197
198
    ADD HYD
                  IDsum=[7], NHYD=["TOT PR-CL-2"], IDs to add=[1+2+6]
199
    *8*************************
200
201
    202
                      ** ROUTED FLOW TO PR-R-BBP-4 **
203
204
    *$***********************
205
                  IDOUT=4 NHYD="to PR-R-BBP-4" IDIN=7 DT=1.00min
206
    ROUTE CHANNEL
                  CHLGTH=230.0 CHSLOPE=0.9% FPSLOPE=0.9%
207
```

```
VSN=9999 NSEG=1
208
209
                     MANNING'S 'n'
                                DISTANCE
210
                       -0.070
                                 10.0
211
                       DISTANCE
                                ELEVATION
212
                         0.0
                                183.5
213
                         1.5
                                183.11
214
                         3.0
                                183.05
215
                         4.0
                                182.0
2.16
                         4.5
                                181.0
                         5.5
217
                                181.0
218
                         6.0
                                182.0
219
                         7.0
                                183.05
220
                         8.5
                                183.15
221
                        10.0
                                183.5
222
    *$********************
223
                        ** PR-R-BBP-4 **
224
    *$*********************
225
226
                 NHYD=[9], NHYD=["PR-R-BBP-4"], DT=[1]min, AREA=[6.10] (ha),
227
    CALTB NASHYD
                 DWF = [0.00] (cms), CN/C = [71], IA = [10.4] (mm),
228
229
                 N=[3], TP=[0.32]hrs,
230
                 END=-1
231
   *$**********************
232
                     ** TOTAL FLOW AT PR-R-BBP-4 **
233
    *$**********************
234
235
236
   ADD HYD
                IDsum=[10], NHYD=["TOT"], IDs to add=[4+9]
237
   *$**********************
238
    239
                    ** FLOWS FROM WEST OF HIGHWAY 400 **
240
    241
242
    *$**********************
243
                        ** PR-CL-1 **
2.44
    *$**********************
245
246
247
    CALIB NASHYD
                NHYD=[1], NHYD=["PR-CL-1"], DT=[1]min, AREA=[4.80] (ha),
248
                 DWF = [0.00] (cms), CN/C = [74], IA = [8.9] (mm),
249
                 N=[3], TP=[0.37]hrs,
250
                 END=-1
251
    *$*********************
252
                        ** PR-R-BBP-2 **
253
   *$********************
254
255
256
    CALIB NASHYD
                 NHYD = [2], NHYD = ["PR - R - BBP - 2"], DT = [1]min, AREA = [5.90] (ha),
                 DWF = [0.00] (cms), CN/C = [71], IA = [10.4] (mm),
257
258
                 N=[3], TP=[0.39]hrs,
259
                 END=-1
260
    *$**********************
261
                   ** TOTAL FLOW AT PR-R-BBP-2 **
262
    *$*********************
263
264
    ADD HYD
265
                IDsum=[9], NHYD=["TOT"], IDs to add=[1+2]
266
    *$*********************
267
                       ** EX-CL-400-3 **
268
    *$********************
269
270
                 NHYD=[3], NHYD=["EX-CL-400-3"], DT=[1]min, AREA=[1.70] (ha),
    CALIB NASHYD
271
                 DWF = [0.00] (cms), CN/C = [72], IA = [9.1] (mm),
272
273
                 N=[3], TP=[0.23]hrs,
274
                 END=-1
275
    *$********************
276
```

```
** TOTAL FLOW AT EX-CL-400-3 **
278
    *$**********************
279
                 IDsum=[1], NHYD=["TOT"], IDs to add=[3+9]
280
    ADD HYD
281
    *$**********************
282
                          ** PR-R-BBP-3 **
283
    *$**********************
284
2.85
286
    CALIB NASHYD
                 NHYD = [4], NHYD = ["PR - R - BBP - 3"], DT = [1]min, AREA = [2.40] (ha),
287
                  DWF = [0.00] (cms), CN/C = [71], IA = [10.4] (mm),
288
                  N=[3], TP=[0.20]hrs,
                 END=-1
2.89
290
    *$********************
291
                          ** PR-CL-400-1 **
292
    *$*********************
293
294
    CALIB NASHYD
                 NHYD=[5], NHYD=["PR-CL-400-1"], DT=[1]min, AREA=[2.20] (ha),
2.95
296
                 DWF = [0.00] (cms), CN/C = [75], IA = [8.5] (mm),
297
                  N=[3], TP=[0.15]hrs,
298
                 END=-1
299
    *$**********************
300
301
                     ** TOTAL FLOW AT PR-CL-400-1 **
    *$********************
302
303
                 IDsum=[9], NHYD=["TOT"], IDs to add=[4+5]
304
    ADD HYD
305
    *$*********************
306
                     ** TOTAL FLOW D/S OF PR-R-BBP-4 **
307
    *$*********************
308
309
                 IDsum=[7], NHYD=["TOT"], IDs to add=[1+9+10]
310
    ADD HYD
311
    *$*********************
312
                    ** ROUTED FLOW TO D/S OF P-SWM P-2 **
313
314
                      (TO BYPASS POND)
315
    *$*************************
316
317
    ROUTE CHANNEL
                 IDOUT=1 NHYD="to PR-R-BBP-10" IDIN=7 DT=1.00min
318
                 CHLGTH=895.0 CHSLOPE=1.0% FPSLOPE=1.0%
319
                  VSN=9999 NSEG=1
320
                      MANNING'S 'n'
                                 DISTANCE
321
                        -0.070
                                  10.0
322
                        DISTANCE
                                  ELEVATION
323
                          0.0
                                  183.5
324
                          1.5
                                  183.11
325
                          3.0
                                  183.05
326
                          4.0
                                  182.0
327
                          4.5
                                  181.0
328
                          5.5
                                  181.0
329
                          6.0
                                  182.0
330
                          7.0
                                  183.05
331
                          8.5
                                  183.15
332
                         10.0
                                  183.5
333
334
    *$************************
                         ** PR-CL-400-2 **
335
    *$*********************
336
337
338
    CALIB NASHYD
                 NHYD=[2], NHYD=["PR-CL-400-2"], DT=[1]min, AREA=[9.60] (ha),
339
                  DWF = [0.00] (cms), CN/C = [71], IA = [10.4] (mm),
340
                  N=[3], TP=[0.54]hrs,
                  END=-1
341
342
    343
344
                      ** TOTAL FLOW AT PR-CL-400-2 **
    *$********************
345
```

```
346
                IDsum=[2], NHYD=["TOT"], IDs to add=[1+2]
347
   ADD HYD
348
   *$**********************
349
350
351
   *$**************************
352
                    ** TOTAL FLOW AT PR-R-BBP-11 **
   *$**********************
353
354
355
   ADD HYD
                IDsum=[6], NHYD=["TOT"], IDs to add=[2+8]
356
   *$**********************
357
358
359
    PROPOSED SWM POND 3 - STORAGE VOLUME ESTIMATION
360
361
                    (BBP & 10th SIDEROAD INTERCHANGE)
362
   363
   *$**************************
364
                         ** PR-R-BBP-9 **
365
   366
367
368
   CALIB NASHYD
                NHYD=[2], NHYD=["PR-R-BBP-9"], DT=[1]min, AREA=[6.60] (ha),
369
                DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
370
                N=[3], TP=[0.41]hrs,
371
                END=-1
372
   *$*************************
373
374
                        ** PR-R-10IC-1 **
   *$************************
375
376
377
   CALIB NASHYD
                NHYD = [1], NHYD = ["PR - R - 10IC - 1"], DT = [1]min, AREA = [4.70] (ha),
                DWF = [0.00] (cms), CN/C = [59], IA = [17.7] (mm),
378
379
                N=[3], TP=[0.29]hrs,
380
                END=-1
381
   *$***********************
382
383
                        ** PR-CL-BBP-1 **
384
   *$*************************
385
386
   CALTB STANDHYD
                ID=[2], NHYD=["PR-CL-BBP-1"], DT=[1]min, Area=[2.30](ha),
387
                XIMP=[0.35], TIMP=[0.35], DWF=[0] (cms), LOSS=[2],
388
                SCS curve number CN=[51],
389
                       surfaces: IAper=[24.4](mm), SLPP=[53](%),
390
                              LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
391
                 Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
392
                              LGI=[124] (m), MNI=[0.015], SCI=[0] (min),
393
                END=-1
394
   *$*************************
395
396
                    ** TOTAL FLOW AT PR-CL-BBP-1 **
397
   398
399
                IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
400
401
   402
                        ** PR-R-10IC-4 **
403
   *$***********************
404
405
   CALIB NASHYD
                NHYD = [4], NHYD = ["PR - R - 10IC - 4"], DT = [1]min, AREA = [1.30] (ha),
406
                DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
407
                N=[3], TP=[0.25]hrs,
408
                END=-1
409
   410
411
                    ** TOTAL FLOW AT PR-R-10IC-4 **
   *$**********************
412
413
414
   ADD HYD
                IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
```

```
415
416
    417
                         ** PR-R-10IC-5 **
    *$***********************
418
419
420
   CALIB STANDHYD
                 ID=[6], NHYD=["PR-R-10IC-5"], DT=[1]min, Area=[2.70] (ha),
421
                 XIMP=[0.30], TIMP=[0.30], DWF=[0] (cms), LOSS=[2],
422
                 SCS curve number CN=[58],
423
                 Pervious surfaces: IAper=[18.4](mm), SLPP=[44](%),
424
                               LGP = [40] (m), MNP = [0.35], SCP = [0] (min),
425
                 Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
426
                               LGI=[134] (m), MNI=[0.015], SCI=[0] (min),
427
                 END=-1
428
    *$*********************
429
                     ** TOTAL FLOW TO PR-R-10IC-5 **
430
    *$***********************
431
432
433
   ADD HYD
                 IDsum=[7], NHYD=["TOT"], IDs to add=[5+6]
434
   *$*********************
435
436
437
     ************************
438
                   ** REOUIRED VOLUME - P-SWM P-3 **
439
                  (Assuming a relase rate of 0.40 cms)
    *$************************
440
441
442
   COMPUTE VOLUME
                 ID=[7], STRATE=[-100] (cms), RELRATE=[0.40] (cms)
443
    *$************************
444
445
446
    447
                  R-Ex Pond-2 - STORAGE VOLUME ESTIMATION
448
                    (BBP & 10th SIDEROAD INTERCHANGE)
449
    450
    4.5.1
452
                         ** PR-R-10IC-3 **
453
    *$************************
454
455
   CALTB NASHYD
                 NHYD=[1], NHYD=["PR-R-10IC-3"], DT=[1]min, AREA=[1.40] (ha),
456
                 DWF = [0.00] (cms), CN/C = [67], IA = [12.5] (mm),
457
                 N=[3], TP=[0.29]hrs,
458
                 END=-1
459
              *****************
460
461
                        ** PR-R-10IC-2 **
    *$********************
462
463
                 ID=[2], NHYD=["PR-R-10IC-2"], DT=[1]min, Area=[3.10] (ha),
464
   CALIB STANDHYD
465
                 XIMP=[0.36], TIMP=[0.36], DWF=[0] (cms), LOSS=[2],
466
                 SCS curve number CN=[61],
467
                 Pervious surfaces: IAper=[16.2] (mm), SLPP=[42](%),
468
                               LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
                 Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
469
470
                               LGI=[144] (m), MNI=[0.015], SCI=[0] (min),
471
                 F.ND=-1
472
    *$*********************
473
                     ** TOTAL FLOW TO PR-R-10IC-2 **
474
    *$*************************
475
476
477
                 IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
   ADD HYD
478
   *$*********************
479
480
    481
                   ** REQUIRED VOLUME - R-Ex Pond-2 **
482
                   (Assuming a relase rate of 0.15 cms)
483
```

```
484
485
486
                  ID=[3], STRATE=[-100] (cms), RELRATE=[0.15] (cms)
    COMPUTE VOLUME
487
    *$**********************
488
489
490
    491
                   P-SWM P-4 - STORAGE VOLUME ESTIMATION
492
                         (BBP & CTY ROAD 4)
493
    494
    495
                          ** PR-R-C4TC-1 **
496
    *$**********************
497
498
499
    CALIB NASHYD
                  NHYD=[1], NHYD=["PR-R-C4IC-1"], DT=[1]min, AREA=[13.40] (ha),
                  DWF = [0.00] (cms), CN/C = [61], IA = [16.2] (mm),
500
501
                  N=[3], TP=[0.50]hrs,
502
                  END=-1
503
    *$*********************
504
505
                          ** PR-CL-BBP-4 **
506
    *$***********************
507
                  ID=[2], NHYD=["PR-CL-BBP-4"], DT=[1]min, Area=[3.0] (ha),
508
    CALIB STANDHYD
                  XIMP=[0.52], TIMP=[0.52], DWF=[0] (cms), LOSS=[2],
509
510
                  SCS curve number CN=[66],
511
                  Pervious surfaces: IAper=[13.1] (mm), SLPP=[48](%),
512
                                 LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
513
                                 LGI=[141] (m), MNI=[0.015], SCI=[0] (min),
514
515
                  END=-1
516
    *$**********************
517
518
                      ** TOTAL FLOW AT PR-CL-BBP-4 **
    *$***********************
519
520
521
    ADD HYD
                  IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
522
    *$*********************
523
524
    *$**********************
525
                          ** PR-R-C4IC-2 **
526
    *$*********************
527
528
529
    CALIB STANDHYD
                  ID=[4], NHYD=["PR-R-C4IC-2"], DT=[1]min, Area=[2.80] (ha),
530
                  XIMP=[0.28], TIMP=[0.28], DWF=[0] (cms), LOSS=[2],
531
                  SCS curve number CN=[58],
532
                  Pervious surfaces: IAper=[18.4] (mm), SLPP=[43](%),
                                 LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
533
534
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
535
                                 LGI=[137] (m), MNI=[0.015], SCI=[0] (min),
536
                  END=-1
537
538
    539
                          ** PR-R-C4IC-3 **
540
       ********************
541
542
    CALIB STANDHYD
                  ID=[5], NHYD=["PR-R-C4IC-3"], DT=[1]min, Area=[1.60] (ha),
                  XIMP=[0.30], TIMP=[0.30], DWF=[0] (cms), LOSS=[2],
543
                  SCS curve number CN=[58],
544
545
                  Pervious surfaces: IAper=[18.4] (mm), SLPP=[60](%),
546
                                 LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
547
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
548
                                 LGI=[103] (m), MNI=[0.015], SCI=[0] (min),
549
                  END=-1
550
                 *****************
551
```

** TOTAL FLOW TO P-SWM P-4 **

```
553
             (ALSO, THIS FLOW WILL BE THE TOTAL FLOW TO PR-R-C4IC-3)
554
555
                IDsum=[6], NHYD=["TOT"], IDs to add=[3+4+5]
556
   ADD HYD
557
    *$**********************
558
559
    560
561
                  ** REQUIRED VOLUME - P-SWM P-4 **
562
                  (Assuming a relase rate of 1.0 cms)
    563
564
                ID=[6], STRATE=[-100](cms), RELRATE=[1.0](cms)
565
   COMPUTE VOLUME
566
    *$**********************
567
568
569
    570
                  P-SWM P-5 - STORAGE VOLUME ESTIMATION
571
                     (BBP & CTY ROAD 4 INTERCHANGE)
572
    573
574
    575
                        ** PR-R-C4IC-5 **
576
577
578
   CALIB NASHYD
                NHYD = [1], NHYD = ["PR - R - C4IC - 5"], DT = [1]min, AREA = [0.40] (ha),
579
                DWF = [0.00] (cms), CN/C = [65], IA = [13.7] (mm),
580
                N=[3], TP=[0.10]hrs,
581
                END = -1
582
   *$***********************
583
584
                        ** PR-R-C4IC-6 **
   *$**********************
585
586
587
                NHYD=[2], NHYD=["PR-R-C4IC-6"], DT=[1]min, AREA=[1.30] (ha),
   CALIB NASHYD
588
                DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
589
                N=[3], TP=[0.28]hrs,
590
                END=-1
591
592
    *$***********************
593
                    ** TOTAL FLOW TO PR-R-C4IC-6 **
   *$***********************
594
595
   *
596
   ADD HYD
                IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
597
    *$************************
598
599
                         ** PR-R-C4IC-7 **
   *$*********************
600
601
602
   CALIB STANDHYD
                ID=[4], NHYD=["PR-R-C4IC-7"], DT=[1]min, Area=[3.10] (ha),
603
                XIMP=[0.37], TIMP=[0.37], DWF=[0] (cms), LOSS=[2],
604
                 SCS curve number CN=[58],
605
                Pervious surfaces: IAper=[18.4] (mm), SLPP=[48](%),
606
                              LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
607
                 Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
608
                              LGI=[144] (m), MNI=[0.015], SCI=[0] (min),
609
                END=-1
610
    ***********************************
611
                    ** TOTAL FLOW AT PR-R-C4IC-7 **
612
    613
614
   ADD HYD
615
                IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
616
   *$*********************
617
618
    *$*********************
619
620
                   ** REQUIRED VOLUME - P-SWM P-5 **
621
                  (Assuming a relase rate of 0.10 cms)
```

```
622
623
624
                  ID=[5], STRATE=[-100] (cms), RELRATE=[0.10] (cms)
    COMPUTE VOLUME
625
    *$**********************
626
627
628
    629
                    P-SWM P-6 - STORAGE VOLUME ESTIMATION
                    (BBP & 2nd CONCESSION ROAD INTERCHANGE)
630
    631
632
    *$***********************
633
                           ** PR-R-2CON-2 **
634
    *$**************************
635
636
637
    CALIB STANDHYD
                   ID=[1], NHYD=["PR-R-2CON-2"], DT=[1]min, Area=[1.60] (ha),
                   XIMP=[0.20], TIMP=[0.20], DWF=[0] (cms), LOSS=[2],
638
                   SCS curve number CN=[70],
639
                           surfaces: IAper=[10.9] (mm), SLPP=[48](%),
640
                   Pervious
641
                                  LGP=[30] (m), MNP=[0.35], SCP=[0] (min),
642
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
643
                                  LGI=[210] (m), MNI=[0.015], SCI=[0] (min),
644
                   END=-1
645
    *$*********************
646
                           ** PR-CL-BBP-12 **
647
    *$*********************
648
649
650
    CALIB STANDHYD
                   ID=[2], NHYD=["PR-CL-BBP-12"], DT=[1]min, Area=[3.0](ha),
                   XIMP=[0.30], TIMP=[0.30], DWF=[0] (cms), LOSS=[2],
651
652
                   SCS curve number CN=[64],
653
                   Pervious
                           surfaces: IAper=[14.3] (mm), SLPP=[56](%),
654
                                  LGP = [30] (m), MNP = [0.35], SCP = [0] (min),
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
655
656
                                  LGI=[240] (m), MNI=[0.015], SCI=[0] (min),
657
                   END=-1
658
659
    *$***********************
660
                       ** TOTAL FLOW AT PR-CL-BBP-12 **
661
    *$*************************
662
663
    ADD HYD
                  IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
664
    *$*********************
665
666
                            ** PR-R-2CON-1 **
    *$*********************
667
668
                   ID=[4], NHYD=["PR-R-2CON-1"], DT=[1]min, Area=[3.0] (ha),
669
    CALIB STANDHYD
670
                   XIMP=[0.38], TIMP=[0.38], DWF=[0] (cms), LOSS=[2],
671
                   SCS curve number CN=[70],
672
                   Pervious surfaces: IAper=[10.9](mm), SLPP=[55](%),
673
                                  LGP=[30] (m), MNP=[0.35], SCP=[0] (min),
674
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
675
                                  LGI=[163] (m), MNI=[0.015], SCI=[0] (min),
676
                   END=-1
677
678
                  **********
679
                       ** TOTAL FLOW AT PR-R-2CON-1 **
    *$***********************
680
681
682
    ADD HYD
                  IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
683
    *$********************
684
685
    *$*********************
686
                     ** REQUIRED VOLUME - P-SWM P-6 **
687
688
                    (Assuming a relase rate of 0.60 cms)
689
690
```

```
ID=[5], STRATE=[-100] (cms), RELRATE=[0.60] (cms)
691
    COMPUTE VOLUME
692
    *$*******************
693
694
695
    696
                   P-SWM P-7 - STORAGE VOLUME ESTIMATION
697
                        BBP & 2nd CONCESSION ROAD)
    698
699
    *$**********************
700
                           ** PR-R-2CON-4 **
701
    *$********************
702
703
704
                  NHYD = [1], NHYD = ["PR - R - 2CON - 4"], DT = [1]min, AREA = [28.0] (ha),
    CALIB NASHYD
705
                  DWF = [0.00] (cms), CN/C = [61], IA = [16.2] (mm),
706
                  N=[3], TP=[1.39]hrs,
707
                  END=-1
708
    *$********************
709
                           ** PR-CL-BBP-13 **
710
    *$*********************
711
712
713
    CALIB STANDHYD
                  ID=[2], NHYD=["PR-CL-BBP-13"], DT=[1]min, Area=[3.0](ha),
714
                  XIMP=[0.45], TIMP=[0.45], DWF=[0] (cms), LOSS=[2],
715
                   SCS curve number CN=[77],
716
                  Pervious surfaces: IAper=[7.6] (mm), SLPP=[48](%),
717
                                  LGP = [40] (m), MNP = [0.35], SCP = [0] (min),
718
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
719
                                 LGI=[141] (m), MNI=[0.015], SCI=[0] (min),
720
                  END=-1
721
    722
                      ** TOTAL FLOW AT PR-CL-BBP-13 **
723
    *$***********************
724
725
726
                  IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
    ADD HYD
727
728
    *$*********************
729
                           ** PR-R-2CON-5 **
    *$********************
730
731
732
    CALIB STANDHYD
                  ID=[4], NHYD=["PR-R-2CON-5"], DT=[1]min, Area=[1.50] (ha),
733
                  XIMP=[0.28], TIMP=[0.28], DWF=[0] (cms), LOSS=[2],
734
                   SCS curve number CN=[78],
735
                  Pervious surfaces: IAper=[7.2](mm), SLPP=[54](%),
736
                                  LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
737
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
738
                                  LGI=[100] (m), MNI=[0.015], SCI=[0] (min),
739
                  END=-1
740
741
    *$***********************
742
                      ** TOTAL FLOW AT PR-R-2CON-5 **
743
    *$*********************
744
745
    ADD HYD
                  IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
746
747
    *$************************
748
                           ** PR-R-2CON-6 **
749
    *$*********************
750
751
                  ID=[6], NHYD=["PR-R-2CON-6"], DT=[1]min, Area=[3.0] (ha),
    CALIB STANDHYD
752
                  XIMP=[0.40], TIMP=[0.40], DWF=[0] (cms), LOSS=[2],
753
                  SCS curve number CN=[78],
754
                  Pervious surfaces: IAper=[7.2](mm), SLPP=[44](%),
755
                                  LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
756
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
757
                                  LGI=[141] (m), MNI=[0.015], SCI=[0] (min),
758
                  END=-1
759
```

```
*$************************
760
761
                    ** TOTAL FLOW AT PR-R-2CON-6 **
762
    *$**************************
763
764
                 IDsum=[7], NHYD=["TOT"], IDs to add=[5+6]
    ADD HYD
765
    *$**********************
766
767
                  ** REQUIRED VOLUME - P-SWM P-7 **
768
                  (Assuming a relase rate of 1.10 cms)
    769
770
771
    COMPUTE VOLUME
                ID=[7], STRATE=[-100] (cms), RELRATE=[1.10] (cms)
772
773
774
775
    776
                  P-SWM P-8 - STORAGE VOLUME ESTIMATION
777
                        (BBP & HIGHWAY 404)
    778
779
    780
781
                        ** PR-R-404-4 **
782
    *$***********************
783
784
    CALIB NASHYD
                 NHYD=[1], NHYD=["PR-R-404-4"], DT=[1]min, AREA=[3.50] (ha),
785
                 DWF = [0.00] (cms), CN/C = [61], IA = [16.2] (mm),
786
                 N=[3], TP=[0.40]hrs,
787
                 END=-1
788
    *$***********************
789
                        ** PR-R-404-5 **
790
    *$*********************
791
792
793
    CALIB NASHYD
                NHYD=[2], NHYD=["PR-R-404-5"], DT=[1]min, AREA=[5.90] (ha),
                 DWF = [0.00] (cms), CN/C = [61], IA = [16.2] (mm),
794
795
                 N=[3], TP=[0.77]hrs,
796
                 END = -1
797
798
    *$*************************
799
                    ** TOTAL FLOW AT PR-R-404-5 **
800
    *$***********************
801
802
    ADD HYD
                IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
803
804
805
806
                        ** PR-R-404-6 **
807
    *$*********************
808
809
810
    CALIB NASHYD
                 NHYD=[4], NHYD=["PR-R-404-6"], DT=[1]min, AREA=[3.70] (ha),
811
                 DWF = [0.00] (cms), CN/C = [63], IA = [14.9] (mm),
812
                 N=[3], TP=[0.35]hrs,
813
                 END=-1
814
815
    816
                    ** TOTAL FLOW AT PR-R-404-6 **
817
818
819
    ADD HYD
                 IDsum=[9], NHYD=["TOT"], IDs to add=[3+4]
820
821
822
    *$*********************
823
                   ** REQUIRED VOLUME - P-SWM P-8 **
824
825
                  (Assuming a relase rate of 0.40 cms)
826
827
828
    COMPUTE VOLUME
                 ID=[9], STRATE=[-100] (cms), RELRATE=[0.40] (cms)
```

```
830
831
   832
833
                P-SWM P-9 - STORAGE VOLUME ESTIMATION
834
                     (BBP & HIGHWAY 404)
835
   836
   *$**********************
837
                     ** PR-R-404-7 **
838
839
   *$*************************
840
              NHYD=[10], NHYD=["PR-R-404-7"], DT=[1]min, AREA=[6.50] (ha),
841
   CALTB NASHYD
              DWF = [0.00] (cms), CN/C = [61], IA = [16.2] (mm),
842
              N=[3], TP=[0.65]hrs,
843
844
              END = -1
845
846
     *********************
847
                ** REQUIRED VOLUME - P-SWM P-9 **
848
               (Assuming a relase rate of 0.10 cms)
   *$********************
849
850
851
   COMPUTE VOLUME
              ID=[10], STRATE=[-100] (cms), RELRATE=[0.10] (cms)
852
853
854
855
   856
                TOTAL FLOWS TO CULVERT PR-R-404-10
857
                     (BBP & HIGHWAY 404)
   858
859
   860
861
                     ** PR-R-404-11 **
   *$************************
862
863
              NHYD=[1], NHYD=["PR-R-404-11"], DT=[1]min, AREA=[29.30] (ha),
864
   CALIB NASHYD
865
              DWF = [0.00] (cms), CN/C = [60], IA = [16.9] (mm),
866
              N=[3], TP=[0.91]hrs,
867
              END=-1
868
869
   *$**********************
870
                     ** EX-CL-404-2 **
   871
872
873
   CALIB NASHYD
              NHYD=[2], NHYD=["PR-R-404-11"], DT=[1]min, AREA=[7.3] (ha),
874
              DWF = [0.00] (cms), CN/C = [60], IA = [16.9] (mm),
875
              N=[3], TP=[0.40]hrs,
              END=-1
876
877
   *$***********************
878
879
                     ** PR-R-404-10 **
880
   *$************************
881
882
   CALIB NASHYD
              NHYD = [3], NHYD = ["PR - CL - 404 - 2"], DT = [1]min, AREA = [2.20] (ha),
883
              DWF = [0.00] (cms), CN/C = [64], IA = [14.3] (mm),
884
              N=[3], TP=[0.51]hrs,
885
              END=-1
886
     887
                 ** TOTAL FLOW AT PR-R-404-10 **
888
   *$*********************
889
890
891
   ADD HYD
              IDsum=[10], NHYD=["TOT"], IDs to add=[1+2+3]
892
   893
894
895
   896
```

PEAK FLOWS AT PROPOSED CULVERTS (NOT RELATED TO SWM PONDS)

```
899
   900
   *$**************************
901
                        ** PR-R-BBP-5 **
902
   *$*********************
903
904
   CALIB NASHYD
905
                NHYD=[1], NHYD=["PR-R-BBP-5"], DT=[1]min, AREA=[2.20](ha),
906
                DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
907
                N=[3], TP=[0.37]hrs,
908
                END = -1
909
   *$********************
910
                        ** PR-R-BBP-6A **
911
   *$********************
912
913
914
                NHYD=[2], NHYD=["PR-R-BBP-6A"], DT=[1]min, AREA=[542.60](ha),
   CALIB NASHYD
915
                DWF = [0.00] (cms), CN/C = [58], IA = [18.4] (mm),
916
                N=[3], TP=[4.60]hrs,
917
                END=-1
918
   *$********************
919
920
                        ** PR-R-BBP-6B **
921
922
                NHYD = [3], NHYD = ["PR - R - BBP - 6B"], DT = [1]min, AREA = [5.60] (ha),
923
   CALIB NASHYD
                DWF = [0.00] (cms), CN/C = [70], IA = [10.9] (mm),
924
925
                N=[3], TP=[0.47]hrs,
                END=-1
926
927
   *$**********************
928
929
                   ** TOTAL FLOW AT PR-R-BBP-6B **
   930
931
932
   ADD HYD
                IDsum=[4], NHYD=["TOT"], IDs to add=[1+2+3]
933
   934
935
                        ** PR-R-BBP-7 **
936
   *$*********************
937
938
   CALIB NASHYD
                NHYD=[1], NHYD=["PR-R-BBP-7"], DT=[1]min, AREA=[2.40] (ha),
939
                DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
940
                N=[3], TP=[0.24]hrs,
941
                END=-1
942
   *$*********************
943
944
                        ** PR-R-BBP-8A **
   *$*********************
945
946
947
                NHYD=[2], NHYD=["PR-R-BBP-8A"], DT=[1]min, AREA=[81.70](ha),
   CALIB NASHYD
                DWF = [0.00] (cms), CN/C = [57], IA = [19.2] (mm),
948
                N=[3], TP=[2.50]hrs,
949
950
                END=-1
951
952
   *$*********************
                       ** PR-R-BBP-8B **
953
   *$*********************
954
955
956
   CALIB NASHYD
                NHYD=[3], NHYD=["PR-R-BBP-8A"], DT=[1]min, AREA=[3.70] (ha),
                DWF = [0.00] (cms), CN/C = [70], IA = [10.9] (mm),
957
958
                N=[3], TP=[0.50]hrs,
959
                END=-1
960
961
   ** TOTAL FLOW AT PR-R-BBP-8B **
962
   *$*********************
963
964
965
               IDsum=[4], NHYD=["TOT"], IDs to add=[2+3]
   ADD HYD
```

```
967
968
                             ** PR-R-10IC-6 **
969
970
971
     CALIB STANDHYD
                    ID=[5], NHYD=["PR-R-10IC-6"], DT=[1]min, Area=[3.4] (ha),
                    XIMP = [0.48], TIMP = [0.48], DWF = [0] (cms), LOSS = [2],
972
973
                    SCS curve number CN=[58],
974
                    Pervious surfaces: IAper=[18.4] (mm), SLPP=[45](%),
975
                                    LGP = [40] (m), MNP = [0.35], SCP = [0] (min),
976
                    Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
977
                                    LGI=[151] (m), MNI=[0.015], SCI=[0] (min),
978
                    END=-1
979
980
     FLOWS TO PR-CL-BBP-2
981
     982
983
     *$**********************
984
985
                             ** PR-R-10TC-3 **
986
     *$**********************
987
988
     CALIB NASHYD
                    NHYD = [8], NHYD = ["PR-R-10IC-3"], DT = [1]min, AREA = [1.40] (ha),
989
                    DWF = [0.00] (cms), CN/C = [67], IA = [12.5] (mm),
990
                    N=[3], TP=[0.29]hrs,
991
                    END=-1
992
     *$*********************
993
                             ** PR-R-10IC-2 **
994
     *$***********************
995
996
997
     CALIB STANDHYD
                    ID=[9], NHYD=["PR-R-10IC-2"], DT=[1]min, Area=[3.10] (ha),
998
                    XIMP=[0.36], TIMP=[0.36], DWF=[0] (cms), LOSS=[2],
999
                    SCS curve number CN=[61],
                    Pervious
                            surfaces: IAper=[16.2] (mm), SLPP=[42](%),
1000
1001
                                    LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
                    Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1002
1003
                                    LGI=[144] (m), MNI=[0.015], SCI=[0] (min),
1004
                    END=-1
1005
     *$*******************
1006
                        ** TOTAL FLOW TO PR-R-10IC-2 **
1007
     *$********************
1008
     *
1009
1010
     ADD HYD
                    IDsum=[10], NHYD=["TOT"], IDs to add=[8+9]
1011
     *$*********************
1012
1013
                         ** ROUTED FLOW TO PR-CL-BBP-2 **
     *$*********************
1014
1015
1016
                    IDOUT=1 NHYD="to PR-CL-BBP-2" IDIN=10 DT=1.00min
     ROUTE CHANNEL
1017
                    CHLGTH=1200.0 CHSLOPE=1.0% FPSLOPE=1.0%
1018
                    VSN=9999 NSEG=1
1019
                         MANNING'S 'n'
                                      DISTANCE
1020
                           -0.070
                                      10.0
1021
                           DISTANCE
                                      ELEVATION
1022
                             0.0
                                      183.5
1023
                             1.5
                                      183.11
1024
                             3.0
                                      183.05
1025
                             4.0
                                      182.0
1026
                             4.5
                                      181.0
1027
                             5.5
                                      181.0
1028
                             6.0
                                      182.0
1029
                             7.0
                                      183.05
1030
                             8.5
                                      183.15
1031
                            10.0
                                      183.5
1032
     *$**********************
1033
1034
                             ** PR-CL-BBP-2 **
     *$*********************
1035
```

*\$***********************

```
1036
1037
     CALIB NASHYD
                   NHYD=[2], NHYD=["PR-CL-BBP-2"], DT=[1]min, AREA=[75.80](ha),
1038
                    DWF = [0.00] (cms), CN/C = [68], IA = [12.0] (mm),
1039
                    N=[3], TP=[1.21]hrs,
1040
                    END=-1
1041
     *$*********************
1042
                       ** TOTAL FLOW AT PR-CL-BBP-2 **
1043
     *$********************
1044
1045
1046
                   IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
     ADD HYD
1047
1048
     *$*********************
                            ** PR-R-C4IC-4 **
1049
     *$*********************
1050
1051
1052
                    ID=[4], NHYD=["PR-R-C4IC-4"], DT=[1]min, Area=[2.50] (ha),
     CALIB STANDHYD
1053
                    XIMP=[0.55], TIMP=[0.55], DWF=[0] (cms), LOSS=[2],
1054
                    SCS curve number CN=[58],
1055
                    Pervious surfaces: IAper=[18.4] (mm), SLPP=[42] (%),
1056
                                   LGP = [40] (m), MNP = [0.35], SCP = [0] (min),
1057
                    Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1058
                                   LGI=[129] (m), MNI=[0.015], SCI=[0] (min),
1059
                    END=-1
1060
     *$**********************
1061
                            ** PR-CL-BBP-3 **
1062
     *$*********************
1063
1064
1065
                   NHYD=[5], NHYD=["PR-CL-BBP-2"], DT=[1]min, AREA=[27.30](ha),
     CALIB NASHYD
1066
                    DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
1067
                    N=[3], TP=[0.71]hrs,
1068
                    END = -1
1069
1070
     1071
                            FLOWS TO PR-CL-BBP-5
1072
     1073
1074
     1075
                            ** PR-R-C4IC-5 **
1076
     *$**********************
1077
1078
     CALIB NASHYD
                    NHYD = [7], NHYD = ["PR - R - C4IC - 5"], DT = [1]min, AREA = [0.40] (ha),
1079
                    DWF = [0.00] (cms), CN/C = [65], IA = [13.7] (mm),
1080
                    N=[3], TP=[0.10]hrs,
1081
                    END=-1
1082
     *$*********************
1083
                            ** PR-R-C4IC-6 **
1084
1085
     *$*********************
1086
1087
                   NHYD = [8], NHYD = ["PR-R-C4IC-6"], DT = [1]min, AREA = [1.30] (ha),
     CALTB NASHYD
                    DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
1088
1089
                    N=[3], TP=[0.28]hrs,
1090
                    END=-1
1091
     *$********************
1092
                             ** PR-R-C4IC-7 **
1093
     *$*********************
1094
1095
                    ID=[9], NHYD=["PR-R-C4IC-7"], DT=[1]min, Area=[3.10] (ha),
1096
     CALIB STANDHYD
1097
                    XIMP=[0.37], TIMP=[0.37], DWF=[0] (cms), LOSS=[2],
1098
                    SCS curve number CN=[58],
1099
                    Pervious surfaces: IAper=[18.4] (mm), SLPP=[48](%),
1100
                                   LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
1101
                    Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1102
                                   LGI=[144] (m), MNI=[0.015], SCI=[0] (min),
1103
                    END=-1
1104
```

```
*$**********************
1105
1106
                      ** TOTAL FLOW AT PR-CL-BBP-4 **
1107
    *$***********************
1108
1109
                  IDsum=[10], NHYD=["TOT"], IDs to add=[7+8+9]
1110
    *$********************
1111
1112
    *$*********************
1113
                      ** ROUTED FLOW TO PR-CL-BBP-5 **
1114
    *$*********************
1115
1116
    ROUTE CHANNEL IDOUT=1 NHYD="to PR-CL-BBP-5" IDIN=10 DT=1.00min
1117
                  CHLGTH=580.0 CHSLOPE=1.0% FPSLOPE=1.0%
1118
1119
                  VSN=9999 NSEG=1
                       MANNING'S 'n'
1120
                                  DISTANCE
1121
                         -0.070
                                   10.0
                                   ELEVATION
1122
                         DISTANCE
1123
                           0.0
                                   183.5
1124
                           1.5
                                   183.11
1125
                           3.0
                                   183.05
1126
                           4.0
                                   182.0
1127
                           4.5
                                   181.0
1128
                           5.5
                                   181.0
1129
                           6.0
                                   182.0
1130
                           7.0
                                   183.05
1131
                           8.5
                                   183.15
1132
                          10.0
                                   183.5
1133
    *$********************
1134
                          ** PR-CL-BBP-5 **
1135
    *$*********************
1136
1137
1138
    CALIB NASHYD
                  NHYD=[2], NHYD=["PR-CL-BBP-2"], DT=[1]min, AREA=[22.10](ha),
1139
                  DWF = [0.00] (cms), CN/C = [64], IA = [14.3] (mm),
1140
                  N=[3], TP=[0.68]hrs,
1141
                  END=-1
1142
1143
    *$**********************
1144
                      ** TOTAL FLOW AT PR-CL-BBP-5 **
    *$********************
1145
1146
1147
    ADD HYD
                  IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
1148
1149
    1150
                      CULVERTS AT BBP & BATHURST STREET
1151
    1152
    *$**********************
1153
1154
                          ** PR-R-BST-1 **
1155
    *$**********************
1156
1157
                  NHYD = [1], NHYD = ["PR - R - BST - 1"], DT = [1]min, AREA = [2.20] (ha),
    CALIB NASHYD
1158
                  DWF = [0.00] (cms), CN/C = [74], IA = [8.9] (mm),
1159
                  N=[3], TP=[0.23]hrs,
1160
1161
    *$********************
1162
                           ** PR-CL-BBP-7 **
1163
    *$**********************
1164
1165
                  ID=[2], NHYD=["PR-CL-BBP-7"], DT=[1]min, Area=[2.0] (ha),
1166
    CALIB STANDHYD
                  XIMP=[0.46], TIMP=[0.46], DWF=[0] (cms), LOSS=[2],
1167
1168
                  SCS curve number CN=[70],
                  Pervious surfaces: IAper=[10.9] (mm), SLPP=[49](%),
1169
1170
                                 LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1171
1172
                                 LGI=[118] (m), MNI=[0.015], SCI=[0] (min),
                  END=-1
1173
```

```
1174
1175
     *$************************
1176
                       ** TOTAL FLOW AT PR-CL-BBP-7 **
     1177
1178
1179
     ADD HYD
                   IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
1180
     *$********************
1181
                            ** PR-R-BST-2 **
1182
     *$*********************
1183
1184
1185
     CALIB STANDHYD
                   ID=[4], NHYD=["PR-R-BST-2"], DT=[1]min, Area=[2.0] (ha),
                   XIMP=[0.40], TIMP=[0.40], DWF=[0] (cms), LOSS=[2],
1186
1187
                   SCS curve number CN=[70],
1188
                   Pervious surfaces: IAper=[10.9] (mm), SLPP=[47](%),
1189
                                   LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1190
1191
                                   LGI=[115] (m), MNI=[0.015], SCI=[0] (min),
                   END=-1
1192
1193
     *$*********************
1194
1195
                       ** TOTAL FLOW AT PR-R-BST-2 **
     *$*********************
1196
1197
1198
     ADD HYD
                   IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
1199
     *$*********************
1200
     *$**********************
1201
1202
                            ** PR-R-BST-3 **
     *$**************************
1203
1204
1205
     CALIB NASHYD
                   NHYD = [1], NHYD = ["PR - R - BST - 3"], DT = [1]min, AREA = [3.60] (ha),
                   DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
1206
1207
                   N=[3], TP=[0.52]hrs,
1208
                   F.ND=-1
1209
     *$**********************
1210
1211
                            ** PR-CL-BBP-8 **
1212
     *$*************************
1213
     CALIB STANDHYD
1214
                   ID=[2], NHYD=["PR-CL-BBP-8"], DT=[1]min, Area=[2.10](ha),
1215
                   XIMP=[0.48], TIMP=[0.48], DWF=[0] (cms), LOSS=[2],
1216
                   SCS curve number CN=[70],
1217
                          surfaces: IAper=[10.9](mm), SLPP=[49](%),
                   Pervious
1218
                                  LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
1219
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1220
                                  LGI=[118] (m), MNI=[0.015], SCI=[0] (min),
1221
                   END=-1
1222
     *$********************
1223
1224
                       ** TOTAL FLOW AT PR-CL-BBP-8 **
1225
     *$***********************
1226
1227
                   IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
1228
     *$**********************
1229
1230
                            ** PR-R-BST-4 **
1231
     *$***********************
1232
1233
     CALIB STANDHYD
                   ID=[4], NHYD=["PR-R-BST-2"], DT=[1]min, Area=[2.0] (ha),
                   XIMP=[0.40], TIMP=[0.40], DWF=[0] (cms), LOSS=[2],
1234
1235
                   SCS curve number CN=[70],
1236
                   Pervious surfaces: IAper=[10.9] (mm), SLPP=[51](%),
1237
                                   LGP=[40](m), MNP=[0.35], SCP=[0](min),
1238
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1239
                                  LGI=[115] (m), MNI=[0.015], SCI=[0] (min),
1240
                   END=-1
1241
     *$*********************
1242
```

```
** TOTAL FLOW AT PR-R-BST-4 **
1243
1244
1245
1246
    ADD HYD
                  IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
1247
1248
    1249
                 CULVERTS AT BBP & 2ND CONCESSION ROAD INTERCHNAGE
1250
    1251
    *$*********************
1252
1253
                          ** PR-R-2CON-3 **
    *$********************
1254
1255
1256
                  NHYD=[1], NHYD=["PR-R-2CON-3"], DT=[1]min, AREA=[243.60] (ha),
    CALIB NASHYD
                  DWF = [0.00] (cms), CN/C = [66], IA = [13.1] (mm),
1257
1258
                  N=[3], TP=[2.31]hrs,
1259
                  END = -1
1260
    *$********************
12.61
                          ** PR-CL-BBP-14 **
1262
    *$*********************
1263
1264
1265
    CALIB NASHYD
                  NHYD=[2], NHYD=["PR-CL-BBP-14"], DT=[1]min, AREA=[37.0](ha),
1266
                  DWF = [0.00] (cms), CN/C = [63], IA = [14.9] (mm),
1267
                  N=[3], TP=[0.85]hrs,
                  END=-1
1268
1269
    *$********************
1270
1271
                          ** PR-R-LST-1 **
    *$********************
1272
1273
1274
    CALIB NASHYD
                  NHYD = [3], NHYD = ["PR - R - LST - 1"], DT = [1]min, AREA = [40.20] (ha),
1275
                  DWF = [0.00] (cms), CN/C = [61], IA = [16.20] (mm),
1276
                  N=[3], TP=[1.04]hrs,
1277
                  END = -1
1278
    *$*********************
1279
1280
                          ** PR-CL-BBP-15 **
1281
    *$***********************
1282
                  ID=[4], NHYD=["PR-CL-BBP-15"], DT=[1]min, Area=[1.80] (ha),
1283
    CALIB STANDHYD
1284
                  XIMP=[0.45], TIMP=[0.45], DWF=[0] (cms), LOSS=[2],
1285
                  SCS curve number CN=[61],
1286
                  Pervious surfaces: IAper=[16.2] (mm), SLPP=[43] (%),
1287
                                 LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
1288
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1289
                                 LGI=[110] (m), MNI=[0.015], SCI=[0] (min),
1290
                  END=-1
1291
    *$********************
1292
1293
                      ** TOTAL FLOW AT PR-CL-BBP-15 **
1294
    1295
1296
                  IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
1297
    1298
1299
1300
                          ** PR-R-LST-2 **
    *$*********************
1301
1302
1303
    CALIB NASHYD
                  NHYD=[1], NHYD=["PR-R-LST-2"], DT=[1]min, AREA=[8.80] (ha),
1304
                  DWF = [0.00] (cms), CN/C = [60], IA = [16.9] (mm),
1305
                  N=[3], TP=[0.60]hrs,
1306
                  END=-1
1307
    *$*********************
1308
                           ** PR-CL-BBP-16 **
1309
1310
1311
```

```
ID=[2], NHYD=["PR-CL-BBP-16"], DT=[1]min, Area=[1.20](ha),
1312
     CALIB STANDHYD
1313
                   XIMP=[0.41], TIMP=[0.41], DWF=[0] (cms), LOSS=[2],
1314
                    SCS curve number CN=[61],
1315
                    Pervious surfaces: IAper=[16.2] (mm), SLPP=[48](%),
1316
                                   LGP = [40] (m), MNP = [0.35], SCP = [0] (min),
                    Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1317
1318
                                  LGI=[89] (m), MNI=[0.015], SCI=[0] (min),
1319
                    END=-1
1320
     *$*********************
1321
1322
                       ** TOTAL FLOW AT PR-CL-BBP-16 **
     *$**********************
1323
1324
1325
                   IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
     ADD HYD
1326
     *$********************
1327
1328
                           ** PR-R-LST-3 **
     *$*********************
1329
1330
     CALIB STANDHYD
                   ID=[4], NHYD=["PR-R-LST-3"], DT=[1]min, Area=[1.10](ha),
1331
                    XIMP=[0.40], TIMP=[0.40], DWF=[0] (cms), LOSS=[2],
1332
1333
                    SCS curve number CN=[58],
                    Pervious surfaces: IAper=[18.4](mm), SLPP=[47](%),
1334
1335
                                   LGP = [40] (m), MNP = [0.35], SCP = [0] (min),
                    Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1336
1337
                                   LGI=[86] (m), MNI=[0.015], SCI=[0] (min),
1338
                    END=-1
1339
     *$**********************
1340
1341
                       ** TOTAL FLOW AT PR-R-LST-3 **
     *$***********************
1342
1343
1344
                   IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
1345
     *$*********************
1346
                            ** PR-CL-BBP-17 **
1347
     *$*********************
1348
1349
1350
     CALIB NASHYD
                   NHYD=[1], NHYD=["PR-CL-BBP-17"], DT=[1]min, AREA=[22.0](ha),
1351
                   DWF = [0.00] (cms), CN/C = [65], IA = [13.7] (mm),
                   N=[3], TP=[0.65]hrs,
1352
1353
                    END = -1
1354
1355
     1356
                  CULVERTS AT BBP & HIGHWAY 404 INTERCHANGE
1357
     1358
     *$*********************
1359
                            ** PR-R-404-3 **
1360
     *$*********************
1361
1362
1363
     CALIB NASHYD
                   NHYD=[1], NHYD=["PR-R-404-3"], DT=[1]min, AREA=[118.50] (ha),
                    DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
1364
1365
                   N=[3], TP=[2.02]hrs,
1366
                   END=-1
1367
1368
                            ** PR-R-404-2 **
1369
     *$*********************
1370
1371
1372
                   NHYD=[2], NHYD=["PR-R-404-2"], DT=[1]min, AREA=[0.90] (ha),
     CALIB NASHYD
1373
                    DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
1374
                    N=[3], TP=[0.32]hrs,
1375
                   END=-1
1376
     *$*********************
1377
                        ** TOTAL FLOW AT PR-R-404-2 **
1378
1379
1380
```

```
IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
1381
1382
    *$*********************
1383
1384
                           ** PR-R-404-1 **
    *$***********************
1385
1386
1387
    CALIB NASHYD
                  NHYD=[4], NHYD=["PR-R-404-1"], DT=[1]min, AREA=[1.70] (ha),
1388
                   DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
                   N=[3], TP=[0.47]hrs,
1389
                   END=-1
1390
1391
    *$*********************
1392
                      ** TOTAL FLOW AT PR-R-404-1 **
1393
     1394
1395
1396
                   IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
1397
     1398
1399
     *$**********************
1400
     *$*********************
1401
1402
                           ** PR-R-404-8A **
     *$*******************
1403
1404
1405
     CALIB NASHYD
                  NHYD = [8], NHYD = ["PR - R - 404 - 8A"], DT = [1]min, AREA = [2.40] (ha),
1406
                   DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
1407
                   N=[3], TP=[0.50]hrs,
1408
                   END = -1
1409
    *$*********************
1410
                          ** PR-R-404-8B **
1411
     *$*********************
1412
1413
1414
     CALIB NASHYD
                   NHYD=[9], NHYD=["PR-R-404-8B"], DT=[1]min, AREA=[2.60] (ha),
1415
                   DWF = [0.00] (cms), CN/C = [64], IA = [14.3] (mm),
1416
                   N=[3], TP=[0.51]hrs,
1417
                   END=-1
1418
1419
     *$**********************
1420
                          ** PR-R-404-9 **
     *$********************
1421
1422
                   NHYD = [10], NHYD = ["PR - R - 404 - 9"], DT = [1]min, AREA = [1.80] (ha),
1423
     CALIB NASHYD
1424
                   DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
1425
                   N=[3], TP=[0.26]hrs,
1426
                   END=-1
1427
1428
     1429
1430
     START
                   TZERO=[0.0], METOUT=[0], NSTORM=[1], NRUN=[005]
1431
                   24SCS005.stm
1432
1433
                   TZERO=[0.0], METOUT=[0], NSTORM=[1], NRUN=[010]
     START
1434
                   24SCS010.stm
1435
1436
     START
                   TZERO=[0.0], METOUT=[0], NSTORM=[1], NRUN=[025]
1437
                   24SCS025.stm
1438
                   TZERO=[0.0], METOUT=[0], NSTORM=[1], NRUN=[050]
1439
     START
1440
                   24SCS050.stm
1441
1442
     START
                  TZERO=[0.0], METOUT=[0], NSTORM=[1], NRUN=[100]
                   24SCS100.stm
1443
1444
1445
    FINISH
1446
1447
```

```
______
2
3
                    H Y Y M M OOO
                                      999
                                          999
               M H
    SSSSS W W M
                                               =======
                      ΥΥ
                          MM MM O O
                                      9 9 9 9
4
         W W W
             MM MM
                 Η
                    Η
                                   ## 9 9
                                          9 9
                          M M M O
5
    SSSSS W W W M M M
                 ннннн
                       Y
                                               Ver 4.05
                                     9999
                          M M O O
6
         W
             M M
                 н н
                       Y
                                          9999
                                               Sept 2011
            M
               м н
                   Н
7
    SSSSS W W
                      Y
                          M M OOO
                                       9
                                            9
                                               =======
                                      9 9 9 9
8
                                               # 1281254
                                      999
9
                                          999
        StormWater Management HYdrologic Model
10
   *****************
11
   12
   ****** A single event and continuous hydrologic simulation model *******
1.3
   ****** based on the principles of HYMO and its successors
14
1.5
                   OTTHYMO-83 and OTTHYMO-89.
   *******************
16
   ****** Distributed by: J.F. Sabourin and Associates Inc.
17
18
                    Ottawa, Ontario: (613) 836-3884
19
   *****
                    Gatineau, Quebec: (819) 243-6858
2.0
                    E-Mail: swmhymo@jfsa.Com
   ******************
21
22
23
   2.4
   +++++++ Licensed user: AECOM
                                               ++++++++
   +++++++ Kitchener
25
                                SERIAL#:1281254
                                               ++++++++
26
   27
   ******************
28
29
               +++++ PROGRAM ARRAY DIMENSIONS +++++
   *****
30
               Maximum value for ID numbers : 10
31
               Max. number of rainfall points: 105408
32
               Max. number of flow points : 105408
   ******************
33
34
35
   **** DESCRIPTION SUMMARY TABLE HEADERS (units depend on METOUT in START) ****
36
        _____****
         ID: Hydrograph IDentification numbers, (1-10).
37
   ***** NHYD: Hydrograph reference numbers, (6 digits or characters).
38
   ***** AREA: Drainage area associated with hydrograph, (ac.) or (ha.).  
***** QPEAK: Peak flow of simulated hydrograph, (ft^3/s) or (m^3/s).
39
40
41
   ***** TpeakDate_hh:mm is the date and time of the peak flow.
42
   ***** R.V.: Runoff Volume of simulated hydrograph, (in) or (mm).
   ****
       R.C.: Runoff Coefficient of simulated hydrograph, (ratio).
43
   ****
44
         *: see WARNING or NOTE message printed at end of run.
45
         **: see ERROR message printed at end of run.
   ********************
46
47
48
49
   50
51
   ************************
52
53
   54
   *****************
        55
56
   ******************
57
   * Input filename: C:\MODELING\BBP\BBP-CU~1.DAT
   * Output filename: C:\MODELING\BBP\BBP-CU~1.out
58
59
   * Summary filename: C:\MODELING\BBP\BBP-CU~1.sum
60
   * User comments:
61
   * 1:
62
   * 2:__
63
   * 3:_
64
65
66
   #*******************
67
    Project Name: BRADFORD BYPASS
                                     JOB NUMBER: [60636190] *
68
         : Jan. 20, 2023
```

Date

```
70
      Modeller
              : [jrm]
 71
      Company
              : AECOM
      License # : 1281254
 72
 73
 74
 75
      Notes: This hydrologic model was developed for the BBP ultimate conditions *
 76
    #
           A new Berm is proposed to isolate flows draining to P-SWM P-2 and
 77
           the tributary of Penville Creek.
 78
79
    #
                PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
 80
                     FOR PROPOSED SWM PONDS (UNCONTROLLED)
81
                       Proposed Drainage Conditions
                 2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
82
83
84
    #***********************
 85
      ** END OF RUN :
 86
 87
88
89
90
91
 92
93
 94
     RUN: COMMAND#
95
     002:0001-----
 96
       START
                .00 hrs on
 97
        [TZERO =
                              01
98
        [METOUT= 2 (1=imperial, 2=metric output)]
        [NSTORM= 1]
99
100
        [NRUN = 2]
    #***********************
101
102
    # Project Name: BRADFORD BYPASS
                                            JOB NUMBER: [60636190] *
103
    # Date : Jan. 20, 2023
              : [jrm]
104
    # Modeller
      Company : AECOM
105
    # License # : 1281254
106
107
108
109
      Notes: This hydrologic model was developed for the BBP ultimate conditions *
110
           A new Berm is proposed to isolate flows draining to P-SWM P-2 and
111
           the tributary of Penville Creek.
112
113
                PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
114
                     FOR PROPOSED SWM PONDS (UNCONTROLLED)
115
                       Proposed Drainage Conditions
                 2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
116
117
    #***********************
118
    #***********************
119
   002:0002-----
120
121
        READ STORM
122
        Filename = STORM.001
123
        [SDT= 6.00:SDUR= 24.00:PTOT= 57.59]
125
    126
    127
    002:0003-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
        CALIB NASHYD 08:PR-R-BBP-1 14.50
                                                         16.34 .284
128
                                        .287 No_date 12:30
129
        [CN= 73.0: N= 3.00]
130
        [Tp= .55:DT= 1.00]
     002:0004-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
131
     * COMPUTE VOLUME 08:PR-R-BBP-1 14.50 .287 No_date 12:30
132
                                                          16.34 n/a
    133
    134
    002:0005-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
135
        CALIB NASHYD 01:PR-R-BBP-9 5.40 .132 No_date 12:18 15.53 .270
136
137
        [CN= 72.0: N= 3.00]
        [Tp= .38:DT= 1.00]
138
```

```
002:0006-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-BBP-9 6.60 .155 No_date 12:20 15.47 .269
140
141
          [CN= 72.0: N= 3.00]
142
           [Tp= .40:DT= 1.00]
143
      002:0007-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         ADD HYD 01:PR-R-BBP-9 5.40 .132 No_date 12:18 15.53 n/a + 02:PR-R-BBP-9 6.60 .155 No_date 12:20 15.47 n/a [DT= 1.00] SUM= 03:TOT 12.00 .286 No_date 12:19 15.50 n/a
144
145
146
      002:0008-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
147
         CALIB NASHYD 04:P-SWM P-2 3.90 .109 No_date 12:17 17.19 .298
148
          [CN = 74.0: N = 3.00]
          [Tp= .37:DT= 1.00]
150
      1.5.1
152
153
154
      002:0010-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
155
          COMPUTE VOLUME 08:TOT 15.90 .395 No_date 12:18 15.91 n/a {ST= .130 ha.m to control at .050 (cms)}
156
157
158
     159
160
     002:0011-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:EX-CL-400- 49.00 1.459 No_date 12:27 23.03 .400
161
          [CN= 79.0: N= 3.00]
162
           [Tp= .53:DT= 1.00]
163
      002:0012------ID:NHYD-------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ROUTE CHANNEL -> 01:EX-CL-400- 49.00 1.459 No_date 12:27 23.03 n/a
[RDT= 1.00] out<- 02:to PR-CL-2 49.00 1.272 No_date 12:42 23.03 n/a
164
165
166
           [L/S/n= 825./ .850/.070]
167
          \{Vmax = .822:Dmax = 1.126\}
168
      002:0013-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
169
         CALIB NASHYD 03:PR-R-BBP-1 8.80 .169 No_date 12:29 15.53 .270
170
          [CN= 72.0: N= 3.00]
172
          [Tp = .53:DT = 1.00]
      002:0014-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
173
         CALIB NASHYD 04:EX-CL-400- 1.30 .047 No_date 12:18 23.03 .400
174
           [CN= 79.0: N= 3.00]
175
176
           [Tp= .40:DT= 1.00]
      002:0015-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
177
         CALIB STANDHYD 05:PR-R-BBP-1 1.30 .167 No_date 11:55 36.88 .640
178
179
          [XIMP=.55:TIMP=.55]
180
           [LOSS= 2 :CN= 70.0]
          [Pervious area: IAper=10.90:SLPP=****:LGP= 8.:MNP=.350:SCP= .0]
181
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 93.:MNI=.015:SCI= .0]
      002:0016-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
183
          ADD HYD 03:PR-R-BBP-1 8.80 .169 No_date 12:29 15.53 n/a + 04:EX-CL-400- 1.30 .047 No_date 12:18 23.03 n/a + 05:PR-R-BBP-1 1.30 .167 No_date 11:55 36.88 n/a [DT= 1.00] SUM= 01:TOT 11.40 .232 No_date 12:24 18.82 n/a
         ADD HYD
184
185
186
187
      002:0017-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
188
         CALIB NASHYD 06:PR-CL-2 161.70 .501 No_date 16:20 10.66 .185
189
          [CN=65.0: N=3.00]
190
191
          [Tp= 3.38:DT= 1.00]
      002:0018-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
192
         193
194
195
196
      002:0019-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
197
         ROUTE CHANNEL -> 07:TOT PR-CL- 222.10 1.560 No_date 12:42 13.81 n/a [RDT= 1.00] out<- 04:to PR-R-BB 222.10 1.546 No_date 12:46 13.81 n/a
198
199
           [L/S/n=230./.900/.070]
200
           {Vmax= .853:Dmax= 1.151}
201
      002:0020-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
202
          CALIB NASHYD 09:PR-R-BBP-4 6.10 .159 No_date 12:14 14.76 .256
203
          [CN= 71.0: N= 3.00]
          [Tp= .32:DT= 1.00]
205
      002:0021-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
206
         ADD HYD 04:to PR-R-BB 222.10 1.546 No_date 12:46 13.81 n/a
2.07
```

```
+ 09:PR-R-BBP-4 6.10 .159 No_date 12:14 14.76 n/a [DT= 1.00] SUM= 10:TOT 228.20 1.622 No_date 12:44 13.84 n/a
208
209
       002:0022-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 01:PR-CL-1 4.80 .134 No_date 12:17 17.19 .298
210
211
212
            [CN= 74.0: N= 3.00]
213
            [Tp = .37:DT = 1.00]
       002:0023-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
214
           CALIB NASHYD 02:PR-R-BBP-2 5.90 .133 No_date 12:19 14.76 .256
215
            [CN= 71.0: N= 3.00]
216
217
            [Tp = .39:DT = 1.00]
       002:0024-----ID:NHYD-----AREA---OPEAK-TpeakDate hh:mm----R.V.-R.C.-
218
          ADD HYD 01:PR-CL-1 4.80 .134 No_date 12:17 17.19 n/a
+ 02:PR-R-BBP-2 5.90 .133 No_date 12:19 14.76 n/a
[DT= 1.00] SUM= 09:TOT 10.70 .267 No_date 12:18 15.85 n/a
219
220
221
       002:0025-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
222
           CALIB NASHYD 03:EX-CL-400- 1.70 .061 No_date 12:08 15.97 .277
223
            [CN=72.0: N=3.00]
224
            [Tp= .23:DT= 1.00]
225
       002:0026-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
226
                        03:EX-CL-400- 1.70 .061 No_date 12:08 15.97 n/a
+ 09:TOT 10.70 .267 No_date 12:18 15.85 n/a
SUM= 01:TOT 12.40 .318 No_date 12:15 15.86 n/a
227
          ADD HYD
228
229
            [DT= 1.00] SUM= 01:TOT
       002:0027-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
230
231
           CALIB NASHYD 04:PR-R-BBP-3 2.40 .086 No_date 12:06 14.76 .256
232
            [CN= 71.0: N= 3.00]
233
            [Tp = .20:DT = 1.00]
       002:0028-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
234
           CALIB NASHYD 05:PR-CL-400- 2.20 .116 No_date 12:03 18.02 .313
235
236
            [CN= 75.0: N= 3.00]
            [Tp= .15:DT= 1.00]
237
       002:0029-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
238
       ADD HYD 04:PR-R-BBP-3 2.40 .086 No_date 12:06 14.76 n/a + 05:PR-CL-400- 2.20 .116 No_date 12:03 18.02 n/a [DT= 1.00] SUM= 09:TOT 4.60 .199 No_date 12:04 16.32 n/a
239
240
241
       002:0030-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
242
          ADD HYD 01:TOT 12.40 .318 No_date 12:15 15.86 n/a
+ 09:TOT 4.60 .199 No_date 12:04 16.32 n/a
+ 10:TOT 228.20 1.622 No_date 12:44 13.84 n/a
[DT= 1.00] SUM= 07:TOT 245.20 1.860 No_date 12:38 13.98 n/a
243
2.44
245
246
       002:0031-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
247
           ROUTE CHANNEL -> 07:TOT 245.20 1.860 No_date 12:38 13.98 n/a
248
            [RDT= 1.00] out<- 01:to PR-R-BB 245.20 1.720 No_date 12:53 13.98 n/a
249
250
            [L/S/n=895./1.000/.070]
251
            \{Vmax = .923:Dmax = 1.229\}
       002:0032-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
252
           CALIB NASHYD 02:PR-CL-400- 9.60 .171 No_date 12:30 14.76 .256
253
254
            [CN= 71.0: N= 3.00]
255
            [Tp = .54 : DT = 1.00]
256
       002:0033-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 01:to PR-R-BB 245.20 1.720 No_date 12:53 13.98 n/a + 02:TOT 9.60 .171 No_date 12:30 14.76 n/a [DT= 1.00] SUM= 02:TOT 254.80 1.859 No_date 12:51 14.01 n/a
257
258
259
260
       002:0034-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 02:TOT 254.80 1.859 No_date 12:51 14.01 n/a + 08:TOT 15.90 .395 No_date 12:18 15.91 n/a [DT= 1.00] SUM= 06:TOT 270.70 2.087 No_date 12:46 14.13 n/a
261
262
263
264
      265
      002:0035-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
266
           CALIB NASHYD 02:PR-R-BBP-9 6.60 .153 No_date 12:20 15.53 .270
267
            [CN= 72.0: N= 3.00]
268
            [Tp= .41:DT= 1.00]
269
       002:0036-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
270
           CALIB NASHYD 01:PR-R-10IC- 4.70 .054 No_date 12:14 7.35 .128
271
            [CN= 59.0: N= 3.00]
272
            [Tp= .29:DT= 1.00]
       002:0037-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
274
          CALIB STANDHYD 02:PR-CL-BBP- 2.30 .157 No_date 11:55 22.04 .383
275
276
            [XIMP=.35:TIMP=.35]
```

```
[LOSS= 2 :CN= 51.0]
           [Pervious area: IAper=24.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
278
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 124.:MNI=.015:SCI=
279
       002:0038-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
280
           ADD HYD 01:PR-R-10IC- 4.70 .054 No_date 12:14 7.35 n/a + 02:PR-CL-BBP- 2.30 .157 No_date 11:55 22.04 n/a [DT= 1.00] SUM= 03:TOT 7.00 .169 No_date 11:55 12.18 n/a
281
          ADD HYD
282
283
      002:0039-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
284
          CALIB NASHYD 04:PR-R-10IC- 1.30 .022 No_date 12:11 8.92 .155
285
286
           [CN= 62.0: N= 3.00]
287
           [Tp = .25:DT = 1.00]
       002:0040-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
288
          ADD HYD 03:TOT 7.00 .169 No_date 11:55 12.18 n/a + 04:PR-R-10IC- 1.30 .022 No_date 12:11 8.92 n/a [DT= 1.00] SUM= 05:TOT 8.30 .176 No_date 11:56 11.67 n/a
289
290
291
       002:0041-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
292
          CALIB STANDHYD 06:PR-R-10IC- 2.70 .163 No_date 11:56 21.50 .373
293
294
           [XIMP=.30:TIMP=.30]
2.95
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
296
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 134.:MNI=.015:SCI= .0]
297
298
      002:0042-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 05:TOT 8.30 .176 No_date 11:56 11.67 n/a + 06:PR-R-10IC- 2.70 .163 No_date 11:56 21.50 n/a [DT= 1.00] SUM= 07:TOT 11.00 .339 No_date 11:56 14.08 n/a
299
300
301
302
       002:0043-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
      * COMPUTE VOLUME 07:TOT 11.00 .339 No_date 11:56 14.08 n/a
303
304
      305
306
      002:0044-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-R-10IC- 1.40 .030 No_date 12:12 11.95 .207
307
308
           [CN= 67.0: N= 3.00]
309
           [Tp= .29:DT= 1.00]
       002:0045-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
310
          CALIB STANDHYD 02:PR-R-10IC- 3.10 .227 No_date 11:56 25.39 .441
311
312
           [XIMP=.36:TIMP=.36]
           [LOSS= 2 :CN= 61.0]
313
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
314
315
316
      002:0046-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           DDD HYD 01:PR-R-10IC- 1.40 .030 No_date 12:12 11.95 n/a + 02:PR-R-10IC- 3.10 .227 No_date 11:56 25.39 n/a [DT= 1.00] SUM= 03:TOT 4.50 .238 No_date 11:56 21.21 n/a
317
          ADD HYD
318
319
      002:0047-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
320
          COMPUTE VOLUME 03:TOT 4.50 .238 No_date 11:56 21.21 n/a {ST= .010 ha.m to control at .150 (cms)}
321
322
      323
324
     325
      002:0048-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-R-C4IC- 13.40 .125 No_date 12:30 8.41 .146
326
327
           [CN= 61.0: N= 3.00]
           [Tp= .50:DT= 1.00]
328
329
      002:0049-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 02:PR-CL-BBP- 3.00 .318 No_date 11:56 34.33 .596
330
331
           [XIMP=.52:TIMP=.52]
332
           [LOSS= 2 :CN= 66.0]
           [Pervious area: IAper=13.10:SLPP=****:LGP= 40.:MNP=.350:SCP= 
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
333
334
       002:0050-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
335
           DDD HYD 01:PR-R-C4IC- 13.40 .125 No_date 12:30 8.41 n/a + 02:PR-CL-BBP- 3.00 .318 No_date 11:56 34.33 n/a [DT= 1.00] SUM= 03:TOT 16.40 .335 No_date 11:57 13.15 n/a
336
337
338
      002:0051------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 04:PR-R-C4IC- 2.80 .158 No_date 11:56 20.52 .356
339
340
341
           [XIMP=.28:TIMP=.28]
342
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
343
344
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 137.:MNI=.015:SCI=
      002:0052-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
345
```

```
CALIB STANDHYD
                         05:PR-R-C4IC- 1.60
346
                                                 .101 No_date 11:55
                                                                        21.50 .373
          [XIMP=.30:TIMP=.30]
347
           [LOSS= 2 :CN= 58.0]
348
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= 
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 103.:MNI=.015:SCI=
349
350
      002:0053-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
351
           DD HYD 03:TOT 16.40 .335 No_date 11:57 13.15 n/a + 04:PR-R-C4IC- 2.80 .158 No_date 11:56 20.52 n/a + 05:PR-R-C4IC- 1.60 .101 No_date 11:55 21.50 n/a [DT= 1.00] SUM= 06:TOT 20.80 .592 No_date 11:56 14.78 n/a
         ADD HYD
352
353
354
355
      002:0054-----ID:NHYD-----AREA---OPEAK-TpeakDate hh:mm----R.V.-R.C.-
       * COMPUTE VOLUME 06:TOT 20.80 .592 No_date 11:56 14.78 n/a
357
     358
     359
      002:0055-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
360
          CALIB NASHYD 01:PR-R-C4IC- .40 .014 No_date 12:01 10.66 .185
361
362
           [CN=65.0: N=3.00]
           [Tp= .10:DT= 1.00]
363
364
      002:0056-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-C4IC- 1.30 .020 No_date 12:13 8.92 .155
365
366
          [CN = 62.0: N = 3.00]
367
           [Tp = .28:DT = 1.00]
      002:0057-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
368
          369
370
371
      002:0058-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
372
         CALIB STANDHYD 04:PR-R-C4IC- 3.10 .226 No_date 11:56 24.91 .432
373
          [XIMP=.37:TIMP=.37]
374
           [LOSS= 2 :CN= 58.0]
375
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
376
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
377
      002:0059-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         ADD HYD 03:TOT 1.70 .029 No_date 12:05 9.33 n/a + 04:PR-R-C4IC- 3.10 .226 No_date 11:56 24.91 n/a [DT= 1.00] SUM= 05:TOT 4.80 .243 No_date 11:56 19.39 n/a
379
380
381
382
      002:0060-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          COMPUTE VOLUME 05:TOT 4.80 .243 No_date 11:56 19.39 n/a {ST= .017 ha.m to control at .100 (cms)}
383
384
385
     386
      002:0061-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
387
          CALIB STANDHYD 01:PR-R-2CON- 1.60 .097 No_date 12:01 22.33 .388
388
389
           [XIMP=.20:TIMP=.20]
390
           [LOSS= 2 :CN= 70.0]
391
           [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP=
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 210.:MNI=.015:SCI=
392
      393
394
395
           [XIMP=.30:TIMP=.30]
396
           [LOSS= 2 :CN= 64.0]
           [Pervious area: IAper=14.30:SLPP=****:LGP= 30.:MNP=.350:SCP=
397
                                                                        .0]
398
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 240.:MNI=.015:SCI=
399
      002:0063-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         ADD HYD 01:PR-R-2CON- 1.60 .097 No_date 12:01 22.33 n/a + 02:PR-CL-BBP- 3.00 .192 No_date 12:00 23.73 n/a [DT= 1.00] SUM= 03:TOT 4.60 .289 No_date 12:00 23.24 n/a
400
401
402
      002:0064-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
403
         CALIB STANDHYD 04:PR-R-2CON- 3.00 .263 No_date 11:57
404
                                                                        29.82 .518
405
           [XIMP=.38:TIMP=.38]
406
           [LOSS= 2 :CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=***:LGP= 30.:MNP=.350:SCP=
407
408
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 163.:MNI=.015:SCI= .0]
409
      002:0065-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          | MADD | HYD | 03:TOT | 4.60 | .289 No_date | 12:00 | 23.24 n/a | | + 04:PR-R-2CON- | 3.00 | .263 No_date | 11:57 | 29.82 n/a | [DT= 1.00] | SUM= | 05:TOT | 7.60 | .547 No_date | 12:00 | 25.84 n/a |
410
         ADD HYD
411
412
413
      002:0066-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
      * COMPUTE VOLUME 05:TOT
                                   7.60 .547 No_date 12:00 25.84 n/a
414
```

```
416
     002:0067------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 01:PR-R-2CON- 28.00 .124 No_date 13:42 8.41 .146
417
418
419
          [CN= 61.0: N= 3.00]
420
          [Tp= 1.39:DT= 1.00]
      002:0068-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
421
         CALIB STANDHYD 02:PR-CL-BBP- 3.00 .325 No_date 11:57 35.94 .624
422
          [XIMP=.45:TIMP=.45]
423
          [LOSS= 2 :CN= 77.0]
424
          [Pervious area: IAper= 7.60:SLPP=***:LGP= 40.:MNP=.350:SCP=
425
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
426
      002:0069-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
42.7
         ADD HYD 01:PR-R-2CON- 28.00 .124 No_date 13:42 8.41 n/a + 02:PR-CL-BBP- 3.00 .325 No_date 11:57 35.94 n/a [DT= 1.00] SUM= 03:TOT 31.00 .328 No_date 11:57 11.07 n/a
428
429
430
      002:0070-----ID:NHYD------AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
431
         CALIB STANDHYD 04:PR-R-2CON- 1.50 .136 No_date 12:00 30.55 .530
432
433
          [XIMP=.28:TIMP=.28]
434
          [LOSS= 2 :CN= 78.0]
435
          [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 100.:MNI=.015:SCI= .0]
436
437
      002:0071-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         ADD HYD 03:TOT 31.00 .328 No_date 11:57 11.07 n/a + 04:PR-R-2CON- 1.50 .136 No_date 12:00 30.55 n/a [DT= 1.00] SUM= 05:TOT 32.50 .461 No_date 11:57 11.97 n/a
438
439
440
      002:0072-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
441
         CALIB STANDHYD 06:PR-R-2CON- 3.00 .308 No_date 11:57 34.72 .603
442
443
          [XIMP=.40:TIMP=.40]
444
          [LOSS= 2 :CN= 78.0]
          [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
445
                                                                      .0]
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
446
      002:0073-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
447
      ADD HYD 05:TOT 32.50 .461 No_date 11:57 11.97 n/a + 06:PR-R-2CON- 3.00 .308 No_date 11:57 34.72 n/a [DT= 1.00] SUM= 07:TOT 35.50 .770 No_date 11:57 13.89 n/a
448
449
450
      002:0074-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
451
     * COMPUTE VOLUME 07:TOT 35.50 .770 No_date 11:57 13.89 n/a
452
453
     454
     002:0075-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
455
         CALIB NASHYD 01:PR-R-404-4 3.50 .039 No_date 12:22 8.41 .146
456
457
          [CN= 61.0: N= 3.00]
458
          [Tp= .40:DT= 1.00]
459
      002:0076-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-404-5 5.90 .040 No_date 12:51 8.41 .146
460
461
          [CN= 61.0: N= 3.00]
462
          [Tp = .77:DT = 1.00]
463
      002:0077-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         ADD HYD 01:PR-R-404-4 3.50 .039 No_date 12:22 8.41 n/a + 02:PR-R-404-5 5.90 .040 No_date 12:51 8.41 n/a [DT= 1.00] SUM= 03:TOT 9.40 .071 No_date 12:33 8.41 n/a
464
465
466
      002:0078-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
467
         CALIB NASHYD 04:PR-R-404-6 3.70 .053 No_date 12:18 9.50 .165
468
469
          [CN= 63.0: N= 3.00]
          [Tp= .35:DT= 1.00]
      002:0079-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
471
         ADD HYD 03:TOT 9.40 .071 No_date 12:33 8.41 n/a + 04:PR-R-404-6 3.70 .053 No_date 12:18 9.50 n/a [DT= 1.00] SUM= 09:TOT 13.10 .119 No_date 12:24 8.72 n/a
472
473
474
      002:0080-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
475
      * COMPUTE VOLUME 09:TOT 13.10 .119 No_date 12:24 8.72 n/a
476
477
     478
     002:0081-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
479
         CALIB NASHYD 10:PR-R-404-7 6.50 .050 No_date 12:42 8.41 .146
480
481
          [CN= 61.0: N= 3.00]
482
          [Tp= .65:DT= 1.00]
      002:0082-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
483
```

```
* COMPUTE VOLUME 10:PR-R-404-7 6.50 .050 No_date 12:42 8.41 n/a
485
       486
       002:0083-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
487
             CALIB NASHYD 01:PR-R-404-1 29.30 .163 No_date 13:03 7.88 .137
488
489
               [CN= 60.0: N= 3.00]
490
               [Tp= .91:DT= 1.00]
        002:0084-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
491
             CALIB NASHYD 02:PR-R-404-1 7.30 .074 No_date 12:23 7.88 .137
492
493
              [CN= 60.0: N= 3.00]
               [Tp = .40:DT = 1.00]
         002:0085-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
             CALIB NASHYD 03:PR-CL-404- 2.20 .026 No_date 12:30 10.07 .175
496
497
               [CN= 64.0: N= 3.00]
               [Tp= .51:DT= 1.00]
498
         002:0086-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
499
                              01:PR-R-404-1 29.30 .163 No_date 13:03 7.88 n/a
+ 02:PR-R-404-1 7.30 .074 No_date 12:23 7.88 n/a
+ 03:PR-CL-404- 2.20 .026 No_date 12:30 10.07 n/a
SUM= 10:TOT 38.80 .228 No_date 12:45 8.01 n/a
500
501
502
503
               [DT= 1.00] SUM= 10:TOT
504
       505
       507
        002:0087------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 01:PR-R-BBP-5 2.20 .055 No_date 12:17 15.53 .270
508
509
510
               [CN= 72.0: N= 3.00]
               [Tp = .37:DT = 1.00]
511
         002:0088-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
512
             CALIB NASHYD 02:PR-R-BBP-6 542.60 .839 No_date 18:26 6.88 .120
513
514
              [CN= 58.0: N= 3.00]
515
               [Tp = 4.60:DT = 1.00]
         002:0089-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
516
             CALIB NASHYD 03:PR-R-BBP-6 5.60 .104 No_date 12:25 14.02 .243
517
518
              [CN= 70.0: N= 3.00]
               [Tp= .47:DT= 1.00]
519
         002:0090-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
520
               | DOMESTIC 
521
             ADD HYD
522
523
524
         002:0091-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
525
             CALIB NASHYD 01:PR-R-BBP-7 2.40 .081 No_date 12:09 15.53 .270
526
527
               [CN= 72.0: N= 3.00]
528
               [Tp= .24:DT= 1.00]
529
         002:0092----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
              CALIB NASHYD 02:PR-R-BBP-8 81.70 .174 No_date 15:24 6.41 .111
530
531
               [CN=57.0: N=3.00]
532
               [Tp= 2.50:DT= 1.00]
         002:0093-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
533
             CALIB NASHYD 03:PR-R-BBP-8 3.70 .066 No_date 12:27 14.02 .243
534
535
              [CN= 70.0: N= 3.00]
536
               [Tp= .50:DT= 1.00]
         002:0094-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
537
           538
539
540
         002:0095-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
541
             CALIB STANDHYD 05:PR-R-10IC- 3.40 .315 No_date 11:56 30.26 .525
542
543
               [XIMP=.48:TIMP=.48]
               [LOSS= 2 :CN= 58.0]
544
               [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
545
               [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 151.:MNI=.015:SCI= .0]
546
       547
       548
549 002:0096-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
550
              CALIB NASHYD 08:PR-R-10IC- 1.40 .030 No_date 12:12 11.95 .207
551
               [CN= 67.0: N= 3.00]
```

[Tp= .29:DT= 1.00]

```
002:0097-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
554
         CALIB STANDHYD 09:PR-R-10IC- 3.10 .227 No_date 11:56 25.39 .441
555
          [XIMP=.36:TIMP=.36]
556
           [LOSS= 2 :CN= 61.0]
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
557
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
558
      002:0098-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
559
         ADD HYD 08:PR-R-10IC- 1.40 .030 No_date 12:12 11.95 n/a
+ 09:PR-R-10IC- 3.10 .227 No_date 11:56 25.39 n/a
[DT= 1.00] SUM= 10:TOT 4.50 .238 No_date 11:56 21.21 n/a
560
561
562
      002:0099-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
          ROUTE CHANNEL -> 10:TOT 4.50 .238 No_date 11:56 21.21 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.50 .084 No_date 12:07 21.21 n/a
565
566
           [L/S/n=1200./1.000/.070]
           \{Vmax = .541:Dmax = .364\}
567
      002:0100-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
568
          CALIB NASHYD 02:PR-CL-BBP- 75.80 .608 No_date 13:22 12.59 .219
569
570
          [CN= 68.0: N= 3.00]
           [Tp= 1.21:DT= 1.00]
571
      002:0101-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
572
         573
574
575
576
      002:0102-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB STANDHYD 04:PR-R-C4IC- 2.50 .268 No_date 11:56 33.67 .585
577
578
          [XIMP=.55:TIMP=.55]
579
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
580
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 129.:MNI=.015:SCI=
581
582
      002:0103-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 05:PR-CL-BBP- 27.30 .420 No_date 12:42 15.53 .270
583
584
          [CN = 72.0: N = 3.00]
           [Tp= .71:DT= 1.00]
     586
     587
588
     002:0104-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 07:PR-R-C4IC- .40 .014 No_date 12:01 10.66 .185
589
590
           [CN=65.0: N=3.00]
591
           [Tp= .10:DT= 1.00]
592
      002:0105-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 08:PR-R-C4IC- 1.30 .020 No_date 12:13 8.92 .155
593
594
          [CN= 62.0: N= 3.00]
           [Tp= .28:DT= 1.00]
595
596
      002:0106-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB STANDHYD 09:PR-R-C4IC- 3.10 .226 No_date 11:56 24.91 .432
597
598
          [XIMP=.37:TIMP=.37]
           [LOSS= 2 :CN= 58.0]
599
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
600
601
      002:0107-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
602
       ADD HYD 07:PR-R-C4IC- .40 .014 No_date 12:01 10.66 n/a + 08:PR-R-C4IC- 1.30 .020 No_date 12:13 8.92 n/a + 09:PR-R-C4IC- 3.10 .226 No_date 11:56 24.91 n/a [DT= 1.00] SUM= 10:TOT 4.80 .243 No_date 11:56 19.39 n/a
603
604
605
606
      002:0108-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         ROUTE CHANNEL -> 10:TOT 4.80 .243 No_date 11:56 19.39 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.80 .144 No_date 12:03 19.39 n/a
608
609
           [L/S/n= 580./1.000/.070]
610
           \{Vmax = .545:Dmax = .369\}
611
      002:0109-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
612
          CALIB NASHYD 02:PR-CL-BBP- 22.10 .208 No_date 12:43 10.07 .175
613
614
          [CN= 64.0: N= 3.00]
615
           [Tp= .68:DT= 1.00]
      002:0110-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
616
          ADD HYD 01:to PR-CL-B 4.80 .144 No_date 12:03 19.39 n/a
+ 02:PR-CL-BBP- 22.10 .208 No_date 12:43 10.07 n/a
[DT= 1.00] SUM= 03:TOT 26.90 .277 No_date 12:35 11.73 n/a
617
618
619
     620
```

```
002:0111-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
622
623
         CALIB NASHYD 01:PR-R-BST-1 2.20 .085 No_date 12:08 17.19 .298
624
          [CN= 74.0: N= 3.00]
625
          [Tp= .23:DT= 1.00]
626
      002:0112-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB STANDHYD 02:PR-CL-BBP- 2.00 .203 No_date 11:55 33.14 .575
627
628
          [XIMP=.46:TIMP=.46]
629
          [LOSS= 2 :CN= 70.0]
          [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
630
                                                                     .0]
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI=
631
      002:0113-----ID:NHYD------AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
         ADD HYD 01:PR-R-BST-1 2.20 .085 No_date 12:08 17.19 n/a
+ 02:PR-CL-BBP- 2.00 .203 No_date 11:55 33.14 n/a
[DT= 1.00] SUM= 03:TOT 4.20 .253 No_date 12:00 24.79 n/a
633
634
635
      002:0114-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
636
         CALIB STANDHYD 04:PR-R-BST-2 2.00 .182 No_date 11:55
637
          [XIMP=.40:TIMP=.40]
638
639
          [LOSS= 2 :CN= 70.0]
640
          [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
641
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI= .0]
      002:0115-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
642
          ADD HYD 03:TOT 4.20 .253 No_date 12:00 24.79 n/a
+ 04:PR-R-BST-2 2.00 .182 No_date 11:55 30.65 n/a
[DT= 1.00] SUM= 05:TOT 6.20 .428 No_date 11:56 26.68 n/a
643
644
645
      646
647
648
          [CN= 72.0: N= 3.00]
649
          [Tp= .52:DT= 1.00]
650
      002:0117-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB STANDHYD 02:PR-CL-BBP- 2.10 .220 No_date 11:55 33.97 .590
651
652
          [XIMP=.48:TIMP=.48]
653
          [LOSS= 2 :CN= 70.0]
654
          [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI= .0]
655
656
      002:0118-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         657
658
659
      002:0119-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
660
         CALIB STANDHYD 04:PR-R-BST-2 2.00 .182 No_date 11:55 30.65 .532
661
662
          [XIMP=.40:TIMP=.40]
663
          [LOSS= 2 :CN= 70.0]
664
          [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI= .0]
665
      002:0120-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
666
         ADD HYD 03:TOT 5.70 .236 No_date 11:56 22.32 n/a + 04:PR-R-BST-2 2.00 .182 No_date 11:55 30.65 n/a [DT= 1.00] SUM= 05:TOT 7.70 .418 No_date 11:56 24.49 n/a
667
668
669
670
     671
672
     002:0121-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 01:PR-R-2CON- 243.60 1.061 No_date 14:51 11.29 .196
673
          [CN= 66.0: N= 3.00]
674
          [Tp= 2.31:DT= 1.00]
675
      002:0122-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 02:PR-CL-BBP- 37.00 .274 No_date 12:56 9.50 .165
677
678
          [CN= 63.0: N= 3.00]
679
          [Tp= .85:DT= 1.00]
      002:0123-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
680
         CALIB NASHYD 03:PR-R-LST-1 40.20 .220 No_date 13:13 8.41 .146
681
          [CN= 61.0: N= 3.00]
682
683
          [Tp= 1.04:DT= 1.00]
      002:0124-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
684
         CALIB STANDHYD 04:PR-CL-BBP- 1.80 .166 No_date 11:55 29.64 .515
685
686
          [XIMP=.45:TIMP=.45]
687
          [LOSS= 2 :CN= 61.0]
          [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
688
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 110.:MNI=.015:SCI=
689
      002:0125-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
690
```

```
03:PR-R-LST-1 40.20 .220 No_date 13:13 8.41 n/a
         ADD HYD
         692
693
      002:0126------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:PR-R-LST-2 8.80 .066 No_date 12:38 7.88 .137
694
695
696
          [CN= 60.0: N= 3.00]
697
          [Tp= .60:DT= 1.00]
      002:0127-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
698
       CALIB STANDHYD 02:PR-CL-BBP- 1.20 .104 No_date 11:55 27.75 .482
699
700
         [XIMP=.41:TIMP=.41]
701
          [LOSS= 2 :CN= 61.0]
          [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 89.:MNI=.015:SCI= .0]
702
703
704
      002:0128-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         705
706
707
      002:0129-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
708
         CALIB STANDHYD 04:PR-R-LST-3 1.10 .091 No_date 11:55 26.37 .458
709
710
          [XIMP=.40:TIMP=.40]
711
          [LOSS= 2 :CN= 58.0]
712
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
713
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 86.:MNI=.015:SCI= .0]
714
      002:0130-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
        ADD HYD 03:TOT 10.00 .109 No_date 11:55 10.27 n/a + 04:PR-R-LST-3 1.10 .091 No_date 11:55 26.37 n/a [DT= 1.00] SUM= 05:TOT 11.10 .200 No_date 11:55 11.86 n/a
715
716
717
718
      002:0131-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 01:PR-CL-BBP- 22.00 .230 No_date 12:40 10.66 .185
719
720
          [CN=65.0: N=3.00]
721
          [Tp= .65:DT= 1.00]
     722
     723
     002:0132-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
724
         CALIB NASHYD 01:PR-R-404-3 118.50 .432 No_date 14:33 8.92 .155
725
726
          [CN= 62.0: N= 3.00]
727
          [Tp= 2.02:DT= 1.00]
728
      002:0133-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-404-2 .90 .013 No_date 12:16 8.92 .155
729
730
          [CN= 62.0: N= 3.00]
          [Tp= .32:DT= 1.00]
731
      002:0134-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
732
          ADD HYD 01:PR-R-404-3 118.50 .432 No_date 14:33 8.92 n/a
+ 02:PR-R-404-2 .90 .013 No_date 12:16 8.92 n/a
[DT= 1.00] SUM= 03:TOT 119.40 .433 No_date 14:32 8.92 n/a
733
734
735
736
      002:0135-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 04:PR-R-404-1 1.70 .018 No_date 12:27 8.92 .155
737
738
          [CN= 62.0: N= 3.00]
739
          [Tp= .47:DT= 1.00]
740
      002:0136-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
      ADD HYD 03:TOT 119.40 .433 No_date 14:32 8.92 n/a + 04:PR-R-404-1 1.70 .018 No_date 12:27 8.92 n/a [DT= 1.00] SUM= 05:TOT 121.10 .437 No_date 14:32 8.92 n/a
741
742
743
744
      002:0137-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 08:PR-R-404-8 2.40 .024 No_date 12:30 8.92 .155
745
746
          [CN= 62.0: N= 3.00]
747
          [Tp= .50:DT= 1.00]
748
      002:0138-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 09:PR-R-404-8 2.60 .030 No_date 12:30 10.07 .175
749
750
          [CN= 64.0: N= 3.00]
751
          [Tp= .51:DT= 1.00]
      002:0139-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
752
         CALIB NASHYD 10:PR-R-404-9 1.80 .029 No_date 12:11 8.92 .155
753
754
          [CN= 62.0: N= 3.00]
755
          [Tp= .26:DT= 1.00]
     756
757
       ** END OF RUN : 4
758
759
```

```
763
764
765
     RUN: COMMAND#
766
     005:0001-----
767
        START
768
         [TZERO = .00 \text{ hrs on}]
769
         [METOUT= 2 (1=imperial, 2=metric output)]
770
         [NSTORM= 1]
         [NRUN = 5]
771
    #************************
772
773
                                               JOB NUMBER: [60636190] *
    # Project Name: BRADFORD BYPASS
774
    # Date : Jan. 20, 2023
      Modeller : [jrm]
Company : AECOM
775
776
777
      License # : 1281254
778
779
780
      Notes: This hydrologic model was developed for the BBP ultimate conditions *
781
            A new Berm is proposed to isolate flows draining to P-SWM P-2 and
782
            the tributary of Penville Creek.
783
784
                 PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
785
                      FOR PROPOSED SWM PONDS (UNCONTROLLED)
786
                         Proposed Drainage Conditions
787
                   2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
788
789
    #***********************
790
     005:0002-----
791
792
        READ STORM
793
         Filename = STORM.001
794
         Comment =
795
         [SDT= 6.00:SDUR= 24.00:PTOT= 76.80]
796
    797
    798
     005:0003-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
        CALIB NASHYD 08:PR-R-BBP-1 14.50 .511 No_date 12:29 28.16 .367
799
800
         [CN= 73.0: N= 3.00]
         [Tp= .55:DT= 1.00]
801
     005:0004----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
802
        COMPUTE VOLUME 08:PR-R-BBP-1 14.50 .511 No_date 12:29 28.16 n/a
         \{ST=.020 \text{ ha.m} \text{ to control at} .500 \text{ (cms)}\}
804
805
    806
     005:0005-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
807
        CALIB NASHYD 01:PR-R-BBP-9 5.40 .238 No_date 12:17 27.02 .352
808
809
         [CN= 72.0: N= 3.00]
810
         [Tp= .38:DT= 1.00]
811
     005:0006-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
        CALIB NASHYD 02:PR-R-BBP-9 6.60 .279 No_date 12:19 26.95 .351
812
813
         [CN= 72.0: N= 3.00]
         [Tp = .40:DT = 1.00]
     005:0007-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
815
         816
817
818
     005:0008------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:P-SWM P-2 3.90 .192 No_date 12:16 29.34 .382
819
820
821
         [CN= 74.0: N= 3.00]
822
         [Tp= .37:DT= 1.00]
     005:0009-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
823
         DDD HYD 03:TOT 12.00 .517 No_date 12:18 26.98 n/a + 04:P-SWM P-2 3.90 .192 No_date 12:16 29.34 n/a [DT= 1.00] SUM= 08:TOT 15.90 .708 No_date 12:18 27.56 n/a
824
        ADD HYD
825
826
     005:0010-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
827
        COMPUTE VOLUME 08:TOT
                              15.90 .708 No_date 12:18 27.56 n/a
828
```

```
\{ST=.277 \text{ ha.m} \text{ to control at} .050 \text{ (cms)}\}
830
      831
      005:0011------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 01:EX-CL-400- 49.00 2.381 No_date 12:26 37.01 .482
832
833
            [CN= 79.0: N= 3.00]
834
835
            [Tp = .53:DT = 1.00]
       005:0012-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
836
          ROUTE CHANNEL -> 01:EX-CL-400- 49.00 2.381 No_date 12:26 37.01 n/a [RDT= 1.00] out<- 02:to PR-CL-2 49.00 2.109 No_date 12:40 37.01 n/a
837
838
            [L/S/n = 825./.850/.070]
           \{Vmax = .916:Dmax = 1.452\}
840
       005:0013-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
841
          CALIB NASHYD 03:PR-R-BBP-1 8.80 .304 No_date 12:28 27.02 .352
842
            [CN= 72.0: N= 3.00]
843
            [Tp= .53:DT= 1.00]
844
845
       005:0014-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 04:EX-CL-400- 1.30 .077 No_date 12:18 37.01 .482
846
           [CN= 79.0: N= 3.00]
847
848
            [Tp = .40:DT = 1.00]
       005:0015-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
849
          CALIB STANDHYD 05:PR-R-BBP-1 1.30 .243 No_date 11:55 52.33 .681
850
851
           [XIMP=.55:TIMP=.55]
852
            [LOSS= 2 :CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=****:LGP= 8.:MNP=.350:SCP= Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 93.:MNI=.015:SCI=
853
854
                                                                              .0]
       005:0016-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
855
           ADD HYD 03:PR-R-BBP-1 8.80 .304 No_date 12:28 27.02 n/a

+ 04:EX-CL-400- 1.30 .077 No_date 12:18 37.01 n/a

+ 05:PR-R-BBP-1 1.30 .243 No_date 11:55 52.33 n/a

[DT= 1.00] SUM= 01:TOT 11.40 .403 No_date 12:24 31.04 n/a
856
       ADD HYD
857
858
859
860
       005:0017-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 06:PR-CL-2 161.70 .973 No_date 16:09 19.92 .259
862
            [CN= 65.0: N= 3.00]
863
           [Tp= 3.38:DT= 1.00]
       005:0018-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
864
           ADD HYD 01:TOT 11.40 .403 No_date 12:24 31.04 n/a + 02:to PR-CL-2 49.00 2.109 No_date 12:40 37.01 n/a + 06:PR-CL-2 161.70 .973 No_date 16:09 19.92 n/a [DT= 1.00] SUM= 07:TOT PR-CL- 222.10 2.650 No_date 12:40 24.26 n/a
865
          ADD HYD
866
867
868
       005:0019-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
869
          ROUTE CHANNEL -> 07:TOT PR-CL- 222.10 2.650 No_date 12:40 24.26 n/a
870
871
           [RDT= 1.00] out<- 04:to PR-R-BB 222.10 2.631 No_date 12:44 24.26 n/a
            [L/S/n = 230./.900/.070]
873
           \{Vmax = .958:Dmax = 1.506\}
874
       005:0020----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 09:PR-R-BBP-4 6.10 .289 No_date 12:13 25.92 .337
875
            [CN= 71.0: N= 3.00]
876
877
            [Tp = .32:DT = 1.00]
       005:0021-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
878
          ADD HYD 04:to PR-R-BB 222.10 2.631 No_date 12:44 24.26 n/a + 09:PR-R-BBP-4 6.10 .289 No_date 12:13 25.92 n/a [DT= 1.00] SUM= 10:TOT 228.20 2.773 No_date 12:41 24.31 n/a
879
880
881
       005:0022-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
882
          CALIB NASHYD 01:PR-CL-1 4.80 .236 No_date 12:16 29.34 .382
884
            [CN= 74.0: N= 3.00]
885
           [Tp= .37:DT= 1.00]
886
       005:0023-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 02:PR-R-BBP-2 5.90 .243 No_date 12:18 25.92 .337
887
888
           [CN= 71.0: N= 3.00]
            [Tp= .39:DT= 1.00]
889
       005:0024-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
890
          891
892
893
       005:0025-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 03:EX-CL-400- 1.70 .108 No_date 12:07 27.53 .358
895
           [CN= 72.0: N= 3.00]
896
```

[Tp= .23:DT= 1.00]

```
005:0026-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
898
          ADD HYD 03:EX-CL-400- 1.70 .108 No_date 12:07 27.53 n/a + 09:TOT 10.70 .479 No_date 12:17 27.45 n/a [DT= 1.00] SUM= 01:TOT 12.40 .569 No_date 12:15 27.46 n/a
899
900
901
902
       005:0027-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 04:PR-R-BBP-3 2.40 .156 No_date 12:06 25.92 .337
903
904
            [CN= 71.0: N= 3.00]
905
            [Tp= .20:DT= 1.00]
       005:0028-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
906
           CALIB NASHYD 05:PR-CL-400- 2.20 .200 No_date 12:03 30.50 .397
907
            [CN= 75.0: N= 3.00]
            [Tp= .15:DT= 1.00]
909
       005:0029-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
910
      ADD HYD 04:PR-R-BBP-3 2.40 .156 No_date 12:06 25.92 n/a + 05:PR-CL-400- 2.20 .200 No_date 12:03 30.50 n/a [DT= 1.00] SUM= 09:TOT 4.60 .351 No_date 12:04 28.11 n/a
911
912
913
       005:0030-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
914
          ADD HYD 01:TOT 12.40 .569 No_date 12:15 27.46 n/a + 09:TOT 4.60 .351 No_date 12:04 28.11 n/a + 10:TOT 228.20 2.773 No_date 12:41 24.31 n/a [DT= 1.00] SUM= 07:TOT 245.20 3.215 No_date 12:36 24.54 n/a
      ADD HYD
915
916
917
918
919
      005:0031-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ROUTE CHANNEL -> 07:TOT 245.20 3.215 No_date 12:36 24.54 n/a [RDT= 1.00] out<- 01:to PR-R-BB 245.20 3.008 No_date 12:49 24.54 n/a
920
921
922
            [L/S/n= 895./1.000/.070]
923
            {Vmax= 1.044:Dmax= 1.610}
       005:0032-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
924
          CALIB NASHYD 02:PR-CL-400- 9.60 .313 No_date 12:29 25.92 .337
925
926
           [CN= 71.0: N= 3.00]
            [Tp= .54:DT= 1.00]
927
      005:0033-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
928
      ADD HYD 01:to PR-R-BB 245.20 3.008 No_date 12:49 24.54 n/a + 02:TOT 9.60 .313 No_date 12:29 25.92 n/a [DT= 1.00] SUM= 02:TOT 254.80 3.274 No_date 12:47 24.59 n/a
929
930
931
      005:0034-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
932
      ADD HYD 02:TOT 254.80 3.274 No_date 12:47 24.59 n/a + 08:TOT 15.90 .708 No_date 12:18 27.56 n/a [DT= 1.00] SUM= 06:TOT 270.70 3.714 No_date 12:41 24.76 n/a
933
934
935
936
      937
      005:0035-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
938
          CALIB NASHYD 02:PR-R-BBP-9 6.60 .275 No_date 12:19 27.02 .352
939
           [CN= 72.0: N= 3.00]
940
941
            [Tp= .41:DT= 1.00]
942
     005:0036-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 01:PR-R-10IC- 4.70 .124 No_date 12:13 14.83 .193
943
944
            [CN= 59.0: N= 3.00]
945
            [Tp = .29:DT = 1.00]
946
       005:0037-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 02:PR-CL-BBP- 2.30 .223 No_date 11:55 32.20 .419
947
948
           [XIMP=.35:TIMP=.35]
949
            [LOSS= 2 :CN= 51.0]
950
            [Pervious area: IAper=24.40:SLPP=***:LGP= 40.:MNP=.350:SCP=
                                                                                 .0]
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 124.:MNI=.015:SCI=
951
952
       005:0038-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ADD HYD 01:PR-R-10IC- 4.70 .124 No_date 12:13 14.83 n/a + 02:PR-CL-BBP- 2.30 .223 No_date 11:55 32.20 n/a [DT= 1.00] SUM= 03:TOT 7.00 .271 No_date 12:00 20.54 n/a
953
954
955
       005:0039-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
956
           CALIB NASHYD 04:PR-R-10IC- 1.30 .046 No_date 12:10 17.27 .225
957
958
            [CN= 62.0: N= 3.00]
            [Tp= .25:DT= 1.00]
959
960
       005:0040-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
      ADD HYD 03:TOT 7.00 .271 No_date 12:00 20.54 n/a + 04:PR-R-10IC- 1.30 .046 No_date 12:10 17.27 n/a [DT= 1.00] SUM= 05:TOT 8.30 .303 No_date 12:00 20.02 n/a
961
962
963
      005:0041-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
964
       CALIB STANDHYD 06:PR-R-10IC- 2.70 .247 No_date 11:55 32.29 .420
965
```

[XIMP=.30:TIMP=.30]

```
[LOSS= 2 :CN= 58.0]
968
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 134.:MNI=.015:SCI=
969
970
      005:0042-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 05:TOT 8.30 .303 No_date 12:00 20.02 n/a + 06:PR-R-10IC- 2.70 .247 No_date 11:55 32.29 n/a [DT= 1.00] SUM= 07:TOT 11.00 .539 No_date 12:00 23.04 n/a
971
         ADD HYD
972
973
      005:0043-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
974
         COMPUTE VOLUME 07:TOT 11.00 .539 No_date 12:00 23.04 n/a
975
          \{ST=.018 \text{ ha.m} \text{ to control at} .400 \text{ (cms)}\}
976
     005:0044-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
979
         CALIB NASHYD 01:PR-R-10IC- 1.40 .059 No_date 12:12
980
981
          [CN= 67.0: N= 3.00]
982
          [Tp = .29:DT = 1.00]
983
      005:0045-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB STANDHYD 02:PR-R-10IC- 3.10 .338 No_date 11:55
984
985
          [XIMP=.36:TIMP=.36]
986
          [LOSS= 2 :CN= 61.0]
987
          [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
988
989
      005:0046-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          990
991
992
      005:0047-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
993
         COMPUTE VOLUME 03:TOT 4.50 .363 No_date 11:56 32.60 n/a {ST= .029 ha.m to control at .150 (cms)}
994
995
     996
     997
      005:0048-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
998
         CALIB NASHYD 01:PR-R-C4IC- 13.40 .272 No_date 12:28 16.47 .214
999
1000
          [CN= 61.0: N= 3.00]
1001
          [Tp = .50:DT = 1.00]
      005:0049-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1002
         CALIB STANDHYD 02:PR-CL-BBP- 3.00 .460 No_date 11:55 48.91 .637
1003
1004
          [XIMP=.52:TIMP=.52]
1005
          [LOSS= 2 :CN= 66.0]
          [Pervious area: IAper=13.10:SLPP=****:LGP= 40.:MNP=.350:SCP=
1006
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
1007
      005:0050-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1008
          ADD HYD 01:PR-R-C4IC- 13.40 .272 No_date 12:28 16.47 n/a + 02:PR-CL-BBP- 3.00 .460 No_date 11:55 48.91 n/a [DT= 1.00] SUM= 03:TOT 16.40 .517 No_date 12:00 22.40 n/a
1009
1010
1011
      005:0051-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1012
         CALIB STANDHYD 04:PR-R-C4IC- 2.80 .242 No_date 11:56 31.08 .405
1013
1014
          [XIMP=.28:TIMP=.28]
1015
          [LOSS= 2 :CN= 58.0]
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
1016
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 137.:MNI=.015:SCI=
1017
      005:0052-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1018
         CALIB STANDHYD 05:PR-R-C4IC- 1.60 .152 No_date 11:55 32.29 .420
1019
          [XIMP=.30:TIMP=.30]
1020
1021
          [LOSS= 2 :CN= 58.0]
1022
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 103.:MNI=.015:SCI=
1023
1024
      005:0053-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
      1025
1026
1027
1028
1029
1030
     1031
     1032
      005:0055-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1033
         CALIB NASHYD 01:PR-R-C4IC- .40 .027 No_date 12:01 19.92 .259
1034
          [CN=65.0: N=3.00]
1035
```

```
1036
            [Tp = .10:DT = 1.00]
1037
       005:0056-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 02:PR-R-C4IC- 1.30 .042 No_date 12:12 17.27 .225
1038
1039
            [CN= 62.0: N= 3.00]
1040
            [Tp = .28:DT = 1.00]
1041
       005:0057-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 01:PR-R-C4IC- .40 .027 No_date 12:01 19.92 n/a + 02:PR-R-C4IC- 1.30 .042 No_date 12:12 17.27 n/a [DT= 1.00] SUM= 03:TOT 1.70 .060 No_date 12:04 17.90 n/a
1042
1043
1044
       005:0058-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1045
           CALIB STANDHYD 04:PR-R-C4IC- 3.10 .335 No_date 11:55 36.55 .476
            [XIMP=.37:TIMP=.37]
1047
            [LOSS= 2 :CN= 58.0]
1048
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
1049
1050
       005:0059----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1051
           ADD HYD 03:TOT 1.70 .060 No_date 12:04 17.90 n/a + 04:PR-R-C4IC- 3.10 .335 No_date 11:55 36.55 n/a [DT= 1.00] SUM= 05:TOT 4.80 .373 No_date 11:56 29.94 n/a
1052
1053
1054
       005:0060-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1055
           COMPUTE VOLUME 05:TOT 4.80 .373 No_date 11:56 29.94 n/a {ST= .038 ha.m to control at .100 (cms)}
1056
1057
1058
      1059
       005:0061------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 01:PR-R-2CON- 1.60 .164 No_date 12:00 34.84 .454
1060
1061
1062
            [XIMP=.20:TIMP=.20]
            [LOSS= 2 :CN= 70.0]
1063
1064
            [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP=
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 210.:MNI=.015:SCI=
1065
       005:0062-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1066
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .307 No_date 12:00 35.76 .466
1067
1068
            [XIMP=.30:TIMP=.30]
            [LOSS= 2 :CN= 64.0]
1069
            [Pervious area: IAper=14.30:SLPP=****:LGP= 30.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 240.:MNI=.015:SCI= .0]
1070
1071
       005:0063-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1072
           ADD HYD 01:PR-R-2CON- 1.60 .164 No_date 12:00 34.84 n/a + 02:PR-CL-BBP- 3.00 .307 No_date 12:00 35.76 n/a [DT= 1.00] SUM= 03:TOT 4.60 .471 No_date 12:00 35.44 n/a
1073
1074
1075
       005:0064------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 04:PR-R-2CON- 3.00 .402 No_date 11:57 43.83 .571
1076
1077
            [XIMP=.38:TIMP=.38]
1078
1079
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP= .0]
1080
1081
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 163.:MNI=.015:SCI= .0]
1082
       005:0065-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 03:TOT 4.60 .471 No_date 12:00 35.44 n/a + 04:PR-R-2CON- 3.00 .402 No_date 11:57 43.83 n/a [DT= 1.00] SUM= 05:TOT 7.60 .865 No_date 12:00 38.75 n/a
1083
1084
1085
1086
       005:0066-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           COMPUTE VOLUME 05:TOT 7.60 .865 No_date 12:00 38.75 n/a {ST= .030 ha.m to control at .600 (cms)}
1087
1088
1089
      1090
      005:0067-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1091
           CALIB NASHYD 01:PR-R-2CON- 28.00 .264 No_date 13:36 16.47 .214
1092
1093
            [CN= 61.0: N= 3.00]
1094
            [Tp= 1.39:DT= 1.00]
       005:0068-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1095
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .480 No_date 11:56 51.82 .675
1096
1097
            [XIMP=.45:TIMP=.45]
            [LOSS= 2 :CN= 77.0]
1098
            [Pervious area: IAper= 7.60:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
1099
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
1100
       005:0069-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1101
          1102
1103
1104
```

```
005:0070-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1105
1106
           CALIB STANDHYD 04:PR-R-2CON- 1.50 .212 No_date 11:56 45.64 .594
1107
            [XIMP=.28:TIMP=.28]
1108
            [LOSS= 2 :CN= 78.0]
            [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 100.:MNI=.015:SCI=
1109
1110
       005:0071-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1111
          ADD HYD 03:TOT 31.00 .493 No_date 11:56 19.89 n/a + 04:PR-R-2CON- 1.50 .212 No_date 11:56 45.64 n/a [DT= 1.00] SUM= 05:TOT 32.50 .705 No_date 11:56 21.08 n/a
1112
1113
1114
       005:0072-----ID:NHYD------AREA---OPEAK-TpeakDate hh:mm---R.V.-R.C.-
1115
           CALIB STANDHYD 06:PR-R-2CON- 3.00 .461 No_date 11:56 50.50 .658
1116
1117
            [XIMP=.40:TIMP=.40]
            [LOSS= 2 :CN= 78.0]
1118
       [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
005:0073-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1119
1120
1121
            ADD HYD 05:TOT 32.50 .705 No_date 11:56 21.08 n/a + 06:PR-R-2CON- 3.00 .461 No_date 11:56 50.50 n/a [DT= 1.00] SUM= 07:TOT 35.50 1.165 No_date 11:56 23.57 n/a
1122
1123
1124
       005:0074------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
COMPUTE VOLUME 07:TOT 35.50 1.165 No_date 11:56 23.57 n/a
{ST= .014 ha.m to control at 1.100 (cms)}
1125
1126
1127
      1128
      1129
      005:0075-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1130
           CALIB NASHYD 01:PR-R-404-4 3.50 .084 No_date 12:20 16.47 .214
1131
1132
            [CN= 61.0: N= 3.00]
1133
            [Tp = .40:DT = 1.00]
1134
       005:0076-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 02:PR-R-404-5 5.90 .087 No_date 12:48 16.47 .214
1135
1136
            [CN= 61.0: N= 3.00]
            [Tp = .77:DT = 1.00]
1137
       005:0077-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1138
       1139
1140
1141
1142
1143
1144
            [CN= 63.0: N= 3.00]
            [Tp= .35:DT= 1.00]
1145
       005:0079-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1146
           ADD HYD 03:TOT 9.40 .155 No_date 12:30 16.47 n/a + 04:PR-R-404-6 3.70 .109 No_date 12:16 18.15 n/a [DT= 1.00] SUM= 09:TOT 13.10 .254 No_date 12:23 16.95 n/a
1147
1148
1149
     005:0080-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
* COMPUTE VOLUME 09:TOT 13.10 .254 No_date 12:23 16.95 n/a
1150
1151
      1152
      1153
1154
      005:0081-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 10:PR-R-404-7 6.50 .109 No_date 12:39 16.47 .214
1155
1156
           [CN= 61.0: N= 3.00]
1157
            [Tp= .65:DT= 1.00]
       005:0082-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1158
           COMPUTE VOLUME 10:PR-R-404-7 6.50 .109 No_date 12:39 16.47 n/a {ST= .009 ha.m to control at .100 (cms)}
1159
1160
1161
      1162
      005:0083-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1163
           CALIB NASHYD 01:PR-R-404-1 29.30 .357 No_date 12:59
1164
1165
            [CN=60.0: N=3.00]
1166
            [Tp= .91:DT= 1.00]
       005:0084------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 02:PR-R-404-1 7.30 .164 No_date 12:21 15.65 .204
1167
1168
            [CN= 60.0: N= 3.00]
1169
1170
            [Tp= .40:DT= 1.00]
       005:0085-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1171
           CALIB NASHYD 03:PR-CL-404- 2.20 .052 No_date 12:28 19.02 .248
1172
1173
            [CN= 64.0: N= 3.00]
```

```
1174
           [Tp = .51:DT = 1.00]
       005:0086-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1175
           ADD HYD 01:PR-R-404-1 29.30 .357 No_date 12:59 15.65 n/a
+ 02:PR-R-404-1 7.30 .164 No_date 12:21 15.65 n/a
+ 03:PR-CL-404- 2.20 .052 No_date 12:28 19.02 n/a
[DT= 1.00] SUM= 10:TOT 38.80 .502 No_date 12:41 15.85 n/a
1176
         ADD HYD
1177
1178
1179
      1180
      1181
      1182
     1183
      005:0087-----ID:NHYD------AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
1184
          CALIB NASHYD 01:PR-R-BBP-5 2.20 .099 No_date 12:17 27.02 .352
1185
1186
           [CN= 72.0: N= 3.00]
1187
           [Tp = .37:DT = 1.00]
       005:0088-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1188
          CALIB NASHYD 02:PR-R-BBP-6 542.60 1.784 No_date 18:02 14.08 .183
1189
1190
           [CN= 58.0: N= 3.00]
1191
           [Tp= 4.60:DT= 1.00]
       005:0089-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1192
          CALIB NASHYD 03:PR-R-BBP-6 5.60 .193 No_date 12:24 24.85 .324
1193
1194
           [CN= 70.0: N= 3.00]
1195
           [Tp = .47:DT = 1.00]
       005:0090-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1196
           ADD HYD 01:PR-R-BBP-5 2.20 .099 No_date 12:17 27.02 n/a

+ 02:PR-R-BBP-6 542.60 1.784 No_date 18:02 14.08 n/a

+ 03:PR-R-BBP-6 5.60 .193 No_date 12:24 24.85 n/a

[DT= 1.00] SUM= 04:TOT 550.40 1.803 No_date 18:00 14.24 n/a
1197
       ADD HYD
1198
1199
1200
       005:0091-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1201
          CALIB NASHYD 01:PR-R-BBP-7 2.40 .145 No_date 12:08 27.02 .352
1202
           [CN= 72.0: N= 3.00]
1203
           [Tp= .24:DT= 1.00]
1204
       005:0092-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1205
          CALIB NASHYD 02:PR-R-BBP-8 81.70 .389 No_date 15:10 13.31 .173
1206
1207
           [CN=57.0: N=3.00]
1208
           [Tp= 2.50:DT= 1.00]
       005:0093-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1209
          CALIB NASHYD 03:PR-R-BBP-8 3.70 .122 No_date 12:26 24.85 .324
1210
1211
           [CN= 70.0: N= 3.00]
           [Tp= .50:DT= 1.00]
1212
1213
       005:0094-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
                        02:PR-R-BBP-8 81.70 .389 No_date 15:10 13.31 n/a
          ADD HYD
1214
       + 03:PR-R-BBP-8 3.70 .122 No_date 12:26 24.85 n/a [DT= 1.00] SUM= 04:TOT 85.40 .404 No_date 15:06 13.81 n/a 005:0095------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1215
1216
          CALIB STANDHYD 05:PR-R-10IC- 3.40 .455 No_date 11:55 43.23 .563
1218
           [XIMP=.48:TIMP=.48]
1219
           [LOSS= 2 :CN= 58.0]
1220
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 151.:MNI=.015:SCI=
1221
1222
      1223
1224
     005:0096-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1225
          CALIB NASHYD 08:PR-R-10IC- 1.40 .059 No_date 12:12 21.83 .284
1226
1227
           [CN= 67.0: N= 3.00]
1228
           [Tp = .29:DT = 1.00]
1229
       005:0097-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 09:PR-R-10IC- 3.10 .338 No_date 11:55 37.47 .488
1230
1231
           [XIMP=.36:TIMP=.36]
1232
           [LOSS= 2 :CN= 61.0]
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
1233
1234
       005:0098-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1235
          1236
1237
1238
       005:0099-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1239
          ROUTE CHANNEL -> 10:TOT 4.50 .363 No_date 11:56 32.60 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.50 .150 No_date 12:09 32.60 n/a
1240
1241
1242
           [L/S/n= 1200./1.000/.070]
```

```
1243
          \{Vmax = .612:Dmax = .471\}
1244 005:0100-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-CL-BBP- 75.80 1.158 No_date 13:18 22.78 .297
1245
1246
           [CN= 68.0: N= 3.00]
1247
           [Tp= 1.21:DT= 1.00]
1248
      005:0101-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
      ADD HYD 01:to PR-CL-B 4.50 .150 No_date 12:09 32.60 n/a + 02:PR-CL-BBP- 75.80 1.158 No_date 13:18 22.78 n/a [DT= 1.00] SUM= 03:TOT 80.30 1.227 No_date 13:16 23.33 n/a
1249
1250
1251
     005:0102-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1252
         CALIB STANDHYD 04:PR-R-C4IC- 2.50 .382 No_date 11:55 47.48 .618
1253
          [XIMP=.55:TIMP=.55]
1254
1255
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 129.:MNI=.015:SCI= .0]
1256
1257
      005:0103-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1258
          CALIB NASHYD 05:PR-CL-BBP- 27.30 .759 No_date 12:40 27.02 .352
1259
1260
           [CN= 72.0: N= 3.00]
           [Tp = .71:DT = 1.00]
1261
      1262
1264 005:0104-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 07:PR-R-C4IC- .40 .027 No_date 12:01 19.92 .259
1265
1266
           [CN=65.0: N=3.00]
1267
           [Tp= .10:DT= 1.00]
      005:0105-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1268
          CALIB NASHYD 08:PR-R-C4IC- 1.30 .042 No_date 12:12 17.27 .225
1269
           [CN= 62.0: N= 3.00]
1270
1271
           [Tp= .28:DT= 1.00]
      005:0106-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1272
          CALIB STANDHYD 09:PR-R-C4IC- 3.10 .335 No_date 11:55 36.55 .476
1273
           [XIMP=.37:TIMP=.37]
1274
           [LOSS= 2 :CN= 58.0]
1275
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
1276
1277
      005:0107-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1278
         ADD HYD 07:PR-R-C4IC- .40 .027 No_date 12:01 19.92 n/a + 08:PR-R-C4IC- 1.30 .042 No_date 12:12 17.27 n/a + 09:PR-R-C4IC- 3.10 .335 No_date 11:55 36.55 n/a [DT= 1.00] SUM= 10:TOT 4.80 .373 No_date 11:56 29.94 n/a
1279
1280
1281
1282
1283
      005:0108-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ROUTE CHANNEL -> 10:TOT 4.80 .373 No_date 11:56 29.94 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.80 .238 No_date 12:03 29.94 n/a
1284
1285
1286
           [L/S/n = 580./1.000/.070]
1287
           \{Vmax = .617:Dmax = .479\}
     005:0109-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1288
          CALIB NASHYD 02:PR-CL-BBP- 22.10 .424 No_date 12:40 19.02 .248
1289
1290
           [CN= 64.0: N= 3.00]
           [Tp= .68:DT= 1.00]
1291
      005:0110-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1292
      1293
1294
1295
      1296
1297
      005:0111-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1298
          CALIB NASHYD 01:PR-R-BST-1 2.20 .150 No_date 12:07 29.34 .382
1299
1300
           [CN= 74.0: N= 3.00]
1301
           [Tp = .23:DT = 1.00]
      005:0112-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1302
         CALIB STANDHYD 02:PR-CL-BBP- 2.00 .300 No_date 11:55 47.83 .623
1303
1304
          [XIMP=.46:TIMP=.46]
           [LOSS= 2 :CN= 70.0]
1305
          [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
1306
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI= .0]
1307
1308 005:0113-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
       1309
1310
1311
```

```
005:0114-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1312
1313
           CALIB STANDHYD 04:PR-R-BST-2 2.00 .276 No_date 11:56 44.83 .584
1314
            [XIMP=.40:TIMP=.40]
1315
             [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI=
1316
1317
        005:0115-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1318
           ADD HYD 03:TOT 4.20 .398 No_date 12:00 38.15 n/a
+ 04:PR-R-BST-2 2.00 .276 No_date 11:56 44.83 n/a
[DT= 1.00] SUM= 05:TOT 6.20 .661 No_date 12:00 40.30 n/a
1319
1320
1321
        005:0116-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
1322
           CALIB NASHYD 01:PR-R-BST-3 3.60 .126 No_date 12:27 27.02 .352
1323
1324
             [CN=72.0: N=3.00]
1325
             [Tp= .52:DT= 1.00]
        005:0117-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1326
           CALIB STANDHYD 02:PR-CL-BBP- 2.10 .324 No_date 11:55 48.83 .636
1327
            [XIMP=.48:TIMP=.48]
1328
1329
             [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
1330
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI= .0]
1331
        005:0118-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1332
            ADD HYD 01:PR-R-BST-3 3.60 .126 No_date 12:27 27.02 n/a + 02:PR-CL-BBP- 2.10 .324 No_date 11:55 48.83 n/a [DT= 1.00] SUM= 03:TOT 5.70 .358 No_date 11:56 35.05 n/a
1333
1334
1335
       005:0119------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 04:PR-R-BST-2 2.00 .276 No_date 11:56 44.83 .584
1336
1337
1338
            [XIMP=.40:TIMP=.40]
             [LOSS= 2 :CN= 70.0]
1339
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
1340
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI=
1341
      005:0120-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1342
        ADD HYD 03:TOT 5.70 .358 No_date 11:56 35.05 n/a + 04:PR-R-BST-2 2.00 .276 No_date 11:56 44.83 n/a [DT= 1.00] SUM= 05:TOT 7.70 .634 No_date 11:56 37.59 n/a
1343
1344
1345
      1346
      1347
       005:0121-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1348
           CALIB NASHYD 01:PR-R-2CON- 243.60 2.054 No_date 14:43 20.86 .272
1349
1350
            [CN= 66.0: N= 3.00]
             [Tp= 2.31:DT= 1.00]
1351
       005:0122-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1352
           CALIB NASHYD 02:PR-CL-BBP- 37.00 .568 No_date 12:53 18.15 .236
1353
1354
            [CN= 63.0: N= 3.00]
1355
            [Tp = .85:DT = 1.00]
1356
       005:0123-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 03:PR-R-LST-1 40.20 .471 No_date 13:09 16.47 .214
1357
1358
            [CN= 61.0: N= 3.00]
1359
             [Tp= 1.04:DT= 1.00]
1360
        005:0124-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 04:PR-CL-BBP- 1.80 .242 No_date 11:55 42.72 .556
1361
1362
            [XIMP=.45:TIMP=.45]
1363
             [LOSS= 2 :CN= 61.0]
1364
             [Pervious area: IAper=16.20:SLPP=***:LGP= 40.:MNP=.350:SCP=
                                                                               .0]
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 110.:MNI=.015:SCI=
1365
1366
        005:0125-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           ADD HYD 03:PR-R-LST-1 40.20 .471 No_date 13:09 16.47 n/a
+ 04:PR-CL-BBP- 1.80 .242 No_date 11:55 42.72 n/a
[DT= 1.00] SUM= 05:TOT 42.00 .487 No_date 13:07 17.60 n/a
1367
1368
1369
        005:0126------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:PR-R-LST-2 8.80 .147 No_date 12:35 15.65 .204
1370
1371
             [CN=60.0: N=3.00]
1372
             [Tp= .60:DT= 1.00]
1373
        005:0127-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1374
           CALIB STANDHYD 02:PR-CL-BBP- 1.20 .152 No_date 11:55 40.39 .526
1375
1376
            [XIMP=.41:TIMP=.41]
1377
             [LOSS= 2 :CN= 61.0]
             [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
1378
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 89.:MNI=.015:SCI=
1379
       005:0128-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1380
```

```
ADD HYD 01:PR-R-LST-2 8.80 .147 No_date 12:35 15.65 n/a + 02:PR-CL-BBP- 1.20 .152 No_date 11:55 40.39 n/a [DT= 1.00] SUM= 03:TOT 10.00 .175 No_date 12:00 18.62 n/a
1381
1382
1383
1386
         [XIMP=.40:TIMP=.40]
          [LOSS= 2 :CN= 58.0]
1387
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
1388
                                                               .0]
         [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 86.:MNI=.015:SCI=
1389
1390 005:0130-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
      ADD HYD 03:TOT 10.00 .175 No_date 12:00 18.62 n/a + 04:PR-R-LST-3 1.10 .134 No_date 11:54 38.37 n/a [DT= 1.00] SUM= 05:TOT 11.10 .305 No_date 11:55 20.58 n/a
1391
1392
1393
1394 005:0131------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 01:PR-CL-BBP- 22.00 .461 No_date 12:38 19.92 .259
1395
1396
          [CN=65.0: N=3.00]
1397
          [Tp = .65:DT = 1.00]
1400 005:0132-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 01:PR-R-404-3 118.50 .891 No_date 14:25 17.27 .225
1401
1402
          [CN= 62.0: N= 3.00]
          [Tp= 2.02:DT= 1.00]
1403
1404 005:0133-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 02:PR-R-404-2 .90 .027 No_date 12:14 17.27 .225
1405
          [CN= 62.0: N= 3.00]
1406
          [Tp = .32:DT = 1.00]
1407
1408
     005:0134-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         1409
1410
1411
     005:0135-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1412
         CALIB NASHYD 04:PR-R-404-1 1.70 .038 No_date 12:25 17.27 .225
1413
          [CN= 62.0: N= 3.00]
1414
1415
          [Tp= .47:DT= 1.00]
      005:0136-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1416
         ADD HYD 03:TOT 119.40 .894 No_date 14:24 17.27 n/a + 04:PR-R-404-1 1.70 .038 No_date 12:25 17.27 n/a [DT= 1.00] SUM= 05:TOT 121.10 .901 No_date 14:23 17.27 n/a
1417
1418
1419
      005:0137-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1420
         CALIB NASHYD 08:PR-R-404-8 2.40 .052 No_date 12:28 17.27 .225
1421
1422
         [CN= 62.0: N= 3.00]
          [Tp= .50:DT= 1.00]
1423
1424 005:0138-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 09:PR-R-404-8 2.60 .062 No_date 12:28 19.02 .248
1425
1426
          [CN= 64.0: N= 3.00]
1427
          [Tp= .51:DT= 1.00]
1428
      005:0139-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 10:PR-R-404-9 1.80 .062 No_date 12:10 17.27 .225
1429
1430
         [CN= 62.0: N= 3.00]
          [Tp= .26:DT= 1.00]
1431
    1432
1433
      ** END OF RUN : 9
1434
     *****************
1436
1437
1438
1439
1440
    RUN: COMMAND#
1441
   010:0001-----
1442
1443
      START
         [TZERO = .00 \text{ hrs on} 0]
1444
         [METOUT= 2 (1=imperial, 2=metric output)]
1445
         [NSTORM= 1]
1446
         [NRUN = 10]
1447
     #***********************
1448
    # Project Name: BRADFORD BYPASS
                                                JOB NUMBER: [60636190] *
1449
```

```
: Jan. 20, 2023
1450
     # Modeller : [jrm]
# Company : AECOM
1451
1452
     # License # : 1281254
1453
1454
1455
1456
       Notes: This hydrologic model was developed for the BBP ultimate conditions *
             A new Berm is proposed to isolate flows draining to P-SWM P-2 and
1457
             the tributary of Penville Creek.
1458
1459
                  PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
1460
                       FOR PROPOSED SWM PONDS (UNCONTROLLED)
1461
                          Proposed Drainage Conditions
1462
                    2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
1463
1464
     #**********************
1465
     #***********************
1466
    010:0002-----
1467
1468
         READ STORM
1469
          Filename = STORM.001
1470
          Comment =
1471
          [SDT= 6.00:SDUR= 24.00:PTOT= 88.80]
1472
    1473
     1474
1475
1476
          [CN= 73.0: N= 3.00]
          [Tp= .55:DT= 1.00]
1477
     010:0004-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1478
         COMPUTE VOLUME 08:PR-R-BBP-1 14.50 .668 No_date 12:29 36.37 n/a {ST= .081 ha.m to control at .500 (cms)}
1479
1480
     1481
     010:0005-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1483
         CALIB NASHYD 01:PR-R-BBP-9 5.40 .312 No_date 12:17 35.04 .395
1484
1485
          [CN= 72.0: N= 3.00]
          [Tp= .38:DT= 1.00]
1486
1487
      010:0006-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 02:PR-R-BBP-9 6.60 .367 No_date 12:18 34.97 .394
1488
1489
          [CN= 72.0: N= 3.00]
          [Tp= .40:DT= 1.00]
1490
      010:0007-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1491
          ADD HYD 01:PR-R-BBP-9 5.40 .312 No_date 12:17 35.04 n/a
+ 02:PR-R-BBP-9 6.60 .367 No_date 12:18 34.97 n/a
[DT= 1.00] SUM= 03:TOT 12.00 .679 No_date 12:18 35.00 n/a
1492
1493
1494
     010:0008-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1495
         CALIB NASHYD 04:P-SWM P-2 3.90 .249 No_date 12:16 37.74 .425
1496
1497
          [CN= 74.0: N= 3.00]
1498
          [Tp= .37:DT= 1.00]
      010:0009-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1499
      ADD HYD 03:TOT 12.00 .679 No_date 12:18 35.00 n/a + 04:P-SWM P-2 3.90 .249 No_date 12:16 37.74 n/a [DT= 1.00] SUM= 08:TOT 15.90 .928 No_date 12:17 35.67 n/a
1500
1501
1502
      010:0010-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1503
         COMPUTE VOLUME 08:TOT 15.90 .928 No_date 12:17 35.67 n/a {ST= .393 ha.m to control at .050 (cms)}
1504
1505
1506
     1507
     010:0011-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1508
         CALIB NASHYD 01:EX-CL-400- 49.00 3.003 No_date 12:26 46.41 .523
1509
          [CN= 79.0: N= 3.00]
1510
          [Tp= .53:DT= 1.00]
1511
      010:0012-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1512
         ROUTE CHANNEL -> 01:EX-CL-400- 49.00 3.003 No_date 12:26 46.41 n/a [RDT= 1.00] out<- 02:to PR-CL-2 49.00 2.685 No_date 12:39 46.41 n/a
1513
1514
1515
          [L/S/n = 825./.850/.070]
          \{Vmax = .965:Dmax = 1.619\}
1516
      010:0013-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1517
         CALIB NASHYD 03:PR-R-BBP-1 8.80 .400 No_date 12:27 35.04 .395
1518
```

```
1519
            [CN=72.0: N=3.00]
           [Tp= .53:DT= 1.00]
1520
     010:0014-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1521
          CALIB NASHYD 04:EX-CL-400- 1.30 .098 No_date 12:18 46.41 .523
1522
1523
            [CN= 79.0: N= 3.00]
1524
            [Tp= .40:DT= 1.00]
      010:0015-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1525
1526
           CALIB STANDHYD 05:PR-R-BBP-1 1.30 .293 No_date 11:54 62.36 .702
1527
           [XIMP=.55:TIMP=.55]
            [LOSS= 2 :CN= 70.0]
1528
           [Pervious area: IAper=10.90:SLPP=****:LGP= 8.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 93.:MNI=.015:SCI= .0]
1530
       010:0016-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1531
          1532
1533
1534
1535
1536 010:0017-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 06:PR-CL-2 161.70 1.320 No_date 16:04 26.62 .300
1537
1538
           [CN=65.0: N=3.00]
1539
            [Tp= 3.38:DT= 1.00]
       010:0018-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1540
     1541
1542
1543
1544
1545
1546
1547
            [L/S/n=230./.900/.070]
1548
1549
            \{Vmax = 1.017:Dmax = 1.696\}
1550
       010:0020-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 09:PR-R-BBP-4 6.10 .382 No_date 12:13 33.74 .380
1552
            [CN= 71.0: N= 3.00]
1553
            [Tp= .32:DT= 1.00]
       010:0021-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1554
          ADD HYD 04:to PR-R-BB 222.10 3.390 No_date 12:43 31.64 n/a + 09:PR-R-BBP-4 6.10 .382 No_date 12:13 33.74 n/a [DT= 1.00] SUM= 10:TOT 228.20 3.582 No_date 12:40 31.70 n/a
1555
1556
1557
       010:0022-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1558
           CALIB NASHYD 01:PR-CL-1 4.80 .307 No_date 12:16 37.74 .425
1559
1560
           [CN= 74.0: N= 3.00]
1561
            [Tp= .37:DT= 1.00]
      010:0023-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 02:PR-R-BBP-2 5.90 .321 No_date 12:18 33.74 .380
1563
1564
            [CN= 71.0: N= 3.00]
1565
            [Tp= .39:DT= 1.00]
1566
       010:0024-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       ADD HYD 01:PR-CL-1 4.80 .307 No_date 12:16 37.74 n/a + 02:PR-R-BBP-2 5.90 .321 No_date 12:18 33.74 n/a [DT= 1.00] SUM= 09:TOT 10.70 .628 No_date 12:17 35.54 n/a
1567
1568
1569
       010:0025-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1570
           CALIB NASHYD 03:EX-CL-400- 1.70 .141 No_date 12:07 35.59 .401
1571
1572
            [CN= 72.0: N= 3.00]
            [Tp= .23:DT= 1.00]
       010:0026-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1574
       ADD HYD 03:EX-CL-400- 1.70 .141 No_date 12:07 35.59 n/a + 09:TOT 10.70 .628 No_date 12:17 35.54 n/a [DT= 1.00] SUM= 01:TOT 12.40 .745 No_date 12:15 35.54 n/a
1575
1576
1577
       010:0027------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:PR-R-BBP-3 2.40 .205 No_date 12:06 33.74 .380
1578
1579
1580
            [CN= 71.0: N= 3.00]
            [Tp= .20:DT= 1.00]
1581
       010:0028-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1582
           CALIB NASHYD 05:PR-CL-400- 2.20 .257 No_date 12:03 39.09 .440
1583
1584
            [CN= 75.0: N= 3.00]
            [Tp= .15:DT= 1.00]
1585
      010:0029-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1586
          ADD HYD 04:PR-R-BBP-3 2.40 .205 No_date 12:06 33.74 n/a
1587
```

```
+ 05:PR-CL-400- 2.20 .257 No_date 12:03 39.09 n/a [DT= 1.00] SUM= 09:TOT 4.60 .457 No_date 12:04 36.30 n/a
1588
1589
     010:0030-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1590
        ADD HYD 01:TOT 12.40 .745 No_date 12:15 35.54 n/a
+ 09:TOT 4.60 .457 No_date 12:04 36.30 n/a
+ 10:TOT 228.20 3.582 No_date 12:40 31.70 n/a
[DT= 1.00] SUM= 07:TOT 245.20 4.171 No_date 12:35 31.98 n/a
1591
1592
1593
1594
     010:0031-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1595
       ROUTE CHANNEL -> 07:TOT 245.20 4.171 No_date 12:35 31.98 n/a [RDT= 1.00] out<- 01:to PR-R-BB 245.20 3.920 No_date 12:47 31.98 n/a
1596
1597
           [L/S/n = 895./1.000/.070]
           {Vmax= 1.110:Dmax= 1.812}
1599
       010:0032-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1600
          CALIB NASHYD 02:PR-CL-400- 9.60 .413 No_date 12:28 33.74 .380
1601
1602
           [CN= 71.0: N= 3.00]
           [Tp= .54:DT= 1.00]
1603
       010:0033-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1604
          1605
1606
1607
       010:0034-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1608
       ADD HYD 02:TOT 254.80 4.277 No_date 12:45 32.05 n/a + 08:TOT 15.90 .928 No_date 12:17 35.67 n/a [DT= 1.00] SUM= 06:TOT 270.70 4.878 No_date 12:40 32.26 n/a
1609
1610
1611
      1612
      1613
      1614
1615
1616
           [CN= 72.0: N= 3.00]
           [Tp= .41:DT= 1.00]
1617
       010:0036-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1618
          CALIB NASHYD 01:PR-R-10IC- 4.70 .178 No_date 12:12 20.42 .230
1619
           [CN=59.0: N=3.00]
           [Tp= .29:DT= 1.00]
1621
       010:0037-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1622
         CALIB STANDHYD 02:PR-CL-BBP- 2.30 .273 No_date 11:55 39.12 .441
1623
1624
           [XIMP=.35:TIMP=.35]
1625
           [LOSS= 2 :CN= 51.0]
           [Pervious area: IAper=24.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 124.:MNI=.015:SCI= .0]
1626
1627
       010:0038-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1628
       ADD HYD 01:PR-R-10IC- 4.70 .178 No_date 12:12 20.42 n/a + 02:PR-CL-BBP- 2.30 .273 No_date 11:55 39.12 n/a [DT= 1.00] SUM= 03:TOT 7.00 .357 No_date 12:00 26.56 n/a
1629
1630
1631
1632
       010:0039-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 04:PR-R-10IC- 1.30 .064 No_date 12:09 23.41 .264
1633
1634
           [CN= 62.0: N= 3.00]
           [Tp = .25:DT = 1.00]
1635
1636
       010:0040-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 03:TOT 7.00 .357 No_date 12:00 26.56 n/a + 04:PR-R-10IC- 1.30 .064 No_date 12:09 23.41 n/a [DT= 1.00] SUM= 05:TOT 8.30 .404 No_date 12:01 26.07 n/a
1637
1638
1639
       010:0041-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1640
          CALIB STANDHYD 06:PR-R-10IC- 2.70 .309 No_date 11:56 39.68 .447
           [XIMP=.30:TIMP=.30]
1643
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 134.:MNI=.015:SCI= .0]
1644
1645
       010:0042-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1646
       1647
1648
1649
1650
1651
1652
      1654
      010:0044-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1655
          CALIB NASHYD 01:PR-R-10IC- 1.40 .079 No_date 12:11 28.90 .326
1656
```

```
1657
           [CN=67.0: N=3.00]
1658
           [Tp= .29:DT= 1.00]
       010:0045-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1659
          CALIB STANDHYD 02:PR-R-10IC- 3.10 .417 No_date 11:56 45.60 .514
1660
1661
           [XIMP=.36:TIMP=.36]
1662
           [LOSS= 2 :CN= 61.0]
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
1663
1664
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
       010:0046-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1665
          ADD HYD 01:PR-R-10IC- 1.40 .079 No_date 12:11 28.90 n/a + 02:PR-R-10IC- 3.10 .417 No_date 11:56 45.60 n/a [DT= 1.00] SUM= 03:TOT 4.50 .454 No_date 12:00 40.41 n/a
1666
1668
       010:0047-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1669
          COMPUTE VOLUME 03:TOT 4.50 .454 No_date 12:00 40.41 n/a {ST= .044 ha.m to control at .150 (cms)}
1670
1671
      1672
      1673
      010:0048-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1674
          CALIB NASHYD 01:PR-R-C4IC- 13.40 .383 No_date 12:27 22.43 .253
1675
           [CN= 61.0: N= 3.00]
1676
           [Tp= .50:DT= 1.00]
1677
1678
       010:0049-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 02:PR-CL-BBP- 3.00 .558 No_date 11:55 58.45 .658
1679
           [XIMP=.52:TIMP=.52]
1680
1681
           [LOSS= 2 :CN= 66.0]
           [Pervious area: IAper=13.10:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
1682
1683
       010:0050-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1684
          ADD HYD 01:PR-R-C4IC- 13.40 .383 No_date 12:27 22.43 n/a + 02:PR-CL-BBP- 3.00 .558 No_date 11:55 58.45 n/a [DT= 1.00] SUM= 03:TOT 16.40 .655 No_date 12:00 29.02 n/a
1685
1686
1687
1688
       010:0051-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 04:PR-R-C4IC- 2.80 .305 No_date 11:56 38.33 .432
1690
           [XIMP=.28:TIMP=.28]
1691
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 137.:MNI=.015:SCI= .0]
1692
1693
1694
       010:0052-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB STANDHYD 05:PR-R-C4IC- 1.60 .190 No_date 11:55 39.68 .447
1695
1696
           [XIMP=.30:TIMP=.30]
1697
           [LOSS= 2 :CN= 58.0]
1698
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 103.:MNI=.015:SCI= .0]
1699
1700
       010:0053-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 03:TOT 16.40 .655 No_date 12:00 29.02 n/a + 04:PR-R-C4IC- 2.80 .305 No_date 11:56 38.33 n/a + 05:PR-R-C4IC- 1.60 .190 No_date 11:55 39.68 n/a [DT= 1.00] SUM= 06:TOT 20.80 1.143 No_date 11:56 31.09 n/a
1701
       ADD HYD
1702
1703
1704
      1705
1706
1707
1708
      1709
       010:0055-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1710
          CALIB NASHYD 01:PR-R-C4IC- .40 .037 No_date 12:01 26.62 .300
1711
1712
           [CN=65.0: N=3.00]
1713
           [Tp= .10:DT= 1.00]
1714
       010:0056-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 02:PR-R-C4IC- 1.30 .059 No_date 12:11 23.41 .264
1715
1716
           [CN= 62.0: N= 3.00]
           [Tp= .28:DT= 1.00]
1717
       010:0057-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1718
          1719
1720
1721
       010:0058-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1722
          CALIB STANDHYD 04:PR-R-C4IC- 3.10 .411 No_date 11:55 44.39 .500
1723
1724
           [XIMP=.37:TIMP=.37]
1725
           [LOSS= 2 :CN= 58.0]
```

```
[Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
1726
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
1727
      1728
1729
1730
1731
      010:0060-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1732
          COMPUTE VOLUME 05:TOT 4.80 .467 No_date 11:56 37.23 n/a {ST= .054 ha.m to control at .100 (cms)}
1733
1734
      1735
      010:0061-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1737
          CALIB STANDHYD 01:PR-R-2CON- 1.60 .209 No_date 12:00 43.35 .488
1738
1739
           [XIMP=.20:TIMP=.20]
1740
           [LOSS= 2 :CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 210.:MNI=.015:SCI= .0]
1741
1742
      010:0062-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1743
          CALIB STANDHYD 02:PR-CL-BBP- 3.00 .387 No_date 12:00 43.91 .495
1744
1745
          [XIMP=.30:TIMP=.30]
1746
           [LOSS= 2 :CN= 64.0]
           [Pervious area: IAper=14.30:SLPP=****:LGP= 30.:MNP=.350:SCP= .0]
1747
1748
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 240.:MNI=.015:SCI= .0]
      010:0063-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1749
          1750
1751
1752
1753
      010:0064-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB STANDHYD 04:PR-R-2CON- 3.00 .497 No_date 11:56 53.13 .598
1754
1755
           [XIMP=.38:TIMP=.38]
           [LOSS= 2 :CN= 70.0]
1756
1757
           [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP=
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 163.:MNI=.015:SCI=
1758
       010:0065-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1759
      1760
1761
1762
1763
1764
1765
      1766
1767
      010:0067-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1768
          CALIB NASHYD 01:PR-R-2CON- 28.00 .370 No_date 13:34 22.43 .253
1769
1770
           [CN= 61.0: N= 3.00]
1771
           [Tp= 1.39:DT= 1.00]
      010:0068-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1772
          CALIB STANDHYD 02:PR-CL-BBP- 3.00 .593 No_date 11:56 62.15 .700
1773
1774
           [XIMP=.45:TIMP=.45]
1775
           [LOSS= 2 :CN= 77.0]
           [Pervious area: IAper= 7.60:SLPP=***:LGP= 40.:MNP=.350:SCP=
1776
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
1777
       010:0069-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1778
          ADD HYD 01:PR-R-2CON- 28.00 .370 No_date 13:34 22.43 n/a + 02:PR-CL-BBP- 3.00 .593 No_date 11:56 62.15 n/a [DT= 1.00] SUM= 03:TOT 31.00 .616 No_date 11:56 26.27 n/a
1779
1780
1781
       010:0070-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1782
          CALIB STANDHYD 04:PR-R-2CON- 1.50 .270 No_date 11:56 55.59 .626
1783
1784
           [XIMP=.28:TIMP=.28]
           [LOSS= 2 :CN= 78.0]
1785
           [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 100.:MNI=.015:SCI= .0]
1786
1787
      010:0071-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1788
          :00/1------ID:NHYD------AREA---QPEAK-TpeakDate_nn:mm----R.V.-R.C.-
ADD HYD 03:TOT 31.00 .616 No_date 11:56 26.27 n/a
+ 04:PR-R-2CON- 1.50 .270 No_date 11:56 55.59 n/a
[DT= 1.00] SUM= 05:TOT 32.50 .887 No_date 11:56 27.63 n/a
1789
1790
1791
      010:0072-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1792
          CALIB STANDHYD 06:PR-R-2CON- 3.00 .573 No_date 11:56 60.79 .685
1793
1794
           [XIMP=.40:TIMP=.40]
```

```
[LOSS= 2 :CN= 78.0]
         [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
1796
1797
     010:0073-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1798
     1799
1800
1801
1802
1803
1804
     1806
     010:0075-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1807
        CALIB NASHYD 01:PR-R-404-4 3.50 .118 No_date 12:20 22.43 .253
1808
1809
         [CN= 61.0: N= 3.00]
1810
         [Tp = .40:DT = 1.00]
     010:0076-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1811
        CALIB NASHYD 02:PR-R-404-5 5.90 .122 No_date 12:47 22.43 .253
1812
1813
         [CN= 61.0: N= 3.00]
1814
         [Tp = .77:DT = 1.00]
     010:0077-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1815
         ADD HYD 01:PR-R-404-4 3.50 .118 No_date 12:20 22.43 n/a + 02:PR-R-404-5 5.90 .122 No_date 12:47 22.43 n/a [DT= 1.00] SUM= 03:TOT 9.40 .218 No_date 12:29 22.43 n/a
1816
1817
1818
     010:0078------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:PR-R-404-6 3.70 .152 No_date 12:16 24.48 .276
1819
1820
         [CN= 63.0: N= 3.00]
1821
1822
         [Tp= .35:DT= 1.00]
     010:0079-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1823
      ADD HYD 03:TOT 9.40 .218 No_date 12:29 22.43 n/a + 04:PR-R-404-6 3.70 .152 No_date 12:16 24.48 n/a [DT= 1.00] SUM= 09:TOT 13.10 .356 No_date 12:22 23.01 n/a
1824
1825
1826
    010:0080-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1827
     * COMPUTE VOLUME 09:TOT 13.10 .356 No_date 12:22 23.01 n/a
1828
     1829
     1830
1831
     010:0081-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
        CALIB NASHYD 10:PR-R-404-7 6.50 .153 No_date 12:38 22.43 .253
1832
1833
         [CN= 61.0: N= 3.00]
         [Tp= .65:DT= 1.00]
1834
     010:0082-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1835
        COMPUTE VOLUME 10:PR-R-404-7 6.50 .153 No_date 12:38 22.43 n/a {ST= .030 ha.m to control at .100 (cms)}
1836
1837
     1838
     1839
     010:0083-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1840
        CALIB NASHYD 01:PR-R-404-1 29.30 .506 No_date 12:57 21.43 .241
1841
1842
         [CN= 60.0: N= 3.00]
1843
         [Tp= .91:DT= 1.00]
1844
     010:0084-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
        CALIB NASHYD 02:PR-R-404-1 7.30 .233 No_date 12:20 21.43 .241
1845
1846
         [CN= 60.0: N= 3.00]
1847
         [Tp= .40:DT= 1.00]
     010:0085-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1848
        CALIB NASHYD 03:PR-CL-404- 2.20 .072 No_date 12:27 25.53 .288
1849
1850
         [CN= 64.0: N= 3.00]
1851
         [Tp= .51:DT= 1.00]
     010:0086-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1852
        1853
1854
1855
1856
     1857
1858
     1859
     1860
     010:0087-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1861
        CALIB NASHYD 01:PR-R-BBP-5 2.20 .130 No_date 12:16 35.03 .395
1862
         [CN= 72.0: N= 3.00]
1863
```

```
1864
            [Tp= .37:DT= 1.00]
1865
       010:0088-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 02:PR-R-BBP-6 542.60 2.508 No_date 17:53 19.49 .219
1866
1867
            [CN=58.0: N=3.00]
1868
            [Tp= 4.60:DT= 1.00]
1869
       010:0089-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 03:PR-R-BBP-6 5.60 .255 No_date 12:23 32.49 .366
1870
            [CN= 70.0: N= 3.00]
1871
            [Tp = .47:DT = 1.00]
1872
       010:0090-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1873
          ADD HYD 01:PR-R-BBP-5 2.20 .130 No_date 12:16 35.03 n/a + 02:PR-R-BBP-6 542.60 2.508 No_date 17:53 19.49 n/a
1875
            + 03:PR-R-BBP-6 5.60 .255 No_date 12:23 32.49 n/a [DT= 1.00] SUM= 04:TOT 550.40 2.533 No_date 17:52 19.68 n/a
1876
1877
       010:0091-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1878
           CALIB NASHYD 01:PR-R-BBP-7 2.40 .190 No_date 12:08 35.04 .395
1879
            [CN= 72.0: N= 3.00]
1880
            [Tp= .24:DT= 1.00]
1881
       010:0092-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1882
           CALIB NASHYD 02:PR-R-BBP-8 81.70 .557 No_date 15:05 18.54 .209
1883
            [CN=57.0: N=3.00]
1884
1885
            [Tp= 2.50:DT= 1.00]
1886
       010:0093-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 03:PR-R-BBP-8 3.70 .161 No_date 12:26 32.49 .366
1887
1888
            [CN= 70.0: N= 3.00]
1889
            [Tp= .50:DT= 1.00]
       010:0094-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1890
       ADD HYD 02:PR-R-BBP-8 81.70 .557 No_date 15:05 18.54 n/a + 03:PR-R-BBP-8 3.70 .161 No_date 12:26 32.49 n/a [DT= 1.00] SUM= 04:TOT 85.40 .576 No_date 15:01 19.15 n/a
1891
1892
1893
1894 010:0095-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB STANDHYD 05:PR-R-10IC- 3.40 .549 No_date 11:55 51.80 .583
1895
            [XIMP=.48:TIMP=.48]
1897
            [LOSS= 2 :CN= 58.0]
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 151.:MNI=.015:SCI= .0]
1898
1899
1900
      1901
      1902
      010:0096-----ID:NHYD------AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
           CALIB NASHYD 08:PR-R-10IC- 1.40 .079 No_date 12:11 28.90 .326
1903
1904
           [CN=67.0: N=3.00]
            [Tp= .29:DT= 1.00]
1905
1906
       010:0097-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 09:PR-R-10IC- 3.10 .417 No_date 11:56 45.60 .514
1907
1908
            [XIMP=.36:TIMP=.36]
1909
            [LOSS= 2 :CN= 61.0]
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
1910
1911
                                                                           .0]
1912
       010:0098-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 08:PR-R-10IC- 1.40 .079 No_date 12:11 28.90 n/a + 09:PR-R-10IC- 3.10 .417 No_date 11:56 45.60 n/a [DT= 1.00] SUM= 10:TOT 4.50 .454 No_date 12:00 40.41 n/a
1913
1914
1915
       010:0099-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1916
           ROUTE CHANNEL -> 10:TOT 4.50 .454 No_date 12:00 40.41 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.50 .199 No_date 12:08 40.41 n/a
1917
1919
            [L/S/n= 1200./1.000/.070]
1920
            \{Vmax = .655:Dmax = .542\}
       010:0100-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1921
           CALIB NASHYD 02:PR-CL-BBP- 75.80 1.554 No_date 13:17 30.04 .338
1922
1923
            [CN= 68.0: N= 3.00]
            [Tp= 1.21:DT= 1.00]
1924
1925
       010:0101-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          1926
1927
1928
1929 010:0102-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB STANDHYD 04:PR-R-C4IC- 2.50 .458 No_date 11:55 56.51 .636
1930
1931
           [XIMP=.55:TIMP=.55]
```

[LOSS= 2 :CN= 58.0]

```
area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
1934
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 129.:MNI=.015:SCI=
     010:0103------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
CALIB NASHYD 05:PR-CL-BBP- 27.30 .998 No_date 12:40 35.04 .395
1935
1936
1937
            [CN= 72.0: N= 3.00]
1938
            [Tp = .71:DT = 1.00]
      1939
     1940
    010:0104-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1941
          CALIB NASHYD 07:PR-R-C4IC- .40 .037 No_date 12:01 26.62 .300
1942
1943
           [CN=65.0: N=3.00]
           [Tp= .10:DT= 1.00]
1944
       010:0105-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1945
          CALIB NASHYD 08:PR-R-C4IC- 1.30 .059 No_date 12:11 23.41 .264
1946
1947
            [CN= 62.0: N= 3.00]
1948
            [Tp = .28:DT = 1.00]
1949
       010:0106-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 09:PR-R-C4IC- 3.10 .411 No_date 11:55 44.39 .500
1950
1951
           [XIMP=.37:TIMP=.37]
1952
           [LOSS= 2 :CN= 58.0]
1953
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
1954
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
       010:0107-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1955
       ADD HYD 07:PR-R-C4IC- .40 .037 No_date 12:01 26.62 n/a + 08:PR-R-C4IC- 1.30 .059 No_date 12:11 23.41 n/a + 09:PR-R-C4IC- 3.10 .411 No_date 11:55 44.39 n/a [DT= 1.00] SUM= 10:TOT 4.80 .467 No_date 11:56 37.23 n/a
1956
1957
1958
1959
1960
     010:0108-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ROUTE CHANNEL -> 10:TOT 4.80 .467 No_date 11:56 37.23 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.80 .310 No_date 12:03 37.23 n/a
1961
1962
           [L/S/n= 580./1.000/.070]
1963
1964
           \{Vmax = .659:Dmax = .551\}
       010:0109-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1965
          CALIB NASHYD 02:PR-CL-BBP- 22.10 .584 No_date 12:39 25.53 .288
1966
1967
           [CN= 64.0: N= 3.00]
           [Tp= .68:DT= 1.00]
1968
       010:0110-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1969
          1970
1971
1972
      1973
      1974
      010:0111-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1975
           CALIB NASHYD 01:PR-R-BST-1 2.20 .194 No_date 12:07 37.74 .425
1976
1977
           [CN = 74.0: N = 3.00]
1978
           [Tp= .23:DT= 1.00]
       010:0112-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1979
          CALIB STANDHYD 02:PR-CL-BBP- 2.00 .369 No_date 11:55 57.47 .647
1980
1981
           [XIMP=.46:TIMP=.46]
1982
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=***:LGP= 40.:MNP=.350:SCP=
1983
1984
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI=
1985
       010:0113-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 01:PR-R-BST-1 2.20 .194 No_date 12:07 37.74 n/a
+ 02:PR-CL-BBP- 2.00 .369 No_date 11:55 57.47 n/a
[DT= 1.00] SUM= 03:TOT 4.20 .497 No_date 12:00 47.14 n/a
1986
1987
1988
       010:0114-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1989
          CALIB STANDHYD 04:PR-R-BST-2 2.00 .343 No_date 11:56 54.21 .611
1990
1991
            [XIMP=.40:TIMP=.40]
            [LOSS= 2 :CN= 70.0]
1992
           [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI= .0]
1993
1994
       010:0115-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1995
          ADD HYD 03:TOT 4.20 .497 No_date 12:00 47.14 n/a + 04:PR-R-BST-2 2.00 .343 No_date 11:56 54.21 n/a [DT= 1.00] SUM= 05:TOT 6.20 .822 No_date 11:56 49.42 n/a
1996
1997
1998
       010:0116-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1999
          CALIB NASHYD 01:PR-R-BST-3 3.60 .166 No_date 12:27 35.04 .395
2000
           [CN= 72.0: N= 3.00]
2001
```

```
2002
            [Tp= .52:DT= 1.00]
2003
       010:0117-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 02:PR-CL-BBP- 2.10 .397 No_date 11:55 58.56 .659
2004
2005
            [XIMP=.48:TIMP=.48]
2006
            [LOSS= 2 : CN= 70.0]
2007
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI=
2008
       010:0118-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2009
        ADD HYD 01:PR-R-BST-3 3.60 .166 No_date 12:27 35.04 n/a + 02:PR-CL-BBP- 2.10 .397 No_date 11:55 58.56 n/a [DT= 1.00] SUM= 03:TOT 5.70 .444 No_date 11:56 43.70 n/a
2010
2011
2012
       010:0119-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2013
           CALIB STANDHYD 04:PR-R-BST-2 2.00 .344 No_date 11:56 54.21 .611
2014
2015
            [XIMP=.40:TIMP=.40]
            [LOSS= 2 :CN= 70.0]
2016
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI= .0]
2017
2018
       010:0120-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2019
           ADD HYD 03:TOT 5.70 .444 No_date 11:56 43.70 n/a + 04:PR-R-BST-2 2.00 .344 No_date 11:56 54.21 n/a [DT= 1.00] SUM= 05:TOT 7.70 .788 No_date 11:56 46.43 n/a
2020
2021
2022
      2023
2024
      010:0121------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 01:PR-R-2CON- 243.60 2.780 No_date 14:40 27.74 .312
2025
2026
2027
            [CN= 66.0: N= 3.00]
2028
            [Tp= 2.31:DT= 1.00]
       010:0122-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2029
           CALIB NASHYD 02:PR-CL-BBP- 37.00 .786 No_date 12:52 24.48 .276
2030
            [CN= 63.0: N= 3.00]
2031
2032
            [Tp = .85:DT = 1.00]
2033
       010:0123-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 03:PR-R-LST-1 40.20 .662 No_date 13:07 22.43 .253
2034
            [CN= 61.0: N= 3.00]
2035
2036
            [Tp= 1.04:DT= 1.00]
2037
        010:0124-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 04:PR-CL-BBP- 1.80 .294 No_date 11:55 51.39 .579
2038
2039
            [XIMP=.45:TIMP=.45]
2040
            [LOSS= 2 :CN= 61.0]
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
2041
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 110.:MNI=.015:SCI= .0]
2042
       010:0125-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2043
            ADD HYD 03:PR-R-LST-1 40.20 .662 No_date 13:07 22.43 n/a + 04:PR-CL-BBP- 1.80 .294 No_date 13:05 51.39 n/a [DT= 1.00] SUM= 05:TOT 42.00 .681 No_date 13:06 23.67 n/a
2044
2045
2046
       010:0126-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2047
           CALIB NASHYD 01:PR-R-LST-2 8.80 .208 No_date 12:34 21.43 .241
2048
2049
            [CN=60.0: N=3.00]
2050
            [Tp = .60:DT = 1.00]
       010:0127-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2051
           CALIB STANDHYD 02:PR-CL-BBP- 1.20 .186 No_date 11:54 48.82 .550
2052
2053
            [XIMP=.41:TIMP=.41]
            [LOSS= 2 :CN= 61.0]
2054
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
2055
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 89.:MNI=.015:SCI= .0]
2056
2057
        010:0128-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           2058
2059
2060
       010:0129------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 04:PR-R-LST-3 1.10 .163 No_date 11:54 46.41 .523
2061
2062
2063
            [XIMP=.40:TIMP=.40]
            [LOSS= 2 :CN= 58.0]
2064
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
2065
                                                                               .0]
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 86.:MNI=.015:SCI= .0]
2066
       010:0130-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2067
          ADD HYD 03:TOT 10.00 .229 No_date 12:31 24.72 n/a + 04:PR-R-LST-3 1.10 .163 No_date 11:54 46.41 n/a [DT= 1.00] SUM= 05:TOT 11.10 .381 No_date 11:55 26.87 n/a
2068
2069
2070
```

```
010:0131-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2071
2072
         CALIB NASHYD 01:PR-CL-BBP- 22.00 .631 No_date 12:37 26.62 .300
2073
          [CN= 65.0: N= 3.00]
2074
           [Tp= .65:DT= 1.00]
     2075
     2076
     010:0132-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2077
         CALIB NASHYD 01:PR-R-404-3 118.50 1.237 No_date 14:21 23.41 .264
2078
2079
          [CN= 62.0: N= 3.00]
          [Tp = 2.02:DT = 1.00]
2080
2081
     010:0133-----ID:NHYD-----AREA---OPEAK-TpeakDate hh:mm----R.V.-R.C.-
         CALIB NASHYD 02:PR-R-404-2 .90 .037 No_date 12:14 23.41 .264
2082
2083
          [CN= 62.0: N= 3.00]
2084
          [Tp= .32:DT= 1.00]
2085
      010:0134-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 01:PR-R-404-3 118.50 1.237 No_date 14:21 23.41 n/a + 02:PR-R-404-2 .90 .037 No_date 12:14 23.41 n/a [DT= 1.00] SUM= 03:TOT 119.40 1.241 No_date 14:21 23.41 n/a
2086
2087
2088
2089 010:0135-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
      CALIB NASHYD 04:PR-R-404-1 1.70 .053 No_date 12:25 23.41 .264
2090
          [CN= 62.0: N= 3.00]
2091
2092
          [Tp = .47:DT = 1.00]
2093 010:0136-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
      ADD HYD 03:TOT 119.40 1.241 No_date 14:21 23.41 n/a + 04:PR-R-404-1 1.70 .053 No_date 12:25 23.41 n/a [DT= 1.00] SUM= 05:TOT 121.10 1.250 No_date 14:20 23.41 n/a
2094
2095
2096
     010:0137-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2097
       CALIB NASHYD 08:PR-R-404-8 2.40 .072 No_date 12:27 23.41 .264
2098
2099
          [CN= 62.0: N= 3.00]
          [Tp= .50:DT= 1.00]
2100
2101
     010:0138-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 09:PR-R-404-8 2.60 .085 No_date 12:27 25.53 .288
2102
2103
          [CN= 64.0: N= 3.00]
2104
          [Tp = .51:DT = 1.00]
2105
     010:0139-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 10:PR-R-404-9 1.80 .086 No_date 12:10 23.41 .264
2106
2107
           [CN= 62.0: N= 3.00]
2108
           [Tp= .26:DT= 1.00]
2109
     2110
     ** END OF RUN : 24
2111
2112
2113
2114
2115
2116
2117
2118
     RUN: COMMAND#
2119
     025:0001-----
2120
       START
          [TZERO = .00 hrs on
2121
                                  0]
2122
          [METOUT= 2 (1=imperial, 2=metric output)]
2123
          [NSTORM= 1]
          [NRUN = 25]
2124
2126 # Project Name: BRADFORD BYPASS
                                                   JOB NUMBER: [60636190] *
2127 # Date : Jan. 20, 2023
     # Modeller : [jrm]
# Company : AECOM
# License # : 1281254
2128
2129
2130
2131
2132
2133 # Notes: This hydrologic model was developed for the BBP ultimate conditions *
              A new Berm is proposed to isolate flows draining to P-SWM P-2 and
2134 #
2135 #
             the tributary of Penville Creek.
2136
2137
                  PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
2138 #
                         FOR PROPOSED SWM PONDS (UNCONTROLLED)
2139
                           Proposed Drainage Conditions
```

```
2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
2140
2141 #
2142 #***********************
     #*********************
2143
     025:0002----
2144
2145
          READ STORM
2146
          Filename = STORM.001
          Comment =
2147
           [SDT= 6.00:SDUR= 24.00:PTOT= 103.20]
2148
     2149
     2150
      025:0003-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2151
          CALIB NASHYD 08:PR-R-BBP-1 14.50 .869 No_date 12:28 46.86 .454
2152
2153
           [CN= 73.0: N= 3.00]
2154
           [Tp = .55:DT = 1.00]
      025:0004-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2155
          COMPUTE VOLUME 08:PR-R-BBP-1 14.50 .869 No_date 12:28 46.86 n/a {ST= .158 ha.m to control at .500 (cms)}
2156
2157
      2158
      2159
      025:0005-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2160
          CALIB NASHYD 01:PR-R-BBP-9 5.40 .408 No_date 12:17 45.32 .439
2161
2162
           [CN= 72.0: N= 3.00]
2163
           [Tp = .38:DT = 1.00]
      025:0006------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:PR-R-BBP-9 6.60 .480 No_date 12:18 45.25 .438
2164
2165
2166
           [CN= 72.0: N= 3.00]
           [Tp= .40:DT= 1.00]
2167
2168
      025:0007-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       ADD HYD 01:PR-R-BBP-9 5.40 .408 No_date 12:17 45.32 n/a + 02:PR-R-BBP-9 6.60 .480 No_date 12:18 45.25 n/a [DT= 1.00] SUM= 03:TOT 12.00 .887 No_date 12:17 45.28 n/a
2169
2170
2171
      025:0008-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2172
          CALIB NASHYD 04:P-SWM P-2 3.90 .323 No_date 12:16 48.45 .469
2173
2174
          [CN= 74.0: N= 3.00]
2175
          [Tp= .37:DT= 1.00]
      025:0009-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2176
          ADD HYD 03:TOT 12.00 .887 No_date 12:17 45.28 n/a + 04:P-SWM P-2 3.90 .323 No_date 12:16 48.45 n/a [DT= 1.00] SUM= 08:TOT 15.90 1.210 No_date 12:17 46.06 n/a
2177
2178
2179
2180
      025:0010-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          COMPUTE VOLUME 08:TOT 15.90 1.210 No_date 12:17 46.06 n/a {ST= .548 ha.m to control at .050 (cms)}
2181
2182
2183
      2184
      025:0011-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2185
          CALIB NASHYD 01:EX-CL-400- 49.00 3.783 No_date 12:26 58.19 .564
2186
           [CN= 79.0: N= 3.00]
2187
           [Tp= .53:DT= 1.00]
2188
      025:0012-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2189
         ROUTE CHANNEL -> 01:EX-CL-400- 49.00 3.783 No_date 12:26 58.19 n/a [RDT= 1.00] out<- 02:to PR-CL-2 49.00 3.414 No_date 12:38 58.19 n/a
2190
2191
           [L/S/n=825./.850/.070]
2192
           \{Vmax = 1.019:Dmax = 1.798\}
2193
      025:0013-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2194
          CALIB NASHYD 03:PR-R-BBP-1 8.80 .523 No_date 12:27 45.32 .439
2195
2196
           [CN= 72.0: N= 3.00]
2197
           [Tp= .53:DT= 1.00]
      025:0014------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:EX-CL-400- 1.30 .123 No_date 12:17 58.19 .564
2198
2199
           [CN= 79.0: N= 3.00]
2200
           [Tp= .40:DT= 1.00]
2201
      025:0015-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2202
          CALIB STANDHYD 05:PR-R-BBP-1 1.30 .355 No_date 11:54 74.72 .724
2203
2204
          [XIMP=.55:TIMP=.55]
2205
           [LOSS= 2 :CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=****:LGP= 8.:MNP=.350:SCP= .0]
2206
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 93.:MNI=.015:SCI=
2207
      025:0016-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
```

```
CALIB NASHYD 06:PR-CL-2 161.70 1.778 No_date 16:00 35.40 .343
2214
            [CN=65.0: N=3.00]
2215
             [Tp= 3.38:DT= 1.00]
2216
        025:0018-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2217
        ADD HYD 01:TOT 11.40 .676 No_date 12:24 50.14 n/a + 02:to PR-CL-2 49.00 3.414 No_date 12:38 58.19 n/a + 06:PR-CL-2 161.70 1.778 No_date 16:00 35.40 n/a [DT= 1.00] SUM= 07:TOT PR-CL- 222.10 4.389 No_date 12:39 41.19 n/a
2218
2219
2220
2221
        025:0019-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2222
        ROUTE CHANNEL -> 07:TOT PR-CL- 222.10 4.389 No_date 12:39 41.19 n/a [RDT= 1.00] out<- 04:to PR-R-BB 222.10 4.364 No_date 12:42 41.19 n/a
2223
2224
             [L/S/n=230./.900/.070]
2225
2226
             \{Vmax = 1.079:Dmax = 1.897\}
2227
      025:0020-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 09:PR-R-BBP-4 6.10 .501 No_date 12:13 43.82 .425
2228
            [CN= 71.0: N= 3.00]
2229
2230
             [Tp = .32:DT = 1.00]
2231
      025:0021-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       ADD HYD 04:to PR-R-BB 222.10 4.364 No_date 12:42 41.19 n/a + 09:PR-R-BBP-4 6.10 .501 No_date 12:13 43.82 n/a [DT= 1.00] SUM= 10:TOT 228.20 4.619 No_date 12:39 41.26 n/a
2232
2233
2234
       025:0022-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2235
           CALIB NASHYD 01:PR-CL-1 4.80 .397 No_date 12:16 48.45 .469
2236
2237
            [CN= 74.0: N= 3.00]
             [Tp = .37:DT = 1.00]
2238
2239 025:0023-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 02:PR-R-BBP-2 5.90 .422 No_date 12:17 43.82 .425
2240
2241
            [CN= 71.0: N= 3.00]
            [Tp= .39:DT= 1.00]
2242
2243 025:0024-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
       ADD HYD 01:PR-CL-1 4.80 .397 No_date 12:16 48.45 n/a + 02:PR-R-BBP-2 5.90 .422 No_date 12:17 43.82 n/a [DT= 1.00] SUM= 09:TOT 10.70 .818 No_date 12:17 45.89 n/a
2244
2245
2246
2247
        025:0025-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 03:EX-CL-400- 1.70 .183 No_date 12:07 45.91 .445
2248
2249
            [CN= 72.0: N= 3.00]
             [Tp= .23:DT= 1.00]
2250
2251 025:0026-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
        ADD HYD 03:EX-CL-400- 1.70 .183 No_date 12:07 45.91 n/a + 09:TOT 10.70 .818 No_date 12:17 45.89 n/a [DT= 1.00] SUM= 01:TOT 12.40 .972 No_date 12:14 45.90 n/a
2252
2253
2254
2255
      025:0027-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 04:PR-R-BBP-3 2.40 .268 No_date 12:05 43.82 .425
2256
2257
             [CN= 71.0: N= 3.00]
             [Tp= .20:DT= 1.00]
2258
2259
       025:0028-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
            CALIB NASHYD 05:PR-CL-400- 2.20 .330 No_date 12:03 50.00 .484
2260
2261
             [CN= 75.0: N= 3.00]
             [Tp= .15:DT= 1.00]
2262
2263
        025:0029-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 04:PR-R-BBP-3 2.40 .268 No_date 12:05 43.82 n/a + 05:PR-CL-400- 2.20 .330 No_date 12:03 50.00 n/a [DT= 1.00] SUM= 09:TOT 4.60 .592 No_date 12:04 46.77 n/a
2264
2265
2266
        025:0030-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2267
            ADD HYD 01:TOT 12.40 .972 No_date 12:14 45.90 n/a + 09:TOT 4.60 .592 No_date 12:39 41.26 n/a + 10:TOT 228.20 4.619 No_date 12:33 41.59 n/a [DT= 1.00] SUM= 07:TOT 245.20 5.400 No_date 12:33 41.59 n/a
2268
2269
2270
2271
        025:0031-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2272
        ROUTE CHANNEL -> 07:TOT 245.20 5.400 No_date 12:33 41.59 n/a
2273
           [RDT= 1.00] out<- 01:to PR-R-BB 245.20 5.054 No_date 12:48 41.59 n/a
2274
             [L/S/n= 895./1.000/.070]
2275
             {Vmax= 1.004:Dmax= 2.167}
2276
        025:0032-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2277
```

```
CALIB NASHYD 02:PR-CL-400- 9.60 .542 No_date 12:28 43.82 .425
2278
2279
           [CN= 71.0: N= 3.00]
2280
            [Tp= .54:DT= 1.00]
       2281
2282
2283
2284
     025:0034-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2285
       ADD HYD 02:TOT 254.80 5.512 No_date 12:46 41.68 n/a + 08:TOT 15.90 1.210 No_date 12:17 46.06 n/a [DT= 1.00] SUM= 06:TOT 270.70 6.268 No_date 12:40 41.94 n/a
2286
2287
2288
     2289
      2290
      025:0035-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2291
          CALIB NASHYD 02:PR-R-BBP-9 6.60 .472 No_date 12:19 45.32 .439
2292
2293
            [CN= 72.0: N= 3.00]
            [Tp= .41:DT= 1.00]
2294
       025:0036-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2295
          CALIB NASHYD 01:PR-R-10IC- 4.70 .250 No_date 12:12 27.90 .270
2296
           [CN= 59.0: N= 3.00]
2297
            [Tp= .29:DT= 1.00]
2298
       025:0037-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2299
           CALIB STANDHYD 02:PR-CL-BBP- 2.30 .339 No_date 11:55 47.92 .464
2300
2301
            [XIMP=.35:TIMP=.35]
            [LOSS= 2 :CN= 51.0]
2302
            [Pervious area: IAper=24.40:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 124.:MNI=.015:SCI=
2303
2304
       025:0038-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2305
          ADD HYD 01:PR-R-10IC- 4.70 .250 No_date 12:12 27.90 n/a
+ 02:PR-CL-BBP- 2.30 .339 No_date 11:55 47.92 n/a
[DT= 1.00] SUM= 03:TOT 7.00 .471 No_date 12:00 34.48 n/a
2306
2307
2308
       025:0039-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2309
           CALIB NASHYD 04:PR-R-10IC- 1.30 .088 No_date 12:09 31.54 .306
2310
            [CN = 62.0: N = 3.00]
2311
2312
            [Tp= .25:DT= 1.00]
       025:0040-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2313
          ADD HYD 03:TOT 7.00 .471 No_date 12:00 34.48 n/a + 04:PR-R-10IC- 1.30 .088 No_date 12:09 31.54 n/a [DT= 1.00] SUM= 05:TOT 8.30 .539 No_date 12:01 34.02 n/a
2314
2315
2316
2317
       025:0041-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 06:PR-R-10IC- 2.70 .393 No_date 11:56 49.09 .476
2318
2319
           [XIMP=.30:TIMP=.30]
2320
            [LOSS= 2 :CN= 58.0]
2321
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
2322
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 134.:MNI=.015:SCI= .0]
       025:0042-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2323
       ADD HYD 05:TOT 8.30 .539 No_date 12:01 34.02 n/a + 06:PR-R-10IC- 2.70 .393 No_date 11:56 49.09 n/a [DT= 1.00] SUM= 07:TOT 11.00 .918 No_date 12:00 37.72 n/a
2324
2325
2326
       025:0043-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2327
           COMPUTE VOLUME 07:TOT 11.00 .918 No_date 12:00 37.72 n/a {ST= .085 ha.m to control at .400 (cms)}
2328
2329
2330
      2331
2332
       025:0044-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 01:PR-R-10IC- 1.40 .106 No_date 12:11 38.12 .369
2333
2334
            [CN=67.0: N=3.00]
2335
            [Tp= .29:DT= 1.00]
       025:0045------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 02:PR-R-10IC- 3.10 .525 No_date 11:56 55.86 .541
2336
2337
            [XIMP=.36:TIMP=.36]
2338
2339
            [LOSS= 2 :CN= 61.0]
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
                                                                           .0]
2340
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
2341
       025:0046-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2342
           ADD HYD 01:PR-R-10IC- 1.40 .106 No_date 12:11 38.12 n/a + 02:PR-R-10IC- 3.10 .525 No_date 11:56 55.86 n/a [DT= 1.00] SUM= 03:TOT 4.50 .577 No_date 12:00 50.34 n/a
2343
2344
2345
      025:0047-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2346
```

```
COMPUTE VOLUME 03:TOT 4.50 .577 No_date 12:00 50.34 n/a {ST= .064 ha.m to control at .150 (cms)}
         COMPUTE VOLUME 03:TOT
2348
     2349
025:0048-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2351
         CALIB NASHYD 01:PR-R-C4IC- 13.40 .531 No_date 12:26 30.35 .294
2352
          [CN= 61.0: N= 3.00]
2353
2354
          [Tp = .50:DT = 1.00]
      025:0049-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2355
         CALIB STANDHYD 02:PR-CL-BBP- 3.00 .685 No_date 11:55 70.26 .681
2356
2357
          [XIMP=.52:TIMP=.52]
          [LOSS= 2 :CN= 66.0]
2358
          [Pervious area: IAper=13.10:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
2359
2360
      025:0050-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2361
         ADD HYD 01:PR-R-C4IC- 13.40 .531 No_date 12:26 30.35 n/a + 02:PR-CL-BBP- 3.00 .685 No_date 11:55 70.26 n/a [DT= 1.00] SUM= 03:TOT 16.40 .835 No_date 12:00 37.65 n/a
2362
2363
2364
      025:0051------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB STANDHYD 04:PR-R-C4IC- 2.80 .391 No_date 11:56 47.60 .461
2365
2366
2367
          [XIMP=.28:TIMP=.28]
2368
          [LOSS= 2 :CN= 58.0]
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
2369
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 137.:MNI=.015:SCI=
2370
      025:0052------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB STANDHYD 05:PR-R-C4IC- 1.60 .241 No_date 11:55 49.09 .476
2371
2372
2373
          [XIMP=.30:TIMP=.30]
2374
          [LOSS= 2 :CN= 58.0]
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
2375
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 103.:MNI=.015:SCI=
2376
      025:0053-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2377
      2378
2379
2380
2381
2382
         COMPUTE VOLUME 06:TOT 20.80 1.450 No_date 12:00 39.87 n/a {ST= .056 ha.m to control at 1.000 (cms)}
2383
2384
2385
     ******************************
2386
     025:0055-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2387
         CALIB NASHYD 01:PR-R-C4IC- .40 .049 No_date 12:01 35.40 .343
2388
2389
          [CN=65.0: N=3.00]
2390
          [Tp = .10:DT = 1.00]
2391
      025:0056-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-C4IC- 1.30 .081 No_date 12:11 31.54 .306
2392
2393
          [CN= 62.0: N= 3.00]
2394
          [Tp = .28:DT = 1.00]
      025:0057-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2395
         2396
2397
2398
      025:0058-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2399
         CALIB STANDHYD 04:PR-R-C4IC- 3.10 .513 No_date 11:56 54.30 .526
2400
2401
          [XIMP=.37:TIMP=.37]
2402
          [LOSS= 2 :CN= 58.0]
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
2403
2404
      025:0059-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2405
      2406
2407
2408
2409
2410
2411
     2412
     2413
     025:0061-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2414
         CALIB STANDHYD 01:PR-R-2CON- 1.60 .271 No_date 12:00 54.12 .524
2415
```

```
[XIMP=.20:TIMP=.20]
2417
            [LOSS= 2 :CN= 70.0]
2418
            [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP=
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 210.:MNI=.015:SCI=
2419
                                                                              .01
2420
       025:0062-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .487 No_date 12:00
2421
            [XIMP=.30:TIMP=.30]
2422
2423
            [LOSS= 2 :CN= 64.0]
            [Pervious area: IAper=14.30:SLPP=****:LGP= 30.:MNP=.350:SCP=
2424
                                                                              .0]
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 240.:MNI=.015:SCI=
2425
        025:0063-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
2426
           ADD HYD 01:PR-R-2CON- 1.60 .271 No_date 12:00 54.12 n/a + 02:PR-CL-BBP- 3.00 .487 No_date 12:00 54.23 n/a [DT= 1.00] SUM= 03:TOT 4.60 .758 No_date 12:00 54.19 n/a
2427
2428
2429
        025:0064-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2430
           CALIB STANDHYD 04:PR-R-2CON- 3.00 .627 No_date 11:56 64.71 .627
2431
2432
            [XIMP=.38:TIMP=.38]
2433
            [LOSS= 2 :CN= 70.0]
2434
            [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP= .0]
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 163.:MNI=.015:SCI= .0]
2435
       025:0065-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2436
            ADD HYD 03:TOT 4.60 .758 No_date 12:00 54.19 n/a
+ 04:PR-R-2CON- 3.00 .627 No_date 11:56 64.71 n/a
[DT= 1.00] SUM= 05:TOT 7.60 1.363 No_date 11:57 58.35 n/a
2437
2438
2439
       2440
2441
2442
      2443
      2444
       025:0067-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2445
           CALIB NASHYD 01:PR-R-2CON- 28.00 .512 No_date 13:32 30.35 .294
2446
2447
            [CN= 61.0: N= 3.00]
2448
            [Tp= 1.39:DT= 1.00]
       025:0068-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2449
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .723 No_date 11:56 74.86 .725
2450
2451
            [XIMP=.45:TIMP=.45]
2452
            [LOSS= 2 :CN= 77.0]
            [Pervious area: IAper= 7.60:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
2453
2454
2455
       025:0069-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            ADD HYD 01:PR-R-2CON- 28.00 .512 No_date 13:32 30.35 n/a + 02:PR-CL-BBP- 3.00 .723 No_date 11:56 74.86 n/a [DT= 1.00] SUM= 03:TOT 31.00 .765 No_date 11:56 34.66 n/a
2456
           ADD HYD
2457
2458
       025:0070-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2459
           CALIB STANDHYD 04:PR-R-2CON- 1.50 .330 No_date 11:55 67.92 .658
2460
2461
            [XIMP=.28:TIMP=.28]
2462
            [LOSS= 2 :CN= 78.0]
            [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 100.:MNI=.015:SCI=
2463
2464
       025:0071-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2465
           ADD HYD 03:TOT 31.00 .765 No_date 11:56 34.66 n/a
+ 04:PR-R-2CON- 1.50 .330 No_date 11:55 67.92 n/a
[DT= 1.00] SUM= 05:TOT 32.50 1.093 No_date 11:56 36.19 n/a
2466
2467
2468
        025:0072-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2469
           CALIB STANDHYD 06:PR-R-2CON- 3.00 .703 No_date 11:56 73.47 .712
2470
2471
            [XIMP=.40:TIMP=.40]
2472
            [LOSS= 2 :CN= 78.0]
            [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
2473
2474
        025:0073-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2475
           ADD HYD 05:TOT 32.50 1.093 No_date 11:56 36.19 n/a + 06:PR-R-2CON- 3.00 .703 No_date 11:56 73.47 n/a [DT= 1.00] SUM= 07:TOT 35.50 1.796 No_date 11:56 39.34 n/a
2476
2477
2478
        025:0074-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2479
           COMPUTE VOLUME 07:TOT 35.50 1.796 No_date 11:56 39.34 n/a {ST= .077 ha.m to control at 1.100 (cms)}
2480
2481
      2482
      2483
       025:0075-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
```

```
CALIB NASHYD 01:PR-R-404-4 3.50 .163 No_date 12:19 30.35 .294
2486
          [CN= 61.0: N= 3.00]
2487
          [Tp = .40:DT = 1.00]
      025:0076------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 02:PR-R-404-5 5.90 .169 No_date 12:46 30.35 .294
2488
2489
          [CN= 61.0: N= 3.00]
2490
          [Tp= .77:DT= 1.00]
2491
      025:0077-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2492
      ADD HYD 01:PR-R-404-4 3.50 .163 No_date 12:19 30.35 n/a + 02:PR-R-404-5 5.90 .169 No_date 12:46 30.35 n/a [DT= 1.00] SUM= 03:TOT 9.40 .303 No_date 12:29 30.35 n/a 025:0078------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2493
2494
2495
2496
         CALIB NASHYD 04:PR-R-404-6 3.70 .207 No_date 12:16 32.83 .318
2497
          [CN= 63.0: N= 3.00]
2498
          [Tp= .35:DT= 1.00]
2499
      025:0079-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2500
          ADD HYD 03:TOT 9.40 .303 No_date 12:29 30.35 n/a + 04:PR-R-404-6 3.70 .207 No_date 12:16 32.83 n/a [DT= 1.00] SUM= 09:TOT 13.10 .493 No_date 12:21 31.05 n/a
2501
2502
2503
      025:0080-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2504
         COMPUTE VOLUME 09:TOT 13.10 .493 No_date 12:21 31.05 n/a {ST= .045 ha.m to control at .400 (cms)}
2505
2506
     2507
    2508
     025:0081-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
CALIB NASHYD 10:PR-R-404-7 6.50 .212 No_date 12:37 30.35 .294
2509
2510
2511
          [CN= 61.0: N= 3.00]
2512
          [Tp= .65:DT= 1.00]
      025:0082----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2513
         COMPUTE VOLUME 10:PR-R-404-7 6.50 .212 No_date 12:37 30.35 n/a
2.514
          \{ST=.060 \text{ ha.m} \text{ to control at} .100 \text{ (cms)}\}
2515
     2516
     2517
     025:0083-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
2518
          CALIB NASHYD 01:PR-R-404-1 29.30 .706 No_date 12:56 29.13 .282
2519
2520
          [CN= 60.0: N= 3.00]
2521
           [Tp= .91:DT= 1.00]
2522
      025:0084-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 02:PR-R-404-1 7.30 .324 No_date 12:19 29.13 .282
2523
2524
          [CN= 60.0: N= 3.00]
2525
           [Tp= .40:DT= 1.00]
      025:0085-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2526
         CALIB NASHYD 03:PR-CL-404- 2.20 .098 No_date 12:27 34.10 .330
2527
2528
          [CN= 64.0: N= 3.00]
          [Tp= .51:DT= 1.00]
2529
      025:0086-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2530
        2531
2532
2533
2534
     2535
     *************************************
2536
2537
     2538
      025:0087-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2539
          CALIB NASHYD 01:PR-R-BBP-5 2.20 .169 No date 12:16 45.32 .439
2540
2541
          [CN= 72.0: N= 3.00]
          [Tp= .37:DT= 1.00]
2542
2543
      025:0088-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 02:PR-R-BBP-6 542.60 3.493 No_date 17:46
2544
2545
           [CN=58.0: N=3.00]
           [Tp= 4.60:DT= 1.00]
2546
      025:0089-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2547
         CALIB NASHYD 03:PR-R-BBP-6 5.60 .337 No_date 12:23 42.35 .410
2548
          [CN= 70.0: N= 3.00]
2549
          [Tp = .47 : DT = 1.00]
2550
      025:0090-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2551
         ADD HYD 01:PR-R-BBP-5 2.20 .169 No_date 12:16 45.32 n/a + 02:PR-R-BBP-6 542.60 3.493 No_date 17:46 26.76 n/a
2552
2553
```

```
+ 03:PR-R-BBP-6 5.60 .337 No_date 12:23 42.35 n/a [DT= 1.00] SUM= 04:TOT 550.40 3.524 No_date 17:45 26.99 n/a
2554
2555
       025:0091------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:PR-R-BBP-7 2.40 .248 No_date 12:08 45.32 .439
2556
2557
2558
             [CN= 72.0: N= 3.00]
2559
             [Tp = .24:DT = 1.00]
        025:0092-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2560
            CALIB NASHYD 02:PR-R-BBP-8 81.70 .787 No_date 15:00 25.60 .248
2561
2562
             [CN= 57.0: N= 3.00]
2563
             [Tp= 2.50:DT= 1.00]
2564
        025:0093-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
            CALIB NASHYD 03:PR-R-BBP-8 3.70 .213 No_date 12:25 42.35 .410
2565
2566
             [CN= 70.0: N= 3.00]
2567
             [Tp = .50:DT = 1.00]
        025:0094-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2568
             ADD HYD 02:PR-R-BBP-8 81.70 .787 No_date 15:00 25.60 n/a
+ 03:PR-R-BBP-8 3.70 .213 No_date 12:25 42.35 n/a
[DT= 1.00] SUM= 04:TOT 85.40 .812 No_date 14:57 26.33 n/a
2569
2570
2571
        025:0095------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB STANDHYD 05:PR-R-10IC- 3.40 .671 No_date 11:55 62.49 .606
2572
2573
2574
            [XIMP=.48:TIMP=.48]
2575
             [LOSS= 2 :CN= 58.0]
             [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
2576
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 151.:MNI=.015:SCI= .0]
2577
       2578
2579
       025:0096-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2580
           CALIB NASHYD 08:PR-R-10IC- 1.40 .106 No_date 12:11 38.12 .369
2581
2582
             [CN= 67.0: N= 3.00]
             [Tp= .29:DT= 1.00]
2583
2584 025:0097-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 09:PR-R-10IC- 3.10 .525 No_date 11:56 55.86 .541
2585
2586
             [XIMP=.36:TIMP=.36]
2587
             [LOSS= 2 :CN= 61.0]
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
2588
2589
        025:0098-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2590
           ADD HYD 08:PR-R-10IC- 1.40 .106 No_date 12:11 38.12 n/a + 09:PR-R-10IC- 3.10 .525 No_date 11:56 55.86 n/a [DT= 1.00] SUM= 10:TOT 4.50 .577 No_date 12:00 50.34 n/a
2591
2592
2593
2594
        025:0099-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           ROUTE CHANNEL -> 10:TOT 4.50 .577 No_date 12:00 50.34 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.50 .265 No_date 12:07 50.34 n/a
2595
2596
2597
             [L/S/n = 1200./1.000/.070]
2598
             \{Vmax = .697 : Dmax = .625\}
2599
        025:0100-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            CALIB NASHYD 02:PR-CL-BBP- 75.80 2.071 No_date 13:16 39.47 .382
2600
             [CN= 68.0: N= 3.00]
2601
2602
             [Tp= 1.21:DT= 1.00]
        025:0101-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2603
        ADD HYD 01:to PR-CL-B 4.50 .265 No_date 12:07 50.34 n/a + 02:PR-CL-BBP- 75.80 2.071 No_date 13:16 39.47 n/a [DT= 1.00] SUM= 03:TOT 80.30 2.174 No_date 13:13 40.08 n/a
2604
2605
2606
        025:0102-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2607
           CALIB STANDHYD 04:PR-R-C4IC- 2.50 .554 No_date 11:55 67.70 .656
2608
2609
             [XIMP=.55:TIMP=.55]
2610
             [LOSS= 2 :CN= 58.0]
             [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 129.:MNI=.015:SCI= .0]
2611
2612
        025:0103------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 05:PR-CL-BBP- 27.30 1.305 No_date 12:39 45.32 .439
2613
2614
2615
             [CN= 72.0: N= 3.00]
2616
             [Tp = .71:DT = 1.00]
       2617
       2618
       025:0104-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2619
            CALIB NASHYD 07:PR-R-C4IC- .40 .049 No_date 12:01 35.40 .343
2620
2621
             [CN=65.0: N=3.00]
             [Tp= .10:DT= 1.00]
2622
```

```
025:0105-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2623
2.62.4
           CALIB NASHYD 08:PR-R-C4IC- 1.30 .081 No_date 12:11 31.54 .306
2625
            [CN= 62.0: N= 3.00]
2626
            [Tp= .28:DT= 1.00]
2627
       025:0106-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 09:PR-R-C4IC- 3.10 .513 No_date 11:56 54.30 .526
2628
2629
            [XIMP=.37:TIMP=.37]
            [LOSS= 2 :CN= 58.0]
2630
2631
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
                                                                         .0]
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
2632
       025:0107-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
       2634
2635
2636
2637
2638
           ROUTE CHANNEL -> 10:TOT 4.80 .592 No_date 11:56 46.56 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.80 .406 No_date 12:03 46.56 n/a
2639
2640
            [L/S/n= 580./1.000/.070]
2641
            \{Vmax = .702:Dmax = .636\}
2642
       025:0109-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2643
           CALIB NASHYD 02:PR-CL-BBP- 22.10 .795 No_date 12:39 34.10 .330
2644
2645
            [CN= 64.0: N= 3.00]
2646
            [Tp= .68:DT= 1.00]
       025:0110-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2647
       ADD HYD 01:to PR-CL-B 4.80 .406 No_date 12:03 46.56 n/a
+ 02:PR-CL-BBP- 22.10 .795 No_date 12:39 34.10 n/a
[DT= 1.00] SUM= 03:TOT 26.90 .973 No_date 12:29 36.32 n/a
2648
2649
2650
      2651
     2652
      025:0111-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2653
           CALIB NASHYD 01:PR-R-BST-1 2.20 .251 No_date 12:07 48.45 .469
2654
2655
            [CN= 74.0: N= 3.00]
2656
            [Tp= .23:DT= 1.00]
       025:0112-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2657
          CALIB STANDHYD 02:PR-CL-BBP- 2.00 .450 No_date 11:55 69.42 .673
2658
2659
            [XIMP=.46:TIMP=.46]
2660
            [LOSS= 2 :CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]

[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI= .0]
2661
2662
       025:0113-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2663
          ADD HYD 01:PR-R-BST-1 2.20 .251 No_date 12:07 48.45 n/a + 02:PR-CL-BBP- 2.00 .450 No_date 11:55 69.42 n/a [DT= 1.00] SUM= 03:TOT 4.20 .620 No_date 12:00 58.44 n/a
2664
2665
2666
       025:0114-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2667
           CALIB STANDHYD 04:PR-R-BST-2 2.00 .422 No_date 11:56 65.89 .638
2668
2669
            [XIMP=.40:TIMP=.40]
            [LOSS= 2 :CN= 70.0]
2670
            [Pervious area: IAper=10.90:SLPP=***:LGP= 40.:MNP=.350:SCP=
2671
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI=
2672
2673
       025:0115-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       2674
2675
2676
2677
           CALIB NASHYD 01:PR-R-BST-3 3.60 .217 No_date 12:26 45.32 .439
2678
2679
            [CN= 72.0: N= 3.00]
2680
            [Tp= .52:DT= 1.00]
       025:0117------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 02:PR-CL-BBP- 2.10 .484 No_date 11:55 70.60 .684
2681
2682
2683
            [XIMP=.48:TIMP=.48]
2684
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
                                                                          .0]
2685
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI= .0]
2686
       025:0118-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2687
           ADD HYD 01:PR-R-BST-3 3.60 .217 No_date 12:26 45.32 n/a
+ 02:PR-CL-BBP- 2.10 .484 No_date 11:55 70.60 n/a
[DT= 1.00] SUM= 03:TOT 5.70 .548 No_date 11:56 54.63 n/a
2688
2689
2690
      025:0119-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2691
```

```
CALIB STANDHYD
                        04:PR-R-BST-2 2.00
                                               .423 No_date 11:56 65.89 .638
2693
         [XIMP=.40:TIMP=.40]
2694
          [LOSS= 2 :CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI=
2695
2696
     025:0120-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2697
      ADD HYD 03:TOT 5.70 .548 No_date 11:56 54.63 n/a + 04:PR-R-BST-2 2.00 .423 No_date 11:56 65.89 n/a [DT= 1.00] SUM= 05:TOT 7.70 .970 No_date 11:56 57.56 n/a
2698
2699
2700
     2701
     2702
      025:0121-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2703
          CALIB NASHYD 01:PR-R-2CON- 243.60 3.736 No_date 14:38 36.74 .356
2704
2705
           [CN= 66.0: N= 3.00]
2706
           [Tp= 2.31:DT= 1.00]
      025:0122-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2707
         CALIB NASHYD 02:PR-CL-BBP- 37.00 1.077 No_date 12:51 32.83 .318
2708
2709
          [CN = 63.0: N = 3.00]
           [Tp= .85:DT= 1.00]
2710
      025:0123-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2711
         CALIB NASHYD 03:PR-R-LST-1 40.20 .917 No_date 13:05 30.35 .294
2712
2713
          [CN= 61.0: N= 3.00]
          [Tp= 1.04:DT= 1.00]
2714
      025:0124-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2715
2716
         CALIB STANDHYD 04:PR-CL-BBP- 1.80 .363 No_date 11:55 62.23 .603
2717
          [XIMP=.45:TIMP=.45]
2718
           [LOSS= 2 :CN= 61.0]
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
2719
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 110.:MNI=.015:SCI=
2720
      025:0125-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2721
         2722
2723
2724
      025:0126-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2725
         CALIB NASHYD 01:PR-R-LST-2 8.80 .291 No_date 12:34 29.13 .282
2726
2727
           [CN= 60.0: N= 3.00]
2728
           [Tp= .60:DT= 1.00]
2729
      025:0127-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB STANDHYD 02:PR-CL-BBP- 1.20 .230 No_date 11:54 59.40 .576
2730
2731
          [XIMP=.41:TIMP=.41]
2732
           [LOSS= 2 :CN= 61.0]
2733
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 89.:MNI=.015:SCI= .0]
2734
2735
      025:0128-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         2736
2737
2738
      025:0129------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 04:PR-R-LST-3 1.10 .201 No_date 11:54 56.54 .548
2739
2740
          [XIMP=.40:TIMP=.40]
2741
2742
           [LOSS= 2 :CN= 58.0]
                                                                   .0]
2743
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 86.:MNI=.015:SCI=
2744
                                                                   .0]
      025:0130-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2745
         ADD HYD 03:TOT 10.00 .316 No_date 12:31 32.77 n/a + 04:PR-R-LST-3 1.10 .201 No_date 11:54 56.54 n/a [DT= 1.00] SUM= 05:TOT 11.10 .485 No_date 11:55 35.12 n/a
2746
2747
2748
      025:0131-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2749
          CALIB NASHYD 01:PR-CL-BBP- 22.00 .854 No_date 12:36 35.40 .343
2750
2751
           [CN=65.0: N=3.00]
           [Tp= .65:DT= 1.00]
2752
     2753
     2754
      025:0132-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2755
          CALIB NASHYD 01:PR-R-404-3 118.50 1.699 No_date 14:19 31.54 .306
2756
2757
           [CN= 62.0: N= 3.00]
2758
           [Tp= 2.02:DT= 1.00]
      025:0133-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2759
         CALIB NASHYD 02:PR-R-404-2 .90 .051 No_date 12:14 31.54 .306
```

```
2761
          [CN= 62.0: N= 3.00]
2762
         [Tp= .32:DT= 1.00]
2763 025:0134-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
        2764
2765
2766
     025:0135-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2767
        CALIB NASHYD 04:PR-R-404-1 1.70 .074 No_date 12:24 31.54 .306
2768
         [CN= 62.0: N= 3.00]
2769
2770
          [Tp= .47:DT= 1.00]
      025:0136-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2771
        ADD HYD 03:TOT 119.40 1.705 No_date 14:19 31.54 n/a + 04:PR-R-404-1 1.70 .074 No_date 12:24 31.54 n/a [DT= 1.00] SUM= 05:TOT 121.10 1.717 No_date 14:18 31.54 n/a
2772
2773
2774
2775
      025:0137-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 08:PR-R-404-8 2.40 .099 No_date 12:26 31.54 .306
2776
          [CN= 62.0: N= 3.00]
2777
          [Tp= .50:DT= 1.00]
2778
     025:0138-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2779
         CALIB NASHYD 09:PR-R-404-8 2.60 .116 No_date 12:27 34.10 .330
2780
2781
         [CN= 64.0: N= 3.00]
2782
          [Tp = .51:DT = 1.00]
2783 025:0139-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 10:PR-R-404-9 1.80 .118 No_date 12:10 31.54 .306
2784
2785
          [CN= 62.0: N= 3.00]
2786
          [Tp = .26:DT = 1.00]
    2787
      ** END OF RUN : 49
2788
2789
2790
2791
2792
2793
2794
2795
2796
     RUN: COMMAND#
2797
      050:0001-----
2798
        START
         [TZERO = .00 hrs on 0]
2799
          [METOUT= 2 (1=imperial, 2=metric output)]
2800
         [NSTORM= 1]
2801
2802
         [NRUN = 50]
2803 #***********************
2804 # Project Name: BRADFORD BYPASS
                                              JOB NUMBER: [60636190] *
2805 # Date : Jan. 20, 2023
    # Modeller : [jrm]
# Company : AECOM
2806
2807
     # License # : 1281254
2808
2809
2810
2811
   # Notes: This hydrologic model was developed for the BBP ultimate conditions *
2812 #
       A new Berm is proposed to isolate flows draining to P-SWM P-2 and
2813
            the tributary of Penville Creek.
2814
                 PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
2815
2816
                       FOR PROPOSED SWM PONDS (UNCONTROLLED)
2817
                         Proposed Drainage Conditions
2818
                   2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
2819
     #*********************
2820
     #***********************
2821
   050:0002----
2822
2823
         READ STORM
2824
         Filename = STORM.001
2825
          Comment =
          [SDT= 6.00:SDUR= 24.00:PTOT= 115.20]
2826
2827
    2828
     050:0003-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2829
```

```
CALIB NASHYD 08:PR-R-BBP-1 14.50 1.046 No_date 12:28 56.04 .486
2831
          [CN=73.0: N=3.00]
2832
           [Tp= .55:DT= 1.00]
     2833
2834
2835
      2836
     2837
2838 050:0005-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-R-BBP-9 5.40 .492 No_date 12:17 54.33 .472
2839
2840
           [CN=72.0: N=3.00]
           [Tp= .38:DT= 1.00]
2841
       050:0006-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2842
          CALIB NASHYD 02:PR-R-BBP-9 6.60 .579 No_date 12:18 54.26 .471
2843
2844
           [CN= 72.0: N= 3.00]
           [Tp= .40:DT= 1.00]
2845
       050:0007-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2846
       ADD HYD 01:PR-R-BBP-9 5.40 .492 No_date 12:17 54.33 n/a + 02:PR-R-BBP-9 6.60 .579 No_date 12:18 54.26 n/a [DT= 1.00] SUM= 03:TOT 12.00 1.071 No_date 12:17 54.29 n/a
2847
2848
2849
2850 050:0008-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 04:P-SWM P-2 3.90 .387 No_date 12:16 57.79 .502
2851
           [CN= 74.0: N= 3.00]
2852
2853
           [Tp= .37:DT= 1.00]
       050:0009-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2854
       ADD HYD 03:TOT 12.00 1.071 No_date 12:17 54.29 n/a + 04:P-SWM P-2 3.90 .387 No_date 12:16 57.79 n/a [DT= 1.00] SUM= 08:TOT 15.90 1.457 No_date 12:17 55.15 n/a
2855
2856
2857
     050:0010-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2858
          COMPUTE VOLUME 08:TOT 15.90 1.457 No_date 12:17 55.15 n/a {ST= .687 ha.m to control at .050 (cms)}
2859
2860
     2861
     2862
2863 050:0011-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:EX-CL-400- 49.00 4.453 No_date 12:26 68.33 .593
2864
2865
           [CN= 79.0: N= 3.00]
           [Tp= .53:DT= 1.00]
2866
2867
       050:0012-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ROUTE CHANNEL -> 01:EX-CL-400- 49.00 4.453 No_date 12:26 68.33 n/a [RDT= 1.00] out<- 02:to PR-CL-2 49.00 4.043 No_date 12:37 68.33 n/a
2868
2869
2870
           [L/S/n = 825./.850/.070]
           {Vmax= 1.059:Dmax= 1.933}
2871
       050:0013-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2872
          CALIB NASHYD 03:PR-R-BBP-1 8.80 .631 No_date 12:27 54.33 .472
2873
           [CN=72.0: N=3.00]
2874
2875
           [Tp= .53:DT= 1.00]
       050:0014-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2876
          CALIB NASHYD 04:EX-CL-400- 1.30 .145 No_date 12:17 68.33 .593
2877
2878
           [CN= 79.0: N= 3.00]
2879
           [Tp= .40:DT= 1.00]
2880
       050:0015-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 05:PR-R-BBP-1 1.30 .413 No_date 11:54 85.23 .740
2881
2882
           [XIMP=.55:TIMP=.55]
2883
           [LOSS= 2 :CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=****:LGP= 8.:MNP=.350:SCP= .0]
2884
2885
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 93.:MNI=.015:SCI= .0]
       050:0016-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2886
          ADD HYD 03:PR-R-BBP-1 8.80 .631 No_date 12:27 54.33 n/a + 04:EX-CL-400- 1.30 .145 No_date 12:17 68.33 n/a + 05:PR-R-BBP-1 1.30 .413 No_date 11:54 85.23 n/a [DT= 1.00] SUM= 01:TOT 11.40 .809 No_date 12:24 59.45 n/a
2887
2888
2889
2890
2891
       050:0017-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 06:PR-CL-2 161.70 2.190 No_date 15:58 43.24 .375
2892
          [CN=65.0: N=3.00]
2893
           [Tp= 3.38:DT= 1.00]
2894
       050:0018-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2895
                    01:TOT 11.40 .809 No_date 12:24 59.45 n/a
+ 02:to PR-CL-2 49.00 4.043 No_date 12:37 68.33 n/a
+ 06:PR-CL-2 161.70 2.190 No_date 15:58 43.24 n/a
2896
          ADD HYD
2897
2898
```

```
[DT= 1.00] SUM= 07:TOT PR-CL- 222.10 5.244 No_date 12:38 49.61 n/a
2899
        050:0019-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2900
          ROUTE CHANNEL -> 07:TOT PR-CL- 222.10 5.244 No_date 12:38 49.61 n/a [RDT= 1.00] out<- 04:to PR-R-BB 222.10 5.147 No_date 12:45 49.61 n/a
2901
2902
             [L/S/n= 230./ .900/.070]
{Vmax= .952:Dmax= 2.185}
2903
2904
        050:0020-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2905
            CALIB NASHYD 09:PR-R-BBP-4 6.10 .606 No_date 12:13 52.67 .457
2906
             [CN= 71.0: N= 3.00]
2907
             [Tp= .32:DT= 1.00]
2908
        050:0021-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            ADD HYD 04:to PR-R-BB 222.10 5.147 No_date 12:45 49.61 n/a
+ 09:PR-R-BBP-4 6.10 .606 No_date 12:13 52.67 n/a
[DT= 1.00] SUM= 10:TOT 228.20 5.418 No_date 12:43 49.69 n/a
2910
2911
2912
        050:0022-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2913
            CALIB NASHYD 01:PR-CL-1 4.80 .476 No_date 12:16 57.79 .502
2914
             [CN= 74.0: N= 3.00]
2915
             [Tp= .37:DT= 1.00]
2916
        050:0023-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2917
            CALIB NASHYD 02:PR-R-BBP-2 5.90 .510 No_date 12:17 52.67 .457
2918
             [CN= 71.0: N= 3.00]
2919
2920
             [Tp= .39:DT= 1.00]
        050:0024-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2921
        ADD HYD 01:PR-CL-1 4.80 .476 No_date 12:16 57.79 n/a + 02:PR-R-BBP-2 5.90 .510 No_date 12:17 52.67 n/a [DT= 1.00] SUM= 09:TOT 10.70 .986 No_date 12:17 54.96 n/a
2922
2923
2924
        050:0025------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 03:EX-CL-400- 1.70 .220 No_date 12:07 54.95 .477
2925
2926
2927
             [CN= 72.0: N= 3.00]
             [Tp= .23:DT= 1.00]
2928
        050:0026-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2929
        ADD HYD 03:EX-CL-400- 1.70 .220 No_date 12:07 54.95 n/a + 09:TOT 10.70 .986 No_date 12:17 54.96 n/a [DT= 1.00] SUM= 01:TOT 12.40 1.171 No_date 12:14 54.96 n/a
2930
2931
2932
2933
        050:0027-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            CALIB NASHYD 04:PR-R-BBP-3 2.40 .324 No_date 12:05 52.67 .457
2934
             [CN= 71.0: N= 3.00]
2935
             [Tp= .20:DT= 1.00]
2936
2937
        050:0028-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            CALIB NASHYD 05:PR-CL-400- 2.20 .393 No_date 12:03 59.49 .516
2938
2939
             [CN= 75.0: N= 3.00]
             [Tp= .15:DT= 1.00]
2940
        050:0029-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2941
          ADD HYD 04:PR-R-BBP-3 2.40 .324 No_date 12:05 52.67 n/a + 05:PR-CL-400- 2.20 .393 No_date 12:03 59.49 n/a [DT= 1.00] SUM= 09:TOT 4.60 .710 No_date 12:04 55.93 n/a
2942
2943
2944
2945
        050:0030-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
        ADD HYD 01:TOT 12.40 1.171 No_date 12:14 54.96 n/a
+ 09:TOT 4.60 .710 No_date 12:04 55.93 n/a
+ 10:TOT 228.20 5.418 No_date 12:43 49.69 n/a
[DT= 1.00] SUM= 07:TOT 245.20 6.370 No_date 12:30 50.07 n/a
2946
2947
2948
2949
2950
       050:0031-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ROUTE CHANNEL -> 07:TOT 245.20 6.370 No_date 12:30 50.07 n/a [RDT= 1.00] out<- 01:to PR-R-BB 245.20 5.814 No_date 12:51 50.07 n/a
2951
2952
             [L/S/n=895./1.000/.070]
2954
             \{Vmax = 1.016:Dmax = 2.281\}
2955
        050:0032-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            CALIB NASHYD 02:PR-CL-400- 9.60 .656 No_date 12:27 52.67 .457
2956
2957
              [CN= 71.0: N= 3.00]
             [Tp= .54:DT= 1.00]
2958
        050:0033-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2959
            2960
2961
2962
        050:0034-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2963
            ADD HYD 02:TOT 254.80 6.346 No_date 12:48 50.17 n/a + 08:TOT 15.90 1.457 No_date 12:17 55.15 n/a [DT= 1.00] SUM= 06:TOT 270.70 7.202 No_date 12:41 50.46 n/a
        ADD HYD
2964
2965
2966
       2967
```

```
2968
      050:0035-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2969
          CALIB NASHYD 02:PR-R-BBP-9 6.60 .570 No_date 12:19 54.33 .472
2970
2971
           [CN= 72.0: N= 3.00]
2972
           [Tp= .41:DT= 1.00]
2973
       050:0036-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 01:PR-R-10IC- 4.70 .315 No_date 12:12 34.69 .301
2974
2975
           [CN=59.0: N=3.00]
           [Tp = .29:DT = 1.00]
2976
       050:0037-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2977
          CALIB STANDHYD 02:PR-CL-BBP- 2.30 .394 No_date 11:55 55.63 .483
           [XIMP=.35:TIMP=.35]
2979
2980
           [LOSS= 2 :CN= 51.0]
           [Pervious area: IAper=24.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 124.:MNI=.015:SCI= .0]
2981
2982
       050:0038-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2983
          ADD HYD 01:PR-R-10IC- 4.70 .315 No_date 12:12 34.69 n/a
+ 02:PR-CL-BBP- 2.30 .394 No_date 11:55 55.63 n/a
[DT= 1.00] SUM= 03:TOT 7.00 .572 No_date 12:00 41.57 n/a
2984
2985
2986
       050:0039-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2987
          CALIB NASHYD 04:PR-R-10IC- 1.30 .110 No_date 12:09 38.86 .337
2988
2989
           [CN= 62.0: N= 3.00]
           [Tp= .25:DT= 1.00]
2990
       050:0040-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2991
          ADD HYD 03:TOT 7.00 .572 No_date 12:00 41.57 n/a + 04:PR-R-10IC- 1.30 .110 No_date 12:09 38.86 n/a [DT= 1.00] SUM= 05:TOT 8.30 .659 No_date 12:01 41.15 n/a
2992
2993
2994
      050:0041-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2995
          CALIB STANDHYD 06:PR-R-10IC- 2.70 .474 No_date 11:56 57.33 .498
2996
2997
          [XIMP=.30:TIMP=.30]
           [LOSS= 2 :CN= 58.0]
2998
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
2999
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 134.:MNI=.015:SCI= .0]
       050:0042-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3001
       ADD HYD 05:TOT 8.30 .659 No_date 12:01 41.15 n/a + 06:PR-R-10IC- 2.70 .474 No_date 11:56 57.33 n/a [DT= 1.00] SUM= 07:TOT 11.00 1.112 No_date 12:00 45.12 n/a 050:0043------ID:NHYD-------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-COMPUTE VOLUME 07:TOT 11.00 1.112 No_date 12:00 45.12 n/a {ST= .122 ha.m to control at .400 (cms)}
3002
3003
3004
3005
3006
3007
      3008
      3009
      050:0044-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3010
          CALIB NASHYD 01:PR-R-10IC- 1.40 .129 No_date 12:11 46.30 .402
3011
3012
           [CN = 67.0: N = 3.00]
3013
           [Tp= .29:DT= 1.00]
       050:0045-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3014
          CALIB STANDHYD 02:PR-R-10IC- 3.10 .625 No_date 11:56 64.75 .562
3015
3016
           [XIMP=.36:TIMP=.36]
3017
           [LOSS= 2 :CN= 61.0]
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
3018
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
3019
3020
       050:0046-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       3021
3022
3023
3024
          COMPUTE VOLUME 03:TOT 4.50 .687 No_date 11:56 59.01 n/a {ST= .082 ha.m to control at .150 (cms)}
3025
3026
      3027
      3028
     050:0048-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3029
          CALIB NASHYD 01:PR-R-C4IC- 13.40 .665 No_date 12:26 37.50 .325
3030
           [CN= 61.0: N= 3.00]
3031
           [Tp= .50:DT= 1.00]
3032
3033 050:0049-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
       CALIB STANDHYD 02:PR-CL-BBP- 3.00 .788 No_date 11:55 80.35 .697
3034
3035
          [XIMP=.52:TIMP=.52]
           [LOSS= 2 :CN= 66.0]
```

```
[Pervious area: IAper=13.10:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
3037
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
3038
       050:0050------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ADD HYD 01:PR-R-C4IC- 13.40 .665 No_date 12:26 37.50 n/a
+ 02:PR-CL-BBP- 3.00 .788 No_date 11:55 80.35 n/a
[DT= 1.00] SUM= 03:TOT 16.40 .992 No_date 12:00 45.33 n/a
3039
3040
3041
3042
        050:0051-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3043
           CALIB STANDHYD 04:PR-R-C4IC- 2.80 .473 No_date 11:56 55.73 .484
3044
            [XIMP=.28:TIMP=.28]
3045
             [LOSS= 2 :CN= 58.0]
3046
             [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
3047
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 137.:MNI=.015:SCI= .0]
3048
        050:0052-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3049
           CALIB STANDHYD 05:PR-R-C4IC- 1.60 .291 No_date 11:55 57.33 .498
3050
3051
            [XIMP=.30:TIMP=.30]
3052
             [LOSS= 2 :CN= 58.0]
             [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 103.:MNI=.015:SCI= .0]
3053
3054
        050:0053-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3055
           ADD HYD 03:TOT 16.40 .992 No_date 12:00 45.33 n/a + 04:PR-R-C4IC- 2.80 .473 No_date 11:56 55.73 n/a + 05:PR-R-C4IC- 1.60 .291 No_date 11:55 57.33 n/a [DT= 1.00] SUM= 06:TOT 20.80 1.729 No_date 12:00 47.66 n/a
3056
        ADD HYD
3057
3058
3059
     050:0054-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3060
           COMPUTE VOLUME 06:TOT 20.80 1.729 No_date 12:00 47.66 n/a {ST= .096 ha.m to control at 1.000 (cms)}
3061
3062
       3063
3064
       050:0055-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3065
           CALIB NASHYD 01:PR-R-C4IC- .40 .060 No_date 12:01 43.24 .375
3066
3067
            [CN=65.0: N=3.00]
3068
            [Tp= .10:DT= 1.00]
        050:0056-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3069
           CALIB NASHYD 02:PR-R-C4IC- 1.30 .101 No_date 12:11 38.86 .337
3070
3071
            [CN= 62.0: N= 3.00]
3072
            [Tp= .28:DT= 1.00]
3073
        050:0057-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 01:PR-R-C4IC- .40 .060 No_date 12:01 43.24 n/a + 02:PR-R-C4IC- 1.30 .101 No_date 12:11 38.86 n/a [DT= 1.00] SUM= 03:TOT 1.70 .142 No_date 12:04 39.89 n/a
3074
3075
3076
       050:0058------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB STANDHYD 04:PR-R-C4IC- 3.10 .609 No_date 11:56 62.91 .546
3077
3078
            [XIMP=.37:TIMP=.37]
3079
3080
             [LOSS= 2 :CN= 58.0]
3081
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
3082
3083
        050:0059-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 03:TOT 1.70 .142 No_date 12:04 39.89 n/a + 04:PR-R-C4IC- 3.10 .609 No_date 11:56 62.91 n/a [DT= 1.00] SUM= 05:TOT 4.80 .709 No_date 11:56 54.76 n/a
3084
3085
3086
3087
       050:0060-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           COMPUTE VOLUME 05:TOT 4.80 .709 No_date 11:56 54.76 n/a {ST= .095 ha.m to control at .100 (cms)}
3088
3089
       3090
3091
       050:0061-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3092
           CALIB STANDHYD 01:PR-R-2CON- 1.60 .323 No_date 12:00 63.47 .551
3093
3094
             [XIMP=.20:TIMP=.20]
3095
             [LOSS= 2 :CN= 70.0]
             [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 210.:MNI=.015:SCI= .0]
3096
3097
        050:0062-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3098
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .582 No_date 11:59 63.20 .549
3099
            [XIMP=.30:TIMP=.30]
3100
             [LOSS= 2 :CN= 64.0]
3101
3102
            [Pervious area: IAper=14.30:SLPP=****:LGP= 30.:MNP=.350:SCP=
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 240.:MNI=.015:SCI= .0]
3103
       050:0063-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3104
           ADD HYD 01:PR-R-2CON- 1.60 .323 No_date 12:00 63.47 n/a
```

```
+ 02:PR-CL-BBP- 3.00 .582 No_date 11:59 63.20 n/a [DT= 1.00] SUM= 03:TOT 4.60 .904 No_date 12:00 63.29 n/a
3106
3107
       050:0064-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3108
          CALIB STANDHYD 04:PR-R-2CON- 3.00 .732 No_date 11:56 74.66 .648
3109
            [XIMP=.38:TIMP=.38]
3110
3111
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=***:LGP= 30.:MNP=.350:SCP=
3112
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 163.:MNI=.015:SCI=
3113
       050:0065-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3114
       3115
3116
3117
3118
           COMPUTE VOLUME 05:TOT 7.60 1.618 No_date 11:57 67.78 n/a {ST= .117 ha.m to control at .600 (cms)}
3119
3120
      3121
      3122
     050:0067-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3123
          CALIB NASHYD 01:PR-R-2CON- 28.00 .641 No_date 13:31 37.50 .325
3124
3125
           [CN= 61.0: N= 3.00]
            [Tp= 1.39:DT= 1.00]
3126
3127
       050:0068-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 02:PR-CL-BBP- 3.00 .850 No_date 11:56 85.65 .743
3128
           [XIMP=.45:TIMP=.45]
3129
           [LOSS= 2 :CN= 77.0]
3130
           [Pervious area: IAper= 7.60:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
3131
3132
3133
       050:0069-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 01:PR-R-2CON- 28.00 .641 No_date 13:31 37.50 n/a
+ 02:PR-CL-BBP- 3.00 .850 No_date 11:56 85.65 n/a
[DT= 1.00] SUM= 03:TOT 31.00 .911 No_date 11:56 42.16 n/a
3134
3135
3136
       050:0070-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3137
          CALIB STANDHYD 04:PR-R-2CON- 1.50 .397 No_date 11:55 78.45 .681
           [XIMP=.28:TIMP=.28]
3139
3140
           [LOSS= 2 :CN= 78.0]
           [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 100.:MNI=.015:SCI= .0]
3141
3142
       050:0071-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3143
          ADD HYD 03:TOT 31.00 .911 No_date 11:56 42.16 n/a + 04:PR-R-2CON- 1.50 .397 No_date 11:55 78.45 n/a [DT= 1.00] SUM= 05:TOT 32.50 1.303 No_date 11:56 43.83 n/a
3144
3145
3146
       050:0072-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3147
          CALIB STANDHYD 06:PR-R-2CON- 3.00 .831 No_date 11:56 84.24 .731
3148
3149
           [XIMP=.40:TIMP=.40]
3150
            [LOSS= 2 :CN= 78.0]
           [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
3151
3152
       050:0073-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3153
       3154
3155
3156
3157
          COMPUTE VOLUME 07:TOT 35.50 2.134 No_date 11:56 47.25 n/a {ST= .111 ha.m to control at 1.100 (cms)}
3158
3159
      3160
3161
      050:0075-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3162
           CALIB NASHYD 01:PR-R-404-4 3.50 .204 No_date 12:19 37.50 .325
3163
3164
            [CN= 61.0: N= 3.00]
            [Tp= .40:DT= 1.00]
3165
3166
       050:0076-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 02:PR-R-404-5 5.90 .212 No_date 12:45 37.50 .325
3167
           [CN= 61.0: N= 3.00]
3168
            [Tp= .77:DT= 1.00]
3169
       050:0077-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3170
           ADD HYD 01:PR-R-404-4 3.50 .204 No_date 12:19 37.50 n/a + 02:PR-R-404-5 5.90 .212 No_date 12:45 37.50 n/a [DT= 1.00] SUM= 03:TOT 9.40 .380 No_date 12:28 37.50 n/a
3171
3172
3173
      050:0078-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3174
```

```
CALIB NASHYD 04:PR-R-404-6 3.70 .258 No_date 12:15 40.33 .350
3175
3176
         [CN=63.0: N=3.00]
3177
          [Tp= .35:DT= 1.00]
3178 050:0079-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     ADD HYD 03:TOT 9.40 .380 No_date 12:28 37.50 n/a + 04:PR-R-404-6 3.70 .258 No_date 12:15 40.33 n/a [DT= 1.00] SUM= 09:TOT 13.10 .616 No_date 12:21 38.30 n/a
3179
3180
3181
3182 050:0080-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
     COMPUTE VOLUME 09:TOT 13.10 .616 No_date 12:21 38.30 n/a {ST= .090 ha.m to control at .400 (cms)}
3183
3184
3187 050:0081-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 10:PR-R-404-7 6.50 .265 No_date 12:36 37.50 .325
3188
3189
          [CN= 61.0: N= 3.00]
3190
          [Tp= .65:DT= 1.00]
3191
     050:0082-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         COMPUTE VOLUME 10:PR-R-404-7 6.50 .265 No_date 12:36 37.50 n/a {ST= .087 ha.m to control at .100 (cms)}
3192
3193
3196 050:0083-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 01:PR-R-404-1 29.30 .889 No_date 12:55 36.11 .313
3197
3198
          [CN= 60.0: N= 3.00]
          [Tp= .91:DT= 1.00]
3199
3200 050:0084-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       CALIB NASHYD 02:PR-R-404-1 7.30 .408 No_date 12:19 36.11 .313
3201
3202
          [CN = 60.0: N = 3.00]
3203
          [Tp= .40:DT= 1.00]
3204 050:0085-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 03:PR-CL-404- 2.20 .121 No_date 12:26 41.76 .363
3205
         [CN= 64.0: N= 3.00]
3206
3207
          [Tp = .51:DT = 1.00]
      050:0086-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3208
     ADD HYD 01:PR-R-404-1 29.30 .889 No_date 12:55 36.11 n/a
+ 02:PR-R-404-1 7.30 .408 No_date 12:19 36.11 n/a
+ 03:PR-CL-404- 2.20 .121 No_date 12:26 41.76 n/a
[DT= 1.00] SUM= 10:TOT 38.80 1.248 No_date 12:38 36.43 n/a
3209
3210
3211
3212
3217 050:0087-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 01:PR-R-BBP-5 2.20 .204 No_date 12:16 54.33 .472
3218
          [CN= 72.0: N= 3.00]
3219
3220
          [Tp= .37:DT= 1.00]
     050:0088-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3221
      CALIB NASHYD 02:PR-R-BBP-6 542.60 4.397 No_date 17:41 33.38 .290
3222
3223
          [CN= 58.0: N= 3.00]
          [Tp= 4.60:DT= 1.00]
3224
3225
     050:0089-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 03:PR-R-BBP-6 5.60 .409 No_date 12:23 51.04 .443
3226
3227
          [CN= 70.0: N= 3.00]
          [Tp= .47:DT= 1.00]
3228
3229
      050:0090-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
     ADD HYD 01:PR-R-BBP-5 2.20 .204 No_date 12:16 54.33 n/a + 02:PR-R-BBP-6 542.60 4.397 No_date 17:41 33.38 n/a + 03:PR-R-BBP-6 5.60 .409 No_date 12:23 51.04 n/a [DT= 1.00] SUM= 04:TOT 550.40 4.433 No_date 17:40 33.64 n/a
3230
3231
3232
3233
      050:0091------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:PR-R-BBP-7 2.40 .299 No_date 12:08 54.33 .472
3234
3235
          [CN=72.0: N=3.00]
3236
          [Tp= .24:DT= 1.00]
3237
      050:0092-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3238
        CALIB NASHYD 02:PR-R-BBP-8 81.70 1.000 No_date 14:58 32.04 .278
3239
3240
         [CN= 57.0: N= 3.00]
          [Tp= 2.50:DT= 1.00]
3241
      050:0093-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3242
        CALIB NASHYD 03:PR-R-BBP-8 3.70 .258 No_date 12:25 51.04 .443
```

```
[CN= 70.0: N= 3.00]
3244
3245
           [Tp = .50:DT = 1.00]
       050:0094------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ADD HYD 02:PR-R-BBP-8 81.70 1.000 No_date 14:58 32.04 n/a
+ 03:PR-R-BBP-8 3.70 .258 No_date 12:25 51.04 n/a
[DT= 1.00] SUM= 04:TOT 85.40 1.030 No_date 14:55 32.87 n/a
3246
3247
3248
3249
       050:0095-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3250
          CALIB STANDHYD 05:PR-R-10IC- 3.40 .774 No_date 11:55 71.69 .622
3251
           [XIMP=.48:TIMP=.48]
3252
            [LOSS= 2 :CN= 58.0]
3253
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
3254
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 151.:MNI=.015:SCI= .0]
3255
      3256
      3257
      050:0096-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3258
          CALIB NASHYD 08:PR-R-10IC- 1.40 .129 No_date 12:11 46.30 .402
3259
3260
            [CN= 67.0: N= 3.00]
            [Tp= .29:DT= 1.00]
3261
       050:0097-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3262
          CALIB STANDHYD 09:PR-R-10IC- 3.10 .625 No_date 11:56 64.75 .562
3263
3264
           [XIMP=.36:TIMP=.36]
3265
           [LOSS= 2 :CN= 61.0]
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
3266
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
3267
       050:0098-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3268
          ADD HYD 08:PR-R-10IC- 1.40 .129 No_date 12:11 46.30 n/a + 09:PR-R-10IC- 3.10 .625 No_date 11:56 64.75 n/a [DT= 1.00] SUM= 10:TOT 4.50 .687 No_date 11:56 59.01 n/a
3269
3270
3271
       050:0099-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3272
          ROUTE CHANNEL -> 10:TOT 4.50 .687 No_date 11:56 59.01 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.50 .324 No_date 12:06 59.01 n/a
3273
3274
3275
            [L/S/n=1200./1.000/.070]
3276
           \{Vmax = .730:Dmax = .694\}
       050:0100-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3277
          CALIB NASHYD 02:PR-CL-BBP- 75.80 2.532 No_date 13:15 47.82 .415
3278
3279
           [CN= 68.0: N= 3.00]
3280
            [Tp= 1.21:DT= 1.00]
3281
       050:0101-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 01:to PR-CL-B 4.50 .324 No_date 12:06 59.01 n/a + 02:PR-CL-BBP- 75.80 2.532 No_date 13:15 47.82 n/a [DT= 1.00] SUM= 03:TOT 80.30 2.652 No_date 13:12 48.45 n/a
3282
3283
3284
       050:0102-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3285
          CALIB STANDHYD 04:PR-R-C4IC- 2.50 .640 No_date 11:55 77.28 .671
3286
3287
           [XIMP=.55:TIMP=.55]
3288
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 129.:MNI=.015:SCI=
3289
3290
       3291
3292
3293
            [CN= 72.0: N= 3.00]
3294
            [Tp = .71:DT = 1.00]
      3295
3296
     050:0104-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3297
          CALIB NASHYD 07:PR-R-C4IC- .40 .060 No_date 12:01 43.24 .375
3298
3299
           [CN=65.0: N=3.00]
3300
           [Tp= .10:DT= 1.00]
       050:0105-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3301
          CALIB NASHYD 08:PR-R-C4IC- 1.30 .101 No_date 12:11 38.86 .337
3302
3303
            [CN= 62.0: N= 3.00]
            [Tp= .28:DT= 1.00]
3304
       050:0106-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3305
          CALIB STANDHYD 09:PR-R-C4IC- 3.10 .609 No_date 11:56 62.91 .546
3306
3307
           [XIMP=.37:TIMP=.37]
3308
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
3309
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
3310
       050:0107-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3311
          ADD HYD 07:PR-R-C4IC- .40 .060 No_date 12:01 43.24 n/a
3312
```

```
+ 08:PR-R-C4IC- 1.30 .101 No_date 12:11 38.86 n/a
+ 09:PR-R-C4IC- 3.10 .609 No_date 11:56 62.91 n/a
[DT= 1.00] SUM= 10:TOT 4.80 .709 No_date 11:56 54.76 n/a
3314
3315
       050:0108------ID:NHYD-------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ROUTE CHANNEL -> 10:TOT 4.80 .709 No_date 11:56 54.76 n/a
[RDT= 1.00] out<- 01:to PR-CL-B 4.80 .494 No_date 12:03 54.76 n/a
3316
3317
3318
            [L/S/n=580./1.000/.070]
3319
3320
            \{Vmax = .735:Dmax = .707\}
       050:0109-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3321
           CALIB NASHYD 02:PR-CL-BBP- 22.10 .985 No_date 12:38 41.76 .363
3322
3323
            [CN= 64.0: N= 3.00]
            [Tp= .68:DT= 1.00]
3324
        050:0110-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3325
           ADD HYD 01:to PR-CL-B 4.80 .494 No_date 12:03 54.76 n/a + 02:PR-CL-BBP- 22.10 .985 No_date 12:38 41.76 n/a [DT= 1.00] SUM= 03:TOT 26.90 1.198 No_date 12:31 44.08 n/a
3326
3327
3328
      3329
      3330
    050:0111-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3331
           CALIB NASHYD 01:PR-R-BST-1 2.20 .301 No_date 12:07 57.79 .502
3332
            [CN= 74.0: N= 3.00]
3333
3334
            [Tp= .23:DT= 1.00]
3335
       050:0112-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 02:PR-CL-BBP- 2.00 .530 No_date 11:55 79.63 .691
3336
3337
            [XIMP=.46:TIMP=.46]
3338
            [LOSS= 2 :CN= 70.0]
3339
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI=
3340
       050:0113-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3341
       3342
3343
3344
3345
           CALIB STANDHYD 04:PR-R-BST-2 2.00 .500 No_date 11:56 75.90 .659
3346
3347
            [XIMP=.40:TIMP=.40]
3348
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI= .0]
3349
3350
3351
       050:0115-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 03:TOT 4.20 .728 No_date 12:00 68.19 n/a + 04:PR-R-BST-2 2.00 .500 No_date 11:56 75.90 n/a [DT= 1.00] SUM= 05:TOT 6.20 1.206 No_date 11:56 70.68 n/a
3352
3353
3354
       050:0116-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3355
           CALIB NASHYD 01:PR-R-BST-3 3.60 .262 No_date 12:26 54.33 .472
3356
            [CN=72.0: N=3.00]
3357
3358
            [Tp = .52:DT = 1.00]
3359
       050:0117-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 02:PR-CL-BBP- 2.10 .568 No_date 11:55 80.88 .702
3360
3361
            [XIMP=.48:TIMP=.48]
            [LOSS= 2 :CN= 70.0]
3362
            [Pervious area: IAper=10.90:SLPP=***:LGP= 40.:MNP=.350:SCP=
3363
3364
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI=
3365
       050:0118-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 01:PR-R-BST-3 3.60 .262 No_date 12:26 54.33 n/a + 02:PR-CL-BBP- 2.10 .568 No_date 11:55 80.88 n/a [DT= 1.00] SUM= 03:TOT 5.70 .646 No_date 11:56 64.11 n/a
3366
3367
3368
3369
        050:0119-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 04:PR-R-BST-2 2.00 .501 No_date 11:56 75.90 .659
3370
3371
             [XIMP=.40:TIMP=.40]
3372
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI= .0]
3373
3374
       050:0120-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3375
            DD HYD 03:TOT 5.70 .646 No_date 11:56 64.11 n/a + 04:PR-R-BST-2 2.00 .501 No_date 11:56 67.17 n/a [DT= 1.00] SUM= 05:TOT 7.70 1.147 No_date 11:56 67.17 n/a
3376
3377
      3379
      3380
       050:0121-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3381
```

```
CALIB NASHYD
                            01:PR-R-2CON- 243.60 4.593 No_date 14:36 44.75 .388
3382
3383
           [CN= 66.0: N= 3.00]
3384
            [Tp= 2.31:DT= 1.00]
       050:0122------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:PR-CL-BBP- 37.00 1.339 No_date 12:50 40.33 .350
3385
3386
3387
            [CN= 63.0: N= 3.00]
3388
            [Tp= .85:DT= 1.00]
       050:0123-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3389
           CALIB NASHYD 03:PR-R-LST-1 40.20 1.149 No_date 13:05 37.50 .325
3390
3391
            [CN= 61.0: N= 3.00]
            [Tp= 1.04:DT= 1.00]
       050:0124-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3393
           CALIB STANDHYD 04:PR-CL-BBP- 1.80 .417 No_date 11:55 71.56 .621
3394
3395
            [XIMP=.45:TIMP=.45]
3396
            [LOSS= 2 :CN= 61.0]
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 110.:MNI=.015:SCI= .0]
3397
3398
       050:0125-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3399
           ADD HYD 03:PR-R-LST-1 40.20 1.149 No_date 13:05 37.50 n/a
+ 04:PR-CL-BBP- 1.80 .417 No_date 11:55 71.56 n/a
[DT= 1.00] SUM= 05:TOT 42.00 1.176 No_date 13:04 38.96 n/a
3400
3401
3402
3403
       050:0126-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 01:PR-R-LST-2 8.80 .366 No_date 12:33 36.11 .313
3404
3405
            [CN=60.0: N=3.00]
3406
            [Tp = .60:DT = 1.00]
3407
       050:0127-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 02:PR-CL-BBP- 1.20 .272 No_date 11:54 68.54 .595
3408
            [XIMP=.41:TIMP=.41]
3409
3410
            [LOSS= 2 :CN= 61.0]
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
3411
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 89.:MNI=.015:SCI=
3412
       050:0128-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3413
           ADD HYD 01:PR-R-LST-2 8.80 .366 No_date 12:33 36.11 n/a + 02:PR-CL-BBP- 1.20 .272 No_date 11:54 68.54 n/a [DT= 1.00] SUM= 03:TOT 10.00 .394 No_date 12:31 40.00 n/a
3415
3416
3417
       050:0129-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB STANDHYD 04:PR-R-LST-3 1.10 .233 No_date 11:54 65.31 .567
3418
3419
            [XIMP=.40:TIMP=.40]
3420
            [LOSS= 2 :CN= 58.0]
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 86.:MNI=.015:SCI= .0]
3421
3422
       050:0130-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3423
            ADD HYD 03:TOT 10.00 .394 No_date 12:31 40.00 n/a + 04:PR-R-LST-3 1.10 .233 No_date 11:54 65.31 n/a [DT= 1.00] SUM= 05:TOT 11.10 .578 No_date 11:55 42.51 n/a
3424
3425
3426
       050:0131-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3427
           CALIB NASHYD 01:PR-CL-BBP- 22.00 1.054 No_date 12:36 43.24 .375
3428
3429
            [CN=65.0: N=3.00]
3430
            [Tp= .65:DT= 1.00]
      3431
3432
     050:0132-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3433
           CALIB NASHYD 01:PR-R-404-3 118.50 2.119 No_date 14:17 38.86 .337
3434
3435
            [CN= 62.0: N= 3.00]
            [Tp= 2.02:DT= 1.00]
3437
       050:0133-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 02:PR-R-404-2 .90 .064 No_date 12:13 38.86 .337
3438
3439
            [CN= 62.0: N= 3.00]
3440
            [Tp= .32:DT= 1.00]
       050:0134-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3441
           ADD HYD 01:PR-R-404-3 118.50 2.119 No_date 14:17 38.86 n/a + 02:PR-R-404-2 .90 .064 No_date 12:13 38.86 n/a [DT= 1.00] SUM= 03:TOT 119.40 2.126 No_date 14:17 38.86 n/a
3442
3443
3444
       050:0135-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3445
           CALIB NASHYD 04:PR-R-404-1 1.70 .092 No_date 12:24 38.86 .337
3446
            [CN= 62.0: N= 3.00]
            [Tp= .47:DT= 1.00]
3448
       050:0136-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3449
           ADD HYD 03:TOT 119.40 2.126 No_date 14:17 38.86 n/a
```

```
+ 04:PR-R-404-1 1.70
                                        .092 No_date 12:24 38.86 n/a
3451
        [DT= 1.00] SUM= 05:TOT 121.10 2.140 No_date 14:16 38.86 n/a
3452
   050:0137-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3453
        CALIB NASHYD 08:PR-R-404-8 2.40 .124 No_date 12:26 38.86 .337
3454
3455
         [CN= 62.0: N= 3.00]
3456
         [Tp= .50:DT= 1.00]
3457
    050:0138-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
        CALIB NASHYD 09:PR-R-404-8 2.60 .143 No_date 12:26 41.76 .363
3458
3459
         [CN = 64.0: N = 3.00]
         [Tp= .51:DT= 1.00]
3460
    050:0139-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
3461
        CALIB NASHYD 10:PR-R-404-9 1.80 .148 No_date 12:09 38.86 .337
3462
3463
         [CN= 62.0: N= 3.00]
3464
         [Tp= .26:DT= 1.00]
     3465
3466
     ** END OF RUN : 99
3467
3468
3469
3470
3471
3472
3473
3474
     RUN: COMMAND#
3475
     100:0001-----
3476
      START
         [TZERO =
3477
                 .00 hrs on
                              0]
         [METOUT= 2 (1=imperial, 2=metric output)]
[NSTORM= 1]
3478
3479
3480
         [NRUN = 100]
3481 #***********************
3482 # Project Name: BRADFORD BYPASS
                                           JOB NUMBER: [60636190] *
3483 # Date : Jan. 20, 2023
    # Modeller : [jrm]
# Company : AECOM
3484
3485
3486
    # License # : 1281254
3487
3488
3489
      Notes: This hydrologic model was developed for the BBP ultimate conditions *
            A new Berm is proposed to isolate flows draining to P-SWM P-2 and
3490
3491
           the tributary of Penville Creek.
3492
     #
3493
               PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
                     FOR PROPOSED SWM PONDS (UNCONTROLLED)
3494
3495
                       Proposed Drainage Conditions
3496
                  2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
3497
    #**********************
3498
    #**********************
3499
    100:0002-----
3500
3501
      READ STORM
3502
         Filename = STORM.001
3503
         Comment =
3504
         [SDT= 6.00:SDUR= 24.00:PTOT= 124.80]
    3505
3506
   3507
    100:0003------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
        CALIB NASHYD 08:PR-R-BBP-1 14.50 1.191 No_date 12:28 63.61 .510
3508
3509
         [CN= 73.0: N= 3.00]
         [Tp= .55:DT= 1.00]
3510
     100:0004-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3511
        COMPUTE VOLUME 08:PR-R-BBP-1 14.50 1.191 No_date 12:28 63.61 n/a {ST= .288 ha.m to control at .500 (cms)}
3512
3513
     3514
    3515
    100:0005------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3516
        CALIB NASHYD 01:PR-R-BBP-9 5.40 .561 No_date 12:16 61.78 .495
3517
         [CN= 72.0: N= 3.00]
3518
3519
         [Tp= .38:DT= 1.00]
```

```
100:0006-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3520
3521
           CALIB NASHYD 02:PR-R-BBP-9 6.60 .661 No_date 12:18 61.70 .494
3522
            [CN= 72.0: N= 3.00]
3523
            [Tp= .40:DT= 1.00]
3524
       100:0007-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           ADD HYD 01:PR-R-BBP-9 5.40 .561 No_date 12:16 61.78 n/a + 02:PR-R-BBP-9 6.60 .661 No_date 12:18 61.70 n/a [DT= 1.00] SUM= 03:TOT 12.00 1.222 No_date 12:17 61.74 n/a
3525
3526
3527
       100:0008-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3528
           CALIB NASHYD 04:P-SWM P-2 3.90 .440 No_date 12:16 65.48 .525
3529
            [CN = 74.0: N = 3.00]
            [Tp = .37:DT = 1.00]
3531
       3532
3533
3534
3535
3536
3537
3538
3539
      100:0011------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3541
           CALIB NASHYD 01:EX-CL-400- 49.00 5.000 No_date 12:26 76.61 .614
3542
3543
            [CN= 79.0: N= 3.00]
            [Tp= .53:DT= 1.00]
3544
      100:0012------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ROUTE CHANNEL -> 01:EX-CL-400- 49.00 5.000 No_date 12:26 76.61 n/a
* [RDT= 1.00] out<- 02:to PR-CL-2 49.00 4.657 No_date 12:44 76.61 n/a
3545
3546
3547
           [L/S/n= 825./ .850/.070]
3548
            \{Vmax = .925:Dmax = 2.170\}
3549
       100:0013-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3550
           CALIB NASHYD 03:PR-R-BBP-1 8.80 .720 No_date 12:26 61.78 .495
3551
            [CN= 72.0: N= 3.00]
            [Tp= .53:DT= 1.00]
3553
       100:0014-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3554
           CALIB NASHYD 04:EX-CL-400- 1.30 .162 No_date 12:17 76.61 .614
3555
3556
            [CN = 79.0: N = 3.00]
3557
            [Tp= .40:DT= 1.00]
       100:0015-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3558
         CALIB STANDHYD 05:PR-R-BBP-1 1.30 .456 No_date 11:54 93.74 .751
3559
3560
           [XIMP=.55:TIMP=.55]
3561
            [LOSS= 2 :CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=****:LGP= 8.:MNP=.350:SCP= .0]
3562
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 93.:MNI=.015:SCI= .0]
3563
      100:0016-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3564
        ADD HYD 03:PR-R-BBP-1 8.80 .720 No_date 12:26 61.78 n/a

+ 04:EX-CL-400- 1.30 .162 No_date 12:17 76.61 n/a

+ 05:PR-R-BBP-1 1.30 .456 No_date 11:54 93.74 n/a

[DT= 1.00] SUM= 01:TOT 11.40 .920 No_date 12:24 67.12 n/a
3565
3566
3567
3568
       100:0017-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3569
           CALIB NASHYD 06:PR-CL-2 161.70 2.536 No_date 15:56 49.79 .399
3570
            [CN=65.0: N=3.00]
3571
            [Tp= 3.38:DT= 1.00]
3572
       100:0018-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3573
         ADD HYD 01:TOT 11.40 .920 No_date 12:24 67.12 n/a + 02:to PR-CL-2 49.00 4.657 No_date 12:44 76.61 n/a + 06:PR-CL-2 161.70 2.536 No_date 15:56 49.79 n/a [DT= 1.00] SUM= 07:TOT PR-CL- 222.10 6.075 No_date 12:44 56.60 n/a
3575
3576
3577
       100:0019-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3578
          ROUTE CHANNEL -> 07:TOT PR-CL- 222.10 6.075 No_date 12:44 56.60 n/a [RDT= 1.00] out<- 04:to PR-R-BB 222.10 5.969 No_date 12:46 56.60 n/a
3579
3580
            [L/S/n=230./.900/.070]
3581
            \{Vmax = .965:Dmax = 2.284\}
3582
       100:0020-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3583
           CALIB NASHYD 09:PR-R-BBP-4 6.10 .693 No_date 12:13 59.99 .481
3584
            [CN= 71.0: N= 3.00]
            [Tp= .32:DT= 1.00]
3586
       100:0021-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3587
           ADD HYD 04:to PR-R-BB 222.10 5.969 No_date 12:46 56.60 n/a
3588
```

```
+ 09:PR-R-BBP-4 6.10 .693 No_date 12:13 59.99 n/a [DT= 1.00] SUM= 10:TOT 228.20 6.264 No_date 12:45 56.69 n/a
3590
      100:0022------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 01:PR-CL-1 4.80 .541 No_date 12:16 65.48 .525
3591
3592
3593
            [CN= 74.0: N= 3.00]
3594
            [Tp= .37:DT= 1.00]
       100:0023-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3595
           CALIB NASHYD 02:PR-R-BBP-2 5.90 .584 No_date 12:17 59.99 .481
3596
            [CN= 71.0: N= 3.00]
3597
            [Tp= .39:DT= 1.00]
3598
       100:0024-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
           ADD HYD 01:PR-CL-1 4.80 .541 No_date 12:16 65.48 n/a
+ 02:PR-R-BBP-2 5.90 .584 No_date 12:17 59.99 n/a
[DT= 1.00] SUM= 09:TOT 10.70 1.124 No_date 12:16 62.45 n/a
3600
3601
3602
       3603
3604
            [CN= 72.0: N= 3.00]
3605
            [Tp= .23:DT= 1.00]
3606
       100:0026-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3607
           ADD HYD 03:EX-CL-400- 1.70 .250 No_date 12:07 62.41 n/a + 09:TOT 10.70 1.124 No_date 12:16 62.45 n/a [DT= 1.00] SUM= 01:TOT 12.40 1.335 No_date 12:14 62.45 n/a
3608
        ADD HYD
3609
3610
3611
       100:0027-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 04:PR-R-BBP-3 2.40 .370 No_date 12:05 59.99 .481
3612
3613
            [CN= 71.0: N= 3.00]
3614
            [Tp = .20:DT = 1.00]
       100:0028-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3615
           CALIB NASHYD 05:PR-CL-400- 2.20 .445 No_date 12:03 67.30 .539
3616
3617
            [CN= 75.0: N= 3.00]
            [Tp= .15:DT= 1.00]
3618
       100:0029-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3619
       ADD HYD 04:PR-R-BBP-3 2.40 .370 No_date 12:05 59.99 n/a + 05:PR-CL-400- 2.20 .445 No_date 12:03 67.30 n/a [DT= 1.00] SUM= 09:TOT 4.60 .807 No_date 12:04 63.49 n/a
3620
3621
3622
3623
       100:0030-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           ADD HYD 01:TOT 12.40 1.335 No_date 12:14 62.45 n/a + 09:TOT 4.60 .807 No_date 12:04 63.49 n/a + 10:TOT 228.20 6.264 No_date 12:45 56.69 n/a [DT= 1.00] SUM= 07:TOT 245.20 7.183 No_date 12:38 57.11 n/a
3624
3625
3626
3627
3628
       100:0031-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
       ROUTE CHANNEL -> 07:TOT 245.20 7.183 No_date 12:38 57.11 n/a

* [RDT= 1.00] out<- 01:to PR-R-BB 245.20 6.716 No_date 12:50 57.11 n/a
3629
3630
3631
            [L/S/n=895./1.000/.070]
3632
            \{Vmax = 1.043:Dmax = 2.355\}
3633
       100:0032-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 02:PR-CL-400- 9.60 .750 No_date 12:27 59.99 .481
3634
3635
            [CN= 71.0: N= 3.00]
3636
            [Tp = .54:DT = 1.00]
       3637
3638
3639
3640
3641
       100:0034-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           ADD HYD 02:TOT 254.80 7.320 No_date 12:48 57.22 n/a + 08:TOT 15.90 1.661 No_date 12:17 62.66 n/a [DT= 1.00] SUM= 06:TOT 270.70 8.263 No_date 12:42 57.54 n/a
3642
3644
3645
      3646
      100:0035-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3647
           CALIB NASHYD 02:PR-R-BBP-9 6.60 .650 No_date 12:18 61.78 .495
3648
            [CN= 72.0: N= 3.00]
3649
            [Tp= .41:DT= 1.00]
3650
       100:0036-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3651
           CALIB NASHYD 01:PR-R-10IC- 4.70 .371 No_date 12:11 40.44 .324
3652
            [CN= 59.0: N= 3.00]
3653
            [Tp= .29:DT= 1.00]
       100:0037-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3655
        CALIB STANDHYD 02:PR-CL-BBP- 2.30 .449 No_date 11:55 62.00 .497
3656
            [XIMP=.35:TIMP=.35]
3657
```

```
[LOSS= 2 :CN= 51.0]
3658
3659
            [Pervious area: IAper=24.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 124.:MNI=.015:SCI=
3660
                                                                            .01
       100:0038-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3661
           ADD HYD 01:PR-R-10IC- 4.70 .371 No_date 12:11 40.44 n/a + 02:PR-CL-BBP- 2.30 .449 No_date 11:55 62.00 n/a [DT= 1.00] SUM= 03:TOT 7.00 .661 No_date 12:00 47.53 n/a
3662
3663
3664
       100:0039-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3665
           CALIB NASHYD 04:PR-R-10IC- 1.30 .128 No_date 12:09 45.02 .361
3666
3667
            [CN= 62.0: N= 3.00]
            [Tp= .25:DT= 1.00]
       100:0040-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3669
           ADD HYD 03:TOT 7.00 .661 No_date 12:00 47.53 n/a + 04:PR-R-10IC- 1.30 .128 No_date 12:09 45.02 n/a [DT= 1.00] SUM= 05:TOT 8.30 .763 No_date 12:01 47.13 n/a
3670
3671
3672
       100:0041-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3673
           CALIB STANDHYD 06:PR-R-10IC- 2.70 .535 No_date 11:56 64.13 .514
3674
3675
            [XIMP=.30:TIMP=.30]
            [LOSS= 2 :CN= 58.0]
3676
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
3677
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 134.:MNI=.015:SCI= .0]
3678
3679
       100:0042-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           ADD HYD 05:TOT 8.30 .763 No_date 12:01 47.13 n/a + 06:PR-R-10IC- 2.70 .535 No_date 11:56 64.13 n/a [DT= 1.00] SUM= 07:TOT 11.00 1.276 No_date 12:00 51.31 n/a
3680
3681
3682
       3683
3684
3685
      3686
      3687
       100:0044-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3688
           CALIB NASHYD 01:PR-R-10IC- 1.40 .149 No_date 12:11 53.12 .426
3689
            [CN= 67.0: N= 3.00]
            [Tp= .29:DT= 1.00]
3691
       100:0045-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3692
           CALIB STANDHYD 02:PR-R-10IC- 3.10 .701 No_date 11:56 72.06 .577
3693
3694
            [XIMP=.36:TIMP=.36]
3695
            [LOSS= 2 :CN= 61.0]
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
3696
3697
       100:0046-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3698
           ADD HYD 01:PR-R-10IC- 1.40 .149 No_date 12:11 53.12 n/a + 02:PR-R-10IC- 3.10 .701 No_date 11:56 72.06 n/a [DT= 1.00] SUM= 03:TOT 4.50 .775 No_date 12:00 66.17 n/a
3699
3700
3701
       100:0047-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3702
           COMPUTE VOLUME 03:TOT 4.50 .775 No_date 12:00 66.17 n/a {ST= .097 ha.m to control at .150 (cms)}
3703
3704
3705
      3706
      100:0048-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3707
           CALIB NASHYD 01:PR-R-C4IC- 13.40 .778 No_date 12:26 43.52 .349
3708
            [CN= 61.0: N= 3.00]
3709
            [Tp= .50:DT= 1.00]
3710
       100:0049-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3711
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .886 No_date 11:55 88.54 .710
3712
3713
            [XIMP=.52:TIMP=.52]
3714
            [LOSS= 2 :CN= 66.0]
            [Pervious area: IAper=13.10:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
3715
3716
       100:0050-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3717
           ADD HYD 01:PR-R-C4IC- 13.40 .778 No_date 12:26 43.52 n/a + 02:PR-CL-BBP- 3.00 .886 No_date 11:55 88.54 n/a [DT= 1.00] SUM= 03:TOT 16.40 1.124 No_date 12:00 51.75 n/a
3718
3719
3720
       100:0051-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3721
           CALIB STANDHYD 04:PR-R-C4IC- 2.80 .536 No_date 11:56 62.46 .500
3722
3723
            [XIMP=.28:TIMP=.28]
3724
            [LOSS= 2 :CN= 58.0]
3725
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 137.:MNI=.015:SCI=
3726
                                                                             .0]
```

```
100:0052-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3727
3728
           CALIB STANDHYD 05:PR-R-C4IC- 1.60 .328 No_date 11:55 64.13 .514
3729
             [XIMP=.30:TIMP=.30]
3730
             [LOSS= 2 :CN= 58.0]
             [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
3731
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 103.:MNI=.015:SCI=
3732
        100:0053-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3733
           ADD HYD 03:TOT 16.40 1.124 No_date 12:00 51.75 n/a
+ 04:PR-R-C4IC- 2.80 .536 No_date 11:56 62.46 n/a
+ 05:PR-R-C4IC- 1.60 .328 No_date 11:55 64.13 n/a
[DT= 1.00] SUM= 06:TOT 20.80 1.959 No_date 12:00 54.15 n/a
3734
3735
3736
        100:0054-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3738
            COMPUTE VOLUME 06:TOT 20.80 1.959 No_date 12:00 54.15 n/a {ST= .174 ha.m to control at 1.000 (cms)}
3739
3740
3741
       3742
3743
       100:0055-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
            CALIB NASHYD 01:PR-R-C4IC- .40 .069 No_date 12:01 49.79 .399
3744
3745
             [CN=65.0: N=3.00]
3746
             [Tp = .10:DT = 1.00]
3747
        100:0056-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 02:PR-R-C4IC- 1.30 .118 No_date 12:11 45.02 .361
3748
3749
             [CN= 62.0: N= 3.00]
3750
             [Tp = .28:DT = 1.00]
        100:0057-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3751
           ADD HYD 01:PR-R-C4IC- .40 .069 No_date 12:01 49.79 n/a + 02:PR-R-C4IC- 1.30 .118 No_date 12:11 45.02 n/a [DT= 1.00] SUM= 03:TOT 1.70 .165 No_date 12:04 46.14 n/a
3752
3753
3754
        100:0058-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3755
           CALIB STANDHYD 04:PR-R-C4IC- 3.10 .682 No_date 11:56 70.00 .561
3756
3757
            [XIMP=.37:TIMP=.37]
3758
             [LOSS= 2 :CN= 58.0]
3759
             [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
3760
3761
        100:0059-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 03:TOT 1.70 .165 No_date 12:04 46.14 n/a + 04:PR-R-C4IC- 3.10 .682 No_date 11:56 70.00 n/a [DT= 1.00] SUM= 05:TOT 4.80 .799 No_date 11:56 61.55 n/a
3762
3763
3764
3765
        100:0060-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           COMPUTE VOLUME 05:TOT 4.80 .799 No_date 11:56 61.55 n/a {ST= .113 ha.m to control at .100 (cms)}
3766
3767
       3768
       3769
       100:0061------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 01:PR-R-2CON- 1.60 .369 No_date 11:58 71.15 .570
3770
3771
             [XIMP=.20:TIMP=.20]
3772
3773
             [LOSS= 2 :CN= 70.0]
             [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP=
3774
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 210.:MNI=.015:SCI=
3775
3776
        100:0062-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .657 No_date 11:58 70.57 .565
3777
3778
             [XIMP=.30:TIMP=.30]
             [LOSS= 2 :CN= 64.0]
3779
             [Pervious area: IAper=14.30:SLPP=****:LGP= 30.:MNP=.350:SCP=
3780
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 240.:MNI=.015:SCI= .0]
3781
3782
        100:0063-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 01:PR-R-2CON- 1.60 .369 No_date 11:58 71.15 n/a + 02:PR-CL-BBP- 3.00 .657 No_date 11:58 70.57 n/a [DT= 1.00] SUM= 03:TOT 4.60 1.026 No_date 11:58 70.77 n/a
3783
3784
3785
        100:0064------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 04:PR-R-2CON- 3.00 .818 No_date 11:56 82.77 .663
3786
3787
3788
            [XIMP=.38:TIMP=.38]
             [LOSS= 2 :CN= 70.0]
3789
             [Pervious area: IAper=10.90:SLPP=***:LGP= 30.:MNP=.350:SCP=
3790
                                                                                .0]
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 163.:MNI=.015:SCI= .0]
3791
3792
        100:0065-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           ADD HYD 03:TOT 4.60 1.026 No_date 11:58 70.77 n/a
+ 04:PR-R-2CON- 3.00 .818 No_date 11:56 82.77 n/a
[DT= 1.00] SUM= 05:TOT 7.60 1.830 No_date 11:57 75.51 n/a
3793
3794
3795
```

```
3796
      100:0066-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          COMPUTE VOLUME 05:TOT 7.60 1.830 No_date 11:57 75.51 n/a {ST= .141 ha.m to control at .600 (cms)}
3797
3798
3799
      3800
      100:0067-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3801
          CALIB NASHYD 01:PR-R-2CON- 28.00 .750 No_date 13:30 43.52 .349
3802
3803
           [CN= 61.0: N= 3.00]
3804
           [Tp= 1.39:DT= 1.00]
       100:0068-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3805
          CALIB STANDHYD 02:PR-CL-BBP- 3.00 .942 No_date 11:56 94.39 .756
3806
           [XIMP=.45:TIMP=.45]
3807
           [LOSS= 2 :CN= 77.0]
3808
           [Pervious area: IAper= 7.60:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
3809
3810
       100:0069-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3811
          ADD HYD 01:PR-R-2CON- 28.00 .750 No_date 13:30 43.52 n/a
+ 02:PR-CL-BBP- 3.00 .942 No_date 11:56 94.39 n/a
[DT= 1.00] SUM= 03:TOT 31.00 1.020 No_date 11:56 48.44 n/a
3812
3813
3814
       100:0070-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3815
          CALIB STANDHYD 04:PR-R-2CON- 1.50 .444 No_date 11:55 87.00 .697
3816
3817
           [XIMP=.28:TIMP=.28]
3818
           [LOSS= 2 :CN= 78.0]
           [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 100.:MNI=.015:SCI= .0]
3819
3820
       100:0071-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3821
          ADD HYD 03:TOT 31.00 1.020 No_date 11:56 48.44 n/a + 04:PR-R-2CON- 1.50 .444 No_date 11:55 87.00 n/a [DT= 1.00] SUM= 05:TOT 32.50 1.459 No_date 11:56 50.22 n/a
3822
3823
3824
       100:0072-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3825
          CALIB STANDHYD 06:PR-R-2CON- 3.00 .924 No_date 11:56 92.96 .745
3826
3827
           [XIMP=.40:TIMP=.40]
3828
           [LOSS= 2 :CN= 78.0]
           [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
3829
3830
3831
       100:0073-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ADD HYD 05:TOT 32.50 1.459 No_date 11:56 50.22 n/a + 06:PR-R-2CON- 3.00 .924 No_date 11:56 92.96 n/a [DT= 1.00] SUM= 07:TOT 35.50 2.383 No_date 11:56 53.83 n/a
3832
3833
3834
       3835
3836
3837
      3838
      3839
3840
      100:0075-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-R-404-4 3.50 .239 No_date 12:19 43.52 .349
3841
3842
           [CN= 61.0: N= 3.00]
3843
           [Tp = .40:DT = 1.00]
3844
       100:0076-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 02:PR-R-404-5 5.90 .248 No_date 12:45 43.52 .349
3845
3846
           [CN= 61.0: N= 3.00]
3847
           [Tp= .77:DT= 1.00]
       100:0077-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3848
          ADD HYD 01:PR-R-404-4 3.50 .239 No_date 12:19 43.52 n/a
+ 02:PR-R-404-5 5.90 .248 No_date 12:45 43.52 n/a
[DT= 1.00] SUM= 03:TOT 9.40 .445 No_date 12:28 43.52 n/a
3849
3850
3851
       100:0078-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3852
          CALIB NASHYD 04:PR-R-404-6 3.70 .300 No_date 12:15 46.62 .374
3853
3854
           [CN= 63.0: N= 3.00]
3855
           [Tp= .35:DT= 1.00]
       100:0079-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3856
          ADD HYD 03:TOT 9.40 .445 No_date 12:28 43.52 n/a + 04:PR-R-404-6 3.70 .300 No_date 12:15 46.62 n/a [DT= 1.00] SUM= 09:TOT 13.10 .721 No_date 12:21 44.39 n/a
3857
3858
3859
       3860
3861
3862
      3863
      3864
```

```
100:0081-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3865
          CALIB NASHYD 10:PR-R-404-7 6.50 .311 No_date 12:36 43.52 .349
3866
3867
          [CN= 61.0: N= 3.00]
3868
           [Tp= .65:DT= 1.00]
3869
      100:0082-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          COMPUTE VOLUME 10:PR-R-404-7 6.50 .311 No_date 12:36 43.52 n/a {ST= .111 ha.m to control at .100 (cms)}
3870
3871
      3872
     3873
      100:0083-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3874
          CALIB NASHYD 01:PR-R-404-1 29.30 1.043 No_date 12:55 41.99 .336
3875
3876
           [CN= 60.0: N= 3.00]
          [Tp= .91:DT= 1.00]
3877
      100:0084------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-CALIB NASHYD 02:PR-R-404-1 7.30 .479 No_date 12:19 41.99 .336
3878
3879
3880
           [CN= 60.0: N= 3.00]
           [Tp= .40:DT= 1.00]
3881
      100:0085-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3882
      CALIB NASHYD 03:PR-CL-404- 2.20 .141 No_date 12:26 48.19 .386
3883
          [CN= 64.0: N= 3.00]
3884
          [Tp= .51:DT= 1.00]
3885
3886
      100:0086-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 01:PR-R-404-1 29.30 1.043 No_date 12:55 41.99 n/a
+ 02:PR-R-404-1 7.30 .479 No_date 12:19 41.99 n/a
+ 03:PR-CL-404- 2.20 .141 No_date 12:26 48.19 n/a
[DT= 1.00] SUM= 10:TOT 38.80 1.465 No_date 12:37 42.34 n/a
3887
         ADD HYD
3888
3889
3890
      3891
     3892
     3893
     3894
     100:0087-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3895
         CALIB NASHYD 01:PR-R-BBP-5 2.20 .233 No_date 12:16 61.78 .495
3896
          [CN= 72.0: N= 3.00]
3898
          [Tp= .37:DT= 1.00]
      100:0088-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3899
         CALIB NASHYD 02:PR-R-BBP-6 542.60 5.166 No_date 17:38 38.99 .312
3900
3901
           [CN=58.0: N=3.00]
3902
           [Tp= 4.60:DT= 1.00]
3903
      100:0089-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 03:PR-R-BBP-6 5.60 .469 No_date 12:23 58.24 .467
3904
3905
          [CN= 70.0: N= 3.00]
          [Tp= .47:DT= 1.00]
3906
      100:0090-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3907
          ADD HYD 01:PR-R-BBP-5 2.20 .233 No_date 12:16 61.78 n/a + 02:PR-R-BBP-6 542.60 5.166 No_date 12:23 38.99 n/a + 03:PR-R-BBP-6 5.60 .469 No_date 12:23 58.24 n/a [DT= 1.00] SUM= 04:TOT 550.40 5.207 No_date 17:37 39.28 n/a
3908
3909
3910
3911
      100:0091------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:PR-R-BBP-7 2.40 .341 No_date 12:08 61.78 .495
3912
3913
           [CN= 72.0: N= 3.00]
3914
3915
           [Tp = .24:DT = 1.00]
3916
      100:0092-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 02:PR-R-BBP-8 81.70 1.181 No_date 14:56 37.52 .301
3917
3918
          [CN= 57.0: N= 3.00]
           [Tp= 2.50:DT= 1.00]
3920
      100:0093-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 03:PR-R-BBP-8 3.70 .296 No_date 12:25 58.24 .467
3921
3922
           [CN= 70.0: N= 3.00]
           [Tp= .50:DT= 1.00]
3923
       100:0094-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3924
         3925
3926
3927
      100:0095-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3928
         CALIB STANDHYD 05:PR-R-10IC- 3.40 .870 No_date 11:55 79.22 .635
3929
3930
          [XIMP=.48:TIMP=.48]
          [LOSS= 2 :CN= 58.0]
3931
3932
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 151.:MNI=.015:SCI=
3933
                                                                    .0]
```

```
3934
3935
    100:0096------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 08:PR-R-10IC- 1.40 .149 No_date 12:11 53.12 .426
3936
3937
3938
           [CN=67.0: N=3.00]
3939
           [Tp = .29:DT = 1.00]
       100:0097-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3940
          CALIB STANDHYD 09:PR-R-10IC- 3.10 .701 No_date 11:56 72.06 .577
3941
           [XIMP=.36:TIMP=.36]
3942
           [LOSS= 2 :CN= 61.0]
3943
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
3944
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
3945
3946
       100:0098-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 08:PR-R-10IC- 1.40 .149 No_date 12:11 53.12 n/a + 09:PR-R-10IC- 3.10 .701 No_date 11:56 72.06 n/a [DT= 1.00] SUM= 10:TOT 4.50 .775 No_date 12:00 66.17 n/a
3947
3948
3949
       100:0099-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3950
          ROUTE CHANNEL -> 10:TOT 4.50 .775 No_date 12:00 66.17 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.50 .373 No_date 12:06 66.17 n/a
3951
3952
3953
           [L/S/n = 1200./1.000/.070]
           \{Vmax = .752 : Dmax = .745\}
3954
       100:0100-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3955
          CALIB NASHYD 02:PR-CL-BBP- 75.80 2.916 No_date 13:14 54.76 .439
3956
3957
           [CN = 68.0: N = 3.00]
           [Tp= 1.21:DT= 1.00]
3958
       100:0101-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3959
          ADD HYD 01:to PR-CL-B 4.50 .373 No_date 12:06 66.17 n/a + 02:PR-CL-BBP- 75.80 2.916 No_date 13:14 54.76 n/a [DT= 1.00] SUM= 03:TOT 80.30 3.052 No_date 13:12 55.40 n/a
3960
3961
3962
       100:0102-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3963
          CALIB STANDHYD 04:PR-R-C4IC- 2.50 .708 No_date 11:55 85.08 .682
3964
3965
           [XIMP=.55:TIMP=.55]
           [LOSS= 2 :CN= 58.0]
3966
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
3967
3968
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 129.:MNI=.015:SCI= .0]
       100:0103-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3969
          CALIB NASHYD 05:PR-CL-BBP- 27.30 1.797 No_date 12:39 61.78 .495
3970
3971
           [CN= 72.0: N= 3.00]
3972
           [Tp = .71:DT = 1.00]
      3973
      3974
      100:0104-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3975
          CALIB NASHYD 07:PR-R-C4IC- .40 .069 No_date 12:01 49.79 .399
3976
3977
           [CN=65.0: N=3.00]
           [Tp= .10:DT= 1.00]
3978
3979
       100:0105-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 08:PR-R-C4IC- 1.30 .118 No_date 12:11 45.02 .361
3980
3981
           [CN= 62.0: N= 3.00]
3982
           [Tp = .28:DT = 1.00]
3983
       100:0106-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 09:PR-R-C4IC- 3.10 .682 No_date 11:56 70.00 .561
3984
3985
           [XIMP=.37:TIMP=.37]
3986
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
3987
                                                                       .0]
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
3989
       100:0107-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
      3990
3991
3992
3993
3994
          ROUTE CHANNEL -> 10:TOT 4.80 .799 No_date 11:56 61.55 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.80 .566 No_date 12:03 61.55 n/a
3995
3996
           [L/S/n= 580./1.000/.070]
3997
           \{Vmax = .759 : Dmax = .759\}
3998
       100:0109-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3999
          CALIB NASHYD 02:PR-CL-BBP- 22.10 1.145 No_date 12:38 48.19 .386
4000
           [CN= 64.0: N= 3.00]
4001
           [Tp= .68:DT= 1.00]
4002
```

```
100:0110-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4003
           4004
4005
4006
      4007
4008
      100:0111-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4009
           CALIB NASHYD 01:PR-R-BST-1 2.20 .341 No_date 12:07 65.48 .525
4010
4011
            [CN= 74.0: N= 3.00]
            [Tp= .23:DT= 1.00]
4012
4013
       100:0112-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
           CALIB STANDHYD 02:PR-CL-BBP- 2.00 .586 No_date 11:55 87.93 .705
4014
            [XIMP=.46:TIMP=.46]
4015
            [LOSS= 2 :CN= 70.0]
4016
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI= .0]
4017
4018
       100:0113-----ID:NHYD------AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
4019
            ADD HYD 01:PR-R-BST-1 2.20 .341 No_date 12:07 65.48 n/a
+ 02:PR-CL-BBP- 2.00 .586 No_date 11:55 87.93 n/a
[DT= 1.00] SUM= 03:TOT 4.20 .811 No_date 12:00 76.17 n/a
4020
           ADD HYD
4021
4022
       100:0114-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4023
           CALIB STANDHYD 04:PR-R-BST-2 2.00 .555 No_date 11:55 84.06 .674
4024
4025
            [XIMP=.40:TIMP=.40]
4026
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= 
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI=
4027
4028
                                                                             .0]
       100:0115-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4029
          ADD HYD 03:TOT 4.20 .811 No_date 12:00 76.17 n/a
+ 04:PR-R-BST-2 2.00 .555 No_date 11:55 84.06 n/a
[DT= 1.00] SUM= 05:TOT 6.20 1.326 No_date 11:55 78.72 n/a
4030
4031
4032
       100:0116-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4033
           CALIB NASHYD 01:PR-R-BST-3 3.60 .299 No_date 12:26 61.78 .495
4034
4035
            [CN= 72.0: N= 3.00]
            [Tp= .52:DT= 1.00]
4036
       100:0117-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4037
           CALIB STANDHYD 02:PR-CL-BBP- 2.10 .627 No_date 11:55 89.22 .715
4038
4039
            [XIMP=.48:TIMP=.48]
4040
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI= .0]
4041
4042
       100:0118-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4043
           ADD HYD 01:PR-R-BST-3 3.60 .299 No_date 12:26 61.78 n/a
+ 02:PR-CL-BBP- 2.10 .627 No_date 11:55 89.22 n/a
[DT= 1.00] SUM= 03:TOT 5.70 .714 No_date 11:55 71.89 n/a
4044
4045
4046
       100:0119-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4047
           CALIB STANDHYD 04:PR-R-BST-2 2.00 .556 No_date 11:55 84.06 .674
4048
4049
            [XIMP=.40:TIMP=.40]
4050
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
4051
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI=
4052
4053
       100:0120-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 03:TOT 5.70 .714 No_date 11:55 71.89 n/a + 04:PR-R-BST-2 2.00 .556 No_date 11:55 84.06 n/a [DT= 1.00] SUM= 05:TOT 7.70 1.270 No_date 11:55 75.05 n/a
4054
4055
4056
4057
      4058
      100:0121-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4059
           CALIB NASHYD 01:PR-R-2CON- 243.60 5.310 No_date 14:35 51.44 .412
4060
4061
            [CN= 66.0: N= 3.00]
4062
            [Tp= 2.31:DT= 1.00]
       100:0122-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4063
           CALIB NASHYD 02:PR-CL-BBP- 37.00 1.560 No_date 12:50 46.62 .374
4064
            [CN= 63.0: N= 3.00]
4065
            [Tp= .85:DT= 1.00]
4066
       100:0123------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 03:PR-R-LST-1 40.20 1.346 No_date 13:04 43.52 .349
4067
4068
            [CN= 61.0: N= 3.00]
4069
4070
            [Tp= 1.04:DT= 1.00]
       100:0124-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4071
```

```
CALIB STANDHYD 04:PR-CL-BBP- 1.80 .472 No_date 11:55
                                                                           79.19 .635
4073
           [XIMP=.45:TIMP=.45]
4074
            [LOSS= 2 :CN= 61.0]
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 110.:MNI=.015:SCI=
4075
4076
4077
       100:0125-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       ADD HYD 03:PR-R-LST-1 40.20 1.346 No_date 13:04 43.52 n/a + 04:PR-CL-BBP- 1.80 .472 No_date 11:55 79.19 n/a [DT= 1.00] SUM= 05:TOT 42.00 1.375 No_date 13:03 45.05 n/a
4078
4079
4080
       100:0126-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4081
           CALIB NASHYD 01:PR-R-LST-2 8.80 .429 No_date 12:33 41.99 .336
4083
            [CN= 60.0: N= 3.00]
            [Tp= .60:DT= 1.00]
4084
       100:0127------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 02:PR-CL-BBP- 1.20 .303 No_date 11:54 76.02 .609
4085
4086
4087
            [XIMP=.41:TIMP=.41]
            [LOSS= 2 :CN= 61.0]
4088
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 89.:MNI=.015:SCI= .0]
4089
4090
       100:0128-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4091
       ADD HYD 01:PR-R-LST-2 8.80 .429 No_date 12:33 41.99 n/a + 02:PR-CL-BBP- 1.20 .303 No_date 11:54 76.02 n/a [DT= 1.00] SUM= 03:TOT 10.00 .461 No_date 12:30 46.08 n/a
4092
4093
4094
       100:0129-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4095
          CALIB STANDHYD 04:PR-R-LST-3 1.10 .264 No_date 11:54 72.51 .581
4096
4097
            [XIMP=.40:TIMP=.40]
4098
            [LOSS= 2 :CN= 58.0]
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
4099
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 86.:MNI=.015:SCI= .0]
4100
       4101
4102
4103
4104
       100:0131-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4105
           CALIB NASHYD 01:PR-CL-BBP- 22.00 1.222 No_date 12:36 49.79 .399
4106
4107
            [CN= 65.0: N= 3.00]
4108
            [Tp= .65:DT= 1.00]
4109
      4110
      100:0132-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4111
           CALIB NASHYD 01:PR-R-404-3 118.50 2.474 No_date 14:16 45.02 .361
4112
4113
           [CN= 62.0: N= 3.00]
4114
            [Tp= 2.02:DT= 1.00]
       100:0133-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 02:PR-R-404-2 .90 .075 No_date 12:13 45.02 .361
4116
4117
            [CN= 62.0: N= 3.00]
4118
            [Tp= .32:DT= 1.00]
       4119
4120
4121
4122
       100:0135-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4123
           CALIB NASHYD 04:PR-R-404-1 1.70 .107 No_date 12:23 45.02 .361
4124
4125
           [CN= 62.0: N= 3.00]
            [Tp = .47:DT = 1.00]
       100:0136-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4127
       ADD HYD 03:TOT 119.40 2.481 No_date 14:16 45.02 n/a + 04:PR-R-404-1 1.70 .107 No_date 12:23 45.02 n/a [DT= 1.00] SUM= 05:TOT 121.10 2.498 No_date 14:15 45.02 n/a
4128
4129
4130
       100:0137------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 08:PR-R-404-8 2.40 .145 No_date 12:26 45.02 .361
4131
4132
4133
            [CN= 62.0: N= 3.00]
            [Tp= .50:DT= 1.00]
4134
       100:0138-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4135
           CALIB NASHYD 09:PR-R-404-8 2.60 .167 No_date 12:26 48.19 .386
4136
            [CN= 64.0: N= 3.00]
            [Tp= .51:DT= 1.00]
4138
       100:0139-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4139
          CALIB NASHYD 10:PR-R-404-9 1.80 .172 No_date 12:09 45.02 .361
4140
```

```
[CN= 62.0: N= 3.00]
4141
4142
          [Tp= .26:DT= 1.00]
4143
    4144
     100:0002-----
4145
         FINISH
4146
     ******************************
4147
         WARNINGS / ERRORS / NOTES
4148
4149
         -----
4150 002:0004 COMPUTE VOLUME
4151
         *** WARNING: No storage required, RelRate > Inflow Qp.
4152
    002:0043 COMPUTE VOLUME
4153
          *** WARNING: No storage required, RelRate > Inflow Qp.
4154
     002:0054 COMPUTE VOLUME
          *** WARNING: No storage required, RelRate > Inflow Qp.
4155
4156
     002:0066 COMPUTE VOLUME
4157
          *** WARNING: No storage required, RelRate > Inflow Qp.
4158
    002:0074 COMPUTE VOLUME
4159
          *** WARNING: No storage required, RelRate > Inflow Qp.
4160 002:0080 COMPUTE VOLUME
4161
          *** WARNING: No storage required, RelRate > Inflow Qp.
4162 002:0082 COMPUTE VOLUME
4163
          *** WARNING: No storage required, RelRate > Inflow Qp.
4164 005:0054 COMPUTE VOLUME
4165
          *** WARNING: No storage required, RelRate > Inflow Qp.
4166
     005:0080 COMPUTE VOLUME
4167
          *** WARNING: No storage required, RelRate > Inflow Qp.
          *** WARNING: No storage required, RelRate > Inflow Qp.
4168
                                at 23:21:22
4169
      Simulation ended on 2023-01-31
4170
    ______
```



Appendix E.1

Proposed Hydrologic Model – Controlled Peak Flows

```
Metric units
   *#***********************
2
3
   *# Project Name: BRADFORD BYPASS
                                               JOB NUMBER: [60636190] *
4
           : Jan. 20, 2023
   *#
      Modeller : [jrm]
      Company
               : AECOM
      License # : 1281254
8
   *#
9
   *#
   *#
10
      Notes: This hydrologic model was developed for the BBP ultimate conditions
   *#
            A new Berm is proposed to isolate flows draining to P-SWM P-2 and
11
12
            the tributary of Penville Creek.
1.3
   *#
            Estimated controlled flows by the SWM ponds based on an assumed
   *#
            release flow rate from the SWM pond.
14
   *#
15
16
   *#
                 PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
17
   *#
                      PROPOSED SWM PONDS (CONTROLLED FLOWS)
18
   *#
                         Proposed Drainage Conditions
19
   *#
                  2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
20
   *#
   *#***********************
21
22
23
2.4
25
                   TZERO=[0.0], METOUT=[0], NSTORM=[1], NRUN=[002]
26
   START
27
                   24SCS002.stm
28
29
   READ STORM
                   "STORM.001"
30
   31
32
                PROPOSED SWM POND 1 - STORAGE VOLUME ESTIMATION
33
                          (BBP & HIGHWAY 400)
34
   35
    *$**********************
36
                           ** PR-R-BBP-11 **
37
38
    *$************************
39
40
   CALTB NASHYD
                   NHYD=[8], NHYD=["PR-R-BBP-11"], DT=[1]min, AREA=[14.5] (ha),
41
                   DWF = [0.00] (cms), CN/C = [73], IA = [9.4] (mm),
42
                   N=[3], TP=[0.55]hrs,
43
                   END=-1
44
45
46
47
       Peak flow to PR-R-BBP-11 from P-SWM P-1 will be diverted as follows:
       -0.50 cms (outflow from P-SWM P-1 - HYD 9) will drain to PR-R-BBP-11.
48
49
       -Flows in excess of the 0.50 cms will remain in the pond(HYD 8).
   *-----
50
51
52
   DIVERT HYD
                   IDin=[8], NIDout=[2]max five,
53
                   outflow hydrographs (ID, NHYD)=[9,"To PR-R-BBP-11"/10,"To Pond"]
54
                   flow distribution table: (modify as necessary)
55
                   Note: all flows are in (cms)
56
                           + QIDii = QTOTAL
                       OIDi
57
                      [0.000 + 0.00 = 0.00]
58
                      [ 0.100 + 0.00 = 0.100 ]
                      [0.250 + 0.00 = 0.250]
59
                      [0.300 + 0.00 = 0.300]
60
61
                                    = 2.400 ] end
                      [0.400 + 2.00]
62
63
                   _____
64
65
   *$********************
67
                      ** REOUIRED VOLUME - P-SWM P-1 **
68
                     (Assuming a release rate of 0.5 cms)
                 (THIS FLOW IS USED TO SIZE CULVERT PR-R-BBP-11)
69
```

```
71
72
                ID=[8], STRATE=[-100] (cms), RELRATE=[0.5] (cms)
    COMPUTE VOLUME
73
    *8**********************
74
75
76
    77
              PROPOSED SWM POND 2 - STORAGE VOLUME ESTIMATION
78
                       (BBP & HIGHWAY 400)
79
    80
    81
                         ** PR-R-BBP-9A **
82
    *$**********************
83
84
85
                 NHYD=[1], NHYD=["PR-R-BBP-9A"], DT=[1]min, AREA=[5.40](ha),
    CALTB NASHYD
                 DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
86
87
                 N=[3], TP=[0.38]hrs,
88
                 END=-1
89
    *$*********************
90
91
                         ** PR-R-BBP-9B **
    *$**********************
92
93
94
    CALIB NASHYD
                NHYD = [2], NHYD = ["PR - R - BBP - 9B"], DT = [1]min, AREA = [6.60] (ha),
                 DWF = [0.00] (cms), CN/C = [72], IA = [10.0] (mm),
95
96
                 N=[3], TP=[0.40]hrs,
97
                 END=-1
98
   *$*********************
99
                    ** TOTAL FLOW AT PR-R-BBP-9B **
100
    *$********************
101
102
   ADD HYD
103
               IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
104
    *$*********************
105
106
107
    *$*********************
108
                        ** P-SWM P-2 **
    *$********************
109
110
                 NHYD=[4], NHYD=["P-SWM P-2"], DT=[1]min, AREA=[3.90] (ha),
111
    CALIB NASHYD
112
                 DWF = [0.00] (cms), CN/C = [74], IA = [8.9] (mm),
113
                 N=[3], TP=[0.37]hrs,
114
                 END=-1
115
    *$*********************
116
                    ** TOTAL FLOW AT P-SWM P-2 **
117
    *$********************
118
119
120
   ADD HYD
                 IDsum=[7], NHYD=["TOT"], IDs to add=[3+4]
121
    *$**********************
122
123
124
125
       Peak flow to PR-R-BBP-10 from P-SWM P-2 will be diverted as follows:
126
       -0.05 cms (outflow from P-SWM P-2 - HYD 9) will drain to PR-R-BBP-10.
127
       -Flows in excess of the 0.05 cms will remain in the pond(HYD 10).
128
    *-----
129
130
    DIVERT HYD
                 IDin=[7], NIDout=[2]max five,
131
                 outflow hydrographs (ID, NHYD) = [9, "To PR-R-BBP-10"/10, "Pond"]
132
                 flow distribution table: (modify as necessary)
133
                 Note: all flows are in (cms)
134
                    QIDi
                        + QIDii = QTOTAL
135
                   [0.000 + 0.00 = 0.00]
136
                   [0.025 + 0.00 = 0.025]
                   [0.050 + 0.00 = 0.050]
137
                   [0.075 + 0.00 = 0.075]
138
```

```
140
141
    *$**********************
142
                  ** REQUIRED VOLUME - P-SWM P-2 **
143
144
                  (Assuming a release rate of 0.05 cms)
     **********************
145
146
147
    COMPUTE VOLUME ID=[7], STRATE=[-100] (cms), RELRATE=[0.05] (cms)
148
    149
150
    1.51
152
                   ESTIMATING TOTAL FLOW AT PR-CL-400-2
153
                       (CULVERT UNDER HIGHWAY 400)
154
    155
156
    *$**********************
157
                        ** EX-CL-400-1 **
158
    *$*********************
159
160
                NHYD=[1], NHYD=["EX-CL-400-1"], DT=[1]min, AREA=[49.0] (ha),
161
    CALIB NASHYD
162
                DWF = [0.00] (cms), CN/C = [79], IA = [5.0] (mm),
163
                 N=[3], TP=[0.53]hrs,
                 END=-1
164
165
166
    *$************************
167
                     ** ROUTED FLOW TO PR-CL-2 **
168
   *$*************************
169
170
    ROUTE CHANNEL
                IDOUT=2 NHYD="to PR-CL-2" IDIN=1 DT=1.00min
171
                 CHLGTH=825.0 CHSLOPE=0.85% FPSLOPE=0.85%
                 VSN=9999 NSEG=1
172
173
                     MANNING'S 'n'
                                DISTANCE
174
                       -0.070
                                10.0
                       DISTANCE
175
                                ELEVATION
176
                        0.0
                                183.5
177
                        1.5
                                183.11
178
                        3.0
                                183.05
                        4.0
179
                                182.0
180
                        4.5
                                181.0
181
                        5.5
                                181.0
182
                        6.0
                                182.0
183
                        7.0
                                183.05
184
                        8.5
                                183.15
185
                        10.0
                                183.5
186
    *$**********************
187
                       ** PR-R-BBP-1A **
188
189
    *$***********************
190
191
                NHYD=[3], NHYD=["PR-R-BBP-1A"], DT=[1]min, AREA=[8.80](ha),
    CALIB NASHYD
192
                 DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
193
                 N=[3], TP=[0.53]hrs,
194
195
196
                       ** EX-CL-400-2 **
197
    *$*********************
198
199
200
    CALIB NASHYD
                 NHYD=[4], NHYD=["EX-CL-400-2"], DT=[1]min, AREA=[1.30] (ha),
201
                 DWF = [0.00] (cms), CN/C = [79], IA = [5.0] (mm),
                 N=[3], TP=[0.40]hrs,
202
                 END=-1
203
204
    205
206
                        ** PR-R-BBP-1B **
    *$********************
207
```

[0.150 + 2.00 = 2.150] end

```
ID=[5], NHYD=["PR-R-BBP-1B"], DT=[1]min, Area=[1.30](ha),
2.09
    CALIB STANDHYD
210
                  XIMP=[0.55], TIMP=[0.55], DWF=[0] (cms), LOSS=[2],
211
                   SCS curve number CN=[70],
212
                  Pervious surfaces: IAper=[10.9] (mm), SLPP=[65](%),
                                 LGP=[8] (m), MNP=[0.35], SCP=[0] (min),
213
214
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
                                 LGI=[93] (m), MNI=[0.015], SCI=[0] (min),
215
216
                  END=-1
217
    *$********************
218
                      ** TOTAL FLOW AT PR-R-BBP-1B **
219
    *$***********************
2.2.0
221
                  IDsum=[1], NHYD=["TOT"], IDs to add=[3+4+5]
222
    ADD HYD
223
    *$********************
224
225
    *$********************
226
                           ** PR-CL-2 **
227
    *$*********************
228
229
                  NHYD=[6], NHYD=["PR-CL-2"], DT=[1]min, AREA=[161.70] (ha),
230
    CALIB NASHYD
231
                  DWF = [0.00] (cms), CN/C = [65], IA = [13.7] (mm),
232
                  N=[3], TP=[3.38]hrs,
2.33
                  END=-1
234
    *$***********************
235
236
                       ** TOTAL FLOW AT PR-CL-2 **
    *$**********************
237
238
              IDsum=[7], NHYD=["TOT PR-CL-2"], IDs to add=[1+2+6]
239
    ADD HYD
240
    *$*********************
241
242
    *$*********************
243
                       ** ROUTED FLOW TO PR-R-BBP-4 **
244
245
    *$***********************
246
    ROUTE CHANNEL IDOUT=4 NHYD="to PR-R-BBP-4" IDIN=7 DT=1.00min
247
248
                  CHLGTH=230.0 CHSLOPE=0.9% FPSLOPE=0.9%
249
                  VSN=9999 NSEG=1
250
                       MANNING'S 'n'
                                   DISTANCE
                         -0.070
251
                                    10.0
252
                         DISTANCE
                                   ELEVATION
253
                           0.0
                                    183.5
254
                           1.5
                                    183.11
255
                           3.0
                                    183.05
256
                           4.0
                                    182.0
257
                           4.5
                                    181.0
258
                           5.5
                                    181.0
259
                           6.0
                                    182.0
260
                           7.0
                                    183.05
261
                           8.5
                                    183.15
262
                          10.0
                                    183.5
263
       *******************
264
265
                          ** PR-R-BBP-4 **
    *$*******************
266
267
268
    CALIB NASHYD
                  NHYD=[9], NHYD=["PR-R-BBP-4"], DT=[1]min, AREA=[6.10] (ha),
269
                  DWF = [0.00] (cms), CN/C = [71], IA = [10.4] (mm),
270
                  N=[3], TP=[0.32]hrs,
271
                  END=-1
272
    *$*********************
273
                       ** TOTAL FLOW AT PR-R-BBP-4 **
274
275
276
```

```
2.77
                 IDsum=[10], NHYD=["TOT"], IDs to add=[4+9]
278
    *$**********************
279
    280
281
                    ** FLOWS FROM WEST OF HIGHWAY 400 **
282
    283
    *$***********************
2.84
                         ** PR-CI-1 **
285
    *$*********************
286
287
288
    CALIB NASHYD
                 NHYD=[1], NHYD=["PR-CL-1"], DT=[1]min, AREA=[4.80] (ha),
                 DWF = [0.00] (cms), CN/C = [74], IA = [8.9] (mm),
289
290
                 N=[3], TP=[0.37]hrs,
                 END=-1
2.91
292
    *$**********************
293
                         ** PR-R-BBP-2 **
294
    *$***********************
2.95
296
297
    CALIB NASHYD
                NHYD = [2], NHYD = ["PR - R - BBP - 2"], DT = [1]min, AREA = [5.90] (ha),
298
                 DWF = [0.00] (cms), CN/C = [71], IA = [10.4] (mm),
299
                 N=[3], TP=[0.39]hrs,
300
                 END=-1
301
    *$********************
302
                   ** TOTAL FLOW AT PR-R-BBP-2 **
303
304
    *$*************************
305
306
   ADD HYD
                 IDsum=[9], NHYD=["TOT"], IDs to add=[1+2]
307
    *$*********************
308
                        ** EX-CL-400-3 **
309
    *$*******************
310
311
                 NHYD=[3], NHYD=["EX-CL-400-3"], DT=[1]min, AREA=[1.70] (ha),
312
    CALIB NASHYD
313
                 DWF = [0.00] (cms), CN/C = [72], IA = [9.1] (mm),
314
                 N=[3], TP=[0.23]hrs,
315
                 END=-1
316
317
    *$***********************
318
                    ** TOTAL FLOW AT EX-CL-400-3 **
    *2***********************
319
320
321
                 IDsum=[1], NHYD=["TOT"], IDs to add=[3+9]
    ADD HYD
322
    *$**********************
323
                         ** PR-R-BBP-3 **
324
    *$*********************
325
326
327
    CALIB NASHYD
                 NHYD=[4], NHYD=["PR-R-BBP-3"], DT=[1]min, AREA=[2.40] (ha),
328
                 DWF = [0.00] (cms), CN/C = [71], IA = [10.4] (mm),
329
                 N=[3], TP=[0.20]hrs,
330
                 END=-1
331
332
    *$**********************
333
                         ** PR-CL-400-1 **
334
    *$***********************
335
336
    CALIB NASHYD
                 NHYD = [5], NHYD = ["PR - CL - 400 - 1"], DT = [1]min, AREA = [2.20] (ha),
337
                 DWF = [0.00] (cms), CN/C = [75], IA = [8.5] (mm),
338
                 N=[3], TP=[0.15]hrs,
339
                 END=-1
340
    *$*********************
341
342
                    ** TOTAL FLOW AT PR-CL-400-1 **
    *$*********************
343
344
    ADD HYD
                 IDsum=[9], NHYD=["TOT"], IDs to add=[4+5]
345
```

```
*$*******************
347
348
                   ** TOTAL FLOW D/S OF PR-R-BBP-4 **
   *$*********************
349
350
351
   ADD HYD
               IDsum=[7], NHYD=["TOT"], IDs to add=[1+9+10]
352
   *$********************
353
                  ** ROUTED FLOW TO D/S OF P-SWM P-2 **
354
355
                   (TO BYPASS THE PROPOSED POND)
356
   *$************************
357
   ROUTE CHANNEL IDOUT=1 NHYD="to PR-R-BBP-10" IDIN=7 DT=1.00min
358
               CHLGTH=895.0 CHSLOPE=1.0% FPSLOPE=1.0%
359
360
                VSN=9999 NSEG=1
361
                    MANNING'S 'n'
                              DISTANCE
                     -0.070
362
                               10.0
363
                     DISTANCE
                              ELEVATION
364
                       0.0
                               183.5
365
                       1.5
                               183.11
366
                       3.0
                               183.05
367
                       4.0
                               182.0
368
                       4.5
                               181.0
369
                       5.5
                               181.0
370
                       6.0
                               182.0
371
                       7.0
                               183.05
372
                       8.5
                               183.15
373
                       10.0
                               183.5
374
   *$**********************
375
                       ** PR-CL-400-2 **
376
   *$*********************
377
378
   CALIB NASHYD
379
               NHYD=[2], NHYD=["PR-CL-400-2"], DT=[1]min, AREA=[9.60] (ha),
380
                DWF = [0.00] (cms), CN/C = [71], IA = [10.4] (mm),
381
                N=[3], TP=[0.54]hrs,
                END=-1
382
383
384
   *$*********************
385
                   ** TOTAL FLOW AT PR-CL-400-2 **
   *$********************
386
387
388
               IDsum=[2], NHYD=["TOT"], IDs to add=[1+2]
389
   *$*********************
390
391
   *$********************
392
                   ** TOTAL FLOW AT PR-R-BBP-11 **
393
   *$*********************
394
395
396
   ADD HYD
                IDsum=[6], NHYD=["TOT"], IDs to add=[2+8]
397
   *$*********************
398
399
400
   401
              PROPOSED SWM POND 3 - STORAGE VOLUME ESTIMATION
402
                    (BBP & 10th SIDEROAD INTERCHANGE)
403
   404
   405
                        ** PR-R-BBP-9 **
406
   *$*********************
407
408
                NHYD=[2], NHYD=["PR-R-BBP-9"], DT=[1]min, AREA=[6.60] (ha),
409
   CALIB NASHYD
                DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
410
411
                N=[3], TP=[0.41]hrs,
412
                END=-1
413
   *$*********************
414
```

```
415
                           ** PR-R-10IC-1 **
416
    *$**********************
417
418
    CALIB NASHYD
                  NHYD=[1], NHYD=["PR-R-10IC-1"], DT=[1]min, AREA=[4.70] (ha),
419
                   DWF = [0.00] (cms), CN/C = [59], IA = [17.7] (mm),
                   N=[3], TP=[0.29]hrs,
420
421
                   END = -1
422
    *$********************
423
                           ** PR-CL-BBP-1 **
424
    *$*********************
425
426
42.7
                   ID=[2], NHYD=["PR-CL-BBP-1"], DT=[1]min, Area=[2.30](ha),
    CALIB STANDHYD
                   XIMP=[0.35], TIMP=[0.35], DWF=[0] (cms), LOSS=[2],
428
                   SCS curve number CN=[51],
429
430
                   Pervious surfaces: IAper=[24.4] (mm), SLPP=[53] (%),
                                  LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
431
432
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
433
                                  LGI=[124] (m), MNI=[0.015], SCI=[0] (min),
434
                   END=-1
435
    *$********************
436
437
                       ** TOTAL FLOW AT PR-CL-BBP-1 **
438
439
440
    ADD HYD
                  IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
441
    *$**********************
442
443
                           ** PR-R-10IC-4 **
    *$********************
444
445
446
    CALIB NASHYD
                  NHYD = [4], NHYD = ["PR - R - 10IC - 4"], DT = [1]min, AREA = [1.30] (ha),
447
                   DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
                   N=[3], TP=[0.25]hrs,
448
449
                   END = -1
450
    *$*********************
451
452
                      ** TOTAL FLOW AT PR-R-10IC-4 **
453
    454
455
    ADD HYD
                   IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
456
    457
458
                           ** PR-R-10IC-5 **
459
    *$***********************
460
    CALIB STANDHYD
                   ID=[6], NHYD=["PR-R-10IC-5"], DT=[1]min, Area=[2.70] (ha),
461
                   XIMP=[0.30], TIMP=[0.30], DWF=[0] (cms), LOSS=[2],
462
463
                   SCS curve number CN=[58],
464
                   Pervious surfaces: IAper=[18.4] (mm), SLPP=[44](%),
465
                                  LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
466
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
467
                                  LGI=[134] (m), MNI=[0.015], SCI=[0] (min),
468
                   END=-1
469
    *$*********************
470
471
                       ** TOTAL FLOW TO PR-R-10IC-5 **
472
    *$***********************
473
474
    ADD HYD
                  IDsum=[7], NHYD=["TOT"], IDs to add=[5+6]
475
    *$*********************
476
477
    478
        Peak flow to PR-R-10IC-5 from P-SWM P-3 will be diverted as follows:
479
       -0.30 cms (outflow from P-SWM P-3 - HYD 1) will drain to PR-R-10IC-5.
480
481
       -Flows in excess of the 0.30 cms will remain in the pond(HYD 2).
482
```

```
484
    DIVERT HYD
                  IDin=[7], NIDout=[2]max five,
485
                  outflow hydrographs (ID, NHYD)=[1, "To PR-R-10IC-5"/2, "To Pond"]
486
                  flow distribution table: (modify as necessary)
487
                  Note: all flows are in (cms)
                          + QIDii = QTOTAL
+ 0.00 = 0.00 ]
488
                      OIDi
                    [ 0.000 + 0.00 ]
489
490
                    [ 0.100 + 0.00 = 0.100 ]
491
                    [0.200 + 0.00 = 0.200]
492
                    [0.250 + 0.00 = 0.250]
493
                    [0.300 + 2.00 = 2.300] end
494
495
    *$*********************
496
                    ** REQUIRED VOLUME - P-SWM P-3 **
497
                    (Assuming a relase rate of 0.40 cms)
498
    499
500
501
    COMPUTE VOLUME
                  ID=[7], STRATE=[-100] (cms), RELRATE=[0.40] (cms)
502
    *$********************
503
504
505
    506
                   R-Ex Pond-2 - STORAGE VOLUME ESTIMATION
507
                      (BBP & 10th SIDEROAD INTERCHANGE)
508
    509
    *$*********************
510
                           ** PR-R-10IC-3 **
511
    *$***********************
512
513
                  NHYD=[1], NHYD=["PR-R-10IC-3"], DT=[1]min, AREA=[1.40] (ha),
514
    CALIB NASHYD
515
                  DWF = [0.00] (cms), CN/C = [67], IA = [12.5] (mm),
516
                  N=[3], TP=[0.29]hrs,
517
                  END=-1
518
    *$*********************
519
                          ** PR-R-10IC-2 **
520
521
    *$**********************
522
523
    CALIB STANDHYD
                  ID=[2], NHYD=["PR-R-10IC-2"], DT=[1]min, Area=[3.10] (ha),
524
                  XIMP=[0.36], TIMP=[0.36], DWF=[0] (cms), LOSS=[2],
525
                  SCS curve number CN=[61],
526
                  Pervious surfaces: IAper=[16.2] (mm), SLPP=[42](%),
527
                                 LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
528
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
529
                                 LGI=[144] (m), MNI=[0.015], SCI=[0] (min),
530
                  END=-1
531
    *$********************
532
                      ** TOTAL FLOW TO PR-R-10IC-2 **
533
534
    *$***********************
535
536
                  IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
    ADD HYD
537
    *$*********************
538
539
540
    *_____
541
        Peak flow to existing watercourse from the pond will be diverted as follows:
542
        -0.18 cms (outflow from R-Ex Pond-2 - HYD 1) will drain to the watercourse.
543
       -Flows in excess of the 0.18 cms will remain in the pond(HYD 2).
    *-----
544
545
546
    DIVERT HYD
                  IDin=[3], NIDout=[2]max five,
547
                  outflow hydrographs (ID, NHYD) = [1, "To watercourse"/2, "To Pond"]
548
                  flow distribution table: (modify as necessary)
549
                  Note: all flows are in (cms)
550
                      QIDi + QIDii = QTOTAL
                     [0.000 + 0.00 = 0.00]
551
                    [0.050 + 0.00 = 0.050]
552
```

```
[0.075 + 0.00]
553
                                   0.0751
554
                    [0.100 + 0.00]
                                   0.100 ]
555
                    [0.180 + 2.00]
                                   2.180 ] end
556
557
558
    *$***********************
                    ** REQUIRED VOLUME - R-Ex Pond-2 **
559
560
                    (Assuming a relase rate of 0.15 cms)
    *$**********************
561
562
563
    COMPUTE VOLUME
                 ID=[3], STRATE=[-100] (cms), RELRATE=[0.15] (cms)
564
565
566
    567
568
                   P-SWM P-4 - STORAGE VOLUME ESTIMATION
569
                         (BBP & CTY ROAD 4)
570
    571
    *$**********************
572
573
                          ** PR-R-C4IC-1 **
574
    575
576
    CALIB NASHYD
                  NHYD=[1], NHYD=["PR-R-C4IC-1"], DT=[1]min, AREA=[13.40](ha),
577
                  DWF = [0.00] (cms), CN/C = [61], IA = [16.2] (mm),
578
                  N=[3], TP=[0.50]hrs,
579
                  END=-1
580
581
    *$*************************
                          ** PR-CI-BBP-4 **
582
    *$***********************
583
584
585
    CALIB STANDHYD
                  ID=[2], NHYD=["PR-CL-BBP-4"], DT=[1]min, Area=[3.0] (ha),
586
                  XIMP=[0.52], TIMP=[0.52], DWF=[0] (cms), LOSS=[2],
587
                  SCS curve number CN=[66],
588
                        surfaces: IAper=[13.1](mm), SLPP=[48](%),
                  Pervious
589
                                LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
590
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
591
                                LGI=[141] (m), MNI=[0.015], SCI=[0] (min),
592
                  END=-1
593
    *$***********************
594
595
                      ** TOTAL FLOW AT PR-CL-BBP-4 **
596
    *$***********************
597
                  IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
598
    ADD HYD
599
    600
601
    602
603
                          ** PR-R-C4IC-2 **
604
    *$************************
605
606
    CALIB STANDHYD
                  ID=[4], NHYD=["PR-R-C4IC-2"], DT=[1]min, Area=[2.80] (ha),
607
                  XIMP=[0.28], TIMP=[0.28], DWF=[0] (cms), LOSS=[2],
608
                  SCS curve number CN=[58],
609
                  Pervious surfaces: IAper=[18.4] (mm), SLPP=[43](%),
610
                                LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
611
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
612
                                LGI=[137] (m), MNI=[0.015], SCI=[0] (min),
613
                  END=-1
614
    *$**********************
615
                          ** PR-R-C4IC-3 **
616
    *$********************
617
618
619
                  ID=[5], NHYD=["PR-R-C4IC-3"], DT=[1]min, Area=[1.60] (ha),
    CALIB STANDHYD
620
                  XIMP=[0.30], TIMP=[0.30], DWF=[0] (cms), LOSS=[2],
                  SCS curve number CN=[58],
621
```

```
622
                  Pervious surfaces: IAper=[18.4] (mm), SLPP=[60](%),
623
                                 LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
624
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
625
                                 LGI=[103] (m), MNI=[0.015], SCI=[0] (min),
626
                  END=-1
627
    *$*********************
628
629
                      ** TOTAL FLOW TO P-SWM P-4 **
             (ALSO, THIS FLOW WILL BE THE TOTAL FLOW TO PR-R-C4IC-3)
630
    *$*********************
631
632
                  IDsum=[6], NHYD=["TOT"], IDs to add=[3+4+5]
633
634
    *$**********************
635
636
637
       Peak flow to PR-R-C4IC-3 from P-SWM P-4 will be diverted as follows:
638
639
       -0.45 cms (outflow from P-SWM P-4 - HYD 9) will drain to PR-R-C4IC-3.
      -Flows in excess of the 0.45 cms will remain in the pond(HYD 10).
640
    *_____
641
642
643
                  IDin=[6], NIDout=[2]max five,
644
                  outflow hydrographs (ID, NHYD) = [9, "To PR-R-C4IC-3"/10, "Pond"]
645
                  flow distribution table: (modify as necessary)
646
                  Note: all flows are in (cms)
                      QIDi + QIDii = QTOTAL 0.000 + 0.00 = 0.00]
647
                    [ 0.000 + 0.00
648
                    [0.100 + 0.00 = 0.100]
649
650
                    [0.250 + 0.00 = 0.250]
                    [ 0.300 + 0.00 = 0.300 ]
651
652
                    [0.450 + 2.00 = 2.450] end
653
654
    *$*********************
655
656
                    ** REOUIRED VOLUME - P-SWM P-4 **
                    (Assuming a relase rate of 1.0 cms)
657
    *$*********************
658
659
660
    COMPUTE VOLUME
                  ID=[6], STRATE=[-100] (cms), RELRATE=[1.0] (cms)
661
    *$********************
662
663
664
    665
                   P-SWM P-5 - STORAGE VOLUME ESTIMATION
666
                       (BBP & CTY ROAD 4 INTERCHANGE)
667
    668
    *$********************
669
                           ** PR-R-C4IC-5 **
670
    *$*********************
671
672
673
                  NHYD=[1], NHYD=["PR-R-C4IC-5"], DT=[1]min, AREA=[0.40] (ha),
    CALTB NASHYD
674
                  DWF = [0.00] (cms), CN/C = [65], IA = [13.7] (mm),
675
                  N=[3], TP=[0.10]hrs,
676
                  END=-1
677
678
    *$*********************
679
                          ** PR-R-C4IC-6 **
    *$*******************
680
681
                  NHYD=[2], NHYD=["PR-R-C4IC-6"], DT=[1]min, AREA=[1.30] (ha),
682
    CALIB NASHYD
683
                  DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
684
                  N=[3], TP=[0.28]hrs,
685
                  END=-1
686
    *$*********************
687
                      ** TOTAL FLOW TO PR-R-C4IC-6 **
688
689
690
```

```
691
                  IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
692
    *$*********************
693
                            ** PR-R-C4IC-7 **
694
    *$**********************
695
696
697
    CALIB STANDHYD
                  ID=[4], NHYD=["PR-R-C4IC-7"], DT=[1]min, Area=[3.10] (ha),
698
                  XIMP=[0.37], TIMP=[0.37], DWF=[0] (cms), LOSS=[2],
699
                  SCS curve number CN=[58],
700
                  Pervious surfaces: IAper=[18.4] (mm), SLPP=[48] (%),
701
                                 LGP = [40] (m), MNP = [0.35], SCP = [0] (min),
702
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
703
                                 LGI=[144] (m), MNI=[0.015], SCI=[0] (min),
704
                  END = -1
705
    *$**********************
706
707
                      ** TOTAL FLOW AT PR-R-C4IC-7 **
    *$**********************
708
709
710
                  IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
711
    *$********************
712
713
714
    715
       Peak flow to PR-R-C4IC-7 from P-SWM P-5 will be diverted as follows:
716
       -0.09 cms (outflow from P-SWM P-5 - HYD 1) will drain to PR-R-C4IC-7.
717
       -Flows in excess of the 0.09 cms will remain in the pond(HYD 2).
    *-----
718
719
    DIVERT HYD
720
                  IDin=[5], NIDout=[2]max five,
                  outflow hydrographs (ID, NHYD)=[9, "To PR-R-C4IC-7"/10, "Pond"]
721
722
                  flow distribution table: (modify as necessary)
723
                  Note: all flows are in (cms)
                      OIDi + OIDii = OTOTAL
724
725
                     [0.000 + 0.00 = 0.00]
726
                     [0.020 + 0.00 = 0.020]
                     [0.030 + 0.00 = 0.030]
727
728
                     [ 0.040 + 0.00
                                  = 0.040 ]
729
                     [0.055 + 0.00]
                                  = 0.0551
730
                    [0.075 + 0.00 = 0.075]
731
                     [0.095 + 2.00 = 2.095] end
732
733
    *$*********************
734
735
                    ** REOUIRED VOLUME - P-SWM P-5 **
736
                    (Assuming a relase rate of 0.10 cms)
737
738
739
    COMPUTE VOLUME
                  ID=[5], STRATE=[-100] (cms), RELRATE=[0.10] (cms)
740
741
    *$***********************
742
743
    744
                    P-SWM P-6 - STORAGE VOLUME ESTIMATION
745
                    (BBP & 2nd CONCESSION ROAD INTERCHANGE)
746
    747
748
    ** PR-R-2CON-2 **
749
    *$*********************
750
751
752
    CALIB STANDHYD
                  ID=[1], NHYD=["PR-R-2CON-2"], DT=[1]min, Area=[1.60] (ha),
753
                  XIMP=[0.20], TIMP=[0.20], DWF=[0] (cms), LOSS=[2],
754
                  SCS curve number CN=[70],
755
                  Pervious
                         surfaces: IAper=[10.9](mm), SLPP=[48](%),
756
                                 LGP=[30](m), MNP=[0.35], SCP=[0](min),
757
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
758
                                 LGI=[210] (m), MNI=[0.015], SCI=[0] (min),
759
                  END=-1
```

```
760
761
    *$***********************
762
                           ** PR-CL-BBP-12 **
    *$*********************
763
764
765
    CALIB STANDHYD
                  ID=[2], NHYD=["PR-CL-BBP-12"], DT=[1]min, Area=[3.0](ha),
766
                   XIMP=[0.30], TIMP=[0.30], DWF=[0] (cms), LOSS=[2],
767
                   SCS curve number CN=[64],
768
                   Pervious surfaces: IAper=[14.3](mm), SLPP=[56](%),
769
                                  LGP=[30] (m), MNP=[0.35], SCP=[0] (min),
770
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
771
                                  LGI=[240] (m), MNI=[0.015], SCI=[0] (min),
772
                   END=-1
773
    *$********************
774
                       ** TOTAL FLOW AT PR-CL-BBP-12 **
775
    *$**********************
776
777
778
    ADD HYD
                  IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
779
    *$*********************
780
781
                            ** PR-R-2CON-1 **
    *$********************
782
783
784
                   ID=[4], NHYD=["PR-R-2CON-1"], DT=[1]min, Area=[3.0] (ha),
    CALIB STANDHYD
785
                   XIMP=[0.38], TIMP=[0.38], DWF=[0] (cms), LOSS=[2],
786
                   SCS curve number CN=[70],
787
                   Pervious surfaces: IAper=[10.9] (mm), SLPP=[55](%),
788
                                  LGP=[30] (m), MNP=[0.35], SCP=[0] (min),
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
789
790
                                  LGI=[163] (m), MNI=[0.015], SCI=[0] (min),
791
                   END=-1
792
    *$***********************
793
794
                       ** TOTAL FLOW AT PR-R-2CON-1 **
    *$*********************
795
796
797
                  IDsum=[6], NHYD=["TOT"], IDs to add=[3+4]
    ADD HYD
798
799
    *$*********************
800
801
    802
        Peak flow to watercourse from P-SWM P-6 will be diverted as follows:
        -0.50 cms (outflow from P-SWM P-6 - HYD 9) will drain to watercourse.
803
804
       -Flows in excess of the 0.50 cms will remain in the pond(HYD 10).
805
    *-----
806
807
    DIVERT HYD
                  IDin=[6], NIDout=[2]max five,
808
                outflow hydrographs (ID, NHYD) = [9, "To watercourse"/10, "Pond"]
809
                flow distribution table: (modify as necessary)
810
                Note: all flows are in (cms)
811
                      QIDi
                          + QIDii = QTOTAL
                     [0.000 + 0.00 = 0.00]
812
                     [0.100 + 0.00 = 0.100]
813
814
                     [0.200 + 0.00 = 0.200]
815
                     [0.300 + 0.00 = 0.300]
816
                     [0.400 + 0.00 = 0.400]
817
                     [0.500 + 2.00 = 2.500] end
818
819
    *$**************************
820
                     ** REQUIRED VOLUME - P-SWM P-6 **
821
822
                    (Assuming a relase rate of 0.60 cms)
    *$**********************
823
824
825
    COMPUTE VOLUME
                  ID=[6], STRATE=[-100] (cms), RELRATE=[0.60] (cms)
826
    *$*******************
827
828
```

```
830
                   P-SWM P-7 - STORAGE VOLUME ESTIMATION
831
                        BBP & 2nd CONCESSION ROAD)
    832
833
    *$**********************
834
                           ** PR-R-2CON-4 **
835
    *$********************
836
837
                  NHYD = [1], NHYD = ["PR - R - 2CON - 4"], DT = [1]min, AREA = [28.0] (ha),
838
    CALIB NASHYD
839
                  DWF = [0.00] (cms), CN/C = [61], IA = [16.2] (mm),
840
                  N=[3], TP=[1.39]hrs,
841
                  END=-1
842
    *$********************
843
                           ** PR-CL-BBP-13 **
844
    *$*********************
845
846
                  ID=[2], NHYD=["PR-CL-BBP-13"], DT=[1]min, Area=[3.0](ha),
847
    CALIB STANDHYD
                  XIMP=[0.45], TIMP=[0.45], DWF=[0] (cms), LOSS=[2],
848
849
                  SCS curve number CN=[77],
850
                  Pervious surfaces: IAper=[7.6] (mm), SLPP=[48] (%),
851
                                  LGP = [40] (m), MNP = [0.35], SCP = [0] (min),
852
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
                                 LGI=[141] (m), MNI=[0.015], SCI=[0] (min),
853
                  END=-1
854
855
    *$**********************
856
857
                      ** TOTAL FLOW AT PR-CL-BBP-13 **
    *$*******************
858
859
860
    ADD HYD
                  IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
861
    862
                           ** PR-R-2CON-5 **
863
    *$***********************
864
865
866
    CALIB STANDHYD
                  ID=[4], NHYD=["PR-R-2CON-5"], DT=[1]min, Area=[1.50] (ha),
867
                  XIMP=[0.28], TIMP=[0.28], DWF=[0] (cms), LOSS=[2],
868
                   SCS curve number CN=[78],
869
                  Pervious surfaces: IAper=[7.2](mm), SLPP=[54](%),
870
                                  LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
871
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
872
                                  LGI=[100] (m), MNI=[0.015], SCI=[0] (min),
873
                  END=-1
874
    *$*********************
875
                      ** TOTAL FLOW AT PR-R-2CON-5 **
876
    *$*********************
877
878
879
    ADD HYD
                  IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
880
    *$*********************
881
                           ** PR-R-2CON-6 **
882
    883
884
885
    CALIB STANDHYD
                  ID=[6], NHYD=["PR-R-2CON-6"], DT=[1]min, Area=[3.0] (ha),
886
                  XIMP=[0.40], TIMP=[0.40], DWF=[0] (cms), LOSS=[2],
887
                  SCS curve number CN=[78],
888
                  Pervious surfaces: IAper=[7.2] (mm), SLPP=[44](%),
                                  LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
889
890
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
891
                                  LGI=[141] (m), MNI=[0.015], SCI=[0] (min),
892
                  END=-1
893
    894
                       ** TOTAL FLOW AT PR-R-2CON-6 **
895
896
```

```
IDsum=[7], NHYD=["TOT"], IDs to add=[5+6]
898
899
900
   *-----
       Peak flow to PR-R-2CON-6 from P-SWM P-7 will be diverted as follows:
901
902
      -0.75 cms (outflow from P-SWM P-7 - HYD 1) will drain to PR-R-2CON-6.
903
      -Flows in excess of the 0.75 cms will remain in the pond(HYD 2).
   *-----
904
905
906
   DIVERT HYD
                IDin=[7], NIDout=[2]max five,
              outflow hydrographs (ID, NHYD) = [1, "To PR-R-2CON"/2, "To Pond"]
907
908
               flow distribution table: (modify as necessary)
909
               Note: all flows are in (cms)
                    OIDi + QIDii = QTOTAL
910
                   [0.000 + 0.00 = 0.00]
911
                   [0.100 + 0.00 = 0.100]
912
                   [0.200 + 0.00]
                              = 0.2001
913
                               = 0.300 ]
914
                   [0.300 + 0.00]
915
                   [0.500 + 0.00 = 0.500]
916
                   [0.600 + 2.00 = 2.600] end
917
918
   *$********************
919
920
                  ** REOUIRED VOLUME - P-SWM P-7 **
921
                  (Assuming a relase rate of 1.10 cms)
    *$*********************
922
923
924
   COMPUTE VOLUME
                ID=[7], STRATE=[-100] (cms), RELRATE=[1.10] (cms)
925
   *$**********************
926
927
   928
929
                  P-SWM P-8 - STORAGE VOLUME ESTIMATION
930
                        (BBP & HIGHWAY 404)
   931
932
    *$**********************
933
                        ** PR-R-404-4 **
934
    *$**********************
935
936
937
   CALIB NASHYD
                NHYD=[1], NHYD=["PR-R-404-4"], DT=[1]min, AREA=[3.50] (ha),
938
                 DWF = [0.00] (cms), CN/C = [61], IA = [16.2] (mm),
939
                 N=[3], TP=[0.40]hrs,
940
                 END=-1
941
942
   ** PR-R-404-5 **
943
   *$********************
944
945
946
   CALIB NASHYD
                NHYD=[2], NHYD=["PR-R-404-5"], DT=[1]min, AREA=[5.90] (ha),
947
                 DWF = [0.00] (cms), CN/C = [61], IA = [16.2] (mm),
948
                 N=[3], TP=[0.77]hrs,
949
                 END=-1
950
   951
952
                    ** TOTAL FLOW AT PR-R-404-5 **
   *$*********************
953
954
                IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
955
   ADD HYD
956
    *$**********************
957
958
    959
                        ** PR-R-404-6 **
960
   *$**********************
961
962
963
   CALIB NASHYD
                 NHYD = [4], NHYD = ["PR - R - 404 - 6"], DT = [1]min, AREA = [3.70] (ha),
                 DWF = [0.00] (cms), CN/C = [63], IA = [14.9] (mm),
964
965
                 N=[3], TP=[0.35]hrs,
966
                 END=-1
```

```
968
    *$*********************
969
                      ** TOTAL FLOW AT PR-R-404-6 **
    *$*********************
970
971
972
    ADD HYD
                  IDsum=[9], NHYD=["TOT"], IDs to add=[3+4]
973
    *$********************
974
975
976
    *_____
977
        Peak flow to PR-R-2CON-6 from P-SWM P-8 will be diverted as follows:
        -0.35 cms (outflow from P-SWM P-8 - HYD 1) will drain to watercourse.
978
979
       -Flows in excess of the 0.35 cms will remain in the pond(HYD 2).
    *-----
980
981
982
    DIVERT HYD
                  IDin=[9], NIDout=[2]max five,
983
                outflow hydrographs (ID, NHYD) = [1, "To watercourse"/2, "To Pond"]
984
                flow distribution table: (modify as necessary)
985
                Note: all flows are in (cms)
986
                     QIDi + QIDii = QTOTAL
987
                    [0.000 + 0.00 = 0.00]
988
                    [0.100 + 0.00 = 0.100]
989
                    [0.120 + 0.00 = 0.120]
                    [0.180 + 2.00 = 2.180] end
990
991
992
    *$********************
993
994
                    ** REOUIRED VOLUME - P-SWM P-8 **
995
                    (Assuming a relase rate of 0.40 cms)
    *$**********************
996
997
998
    COMPUTE VOLUME
                ID=[9], STRATE=[-100] (cms), RELRATE=[0.40] (cms)
999
    *$*********************
1000
1001
1002
    1003
                    P-SWM P-9 - STORAGE VOLUME ESTIMATION
1004
                          (BBP & HIGHWAY 404)
1005
    1006
    *$**********************
1007
1008
                          ** PR-R-404-7 **
    *$**********************
1009
1010
1011
    CALIB NASHYD
                  NHYD=[10], NHYD=["PR-R-404-7"], DT=[1]min, AREA=[6.50] (ha),
1012
                  DWF = [0.00] (cms), CN/C = [61], IA = [16.2] (mm),
1013
                  N=[3], TP=[0.65]hrs,
1014
                  END=-1
1015
    *-----
1016
1017
    * Peak flow to watrourse from P-SWM P-9 will be diverted as follows:
       -0.10 cms (outflow from P-SWM P-9 - HYD 1) will drain to watercourse.
1018
1019
      -Flows in excess of the 0.10 cms will remain in the pond(HYD 2).
    *_____
1020
1021
1022
    DIVERT HYD
                  IDin=[10], NIDout=[2]max five,
1023
                outflow hydrographs (ID, NHYD) = [1, "watercourse"/2, "To Pond"]
1024
                flow distribution table: (modify as necessary)
1025
                Note: all flows are in (cms)
1026
                     QIDi + QIDii = QTOTAL
                    [0.000 + 0.00]
                                 = 0.00 ]
1027
1028
                    [0.050 + 0.00 = 0.050]
1029
                    [0.065 + 0.00 = 0.065]
1030
                    [0.071 + 2.00 = 2.710] end
1031
1032
    *$**********************
1033
1034
                    ** REQUIRED VOLUME - P-SWM P-9 **
1035
                    (Assuming a relase rate of 0.10 cms)
```

```
1036
1037
1038
               ID=[10], STRATE=[-100] (cms), RELRATE=[0.10] (cms)
1039
    *$********************
1040
1041
1042
    1043
                  TOTAL FLOWS TO CULVERT PR-R-404-10
                       (BBP & HIGHWAY 404)
1044
    1045
1046
    *$*********************
1047
                       ** PR-R-404-11 **
1048
    *$*************************
1049
1050
1051
    CALIB NASHYD
                NHYD=[1], NHYD=["PR-R-404-11"], DT=[1]min, AREA=[29.30] (ha),
1052
                DWF = [0.00] (cms), CN/C = [60], IA = [16.9] (mm),
1053
                N=[3], TP=[0.91]hrs,
                END=-1
1054
1055
    *$*********************
1056
1057
                       ** EX-CL-404-2 **
    *$********************
1058
1059
1060
    CALIB NASHYD
               NHYD=[2], NHYD=["PR-R-404-11"], DT=[1]min, AREA=[7.3] (ha),
1061
                DWF = [0.00] (cms), CN/C = [60], IA = [16.9] (mm),
1062
                N=[3], TP=[0.40]hrs,
                END = -1
1063
1064
    *$*********************
1065
                      ** PR-R-404-10 **
1066
    *$**********************
1067
1068
1069
    CALIB NASHYD
                NHYD=[3], NHYD=["PR-CL-404-2"], DT=[1]min, AREA=[2.20] (ha),
1070
                DWF = [0.00] (cms), CN/C = [64], IA = [14.3] (mm),
1071
                N=[3], TP=[0.51]hrs,
1072
                END=-1
1073
1074
    *$**********************
1075
                   ** TOTAL FLOW AT PR-R-404-10 **
    *$********************
1076
1077
1078
                IDsum=[10], NHYD=["TOT"], IDs to add=[1+2+3]
1079
1080
    *$***********************
1081
1082
    1083
1084
      PEAK FLOWS AT PROPOSED CULVERTS (NOT RELATED TO SWM PONDS)
    1085
1086
    1087
    *$***********************
1088
                       ** PR-R-BBP-5 **
1089
1090
    *$**********************
1091
1092
    CALIB NASHYD
                NHYD=[1], NHYD=["PR-R-BBP-5"], DT=[1]min, AREA=[2.20] (ha),
1093
                DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
                N=[3], TP=[0.37]hrs,
1094
1095
                END=-1
1096
    *$********************
1097
                       ** PR-R-BBP-6A **
1098
    *$*********************
1099
1100
1101
    CALIB NASHYD
                NHYD=[2], NHYD=["PR-R-BBP-6A"], DT=[1]min, AREA=[542.60] (ha),
                DWF = [0.00] (cms), CN/C = [58], IA = [18.4] (mm),
1102
1103
                N=[3], TP=[4.60]hrs,
1104
                END=-1
```

```
1105
1106
    *$***********************
1107
                          ** PR-R-BBP-6B **
    *$**********************
1108
1109
1110
    CALIB NASHYD
                  NHYD=[3], NHYD=["PR-R-BBP-6B"], DT=[1]min, AREA=[5.60] (ha),
1111
                  DWF = [0.00] (cms), CN/C = [70], IA = [10.9] (mm),
                  N=[3], TP=[0.47]hrs,
1112
                  END=-1
1113
1114
    *$********************
1115
                     ** TOTAL FLOW AT PR-R-BBP-6B **
1116
    *$*******************
1117
1118
1119
                  IDsum=[4], NHYD=["TOT"], IDs to add=[1+2+3]
    ADD HYD
1120
1121
    *$***********************
                          ** PR-R-BBP-7 **
1122
    *$**********************
1123
1124
1125
    CALIB NASHYD
                  NHYD = [1], NHYD = ["PR - R - BBP - 7"], DT = [1]min, AREA = [2.40] (ha),
1126
                  DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
1127
                  N=[3], TP=[0.24]hrs,
1128
                  END=-1
1129
    *$********************
1130
                          ** PR-R-BBP-8A **
1131
1132
    *$**********************
1133
                  NHYD=[2], NHYD=["PR-R-BBP-8A"], DT=[1]min, AREA=[81.70] (ha),
1134
    CALTB NASHYD
                  DWF = [0.00] (cms), CN/C = [57], IA = [19.2] (mm),
1135
1136
                  N=[3], TP=[2.50]hrs,
1137
                  END=-1
1138
1139
                         ** PR-R-BBP-8B **
1140
    *$*********************
1141
1142
1143
    CALIB NASHYD
                  NHYD=[3], NHYD=["PR-R-BBP-8A"], DT=[1]min, AREA=[3.70](ha),
1144
                  DWF = [0.00] (cms), CN/C = [70], IA = [10.9] (mm),
                  N=[3], TP=[0.50]hrs,
1145
1146
                  END = -1
1147
    *$********************
1148
1149
                      ** TOTAL FLOW AT PR-R-BBP-8B **
1150
1151
1152
                  IDsum=[4], NHYD=["TOT"], IDs to add=[2+3]
    ADD HYD
1153
    *$*********************
1154
1155
                          ** PR-R-10IC-6 **
    *$********************
1156
1157
1158
    CALIB STANDHYD
                  ID=[5], NHYD=["PR-R-10IC-6"], DT=[1]min, Area=[3.4] (ha),
1159
                  XIMP = [0.48], TIMP = [0.48], DWF = [0] (cms), LOSS = [2],
1160
                  SCS curve number CN=[58],
1161
                  Pervious surfaces: IAper=[18.4](mm), SLPP=[45](%),
1162
                                 LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
1163
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1164
                                 LGI=[151] (m), MNI=[0.015], SCI=[0] (min),
1165
                  END=-1
1166
    1167
1168
                          FLOWS TO PR-CL-BBP-2
    1169
1170
    1171
1172
                          ** PR-R-10IC-3 **
1173
    *$********************
```

```
1174
1175
                    NHYD = [8], NHYD = ["PR - R - 10IC - 3"], DT = [1]min, AREA = [1.40] (ha),
     CALIB NASHYD
1176
                    DWF = [0.00] (cms), CN/C = [67], IA = [12.5] (mm),
1177
                    N=[3], TP=[0.29]hrs,
1178
                    END=-1
1179
     *$**********************
1180
                            ** PR-R-10IC-2 **
1181
     *$********************
1182
1183
                    ID=[9], NHYD=["PR-R-10IC-2"], DT=[1]min, Area=[3.10] (ha),
1184
     CALIB STANDHYD
1185
                    XIMP=[0.36], TIMP=[0.36], DWF=[0] (cms), LOSS=[2],
                    SCS curve number CN=[61],
1186
1187
                    Pervious surfaces: IAper=[16.2](mm), SLPP=[42](%),
1188
                                    LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
1189
                    Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1190
                                    LGI = [144] (m), MNI = [0.015], SCI = [0] (min),
1191
                    END=-1
1192
     *$*********************
1193
                        ** TOTAL FLOW TO PR-R-10IC-2 **
1194
1195
     *$***********************
1196
1197
     ADD HYD
                   IDsum=[10], NHYD=["TOT"], IDs to add=[8+9]
1198
     *$**********************
1199
1200
                         ** ROUTED FLOW TO PR-CL-BBP-2 **
     *$**********************
1201
1202
     ROUTE CHANNEL
                    IDOUT=1 NHYD="to PR-CL-BBP-2" IDIN=10 DT=1.00min
1203
                    CHLGTH=1200.0 CHSLOPE=1.0% FPSLOPE=1.0%
1204
1205
                    VSN=9999 NSEG=1
1206
                         MANNING'S 'n'
                                    DISTANCE
1207
                           -0.070
                                      10.0
1208
                                      ELEVATION
                           DISTANCE
1209
                             0.0
                                      183.5
1210
                             1.5
                                      183.11
1211
                             3.0
                                      183.05
1212
                             4.0
                                      182.0
1213
                             4.5
                                      181.0
1214
                             5.5
                                      181.0
1215
                             6.0
                                      182.0
1216
                             7.0
                                      183.05
1217
                             8.5
                                      183.15
1218
                            10.0
                                      183.5
1219
1220
     *$***********************
                             ** PR-CL-BBP-2 **
1221
     *$**********************
1222
1223
1224
                    NHYD=[2], NHYD=["PR-CL-BBP-2"], DT=[1]min, AREA=[75.80](ha),
    CALIB NASHYD
1225
                    DWF = [0.00] (cms), CN/C = [68], IA = [12.0] (mm),
1226
                    N=[3], TP=[1.21]hrs,
1227
                    END=-1
1228
1229
     1230
                       ** TOTAL FLOW AT PR-CL-BBP-2 **
1231
     *$**********************
1232
1233
     ADD HYD
                    IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
1234
     *$********************
1235
                              ** PR-R-C4IC-4 **
1236
     *$**********************
1237
1238
1239
                    ID=[4], NHYD=["PR-R-C4IC-4"], DT=[1]min, Area=[2.50] (ha),
     CALIB STANDHYD
1240
                    XIMP=[0.55], TIMP=[0.55], DWF=[0] (cms), LOSS=[2],
1241
                    SCS curve number CN=[58],
                    Pervious surfaces: IAper=[18.4](mm), SLPP=[42](%),
1242
```

```
1243
                                  LGP = [40] (m), MNP = [0.35], SCP = [0] (min),
1244
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1245
                                  LGI=[129] (m), MNI=[0.015], SCI=[0] (min),
1246
                   END=-1
1247
1248
     *$************************
1249
                           ** PR-CL-BBP-3 **
1250
    *$**********************
1251
1252
     CALIB NASHYD
                   NHYD=[5], NHYD=["PR-CL-BBP-2"], DT=[1]min, AREA=[27.30](ha),
1253
                   DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
1254
                   N=[3], TP=[0.71]hrs,
1255
                   END=-1
1256
1257
     1258
                          FLOWS TO PR-CL-BBP-5
     1259
1260
     *$*********************
12.61
                           ** PR-R-C4IC-5 **
1262
     1263
1264
1265
     CALIB NASHYD
                  NHYD=[7], NHYD=["PR-R-C4IC-5"], DT=[1]min, AREA=[0.40] (ha),
1266
                   DWF = [0.00] (cms), CN/C = [65], IA = [13.7] (mm),
1267
                   N=[3], TP=[0.10]hrs,
1268
                   END=-1
1269
     *$***********************
1270
1271
                           ** PR-R-C4IC-6 **
    *$*************************
1272
1273
1274
     CALIB NASHYD
                   NHYD = [8], NHYD = ["PR - R - C4IC - 6"], DT = [1]min, AREA = [1.30] (ha),
                   DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
1275
1276
                   N=[3], TP=[0.28]hrs,
1277
                   END = -1
1278
     *$*********************
1279
1280
                           ** PR-R-C4IC-7 **
1281
     *$***********************
1282
1283
     CALIB STANDHYD
                   ID=[9], NHYD=["PR-R-C4IC-7"], DT=[1]min, Area=[3.10] (ha),
                   XIMP=[0.37], TIMP=[0.37], DWF=[0] (cms), LOSS=[2],
1284
1285
                   SCS curve number CN=[58],
1286
                         surfaces: IAper=[18.4] (mm), SLPP=[48](%),
                   Pervious
1287
                                  LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
1288
                   Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1289
                                 LGI=[144] (m), MNI=[0.015], SCI=[0] (min),
1290
                   END=-1
1291
     *$***********************
1292
1293
                       ** TOTAL FLOW AT PR-CL-BBP-4 **
1294
    *$*************************
1295
1296
                  IDsum=[10], NHYD=["TOT"], IDs to add=[7+8+9]
1297
1298
     *$**********************
1299
1300
     ** ROUTED FLOW TO PR-CL-BBP-5 **
1301
     *$**********************
1302
1303
1304
     ROUTE CHANNEL
                   IDOUT=1 NHYD="to PR-CL-BBP-5" IDIN=10 DT=1.00min
1305
                   CHLGTH=580.0 CHSLOPE=1.0% FPSLOPE=1.0%
1306
                   VSN=9999 NSEG=1
                        MANNING'S 'n'
1307
                                   DISTANCE
1308
                         -0.070
                                    10.0
1309
                         DISTANCE
                                   ELEVATION
1310
                           0.0
                                    183.5
1311
                           1.5
                                    183.11
```

```
3.0
                                     183.05
1313
                             4.0
                                     182.0
                             4.5
1314
                                     181.0
1315
                             5.5
                                     181.0
1316
                             6.0
                                      182.0
1317
                             7.0
                                     183.05
1318
                            8.5
                                     183.15
1319
                            10.0
                                     183.5
1320
     *$*********************
1321
                            ** PR-CL-BBP-5 **
1322
     *$********************
1323
1324
1325
                    NHYD=[2], NHYD=["PR-CL-BBP-2"], DT=[1]min, AREA=[22.10](ha),
     CALIB NASHYD
1326
                    DWF = [0.00] (cms), CN/C = [64], IA = [14.3] (mm),
1327
                    N=[3], TP=[0.68]hrs,
1328
                    END = -1
1329
     *$********************
1330
                        ** TOTAL FLOW AT PR-CL-BBP-5 **
1331
     *$*********************
1332
1333
1334
     ADD HYD
                   IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
1335
     1336
1337
                        CULVERTS AT BBP & BATHURST STREET
     1338
1339
     *$**********************
1340
1341
                            ** PR-R-BST-1 **
     *$***********************
1342
1343
1344
     CALIB NASHYD
                   NHYD = [1], NHYD = ["PR - R - BST - 1"], DT = [1]min, AREA = [2.20] (ha),
1345
                    DWF = [0.00] (cms), CN/C = [74], IA = [8.9] (mm),
1346
                    N=[3], TP=[0.23]hrs,
1347
                    END = -1
1348
1349
     *$**********************
1350
                             ** PR-CL-BBP-7 **
     *$********************
1351
1352
1353
     CALIB STANDHYD
                    ID=[2], NHYD=["PR-CL-BBP-7"], DT=[1]min, Area=[2.0](ha),
1354
                    XIMP=[0.46], TIMP=[0.46], DWF=[0] (cms), LOSS=[2],
1355
                    SCS curve number CN=[70],
1356
                    Pervious surfaces: IAper=[10.9](mm), SLPP=[49](%),
1357
                                   LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
1358
                    Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1359
                                   LGI=[118] (m), MNI=[0.015], SCI=[0] (min),
1360
                    END=-1
1361
1362
     *$**********************
1363
                        ** TOTAL FLOW AT PR-CL-BBP-7 **
1364
     *$*********************
1365
1366
     ADD HYD
                   IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
1367
1368
                            ** PR-R-BST-2 **
1369
     *$*********************
1370
1371
1372
                    ID=[4], NHYD=["PR-R-BST-2"], DT=[1]min, Area=[2.0] (ha),
     CALIB STANDHYD
                    XIMP=[0.40], TIMP=[0.40], DWF=[0] (cms), LOSS=[2],
1373
1374
                    SCS curve number CN=[70],
1375
                    Pervious surfaces: IAper=[10.9](mm), SLPP=[47](%),
1376
                                   LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
1377
                    Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1378
                                   LGI=[115] (m), MNI=[0.015], SCI=[0] (min),
1379
                    END=-1
1380
```

```
*$***********************
1381
1382
                      ** TOTAL FLOW AT PR-R-BST-2 **
1383
1384
1385
                  IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
1386
    *$**********************
1387
    1388
                          ** PR-R-BST-3 **
1389
    *$*********************
1390
1391
                  NHYD=[1], NHYD=["PR-R-BST-3"], DT=[1]min, AREA=[3.60] (ha),
1392
    CALIB NASHYD
1393
                  DWF = [0.00] (cms), CN/C = [72], IA = [9.9] (mm),
1394
                  N=[3], TP=[0.52]hrs,
1395
                  END=-1
1396
    *$*********************
1397
                           ** PR-CL-BBP-8 **
1398
1399
    *$********************
1400
                  ID=[2], NHYD=["PR-CL-BBP-8"], DT=[1]min, Area=[2.10](ha),
1401
    CALIB STANDHYD
1402
                  XIMP = [0.48], TIMP = [0.48], DWF = [0] (cms), LOSS = [2],
1403
                  SCS curve number CN=[70],
1404
                  Pervious surfaces: IAper=[10.9](mm), SLPP=[49](%),
1405
                                 LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
1406
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
                                 LGI=[118] (m), MNI=[0.015], SCI=[0] (min),
1407
1408
1409
    *$**********************
1410
                      ** TOTAL FLOW AT PR-CL-BBP-8 **
1411
    *$*********************
1412
1413
                  IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
    ADD HYD
1414
1415
1416
                          ** PR-R-BST-4 **
1417
1418
    *$********************
1419
                  ID=[4], NHYD=["PR-R-BST-2"], DT=[1]min, Area=[2.0] (ha),
1420
    CALIB STANDHYD
1421
                  XIMP=[0.40], TIMP=[0.40], DWF=[0] (cms), LOSS=[2],
1422
                  SCS curve number CN=[70],
1423
                  Pervious surfaces: IAper=[10.9] (mm), SLPP=[51](%),
1424
                                 LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
1425
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1426
                                 LGI=[115] (m), MNI=[0.015], SCI=[0] (min),
1427
                  END=-1
1428
    *$**********************
1429
1430
                      ** TOTAL FLOW AT PR-R-BST-4 **
1431
    *$***********************
1432
1433
                  IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
    ADD HYD
1434
1435
    1436
                 CULVERTS AT BBP & 2ND CONCESSION ROAD INTERCHNAGE
1437
    1438
    *$*********************
1439
                          ** PR-R-2CON-3 **
1440
    *$*******************
1441
1442
1443
                  NHYD=[1], NHYD=["PR-R-2CON-3"], DT=[1]min, AREA=[243.60] (ha),
    CALIB NASHYD
                  DWF = [0.00] (cms), CN/C = [66], IA = [13.1] (mm),
1444
1445
                  N=[3], TP=[2.31]hrs,
1446
                  END=-1
1447
       *********************
1448
                           ** PR-CL-BBP-14 **
```

```
1450
1451
1452
                    NHYD=[2], NHYD=["PR-CL-BBP-14"], DT=[1]min, AREA=[37.0] (ha),
     CALIB NASHYD
1453
                    DWF = [0.00] (cms), CN/C = [63], IA = [14.9] (mm),
1454
                    N=[3], TP=[0.85]hrs,
1455
                    END=-1
1456
     *$**********************
1457
                            ** PR-R-LST-1 **
1458
     *$*********************
1459
1460
1461
     CALIB NASHYD
                    NHYD=[3], NHYD=["PR-R-LST-1"], DT=[1]min, AREA=[40.20](ha),
                    DWF = [0.00] (cms), CN/C = [61], IA = [16.20] (mm),
1462
1463
                    N=[3], TP=[1.04]hrs,
1464
                    F.ND=-1
1465
1466
     *$***********************
1467
                             ** PR-CL-BBP-15 **
     *$**********************
1468
1469
1470
     CALIB STANDHYD
                    ID=[4], NHYD=["PR-CL-BBP-15 "], DT=[1]min, Area=[1.80](ha),
1471
                    XIMP=[0.45], TIMP=[0.45], DWF=[0] (cms), LOSS=[2],
1472
                    SCS curve number CN=[61],
1473
                    Pervious surfaces: IAper=[16.2] (mm), SLPP=[43](%),
1474
                                    LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
1475
                    Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1476
                                   LGI=[110] (m), MNI=[0.015], SCI=[0] (min),
1477
                    END=-1
1478
     *$***********************
1479
                        ** TOTAL FLOW AT PR-CL-BBP-15 **
1480
     *$**********************
1481
1482
     ADD HYD
                    IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
1483
1484
     *$***********************
1485
     *$**********************
1486
1487
                             ** PR-R-LST-2 **
1488
     *$*************************
1489
1490
     CALTB NASHYD
                    NHYD=[1], NHYD=["PR-R-LST-2"], DT=[1]min, AREA=[8.80] (ha),
1491
                    DWF = [0.00] (cms), CN/C = [60], IA = [16.9] (mm),
1492
                    N=[3], TP=[0.60]hrs,
1493
                    END=-1
1494
        *********************
1495
1496
                             ** PR-CL-BBP-16 **
     *$********************
1497
1498
1499
     CALIB STANDHYD
                    ID=[2], NHYD=["PR-CL-BBP-16"], DT=[1]min, Area=[1.20](ha),
1500
                    XIMP=[0.41], TIMP=[0.41], DWF=[0] (cms), LOSS=[2],
1501
                    SCS curve number CN=[61],
1502
                    Pervious
                            surfaces: IAper=[16.2] (mm), SLPP=[48](%),
1503
                                   LGP=[40] (m), MNP=[0.35], SCP=[0] (min),
1504
                    Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1505
                                   LGI=[89] (m), MNI=[0.015], SCI=[0] (min),
1506
                    END=-1
1507
     *$********************
1508
                       ** TOTAL FLOW AT PR-CL-BBP-16 **
1509
     *$*********************
1510
1511
1512
     ADD HYD
                    IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
1513
     *$*********************
1514
1515
                             ** PR-R-LST-3 **
     *$*********************
1516
1517
1518
     CALIB STANDHYD
                    ID=[4], NHYD=["PR-R-LST-3"], DT=[1]min, Area=[1.10] (ha),
```

```
1519
                  XIMP = [0.40], TIMP = [0.40], DWF = [0] (cms), LOSS = [2],
1520
                  SCS curve number CN=[58],
1521
                  Pervious surfaces: IAper=[18.4] (mm), SLPP=[47](%),
1522
                                LGP = [40] (m), MNP = [0.35], SCP = [0] (min),
1523
                  Impervious Surfaces: IAimp=[2](mm), SLPI=[1](%),
1524
                                LGI=[86] (m), MNI=[0.015], SCI=[0] (min),
1525
                  END=-1
1526
    *$**********************
1527
                      ** TOTAL FLOW AT PR-R-LST-3 **
1528
    *$**********************
1529
1530
1531
                  IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
    ADD HYD
1532
    *$********************
1533
                         ** PR-CL-BBP-17 **
1534
1535
    *$**********************
1536
                 NHYD=[1], NHYD=["PR-CL-BBP-17"], DT=[1]min, AREA=[22.0](ha),
1537
    CALIB NASHYD
1538
                  DWF = [0.00] (cms), CN/C = [65], IA = [13.7] (mm),
1539
                  N=[3], TP=[0.65]hrs,
1540
                  END=-1
1541
1542
    1543
                 CULVERTS AT BBP & HIGHWAY 404 INTERCHANGE
1544
    1545
    *$********************
1546
1547
                          ** PR-R-404-3 **
1548
    *$***********************
1549
1550
    CALIB NASHYD
                  NHYD=[1], NHYD=["PR-R-404-3"], DT=[1]min, AREA=[118.50] (ha),
                  DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
1551
1552
                  N=[3], TP=[2.02]hrs,
1553
                  END = -1
1554
1555
    *$*********************
1556
                         ** PR-R-404-2 **
1557
    *$*************************
1558
1559
    CALTB NASHYD
                  NHYD=[2], NHYD=["PR-R-404-2"], DT=[1]min, AREA=[0.90] (ha),
1560
                  DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
1561
                  N=[3], TP=[0.32]hrs,
1562
                  END=-1
1563
    *$**********************
1564
1565
                      ** TOTAL FLOW AT PR-R-404-2 **
    *$*********************
1566
1567
1568
    ADD HYD
                  IDsum=[3], NHYD=["TOT"], IDs to add=[1+2]
1569
    *$*********************
1570
1571
                          ** PR-R-404-1 **
    *$*********************
1572
1573
1574
    CALIB NASHYD
                  NHYD=[4], NHYD=["PR-R-404-1"], DT=[1]min, AREA=[1.70] (ha),
1575
                  DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
1576
                  N=[3], TP=[0.47]hrs,
1577
                  END=-1
1578
1579
    *$*********************
                     ** TOTAL FLOW AT PR-R-404-1 **
1580
1581
    *$********************
1582
                  IDsum=[5], NHYD=["TOT"], IDs to add=[3+4]
1583
    ADD HYD
1584
    1585
1586
1587
```

```
*$**********************
1588
1589
                             ** PR-R-404-8A **
1590
     *$**********************
1591
1592
     CALIB NASHYD
                    NHYD=[8], NHYD=["PR-R-404-8A"], DT=[1]min, AREA=[2.40] (ha),
1593
                    DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
1594
                    N=[3], TP=[0.50]hrs,
1595
                    END=-1
1596
     *$*********************
1597
1598
                             ** PR-R-404-8B **
     *$*********************
1599
1600
1601
                    NHYD=[9], NHYD=["PR-R-404-8B"], DT=[1]min, AREA=[2.60] (ha),
     CALIB NASHYD
1602
                    DWF = [0.00] (cms), CN/C = [64], IA = [14.3] (mm),
1603
                    N=[3], TP=[0.51]hrs,
1604
                    END=-1
1605
1606
     *$********************
                              ** PR-R-404-9 **
1607
     *$*********************
1608
1609
1610
     CALIB NASHYD
                    NHYD = [10], NHYD = ["PR-R-404-9"], DT = [1]min, AREA = [1.80] (ha),
1611
                    DWF = [0.00] (cms), CN/C = [62], IA = [15.6] (mm),
1612
                    N=[3], TP=[0.26]hrs,
1613
                    END=-1
1614
1615
     1616
1617
                    TZERO=[0.0], METOUT=[0], NSTORM=[1], NRUN=[005]
     START
1618
                    24SCS005.stm
1619
1620
     START
                    TZERO=[0.0], METOUT=[0], NSTORM=[1], NRUN=[010]
                    24SCS010.stm
1621
1622
1623
     START
                    TZERO=[0.0], METOUT=[0], NSTORM=[1], NRUN=[025]
1624
                    24SCS025.stm
1625
1626
     START
                    TZERO=[0.0], METOUT=[0],
                                         NSTORM=[1], NRUN=[050]
1627
                    24SCS050.stm
1628
1629
     START
                    TZERO=[0.0], METOUT=[0], NSTORM=[1], NRUN=[100]
1630
                    24SCS100.stm
1631
1632
    FINISH
1633
1634
1635
1636
1637
```

```
______
2
3
               M H
                    H Y Y M M OOO
                                      999
                                           999
     SSSSS W W M
                                                =======
                      ΥΥ
                           MM MM O O
                                      9 9 9 9
4
         W W W
             MM MM
                  Η
                    Η
                                    ## 9 9
                                           9 9
                           M M M O
5
     SSSSS W W W M M M
                  ннннн
                       Y
                                                Ver 4.05
                                      9999
                           M M O O
6
         W
             M M
                  н н
                       Y
                                           9999
                                                Sept 2011
            M
               м н
                   Н
7
     SSSSS W W
                       Y
                          M M OOO
                                        9
                                             9
                                                =======
                                      9 9 9 9
8
                                                # 1281254
                                       999
9
                                           999
        StormWater Management HYdrologic Model
10
   ******************
11
   12
   ****** A single event and continuous hydrologic simulation model *******
1.3
   ****** based on the principles of HYMO and its successors
14
1.5
                   OTTHYMO-83 and OTTHYMO-89.
   *******************
16
   ****** Distributed by: J.F. Sabourin and Associates Inc.
17
18
                    Ottawa, Ontario: (613) 836-3884
19
   *****
                     Gatineau, Quebec: (819) 243-6858
2.0
                    E-Mail: swmhymo@jfsa.Com
   ******************
21
22
23
   2.4
   +++++++ Licensed user: AECOM
                                                ++++++++
   +++++++ Kitchener
25
                                SERIAL#:1281254
                                                ++++++++
26
   27
   ******************
28
29
                +++++ PROGRAM ARRAY DIMENSIONS +++++
   *****
30
               Maximum value for ID numbers : 10
31
               Max. number of rainfall points: 105408
32
               Max. number of flow points : 105408
   *******************
33
34
35
   **** DESCRIPTION SUMMARY TABLE HEADERS (units depend on METOUT in START) ****
36
        _____****
         ID: Hydrograph IDentification numbers, (1-10).
37
   ***** NHYD: Hydrograph reference numbers, (6 digits or characters).
38
   ***** AREA: Drainage area associated with hydrograph, (ac.) or (ha.).  
***** QPEAK: Peak flow of simulated hydrograph, (ft^3/s) or (m^3/s).
39
40
41
   ***** TpeakDate_hh:mm is the date and time of the peak flow.
42
   ***** R.V.: Runoff Volume of simulated hydrograph, (in) or (mm).
   ****
        R.C.: Runoff Coefficient of simulated hydrograph, (ratio).
43
   ****
44
         *: see WARNING or NOTE message printed at end of run.
45
         **: see ERROR message printed at end of run.
   *******************
46
47
48
49
   50
51
   ************************
52
53
   54
   *****************
         DATE: 2023-02-02 TIME: 03:43:36 RUN COUNTER: 000181
55
56
   ******************
57
   * Input filename: C:\MODELING\BBP\BBP-CU~1.DAT
   * Output filename: C:\MODELING\BBP\BBP-CU~1.out
58
59
   * Summary filename: C:\MODELING\BBP\BBP-CU~1.sum
60
   * User comments:
61
   * 1:
   62
63
   * 3:_
64
65
66
   #******************
67
     Project Name: BRADFORD BYPASS
                                      JOB NUMBER: [60636190] *
68
         : Jan. 20, 2023
```

Date

```
70
       Modeller
               : [jrm]
 71
               : AECOM
       Company
       License # : 1281254
 72
 73
 74
 75
      Notes: This hydrologic model was developed for the BBP ultimate conditions *
 76
    #
            A new Berm is proposed to isolate flows draining to P-SWM P-2 and
 77
            the tributary of Penville Creek.
            Estimated controlled flows by the SWM ponds based on an assumed
 78
 79
    #
            release flow rate from the SWM pond.
 80
                 PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
 81
                       PROPOSED SWM PONDS (CONTROLLED FLOWS)
 82
 83
                         Proposed Drainage Conditions
                   2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
 84
 85
    #************************
 86
 87
      ** END OF RUN : 1
 88
 89
 90
 91
 92
 93
 94
 95
 96
     RUN: COMMAND#
 97
     002:0001-----
98
        START
99
         [TZERO =
                  .00 hrs on
                                0.1
100
         [METOUT= 2 (1=imperial, 2=metric output)]
101
         [NSTORM= 1]
102
         [NRUN = 2]
      *******************
103
104
       Project Name: BRADFORD BYPASS
                                                JOB NUMBER: [60636190] *
105
    # Date : Jan. 20, 2023
       Modeller : [jrm]
Company : AECOM
106
      Modeller
107
       License # : 1281254
108
109
110
111
      Notes: This hydrologic model was developed for the BBP ultimate conditions *
112
            A new Berm is proposed to isolate flows draining to P-SWM P-2 and
113
            the tributary of Penville Creek.
114
            Estimated controlled flows by the SWM ponds based on an assumed
115
            release flow rate from the SWM pond.
116
                 PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
117
118
    #
                       PROPOSED SWM PONDS (CONTROLLED FLOWS)
119
                         Proposed Drainage Conditions
120
                   2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
121
    #***********************
122
    #***********************
123
     002:0002-----
124
125
         READ STORM
126
         Filename = STORM.001
127
         Comment =
128
          [SDT= 6.00:SDUR= 24.00:PTOT= 57.59]
129
     130
131
     002:0003-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 08:PR-R-BBP-1 14.50 .287 No_date 12:30 16.34 .284
132
133
         [CN= 73.0: N= 3.00]
134
         [Tp = .55:DT = 1.00]
     002:0004-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
135
        DIVERT HYD -> 08:PR-R-BBP-1 14.50 .287 No_date 12:30 16.34 n/a
136
              diverted <= 09:To PR-R-BB 14.50
                                             .287 No_date 12:30
                                                                16.34 n/a
137
              diverted <= 10:To Pond
                                     .00
                                             .000 No_date 0:00
                                                                .00 n/a
138
```

```
002:0005-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     * COMPUTE VOLUME 08:PR-R-BBP-1 14.50 .287 No_date 12:30 16.34 n/a
140
141
     142
     002:0006-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
143
         CALIB NASHYD 01:PR-R-BBP-9 5.40 .132 No_date 12:18 15.53 .270
144
          [CN= 72.0: N= 3.00]
145
146
          [Tp = .38:DT = 1.00]
147
      002:0007-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-BBP-9 6.60 .155 No_date 12:20 15.47 .269
148
          [CN=72.0: N=3.00]
          [Tp= .40:DT= 1.00]
150
      002:0008-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1.51
         ADD HYD 01:PR-R-BBP-9 5.40 .132 No_date 12:18 15.53 n/a + 02:PR-R-BBP-9 6.60 .155 No_date 12:20 15.47 n/a [DT= 1.00] SUM= 03:TOT 12.00 .286 No_date 12:19 15.50 n/a
152
153
154
      002:0009-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
155
         CALIB NASHYD 04:P-SWM P-2 3.90 .109 No_date 12:17 17.19 .298
156
157
          [CN=74.0: N=3.00]
158
          [Tp= .37:DT= 1.00]
159
      002:0010-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 03:TOT 12.00 .286 No_date 12:19 15.50 n/a + 04:P-SWM P-2 3.90 .109 No_date 12:17 17.19 n/a [DT= 1.00] SUM= 07:TOT 15.90 .395 No_date 12:18 15.91 n/a
160
161
162
      163
164
165
166
     002:0012-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
167
         COMPUTE VOLUME 07:TOT 15.90 .395 No_date 12:18 15.91 n/a {ST= .130 ha.m to control at .050 (cms)}
168
169
     170
     171
     002:0013-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
172
         CALIB NASHYD 01:EX-CL-400- 49.00 1.459 No_date 12:27 23.03 .400
173
174
          [CN= 79.0: N= 3.00]
          [Tp= .53:DT= 1.00]
175
176
      002:0014-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         ROUTE CHANNEL -> 01:EX-CL-400- 49.00 1.459 No_date 12:27 23.03 n/a [RDT= 1.00] out<- 02:to PR-CL-2 49.00 1.272 No_date 12:42 23.03 n/a
177
178
179
          [L/S/n = 825./.850/.070]
          {Vmax= .822:Dmax= 1.126}
180
      002:0015-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
181
         CALIB NASHYD 03:PR-R-BBP-1 8.80 .169 No_date 12:29 15.53 .270
          [CN=72.0: N=3.00]
183
184
          [Tp= .53:DT= 1.00]
      002:0016-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
185
         CALIB NASHYD 04:EX-CL-400- 1.30 .047 No_date 12:18 23.03 .400
186
187
          [CN= 79.0: N= 3.00]
188
          [Tp = .40:DT = 1.00]
189
      002:0017-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB STANDHYD 05:PR-R-BBP-1 1.30 .167 No_date 11:55 36.88 .640
190
191
          [XIMP=.55:TIMP=.55]
192
          [LOSS= 2 :CN= 70.0]
193
          [Pervious area: IAper=10.90:SLPP=****:LGP= 8.:MNP=.350:SCP=
194
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 93.:MNI=.015:SCI= .0]
      002:0018-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
195
         ADD HYD 03:PR-R-BBP-1 8.80 .169 No_date 12:29 15.53 n/a
+ 04:EX-CL-400- 1.30 .047 No_date 12:18 23.03 n/a
+ 05:PR-R-BBP-1 1.30 .167 No_date 11:55 36.88 n/a
[DT= 1.00] SUM= 01:TOT 11.40 .232 No_date 12:24 18.82 n/a
196
197
198
199
      002:0019-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
200
         CALIB NASHYD 06:PR-CL-2 161.70 .501 No_date 16:20 10.66 .185
201
          [CN=65.0: N=3.00]
202
203
          [Tp= 3.38:DT= 1.00]
      002:0020----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
                     01:TOT 11.40 .232 No_date 12:24 18.82 n/a
+ 02:to PR-CL-2 49.00 1.272 No_date 12:42 23.03 n/a
+ 06:PR-CL-2 161.70 .501 No_date 16:20 10.66 n/a
205
         ADD HYD
206
207
```

```
[DT= 1.00] SUM= 07:TOT PR-CL- 222.10 1.560 No_date 12:42 13.81 n/a
208
       002:0021-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2.09
           ROUTE CHANNEL -> 07:TOT PR-CL- 222.10 1.560 No_date 12:42 13.81 n/a [RDT= 1.00] out<- 04:to PR-R-BB 222.10 1.546 No_date 12:46 13.81 n/a
210
211
             [L/S/n= 230./ .900/.070]
{Vmax= .853:Dmax= 1.151}
212
213
       002:0022-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
214
           CALIB NASHYD 09:PR-R-BBP-4 6.10 .159 No_date 12:14 14.76 .256
215
             [CN= 71.0: N= 3.00]
216
217
             [Tp= .32:DT= 1.00]
       002:0023-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
218
           ADD HYD 04:to PR-R-BB 222.10 1.546 No_date 12:46 13.81 n/a
+ 09:PR-R-BBP-4 6.10 .159 No_date 12:14 14.76 n/a
[DT= 1.00] SUM= 10:TOT 228.20 1.622 No_date 12:44 13.84 n/a
219
2.2.0
221
       002:0024-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
222
           CALIB NASHYD 01:PR-CL-1 4.80 .134 No_date 12:17 17.19 .298
223
             [CN= 74.0: N= 3.00]
224
             [Tp= .37:DT= 1.00]
225
       002:0025-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
226
           CALIB NASHYD 02:PR-R-BBP-2 5.90 .133 No_date 12:19 14.76 .256
227
228
             [CN= 71.0: N= 3.00]
229
             [Tp= .39:DT= 1.00]
       002:0026-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
230
          ADD HYD 01:PR-CL-1 4.80 .134 No_date 12:17 17.19 n/a + 02:PR-R-BBP-2 5.90 .133 No_date 12:19 14.76 n/a [DT= 1.00] SUM= 09:TOT 10.70 .267 No_date 12:18 15.85 n/a
231
232
233
       002:0027------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 03:EX-CL-400- 1.70 .061 No_date 12:08 15.97 .277
234
235
236
             [CN= 72.0: N= 3.00]
             [Tp= .23:DT= 1.00]
237
       002:0028-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
238
       ADD HYD 03:EX-CL-400- 1.70 .061 No_date 12:08 15.97 n/a + 09:TOT 10.70 .267 No_date 12:18 15.85 n/a [DT= 1.00] SUM= 01:TOT 12.40 .318 No_date 12:15 15.86 n/a
239
2.40
241
       002:0029-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
242
           CALIB NASHYD 04:PR-R-BBP-3 2.40 .086 No_date 12:06 14.76 .256
243
             [CN= 71.0: N= 3.00]
244
245
             [Tp= .20:DT= 1.00]
246
       002:0030-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 05:PR-CL-400- 2.20 .116 No_date 12:03 18.02 .313
247
248
            [CN= 75.0: N= 3.00]
             [Tp= .15:DT= 1.00]
249
       002:0031-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
250
           ADD HYD 04:PR-R-BBP-3 2.40 .086 No_date 12:06 14.76 n/a
+ 05:PR-CL-400- 2.20 .116 No_date 12:03 18.02 n/a
[DT= 1.00] SUM= 09:TOT 4.60 .199 No_date 12:04 16.32 n/a
251
252
253
       002:0032-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
254
            ADD HYD 01:TOT 12.40 .318 No_date 12:15 15.86 n/a + 09:TOT 4.60 .199 No_date 12:04 16.32 n/a + 10:TOT 228.20 1.622 No_date 12:44 13.84 n/a [DT= 1.00] SUM= 07:TOT 245.20 1.860 No_date 12:38 13.98 n/a
255
           ADD HYD
256
257
258
259
       002:0033-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ROUTE CHANNEL -> 07:TOT 245.20 1.860 No_date 12:38 13.98 n/a [RDT= 1.00] out<- 01:to PR-R-BB 245.20 1.720 No_date 12:53 13.98 n/a
260
261
             [L/S/n=895./1.000/.070]
2.62
263
             \{Vmax = .923:Dmax = 1.229\}
       002:0034-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
264
            CALIB NASHYD 02:PR-CL-400- 9.60 .171 No_date 12:30 14.76 .256
265
266
             [CN= 71.0: N= 3.00]
             [Tp= .54:DT= 1.00]
267
       002:0035-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
268
           ADD HYD
                           01:to PR-R-BB 245.20 1.720 No_date 12:53 13.98 n/a
269
                           + 02:TOT 9.60 .171 No_date 12:30 14.76 n/a
SUM= 02:TOT 254.80 1.859 No_date 12:51 14.01 n/a
270
             [DT= 1.00] SUM= 02:TOT
271
       002:0036-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
272
            ADD HYD 02:TOT 254.80 1.859 No_date 12:51 14.01 n/a + 08:PR-R-BBP-1 14.50 .287 No_date 12:30 16.34 n/a [DT= 1.00] SUM= 06:TOT 269.30 2.104 No_date 12:48 14.14 n/a
273
           ADD HYD
274
275
      276
```

```
278
     002:0037-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-BBP-9 6.60 .153 No_date 12:20 15.53 .270
279
280
          [CN= 72.0: N= 3.00]
281
          [Tp= .41:DT= 1.00]
      002:0038-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
282
         CALIB NASHYD 01:PR-R-10IC- 4.70 .054 No_date 12:14 7.35 .128
283
284
          [CN= 59.0: N= 3.00]
2.85
          [Tp = .29:DT = 1.00]
      002:0039-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
286
         CALIB STANDHYD 02:PR-CL-BBP- 2.30 .157 No_date 11:55 22.04 .383
287
          [XIMP=.35:TIMP=.35]
288
          [LOSS= 2 :CN= 51.0]
2.89
          [Pervious area: IAper=24.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 124.:MNI=.015:SCI= .0]
290
291
      002:0040-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
292
         ADD HYD 01:PR-R-10IC- 4.70 .054 No_date 12:14 7.35 n/a + 02:PR-CL-BBP- 2.30 .157 No_date 11:55 22.04 n/a [DT= 1.00] SUM= 03:TOT 7.00 .169 No_date 11:55 12.18 n/a
293
294
295
      002:0041-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
296
         CALIB NASHYD 04:PR-R-10IC- 1.30 .022 No_date 12:11 8.92 .155
297
298
          [CN= 62.0: N= 3.00]
          [Tp= .25:DT= 1.00]
299
      002:0042-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
300
         ADD HYD 03:TOT 7.00 .169 No_date 11:55 12.18 n/a + 04:PR-R-10IC- 1.30 .022 No_date 12:11 8.92 n/a [DT= 1.00] SUM= 05:TOT 8.30 .176 No_date 11:56 11.67 n/a
301
302
303
304
      002:0043-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB STANDHYD 06:PR-R-10IC- 2.70 .163 No_date 11:56 21.50 .373
305
306
          [XIMP=.30:TIMP=.30]
          [LOSS= 2 :CN= 58.0]
307
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
308
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 134.:MNI=.015:SCI=
309
      002:0044-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
310
     311
312
313
314
         DIVERT HYD -> 07:TOT 11.00 .339 No_date 11:56 14.08 n/a diverted <= 01:To PR-R-10 10.67 .252 No_date 11:56 14.08 n/a diverted <= 02:To Pond .33 .087 No_date 11:56 14.08 n/a
315
316
317
     002:0046-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-

* COMPUTE VOLUME 07:TOT 11.00 .339 No_date 11:56 14.08 n/a
318
319
     320
     321
     002:0047------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 01:PR-R-10IC- 1.40 .030 No_date 12:12 11.95 .207
322
323
324
          [CN=67.0: N=3.00]
325
          [Tp = .29:DT = 1.00]
326
      002:0048-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB STANDHYD 02:PR-R-10IC- 3.10 .227 No_date 11:56 25.39 .441
327
328
          [XIMP=.36:TIMP=.36]
329
          [LOSS= 2 :CN= 61.0]
          [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
330
331
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
332
      002:0049-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         333
334
335
      002:0050-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
336
         337
338
339
      002:0051-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
340
         COMPUTE VOLUME 03:TOT 4.50 .238 No_date 11:56 21.21 n/a {ST= .010 ha.m to control at .150 (cms)}
341
342
     343
     344
     002:0052-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
345
```

```
CALIB NASHYD
                           01:PR-R-C4IC- 13.40 .125 No_date 12:30 8.41 .146
346
           [CN= 61.0: N= 3.00]
347
348
           [Tp = .50:DT = 1.00]
349
      002:0053-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 02:PR-CL-BBP- 3.00 .318 No_date 11:56 34.33 .596
350
351
           [XIMP=.52:TIMP=.52]
352
           [LOSS= 2 :CN= 66.0]
           [Pervious area: IAper=13.10:SLPP=****:LGP= 40.:MNP=.350:SCP=
353
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
354
      002:0054-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
355
          ADD HYD 01:PR-R-C4IC- 13.40 .125 No_date 12:30 8.41 n/a + 02:PR-CL-BBP- 3.00 .318 No_date 11:56 34.33 n/a [DT= 1.00] SUM= 03:TOT 16.40 .335 No_date 11:57 13.15 n/a
357
358
359
      002:0055-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 04:PR-R-C4IC- 2.80 .158 No_date 11:56 20.52 .356
360
361
           [XIMP=.28:TIMP=.28]
           [LOSS= 2 :CN= 58.0]
362
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
363
364
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 137.:MNI=.015:SCI= .0]
365
      002:0056-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 05:PR-R-C4IC- 1.60 .101 No_date 11:55 21.50 .373
366
367
           [XIMP=.30:TIMP=.30]
368
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
369
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 103.:MNI=.015:SCI=
370
      002:0057-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
371
           ADD HYD 03:TOT 16.40 .335 No_date 11:57 13.15 n/a + 04:PR-R-C4IC- 2.80 .158 No_date 11:56 20.52 n/a + 05:PR-R-C4IC- 1.60 .101 No_date 11:55 21.50 n/a [DT= 1.00] SUM= 06:TOT 20.80 .592 No_date 11:56 14.78 n/a
372
          ADD HYD
373
374
375
      002:0058-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
376
          DIVERT HYD -> 06:TOT 20.80 .592 No_date 11:56 14.78 n/a diverted <= 09:To PR-R-C4 19.48 .320 No_date 11:56 14.78 n/a diverted <= 10:Pond 1.32 .272 No_date 11:56 14.78 n/a
377
379
      002:0059-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
380
      * COMPUTE VOLUME 06:TOT 20.80 .592 No_date 11:56 14.78 n/a
381
      382
383
     384
      002:0060-----ID:NHYD------AREA---OPEAK-TpeakDate hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-R-C4IC- .40 .014 No_date 12:01 10.66 .185
385
386
           [CN=65.0: N=3.00]
387
           [Tp = .10:DT = 1.00]
      002:0061-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
388
          CALIB NASHYD 02:PR-R-C4IC- 1.30 .020 No_date 12:13 8.92 .155
390
           [CN= 62.0: N= 3.00]
391
           [Tp= .28:DT= 1.00]
392
      002:0062----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 01:PR-R-C4IC- .40 .014 No_date 12:01 10.66 n/a + 02:PR-R-C4IC- 1.30 .020 No_date 12:13 8.92 n/a [DT= 1.00] SUM= 03:TOT 1.70 .029 No_date 12:05 9.33 n/a
393
394
395
396
      002:0063-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB STANDHYD 04:PR-R-C4IC- 3.10 .226 No_date 11:56 24.91 .432
397
           [XIMP=.37:TIMP=.37]
398
           [LOSS= 2 :CN= 58.0]
399
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
400
401
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
      002:0064-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
402
          ADD HYD 03:TOT 1.70 .029 No_date 12:05 9.33 n/a + 04:PR-R-C4IC- 3.10 .226 No_date 11:56 24.91 n/a [DT= 1.00] SUM= 05:TOT 4.80 .243 No_date 11:56 19.39 n/a
403
404
405
      002:0065-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
406
          DIVERT HYD -> 05:TOT 4.80 .243 No_date 11:56 19.39 n/a diverted <= 09:To PR-R-C4 3.98 .077 No_date 11:56 19.39 n/a diverted <= 10:Pond .82 .166 No_date 11:56 19.39 n/a
407
408
409
      002:0066-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
410
          COMPUTE VOLUME 05:TOT 4.80 .243 No_date 11:56 19.39 n/a {ST= .017 ha.m to control at .100 (cms)}
412
      413
414
```

```
002:0067-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
415
416
          CALIB STANDHYD 01:PR-R-2CON- 1.60 .097 No_date 12:01 22.33 .388
417
           [XIMP=.20:TIMP=.20]
418
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=***:LGP= 30.:MNP=.350:SCP=
419
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 210.:MNI=.015:SCI=
420
       002:0068-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
421
          CALIB STANDHYD 02:PR-CL-BBP- 3.00 .192 No_date 12:00
422
                                                                              23.73 .412
423
           [XIMP=.30:TIMP=.30]
424
            [LOSS= 2 :CN= 64.0]
            [Pervious area: IAper=14.30:SLPP=****:LGP= 30.:MNP=.350:SCP=
425
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 240.:MNI=.015:SCI= .0]
426
       002:0069-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
42.7
          ADD HYD 01:PR-R-2CON- 1.60 .097 No_date 12:01 22.33 n/a + 02:PR-CL-BBP- 3.00 .192 No_date 12:00 23.73 n/a [DT= 1.00] SUM= 03:TOT 4.60 .289 No_date 12:00 23.24 n/a
428
429
            [DT= 1.00] SUM= 03:TOT
430
431
       002:0070-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB STANDHYD 04:PR-R-2CON- 3.00 .263 No_date 11:57 29.82 .518
432
433
           [XIMP=.38:TIMP=.38]
434
            [LOSS= 2 : CN= 70.0]
435
            [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP=
                                                                              .01
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 163.:MNI=.015:SCI= .0]
436
437
       002:0071-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 03:TOT 4.60 .289 No_date 12:00 23.24 n/a + 04:PR-R-2CON- 3.00 .263 No_date 11:57 29.82 n/a [DT= 1.00] SUM= 06:TOT 7.60 .547 No_date 12:00 25.84 n/a
438
439
440
       002:0072-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
441
          DIVERT HYD -> 06:TOT 7.60 .547 No_date 12:00 25.84 n/a diverted <= 09:To waterco 7.30 .407 No_date 12:00 25.84 n/a diverted <= 10:Pond .30 .140 No_date 12:00 25.84 n/a
442
443
444
      002:0073-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
445
       * COMPUTE VOLUME 06:TOT 7.60 .547 No date 12:00 25.84 n/a
446
      447
      448
      002:0074-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
449
          CALIB NASHYD 01:PR-R-2CON- 28.00 .124 No_date 13:42 8.41 .146
450
451
            [CN= 61.0: N= 3.00]
452
            [Tp= 1.39:DT= 1.00]
453
       002:0075-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 02:PR-CL-BBP- 3.00 .325 No_date 11:57 35.94 .624
454
455
           [XIMP=.45:TIMP=.45]
456
            [LOSS= 2 :CN= 77.0]
            [Pervious area: IAper= 7.60:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
457
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
458
       002:0076-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
459
          460
461
462
      002:0077------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 04:PR-R-2CON- 1.50 .136 No_date 12:00 30.55 .530
463
464
           [XIMP=.28:TIMP=.28]
465
466
            [LOSS= 2 :CN= 78.0]
467
            [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
                                                                              .0]
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 100.:MNI=.015:SCI=
468
469
       002:0078-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ADD HYD 03:TOT 31.00 .328 No_date 11:57 11.07 n/a + 04:PR-R-2CON- 1.50 .136 No_date 12:00 30.55 n/a [DT= 1.00] SUM= 05:TOT 32.50 .461 No_date 11:57 11.97 n/a
470
471
472
      002:0079------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 06:PR-R-2CON- 3.00 .308 No_date 11:57 34.72 .603
473
474
475
            [XIMP=.40:TIMP=.40]
476
            [LOSS= 2 :CN= 78.0]
            [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
                                                                              .0]
477
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
478
       002:0080-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
479
           ADD HYD 05:TOT 32.50 .461 No_date 11:57 11.97 n/a
+ 06:PR-R-2CON- 3.00 .308 No_date 11:57 34.72 n/a
[DT= 1.00] SUM= 07:TOT 35.50 .770 No_date 11:57 13.89 n/a
480
          ADD HYD
481
482
      002:0081-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
483
```

```
DIVERT HYD -> 07:TOT 35.50 .770 No_date 11:57 13.89 n/a diverted <= 01:To PR-R-2C 34.36 .513 No_date 11:57 13.89 n/a diverted <= 02:To Pond 1.14 .257 No_date 11:57 13.89 n/a
485
486
487
      002:0082-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
     * COMPUTE VOLUME 07:TOT 35.50 .770 No_date 11:57 13.89 n/a
488
489
     490
     002:0083-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
491
        CALIB NASHYD 01:PR-R-404-4 3.50 .039 No_date 12:22 8.41 .146
492
493
         [CN= 61.0: N= 3.00]
          [Tp = .40:DT = 1.00]
      002:0084-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 02:PR-R-404-5 5.90 .040 No_date 12:51 8.41 .146
496
497
          [CN= 61.0: N= 3.00]
          [Tp = .77:DT = 1.00]
498
      002:0085-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
499
          ADD HYD 01:PR-R-404-4 3.50 .039 No_date 12:22 8.41 n/a
+ 02:PR-R-404-5 5.90 .040 No_date 12:51 8.41 n/a
[DT= 1.00] SUM= 03:TOT 9.40 .071 No_date 12:33 8.41 n/a
500
501
502
503
      002:0086-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 04:PR-R-404-6 3.70 .053 No_date 12:18 9.50 .165
504
505
          [CN= 63.0: N= 3.00]
506
          [Tp = .35:DT = 1.00]
507
      002:0087-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
        ADD HYD 03:TOT 9.40 .071 No_date 12:33 8.41 n/a + 04:PR-R-404-6 3.70 .053 No_date 12:18 9.50 n/a [DT= 1.00] SUM= 09:TOT 13.10 .119 No_date 12:24 8.72 n/a
508
509
510
      002:0088-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
511
         DIVERT HYD -> 09:TOT 13.10 .119 No_date 12:24 8.72 n/a diverted <= 01:To waterco 13.10 .119 No_date 12:24 8.72 n/a diverted <= 02:To Pond .00 .000 No_date 0:00 .00 n/a
512
513
514
      002:0089-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
515
      * COMPUTE VOLUME 09:TOT 13.10 .119 No_date 12:24 8.72 n/a
     517
     518
     002:0090-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
519
         520
521
          [CN= 61.0: N= 3.00]
522
          [Tp= .65:DT= 1.00]
      002:0091-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
523
         DIVERT HYD -> 10:PR-R-404-7 6.50 .050 No_date 12:42 8.41 n/a diverted <= 01:watercours 6.50 .050 No_date 12:42 8.41 n/a diverted <= 02:To Pond .00 .000 No_date 0:00 .00 n/a
524
525
526
     002:0092------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
* COMPUTE VOLUME 10:PR-R-404-7 6.50 .050 No_date 12:42 8.41 n/a
527
528
529
     530
     002:0093------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-CALIB NASHYD 01:PR-R-404-1 29.30 .163 No_date 13:03 7.88 .137
531
532
          [CN= 60.0: N= 3.00]
533
534
          [Tp= .91:DT= 1.00]
535
      002:0094-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-404-1 7.30 .074 No_date 12:23 7.88 .137
536
537
          [CN= 60.0: N= 3.00]
          [Tp= .40:DT= 1.00]
539
      002:0095-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 03:PR-CL-404- 2.20 .026 No_date 12:30 10.07 .175
540
541
          [CN= 64.0: N= 3.00]
542
          [Tp= .51:DT= 1.00]
543
      002:0096-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
                      01:PR-R-404-1 29.30 .163 No_date 13:03 7.88 n/a
+ 02:PR-R-404-1 7.30 .074 No_date 12:23 7.88 n/a
+ 03:PR-CL-404- 2.20 .026 No_date 12:30 10.07 n/a
M= 10:TOT 38.80 .228 No_date 12:45 8.01 n/a
544
545
546
547
          [DT= 1.00] SUM= 10:TOT
     548
     550
     551
     002:0097-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
552
```

```
CALIB NASHYD
                          01:PR-R-BBP-5 2.20 .055 No_date 12:17 15.53 .270
554
           [CN= 72.0: N= 3.00]
555
           [Tp= .37:DT= 1.00]
      002:0098------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:PR-R-BBP-6 542.60 .839 No_date 18:26 6.88 .120
556
557
558
           [CN= 58.0: N= 3.00]
559
           [Tp= 4.60:DT= 1.00]
      002:0099-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
560
          CALIB NASHYD 03:PR-R-BBP-6 5.60 .104 No_date 12:25 14.02 .243
561
562
           [CN= 70.0: N= 3.00]
           [Tp = .47:DT = 1.00]
      002:0100-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
564
         565
566
567
568
569
      002:0101-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-R-BBP-7 2.40 .081 No_date 12:09 15.53 .270
570
           [CN= 72.0: N= 3.00]
571
572
           [Tp = .24:DT = 1.00]
573
      002:0102----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 02:PR-R-BBP-8 81.70 .174 No_date 15:24 6.41 .111
574
575
           [CN=57.0: N=3.00]
           [Tp= 2.50:DT= 1.00]
576
577
      002:0103-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 03:PR-R-BBP-8 3.70 .066 No_date 12:27 14.02 .243
578
579
           [CN= 70.0: N= 3.00]
           [Tp= .50:DT= 1.00]
580
581
      002:0104-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       ADD HYD 02:PR-R-BBP-8 81.70 .174 No_date 15:24 6.41 n/a + 03:PR-R-BBP-8 3.70 .066 No_date 12:27 14.02 n/a [DT= 1.00] SUM= 04:TOT 85.40 .182 No_date 15:20 6.74 n/a
582
583
584
      002:0105-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB STANDHYD 05:PR-R-10IC- 3.40 .315 No_date 11:56 30.26 .525
586
           [XIMP=.48:TIMP=.48]
587
588
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 151.:MNI=.015:SCI= .0]
589
590
591
     592
     002:0106-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
593
          CALIB NASHYD 08:PR-R-10IC- 1.40 .030 No_date 12:12 11.95 .207
594
           [CN= 67.0: N= 3.00]
595
596
           [Tp = .29:DT = 1.00]
597
      002:0107-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 09:PR-R-10IC- 3.10 .227 No_date 11:56 25.39 .441
598
599
           [XIMP=.36:TIMP=.36]
           [LOSS= 2 :CN= 61.0]
600
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
601
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
602
603
      002:0108-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         ADD HYD 08:PR-R-10IC- 1.40 .030 No_date 12:12 11.95 n/a + 09:PR-R-10IC- 3.10 .227 No_date 11:56 25.39 n/a [DT= 1.00] SUM= 10:TOT 4.50 .238 No_date 11:56 21.21 n/a
604
605
606
      002:0109-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ROUTE CHANNEL -> 10:TOT 4.50 .238 No_date 11:56 21.21 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.50 .084 No_date 12:07 21.21 n/a
608
609
610
           [L/S/n= 1200./1.000/.070]
611
           \{Vmax = .541:Dmax = .364\}
      002:0110-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
612
          CALIB NASHYD 02:PR-CL-BBP- 75.80 .608 No_date 13:22 12.59 .219
613
614
           [CN= 68.0: N= 3.00]
           [Tp= 1.21:DT= 1.00]
615
      002:0111-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
616
          ADD HYD 01:to PR-CL-B 4.50 .084 No_date 12:07 21.21 n/a + 02:PR-CL-BBP- 75.80 .608 No_date 13:22 12.59 n/a [DT= 1.00] SUM= 03:TOT 80.30 .654 No_date 13:18 13.07 n/a
617
619
      002:0112-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
620
          CALIB STANDHYD 04:PR-R-C4IC- 2.50 .268 No_date 11:56 33.67 .585
621
```

```
[XIMP=.55:TIMP=.55]
623
          [LOSS= 2 :CN= 58.0]
624
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 129.:MNI=.015:SCI=
625
                                                                      .01
626
      002:0113-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 05:PR-CL-BBP- 27.30 .420 No_date 12:42 15.53 .270
627
628
          [CN= 72.0: N= 3.00]
          [Tp = .71:DT = 1.00]
629
     630
     631
      002:0114-----ID:NHYD------AREA---OPEAK-TpeakDate hh:mm---R.V.-R.C.-
632
         CALIB NASHYD 07:PR-R-C4IC- .40 .014 No_date 12:01 10.66 .185
633
634
          [CN=65.0: N=3.00]
635
          [Tp = .10:DT = 1.00]
      002:0115-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
636
         CALIB NASHYD 08:PR-R-C4IC- 1.30 .020 No_date 12:13 8.92 .155
637
638
          [CN= 62.0: N= 3.00]
639
          [Tp = .28:DT = 1.00]
      002:0116-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
640
         CALIB STANDHYD 09:PR-R-C4IC- 3.10 .226 No_date 11:56 24.91 .432
641
642
          [XIMP=.37:TIMP=.37]
643
          [LOSS= 2 :CN= 58.0]
644
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
645
      002:0117-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
646
      ADD HYD 07:PR-R-C4IC- .40 .014 No_date 12:01 10.66 n/a + 08:PR-R-C4IC- 1.30 .020 No_date 12:13 8.92 n/a + 09:PR-R-C4IC- 3.10 .226 No_date 11:56 24.91 n/a [DT= 1.00] SUM= 10:TOT 4.80 .243 No_date 11:56 19.39 n/a
647
648
649
650
      002:0118-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
651
         ROUTE CHANNEL -> 10:TOT 4.80 .243 No_date 11:56 19.39 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.80 .144 No_date 12:03 19.39 n/a
652
653
654
          [L/S/n = 580./1.000/.070]
          \{Vmax = .545:Dmax = .369\}
655
      002:0119-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
656
         CALIB NASHYD 02:PR-CL-BBP- 22.10 .208 No_date 12:43 10.07 .175
657
658
          [CN= 64.0: N= 3.00]
659
          [Tp= .68:DT= 1.00]
      002:0120-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
660
          661
662
663
     664
     666
      002:0121-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 01:PR-R-BST-1 2.20 .085 No_date 12:08 17.19 .298
667
668
          [CN= 74.0: N= 3.00]
669
          [Tp = .23:DT = 1.00]
670
      002:0122-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB STANDHYD 02:PR-CL-BBP- 2.00 .203 No_date 11:55 33.14 .575
671
672
          [XIMP=.46:TIMP=.46]
673
          [LOSS= 2 :CN= 70.0]
          [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
674
                                                                      .0]
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI=
675
676
      002:0123-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         ADD HYD 01:PR-R-BST-1 2.20 .085 No_date 12:08 17.19 n/a
+ 02:PR-CL-BBP- 2.00 .203 No_date 11:55 33.14 n/a
[DT= 1.00] SUM= 03:TOT 4.20 .253 No_date 12:00 24.79 n/a
677
678
679
      002:0124-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
680
         CALIB STANDHYD 04:PR-R-BST-2 2.00 .182 No_date 11:55
681
                                                                      30.65 .532
          [XIMP=.40:TIMP=.40]
682
683
          [LOSS= 2 :CN= 70.0]
          [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
                                                                      .0]
684
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI= .0]
685
      002:0125-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
686
          ADD HYD 03:TOT 4.20 .253 No_date 12:00 24.79 n/a + 04:PR-R-BST-2 2.00 .182 No_date 11:55 30.65 n/a [DT= 1.00] SUM= 05:TOT 6.20 .428 No_date 11:56 26.68 n/a
687
688
689
      002:0126-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
690
```

```
CALIB NASHYD
                            01:PR-R-BST-3 3.60
691
                                                       .070 No_date 12:28 15.53 .270
692
           [CN= 72.0: N= 3.00]
693
            [Tp = .52:DT = 1.00]
       002:0127------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 02:PR-CL-BBP- 2.10 .220 No_date 11:55 33.97 .590
694
695
696
            [XIMP=.48:TIMP=.48]
697
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
698
                                                                               .0]
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI=
699
       002:0128-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
700
          ADD HYD 01:PR-R-BST-3 3.60 .070 No_date 12:28 15.53 n/a + 02:PR-CL-BBP- 2.10 .220 No_date 11:55 33.97 n/a [DT= 1.00] SUM= 03:TOT 5.70 .236 No_date 11:56 22.32 n/a
701
702
703
704
       002:0129-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 04:PR-R-BST-2 2.00 .182 No_date 11:55 30.65 .532
705
706
            [XIMP=.40:TIMP=.40]
707
            [LOSS= 2 : CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI= .0]
708
709
710
       002:0130-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            DDD HYD 03:TOT 5.70 .236 No_date 11:56 22.32 n/a + 04:PR-R-BST-2 2.00 .182 No_date 11:55 30.65 n/a [DT= 1.00] SUM= 05:TOT 7.70 .418 No_date 11:56 24.49 n/a
711
          ADD HYD
712
713
      714
715
      716
      002:0131-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-R-2CON- 243.60 1.061 No_date 14:51 11.29 .196
717
            [CN= 66.0: N= 3.00]
718
719
            [Tp= 2.31:DT= 1.00]
720
       002:0132-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 02:PR-CL-BBP- 37.00 .274 No_date 12:56 9.50 .165
721
722
            [CN= 63.0: N= 3.00]
723
            [Tp = .85:DT = 1.00]
       002:0133-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
724
           CALIB NASHYD 03:PR-R-LST-1 40.20 .220 No_date 13:13 8.41 .146
725
726
            [CN= 61.0: N= 3.00]
727
            [Tp= 1.04:DT= 1.00]
728
       002:0134-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 04:PR-CL-BBP- 1.80 .166 No_date 11:55 29.64 .515
729
730
           [XIMP=.45:TIMP=.45]
731
            [LOSS= 2 :CN= 61.0]
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
732
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 110.:MNI=.015:SCI= .0]
733
734
       002:0135-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           ADD HYD 03:PR-R-LST-1 40.20 .220 No_date 13:13 8.41 n/a + 04:PR-CL-BBP- 1.80 .166 No_date 11:55 29.64 n/a [DT= 1.00] SUM= 05:TOT 42.00 .230 No_date 13:12 9.32 n/a
735
          ADD HYD
736
737
738
       002:0136------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:PR-R-LST-2 8.80 .066 No_date 12:38 7.88 .137
739
740
            [CN= 60.0: N= 3.00]
741
            [Tp = .60:DT = 1.00]
742
       002:0137-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 02:PR-CL-BBP- 1.20 .104 No_date 11:55 27.75 .482
743
744
            [XIMP=.41:TIMP=.41]
745
            [LOSS= 2 :CN= 61.0]
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
746
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 89.:MNI=.015:SCI= .0]
747
748
       002:0138-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 01:PR-R-LST-2 8.80 .066 No_date 12:38 7.88 n/a + 02:PR-CL-BBP- 1.20 .104 No_date 11:55 27.75 n/a [DT= 1.00] SUM= 03:TOT 10.00 .109 No_date 11:55 10.27 n/a
749
750
751
       002:0139-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
752
           CALIB STANDHYD 04:PR-R-LST-3 1.10 .091 No_date 11:55
753
                                                                               26.37 .458
754
           [XIMP=.40:TIMP=.40]
755
            [LOSS= 2 :CN= 58.0]
756
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
757
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 86.:MNI=.015:SCI=
758
       002:0140-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
                                        10.00 .109 No_date 11:55 10.27 n/a
                     03:TOT
759
          ADD HYD
```

```
+ 04:PR-R-LST-3 1.10 .091 No_date 11:55 26.37 n/a [DT= 1.00] SUM= 05:TOT 11.10 .200 No_date 11:55 11.86 n/a
760
761
762
    002:0141-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
        CALIB NASHYD 01:PR-CL-BBP- 22.00 .230 No_date 12:40 10.66 .185
763
764
          [CN=65.0: N=3.00]
765
          [Tp = .65:DT = 1.00]
     766
    767
    002:0142-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
768
         CALIB NASHYD 01:PR-R-404-3 118.50 .432 No_date 14:33 8.92 .155
769
770
          [CN= 62.0: N= 3.00]
         [Tp= 2.02:DT= 1.00]
771
772
     002:0143-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-404-2 .90 .013 No_date 12:16 8.92 .155
773
774
          [CN= 62.0: N= 3.00]
775
          [Tp = .32:DT = 1.00]
776
     002:0144-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
                      01:PR-R-404-3 118.50 .432 No_date 14:33 8.92 n/a
777
         + 02:PR-R-404-2 .90 .013 No_date 14:33 8.92 n/a [DT= 1.00] SUM= 03:TOT 119.40 .433 No_date 14:32 8.92 n/a
778
779
780 002:0145-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 04:PR-R-404-1 1.70 .018 No_date 12:27 8.92 .155
781
782
          [CN= 62.0: N= 3.00]
783
          [Tp= .47:DT= 1.00]
     002:0146-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
784
         ADD HYD 03:TOT 119.40 .433 No_date 14:32 8.92 n/a + 04:PR-R-404-1 1.70 .018 No_date 12:27 8.92 n/a [DT= 1.00] SUM= 05:TOT 121.10 .437 No_date 14:32 8.92 n/a
785
      ADD HYD
786
787
     002:0147-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
788
        CALIB NASHYD 08:PR-R-404-8 2.40 .024 No_date 12:30 8.92 .155
789
790
         [CN= 62.0: N= 3.00]
         [Tp = .50:DT = 1.00]
791
792
     002:0148-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
        CALIB NASHYD 09:PR-R-404-8 2.60 .030 No_date 12:30 10.07 .175
793
794
         [CN= 64.0: N= 3.00]
795
         [Tp= .51:DT= 1.00]
796
     002:0149-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 10:PR-R-404-9 1.80 .029 No_date 12:11 8.92 .155
797
798
          [CN= 62.0: N= 3.00]
799
          [Tp= .26:DT= 1.00]
     800
801
     ** END OF RUN : 4
802
803
     ***********************
804
805
806
807
808
809
     RUN: COMMAND#
    005:0001----
810
811
      START
         [TZERO = .00 \text{ hrs on}]
812
                                 01
813
          [METOUT= 2 (1=imperial, 2=metric output)]
814
         [NSTORM= 1]
815
         [NRUN = 5]
816 #****************************
    # Project Name: BRADFORD BYPASS
817
                                                  JOB NUMBER: [60636190] *
    # Date : Jan. 20, 2023
818
    # Modeller : [jrm]
# Company : AECOM
819
820
       License # : 1281254
821
822
823
824 # Notes: This hydrologic model was developed for the BBP ultimate conditions *
825 #
             A new Berm is proposed to isolate flows draining to P-SWM P-2 and
             the tributary of Penville Creek.
826 #
827
             Estimated controlled flows by the SWM ponds based on an assumed
828
             release flow rate from the SWM pond.
```

```
830 #
                 PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
831 #
                        PROPOSED SWM PONDS (CONTROLLED FLOWS)
832
                          Proposed Drainage Conditions
833
                    2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
834
835
    #********************
836
   005:0002-----
837
838
         READ STORM
         Filename = STORM.001
840
         Comment =
          [SDT= 6.00:SDUR= 24.00:PTOT= 76.80]
841
     842
    843
     005:0003-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
844
         CALIB NASHYD 08:PR-R-BBP-1 14.50 .511 No_date 12:29 28.16 .367
845
846
         [CN= 73.0: N= 3.00]
847
          [Tp= .55:DT= 1.00]
848
     005:0004-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
      DIVERT HYD -> 08:PR-R-BBP-1 14.50 .511 No_date 12:29 28.16 n/a diverted <= 09:To PR-R-BB 12.82 .310 No_date 12:29 28.16 n/a diverted <= 10:To Pond 1.68 .201 No_date 12:29 28.16 n/a
849
850
851
852
     005:0005-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         COMPUTE VOLUME 08:PR-R-BBP-1 14.50 .511 No_date 12:29 28.16 n/a {ST= .020 ha.m to control at .500 (cms)}
853
854
855
     856
     005:0006-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
857
         CALIB NASHYD 01:PR-R-BBP-9 5.40 .238 No_date 12:17 27.02 .352
858
859
         [CN= 72.0: N= 3.00]
          [Tp= .38:DT= 1.00]
860
     005:0007-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
        CALIB NASHYD 02:PR-R-BBP-9 6.60 .279 No_date 12:19 26.95 .351
862
863
         [CN=72.0: N=3.00]
864
         [Tp = .40:DT = 1.00]
     005:0008-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
865
      ADD HYD 01:PR-R-BBP-9 5.40 .238 No_date 12:17 27.02 n/a + 02:PR-R-BBP-9 6.60 .279 No_date 12:19 26.95 n/a [DT= 1.00] SUM= 03:TOT 12.00 .517 No_date 12:18 26.98 n/a
866
     ADD HYD
867
868
869
     005:0009-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 04:P-SWM P-2 3.90 .192 No_date 12:16 29.34 .382
870
871
         [CN=74.0: N=3.00]
          [Tp = .37:DT = 1.00]
     005:0010-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
873
        ADD HYD 03:TOT 12.00 .517 No_date 12:18 26.98 n/a + 04:P-SWM P-2 3.90 .192 No_date 12:16 29.34 n/a [DT= 1.00] SUM= 07:TOT 15.90 .708 No_date 12:18 27.56 n/a
874
875
876
877
      005:0011-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         DIVERT HYD -> 07:TOT 15.90 .708 No_date 12:18 27.56 n/a diverted <= 09:To PR-R-BB 8.57 .098 No_date 12:18 27.56 n/a diverted <= 10:Pond 7.33 .610 No_date 12:18 27.56 n/a
878
879
880
881
     005:0012-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          COMPUTE VOLUME 07:TOT 15.90 .708 No_date 12:18 27.56 n/a {ST= .277 ha.m to control at .050 (cms)}
         COMPUTE VOLUME 07:TOT
882
     885
     005:0013-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
886
        CALIB NASHYD 01:EX-CL-400- 49.00 2.381 No_date 12:26 37.01 .482
887
888
          [CN= 79.0: N= 3.00]
          [Tp= .53:DT= 1.00]
889
     005:0014-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
890
         ROUTE CHANNEL -> 01:EX-CL-400- 49.00 2.381 No_date 12:26 37.01 n/a
891
892
          [RDT= 1.00] out<- 02:to PR-CL-2 49.00 2.109 No_date 12:40 37.01 n/a
893
          [L/S/n = 825./.850/.070]
          \{Vmax = .916:Dmax = 1.452\}
     005:0015-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
895
        CALIB NASHYD 03:PR-R-BBP-1 8.80 .304 No_date 12:28 27.02 .352
896
```

[CN= 72.0: N= 3.00]

```
[Tp= .53:DT= 1.00]
899
       005:0016-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 04:EX-CL-400- 1.30 .077 No_date 12:18 37.01 .482
900
901
            [CN= 79.0: N= 3.00]
902
            [Tp= .40:DT= 1.00]
903
       005:0017----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 05:PR-R-BBP-1 1.30 .243 No_date 11:55 52.33 .681
904
905
            [XIMP=.55:TIMP=.55]
906
            [LOSS= 2 :CN= 70.0]
907
            [Pervious area: IAper=10.90:SLPP=****:LGP= 8.:MNP=.350:SCP=
                                                                                 .01
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 93.:MNI=.015:SCI= .0]
       005:0018-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
909
          910
911
912
913
       005:0019-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
914
          CALIB NASHYD 06:PR-CL-2 161.70 .973 No_date 16:09 19.92 .259
915
916
            [CN=65.0: N=3.00]
917
            [Tp= 3.38:DT= 1.00]
       005:0020-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
918
                            01:TOT 11.40 .403 No_date 12:24 31.04 n/a
919
           + 02:to PR-CL-2 49.00 2.109 No_date 12:40 37.01 n/a
+ 06:PR-CL-2 161.70 .973 No_date 16:09 19.92 n/a
[DT= 1.00] SUM= 07:TOT PR-CL- 222.10 2.650 No_date 12:40 24.26 n/a
920
921
922
       005:0021------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ROUTE CHANNEL -> 07:TOT PR-CL- 222.10 2.650 No_date 12:40 24.26 n/a
[RDT= 1.00] out<- 04:to PR-R-BB 222.10 2.631 No_date 12:44 24.26 n/a
923
924
925
            [L/S/n=230./.900/.070]
926
            \{Vmax = .958:Dmax = 1.506\}
927
       005:0022-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
928
           CALIB NASHYD 09:PR-R-BBP-4 6.10 .289 No_date 12:13 25.92 .337
929
930
            [CN= 71.0: N= 3.00]
            [Tp= .32:DT= 1.00]
931
932
       005:0023-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 04:to PR-R-BB 222.10 2.631 No_date 12:44 24.26 n/a + 09:PR-R-BBP-4 6.10 .289 No_date 12:13 25.92 n/a [DT= 1.00] SUM= 10:TOT 228.20 2.773 No_date 12:41 24.31 n/a
933
934
935
936
       005:0024-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 01:PR-CL-1 4.80 .236 No_date 12:16 29.34 .382
937
938
            [CN= 74.0: N= 3.00]
939
            [Tp = .37:DT = 1.00]
       005:0025-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
940
           CALIB NASHYD 02:PR-R-BBP-2 5.90 .243 No_date 12:18 25.92 .337
941
942
            [CN= 71.0: N= 3.00]
943
            [Tp= .39:DT= 1.00]
944
       005:0026-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 01:PR-CL-1 4.80 .236 No_date 12:16 29.34 n/a + 02:PR-R-BBP-2 5.90 .243 No_date 12:18 25.92 n/a [DT= 1.00] SUM= 09:TOT 10.70 .479 No_date 12:17 27.45 n/a
945
946
947
948
       005:0027-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 03:EX-CL-400- 1.70 .108 No_date 12:07 27.53 .358
949
950
            [CN= 72.0: N= 3.00]
951
            [Tp= .23:DT= 1.00]
952
       005:0028-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ADD HYD 03:EX-CL-400- 1.70 .108 No_date 12:07 27.53 n/a + 09:TOT 10.70 .479 No_date 12:17 27.45 n/a [DT= 1.00] SUM= 01:TOT 12.40 .569 No_date 12:15 27.46 n/a
954
955
       005:0029-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 04:PR-R-BBP-3 2.40 .156 No_date 12:06 25.92 .337
956
957
958
            [CN= 71.0: N= 3.00]
            [Tp= .20:DT= 1.00]
959
960
       005:0030-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 05:PR-CL-400- 2.20 .200 No_date 12:03 30.50 .397
961
962
            [CN= 75.0: N= 3.00]
            [Tp = .15:DT = 1.00]
       005:0031-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
964
          ADD HYD 04:PR-R-BBP-3 2.40 .156 No_date 12:06 25.92 n/a + 05:PR-CL-400- 2.20 .200 No_date 12:03 30.50 n/a
965
```

```
[DT= 1.00] SUM= 09:TOT
                                                4.60 .351 No_date 12:04 28.11 n/a
 967
        005:0032-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 968
        ADD HYD 01:TOT 12.40 .569 No_date 12:15 27.46 n/a
+ 09:TOT 4.60 .351 No_date 12:04 28.11 n/a
+ 10:TOT 228.20 2.773 No_date 12:41 24.31 n/a
[DT= 1.00] SUM= 07:TOT 245.20 3.215 No_date 12:36 24.54 n/a
 969
 970
 971
 972
        005:0033-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 973
            ROUTE CHANNEL -> 07:TOT 245.20 3.215 No_date 12:36 24.54 n/a [RDT= 1.00] out<- 01:to PR-R-BB 245.20 3.008 No_date 12:49 24.54 n/a
 974
 975
 976
             [L/S/n = 895./1.000/.070]
             \{Vmax = 1.044:Dmax = 1.610\}
        005:0034-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 978
            CALIB NASHYD 02:PR-CL-400- 9.60 .313 No_date 12:29 25.92 .337
 979
 980
             [CN= 71.0: N= 3.00]
 981
             [Tp = .54:DT = 1.00]
        005:0035-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 982
           983
 984
 985
        005:0036-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 986
           ADD HYD 02:TOT 254.80 3.274 No_date 12:47 24.59 n/a + 08:PR-R-BBP-1 14.50 .511 No_date 12:29 28.16 n/a [DT= 1.00] SUM= 06:TOT 269.30 3.725 No_date 12:44 24.78 n/a
 987
 988
       990
       991
       005:0037-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
 992
            CALIB NASHYD 02:PR-R-BBP-9 6.60 .275 No_date 12:19 27.02 .352
 993
 994
             [CN= 72.0: N= 3.00]
 995
             [Tp= .41:DT= 1.00]
 996
       005:0038-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            CALIB NASHYD 01:PR-R-10IC- 4.70 .124 No_date 12:13 14.83 .193
 997
             [CN= 59.0: N= 3.00]
 998
 999
             [Tp = .29:DT = 1.00]
        005:0039-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1000
            CALIB STANDHYD 02:PR-CL-BBP- 2.30 .223 No_date 11:55 32.20 .419
1001
1002
             [XIMP=.35:TIMP=.35]
1003
             [LOSS= 2 :CN= 51.0]
             [Pervious area: IAper=24.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 124.:MNI=.015:SCI= .0]
1004
1005
1006
        005:0040-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 01:PR-R-10IC- 4.70 .124 No_date 12:13 14.83 n/a
+ 02:PR-CL-BBP- 2.30 .223 No_date 11:55 32.20 n/a
[DT= 1.00] SUM= 03:TOT 7.00 .271 No_date 12:00 20.54 n/a
1007
1008
1009
        005:0041-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1010
            CALIB NASHYD 04:PR-R-10IC- 1.30 .046 No_date 12:10 17.27 .225
1011
1012
             [CN= 62.0: N= 3.00]
1013
             [Tp= .25:DT= 1.00]
1014
        005:0042----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
        ADD HYD 03:TOT 7.00 .271 No_date 12:00 20.54 n/a + 04:PR-R-10IC- 1.30 .046 No_date 12:10 17.27 n/a [DT= 1.00] SUM= 05:TOT 8.30 .303 No_date 12:00 20.02 n/a
1015
1016
1017
        005:0043-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1018
           CALIB STANDHYD 06:PR-R-10IC- 2.70 .247 No_date 11:55 32.29 .420
1019
1020
             [XIMP=.30:TIMP=.30]
1021
             [LOSS= 2 :CN= 58.0]
             [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 134.:MNI=.015:SCI= .0]
1022
1023
1024
        005:0044-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 05:TOT 8.30 .303 No_date 12:00 20.02 n/a + 06:PR-R-10IC- 2.70 .247 No_date 12:00 23.04 n/a [DT= 1.00] SUM= 07:TOT 11.00 .539 No_date 12:00 23.04 n/a
1025
1026
1027
        005:0045-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1028
            DIVERT HYD -> 07:TOT 11.00 .539 No_date 12:00 23.04 n/a diverted <= 01:To PR-R-10 9.83 .257 No_date 12:00 23.04 n/a diverted <= 02:To Pond 1.17 .282 No_date 12:00 23.04 n/a
1029
1030
1031
        005:0046-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
            COMPUTE VOLUME 07:TOT 11.00 .539 No_date 12:00 23.04 n/a {ST= .018 ha.m to control at .400 (cms)}
1033
1034
```

```
1036
1037
      005:0047-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 01:PR-R-10IC- 1.40 .059 No_date 12:12 21.83 .284
1038
1039
            [CN= 67.0: N= 3.00]
1040
            [Tp= .29:DT= 1.00]
       005:0048-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1041
          CALIB STANDHYD 02:PR-R-10IC- 3.10 .338 No_date 11:55 37.47 .488
1042
1043
           [XIMP=.36:TIMP=.36]
            [LOSS= 2 :CN= 61.0]
1044
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
1045
                                                                         .01
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
       005:0049-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1047
       ADD HYD 01:PR-R-10IC- 1.40 .059 No_date 12:12 21.83 n/a + 02:PR-R-10IC- 3.10 .338 No_date 11:55 37.47 n/a [DT= 1.00] SUM= 03:TOT 4.50 .363 No_date 11:56 32.60 n/a 005:0050------ID:NHYD-------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1048
1049
1050
1051
          DIVERT HYD -> 03:TOT 4.50 .363 No_date 11:56 32.60 n/a diverted <= 01:To waterco 3.60 .110 No_date 11:56 32.60 n/a diverted <= 02:To Pond .90 .253 No_date 11:56 32.60 n/a
1052
1053
1054
       005:0051-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1055
          COMPUTE VOLUME 03:TOT 4.50 .363 No_date 11:56 32.60 n/a {ST= .029 ha.m to control at .150 (cms)}
1056
1057
      1058
      1059
      1060
1061
            [CN= 61.0: N= 3.00]
1062
1063
           [Tp = .50:DT = 1.00]
       005:0053-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1064
          CALIB STANDHYD 02:PR-CL-BBP- 3.00 .460 No_date 11:55 48.91 .637
1065
           [XIMP=.52:TIMP=.52]
1066
            [LOSS= 2 :CN= 66.0]
1067
           [Pervious area: IAper=13.10:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
1068
1069
       005:0054-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1070
          ADD HYD 01:PR-R-C4IC- 13.40 .272 No_date 12:28 16.47 n/a + 02:PR-CL-BBP- 3.00 .460 No_date 11:55 48.91 n/a [DT= 1.00] SUM= 03:TOT 16.40 .517 No_date 12:00 22.40 n/a
1071
1072
1073
       005:0055-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1074
          CALIB STANDHYD 04:PR-R-C4IC- 2.80 .242 No_date 11:56 31.08 .405
1075
1076
           [XIMP=.28:TIMP=.28]
            [LOSS= 2 :CN= 58.0]
1077
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
1078
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 137.:MNI=.015:SCI= .0]
1079
1080
       005:0056-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 05:PR-R-C4IC- 1.60 .152 No_date 11:55 32.29 .420
1081
           [XIMP=.30:TIMP=.30]
1082
1083
            [LOSS= 2 :CN= 58.0]
1084
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 103.:MNI=.015:SCI=
1085
1086
       005:0057-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       1087
1088
1089
1091
          DIVERT HYD -> 06:TOT 20.80 .909 No_date 11:56 24.33 n/a diverted <= 09:To PR-R-C4 17.73 .342 No_date 11:56 24.33 n/a diverted <= 10:Pond 3.07 .567 No_date 11:56 24.33 n/a
1092
1093
1094
       005:0059------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-

* COMPUTE VOLUME 06:TOT 20.80 .909 No_date 11:56 24.33 n/a
1095
1096
      1097
1098
      005:0060-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1099
          CALIB NASHYD 01:PR-R-C4IC- .40 .027 No_date 12:01 19.92 .259
1100
1101
           [CN=65.0: N=3.00]
           [Tp= .10:DT= 1.00]
1102
       005:0061-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1103
          CALIB NASHYD 02:PR-R-C4IC- 1.30 .042 No_date 12:12 17.27 .225
1104
```

```
[CN= 62.0: N= 3.00]
1105
1106
            [Tp = .28:DT = 1.00]
1107
       005:0062-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           1108
1109
1110
       005:0063-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1111
           CALIB STANDHYD 04:PR-R-C4IC- 3.10 .335 No_date 11:55 36.55 .476
1112
            [XIMP=.37:TIMP=.37]
1113
            [LOSS= 2 :CN= 58.0]
1114
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
1115
1116
        005:0064-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1117
           ADD HYD 03:TOT 1.70 .060 No_date 12:04 17.90 n/a + 04:PR-R-C4IC- 3.10 .335 No_date 11:55 36.55 n/a [DT= 1.00] SUM= 05:TOT 4.80 .373 No_date 11:56 29.94 n/a
1118
1119
1120
        005:0065-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1121
           DIVERT HYD -> 05:TOT 4.80 .373 No_date 11:56 29.94 n/a diverted <= 09:To PR-R-C4 3.58 .078 No_date 11:56 29.94 n/a diverted <= 10:Pond 1.22 .295 No_date 11:56 29.94 n/a
1122
1123
1124
       1125
1126
1127
      1128
      1129
       005:0067-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1130
           CALIB STANDHYD 01:PR-R-2CON- 1.60 .164 No_date 12:00 34.84 .454
1131
            [XIMP=.20:TIMP=.20]
1132
            [LOSS= 2 :CN= 70.0]
1133
            [Pervious area: IAper=10.90:SLPP=***:LGP= 30.:MNP=.350:SCP=
1134
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 210.:MNI=.015:SCI=
1135
       005:0068-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1136
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .307 No_date 12:00 35.76 .466
            [XIMP=.30:TIMP=.30]
1138
1139
            [LOSS= 2 :CN= 64.0]
            [Pervious area: IAper=14.30:SLPP=****:LGP= 30.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 240.:MNI=.015:SCI=
1140
                                                                               .01
1141
                                                                               .0]
        005:0069-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1142
           ADD HYD 01:PR-R-2CON- 1.60 .164 No_date 12:00 34.84 n/a + 02:PR-CL-BBP- 3.00 .307 No_date 12:00 35.76 n/a [DT= 1.00] SUM= 03:TOT 4.60 .471 No_date 12:00 35.44 n/a
1143
1144
1145
       005:0070-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1146
           CALIB STANDHYD 04:PR-R-2CON- 3.00 .402 No_date 11:57 43.83 .571
1147
1148
            [XIMP=.38:TIMP=.38]
1149
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 163.:MNI=.015:SCI=
1150
1151
                                                                               .01
        005:0071-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1152
       ADD HYD 03:TOT 4.60 .471 No_date 12:00 35.44 n/a + 04:PR-R-2CON- 3.00 .402 No_date 11:57 43.83 n/a [DT= 1.00] SUM= 06:TOT 7.60 .865 No_date 12:00 38.75 n/a 005:0072------ID:NHYD------------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1153
1154
1155
1156
           DIVERT HYD -> 06:TOT 7.60 .865 No_date 12:00 38.75 n/a diverted <= 09:To waterco 6.71 .422 No_date 12:00 38.75 n/a diverted <= 10:Pond .89 .443 No_date 12:00 38.75 n/a
1157
1158
        005:0073-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1160
           COMPUTE VOLUME 06:TOT 7.60 .865 No_date 12:00 38.75 n/a {ST= .030 ha.m to control at .600 (cms)}
1161
1162
       1163
      1164
1165
       005:0074-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 01:PR-R-2CON- 28.00 .264 No_date 13:36 16.47 .214
1166
1167
            [CN= 61.0: N= 3.00]
             [Tp= 1.39:DT= 1.00]
1168
       005:0075-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1169
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .480 No_date 11:56
1170
1171
            [XIMP=.45:TIMP=.45]
1172
            [LOSS= 2 :CN= 77.0]
            [Pervious area: IAper= 7.60:SLPP=****:LGP= 40.:MNP=.350:SCP=
1173
                                                                               .0]
```

```
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
     005:0076-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1175
     1176
1177
1178
1179
     CALIB STANDHYD 04:PR-R-2CON- 1.50 .212 No_date 11:56 45.64 .594
1180
1181
        [XIMP=.28:TIMP=.28]
         [LOSS= 2 :CN= 78.0]
1182
         [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
1183
                                                        .0]
         [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 100.:MNI=.015:SCI= .0]
     005:0078-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1185
     1186
1187
1188
1189
     CALIB STANDHYD 06:PR-R-2CON- 3.00 .461 No_date 11:56 50.50 .658
1190
1191
        [XIMP=.40:TIMP=.40]
1192
         [LOSS= 2 :CN= 78.0]
        [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
1193
        [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
1194
1195 005:0080-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
      ADD HYD 05:TOT 32.50 .705 No_date 11:56 21.08 n/a + 06:PR-R-2CON- 3.00 .461 No_date 11:56 50.50 n/a [DT= 1.00] SUM= 07:TOT 35.50 1.165 No_date 11:56 23.57 n/a
1196
1197
1198
    1199
1200
1201
1202
1203
        COMPUTE VOLUME 07:TOT 35.50 1.165 No_date 11:56 23.57 n/a {ST= .014 ha.m to control at 1.100 (cms)}
1204
1205
    1207
     005:0083-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1208
        CALIB NASHYD 01:PR-R-404-4 3.50 .084 No_date 12:20 16.47 .214
1209
1210
         [CN= 61.0: N= 3.00]
1211
         [Tp= .40:DT= 1.00]
     005:0084-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1212
     CALIB NASHYD 02:PR-R-404-5 5.90 .087 No_date 12:48 16.47 .214
1213
1214
        [CN= 61.0: N= 3.00]
         [Tp= .77:DT= 1.00]
1215
     005:0085-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1216
       1217
1218
1219
     005:0086-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1220
        CALIB NASHYD 04:PR-R-404-6 3.70 .109 No_date 12:16 18.15 .236
1221
1222
         [CN= 63.0: N= 3.00]
1223
         [Tp= .35:DT= 1.00]
1224
     005:0087-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
     1225
1226
1227
     1229
1230
1231
1232
     * COMPUTE VOLUME 09:TOT 13.10 .254 No_date 12:23 16.95 n/a
1233
    1234
    1235
     005:0090-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1236
        CALIB NASHYD 10:PR-R-404-7 6.50 .109 No_date 12:39 16.47 .214
1237
         [CN= 61.0: N= 3.00]
1238
         [Tp= .65:DT= 1.00]
     005:0091-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1240
        DIVERT HYD -> 10:PR-R-404-7 6.50 .109 No_date 12:39 16.47 n/a diverted <= 01:watercours 5.75 .065 No_date 12:39 16.47 n/a
1241
1242
```

```
diverted <= 02:To Pond
                                        .57 .033 No_date 12:39 16.47 n/a
1244 005:0092-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         COMPUTE VOLUME 10:PR-R-404-7 6.50 .109 No_date 12:39 16.47 n/a {ST= .009 ha.m to control at .100 (cms)}
1245
1246
     1247
     1248
    005:0093-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1249
         CALIB NASHYD 01:PR-R-404-1 29.30 .357 No_date 12:59 15.65 .204
1250
          [CN= 60.0: N= 3.00]
1251
          [Tp= .91:DT= 1.00]
1252
      005:0094-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
1253
         CALIB NASHYD 02:PR-R-404-1 7.30 .164 No_date 12:21 15.65 .204
1254
1255
          [CN= 60.0: N= 3.00]
1256
          [Tp= .40:DT= 1.00]
      005:0095-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1257
         CALIB NASHYD 03:PR-CL-404- 2.20 .052 No_date 12:28 19.02 .248
1258
1259
          [CN = 64.0: N = 3.00]
1260
          [Tp= .51:DT= 1.00]
      005:0096-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1261
         ADD HYD 01:PR-R-404-1 29.30 .357 No_date 12:59 15.65 n/a + 02:PR-R-404-1 7.30 .164 No_date 12:21 15.65 n/a + 03:PR-CL-404- 2.20 .052 No_date 12:28 19.02 n/a [DT= 1.00] SUM= 10:TOT 38.80 .502 No_date 12:41 15.85 n/a
1262
      ADD HYD
1263
1264
1265
1267
     1268
     1269
    005:0097-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1270
         CALIB NASHYD 01:PR-R-BBP-5 2.20 .099 No_date 12:17 27.02 .352
1271
          [CN= 72.0: N= 3.00]
1272
          [Tp= .37:DT= 1.00]
1273
1274
      005:0098-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 02:PR-R-BBP-6 542.60 1.784 No_date 18:02 14.08 .183
1275
1276
          [CN = 58.0: N = 3.00]
1277
          [Tp= 4.60:DT= 1.00]
      005:0099-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1278
         CALIB NASHYD 03:PR-R-BBP-6 5.60 .193 No_date 12:24 24.85 .324
1279
1280
          [CN= 70.0: N= 3.00]
          [Tp= .47:DT= 1.00]
1281
      005:0100------ID:NHYD-------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
ADD HYD 01:PR-R-BBP-5 2.20 .099 No_date 12:17 27.02 n/a
1282
1283
         + 02:PR-R-BBP-6 542.60 1.784 No_date 18:02 14.08 n/a

+ 03:PR-R-BBP-6 5.60 .193 No_date 12:24 24.85 n/a

[DT= 1.00] SUM= 04:TOT 550.40 1.803 No_date 18:00 14.24 n/a
1284
1285
1286
1287
     005:0101-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 01:PR-R-BBP-7 2.40 .145 No_date 12:08 27.02 .352
1288
1289
          [CN= 72.0: N= 3.00]
1290
          [Tp= .24:DT= 1.00]
1291
      005:0102-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-BBP-8 81.70 .389 No_date 15:10 13.31 .173
1292
1293
          [CN= 57.0: N= 3.00]
1294
          [Tp= 2.50:DT= 1.00]
1295
      005:0103-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 03:PR-R-BBP-8 3.70 .122 No_date 12:26 24.85 .324
1296
1297
          [CN= 70.0: N= 3.00]
1298
          [Tp= .50:DT= 1.00]
      005:0104-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1299
         ADD HYD 02:PR-R-BBP-8 81.70 .389 No_date 15:10 13.31 n/a + 03:PR-R-BBP-8 3.70 .122 No_date 12:26 24.85 n/a [DT= 1.00] SUM= 04:TOT 85.40 .404 No_date 15:06 13.81 n/a
1300
1301
1302
      005:0105-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1303
         CALIB STANDHYD 05:PR-R-10IC- 3.40 .455 No_date 11:55 43.23 .563
1304
1305
          [XIMP=.48:TIMP=.48]
1306
          [LOSS= 2 :CN= 58.0]
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
1307
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 151.:MNI=.015:SCI=
1308
     1309
     1310
      005:0106-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1311
```

```
1312
          CALIB NASHYD 08:PR-R-10IC- 1.40 .059 No_date 12:12 21.83 .284
1313
          [CN=67.0: N=3.00]
1314
           [Tp= .29:DT= 1.00]
     005:0107-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB STANDHYD 09:PR-R-10IC- 3.10 .338 No_date 11:55 37.47 .488
1315
1316
1317
           [XIMP=.36:TIMP=.36]
           [LOSS= 2 :CN= 61.0]
1318
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
1319
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
1320
       005:0108-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1321
      1322
1323
1324
1325
          ROUTE CHANNEL -> 10:TOT 4.50 .363 No_date 11:56 32.60 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.50 .150 No_date 12:09 32.60 n/a
1326
1327
           [L/S/n= 1200./1.000/.070]
1328
           {Vmax= .612:Dmax= .471}
1329
1330
       005:0110-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 02:PR-CL-BBP- 75.80 1.158 No_date 13:18 22.78 .297
1331
1332
           [CN = 68.0: N = 3.00]
1333
           [Tp= 1.21:DT= 1.00]
1334
       005:0111-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          1335
1336
1337
     005:0112-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1338
          CALIB STANDHYD 04:PR-R-C4IC- 2.50 .382 No_date 11:55 47.48 .618
1339
          [XIMP=.55:TIMP=.55]
1340
1341
           [LOSS= 2 :CN= 58.0]
1342
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 129.:MNI=.015:SCI= .0]
1343
1344 005:0113-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 05:PR-CL-BBP- 27.30 .759 No_date 12:40 27.02 .352
1345
1346
           [CN= 72.0: N= 3.00]
1347
           [Tp = .71:DT = 1.00]
     1348
1349
      005:0114-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1350
          CALIB NASHYD 07:PR-R-C4IC- .40 .027 No_date 12:01 19.92 .259
1351
1352
           [CN=65.0: N=3.00]
           [Tp= .10:DT= 1.00]
1353
1354 005:0115-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 08:PR-R-C4IC- 1.30 .042 No_date 12:12 17.27 .225
1355
1356
           [CN = 62.0: N = 3.00]
1357
           [Tp= .28:DT= 1.00]
     005:0116-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1358
          CALIB STANDHYD 09:PR-R-C4IC- 3.10 .335 No_date 11:55 36.55 .476
1359
           [XIMP=.37:TIMP=.37]
1360
1361
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
1362
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
1363
1364
       005:0117-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 07:PR-R-C4IC- .40 .027 No_date 12:01 19.92 n/a
+ 08:PR-R-C4IC- 1.30 .042 No_date 12:12 17.27 n/a
+ 09:PR-R-C4IC- 3.10 .335 No_date 11:55 36.55 n/a
[DT= 1.00] SUM= 10:TOT 4.80 .373 No_date 11:56 29.94 n/a
1365
1366
1367
1368
       005:0118-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1369
          ROUTE CHANNEL -> 10:TOT 4.80 .373 No_date 11:56 29.94 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.80 .238 No_date 12:03 29.94 n/a
1370
1371
           [L/S/n= 580./1.000/.070]
1372
           \{Vmax = .617:Dmax = .479\}
1373
       005:0119-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1374
          CALIB NASHYD 02:PR-CL-BBP- 22.10 .424 No_date 12:40 19.02 .248
1375
1376
           [CN= 64.0: N= 3.00]
           [Tp= .68:DT= 1.00]
       005:0120-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1378
        ADD HYD 01:to PR-CL-B 4.80 .238 No_date 12:03 29.94 n/a
+ 02:PR-CL-BBP- 22.10 .424 No_date 12:40 19.02 n/a
1379
1380
```

```
26.90 .532 No_date 12:31 20.97 n/a
            [DT= 1.00] SUM= 03:TOT
1381
      1382
1384
1385
1386
            [CN= 74.0: N= 3.00]
1387
            [Tp= .23:DT= 1.00]
      005:0122-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1388
         CALIB STANDHYD 02:PR-CL-BBP- 2.00 .300 No_date 11:55 47.83 .623
1389
1390
           [XIMP=.46:TIMP=.46]
            [LOSS= 2 :CN= 70.0]
1391
           [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI= .0]
1392
1393
       005:0123-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1394
          ADD HYD 01:PR-R-BST-1 2.20 .150 No_date 12:07 29.34 n/a + 02:PR-CL-BBP- 2.00 .300 No_date 11:55 47.83 n/a [DT= 1.00] SUM= 03:TOT 4.20 .398 No_date 12:00 38.15 n/a
1395
1396
1397
       005:0124-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1398
           CALIB STANDHYD 04:PR-R-BST-2 2.00 .276 No_date 11:56 44.83 .584
1399
           [XIMP=.40:TIMP=.40]
1400
            [LOSS= 2 :CN= 70.0]
1401
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
1402
1403
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI= .0]
1404
       005:0125-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 03:TOT 4.20 .398 No_date 12:00 38.15 n/a + 04:PR-R-BST-2 2.00 .276 No_date 11:56 44.83 n/a [DT= 1.00] SUM= 05:TOT 6.20 .661 No_date 12:00 40.30 n/a
1405
1406
1407
       005:0126-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1408
           CALIB NASHYD 01:PR-R-BST-3 3.60 .126 No_date 12:27 27.02 .352
1409
            [CN= 72.0: N= 3.00]
1410
1411
            [Tp = .52:DT = 1.00]
1412
       005:0127-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 02:PR-CL-BBP- 2.10 .324 No_date 11:55 48.83 .636
1413
            [XIMP=.48:TIMP=.48]
1414
1415
            [LOSS= 2 :CN= 70.0]
       [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI= .0]
005:0128-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1416
1417
1418
           ADD HYD 01:PR-R-BST-3 3.60 .126 No_date 12:27 27.02 n/a + 02:PR-CL-BBP- 2.10 .324 No_date 11:55 48.83 n/a [DT= 1.00] SUM= 03:TOT 5.70 .358 No_date 11:56 35.05 n/a
1419
1420
1421
       005:0129-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1422
           CALIB STANDHYD 04:PR-R-BST-2 2.00 .276 No_date 11:56 44.83 .584
1423
1424
            [XIMP=.40:TIMP=.40]
1425
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI=
1426
1427
                                                                           .01
1428
       005:0130-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 03:TOT 5.70 .358 No_date 11:56 35.05 n/a + 04:PR-R-BST-2 2.00 .276 No_date 11:56 44.83 n/a [DT= 1.00] SUM= 05:TOT 7.70 .634 No_date 11:56 37.59 n/a
1429
1430
1431
      1432
1433
     005:0131-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1434
           CALIB NASHYD 01:PR-R-2CON- 243.60 2.054 No_date 14:43 20.86 .272
1436
            [CN= 66.0: N= 3.00]
1437
            [Tp= 2.31:DT= 1.00]
1438
       005:0132-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 02:PR-CL-BBP- 37.00 .568 No_date 12:53 18.15 .236
1439
1440
            [CN= 63.0: N= 3.00]
            [Tp= .85:DT= 1.00]
1441
       005:0133-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1442
           CALIB NASHYD 03:PR-R-LST-1 40.20 .471 No_date 13:09 16.47 .214
1443
            [CN= 61.0: N= 3.00]
1444
            [Tp= 1.04:DT= 1.00]
1445
1446 005:0134-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB STANDHYD 04:PR-CL-BBP- 1.80 .242 No_date 11:55 42.72 .556
1447
1448
           [XIMP=.45:TIMP=.45]
```

[LOSS= 2 :CN= 61.0]

```
[Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
1450
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 110.:MNI=.015:SCI=
1451
       005:0135------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ADD HYD 03:PR-R-LST-1 40.20 .471 No_date 13:09 16.47 n/a
+ 04:PR-CL-BBP- 1.80 .242 No_date 11:55 42.72 n/a
[DT= 1.00] SUM= 05:TOT 42.00 .487 No_date 13:07 17.60 n/a
1452
1453
1454
1455
       005:0136-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1456
           CALIB NASHYD 01:PR-R-LST-2 8.80 .147 No_date 12:35 15.65 .204
1457
            [CN= 60.0: N= 3.00]
1458
             [Tp= .60:DT= 1.00]
1459
        005:0137-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
1460
           CALIB STANDHYD 02:PR-CL-BBP- 1.20 .152 No_date 11:55 40.39 .526
1461
            [XIMP=.41:TIMP=.41]
1462
            [LOSS= 2 :CN= 61.0]
1463
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 89.:MNI=.015:SCI= .0]
1464
1465
        005:0138-----ID:NHYD------AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
1466
           ADD HYD 01:PR-R-LST-2 8.80 .147 No_date 12:35 15.65 n/a + 02:PR-CL-BBP- 1.20 .152 No_date 11:55 40.39 n/a [DT= 1.00] SUM= 03:TOT 10.00 .175 No_date 12:00 18.62 n/a
1467
1468
1469
       005:0139-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1470
           CALIB STANDHYD 04:PR-R-LST-3 1.10 .134 No_date 11:54 38.37 .500
1471
1472
            [XIMP=.40:TIMP=.40]
1473
            [LOSS= 2 :CN= 58.0]
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 86.:MNI=.015:SCI=
1474
1475
                                                                                .0]
       005:0140-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1476
        ADD HYD 03:TOT 10.00 .175 No_date 12:00 18.62 n/a + 04:PR-R-LST-3 1.10 .134 No_date 11:54 38.37 n/a [DT= 1.00] SUM= 05:TOT 11.10 .305 No_date 11:55 20.58 n/a
1477
1478
1479
     005:0141-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1480
           CALIB NASHYD 01:PR-CL-BBP- 22.00 .461 No_date 12:38 19.92 .259
1481
             [CN= 65.0: N= 3.00]
            [Tp= .65:DT= 1.00]
1483
      1484
      1485
1486
      005:0142-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 01:PR-R-404-3 118.50 .891 No_date 14:25 17.27 .225
1487
1488
            [CN = 62.0: N = 3.00]
            [Tp= 2.02:DT= 1.00]
1489
       005:0143-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1490
           CALIB NASHYD 02:PR-R-404-2 .90 .027 No_date 12:14 17.27 .225
1491
            [CN= 62.0: N= 3.00]
1492
1493
            [Tp= .32:DT= 1.00]
       005:0144-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1494
         1495
1496
1497
       005:0145------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:PR-R-404-1 1.70 .038 No_date 12:25 17.27 .225
1498
1499
1500
            [CN= 62.0: N= 3.00]
1501
             [Tp= .47:DT= 1.00]
        005:0146-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1502
           ADD HYD 03:TOT 119.40 .894 No_date 14:24 17.27 n/a + 04:PR-R-404-1 1.70 .038 No_date 12:25 17.27 n/a [DT= 1.00] SUM= 05:TOT 121.10 .901 No_date 14:23 17.27 n/a
1503
1504
1505
        005:0147-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1506
           CALIB NASHYD 08:PR-R-404-8 2.40 .052 No_date 12:28 17.27 .225
1507
1508
             [CN= 62.0: N= 3.00]
1509
             [Tp= .50:DT= 1.00]
1510
        005:0148-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 09:PR-R-404-8 2.60 .062 No_date 12:28 19.02 .248
1511
            [CN = 64.0: N = 3.00]
1512
1513
             [Tp= .51:DT= 1.00]
       005:0149------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 10:PR-R-404-9 1.80 .062 No_date 12:10 17.27 .225
1514
1515
            [CN = 62.0: N = 3.00]
1516
1517
            [Tp= .26:DT= 1.00]
       1518
```

```
** END OF RUN :
1519
1520
1521
1522
1523
1524
1525
1526
1527
     RUN: COMMAND#
1528 010:0001-----
1529
1530
          [TZERO = .00 \text{ hrs on } 0]
          [METOUT= 2 (1=imperial, 2=metric output)]
1531
          [NSTORM= 1]
1532
          [NRUN = 10]
1533
     #************************
1534
       Project Name: BRADFORD BYPASS
1535
                                              JOB NUMBER: [60636190] *
1536
       Date : Jan. 20, 2023
     # Modeller : [jrm]
# Company : AECOM
1537
1538
     # License # : 1281254
1539
1540
1541
1542
     # Notes: This hydrologic model was developed for the BBP ultimate conditions *
1543
             A new Berm is proposed to isolate flows draining to P-SWM P-2 and
1544
             the tributary of Penville Creek.
1545
             Estimated controlled flows by the SWM ponds based on an assumed
1546
            release flow rate from the SWM pond.
1547
1548
                 PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
1549
                       PROPOSED SWM PONDS (CONTROLLED FLOWS)
1550
                          Proposed Drainage Conditions
1551
                    2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
1552
    #***********************
1553
1554
     010:0002-----
1555
1556
         READ STORM
1557
          Filename = STORM.001
1558
          Comment =
1559
          [SDT= 6.00:SDUR= 24.00:PTOT= 88.80]
1560
     1561
     1562
      010:0003-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 08:PR-R-BBP-1 14.50 .668 No_date 12:29 36.37 .410
1563
1564
          [CN= 73.0: N= 3.00]
1565
          [Tp= .55:DT= 1.00]
      010:0004-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1566
         DIVERT HYD -> 08:PR-R-BBP-1 14.50 .668 No_date 12:29 36.37 n/a diverted <= 09:To PR-R-BB 11.77 .318 No_date 12:29 36.37 n/a diverted <= 10:To Pond 2.73 .350 No_date 12:29 36.37 n/a
1567
1568
1569
1570
      010:0005-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         COMPUTE VOLUME 08:PR-R-BBP-1 14.50 .668 No_date 12:29 36.37 n/a {ST= .081 ha.m to control at .500 (cms)}
1571
1572
     1574
     010:0006-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1575
         CALIB NASHYD 01:PR-R-BBP-9 5.40 .312 No_date 12:17 35.04 .395
1576
1577
          [CN= 72.0: N= 3.00]
          [Tp= .38:DT= 1.00]
1578
      010:0007-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1579
         CALIB NASHYD 02:PR-R-BBP-9 6.60 .367 No_date 12:18 34.97 .394
1580
1581
          [CN= 72.0: N= 3.00]
1582
          [Tp= .40:DT= 1.00]
      010:0008-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1583
          1584
         ADD HYD
1585
1586
     010:0009-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1587
```

```
CALIB NASHYD 04:P-SWM P-2 3.90
1588
                                                         .249 No_date 12:16 37.74 .425
1589
           [CN= 74.0: N= 3.00]
1590
             [Tp= .37:DT= 1.00]
      1591
1592
1593
1594
     010:0011-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1595
       DIVERT HYD -> 07:TOT 15.90 .928 No_date 12:17 35.67 n/a diverted <= 09:To PR-R-BB 7.81 .106 No_date 12:17 35.67 n/a diverted <= 10:Pond 8.09 .822 No_date 12:17 35.67 n/a
1596
1597
      010:0012-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1599
            COMPUTE VOLUME 07:TOT 15.90 .928 No_date 12:17 35.67 n/a {ST= .393 ha.m to control at .050 (cms)}
1600
1601
1602
       1603
      010:0013-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1604
            CALIB NASHYD 01:EX-CL-400- 49.00 3.003 No_date 12:26 46.41 .523
1605
1606
             [CN= 79.0: N= 3.00]
             [Tp= .53:DT= 1.00]
1607
1608 010:0014------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
            ROUTE CHANNEL -> 01:EX-CL-400- 49.00 3.003 No_date 12:26 46.41 n/a [RDT= 1.00] out<- 02:to PR-CL-2 49.00 2.685 No_date 12:39 46.41 n/a
1609
1610
1611
             [L/S/n=825./.850/.070]
             \{Vmax = .965:Dmax = 1.619\}
1612
        010:0015-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1613
            CALIB NASHYD 03:PR-R-BBP-1 8.80 .400 No_date 12:27 35.04 .395
1614
             [CN= 72.0: N= 3.00]
1615
1616
             [Tp= .53:DT= 1.00]
       010:0016-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1617
            CALIB NASHYD 04:EX-CL-400- 1.30 .098 No_date 12:18 46.41 .523
1618
             [CN= 79.0: N= 3.00]
1619
1620
             [Tp = .40:DT = 1.00]
        010:0017-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1621
            CALIB STANDHYD 05:PR-R-BBP-1 1.30 .293 No_date 11:54 62.36 .702
1622
1623
             [XIMP=.55:TIMP=.55]
             [LOSS= 2 :CN= 70.0]
1624
             [Pervious area: IAper=10.90:SLPP=****:LGP= 8.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 93.:MNI=.015:SCI= .0]
1625
1626
1627
        010:0018-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            ADD HYD 03:PR-R-BBP-1 8.80 .400 No_date 12:27 35.04 n/a + 04:EX-CL-400- 1.30 .098 No_date 12:18 46.41 n/a + 05:PR-R-BBP-1 1.30 .293 No_date 11:54 62.36 n/a [DT= 1.00] SUM= 01:TOT 11.40 .523 No_date 12:24 39.45 n/a
       ADD HYD
1628
1629
1630
1631
1632
      010:0019-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
            CALIB NASHYD 06:PR-CL-2 161.70 1.320 No_date 16:04 26.62 .300
1633
1634
             [CN= 65.0: N= 3.00]
1635
             [Tp= 3.38:DT= 1.00]
1636
        010:0020-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            ADD HYD 01:TOT 11.40 .523 No_date 12:24 39.45 n/a + 02:to PR-CL-2 49.00 2.685 No_date 12:39 46.41 n/a + 06:PR-CL-2 161.70 1.320 No_date 16:04 26.62 n/a [DT= 1.00] SUM= 07:TOT PR-CL- 222.10 3.412 No_date 12:39 31.64 n/a
1637
            ADD HYD
1638
1639
1640
        010:0021-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1641
            ROUTE CHANNEL -> 07:TOT PR-CL- 222.10 3.412 No_date 12:39 31.64 n/a [RDT= 1.00] out<- 04:to PR-R-BB 222.10 3.390 No_date 12:43 31.64 n/a
1643
1644
             [L/S/n = 230./.900/.070]
1645
             {Vmax= 1.017:Dmax= 1.696}
        010:0022-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1646
            CALIB NASHYD 09:PR-R-BBP-4 6.10 .382 No_date 12:13 33.74 .380
1647
             [CN= 71.0: N= 3.00]
1648
             [Tp= .32:DT= 1.00]
1649
        010:0023-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1650
           ADD HYD 04:to PR-R-BB 222.10 3.390 No_date 12:43 31.64 n/a + 09:PR-R-BBP-4 6.10 .382 No_date 12:13 33.74 n/a [DT= 1.00] SUM= 10:TOT 228.20 3.582 No_date 12:40 31.70 n/a
1651
1652
1654 010:0024------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1655 CALIB NASHYD 01:PR-CL-1 4.80 .307 No_date 12:16 37.74 .425
             [CN= 74.0: N= 3.00]
1656
```

```
1657
            [Tp= .37:DT= 1.00]
1658
       010:0025-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 02:PR-R-BBP-2 5.90 .321 No_date 12:18 33.74 .380
1659
            [CN= 71.0: N= 3.00]
1660
1661
             [Tp= .39:DT= 1.00]
1662
       010:0026-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
        ADD HYD 01:PR-CL-1 4.80 .307 No_date 12:16 37.74 n/a + 02:PR-R-BBP-2 5.90 .321 No_date 12:18 33.74 n/a [DT= 1.00] SUM= 09:TOT 10.70 .628 No_date 12:17 35.54 n/a
1663
1664
1665
       010:0027-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1666
           CALIB NASHYD 03:EX-CL-400- 1.70 .141 No_date 12:07 35.59 .401
1668
            [CN= 72.0: N= 3.00]
            [Tp= .23:DT= 1.00]
1669
       010:0028------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ADD HYD 03:EX-CL-400- 1.70 .141 No_date 12:07 35.59 n/a
+ 09:TOT 10.70 .628 No_date 12:17 35.54 n/a
[DT= 1.00] SUM= 01:TOT 12.40 .745 No_date 12:15 35.54 n/a
1670
1671
1672
1673
        010:0029-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1674
           CALIB NASHYD 04:PR-R-BBP-3 2.40 .205 No_date 12:06 33.74 .380
1675
            [CN= 71.0: N= 3.00]
1676
             [Tp= .20:DT= 1.00]
1677
       010:0030-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 05:PR-CL-400- 2.20 .257 No_date 12:03 39.09 .440
1679
1680
            [CN= 75.0: N= 3.00]
            [Tp= .15:DT= 1.00]
1681
        010:0031-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1682
           ADD HYD 04:PR-R-BBP-3 2.40 .205 No_date 12:06 33.74 n/a
+ 05:PR-CL-400- 2.20 .257 No_date 12:03 39.09 n/a
[DT= 1.00] SUM= 09:TOT 4.60 .457 No_date 12:04 36.30 n/a
1683
1684
1685
       010:0032-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1686
        ADD HYD 01:TOT 12.40 .745 No_date 12:15 35.54 n/a
+ 09:TOT 4.60 .457 No_date 12:04 36.30 n/a
+ 10:TOT 228.20 3.582 No_date 12:40 31.70 n/a
[DT= 1.00] SUM= 07:TOT 245.20 4.171 No_date 12:35 31.98 n/a
1687
1688
1690
       010:0033-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1691
           ROUTE CHANNEL -> 07:TOT 245.20 4.171 No_date 12:35 31.98 n/a [RDT= 1.00] out<- 01:to PR-R-BB 245.20 3.920 No_date 12:47 31.98 n/a
1692
1693
1694
             [L/S/n= 895./1.000/.070]
1695
             {Vmax= 1.110:Dmax= 1.812}
       010:0034-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1696
           CALIB NASHYD 02:PR-CL-400- 9.60 .413 No_date 12:28 33.74 .380
1697
1698
            [CN= 71.0: N= 3.00]
            [Tp= .54:DT= 1.00]
1699
1700
       010:0035-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
        1701
1702
1703
       010:0036------ID:NHYD-------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ADD HYD 02:TOT 254.80 4.277 No_date 12:45 32.05 n/a
+ 08:PR-R-BBP-1 14.50 .668 No_date 12:29 36.37 n/a
[DT= 1.00] SUM= 06:TOT 269.30 4.879 No_date 12:42 32.28 n/a
1704
1705
1706
1707
      1708
      1709
       010:0037-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1710
           CALIB NASHYD 02:PR-R-BBP-9 6.60 .361 No_date 12:19 35.04 .395
1712
            [CN= 72.0: N= 3.00]
1713
            [Tp= .41:DT= 1.00]
1714
        010:0038-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 01:PR-R-10IC- 4.70 .178 No_date 12:12 20.42 .230
1715
1716
             [CN= 59.0: N= 3.00]
             [Tp= .29:DT= 1.00]
1717
        010:0039-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1718
           CALIB STANDHYD 02:PR-CL-BBP- 2.30 .273 No_date 11:55 39.12 .441
1719
            [XIMP=.35:TIMP=.35]
1720
            [LOSS= 2 :CN= 51.0]
1721
1722
            [Pervious area: IAper=24.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 124.:MNI=.015:SCI= .0]
1723
      010:0040-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1724
           ADD HYD 01:PR-R-10IC- 4.70 .178 No_date 12:12 20.42 n/a
1725
```

```
+ 02:PR-CL-BBP- 2.30 .273 No_date 11:55 39.12 n/a [DT= 1.00] SUM= 03:TOT 7.00 .357 No_date 12:00 26.56 n/a
1726
1727
       010:0041-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1728
           CALIB NASHYD 04:PR-R-10IC- 1.30 .064 No_date 12:09 23.41 .264
1729
1730
            [CN= 62.0: N= 3.00]
1731
            [Tp = .25:DT = 1.00]
       010:0042-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1732
           ADD HYD 03:TOT 7.00 .357 No_date 12:00 26.56 n/a + 04:PR-R-10IC- 1.30 .064 No_date 12:09 23.41 n/a [DT= 1.00] SUM= 05:TOT 8.30 .404 No_date 12:01 26.07 n/a
1733
1734
1735
       010:0043-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
1736
           CALIB STANDHYD 06:PR-R-10IC- 2.70 .309 No_date 11:56 39.68 .447
1737
1738
            [XIMP=.30:TIMP=.30]
            [LOSS= 2 :CN= 58.0]
1739
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 134.:MNI=.015:SCI= .0]
1740
1741
       010:0044-----ID:NHYD------AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
1742
            ADD HYD 05:TOT 8.30 .404 No_date 12:01 26.07 n/a
+ 06:PR-R-10IC- 2.70 .309 No_date 11:56 39.68 n/a
[DT= 1.00] SUM= 07:TOT 11.00 .702 No_date 12:00 29.41 n/a
1743
1744
1745
       010:0045------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
DIVERT HYD -> 07:TOT 11.00 .702 No_date 12:00 29.41 n/a
diverted <= 01:To PR-R-10 9.21 .261 No_date 12:00 29.41 n/a
diverted <= 02:To Pond 1.79 .441 No_date 12:00 29.41 n/a
1746
1747
1748
1749
       1750
1751
1752
1753
      1754
       010:0047-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1755
           CALIB NASHYD 01:PR-R-10IC- 1.40 .079 No_date 12:11 28.90 .326
1756
1757
            [CN= 67.0: N= 3.00]
1758
            [Tp= .29:DT= 1.00]
       010:0048-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1759
           CALIB STANDHYD 02:PR-R-10IC- 3.10 .417 No_date 11:56 45.60 .514
1760
1761
            [XIMP=.36:TIMP=.36]
            [LOSS= 2 :CN= 61.0]
1762
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
1763
1764
1765
       010:0049-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       1766
1767
1768
1769
           DIVERT HYD -> 03:TOT 4.50 .454 No_date 12:00 40.41 n/a diverted <= 01:To waterco 3.40 .114 No_date 12:00 40.41 n/a diverted <= 02:To Pond 1.10 .340 No_date 12:00 40.41 n/a
1770
1771
1772
       1773
1774
1775
1776
      1777
       010:0052-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1778
           CALIB NASHYD 01:PR-R-C4IC- 13.40 .383 No_date 12:27 22.43 .253
1779
1780
            [CN= 61.0: N= 3.00]
1781
            [Tp= .50:DT= 1.00]
1782
       010:0053-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .558 No_date 11:55 58.45 .658
1783
1784
            [XIMP=.52:TIMP=.52]
1785
            [LOSS= 2 :CN= 66.0]
            [Pervious area: IAper=13.10:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
1786
1787
       010:0054-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1788
            ADD HYD 01:PR-R-C4IC- 13.40 .383 No_date 12:27 22.43 n/a + 02:PR-CL-BBP- 3.00 .558 No_date 11:55 58.45 n/a [DT= 1.00] SUM= 03:TOT 16.40 .655 No_date 12:00 29.02 n/a
1789
1790
1791
       010:0055-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1792
           CALIB STANDHYD 04:PR-R-C4IC- 2.80 .305 No_date 11:56 38.33 .432
1793
1794
            [XIMP=.28:TIMP=.28]
```

```
[LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
1796
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 137.:MNI=.015:SCI=
1797
                                                                      .01
      1798
1799
1800
           [XIMP=.30:TIMP=.30]
           [LOSS= 2 :CN= 58.0]
1801
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
1802
                                                                      .0]
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 103.:MNI=.015:SCI=
1803
                                                                      .01
       010:0057-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1804
          ADD HYD 03:TOT 16.40 .655 No_date 12:00 29.02 n/a + 04:PR-R-C4IC- 2.80 .305 No_date 11:56 38.33 n/a + 05:PR-R-C4IC- 1.60 .190 No_date 11:55 39.68 n/a [DT= 1.00] SUM= 06:TOT 20.80 1.143 No_date 11:56 31.09 n/a
1805
1806
1807
1808
       010:0058-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1809
      1810
1811
1812
1813
          COMPUTE VOLUME 06:TOT 20.80 1.143 No_date 11:56 31.09 n/a {ST= .021 ha.m to control at 1.000 (cms)}
1814
1815
      1816
      1817
      010:0060-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1818
          CALIB NASHYD 01:PR-R-C4IC- .40 .037 No_date 12:01 26.62 .300
1819
1820
           [CN=65.0: N=3.00]
           [Tp = .10:DT = 1.00]
1821
       010:0061-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1822
          CALIB NASHYD 02:PR-R-C4IC- 1.30 .059 No_date 12:11 23.41 .264
1823
1824
           [CN= 62.0: N= 3.00]
1825
           [Tp= .28:DT= 1.00]
       010:0062-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1826
          ADD HYD 01:PR-R-C4IC- .40 .037 No_date 12:01 26.62 n/a + 02:PR-R-C4IC- 1.30 .059 No_date 12:11 23.41 n/a [DT= 1.00] SUM= 03:TOT 1.70 .083 No_date 12:04 24.16 n/a
1827
1828
1829
       1830
1831
1832
           [XIMP=.37:TIMP=.37]
1833
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=***:LGP= 40.:MNP=.350:SCP=
1834
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
1835
       010:0064-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1836
           ADD HYD 03:TOT 1.70 .083 No_date 12:04 24.16 n/a + 04:PR-R-C4IC- 3.10 .411 No_date 11:55 44.39 n/a [DT= 1.00] SUM= 05:TOT 4.80 .467 No_date 11:56 37.23 n/a
1837
1838
1839
       010:0065-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1840
      1841
1842
1843
1844
          COMPUTE VOLUME 05:TOT 4.80 .467 No_date 11:56 37.23 n/a {ST= .054 ha.m to control at .100 (cms)}
1845
1846
1847
      1848
      1849
       010:0067-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 01:PR-R-2CON- 1.60 .209 No_date 12:00 43.35 .488
1851
           [XIMP=.20:TIMP=.20]
1852
           [LOSS= 2 :CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP= Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 210.:MNI=.015:SCI=
1853
                                                                      .0]
1854
       010:0068-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1855
          CALIB STANDHYD 02:PR-CL-BBP- 3.00 .387 No_date 12:00 43.91 .495
1856
1857
           [XIMP=.30:TIMP=.30]
           [LOSS= 2 :CN= 64.0]
1858
           [Pervious area: IAper=14.30:SLPP=****:LGP= 30.:MNP=.350:SCP=
1859
                                                                      .0]
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 240.:MNI=.015:SCI=
1860
       010:0069-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1861
                       01:PR-R-2CON- 1.60 .209 No_date 12:00 43.35 n/a
+ 02:PR-CL-BBP- 3.00 .387 No_date 12:00 43.91 n/a
1862
          ADD HYD
1863
```

```
[DT= 1.00] SUM= 03:TOT 4.60 .596 No_date 12:00 43.72 n/a
1864
       010:0070-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1865
          CALIB STANDHYD 04:PR-R-2CON- 3.00 .497 No_date 11:56 53.13 .598
1866
1867
           [XIMP=.38:TIMP=.38]
1868
           [LOSS= 2 :CN= 70.0]
1869
           [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP=
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 163.:MNI=.015:SCI=
1870
       010:0071-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1871
       1872
1873
1875
       1876
1877
1878
1879
          COMPUTE VOLUME 06:TOT 7.60 1.079 No_date 12:00 47.43 n/a {ST= .054 ha.m to control at .600 (cms)}
1880
1881
      1882
1883
      010:0074-----ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 01:PR-R-2CON- 28.00 .370 No_date 13:34 22.43 .253
1884
1885
           [CN = 61.0: N = 3.00]
1886
1887
           [Tp= 1.39:DT= 1.00]
1888
       010:0075-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 02:PR-CL-BBP- 3.00 .593 No_date 11:56 62.15 .700
1889
1890
           [XIMP=.45:TIMP=.45]
           [LOSS= 2 :CN= 77.0]
1891
           [Pervious area: IAper= 7.60:SLPP=****:LGP= 40.:MNP=.350:SCP=
1892
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
1893
       010:0076-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1894
       ADD HYD 01:PR-R-2CON- 28.00 .370 No_date 13:34 22.43 n/a + 02:PR-CL-BBP- 3.00 .593 No_date 11:56 62.15 n/a [DT= 1.00] SUM= 03:TOT 31.00 .616 No_date 11:56 26.27 n/a
1895
1897
       010:0077-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1898
          CALIB STANDHYD 04:PR-R-2CON- 1.50 .270 No_date 11:56 55.59 .626
1899
1900
           [XIMP=.28:TIMP=.28]
1901
           [LOSS= 2 :CN= 78.0]
           [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 100.:MNI=.015:SCI= .0]
1902
1903
      010:0078------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ADD HYD 03:TOT 31.00 .616 No_date 11:56 26.27 n/a
+ 04:PR-R-2CON- 1.50 .270 No_date 11:56 55.59 n/a
[DT= 1.00] SUM= 05:TOT 32.50 .887 No_date 11:56 27.63 n/a
1904
1905
1906
1907
1908
       010:0079-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 06:PR-R-2CON- 3.00 .573 No_date 11:56 60.79 .685
1909
1910
           [XIMP=.40:TIMP=.40]
1911
           [LOSS= 2 :CN= 78.0]
           [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
1912
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
1913
1914
       010:0080-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       ADD HYD 05:TOT 32.50 .887 No_date 11:56 27.63 n/a + 06:PR-R-2CON- 3.00 .573 No_date 11:56 60.79 n/a [DT= 1.00] SUM= 07:TOT 35.50 1.460 No_date 11:56 30.43 n/a 010:0081------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1915
1916
1917
       1919
1920
1921
1922
1923
1924
      1925
      1926
       010:0083-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1927
          CALIB NASHYD 01:PR-R-404-4 3.50 .118 No_date 12:20 22.43 .253
1928
1929
           [CN= 61.0: N= 3.00]
           [Tp= .40:DT= 1.00]
1930
1931
       010:0084-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 02:PR-R-404-5 5.90 .122 No_date 12:47 22.43 .253
```

```
[CN= 61.0: N= 3.00]
1933
1934
         [Tp = .77:DT = 1.00]
      010:0085-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1935
        ADD HYD 01:PR-R-404-4 3.50 .118 No_date 12:20 22.43 n/a + 02:PR-R-404-5 5.90 .122 No_date 12:47 22.43 n/a [DT= 1.00] SUM= 03:TOT 9.40 .218 No_date 12:29 22.43 n/a
1936
1937
1938
     010:0086-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1939
         CALIB NASHYD 04:PR-R-404-6 3.70 .152 No_date 12:16 24.48 .276
1940
          [CN= 63.0: N= 3.00]
1941
          [Tp= .35:DT= 1.00]
1942
      010:0087-----ID:NHYD------AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
1943
         ADD HYD 03:TOT 9.40 .218 No_date 12:29 22.43 n/a + 04:PR-R-404-6 3.70 .152 No_date 12:16 24.48 n/a [DT= 1.00] SUM= 09:TOT 13.10 .356 No_date 12:22 23.01 n/a
1945
1946
      010:0088-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1947
     1948
1949
1950
1951
1952
1953
     1954
1955
     010:0090-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 10:PR-R-404-7 6.50 .153 No_date 12:38 22.43 .253
1956
1957
          [CN= 61.0: N= 3.00]
1958
          [Tp = .65:DT = 1.00]
     010:0091-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1959
     1960
1961
1962
1963
         COMPUTE VOLUME 10:PR-R-404-7 6.50 .153 No_date 12:38 22.43 n/a {ST= .030 ha.m to control at .100 (cms)}
1964
1965
     1966
     1967
     010:0093-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1968
         CALIB NASHYD 01:PR-R-404-1 29.30 .506 No_date 12:57 21.43 .241
1969
1970
          [CN= 60.0: N= 3.00]
          [Tp= .91:DT= 1.00]
1971
1972
      010:0094-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-404-1 7.30 .233 No_date 12:20 21.43 .241
1973
1974
          [CN= 60.0: N= 3.00]
          [Tp= .40:DT= 1.00]
1975
1976
      010:0095-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 03:PR-CL-404- 2.20 .072 No_date 12:27 25.53 .288
1977
1978
         [CN= 64.0: N= 3.00]
1979
          [Tp= .51:DT= 1.00]
      010:0096-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1980
          ADD HYD 01:PR-R-404-1 29.30 .506 No_date 12:57 21.43 n/a

+ 02:PR-R-404-1 7.30 .233 No_date 12:20 21.43 n/a

+ 03:PR-CL-404- 2.20 .072 No_date 12:27 25.53 n/a

[DT= 1.00] SUM= 10:TOT 38.80 .710 No_date 12:40 21.66 n/a
1981
      ADD HYD
1982
1983
1984
1985
     1986
     010:0097-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
1989
         CALIB NASHYD 01:PR-R-BBP-5 2.20 .130 No_date 12:16 35.03 .395
1990
1991
          [CN=72.0: N=3.00]
          [Tp= .37:DT= 1.00]
1992
1993
      010:0098-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-BBP-6 542.60 2.508 No_date 17:53 19.49 .219
1994
1995
          [CN= 58.0: N= 3.00]
1996
          [Tp= 4.60:DT= 1.00]
      010:0099-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
1997
         CALIB NASHYD 03:PR-R-BBP-6 5.60 .255 No_date 12:23 32.49 .366
1998
          [CN= 70.0: N= 3.00]
1999
2000
          [Tp= .47:DT= 1.00]
      010:0100-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2001
```

```
2002
          ADD HYD
2003
2004
2005
       010:0101-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2006
          CALIB NASHYD 01:PR-R-BBP-7 2.40 .190 No_date 12:08 35.04 .395
2007
            [CN= 72.0: N= 3.00]
2008
2009
            [Tp= .24:DT= 1.00]
       010:0102-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2010
           CALIB NASHYD 02:PR-R-BBP-8 81.70 .557 No_date 15:05 18.54 .209
2011
2012
            [CN=57.0: N=3.00]
            [Tp= 2.50:DT= 1.00]
2013
       010:0103-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2014
           CALIB NASHYD 03:PR-R-BBP-8 3.70 .161 No_date 12:26 32.49 .366
2015
2016
            [CN= 70.0: N= 3.00]
2017
            [Tp = .50:DT = 1.00]
       010:0104-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2018
           ADD HYD 02:PR-R-BBP-8 81.70 .557 No_date 15:05 18.54 n/a + 03:PR-R-BBP-8 3.70 .161 No_date 12:26 32.49 n/a [DT= 1.00] SUM= 04:TOT 85.40 .576 No_date 15:01 19.15 n/a
2019
2020
2021
       010:0105-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2022
           CALIB STANDHYD 05:PR-R-10IC- 3.40 .549 No_date 11:55 51.80 .583
2023
2024
            [XIMP=.48:TIMP=.48]
2025
            [LOSS= 2 :CN= 58.0]
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 151.:MNI=.015:SCI=
2026
2027
      2028
     2029
     010:0106-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2030
           CALIB NASHYD 08:PR-R-10IC- 1.40 .079 No_date 12:11 28.90 .326
2031
2032
            [CN= 67.0: N= 3.00]
2033
            [Tp= .29:DT= 1.00]
       010:0107-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2034
          CALIB STANDHYD 09:PR-R-10IC- 3.10 .417 No_date 11:56 45.60 .514
2035
2036
           [XIMP=.36:TIMP=.36]
2037
            [LOSS= 2 :CN= 61.0]
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
2038
2039
2040
       010:0108-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           ADD HYD 08:PR-R-10IC- 1.40 .079 No_date 12:11 28.90 n/a + 09:PR-R-10IC- 3.10 .417 No_date 11:56 45.60 n/a [DT= 1.00] SUM= 10:TOT 4.50 .454 No_date 12:00 40.41 n/a
2041
2042
2043
       010:0109------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ROUTE CHANNEL -> 10:TOT 4.50 .454 No_date 12:00 40.41 n/a
[RDT= 1.00] out<- 01:to PR-CL-B 4.50 .199 No_date 12:08 40.41 n/a
2044
2045
2046
2047
            [L/S/n=1200./1.000/.070]
2048
            \{Vmax = .655:Dmax = .542\}
       010:0110------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:PR-CL-BBP- 75.80 1.554 No_date 13:17 30.04 .338
2049
2050
2051
            [CN= 68.0: N= 3.00]
2052
            [Tp= 1.21:DT= 1.00]
       010:0111-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2053
       ADD HYD 01:to PR-CL-B 4.50 .199 No_date 12:08 40.41 n/a + 02:PR-CL-BBP- 75.80 1.554 No_date 13:17 30.04 n/a [DT= 1.00] SUM= 03:TOT 80.30 1.638 No_date 13:14 30.62 n/a
2054
2055
2056
       010:0112-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2057
           CALIB STANDHYD 04:PR-R-C4IC- 2.50 .458 No_date 11:55 56.51 .636
2058
2059
            [XIMP=.55:TIMP=.55]
            [LOSS= 2 :CN= 58.0]
2060
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 129.:MNI=.015:SCI= .0]
2061
2062
       010:0113-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2063
           CALIB NASHYD 05:PR-CL-BBP- 27.30 .998 No_date 12:40 35.04 .395
2064
            [CN= 72.0: N= 3.00]
2065
            [Tp = .71:DT = 1.00]
2066
      2067
      2068
       010:0114-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2069
           CALIB NASHYD 07:PR-R-C4IC- .40 .037 No_date 12:01 26.62 .300
2070
```

```
[CN=65.0: N=3.00]
2071
2.072
            [Tp= .10:DT= 1.00]
        010:0115-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2073
           CALIB NASHYD 08:PR-R-C4IC- 1.30 .059 No_date 12:11 23.41 .264
2074
2075
             [CN= 62.0: N= 3.00]
2076
             [Tp = .28:DT = 1.00]
        010:0116-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2077
           CALIB STANDHYD 09:PR-R-C4IC- 3.10 .411 No_date 11:55 44.39 .500
2078
             [XIMP=.37:TIMP=.37]
2079
             [LOSS= 2 :CN= 58.0]
2080
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
2081
2082
        010:0117-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2083
           ADD HYD 07:PR-R-C4IC- .40 .037 No_date 12:01 26.62 n/a + 08:PR-R-C4IC- 1.30 .059 No_date 12:11 23.41 n/a + 09:PR-R-C4IC- 3.10 .411 No_date 11:55 44.39 n/a [DT= 1.00] SUM= 10:TOT 4.80 .467 No_date 11:56 37.23 n/a
2084
2085
2086
2087
        010:0118-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2088
           ROUTE CHANNEL -> 10:TOT 4.80 .467 No_date 11:56 37.23 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.80 .310 No_date 12:03 37.23 n/a
2089
2090
             [L/S/n = 580./1.000/.070]
2091
2092
             \{Vmax = .659:Dmax = .551\}
2093
       010:0119-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 02:PR-CL-BBP- 22.10 .584 No_date 12:39 25.53 .288
2094
2095
            [CN= 64.0: N= 3.00]
2096
             [Tp= .68:DT= 1.00]
       010:0120-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2097
        ADD HYD 01:to PR-CL-B 4.80 .310 No_date 12:03 37.23 n/a + 02:PR-CL-BBP- 22.10 .584 No_date 12:39 25.53 n/a [DT= 1.00] SUM= 03:TOT 26.90 .722 No_date 12:32 27.62 n/a
2098
2099
2100
      2101
      2102
       010:0121-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2103
           CALIB NASHYD 01:PR-R-BST-1 2.20 .194 No_date 12:07 37.74 .425
2104
2105
             [CN= 74.0: N= 3.00]
2106
            [Tp= .23:DT= 1.00]
        010:0122-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2107
           CALIB STANDHYD 02:PR-CL-BBP- 2.00 .369 No_date 11:55 57.47 .647
2108
2109
            [XIMP=.46:TIMP=.46]
2110
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
2111
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI= .0]
2112
        010:0123-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2113
           ADD HYD 01:PR-R-BST-1 2.20 .194 No_date 12:07 37.74 n/a
+ 02:PR-CL-BBP- 2.00 .369 No_date 11:55 57.47 n/a
[DT= 1.00] SUM= 03:TOT 4.20 .497 No_date 12:00 47.14 n/a
2114
2115
2116
2117
       010:0124-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB STANDHYD 04:PR-R-BST-2 2.00 .343 No_date 11:56 54.21 .611
2118
2119
             [XIMP=.40:TIMP=.40]
             [LOSS= 2 :CN= 70.0]
2120
             [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
2121
2122
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI=
        010:0125-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2123
           ADD HYD 03:TOT 4.20 .497 No_date 12:00 47.14 n/a + 04:PR-R-BST-2 2.00 .343 No_date 11:56 54.21 n/a [DT= 1.00] SUM= 05:TOT 6.20 .822 No_date 11:56 49.42 n/a
2124
2125
2126
        010:0126-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2127
           CALIB NASHYD 01:PR-R-BST-3 3.60 .166 No_date 12:27 35.04 .395
2128
2129
             [CN=72.0: N=3.00]
             [Tp= .52:DT= 1.00]
2130
        010:0127-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2131
           CALIB STANDHYD 02:PR-CL-BBP- 2.10 .397 No_date 11:55 58.56 .659
2132
            [XIMP=.48:TIMP=.48]
2133
             [LOSS= 2 :CN= 70.0]
2134
             [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
2135
                                                                                .0]
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI=
        010:0128-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2137
                      01:PR-R-BST-3 3.60 .166 No_date 12:27 35.04 n/a
+ 02:PR-CL-BBP- 2.10 .397 No_date 11:55 58.56 n/a
2138
           ADD HYD
2139
```

```
[DT= 1.00] SUM= 03:TOT 5.70 .444 No_date 11:56 43.70 n/a
2140
     010:0129-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2141
        CALIB STANDHYD 04:PR-R-BST-2 2.00 .344 No_date 11:56 54.21 .611
2142
2143
           [XIMP=.40:TIMP=.40]
2144
           [LOSS= 2 : CN= 70.0]
2145
           [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI=
2146
     010:0130-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2147
      ADD HYD 03:TOT 5.70 .444 No_date 11:56 43.70 n/a + 04:PR-R-BST-2 2.00 .344 No_date 11:56 54.21 n/a [DT= 1.00] SUM= 05:TOT 7.70 .788 No_date 11:56 46.43 n/a
2148
2149
2150
      2151
      2152
      010:0131-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2153
          CALIB NASHYD 01:PR-R-2CON- 243.60 2.780 No_date 14:40 27.74 .312
2154
2155
           [CN= 66.0: N= 3.00]
           [Tp= 2.31:DT= 1.00]
2156
       010:0132-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2157
          CALIB NASHYD 02:PR-CL-BBP- 37.00 .786 No_date 12:52 24.48 .276
2158
           [CN = 63.0: N = 3.00]
2159
           [Tp= .85:DT= 1.00]
2160
2161
       010:0133-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 03:PR-R-LST-1 40.20 .662 No_date 13:07 22.43 .253
2162
2163
           [CN= 61.0: N= 3.00]
2164
           [Tp= 1.04:DT= 1.00]
       010:0134-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2165
          CALIB STANDHYD 04:PR-CL-BBP- 1.80 .294 No_date 11:55 51.39 .579
2166
           [XIMP=.45:TIMP=.45]
2167
2168
           [LOSS= 2 :CN= 61.0]
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
2169
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 110.:MNI=.015:SCI=
2170
       010:0135-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2171
          ADD HYD 03:PR-R-LST-1 40.20 .662 No_date 13:07 22.43 n/a
+ 04:PR-CL-BBP- 1.80 .294 No_date 11:55 51.39 n/a
[DT= 1.00] SUM= 05:TOT 42.00 .681 No_date 13:06 23.67 n/a
2172
2173
2174
       2175
2176
2177
           [CN=60.0: N=3.00]
           [Tp= .60:DT= 1.00]
2178
2179
       010:0137-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 02:PR-CL-BBP- 1.20 .186 No_date 11:54 48.82 .550
2180
2181
           [XIMP=.41:TIMP=.41]
2182
           [LOSS= 2 :CN= 61.0]
2183
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
2184
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 89.:MNI=.015:SCI= .0]
2185
       010:0138-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 01:PR-R-LST-2 8.80 .208 No_date 12:34 21.43 n/a + 02:PR-CL-BBP- 1.20 .186 No_date 11:54 48.82 n/a [DT= 1.00] SUM= 03:TOT 10.00 .229 No_date 12:31 24.72 n/a
2186
2187
2188
       010:0139-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2189
2190
          CALIB STANDHYD 04:PR-R-LST-3 1.10 .163 No_date 11:54 46.41 .523
2191
           [XIMP=.40:TIMP=.40]
           [LOSS= 2 :CN= 58.0]
2192
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
2193
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 86.:MNI=.015:SCI= .0]
2194
2195
       010:0140-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 03:TOT 10.00 .229 No_date 12:31 24.72 n/a + 04:PR-R-LST-3 1.10 .163 No_date 11:54 46.41 n/a [DT= 1.00] SUM= 05:TOT 11.10 .381 No_date 11:55 26.87 n/a
2196
2197
2198
       010:0141------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:PR-CL-BBP- 22.00 .631 No_date 12:37 26.62 .300
2199
2200
2201
           [CN=65.0: N=3.00]
2202
            [Tp= .65:DT= 1.00]
      2203
      2204
      010:0142-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2205
          CALIB NASHYD 01:PR-R-404-3 118.50 1.237 No_date 14:21 23.41 .264
2206
2207
           [CN= 62.0: N= 3.00]
2208
           [Tp= 2.02:DT= 1.00]
```

```
010:0143-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2209
2210
          CALIB NASHYD 02:PR-R-404-2 .90 .037 No_date 12:14 23.41 .264
2211
           [CN= 62.0: N= 3.00]
2212
           [Tp= .32:DT= 1.00]
2213
      010:0144-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         ADD HYD 01:PR-R-404-3 118.50 1.237 No_date 14:21 23.41 n/a + 02:PR-R-404-2 .90 .037 No_date 12:14 23.41 n/a [DT= 1.00] SUM= 03:TOT 119.40 1.241 No_date 14:21 23.41 n/a
2214
2215
2216
     010:0145-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2217
          CALIB NASHYD 04:PR-R-404-1 1.70 .053 No_date 12:25 23.41 .264
2218
           [CN = 62.0: N = 3.00]
2219
2220
           [Tp = .47:DT = 1.00]
      010:0146------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ADD HYD 03:TOT 119.40 1.241 No_date 14:21 23.41 n/a
+ 04:PR-R-404-1 1.70 .053 No_date 12:25 23.41 n/a
[DT= 1.00] SUM= 05:TOT 121.10 1.250 No_date 14:20 23.41 n/a
2221
2222
2223
2224
      010:0147-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2225
          CALIB NASHYD 08:PR-R-404-8 2.40 .072 No_date 12:27 23.41 .264
2226
2227
           [CN= 62.0: N= 3.00]
           [Tp= .50:DT= 1.00]
2228
2229 010:0148-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 09:PR-R-404-8 2.60 .085 No_date 12:27 25.53 .288
2230
2231
           [CN= 64.0: N= 3.00]
           [Tp= .51:DT= 1.00]
2232
2233
     010:0149-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 10:PR-R-404-9 1.80 .086 No_date 12:10 23.41 .264
2234
2235
           [CN= 62.0: N= 3.00]
2236
           [Tp = .26:DT = 1.00]
2237
     ** END OF RUN : 24
2238
2239
      ************************
2240
2241
2242
2243
2244
2245
2246
     RUN: COMMAND#
     025:0001-----
2247
2248
      START
          [TZERO = .00 \text{ hrs on } 0]
2249
2250
           [METOUT= 2 (1=imperial, 2=metric output)]
          [NSTORM= 1]
2251
2252
           [NRUN = 25]
2253 #***********************************
                                                    JOB NUMBER: [60636190] *
2254 # Project Name: BRADFORD BYPASS
2255 # Date : Jan. 20, 2023
     # Modeller : [jrm]
# Company : AECOM
2256
2257
     # License # : 1281254
2258
2259
2260
2261 # Notes: This hydrologic model was developed for the BBP ultimate conditions *
2262
              A new Berm is proposed to isolate flows draining to P-SWM P-2 and
              the tributary of Penville Creek.
2263
2264
             Estimated controlled flows by the SWM ponds based on an assumed
2265
             release flow rate from the SWM pond.
2266
2267
                    PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
2268
                          PROPOSED SWM PONDS (CONTROLLED FLOWS)
2269
                            Proposed Drainage Conditions
2270
                     2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
2271
2272 #****************************
      #*********************
2273
2274 025:0002-----
2275
          READ STORM
2276
          Filename = STORM.001
```

Comment =

```
[SDT= 6.00:SDUR= 24.00:PTOT= 103.20]
      2279
2280
      025:0003------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 08:PR-R-BBP-1 14.50 .869 No_date 12:28 46.86 .454
2281
2282
2283
           [CN= 73.0: N= 3.00]
2284
           [Tp = .55:DT = 1.00]
      025:0004-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2285
      2286
2287
2288
2289
          COMPUTE VOLUME 08:PR-R-BBP-1 14.50 .869 No_date 12:28 46.86 n/a {ST= .158 ha.m to control at .500 (cms)}
2290
2291
      2292
      2293
2294
      025:0006-----ID:NHYD------AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-R-BBP-9 5.40 .408 No_date 12:17 45.32 .439
2295
2296
           [CN= 72.0: N= 3.00]
2297
           [Tp = .38:DT = 1.00]
2298
       025:0007-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 02:PR-R-BBP-9 6.60 .480 No_date 12:18 45.25 .438
2299
2300
           [CN=72.0: N=3.00]
2301
           [Tp= .40:DT= 1.00]
       025:0008-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2302
         2303
2304
2305
       025:0009-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2306
          CALIB NASHYD 04:P-SWM P-2 3.90 .323 No_date 12:16 48.45 .469
2307
2308
           [CN= 74.0: N= 3.00]
2309
           [Tp= .37:DT= 1.00]
       025:0010-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2310
         ADD HYD 03:TOT 12.00 .887 No_date 12:17 45.28 n/a + 04:P-SWM P-2 3.90 .323 No_date 12:16 48.45 n/a [DT= 1.00] SUM= 07:TOT 15.90 1.210 No_date 12:17 46.06 n/a
2311
2312
2313
       025:0011-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2314
          DIVERT HYD -> 07:TOT 15.90 1.210 No_date 12:17 46.06 n/a diverted <= 09:To PR-R-BB 7.06 .116 No_date 12:17 46.06 n/a diverted <= 10:Pond 8.84 1.094 No_date 12:17 46.06 n/a
2315
2316
2317
       025:0012-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2318
          COMPUTE VOLUME 07:TOT 15.90 1.210 No_date 12:17 46.06 n/a {ST= .548 ha.m to control at .050 (cms)}
2319
2320
      2321
      2322
      025:0013-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2323
          CALIB NASHYD 01:EX-CL-400- 49.00 3.783 No_date 12:26 58.19 .564
2324
2325
           [CN= 79.0: N= 3.00]
2326
           [Tp= .53:DT= 1.00]
      025:0014------ID:NHYD-------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-

ROUTE CHANNEL -> 01:EX-CL-400- 49.00 3.783 No_date 12:26 58.19 n/a

[RDT= 1.00] out<- 02:to PR-CL-2 49.00 3.414 No_date 12:38 58.19 n/a
2327
2328
2329
2330
           [L/S/n= 825./ .850/.070]
           \{Vmax = 1.019:Dmax = 1.798\}
2331
2332
       025:0015-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 03:PR-R-BBP-1 8.80 .523 No_date 12:27 45.32 .439
2333
2334
           [CN= 72.0: N= 3.00]
2335
           [Tp= .53:DT= 1.00]
       025:0016------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:EX-CL-400- 1.30 .123 No_date 12:17 58.19 .564
2336
2337
           [CN= 79.0: N= 3.00]
2338
           [Tp= .40:DT= 1.00]
2339
       025:0017-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2340
          CALIB STANDHYD 05:PR-R-BBP-1 1.30 .355 No_date 11:54 74.72 .724
2341
2342
           [XIMP=.55:TIMP=.55]
2343
           [LOSS= 2 :CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=****:LGP= 8.:MNP=.350:SCP=
2344
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 93.:MNI=.015:SCI=
2345
       025:0018-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2346
```

```
CALIB NASHYD 06:PR-CL-2 161.70 1.778 No_date 16:00 35.40 .343
2352
            [CN=65.0: N=3.00]
2353
2354
             [Tp= 3.38:DT= 1.00]
        025:0020-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2355
        ADD HYD 01:TOT 11.40 .676 No_date 12:24 50.14 n/a + 02:to PR-CL-2 49.00 3.414 No_date 12:38 58.19 n/a + 06:PR-CL-2 161.70 1.778 No_date 16:00 35.40 n/a [DT= 1.00] SUM= 07:TOT PR-CL- 222.10 4.389 No_date 12:39 41.19 n/a
2356
2357
2358
2359
2360
        025:0021-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ROUTE CHANNEL -> 07:TOT PR-CL- 222.10 4.389 No_date 12:39 41.19 n/a [RDT= 1.00] out<- 04:to PR-R-BB 222.10 4.364 No_date 12:42 41.19 n/a
2361
2362
             [L/S/n=230./.900/.070]
2363
2364
             \{Vmax = 1.079:Dmax = 1.897\}
2365 025:0022-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 09:PR-R-BBP-4 6.10 .501 No_date 12:13 43.82 .425
2366
            [CN= 71.0: N= 3.00]
2367
2368
             [Tp = .32:DT = 1.00]
2369
        025:0023-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
        ADD HYD 04:to PR-R-BB 222.10 4.364 No_date 12:42 41.19 n/a + 09:PR-R-BBP-4 6.10 .501 No_date 12:13 43.82 n/a [DT= 1.00] SUM= 10:TOT 228.20 4.619 No_date 12:39 41.26 n/a
2370
2371
2372
       025:0024-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2373
            CALIB NASHYD 01:PR-CL-1 4.80 .397 No_date 12:16 48.45 .469
2374
2375
            [CN= 74.0: N= 3.00]
             [Tp= .37:DT= 1.00]
2376
        025:0025-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2377
           CALIB NASHYD 02:PR-R-BBP-2 5.90 .422 No_date 12:17 43.82 .425
2378
             [CN= 71.0: N= 3.00]
            [Tp= .39:DT= 1.00]
2380
        025:0026-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2381
       ADD HYD 01:PR-CL-1 4.80 .397 No_date 12:16 48.45 n/a + 02:PR-R-BBP-2 5.90 .422 No_date 12:17 43.82 n/a [DT= 1.00] SUM= 09:TOT 10.70 .818 No_date 12:17 45.89 n/a
2382
2383
2384
2385
        025:0027-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
            CALIB NASHYD 03:EX-CL-400- 1.70 .183 No_date 12:07 45.91 .445
2386
2387
            [CN= 72.0: N= 3.00]
             [Tp= .23:DT= 1.00]
2388
2389 025:0028-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         ADD HYD 03:EX-CL-400- 1.70 .183 No_date 12:07 45.91 n/a + 09:TOT 10.70 .818 No_date 12:17 45.89 n/a [DT= 1.00] SUM= 01:TOT 12.40 .972 No_date 12:14 45.90 n/a
2390
2391
2392
2393
      025:0029-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 04:PR-R-BBP-3 2.40 .268 No_date 12:05 43.82 .425
2394
2395
             [CN= 71.0: N= 3.00]
             [Tp= .20:DT= 1.00]
2396
2397
       025:0030-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            CALIB NASHYD 05:PR-CL-400- 2.20 .330 No_date 12:03 50.00 .484
2398
             [CN= 75.0: N= 3.00]
2399
             [Tp= .15:DT= 1.00]
2400
        025:0031-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2401
           ADD HYD 04:PR-R-BBP-3 2.40 .268 No_date 12:05 43.82 n/a + 05:PR-CL-400- 2.20 .330 No_date 12:03 50.00 n/a [DT= 1.00] SUM= 09:TOT 4.60 .592 No_date 12:04 46.77 n/a
2402
2403
2404
        025:0032-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2405
            ADD HYD 01:TOT 12.40 .972 No_date 12:14 45.90 n/a + 09:TOT 4.60 .592 No_date 12:04 46.77 n/a + 10:TOT 228.20 4.619 No_date 12:39 41.26 n/a [DT= 1.00] SUM= 07:TOT 245.20 5.400 No_date 12:33 41.59 n/a
2406
2407
2408
2409
2410 025:0033-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
        ROUTE CHANNEL -> 07:TOT 245.20 5.400 No_date 12:33 41.59 n/a
2411
           [RDT= 1.00] out<- 01:to PR-R-BB 245.20 5.054 No_date 12:48 41.59 n/a
2412
            [L/S/n= 895./1.000/.070]
2413
             {Vmax= 1.004:Dmax= 2.167}
2414
      025:0034-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2415
```

```
CALIB NASHYD 02:PR-CL-400- 9.60 .542 No_date 12:28 43.82 .425
2416
2417
           [CN= 71.0: N= 3.00]
2418
           [Tp= .54:DT= 1.00]
       2419
2420
2421
2422
     025:0036-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2423
       ADD HYD 02:TOT 254.80 5.512 No_date 12:46 41.68 n/a + 08:PR-R-BBP-1 14.50 .869 No_date 12:28 46.86 n/a [DT= 1.00] SUM= 06:TOT 269.30 6.283 No_date 12:43 41.96 n/a
2424
2425
2426
     2427
     2428
      025:0037-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2429
          CALIB NASHYD 02:PR-R-BBP-9 6.60 .472 No_date 12:19 45.32 .439
2430
2431
            [CN= 72.0: N= 3.00]
            [Tp= .41:DT= 1.00]
2432
       025:0038-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2433
          CALIB NASHYD 01:PR-R-10IC- 4.70 .250 No_date 12:12 27.90 .270
2434
2435
           [CN= 59.0: N= 3.00]
2436
            [Tp= .29:DT= 1.00]
       025:0039-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2437
          CALIB STANDHYD 02:PR-CL-BBP- 2.30 .339 No_date 11:55 47.92 .464
2438
2439
           [XIMP=.35:TIMP=.35]
            [LOSS= 2 :CN= 51.0]
2440
            [Pervious area: IAper=24.40:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 124.:MNI=.015:SCI=
2441
2442
2443
       025:0040-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ADD HYD 01:PR-R-10IC- 4.70 .250 No_date 12:12 27.90 n/a
+ 02:PR-CL-BBP- 2.30 .339 No_date 11:55 47.92 n/a
[DT= 1.00] SUM= 03:TOT 7.00 .471 No_date 12:00 34.48 n/a
2444
2445
2446
       025:0041-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2447
           CALIB NASHYD 04:PR-R-10IC- 1.30 .088 No_date 12:09 31.54 .306
2448
            [CN = 62.0: N = 3.00]
2449
2450
           [Tp= .25:DT= 1.00]
       025:0042-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2451
          ADD HYD 03:TOT 7.00 .471 No_date 12:00 34.48 n/a + 04:PR-R-10IC- 1.30 .088 No_date 12:09 31.54 n/a [DT= 1.00] SUM= 05:TOT 8.30 .539 No_date 12:01 34.02 n/a
2452
2453
2454
2455
       025:0043-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 06:PR-R-10IC- 2.70 .393 No_date 11:56 49.09 .476
2456
2457
           [XIMP=.30:TIMP=.30]
2458
            [LOSS= 2 :CN= 58.0]
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
2459
2460
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 134.:MNI=.015:SCI= .0]
2461
       025:0044-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 05:TOT 8.30 .539 No_date 12:01 34.02 n/a + 06:PR-R-10IC- 2.70 .393 No_date 11:56 49.09 n/a [DT= 1.00] SUM= 07:TOT 11.00 .918 No_date 12:00 37.72 n/a
2462
2463
2464
       025:0045-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2465
          DIVERT HYD -> 07:TOT 11.00 .918 No_date 12:00 37.72 n/a diverted <= 01:To PR-R-10 8.58 .266 No_date 12:00 37.72 n/a diverted <= 02:To Pond 2.42 .652 No_date 12:00 37.72 n/a
2466
2467
2468
       025:0046-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2469
           COMPUTE VOLUME 07:TOT 11.00 .918 No_date 12:00 37.72 n/a {ST= .085 ha.m to control at .400 (cms)}
2471
2472
      2473
      025:0047-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2474
           CALIB NASHYD 01:PR-R-10IC- 1.40 .106 No_date 12:11 38.12 .369
2475
            [CN=67.0: N=3.00]
2476
            [Tp= .29:DT= 1.00]
2477
       025:0048-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2478
          CALIB STANDHYD 02:PR-R-10IC- 3.10 .525 No_date 11:56 55.86 .541
2479
           [XIMP=.36:TIMP=.36]
2480
2481
            [LOSS= 2 :CN= 61.0]
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
2482
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
2483
      025:0049-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2484
```

```
2485
         ADD HYD
2486
2487
      2488
2489
2490
2491
2492
         COMPUTE VOLUME 03:TOT 4.50 .577 No_date 12:00 50.34 n/a {ST= .064 ha.m to control at .150 (cms)}
2493
2494
     2496
      025:0052-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2.497
          CALIB NASHYD 01:PR-R-C4IC- 13.40 .531 No_date 12:26 30.35 .294
2498
2499
          [CN= 61.0: N= 3.00]
2500
          [Tp = .50:DT = 1.00]
      025:0053-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2501
         CALIB STANDHYD 02:PR-CL-BBP- 3.00 .685 No_date 11:55
2502
          [XIMP=.52:TIMP=.52]
2503
2504
          [LOSS= 2 :CN= 66.0]
2505
          [Pervious area: IAper=13.10:SLPP=****:LGP= 40.:MNP=.350:SCP=
                                                                  .01
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
2506
2507
      025:0054-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         2508
2509
2510
      025:0055-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2511
         CALIB STANDHYD 04:PR-R-C4IC- 2.80 .391 No_date 11:56 47.60 .461
2512
          [XIMP=.28:TIMP=.28]
2513
2514
          [LOSS= 2 :CN= 58.0]
2515
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
                                                                   .0]
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 137.:MNI=.015:SCI=
2516
      025:0056-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2517
         CALIB STANDHYD 05:PR-R-C4IC- 1.60 .241 No_date 11:55 49.09 .476
2518
          [XIMP=.30:TIMP=.30]
2519
2520
          [LOSS= 2 :CN= 58.0]
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 103.:MNI=.015:SCI= .0]
2521
2522
2523
      025:0057-----ID:NHYD-----AREA---OPEAK-TpeakDate hh:mm----R.V.-R.C.-
      2524
2525
2526
2527
2528
         DIVERT HYD -> 06:TOT 20.80 1.450 No_date 12:00 39.87 n/a diverted <= 09:To PR-R-C4 15.24 .380 No_date 12:00 39.87 n/a diverted <= 10:Pond 5.56 1.069 No_date 12:00 39.87 n/a
2529
2530
2531
      025:0059------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
COMPUTE VOLUME 06:TOT 20.80 1.450 No_date 12:00 39.87 n/a
{ST= .056 ha.m to control at 1.000 (cms)}
2532
2533
2534
2535
     2536
2537
      025:0060-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-R-C4IC- .40 .049 No_date 12:01 35.40 .343
2538
2539
          [CN=65.0: N=3.00]
2540
          [Tp= .10:DT= 1.00]
2541
      025:0061-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-C4IC- 1.30 .081 No_date 12:11 31.54 .306
2542
2543
           [CN= 62.0: N= 3.00]
2544
          [Tp= .28:DT= 1.00]
      025:0062-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2545
          ADD HYD 01:PR-R-C4IC- .40 .049 No_date 12:01 35.40 n/a
+ 02:PR-R-C4IC- 1.30 .081 No_date 12:11 31.54 n/a
[DT= 1.00] SUM= 03:TOT 1.70 .114 No_date 12:04 32.45 n/a
2546
         ADD HYD
2547
2548
      025:0063-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2549
         CALIB STANDHYD 04:PR-R-C4IC- 3.10 .513 No_date 11:56 54.30 .526
2550
2551
          [XIMP=.37:TIMP=.37]
2552
          [LOSS= 2 :CN= 58.0]
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
2553
                                                                   .0]
```

```
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
2554
        025:0064-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2555
             ADD HYD 03:TOT 1.70 .114 No_date 12:04 32.45 n/a
+ 04:PR-R-C4IC- 3.10 .513 No_date 11:56 54.30 n/a
[DT= 1.00] SUM= 05:TOT 4.80 .592 No_date 11:56 46.56 n/a
2556
           ADD HYD
2557
2558
        025:0065-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2559
            DIVERT HYD -> 05:TOT 4.80 .592 No_date 11:56 46.56 n/a diverted <= 09:To PR-R-C4 3.19 .080 No_date 11:56 46.56 n/a diverted <= 10:Pond 1.61 .512 No_date 11:56 46.56 n/a
2560
2561
2562
        025:0066-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2563
            COMPUTE VOLUME 05:TOT 4.80 .592 No_date 11:56 46.56 n/a {ST= .075 ha.m to control at .100 (cms)}
2564
2565
       2566
       2567
        025:0067-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2568
            CALIB STANDHYD 01:PR-R-2CON- 1.60 .271 No_date 12:00 54.12 .524
2569
2570
             [XIMP=.20:TIMP=.20]
2571
             [LOSS= 2 :CN= 70.0]
             [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP=
2572
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 210.:MNI=.015:SCI= .0]
2573
        025:0068-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2574
            CALIB STANDHYD 02:PR-CL-BBP- 3.00 .487 No_date 12:00 54.23 .525
2575
2576
             [XIMP=.30:TIMP=.30]
2577
             [LOSS= 2 :CN= 64.0]
             [Pervious area: IAper=14.30:SLPP=****:LGP= 30.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 240.:MNI=.015:SCI=
2578
2579
                                                                                   . 01
        025:0069-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2580
           ADD HYD 01:PR-R-2CON- 1.60 .271 No_date 12:00 54.12 n/a + 02:PR-CL-BBP- 3.00 .487 No_date 12:00 54.23 n/a [DT= 1.00] SUM= 03:TOT 4.60 .758 No_date 12:00 54.19 n/a
2581
2582
2.583
        025:0070-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2584
            CALIB STANDHYD 04:PR-R-2CON- 3.00 .627 No_date 11:56 64.71 .627
2585
2586
             [XIMP=.38:TIMP=.38]
             [LOSS= 2 :CN= 70.0]
2587
             [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 163.:MNI=.015:SCI= .0]
2588
2589
        025:0071-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2590
            ADD HYD 03:TOT 4.60 .758 No_date 12:00 54.19 n/a + 04:PR-R-2CON- 3.00 .627 No_date 11:56 64.71 n/a [DT= 1.00] SUM= 06:TOT 7.60 1.363 No_date 11:57 58.35 n/a
2591
2592
2593
        025:0072-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2594
            DIVERT HYD -> 06:TOT 7.60 1.363 No_date 11:57 58.35 n/a diverted <= 09:To waterco 6.11 .446 No_date 11:57 58.35 n/a diverted <= 10:Pond 1.49 .917 No_date 11:57 58.35 n/a
2595
2596
2597
        025:0073-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2598
            COMPUTE VOLUME 06:TOT 7.60 1.363 No_date 11:57 58.35 n/a {ST= .087 ha.m to control at .600 (cms)}
2599
2600
2601
       2602
       025:0074-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2603
            CALIB NASHYD 01:PR-R-2CON- 28.00 .512 No_date 13:32 30.35 .294
2604
2605
             [CN= 61.0: N= 3.00]
             [Tp= 1.39:DT= 1.00]
2606
        025:0075-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2607
            CALIB STANDHYD 02:PR-CL-BBP- 3.00 .723 No_date 11:56 74.86 .725
2609
             [XIMP=.45:TIMP=.45]
2610
             [LOSS= 2 :CN= 77.0]
             [Pervious area: IAper= 7.60:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
2611
2612
        025:0076-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2613
            ADD HYD 01:PR-R-2CON- 28.00 .512 No_date 13:32 30.35 n/a + 02:PR-CL-BBP- 3.00 .723 No_date 11:56 74.86 n/a [DT= 1.00] SUM= 03:TOT 31.00 .765 No_date 11:56 34.66 n/a
2614
2615
2616
        025:0077-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2617
            CALIB STANDHYD 04:PR-R-2CON- 1.50 .330 No_date 11:55 67.92 .658
2618
2619
             [XIMP=.28:TIMP=.28]
             [LOSS= 2 :CN= 78.0]
2620
2621
             [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 100.:MNI=.015:SCI=
                                                                                   .0]
2622
```

```
025:0078-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2623
       2624
2625
2626
2627
       CALIB STANDHYD 06:PR-R-2CON- 3.00 .703 No_date 11:56 73.47 .712
2628
2629
          [XIMP=.40:TIMP=.40]
2630
           [LOSS= 2 :CN= 78.0]
           [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
2631
                                                                        .0]
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
2632
       025:0080-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
       ADD HYD 05:TOT 32.50 1.093 No_date 11:56 36.19 n/a + 06:PR-R-2CON- 3.00 .703 No_date 11:56 73.47 n/a [DT= 1.00] SUM= 07:TOT 35.50 1.796 No_date 11:56 39.34 n/a
2634
2635
2636
     [DT= 1.00] SUM= 07:TOT 35.50 1.796 No_date 11:56 39.34 n/a
025:0081-------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
DIVERT HYD -> 07:TOT 35.50 1.796 No_date 11:56 39.34 n/a
diverted <= 01:To PR-R-2C 31.32 .562 No_date 11:56 39.34 n/a
diverted <= 02:To Pond 4.18 1.234 No_date 11:56 39.34 n/a
025:0082------ID:NHYD--------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
COMPUTE VOLUME 07:TOT 35.50 1.796 No_date 11:56 39.34 n/a
{ST= .077 ha.m to control at 1.100 (cms)}
2637
2638
2639
2640
2641
2642
2643
2644
      2645
      025:0083-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2646
          CALIB NASHYD 01:PR-R-404-4 3.50 .163 No_date 12:19 30.35 .294
2647
           [CN= 61.0: N= 3.00]
2648
2649
           [Tp= .40:DT= 1.00]
2650
       025:0084-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 02:PR-R-404-5 5.90 .169 No_date 12:46 30.35 .294
2651
2652
           [CN= 61.0: N= 3.00]
           [Tp= .77:DT= 1.00]
2653
       025:0085-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2654
          ADD HYD 01:PR-R-404-4 3.50 .163 No_date 12:19 30.35 n/a + 02:PR-R-404-5 5.90 .169 No_date 12:46 30.35 n/a [DT= 1.00] SUM= 03:TOT 9.40 .303 No_date 12:29 30.35 n/a
2655
2656
2657
       025:0086------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:PR-R-404-6 3.70 .207 No_date 12:16 32.83 .318
2658
2659
2660
           [CN= 63.0: N= 3.00]
           [Tp= .35:DT= 1.00]
2661
       025:0087-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2662
      ADD HYD
       2663
2664
2665
2666
          DIVERT HYD -> 09:TOT 13.10 .493 No_date 12:21 31.05 n/a diverted <= 01:To waterco 8.82 .131 No_date 12:21 31.05 n/a diverted <= 02:To Pond 4.28 .362 No_date 12:21 31.05 n/a
2667
2668
2669
       2670
2671
2672
2673
      2.674
2675
      025:0090-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 10:PR-R-404-7 6.50 .212 No_date 12:37 30.35 .294
2676
2677
           [CN= 61.0: N= 3.00]
2678
           [Tp= .65:DT= 1.00]
2679
       025:0091-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       2680
2681
2682
2683
          COMPUTE VOLUME 10:PR-R-404-7 6.50 .212 No_date 12:37 30.35 n/a {ST= .060 ha.m to control at .100 (cms)}
2684
2685
      2686
      2687
      025:0093-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2688
          CALIB NASHYD 01:PR-R-404-1 29.30 .706 No_date 12:56 29.13 .282
2689
2690
           [CN= 60.0: N= 3.00]
           [Tp= .91:DT= 1.00]
2691
```

```
025:0094-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2692
2693
         CALIB NASHYD 02:PR-R-404-1 7.30 .324 No_date 12:19 29.13 .282
2694
          [CN= 60.0: N= 3.00]
2695
          [Tp = .40:DT = 1.00]
2696
      025:0095-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 03:PR-CL-404- 2.20 .098 No_date 12:27 34.10 .330
2697
2698
          [CN= 64.0: N= 3.00]
          [Tp= .51:DT= 1.00]
2699
      025:0096-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2700
         ADD HYD 01:PR-R-404-1 29.30 .706 No_date 12:56 29.13 n/a + 02:PR-R-404-1 7.30 .324 No_date 12:19 29.13 n/a + 03:PR-CL-404- 2.20 .098 No_date 12:27 34.10 n/a [DT= 1.00] SUM= 10:TOT 38.80 .992 No_date 12:38 29.42 n/a
2701
2702
2703
2704
     2705
     2706
     2707
2708
     025:0097-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2709
         CALIB NASHYD 01:PR-R-BBP-5 2.20 .169 No_date 12:16 45.32 .439
2710
         [CN= 72.0: N= 3.00]
2711
2712
          [Tp= .37:DT= 1.00]
2713 025:0098-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-BBP-6 542.60 3.493 No_date 17:46 26.76 .259
2714
          [CN= 58.0: N= 3.00]
2715
2716
          [Tp= 4.60:DT= 1.00]
      025:0099-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2717
         CALIB NASHYD 03:PR-R-BBP-6 5.60 .337 No_date 12:23 42.35 .410
2718
          [CN= 70.0: N= 3.00]
2719
2720
          [Tp= .47:DT= 1.00]
      025:0100-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2721
      ADD HYD 01:PR-R-BBP-5 2.20 .169 No_date 12:16 45.32 n/a

+ 02:PR-R-BBP-6 542.60 3.493 No_date 17:46 26.76 n/a

+ 03:PR-R-BBP-6 5.60 .337 No_date 12:23 42.35 n/a

[DT= 1.00] SUM= 04:TOT 550.40 3.524 No_date 17:45 26.99 n/a
2722
2723
2724
2725
2726
      025:0101-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 01:PR-R-BBP-7 2.40 .248 No_date 12:08 45.32 .439
2727
          [CN= 72.0: N= 3.00]
2728
2729
          [Tp= .24:DT= 1.00]
2730
      025:0102-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-BBP-8 81.70 .787 No_date 15:00 25.60 .248
2731
2732
         [CN=57.0: N=3.00]
2733
          [Tp= 2.50:DT= 1.00]
      025:0103-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2734
         CALIB NASHYD 03:PR-R-BBP-8 3.70 .213 No_date 12:25 42.35 .410
2735
2736
          [CN= 70.0: N= 3.00]
2737
          [Tp= .50:DT= 1.00]
2738
      025:0104-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         2739
2740
2741
2742
      025:0105-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB STANDHYD 05:PR-R-10IC- 3.40 .671 No_date 11:55 62.49 .606
2743
          [XIMP=.48:TIMP=.48]
2744
          [LOSS= 2 :CN= 58.0]
2745
2746
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 151.:MNI=.015:SCI= .0]
2747
2748
     2749
     025:0106-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2750
         CALIB NASHYD 08:PR-R-10IC- 1.40 .106 No_date 12:11 38.12 .369
2751
2752
          [CN=67.0: N=3.00]
          [Tp= .29:DT= 1.00]
2753
      025:0107-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2754
         CALIB STANDHYD 09:PR-R-10IC- 3.10 .525 No_date 11:56 55.86 .541
2755
2756
          [XIMP=.36:TIMP=.36]
2757
          [LOSS= 2 :CN= 61.0]
2758
          [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
2759
     025:0108-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2760
```

```
2761
          ADD HYD
2762
2763
       025:0109------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ROUTE CHANNEL -> 10:TOT 4.50 .577 No_date 12:00 50.34 n/a
[RDT= 1.00] out<- 01:to PR-CL-B 4.50 .265 No_date 12:07 50.34 n/a
2764
2765
2766
            [L/S/n = 1200./1.000/.070]
2767
2768
            \{Vmax = .697:Dmax = .625\}
       025:0110-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2769
          CALIB NASHYD 02:PR-CL-BBP- 75.80 2.071 No_date 13:16 39.47 .382
2770
2771
            [CN= 68.0: N= 3.00]
            [Tp= 1.21:DT= 1.00]
2772
       025:0111-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2.773
          ADD HYD 01:to PR-CL-B 4.50 .265 No_date 12:07 50.34 n/a + 02:PR-CL-BBP- 75.80 2.071 No_date 13:16 39.47 n/a [DT= 1.00] SUM= 03:TOT 80.30 2.174 No_date 13:13 40.08 n/a
2774
2775
2776
2777
       025:0112-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 04:PR-R-C4IC- 2.50 .554 No_date 11:55 67.70 .656
2778
           [XIMP=.55:TIMP=.55]
2779
            [LOSS= 2 :CN= 58.0]
2780
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
2781
2782
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 129.:MNI=.015:SCI= .0]
2783
       025:0113-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 05:PR-CL-BBP- 27.30 1.305 No_date 12:39 45.32 .439
2784
2785
            [CN= 72.0: N= 3.00]
2786
            [Tp= .71:DT= 1.00]
      2787
      2788
      025:0114-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2789
          CALIB NASHYD 07:PR-R-C4IC- .40 .049 No_date 12:01 35.40 .343
2790
2791
           [CN=65.0: N=3.00]
2792
           [Tp= .10:DT= 1.00]
       025:0115-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2793
          CALIB NASHYD 08:PR-R-C4IC- 1.30 .081 No_date 12:11 31.54 .306
2794
2795
           [CN= 62.0: N= 3.00]
2796
           [Tp= .28:DT= 1.00]
       025:0116-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2797
          CALIB STANDHYD 09:PR-R-C4IC- 3.10 .513 No_date 11:56 54.30 .526
2798
2799
           [XIMP=.37:TIMP=.37]
2800
           [LOSS= 2 :CN= 58.0]
2801
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
2802
       025:0117-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2803
           ADD HYD 07:PR-R-C4IC- .40 .049 No_date 12:01 35.40 n/a + 08:PR-R-C4IC- 1.30 .081 No_date 12:11 31.54 n/a + 09:PR-R-C4IC- 3.10 .513 No_date 11:56 54.30 n/a [DT= 1.00] SUM= 10:TOT 4.80 .592 No_date 11:56 46.56 n/a
2804
          ADD HYD
2805
2806
2807
       025:0118------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ROUTE CHANNEL -> 10:TOT 4.80 .592 No_date 11:56 46.56 n/a
[RDT= 1.00] out<- 01:to PR-CL-B 4.80 .406 No_date 12:03 46.56 n/a
2808
2809
2810
2811
            [L/S/n=580./1.000/.070]
2812
            \{Vmax = .702:Dmax = .636\}
2813
       025:0119-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 02:PR-CL-BBP- 22.10 .795 No_date 12:39 34.10 .330
2814
            [CN= 64.0: N= 3.00]
2816
            [Tp= .68:DT= 1.00]
       025:0120-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2817
          ADD HYD 01:to PR-CL-B 4.80 .406 No_date 12:03 46.56 n/a
2818
            + 02:PR-CL-BBP- 22.10 .795 No_date 12:39 34.10 n/a [DT= 1.00] SUM= 03:TOT 26.90 .973 No_date 12:29 36.32 n/a
2819
2820
      2821
     2822
     025:0121-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2823
          CALIB NASHYD 01:PR-R-BST-1 2.20 .251 No_date 12:07 48.45 .469
2824
2825
           [CN= 74.0: N= 3.00]
2826
           [Tp= .23:DT= 1.00]
       025:0122-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2827
          CALIB STANDHYD 02:PR-CL-BBP- 2.00 .450 No_date 11:55 69.42 .673
2828
2829
           [XIMP=.46:TIMP=.46]
```

```
[LOSS= 2 :CN= 70.0]
2830
2831
                   [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
                   [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI=
2832
                                                                                                                         .01
2833
            025:0123-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
                 ADD HYD 01:PR-R-BST-1 2.20 .251 No_date 12:07 48.45 n/a + 02:PR-CL-BBP- 2.00 .450 No_date 11:55 69.42 n/a [DT= 1.00] SUM= 03:TOT 4.20 .620 No_date 12:00 58.44 n/a
2834
2835
2836
            025:0124-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2837
                 CALIB STANDHYD 04:PR-R-BST-2 2.00 .422 No_date 11:56 65.89 .638
2838
2839
                   [XIMP=.40:TIMP=.40]
                   [LOSS= 2 :CN= 70.0]
2840
                   [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI= .0]
2841
2842
2843
            025:0125-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
                 ADD HYD 03:TOT 4.20 .620 No_date 12:00 58.44 n/a + 04:PR-R-BST-2 2.00 .422 No_date 11:56 65.89 n/a [DT= 1.00] SUM= 05:TOT 6.20 1.020 No_date 12:00 60.84 n/a
2844
2845
2846
            025:0126-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2847
                  CALIB NASHYD 01:PR-R-BST-3 3.60 .217 No_date 12:26 45.32 .439
2848
                   [CN= 72.0: N= 3.00]
2849
                   [Tp= .52:DT= 1.00]
2850
2851
            025:0127-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
                 CALIB STANDHYD 02:PR-CL-BBP- 2.10 .484 No_date 11:55 70.60 .684
2852
2853
                   [XIMP=.48:TIMP=.48]
2854
                   [LOSS= 2 :CN= 70.0]
                   [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI=
2855
                                                                                                                          .0]
2856
            025:0128-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2857
                 2858
2859
2860
2861
            025:0129-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
                  CALIB STANDHYD 04:PR-R-BST-2 2.00 .423 No_date 11:56 65.89 .638
2862
                   [XIMP=.40:TIMP=.40]
2863
                   [LOSS= 2 :CN= 70.0]
2864
                   [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI= .0]
2865
2866
            025:0130-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2867
                   | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 | 130 
2868
                  ADD HYD
2869
2870
          2871
          2872
2873
            025:0131-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
                  CALIB NASHYD 01:PR-R-2CON- 243.60 3.736 No_date 14:38 36.74 .356
2874
2875
                   [CN= 66.0: N= 3.00]
2876
                   [Tp= 2.31:DT= 1.00]
            025:0132------ID:NHYD-------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:PR-CL-BBP- 37.00 1.077 No_date 12:51 32.83 .318
2877
2878
                   [CN= 63.0: N= 3.00]
2879
2880
                   [Tp = .85:DT = 1.00]
2881
            025:0133-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
                  CALIB NASHYD 03:PR-R-LST-1 40.20 .917 No_date 13:05 30.35 .294
2882
2883
                   [CN= 61.0: N= 3.00]
                   [Tp= 1.04:DT= 1.00]
2884
            025:0134-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2885
                  CALIB STANDHYD 04:PR-CL-BBP- 1.80 .363 No_date 11:55 62.23 .603
2886
2887
                   [XIMP=.45:TIMP=.45]
2888
                    [LOSS= 2 :CN= 61.0]
                   [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 110.:MNI=.015:SCI= .0]
2889
2890
            025:0135-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2891
                 2892
2893
2894
            025:0136-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
2895
                  CALIB NASHYD 01:PR-R-LST-2 8.80 .291 No_date 12:34 29.13 .282
2896
                   [CN= 60.0: N= 3.00]
2897
                   [Tp= .60:DT= 1.00]
2898
```

```
025:0137-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2899
2900
       CALIB STANDHYD 02:PR-CL-BBP- 1.20 .230 No_date 11:54 59.40 .576
2901
           [XIMP=.41:TIMP=.41]
2902
            [LOSS= 2 :CN= 61.0]
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 89.:MNI=.015:SCI=
2903
2904
     025:0138-----ID:NHYD------AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
2905
          ADD HYD 01:PR-R-LST-2 8.80 .291 No_date 12:34 29.13 n/a + 02:PR-CL-BBP- 1.20 .230 No_date 11:54 59.40 n/a [DT= 1.00] SUM= 03:TOT 10.00 .316 No_date 12:31 32.77 n/a
2906
2907
2908
2909 025:0139-----ID:NHYD-----AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
          CALIB STANDHYD 04:PR-R-LST-3 1.10 .201 No_date 11:54 56.54 .548
2910
           [XIMP=.40:TIMP=.40]
2911
            [LOSS= 2 :CN= 58.0]
2912
            [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 86.:MNI=.015:SCI= .0]
2913
2914
       025:0140-----ID:NHYD------AREA---OPEAK-TpeakDate hh:mm----R.V.-R.C.-
2915
      ADD HYD 03:TOT 10.00 .316 No_date 12:31 32.77 n/a + 04:PR-R-LST-3 1.10 .201 No_date 11:54 56.54 n/a [DT= 1.00] SUM= 05:TOT 11.10 .485 No_date 11:55 35.12 n/a
2916
2917
2918
2919 025:0141-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-CL-BBP- 22.00 .854 No_date 12:36 35.40 .343
2920
            [CN= 65.0: N= 3.00]
2921
2922
            [Tp = .65:DT = 1.00]
     2923
     2924
     025:0142-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2925
          CALIB NASHYD 01:PR-R-404-3 118.50 1.699 No_date 14:19 31.54 .306
2926
2927
           [CN= 62.0: N= 3.00]
2928
           [Tp= 2.02:DT= 1.00]
2929 025:0143-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 02:PR-R-404-2 .90 .051 No_date 12:14 31.54 .306
2930
2931
           [CN= 62.0: N= 3.00]
           [Tp = .32:DT = 1.00]
2932
2933 025:0144-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
      ADD HYD 01:PR-R-404-3 118.50 1.699 No_date 14:19 31.54 n/a + 02:PR-R-404-2 .90 .051 No_date 12:14 31.54 n/a [DT= 1.00] SUM= 03:TOT 119.40 1.705 No_date 14:19 31.54 n/a
2934
2935
2936
2937
       025:0145-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 04:PR-R-404-1 1.70 .074 No_date 12:24 31.54 .306
2938
2939
           [CN= 62.0: N= 3.00]
           [Tp= .47:DT= 1.00]
2940
       025:0146-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2941
          ADD HYD 03:TOT 119.40 1.705 No_date 14:19 31.54 n/a + 04:PR-R-404-1 1.70 .074 No_date 12:24 31.54 n/a [DT= 1.00] SUM= 05:TOT 121.10 1.717 No_date 14:18 31.54 n/a
2942
2943
2944
     025:0147-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
2945
          CALIB NASHYD 08:PR-R-404-8 2.40 .099 No_date 12:26 31.54 .306
2946
2947
           [CN= 62.0: N= 3.00]
2948
            [Tp = .50:DT = 1.00]
2949
      025:0148-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 09:PR-R-404-8 2.60 .116 No_date 12:27 34.10 .330
2950
2951
           [CN= 64.0: N= 3.00]
2952
            [Tp= .51:DT= 1.00]
2953
       025:0149-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 10:PR-R-404-9 1.80 .118 No_date 12:10 31.54 .306
2954
2955
            [CN= 62.0: N= 3.00]
            [Tp= .26:DT= 1.00]
2956
      2957
      ** END OF RUN : 49
2958
2959
      ******************
2960
2961
2962
2963
2964
2965
```

2967

RUN: COMMAND#

050:0001----

```
2968
         START
          [TZERO = .00 \text{ hrs on} 0]
2969
           [METOUT= 2 (1=imperial, 2=metric output)]
2970
           [NSTORM= 1]
2971
           [NRUN = 50]
2972
    #******************
2973
2974 # Project Name: BRADFORD BYPASS
                                                    JOB NUMBER: [60636190] *
2975 # Date : Jan. 20, 2023
2976  # Modeller : [jrm]
2977  # Company : AECOM
     # License # : 1281254
2978
2979
2980
2981
     # Notes: This hydrologic model was developed for the BBP ultimate conditions *
              A new Berm is proposed to isolate flows draining to P-SWM P-2 and
2982
2983
              the tributary of Penville Creek.
             Estimated controlled flows by the SWM ponds based on an assumed
2984
             release flow rate from the SWM pond.
2985
2986
                   PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
2987
2988
                         PROPOSED SWM PONDS (CONTROLLED FLOWS)
2989
                            Proposed Drainage Conditions
2990 #
                     2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
2991
2992
2993
     050:0002-----
2994
2995
        READ STORM
2996
          Filename = STORM.001
2997
          Comment =
2998
           [SDT= 6.00:SDUR= 24.00:PTOT= 115.20]
3001
     050:0003-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 08:PR-R-BBP-1 14.50 1.046 No_date 12:28 56.04 .486
3002
3003
           [CN= 73.0: N= 3.00]
3004
           [Tp= .55:DT= 1.00]
3005
      050:0004-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          DIVERT HYD -> 08:PR-R-BBP-1 14.50 1.046 No_date 12:28 56.04 n/a diverted <= 09:To PR-R-BB 10.15 .336 No_date 12:28 56.04 n/a diverted <= 10:To Pond 4.35 .710 No_date 12:28 56.04 n/a
3006
3007
3008
     050:0005-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3009
          COMPUTE VOLUME 08:PR-R-BBP-1 14.50 1.046 No_date 12:28 56.04 n/a {ST= .228 ha.m to control at .500 (cms)}
3010
3011
3012
      3013
      3014
      050:0006-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-R-BBP-9 5.40 .492 No_date 12:17 54.33 .472
3015
3016
           [CN= 72.0: N= 3.00]
           [Tp= .38:DT= 1.00]
3017
3018
     050:0007-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 02:PR-R-BBP-9 6.60 .579 No_date 12:18 54.26 .471
3019
          [CN= 72.0: N= 3.00]
3020
           [Tp= .40:DT= 1.00]
3021
3022
      050:0008-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 01:PR-R-BBP-9 5.40 .492 No_date 12:17 54.33 n/a + 02:PR-R-BBP-9 6.60 .579 No_date 12:18 54.26 n/a [DT= 1.00] SUM= 03:TOT 12.00 1.071 No_date 12:17 54.29 n/a
3023
3024
3025
      050:0009------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:P-SWM P-2 3.90 .387 No_date 12:16 57.79 .502
3026
3027
           [CN= 74.0: N= 3.00]
3028
           [Tp= .37:DT= 1.00]
3029
      050:0010-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3030
          3031
          ADD HYD
3032
3033
      050:0011-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3034
       DIVERT HYD -> 07:TOT 15.90 1.457 No_date 12:17 55.15 n/a diverted <= 09:To PR-R-BB 6.53 .125 No_date 12:17 55.15 n/a
3035
3036
```

```
diverted <= 10:Pond
                                          9.37 1.332 No_date 12:17 55.15 n/a
3038 050:0012-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
      COMPUTE VOLUME 07:TOT 15.90 1.457 No_date 12:17 55.15 n/a {ST= .687 ha.m to control at .050 (cms)}
3039
3040
3041
      3042
3043 050:0013-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:EX-CL-400- 49.00 4.453 No_date 12:26 68.33 .593
3044
3045
           [CN= 79.0: N= 3.00]
           [Tp= .53:DT= 1.00]
3046
       050:0014-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3047
          ROUTE CHANNEL -> 01:EX-CL-400- 49.00 4.453 No_date 12:26 68.33 n/a [RDT= 1.00] out<- 02:to PR-CL-2 49.00 4.043 No_date 12:37 68.33 n/a
3048
3049
3050
           [L/S/n = 825./.850/.070]
3051
           \{Vmax = 1.059:Dmax = 1.933\}
       050:0015-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3052
          CALIB NASHYD 03:PR-R-BBP-1 8.80 .631 No_date 12:27 54.33 .472
3053
3054
           [CN= 72.0: N= 3.00]
           [Tp= .53:DT= 1.00]
3055
       050:0016-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3056
          CALIB NASHYD 04:EX-CL-400- 1.30 .145 No_date 12:17 68.33 .593
3057
3058
           [CN= 79.0: N= 3.00]
           [Tp= .40:DT= 1.00]
3059
3060 050:0017-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 05:PR-R-BBP-1 1.30 .413 No_date 11:54 85.23 .740
3061
3062
           [XIMP=.55:TIMP=.55]
3063
           [LOSS= 2 :CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=****:LGP= 8.:MNP=.350:SCP=
3064
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 93.:MNI=.015:SCI= .0]
3065
3066 050:0018-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       ADD HYD 03:PR-R-BBP-1 8.80 .631 No_date 12:27 54.33 n/a + 04:EX-CL-400- 1.30 .145 No_date 12:17 68.33 n/a + 05:PR-R-BBP-1 1.30 .413 No_date 11:54 85.23 n/a [DT= 1.00] SUM= 01:TOT 11.40 .809 No_date 12:24 59.45 n/a
3067
3068
3069
3070
       050:0019-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3071
          CALIB NASHYD 06:PR-CL-2 161.70 2.190 No_date 15:58 43.24 .375
3072
3073
           [CN=65.0: N=3.00]
3074
           [Tp= 3.38:DT= 1.00]
3075
       050:0020-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 01:TOT 11.40 .809 No_date 12:24 59.45 n/a + 02:to PR-CL-2 49.00 4.043 No_date 12:37 68.33 n/a
3076
3077
           + 06:PR-CL-2 161.70 2.190 No_date 15:58 43.24 n/a [DT= 1.00] SUM= 07:TOT PR-CL- 222.10 5.244 No_date 12:38 49.61 n/a
3078
3079
      050:0021-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3080
3081
         ROUTE CHANNEL -> 07:TOT PR-CL- 222.10 5.244 No_date 12:38 49.61 n/a
          [RDT= 1.00] out<- 04:to PR-R-BB 222.10 5.147 No_date 12:45 49.61 n/a
3082
3083
           [L/S/n = 230./.900/.070]
           \{Vmax = .952:Dmax = 2.185\}
3084
3085
       050:0022-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 09:PR-R-BBP-4 6.10 .606 No_date 12:13 52.67 .457
3086
3087
           [CN= 71.0: N= 3.00]
3088
           [Tp= .32:DT= 1.00]
       050:0023-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3089
          ADD HYD 04:to PR-R-BB 222.10 5.147 No_date 12:45 49.61 n/a
+ 09:PR-R-BBP-4 6.10 .606 No_date 12:13 52.67 n/a
[DT= 1.00] SUM= 10:TOT 228.20 5.418 No_date 12:43 49.69 n/a
3090
3091
3092
3093
       050:0024-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 01:PR-CL-1 4.80 .476 No_date 12:16 57.79 .502
3094
3095
           [CN= 74.0: N= 3.00]
           [Tp= .37:DT= 1.00]
3096
       050:0025-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3097
          CALIB NASHYD 02:PR-R-BBP-2 5.90 .510 No_date 12:17 52.67 .457
3098
           [CN= 71.0: N= 3.00]
3099
           [Tp= .39:DT= 1.00]
3100
       3101
3102
3103
3104
     050:0027-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3105
```

```
CALIB NASHYD 03:EX-CL-400- 1.70 .220 No_date 12:07 54.95 .477
3106
3107
             [CN=72.0: N=3.00]
3108
              [Tp= .23:DT= 1.00]
         050:0028-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3109
         ADD HYD 03:EX-CL-400- 1.70 .220 No_date 12:07 54.95 n/a + 09:TOT 10.70 .986 No_date 12:17 54.96 n/a [DT= 1.00] SUM= 01:TOT 12.40 1.171 No_date 12:14 54.96 n/a
3110
3111
3112
      050:0029-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3113
         CALIB NASHYD 04:PR-R-BBP-3 2.40 .324 No_date 12:05 52.67 .457
3114
3115
             [CN= 71.0: N= 3.00]
              [Tp = .20:DT = 1.00]
3116
         050:0030-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3117
            CALIB NASHYD 05:PR-CL-400- 2.20 .393 No_date 12:03 59.49 .516
3118
3119
              [CN= 75.0: N= 3.00]
3120
              [Tp= .15:DT= 1.00]
         050:0031-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3121
        ADD HYD 04:PR-R-BBP-3 2.40 .324 No_date 12:05 52.67 n/a
+ 05:PR-CL-400- 2.20 .393 No_date 12:03 59.49 n/a
[DT= 1.00] SUM= 09:TOT 4.60 .710 No_date 12:04 55.93 n/a
3122
3123
3124
         050:0032-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3125
             ADD HYD 01:TOT 12.40 1.171 No_date 12:14 54.96 n/a + 09:TOT 4.60 .710 No_date 12:43 49.69 n/a + 10:TOT 228.20 5.418 No_date 12:43 49.69 n/a [DT= 1.00] SUM= 07:TOT 245.20 6.370 No_date 12:30 50.07 n/a
3126
         ADD HYD
3127
3128
3129
        050:0033------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ROUTE CHANNEL -> 07:TOT 245.20 6.370 No_date 12:30 50.07 n/a

* [RDT= 1.00] out<- 01:to PR-R-BB 245.20 5.814 No_date 12:51 50.07 n/a
3130
3131
3132
              [L/S/n= 895./1.000/.070]
3133
3134
              \{Vmax = 1.016:Dmax = 2.281\}
        050:0034-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3135
             CALIB NASHYD 02:PR-CL-400- 9.60 .656 No_date 12:27 52.67 .457
3136
3137
              [CN= 71.0: N= 3.00]
              [Tp = .54:DT = 1.00]
         050:0035-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3139
            ADD HYD 01:to PR-R-BB 245.20 5.814 No_date 12:51 50.07 n/a
+ 02:TOT 9.60 .656 No_date 12:27 52.67 n/a
[DT= 1.00] SUM= 02:TOT 254.80 6.346 No_date 12:48 50.17 n/a
3140
3141
3142
3143
         050:0036-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            ADD HYD 02:TOT 254.80 6.346 No_date 12:48 50.17 n/a + 08:PR-R-BBP-1 14.50 1.046 No_date 12:28 56.04 n/a [DT= 1.00] SUM= 06:TOT 269.30 7.244 No_date 12:45 50.49 n/a
3144
3145
3146
       3147
050:0037------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 02:PR-R-BBP-9 6.60 .570 No_date 12:19 54.33 .472
3150
3151
              [CN= 72.0: N= 3.00]
3152
              [Tp= .41:DT= 1.00]
3153
         050:0038-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
             CALIB NASHYD 01:PR-R-10IC- 4.70 .315 No_date 12:12 34.69 .301
3154
              [CN= 59.0: N= 3.00]
3155
3156
              [Tp= .29:DT= 1.00]
3157
        050:0039-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            CALIB STANDHYD 02:PR-CL-BBP- 2.30 .394 No_date 11:55 55.63 .483
3158
3159
              [XIMP=.35:TIMP=.35]
              [LOSS= 2 :CN= 51.0]
3160
              [Pervious area: IAper=24.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 124.:MNI=.015:SCI= .0]
3161
3162
3163
         050:0040-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            ADD HYD 01:PR-R-10IC- 4.70 .315 No_date 12:12 34.69 n/a + 02:PR-CL-BBP- 2.30 .394 No_date 11:55 55.63 n/a [DT= 1.00] SUM= 03:TOT 7.00 .572 No_date 12:00 41.57 n/a
3164
3165
3166
        050:0041------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:PR-R-10IC- 1.30 .110 No_date 12:09 38.86 .337
3167
3168
              [CN= 62.0: N= 3.00]
3169
              [Tp= .25:DT= 1.00]
3170
3171 050:0042-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         ADD HYD 03:TOT 7.00 .572 No_date 12:00 41.57 n/a + 04:PR-R-10IC- 1.30 .110 No_date 12:09 38.86 n/a [DT= 1.00] SUM= 05:TOT 8.30 .659 No_date 12:01 41.15 n/a
3172
3173
3174
```

```
050:0043-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3175
3176
         CALIB STANDHYD 06:PR-R-10IC- 2.70 .474 No_date 11:56 57.33 .498
3177
          [XIMP=.30:TIMP=.30]
3178
          [LOSS= 2 :CN= 58.0]
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 134.:MNI=.015:SCI=
3179
3180
      050:0044-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3181
         ADD HYD 05:TOT 8.30 .659 No_date 12:01 41.15 n/a
+ 06:PR-R-10IC- 2.70 .474 No_date 11:56 57.33 n/a
[DT= 1.00] SUM= 07:TOT 11.00 1.112 No_date 12:00 45.12 n/a
3182
3183
3184
      050:0045-----ID:NHYD-----AREA---OPEAK-TpeakDate hh:mm---R.V.-R.C.-
3185
      3186
3187
3188
3189
3190
3191
3192
     3194 050:0047-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 01:PR-R-10IC- 1.40 .129 No_date 12:11 46.30 .402
3195
3196
          [CN= 67.0: N= 3.00]
3197
          [Tp= .29:DT= 1.00]
    050:0048-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3198
         CALIB STANDHYD 02:PR-R-10IC- 3.10 .625 No_date 11:56 64.75 .562
3199
3200
          [XIMP=.36:TIMP=.36]
3201
          [LOSS= 2 :CN= 61.0]
          [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
3202
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
3203
    050:0049-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3204
      3205
3206
3207
3208
      3209
3210
3211
3212
         COMPUTE VOLUME 03:TOT 4.50 .687 No_date 11:56 59.01 n/a {ST= .082 ha.m to control at .150 (cms)}
3213
3214
     3215
     3216
     050:0052-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3217
         CALIB NASHYD 01:PR-R-C4IC- 13.40 .665 No_date 12:26 37.50 .325
3218
3219
          [CN= 61.0: N= 3.00]
3220
          [Tp= .50:DT= 1.00]
      050:0053-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3221
         CALIB STANDHYD 02:PR-CL-BBP- 3.00 .788 No_date 11:55 80.35 .697
3222
3223
          [XIMP=.52:TIMP=.52]
3224
          [LOSS= 2 :CN= 66.0]
          [Pervious area: IAper=13.10:SLPP=***:LGP= 40.:MNP=.350:SCP=
3225
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
3226
3227
      050:0054-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         ADD HYD 01:PR-R-C4IC- 13.40 .665 No_date 12:26 37.50 n/a
+ 02:PR-CL-BBP- 3.00 .788 No_date 11:55 80.35 n/a
[DT= 1.00] SUM= 03:TOT 16.40 .992 No_date 12:00 45.33 n/a
3228
3229
3230
      050:0055-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3231
         CALIB STANDHYD 04:PR-R-C4IC- 2.80 .473 No_date 11:56 55.73 .484
3232
3233
          [XIMP=.28:TIMP=.28]
3234
          [LOSS= 2 :CN= 58.0]
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
3235
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 137.:MNI=.015:SCI= .0]
3236
      050:0056-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3237
         CALIB STANDHYD 05:PR-R-C4IC- 1.60 .291 No_date 11:55 57.33 .498
3238
          [XIMP=.30:TIMP=.30]
3239
3240
          [LOSS= 2 :CN= 58.0]
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
3241
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 103.:MNI=.015:SCI=
3242
      050:0057-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3243
```

```
ADD HYD 03:TOT 16.40 .992 No_date 12:00 45.33 n/a + 04:PR-R-C4IC- 2.80 .473 No_date 11:56 55.73 n/a + 05:PR-R-C4IC- 1.60 .291 No_date 11:55 57.33 n/a [DT= 1.00] SUM= 06:TOT 20.80 1.729 No_date 12:00 47.66 n/a
3244
        ADD HYD
3245
3246
3247
     050:0058-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3248
       DIVERT HYD -> 06:TOT 20.80 1.729 No_date 12:00 47.66 n/a diverted <= 09:To PR-R-C4 14.40 .400 No_date 12:00 47.66 n/a diverted <= 10:Pond 6.40 1.329 No_date 12:00 47.66 n/a
3249
3250
3251
     050:0059-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3252
          COMPUTE VOLUME 06:TOT 20.80 1.729 No_date 12:00 47.66 n/a {ST= .096 ha.m to control at 1.000 (cms)}
3253
3254
      3255
     3256
      050:0060-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3257
         CALIB NASHYD 01:PR-R-C4IC- .40 .060 No_date 12:01 43.24 .375
3258
3259
           [CN=65.0: N=3.00]
           [Tp= .10:DT= 1.00]
3260
      050:0061-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3261
         CALIB NASHYD 02:PR-R-C4IC- 1.30 .101 No_date 12:11 38.86 .337
3262
3263
          [CN= 62.0: N= 3.00]
3264
           [Tp= .28:DT= 1.00]
      050:0062-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3265
         3266
3267
3268
      050:0063-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3269
         CALIB STANDHYD 04:PR-R-C4IC- 3.10 .609 No_date 11:56 62.91 .546
3270
           [XIMP=.37:TIMP=.37]
3271
           [LOSS= 2 :CN= 58.0]
3272
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
3273
                                                                    .0]
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
3274
      050:0064-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3275
         ADD HYD 03:TOT 1.70 .142 No_date 12:04 39.89 n/a + 04:PR-R-C4IC- 3.10 .609 No_date 11:56 62.91 n/a [DT= 1.00] SUM= 05:TOT 4.80 .709 No_date 11:56 54.76 n/a
3276
3277
3278
      050:0065-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3279
    3280
3281
3282
3283
          COMPUTE VOLUME 05:TOT 4.80 .709 No_date 11:56 54.76 n/a {ST= .095 ha.m to control at .100 (cms)}
3284
3285
      3286
      3287
3288
     050:0067-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB STANDHYD 01:PR-R-2CON- 1.60 .323 No_date 12:00 63.47 .551
3289
3290
          [XIMP=.20:TIMP=.20]
3291
           [LOSS= 2 :CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=***:LGP= 30.:MNP=.350:SCP=
3292
          [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 210.:MNI=.015:SCI=
3293
3294
      050:0068-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB STANDHYD 02:PR-CL-BBP- 3.00 .582 No_date 11:59 63.20 .549
3295
3296
          [XIMP=.30:TIMP=.30]
3297
           [LOSS= 2 :CN= 64.0]
3298
           [Pervious area: IAper=14.30:SLPP=****:LGP= 30.:MNP=.350:SCP=
3299
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 240.:MNI=.015:SCI=
3300
      050:0069-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
      3301
3302
3303
3304
          CALIB STANDHYD 04:PR-R-2CON- 3.00 .732 No_date 11:56 74.66 .648
3305
          [XIMP=.38:TIMP=.38]
3306
3307
           [LOSS= 2 :CN= 70.0]
           [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP=
                                                                    .01
3308
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 163.:MNI=.015:SCI= .0]
      050:0071-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3310
                       03:TOT 4.60 .904 No_date 12:00 63.29 n/a
+ 04:PR-R-2CON- 3.00 .732 No_date 11:56 74.66 n/a
3311
       ADD HYD
3312
```

```
[DT= 1.00] SUM= 06:TOT
                                              7.60 1.618 No_date 11:57 67.78 n/a
       050:0072-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3314
           DIVERT HYD -> 06:TOT 7.60 1.618 No_date 11:57 67.78 n/a diverted <= 09:To waterco 5.90 .458 No_date 11:57 67.78 n/a diverted <= 10:Pond 1.70 1.00 No_date 11:57 67.78 n/a
3315
3316
3317
       050:0073-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3318
           COMPUTE VOLUME 06:TOT 7.60 1.618 No_date 11:57 67.78 n/a {ST= .117 ha.m to control at .600 (cms)}
3319
3320
      3321
      3322
       050:0074-----ID:NHYD------AREA----OPEAK-TpeakDate hh:mm----R.V.-R.C.-
3323
           CALIB NASHYD 01:PR-R-2CON- 28.00 .641 No_date 13:31 37.50 .325
3324
3325
            [CN= 61.0: N= 3.00]
3326
            [Tp= 1.39:DT= 1.00]
3327
       050:0075-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .850 No_date 11:56 85.65 .743
3328
            [XIMP=.45:TIMP=.45]
3329
3330
            [LOSS= 2 :CN= 77.0]
            [Pervious area: IAper= 7.60:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
3331
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
3332
       050:0076-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3333
           ADD HYD 01:PR-R-2CON- 28.00 .641 No_date 13:31 37.50 n/a + 02:PR-CL-BBP- 3.00 .850 No_date 11:56 85.65 n/a [DT= 1.00] SUM= 03:TOT 31.00 .911 No_date 11:56 42.16 n/a
3334
3335
3336
       050:0077------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 04:PR-R-2CON- 1.50 .397 No_date 11:55 78.45 .681
3337
3338
3339
            [XIMP=.28:TIMP=.28]
            [LOSS= 2 :CN= 78.0]
3340
3341
            [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 100.:MNI=.015:SCI=
3342
       050:0078-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3343
        ADD HYD 03:TOT 31.00 .911 No_date 11:56 42.16 n/a + 04:PR-R-2CON- 1.50 .397 No_date 11:55 78.45 n/a [DT= 1.00] SUM= 05:TOT 32.50 1.303 No_date 11:56 43.83 n/a
3344
3346
       050:0079-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3347
           CALIB STANDHYD 06:PR-R-2CON- 3.00 .831 No_date 11:56 84.24 .731
3348
3349
            [XIMP=.40:TIMP=.40]
3350
            [LOSS= 2 :CN= 78.0]
            [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
3351
3352
       050:0080-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3353
           ADD HYD 05:TOT 32.50 1.303 No_date 11:56 43.83 n/a + 06:PR-R-2CON- 3.00 .831 No_date 11:56 84.24 n/a [DT= 1.00] SUM= 07:TOT 35.50 2.134 No_date 11:56 47.25 n/a
3354
3355
3356
3357
       050:0081-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           DIVERT HYD -> 07:TOT 35.50 2.134 No_date 11:56 47.25 n/a diverted <= 01:To PR-R-2C 29.06 .578 No_date 11:56 47.25 n/a diverted <= 02:To Pond 6.44 1.556 No_date 11:56 47.25 n/a
3358
3359
3360
       050:0082-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
COMPUTE VOLUME 07:TOT 35.50 2.134 No_date 11:56 47.25 n/a
{ST= .111 ha.m to control at 1.100 (cms)}
3361
3362
3363
3364
      3365
      050:0083-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3366
           CALIB NASHYD 01:PR-R-404-4 3.50 .204 No_date 12:19 37.50 .325
3368
            [CN= 61.0: N= 3.00]
3369
            [Tp= .40:DT= 1.00]
       050:0084-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3370
           CALIB NASHYD 02:PR-R-404-5 5.90 .212 No_date 12:45 37.50 .325
3371
3372
            [CN= 61.0: N= 3.00]
            [Tp= .77:DT= 1.00]
3373
       050:0085-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3374
           3375
3376
3377
       050:0086-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3378
           CALIB NASHYD 04:PR-R-404-6 3.70 .258 No_date 12:15 40.33 .350
3379
            [CN= 63.0: N= 3.00]
3380
            [Tp= .35:DT= 1.00]
3381
```

```
050:0087-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3382
         ADD HYD 03:TOT 9.40 .380 No_date 12:28 37.50 n/a + 04:PR-R-404-6 3.70 .258 No_date 12:15 40.33 n/a [DT= 1.00] SUM= 09:TOT 13.10 .616 No_date 12:21 38.30 n/a
3383
3384
3385
       050:0088-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3386
          DIVERT HYD -> 09:TOT 13.10 .616 No_date 12:21 38.30 n/a diverted <= 01:To waterco 8.14 .134 No_date 12:21 38.30 n/a diverted <= 02:To Pond 4.96 .482 No_date 12:21 38.30 n/a
3387
3388
3389
      050:0089-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3390
          COMPUTE VOLUME 09:TOT 13.10 .616 No_date 12:21 38.30 n/a {ST= .090 ha.m to control at .400 (cms)}
3391
      3393
3394
      050:0090-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3395
         CALIB NASHYD 10:PR-R-404-7 6.50 .265 No_date 12:36 37.50 .325
3396
3397
           [CN= 61.0: N= 3.00]
           [Tp= .65:DT= 1.00]
3398
       050:0091-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3399
         DIVERT HYD -> 10:PR-R-404-7 6.50 .265 No_date 12:36 37.50 n/a diverted <= 01:watercours 4.14 .065 No_date 12:36 37.50 n/a diverted <= 02:To Pond 1.79 .152 No_date 12:36 37.50 n/a
3400
3401
3402
       050:0092-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3403
          COMPUTE VOLUME 10:PR-R-404-7 6.50 .265 No_date 12:36 37.50 n/a {ST= .087 ha.m to control at .100 (cms)}
3404
3405
3406
      3407
      050:0093-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3408
          CALIB NASHYD 01:PR-R-404-1 29.30 .889 No_date 12:55 36.11 .313
3409
3410
           [CN= 60.0: N= 3.00]
3411
           [Tp= .91:DT= 1.00]
      050:0094-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3412
         CALIB NASHYD 02:PR-R-404-1 7.30 .408 No_date 12:19 36.11 .313
3413
           [CN= 60.0: N= 3.00]
          [Tp = .40:DT = 1.00]
3415
3416
       050:0095-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 03:PR-CL-404- 2.20 .121 No_date 12:26 41.76 .363
3417
3418
           [CN= 64.0: N= 3.00]
3419
           [Tp= .51:DT= 1.00]
3420
       050:0096-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
                   01:PR-R-404-1 29.30 .889 No_date 12:55 36.11 n/a
+ 02:PR-R-404-1 7.30 .408 No_date 12:19 36.11 n/a
+ 03:PR-CL-404- 2.20 .121 No_date 12:26 41.76 n/a
] SUM= 10:TOT 38.80 1.248 No_date 12:38 36.43 n/a
3421
3422
3423
3424
           [DT= 1.00] SUM= 10:TOT
      3426
3427
      3428
      050:0097------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:PR-R-BBP-5 2.20 .204 No_date 12:16 54.33 .472
3429
3430
3431
           [CN= 72.0: N= 3.00]
3432
           [Tp= .37:DT= 1.00]
3433
      050:0098-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 02:PR-R-BBP-6 542.60 4.397 No_date 17:41 33.38 .290
3434
3435
          [CN= 58.0: N= 3.00]
           [Tp= 4.60:DT= 1.00]
3437
       050:0099-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 03:PR-R-BBP-6 5.60 .409 No_date 12:23 51.04 .443
3438
3439
           [CN= 70.0: N= 3.00]
           [Tp= .47:DT= 1.00]
3440
       050:0100-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3441
           3442
3443
3444
3445
      050:0101------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
CALIB NASHYD 01:PR-R-BBP-7 2.40 .299 No_date 12:08 54.33 .472
3446
3447
           [CN= 72.0: N= 3.00]
3448
3449
           [Tp= .24:DT= 1.00]
      050:0102-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3450
```

```
CALIB NASHYD 02:PR-R-BBP-8 81.70 1.000 No_date 14:58 32.04 .278
3451
3452
          [CN=57.0: N=3.00]
3453
           [Tp= 2.50:DT= 1.00]
     050:0103-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
CALIB NASHYD 03:PR-R-BBP-8 3.70 .258 No_date 12:25 51.04 .443
3454
3455
3456
           [CN=70.0: N=3.00]
3457
           [Tp= .50:DT= 1.00]
3458
    050:0104-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
      ADD HYD 02:PR-R-BBP-8 81.70 1.000 No_date 14:58 32.04 n/a + 03:PR-R-BBP-8 3.70 .258 No_date 12:25 51.04 n/a [DT= 1.00] SUM= 04:TOT 85.40 1.030 No_date 14:55 32.87 n/a
3459
3460
3461
3462 050:0105-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
       CALIB STANDHYD 05:PR-R-10IC- 3.40 .774 No_date 11:55 71.69 .622
3463
3464
           [XIMP=.48:TIMP=.48]
3465
            [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 151.:MNI=.015:SCI= .0]
3466
3467
3469
      3470 050:0106-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 08:PR-R-10IC- 1.40 .129 No_date 12:11 46.30 .402
3471
3472
           [CN= 67.0: N= 3.00]
           [Tp= .29:DT= 1.00]
3473
       050:0107-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3474
          CALIB STANDHYD 09:PR-R-10IC- 3.10 .625 No_date 11:56 64.75 .562
3475
3476
           [XIMP=.36:TIMP=.36]
3477
            [LOSS= 2 :CN= 61.0]
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
3478
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
3479
3480
      050:0108-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ADD HYD 08:PR-R-10IC- 1.40 .129 No_date 12:11 46.30 n/a + 09:PR-R-10IC- 3.10 .625 No_date 11:56 64.75 n/a [DT= 1.00] SUM= 10:TOT 4.50 .687 No_date 11:56 59.01 n/a
3481
3482
3483
       050:0109-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3484
          ROUTE CHANNEL -> 10:TOT 4.50 .687 No_date 11:56 59.01 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.50 .324 No_date 12:06 59.01 n/a
3485
3486
3487
            [L/S/n= 1200./1.000/.070]
3488
           \{Vmax = .730:Dmax = .694\}
       050:0110-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3489
          CALIB NASHYD 02:PR-CL-BBP- 75.80 2.532 No_date 13:15 47.82 .415
3490
3491
           [CN= 68.0: N= 3.00]
           [Tp= 1.21:DT= 1.00]
3492
       050:0111-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3493
          ADD HYD 01:to PR-CL-B 4.50 .324 No_date 12:06 59.01 n/a + 02:PR-CL-BBP- 75.80 2.532 No_date 13:15 47.82 n/a [DT= 1.00] SUM= 03:TOT 80.30 2.652 No_date 13:12 48.45 n/a
3494
3495
3496
     050:0112-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3497
          CALIB STANDHYD 04:PR-R-C4IC- 2.50 .640 No_date 11:55 77.28 .671
3498
3499
           [XIMP=.55:TIMP=.55]
            [LOSS= 2 :CN= 58.0]
3500
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
3501
3502
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 129.:MNI=.015:SCI= .0]
3503 050:0113-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 05:PR-CL-BBP- 27.30 1.574 No_date 12:39 54.33 .472
3504
3505
            [CN= 72.0: N= 3.00]
3506
            [Tp= .71:DT= 1.00]
     3507
      3508
      050:0114-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3509
           CALIB NASHYD 07:PR-R-C4IC- .40 .060 No_date 12:01 43.24 .375
3510
           [CN=65.0: N=3.00]
3511
3512
            [Tp= .10:DT= 1.00]
       050:0115-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3513
          CALIB NASHYD 08:PR-R-C4IC- 1.30 .101 No_date 12:11 38.86 .337
3514
3515
           [CN= 62.0: N= 3.00]
           [Tp = .28:DT = 1.00]
       050:0116-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3517
       CALIB STANDHYD 09:PR-R-C4IC- 3.10 .609 No_date 11:56 62.91 .546
3518
```

3519

[XIMP=.37:TIMP=.37]

```
[LOSS= 2 :CN= 58.0]
3520
             [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI=
3521
3522
                                                                                   .01
        050:0117-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3523
        ADD HYD 07:PR-R-C4IC- .40 .060 No_date 12:01 43.24 n/a + 08:PR-R-C4IC- 1.30 .101 No_date 12:11 38.86 n/a + 09:PR-R-C4IC- 3.10 .609 No_date 11:56 62.91 n/a [DT= 1.00] SUM= 10:TOT 4.80 .709 No_date 11:56 54.76 n/a
3524
3525
3526
3527
        050:0118-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3528
            ROUTE CHANNEL -> 10:TOT 4.80 .709 No_date 11:56 54.76 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.80 .494 No_date 12:03 54.76 n/a
3529
3530
             [L/S/n = 580./1.000/.070]
3531
             \{Vmax = .735:Dmax = .707\}
3532
        050:0119-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3533
            CALIB NASHYD 02:PR-CL-BBP- 22.10 .985 No_date 12:38 41.76 .363
3534
3535
             [CN= 64.0: N= 3.00]
3536
             [Tp= .68:DT= 1.00]
        050:0120-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3537
            ADD HYD 01:to PR-CL-B 4.80 .494 No_date 12:03 54.76 n/a
+ 02:PR-CL-BBP- 22.10 .985 No_date 12:38 41.76 n/a
[DT= 1.00] SUM= 03:TOT 26.90 1.198 No_date 12:31 44.08 n/a
3538
3539
3540
       3541
       3542
       050:0121-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3543
            CALIB NASHYD 01:PR-R-BST-1 2.20 .301 No_date 12:07 57.79 .502
3544
             [CN = 74.0: N = 3.00]
3545
             [Tp = .23:DT = 1.00]
3546
        050:0122-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3547
            CALIB STANDHYD 02:PR-CL-BBP- 2.00 .530 No_date 11:55 79.63 .691
3548
             [XIMP=.46:TIMP=.46]
3549
             [LOSS= 2 :CN= 70.0]
3550
             [Pervious area: IAper=10.90:SLPP=***:LGP= 40.:MNP=.350:SCP=
3551
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI=
3552
        050:0123-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3553
           3554
3555
3556
        050:0124------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 04:PR-R-BST-2 2.00 .500 No_date 11:56 75.90 .659
3557
3558
3559
             [XIMP=.40:TIMP=.40]
3560
             [LOSS= 2 :CN= 70.0]
             [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
3561
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI= .0]
3562
3563
        050:0125-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           ADD HYD 03:TOT 4.20 .728 No_date 12:00 68.19 n/a + 04:PR-R-BST-2 2.00 .500 No_date 11:56 75.90 n/a [DT= 1.00] SUM= 05:TOT 6.20 1.206 No_date 11:56 70.68 n/a
3564
3565
3566
        050:0126------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:PR-R-BST-3 3.60 .262 No_date 12:26 54.33 .472
3567
3568
             [CN= 72.0: N= 3.00]
3569
3570
             [Tp= .52:DT= 1.00]
3571
        050:0127-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            CALIB STANDHYD 02:PR-CL-BBP- 2.10 .568 No_date 11:55 80.88 .702
3572
3573
             [XIMP=.48:TIMP=.48]
             [LOSS= 2 :CN= 70.0]
             [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI= .0]
3575
3576
3577
        050:0128-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            ADD HYD 01:PR-R-BST-3 3.60 .262 No_date 12:26 54.33 n/a + 02:PR-CL-BBP- 2.10 .568 No_date 11:55 80.88 n/a [DT= 1.00] SUM= 03:TOT 5.70 .646 No_date 11:56 64.11 n/a
3578
3579
3580
        050:0129-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3581
            CALIB STANDHYD 04:PR-R-BST-2 2.00 .501 No_date 11:56 75.90 .659
3582
3583
             [XIMP=.40:TIMP=.40]
             [LOSS= 2 :CN= 70.0]
3584
3585
             [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI= .0]
3586
3587
        050:0130-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
                                         5.70 .646 No_date 11:56 64.11 n/a
            ADD HYD 03:TOT
3588
```

```
+ 04:PR-R-BST-2 2.00 .501 No_date 11:56 75.90 n/a [DT= 1.00] SUM= 05:TOT 7.70 1.147 No_date 11:56 67.17 n/a
3590
3592
      050:0131-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3593
          CALIB NASHYD 01:PR-R-2CON- 243.60 4.593 No_date 14:36 44.75 .388
3594
           [CN= 66.0: N= 3.00]
3595
3596
           [Tp= 2.31:DT= 1.00]
       050:0132-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3597
          CALIB NASHYD 02:PR-CL-BBP- 37.00 1.339 No_date 12:50 40.33 .350
3598
           [CN= 63.0: N= 3.00]
           [Tp= .85:DT= 1.00]
3600
       050:0133-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3601
          CALIB NASHYD 03:PR-R-LST-1 40.20 1.149 No_date 13:05 37.50 .325
3602
3603
           [CN= 61.0: N= 3.00]
3604
           [Tp= 1.04:DT= 1.00]
3605
       050:0134-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB STANDHYD 04:PR-CL-BBP- 1.80 .417 No_date 11:55 71.56 .621
3606
          [XIMP=.45:TIMP=.45]
3607
           [LOSS= 2 :CN= 61.0]
3608
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
3609
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 110.:MNI=.015:SCI= .0]
3610
3611
       050:0135-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       ADD HYD 03:PR-R-LST-1 40.20 1.149 No_date 13:05 37.50 n/a + 04:PR-CL-BBP- 1.80 .417 No_date 13:05 71.56 n/a [DT= 1.00] SUM= 05:TOT 42.00 1.176 No_date 13:04 38.96 n/a
3612
3613
3614
       3615
3616
3617
           [CN= 60.0: N= 3.00]
           [Tp= .60:DT= 1.00]
3618
       050:0137-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3619
          CALIB STANDHYD 02:PR-CL-BBP- 1.20 .272 No_date 11:54 68.54 .595
3620
3621
           [XIMP=.41:TIMP=.41]
           [LOSS= 2 :CN= 61.0]
3622
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 89.:MNI=.015:SCI= .0]
3623
3624
       050:0138-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3625
          ADD HYD 01:PR-R-LST-2 8.80 .366 No_date 12:33 36.11 n/a + 02:PR-CL-BBP- 1.20 .272 No_date 11:54 68.54 n/a [DT= 1.00] SUM= 03:TOT 10.00 .394 No_date 12:31 40.00 n/a
3626
3627
3628
       050:0139------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB STANDHYD 04:PR-R-LST-3 1.10 .233 No_date 11:54 65.31 .567
3629
3630
           [XIMP=.40:TIMP=.40]
3631
3632
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
3633
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 86.:MNI=.015:SCI=
3634
3635
       050:0140-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          ADD HYD 03:TOT 10.00 .394 No_date 12:31 40.00 n/a + 04:PR-R-LST-3 1.10 .233 No_date 11:54 65.31 n/a [DT= 1.00] SUM= 05:TOT 11.10 .578 No_date 11:55 42.51 n/a
3636
3637
3638
3639
      050:0141-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-CL-BBP- 22.00 1.054 No_date 12:36 43.24 .375
3640
3641
           [CN=65.0: N=3.00]
           [Tp= .65:DT= 1.00]
3642
      3644
3645
      050:0142-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-R-404-3 118.50 2.119 No_date 14:17 38.86 .337
3646
3647
           [CN= 62.0: N= 3.00]
3648
           [Tp= 2.02:DT= 1.00]
       050:0143-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3649
          CALIB NASHYD 02:PR-R-404-2 .90 .064 No_date 12:13 38.86 .337
3650
          [CN= 62.0: N= 3.00]
3651
           [Tp= .32:DT= 1.00]
3652
       050:0144-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3653
       3654
3655
3656
      050:0145-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3657
```

```
CALIB NASHYD 04:PR-R-404-1 1.70 .092 No_date 12:24 38.86 .337
3658
3659
         [CN= 62.0: N= 3.00]
3660
          [Tp= .47:DT= 1.00]
    050:0146------ID:NHYD-------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ADD HYD 03:TOT 119.40 2.126 No_date 14:17 38.86 n/a
+ 04:PR-R-404-1 1.70 .092 No_date 12:24 38.86 n/a
[DT= 1.00] SUM= 05:TOT 121.10 2.140 No_date 14:16 38.86 n/a
3661
3662
3663
3664
3665 050:0147-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
      CALIB NASHYD 08:PR-R-404-8 2.40 .124 No_date 12:26 38.86 .337
3666
3667
         [CN= 62.0: N= 3.00]
         [Tp= .50:DT= 1.00]
3668
3669 050:0148-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB NASHYD 09:PR-R-404-8 2.60 .143 No_date 12:26 41.76 .363
3670
3671
          [CN= 64.0: N= 3.00]
3672
          [Tp= .51:DT= 1.00]
      050:0149-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3673
         CALIB NASHYD 10:PR-R-404-9 1.80 .148 No_date 12:09 38.86 .337
3674
3675
          [CN= 62.0: N= 3.00]
3676
          [Tp= .26:DT= 1.00]
     3677
3678
      ** END OF RUN : 99
3679
3680
     *************************
3681
3682
3683
3684
3685
    RUN: COMMAND#
3686
     100:0001-----
3687
3688
      START
         [TZERO = .00 \text{ hrs on}]
3689
3690
          [METOUT= 2 (1=imperial, 2=metric output)]
          [NSTORM= 1 ]
3691
3692
         [NRUN = 100]
3693 #********************
3694
    # Project Name: BRADFORD BYPASS
                                               JOB NUMBER: [60636190] *
3695
    # Date : Jan. 20, 2023
    # Modeller : [jrm]
# Company : AECOM
3696
3697
3698
    # License # : 1281254
3699
3700 #
3701 # Notes: This hydrologic model was developed for the BBP ultimate conditions *
3702 #
            A new Berm is proposed to isolate flows draining to P-SWM P-2 and
3703 #
            the tributary of Penville Creek.
3704 #
            Estimated controlled flows by the SWM ponds based on an assumed
3705
            release flow rate from the SWM pond.
     #
3706
     #
                 PEAK FLOWS AT PROPOSED CULVERTS & STORAGE VOLUMES
3707
     #
3708
                       PROPOSED SWM PONDS (CONTROLLED FLOWS)
3709
                        Proposed Drainage Conditions
3710 #
                   2-YEAR TO 100-YEAR_24-hour SCS TYPE II STORM
3711
    #*********************
3712
    #**********************
3713
     100:0002-----
3714
3715
         READ STORM
3716
          Filename = STORM.001
3717
          Comment
3718
          [SDT= 6.00:SDUR= 24.00:PTOT= 124.80]
    3719
100:0003------ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3721
         CALIB NASHYD 08:PR-R-BBP-1 14.50 1.191 No_date 12:28 63.61 .510
3722
3723
          [CN= 73.0: N= 3.00]
3724
          [Tp= .55:DT= 1.00]
3725
     100:0004------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
        DIVERT HYD -> 08:PR-R-BBP-1 14.50 1.191 No_date 12:28 63.61 n/a
```

3726

```
diverted <= 09:To PR-R-BB 9.72 .342 No_date 12:28 63.61 n/a diverted <= 10:To Pond 4.78 .848 No_date 12:28 63.61 n/a
3727
3728
     100:0005-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3729
           COMPUTE VOLUME 08:PR-R-BBP-1 14.50 1.191 No_date 12:28 63.61 n/a {ST= .288 ha.m to control at .500 (cms)}
3730
3731
3732
      3733
      100:0006-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3734
           CALIB NASHYD 01:PR-R-BBP-9 5.40 .561 No_date 12:16 61.78 .495
3735
3736
            [CN= 72.0: N= 3.00]
            [Tp= .38:DT= 1.00]
       100:0007-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3738
           CALIB NASHYD 02:PR-R-BBP-9 6.60 .661 No_date 12:18 61.70 .494
3739
3740
            [CN= 72.0: N= 3.00]
3741
            [Tp = .40:DT = 1.00]
       100:0008-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3742
           ADD HYD 01:PR-R-BBP-9 5.40 .561 No_date 12:16 61.78 n/a + 02:PR-R-BBP-9 6.60 .661 No_date 12:18 61.70 n/a [DT= 1.00] SUM= 03:TOT 12.00 1.222 No_date 12:17 61.74 n/a
3743
3744
3745
       100:0009-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3746
           CALIB NASHYD 04:P-SWM P-2 3.90 .440 No_date 12:16 65.48 .525
3747
3748
            [CN= 74.0: N= 3.00]
            [Tp= .37:DT= 1.00]
3749
       100:0010-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3750
           ADD HYD 03:TOT 12.00 1.222 No_date 12:17 61.74 n/a + 04:P-SWM P-2 3.90 .440 No_date 12:16 65.48 n/a [DT= 1.00] SUM= 07:TOT 15.90 1.661 No_date 12:17 62.66 n/a
3751
3752
3753
       100:0011-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3754
           DIVERT HYD -> 07:TOT 15.90 1.661 No_date 12:17 62.66 n/a diverted <= 09:To PR-R-BB 6.14 .132 No_date 12:17 62.66 n/a diverted <= 10:Pond 9.76 1.528 No_date 12:17 62.66 n/a
3755
3756
3757
       100:0012-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3758
           COMPUTE VOLUME 07:TOT 15.90 1.661 No_date 12:17 62.66 n/a {ST= .822 ha.m to control at .050 (cms)}
3760
3761
      3762
      3763
       100:0013-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 01:EX-CL-400- 49.00 5.000 No_date 12:26 76.61 .614
3764
3765
            [CN=79.0: N=3.00]
3766
            [Tp = .53:DT = 1.00]
       100:0014-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3767
          ROUTE CHANNEL -> 01:EX-CL-400- 49.00 5.000 No_date 12:26 76.61 n/a
3768
           [RDT= 1.00] out<- 02:to PR-CL-2 49.00 4.657 No_date 12:44 76.61 n/a
3769
3770
            [L/S/n=825./.850/.070]
3771
            \{Vmax = .925:Dmax = 2.170\}
3772
       100:0015-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB NASHYD 03:PR-R-BBP-1 8.80 .720 No_date 12:26 61.78 .495
3773
3774
            [CN= 72.0: N= 3.00]
3775
            [Tp = .53:DT = 1.00]
       100:0016-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3776
           CALIB NASHYD 04:EX-CL-400- 1.30 .162 No_date 12:17 76.61 .614
3777
3778
            [CN= 79.0: N= 3.00]
            [Tp= .40:DT= 1.00]
3779
       100:0017-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3780
           CALIB STANDHYD 05:PR-R-BBP-1 1.30 .456 No_date 11:54 93.74 .751
3781
3782
            [XIMP=.55:TIMP=.55]
3783
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 8.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 93.:MNI=.015:SCI= .0]
3784
3785
       100:0018-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3786
            ADD HYD 03:PR-R-BBP-1 8.80 .720 No_date 12:26 61.78 n/a
+ 04:EX-CL-400- 1.30 .162 No_date 12:17 76.61 n/a
+ 05:PR-R-BBP-1 1.30 .456 No_date 11:54 93.74 n/a
[DT= 1.00] SUM= 01:TOT 11.40 .920 No_date 12:24 67.12 n/a
3787
           ADD HYD
3788
3789
3790
       100:0019------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 06:PR-CL-2 161.70 2.536 No_date 15:56 49.79 .399
3791
3792
3793
            [CN= 65.0: N= 3.00]
3794
            [Tp= 3.38:DT= 1.00]
       100:0020-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3795
```

```
3796
3797
3798
3799
3800
        ROUTE CHANNEL -> 07:TOT PR-CL- 222.10 6.075 No_date 12:44 56.60 n/a
* [RDT= 1.00] out<- 04:to PR-R-BB 222.10 5.969 No_date 12:46 56.60 n/a
3801
3802
           [L/S/n=230./.900/.070]
3803
            \{Vmax = .965:Dmax = 2.284\}
3804
        100:0022-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3805
           CALIB NASHYD 09:PR-R-BBP-4 6.10 .693 No_date 12:13 59.99 .481
3807
            [CN= 71.0: N= 3.00]
            [Tp= .32:DT= 1.00]
3808
CALIB NASHYD 01:PR-CL-1 4.80 .541 No_date 12:16 65.48 .525
3814
            [CN=74.0: N=3.00]
3815
             [Tp= .37:DT= 1.00]
3816
3817 100:0025-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB NASHYD 02:PR-R-BBP-2 5.90 .584 No_date 12:17 59.99 .481
3818
3819
            [CN= 71.0: N= 3.00]
3820
             [Tp= .39:DT= 1.00]
       100:0026-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3821
           ADD HYD 01:PR-CL-1 4.80 .541 No_date 12:16 65.48 n/a + 02:PR-R-BBP-2 5.90 .584 No_date 12:17 59.99 n/a [DT= 1.00] SUM= 09:TOT 10.70 1.124 No_date 12:16 62.45 n/a
3822
3823
3824
     100:0027-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3825
           CALIB NASHYD 03:EX-CL-400- 1.70 .250 No_date 12:07 62.41 .500
3826
3827
            [CN= 72.0: N= 3.00]
            [Tp = .23:DT = 1.00]
        100:0028-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3829
           ADD HYD 03:EX-CL-400- 1.70 .250 No_date 12:07 62.41 n/a + 09:TOT 10.70 1.124 No_date 12:16 62.45 n/a [DT= 1.00] SUM= 01:TOT 12.40 1.335 No_date 12:14 62.45 n/a
3830
3831
3832
       100:0029------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 04:PR-R-BBP-3 2.40 .370 No_date 12:05 59.99 .481
3833
3834
3835
            [CN= 71.0: N= 3.00]
3836
             [Tp= .20:DT= 1.00]
       100:0030-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3837
           CALIB NASHYD 05:PR-CL-400- 2.20 .445 No_date 12:03 67.30 .539
3838
            [CN= 75.0: N= 3.00]
3840
            [Tp= .15:DT= 1.00]
3841
       100:0031-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       ADD HYD 04:PR-R-BBP-3 2.40 .370 No_date 12:05 59.99 n/a + 05:PR-CL-400- 2.20 .445 No_date 12:03 67.30 n/a [DT= 1.00] SUM= 09:TOT 4.60 .807 No_date 12:04 63.49 n/a
3842
3843
3844
     100:0032-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3845
       ADD HYD 01:TOT 12.40 1.335 No_date 12:14 62.45 n/a
+ 09:TOT 4.60 .807 No_date 12:04 63.49 n/a
+ 10:TOT 228.20 6.264 No_date 12:45 56.69 n/a
[DT= 1.00] SUM= 07:TOT 245.20 7.183 No_date 12:38 57.11 n/a
3846
3847
3848
3849
3850 100:0033-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
        ROUTE CHANNEL -> 07:TOT 245.20 7.183 No_date 12:38 57.11 n/a
3851
           [RDT= 1.00] out<- 01:to PR-R-BB 245.20 6.716 No_date 12:50 57.11 n/a
3852
3853
             [L/S/n= 895./1.000/.070]
3854
             {Vmax= 1.043:Dmax= 2.355}
        100:0034-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3855
           CALIB NASHYD 02:PR-CL-400- 9.60 .750 No_date 12:27 59.99 .481
3856
3857
            [CN= 71.0: N= 3.00]
            [Tp= .54:DT= 1.00]
3858
       100:0035-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3859
        ADD HYD 01:to PR-R-BB 245.20 6.716 No_date 12:50 57.11 n/a + 02:TOT 9.60 .750 No_date 12:27 59.99 n/a [DT= 1.00] SUM= 02:TOT 254.80 7.320 No_date 12:48 57.22 n/a
3860
3861
3862
3863 100:0036-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ADD HYD 02:TOT 254.80 7.320 No_date 12:48 57.22 n/a
3864
```

```
+ 08:PR-R-BBP-1 14.50 1.191 No_date 12:28 63.61 n/a [DT= 1.00] SUM= 06:TOT 269.30 8.331 No_date 12:46 57.56 n/a
3866
3867
       3868
       100:0037-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3869
            CALIB NASHYD 02:PR-R-BBP-9 6.60 .650 No_date 12:18 61.78 .495
3870
3871
             [CN= 72.0: N= 3.00]
3872
             [Tp = .41:DT = 1.00]
        100:0038-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3873
            CALIB NASHYD 01:PR-R-10IC- 4.70 .371 No_date 12:11 40.44 .324
3874
             [CN= 59.0: N= 3.00]
             [Tp= .29:DT= 1.00]
3876
        100:0039-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3877
            CALIB STANDHYD 02:PR-CL-BBP- 2.30 .449 No_date 11:55 62.00 .497
3878
3879
             [XIMP=.35:TIMP=.35]
3880
             [LOSS= 2 :CN= 51.0]
             [Pervious area: IAper=24.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 124.:MNI=.015:SCI= .0]
3881
3882
        100:0040-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3883
            ADD HYD 01:PR-R-10IC- 4.70 .371 No_date 12:11 40.44 n/a + 02:PR-CL-BBP- 2.30 .449 No_date 11:55 62.00 n/a [DT= 1.00] SUM= 03:TOT 7.00 .661 No_date 12:00 47.53 n/a
            ADD HYD
3884
3885
3886
3887
        100:0041-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
            CALIB NASHYD 04:PR-R-10IC- 1.30 .128 No_date 12:09 45.02 .361
3888
3889
             [CN= 62.0: N= 3.00]
3890
             [Tp= .25:DT= 1.00]
        100:0042-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3891
        ADD HYD 03:TOT 7.00 .661 No_date 12:00 47.53 n/a + 04:PR-R-10IC- 1.30 .128 No_date 12:09 45.02 n/a [DT= 1.00] SUM= 05:TOT 8.30 .763 No_date 12:01 47.13 n/a
3892
3893
3894
        100:0043-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3895
           CALIB STANDHYD 06:PR-R-10IC- 2.70 .535 No_date 11:56 64.13 .514
3896
             [XIMP=.30:TIMP=.30]
             [LOSS= 2 :CN= 58.0]
3898
             [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 134.:MNI=.015:SCI= .0]
3899
3900
3901
        100:0044-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 05:TOT 8.30 .763 No_date 12:01 47.13 n/a + 06:PR-R-10IC- 2.70 .535 No_date 11:56 64.13 n/a [DT= 1.00] SUM= 07:TOT 11.00 1.276 No_date 12:00 51.31 n/a
3902
3903
3904
        100:0045-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3905
            DIVERT HYD -> 07:TOT 11.00 1.276 No_date 12:00 51.31 n/a diverted <= 01:To PR-R-10 7.86 .275 No_date 12:00 51.31 n/a diverted <= 02:To Pond 3.14 1.001 No_date 12:00 51.31 n/a
3906
3907
3908
        100:0046-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3909
            COMPUTE VOLUME 07:TOT 11.00 1.276 No_date 12:00 51.31 n/a {ST= .154 ha.m to control at .400 (cms)}
3910
3911
3912
       3913
       100:0047-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3914
            CALIB NASHYD 01:PR-R-10IC- 1.40 .149 No_date 12:11 53.12 .426
3915
3916
             [CN= 67.0: N= 3.00]
             [Tp= .29:DT= 1.00]
3917
        100:0048-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3918
            CALIB STANDHYD 02:PR-R-10IC- 3.10 .701 No_date 11:56 72.06 .577
3920
             [XIMP=.36:TIMP=.36]
3921
             [LOSS= 2 :CN= 61.0]
             [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
3922
3923
        100:0049-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3924
            ADD HYD 01:PR-R-10IC- 1.40 .149 No_date 12:11 53.12 n/a + 02:PR-R-10IC- 3.10 .701 No_date 11:56 72.06 n/a [DT= 1.00] SUM= 03:TOT 4.50 .775 No_date 12:00 66.17 n/a
3925
3926
3927
        100:0050-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3928
            DIVERT HYD -> 03:TOT 4.50 .775 No_date 12:00 66.17 n/a diverted <= 01:To waterco 3.00 .126 No_date 12:00 66.17 n/a diverted <= 02:To Pond 1.50 .649 No_date 12:00 66.17 n/a
3929
3930
3931
        100:0051-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3932
            COMPUTE VOLUME 03:TOT
                                        4.50 .775 No_date 12:00 66.17 n/a
3933
```

```
\{ST=.097 \text{ ha.m} \text{ to control at} .150 \text{ (cms)}\}
3935
       100:0052------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 01:PR-R-C4IC- 13.40 .778 No_date 12:26 43.52 .349
3937
3938
3939
             [CN= 61.0: N= 3.00]
3940
             [Tp = .50:DT = 1.00]
        100:0053-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3941
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .886 No_date 11:55 88.54 .710
3942
3943
            [XIMP=.52:TIMP=.52]
             [LOSS= 2 :CN= 66.0]
            [Pervious area: IAper=13.10:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
3945
3946
3947
        100:0054-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 01:PR-R-C4IC- 13.40 .778 No_date 12:26 43.52 n/a + 02:PR-CL-BBP- 3.00 .886 No_date 11:55 88.54 n/a [DT= 1.00] SUM= 03:TOT 16.40 1.124 No_date 12:00 51.75 n/a
3948
3949
3950
        100:0055-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3951
           CALIB STANDHYD 04:PR-R-C4IC- 2.80 .536 No_date 11:56 62.46 .500
3952
3953
            [XIMP=.28:TIMP=.28]
             [LOSS= 2 :CN= 58.0]
3954
             [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
3955
3956
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 137.:MNI=.015:SCI= .0]
        100:0056-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3957
           CALIB STANDHYD 05:PR-R-C4IC- 1.60 .328 No_date 11:55 64.13 .514
3958
3959
             [XIMP=.30:TIMP=.30]
3960
             [LOSS= 2 : CN= 58.0]
             [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP=
3961
             [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 103.:MNI=.015:SCI=
3962
        100:0057-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3963
           3964
3965
3966
3967
        100:0058-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3968
            DIVERT HYD -> 06:TOT 20.80 1.959 No_date 12:00 54.15 n/a diverted <= 09:To PR-R-C4 13.83 .416 No_date 12:00 54.15 n/a diverted <= 10:Pond 6.97 1.543 No_date 12:00 54.15 n/a
3969
3970
3971
3972
        100:0059-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
            COMPUTE VOLUME 06:TOT 20.80 1.959 No_date 12:00 54.15 n/a {ST= .174 ha.m to control at 1.000 (cms)}
3973
3974
       3975
       3976
3977
        100:0060-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            CALIB NASHYD 01:PR-R-C4IC- .40 .069 No_date 12:01 49.79 .399
3978
3979
             [CN=65.0: N=3.00]
3980
             [Tp= .10:DT= 1.00]
        100:0061------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-CALIB NASHYD 02:PR-R-C4IC- 1.30 .118 No_date 12:11 45.02 .361
3981
3982
             [CN= 62.0: N= 3.00]
3983
3984
             [Tp= .28:DT= 1.00]
        100:0062-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3985
        ADD HYD 01:PR-R-C4IC- .40 .069 No_date 12:01 49.79 n/a + 02:PR-R-C4IC- 1.30 .118 No_date 12:11 45.02 n/a [DT= 1.00] SUM= 03:TOT 1.70 .165 No_date 12:04 46.14 n/a
3986
3987
        100:0063-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3989
            CALIB STANDHYD 04:PR-R-C4IC- 3.10 .682 No_date 11:56 70.00 .561
3990
3991
             [XIMP=.37:TIMP=.37]
3992
             [LOSS= 2 :CN= 58.0]
             [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
3993
3994
        100:0064-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
3995
           ADD HYD 03:TOT 1.70 .165 No_date 12:04 46.14 n/a + 04:PR-R-C4IC- 3.10 .682 No_date 11:56 70.00 n/a [DT= 1.00] SUM= 05:TOT 4.80 .799 No_date 11:56 61.55 n/a
3996
3997
3998
        100:0065-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
3999
           DIVERT HYD -> 05:TOT 4.80 .799 No_date 11:56 61.55 n/a diverted <= 09:To PR-R-C4 2.97 .082 No_date 11:56 61.55 n/a diverted <= 10:Pond 1.83 .717 No_date 11:56 61.55 n/a
4000
4001
4002
```

```
100:0066-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4003
           COMPUTE VOLUME 05:TOT 4.80 .799 No_date 11:56 61.55 n/a {ST= .113 ha.m to control at .100 (cms)}
4004
4005
4006
      4007
      100:0067-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4008
           CALIB STANDHYD 01:PR-R-2CON- 1.60 .369 No_date 11:58 71.15 .570
4009
4010
           [XIMP=.20:TIMP=.20]
4011
            [LOSS= 2 :CN= 70.0]
4012
            [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP=
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 210.:MNI=.015:SCI= .0]
       100:0068-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4014
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .657 No_date 11:58 70.57 .565
4015
4016
            [XIMP=.30:TIMP=.30]
            [LOSS= 2 :CN= 64.0]
4017
            [Pervious area: IAper=14.30:SLPP=****:LGP= 30.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 240.:MNI=.015:SCI= .0]
4018
4019
       100:0069-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4020
           ADD HYD 01:PR-R-2CON- 1.60 .369 No_date 11:58 71.15 n/a + 02:PR-CL-BBP- 3.00 .657 No_date 11:58 70.57 n/a [DT= 1.00] SUM= 03:TOT 4.60 1.026 No_date 11:58 70.77 n/a
4021
4022
4023
4024
       100:0070-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB STANDHYD 04:PR-R-2CON- 3.00 .818 No_date 11:56 82.77 .663
4025
4026
            [XIMP=.38:TIMP=.38]
4027
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 30.:MNP=.350:SCP= 
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 163.:MNI=.015:SCI=
4028
                                                                             . 01
4029
4030
       100:0071-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 03:TOT 4.60 1.026 No_date 11:58 70.77 n/a + 04:PR-R-2CON- 3.00 .818 No_date 11:56 82.77 n/a [DT= 1.00] SUM= 06:TOT 7.60 1.830 No_date 11:57 75.51 n/a
4031
4032
4033
       100:0072-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4034
           DIVERT HYD -> 06:TOT 7.60 1.830 No_date 11:57 75.51 n/a diverted <= 09:To waterco 5.75 .468 No_date 11:57 75.51 n/a diverted <= 10:Pond 1.85 1.362 No_date 11:57 75.51 n/a
4035
4036
4037
       100:0073-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4038
           COMPUTE VOLUME 06:TOT 7.60 1.830 No_date 11:57 75.51 n/a {ST= .141 ha.m to control at .600 (cms)}
4039
4040
4041
      4042
      100:0074-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4043
           CALIB NASHYD 01:PR-R-2CON- 28.00 .750 No_date 13:30 43.52 .349
4044
4045
            [CN= 61.0: N= 3.00]
4046
            [Tp= 1.39:DT= 1.00]
4047
       100:0075-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           CALIB STANDHYD 02:PR-CL-BBP- 3.00 .942 No_date 11:56 94.39 .756
4048
            [XIMP=.45:TIMP=.45]
4049
4050
            [LOSS= 2 :CN= 77.0]
            [Pervious area: IAper= 7.60:SLPP=****:LGP= 40.:MNP=.350:SCP=
4051
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI=
4052
4053
       100:0076-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 01:PR-R-2CON- 28.00 .750 No_date 13:30 43.52 n/a + 02:PR-CL-BBP- 3.00 .942 No_date 11:56 94.39 n/a [DT= 1.00] SUM= 03:TOT 31.00 1.020 No_date 11:56 48.44 n/a
4054
4055
4056
       100:0077-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4057
           CALIB STANDHYD 04:PR-R-2CON- 1.50 .444 No_date 11:55 87.00 .697
4058
4059
            [XIMP=.28:TIMP=.28]
4060
            [LOSS= 2 :CN= 78.0]
            4061
                                                                             .0]
4062
       100:0078-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4063
           ADD HYD 03:TOT 31.00 1.020 No_date 11:56 48.44 n/a
+ 04:PR-R-2CON- 1.50 .444 No_date 11:55 87.00 n/a
[DT= 1.00] SUM= 05:TOT 32.50 1.459 No_date 11:56 50.22 n/a
4064
4065
4066
       100:0079-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4067
          CALIB STANDHYD 06:PR-R-2CON- 3.00 .924 No_date 11:56 92.96 .745
4068
4069
            [XIMP=.40:TIMP=.40]
4070
            [LOSS= 2 :CN= 78.0]
            [Pervious area: IAper= 7.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
4071
                                                                             .0]
```

```
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 141.:MNI=.015:SCI= .0]
4072
      100:0080-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4073
      4074
4075
4076
4077
         DIVERT HYD -> 07:TOT 35.50 2.383 No_date 11:56 53.83 n/a diverted <= 01:To PR-R-2C 27.44 .590 No_date 11:56 53.83 n/a diverted <= 02:To Pond 8.06 1.793 No_date 11:56 53.83 n/a
4078
4079
4080
      100:0082-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4081
         COMPUTE VOLUME 07:TOT 35.50 2.383 No_date 11:56 53.83 n/a {ST= .140 ha.m to control at 1.100 (cms)}
4083
     4084
     4085
      100:0083-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4086
         CALIB NASHYD 01:PR-R-404-4 3.50 .239 No_date 12:19 43.52 .349
4087
4088
          [CN= 61.0: N= 3.00]
          [Tp= .40:DT= 1.00]
4089
      100:0084-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4090
         CALIB NASHYD 02:PR-R-404-5 5.90 .248 No_date 12:45 43.52 .349
4091
          [CN = 61.0: N = 3.00]
4092
4093
          [Tp= .77:DT= 1.00]
4094
      100:0085-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         4095
4096
4097
      100:0086-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4098
         CALIB NASHYD 04:PR-R-404-6 3.70 .300 No_date 12:15 46.62 .374
4099
4100
          [CN= 63.0: N= 3.00]
          [Tp= .35:DT= 1.00]
4101
      100:0087-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4102
       ADD HYD 03:TOT 9.40 .445 No_date 12:28 43.52 n/a + 04:PR-R-404-6 3.70 .300 No_date 12:15 46.62 n/a [DT= 1.00] SUM= 09:TOT 13.10 .721 No_date 12:21 44.39 n/a
4103
4104
4105
      100:0088-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4106
         DIVERT HYD -> 09:TOT 13.10 .721 No_date 12:21 44.39 n/a diverted <= 01:To waterco 7.69 .137 No_date 12:21 44.39 n/a diverted <= 02:To Pond 5.41 .583 No_date 12:21 44.39 n/a
4107
4108
4109
      100:0089-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4110
         COMPUTE VOLUME 09:TOT 13.10 .721 No_date 12:21 44.39 n/a {ST= .130 ha.m to control at .400 (cms)}
4111
4112
     4113
     4114
      100:0090-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4115
         CALIB NASHYD 10:PR-R-404-7 6.50 .311 No_date 12:36 43.52 .349
4116
4117
          [CN= 61.0: N= 3.00]
          [Tp= .65:DT= 1.00]
4118
4119
      100:0091-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
      4120
4121
4122
4123
         COMPUTE VOLUME 10:PR-R-404-7 6.50 .311 No_date 12:36 43.52 n/a {ST= .111 ha.m to control at .100 (cms)}
4124
4125
4126
     4127
     100:0093-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4128
         CALIB NASHYD 01:PR-R-404-1 29.30 1.043 No_date 12:55 41.99 .336
4129
4130
          [CN=60.0: N=3.00]
          [Tp= .91:DT= 1.00]
4131
4132
      100:0094-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
         CALIB NASHYD 02:PR-R-404-1 7.30 .479 No_date 12:19 41.99 .336
4133
4134
          [CN=60.0: N=3.00]
4135
          [Tp= .40:DT= 1.00]
      100:0095-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4136
         CALIB NASHYD 03:PR-CL-404- 2.20 .141 No_date 12:26 48.19 .386
4137
          [CN= 64.0: N= 3.00]
4138
4139
          [Tp= .51:DT= 1.00]
      100:0096-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4140
```

```
ADD HYD 01:PR-R-404-1 29.30 1.043 No_date 12:55 41.99 n/a
+ 02:PR-R-404-1 7.30 .479 No_date 12:19 41.99 n/a
+ 03:PR-CL-404- 2.20 .141 No_date 12:26 48.19 n/a
[DT= 1.00] SUM= 10:TOT 38.80 1.465 No_date 12:37 42.34 n/a
4141
         ADD HYD
4142
4143
4144
      4145
      4146
      4147
     4148
      100:0097------ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4149
          CALIB NASHYD 01:PR-R-BBP-5 2.20 .233 No_date 12:16 61.78 .495
4150
4151
            [CN= 72.0: N= 3.00]
           [Tp= .37:DT= 1.00]
4152
       100:0098-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4153
           CALIB NASHYD 02:PR-R-BBP-6 542.60 5.166 No_date 17:38 38.99 .312
4154
4155
            [CN= 58.0: N= 3.00]
4156
            [Tp= 4.60:DT= 1.00]
       100:0099-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4157
          CALIB NASHYD 03:PR-R-BBP-6 5.60 .469 No_date 12:23 58.24 .467
4158
4159
           [CN= 70.0: N= 3.00]
4160
           [Tp= .47:DT= 1.00]
       100:0100------ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-ADD HYD 01:PR-R-BBP-5 2.20 .233 No_date 12:16 61.78 n/a
4161
4162
4163
                        + 02:PR-R-BBP-6 542.60 5.166 No_date 17:38 38.99 n/a
           + 03:PR-R-BBP-6 5.60 .469 No_date 17:37 39.28 n/a [DT= 1.00] SUM= 04:TOT 550.40 5.207 No_date 17:37 39.28 n/a
4164
4165
       100:0101-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4166
          CALIB NASHYD 01:PR-R-BBP-7 2.40 .341 No_date 12:08 61.78 .495
4167
4168
            [CN= 72.0: N= 3.00]
4169
            [Tp = .24:DT = 1.00]
       100:0102-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4170
           CALIB NASHYD 02:PR-R-BBP-8 81.70 1.181 No_date 14:56 37.52 .301
4171
4172
            [CN= 57.0: N= 3.00]
4173
           [Tp= 2.50:DT= 1.00]
       100:0103-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4174
           CALIB NASHYD 03:PR-R-BBP-8 3.70 .296 No_date 12:25 58.24 .467
4175
4176
            [CN= 70.0: N= 3.00]
            [Tp= .50:DT= 1.00]
4177
4178
       100:0104-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           ADD HYD 02:PR-R-BBP-8 81.70 1.181 No_date 14:56 37.52 n/a
+ 03:PR-R-BBP-8 3.70 .296 No_date 12:25 58.24 n/a
[DT= 1.00] SUM= 04:TOT 85.40 1.215 No_date 14:53 38.41 n/a
4179
4180
4181
       100:0105-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4182
          CALIB STANDHYD 05:PR-R-10IC- 3.40 .870 No_date 11:55 79.22 .635
4183
4184
           [XIMP=.48:TIMP=.48]
4185
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= 
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 151.:MNI=.015:SCI=
4186
4187
4188
      4189
     4190
       100:0106-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 08:PR-R-10IC- 1.40 .149 No_date 12:11 53.12 .426
4191
4192
           [CN= 67.0: N= 3.00]
4193
           [Tp= .29:DT= 1.00]
       100:0107-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4194
          CALIB STANDHYD 09:PR-R-10IC- 3.10 .701 No_date 11:56 72.06 .577
4195
4196
           [XIMP=.36:TIMP=.36]
4197
           [LOSS= 2 :CN= 61.0]
           [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
4198
4199
       100:0108-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4200
          ADD HYD 08:PR-R-10IC- 1.40 .149 No_date 12:11 53.12 n/a + 09:PR-R-10IC- 3.10 .701 No_date 11:56 72.06 n/a [DT= 1.00] SUM= 10:TOT 4.50 .775 No_date 12:00 66.17 n/a
4201
4202
4203
       100:0109-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4204
          ROUTE CHANNEL -> 10:TOT 4.50 .775 No_date 12:00 66.17 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.50 .373 No_date 12:06 66.17 n/a
4205
4206
            [L/S/n= 1200./1.000/.070]
4207
4208
            \{Vmax = .752:Dmax = .745\}
       100:0110-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4209
```

```
CALIB NASHYD 02:PR-CL-BBP- 75.80 2.916 No_date 13:14 54.76 .439
4210
4211
          [CN= 68.0: N= 3.00]
4212
           [Tp= 1.21:DT= 1.00]
      4213
4214
4215
4216
4217
     100:0112-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
      CALIB STANDHYD 04:PR-R-C4IC- 2.50 .708 No_date 11:55 85.08 .682
4218
4219
          [XIMP=.55:TIMP=.55]
4220
           [LOSS= 2 :CN= 58.0]
          [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 129.:MNI=.015:SCI= .0]
4221
4222
     100:0113-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4223
          CALIB NASHYD 05:PR-CL-BBP- 27.30 1.797 No_date 12:39 61.78 .495
4224
4225
           [CN= 72.0: N= 3.00]
4226
           [Tp= .71:DT=1.00]
      4227
    4228
4229 100:0114-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
          CALIB NASHYD 07:PR-R-C4IC- .40 .069 No_date 12:01 49.79 .399
4230
4231
           [CN=65.0: N=3.00]
           [Tp= .10:DT= 1.00]
4232
4233 100:0115-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 08:PR-R-C4IC- 1.30 .118 No_date 12:11 45.02 .361
4234
           [CN= 62.0: N= 3.00]
4235
4236
           [Tp = .28:DT = 1.00]
      100:0116-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4237
          CALIB STANDHYD 09:PR-R-C4IC- 3.10 .682 No_date 11:56 70.00 .561
4238
           [XIMP=.37:TIMP=.37]
4239
           [LOSS= 2 :CN= 58.0]
4240
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
4241
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 144.:MNI=.015:SCI= .0]
4242
4243
       100:0117-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ADD HYD 07:PR-R-C4IC- .40 .069 No_date 12:01 49.79 n/a
+ 08:PR-R-C4IC- 1.30 .118 No_date 12:11 45.02 n/a
+ 09:PR-R-C4IC- 3.10 .682 No_date 11:56 70.00 n/a
[DT= 1.00] SUM= 10:TOT 4.80 .799 No_date 11:56 61.55 n/a
4244
4245
4246
4247
       100:0118-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4248
          ROUTE CHANNEL -> 10:TOT 4.80 .799 No_date 11:56 61.55 n/a [RDT= 1.00] out<- 01:to PR-CL-B 4.80 .566 No_date 12:03 61.55 n/a
4249
4250
           [L/S/n= 580./1.000/.070]
4251
4252
           \{Vmax = .759 : Dmax = .759\}
4253 100:0119-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 02:PR-CL-BBP- 22.10 1.145 No_date 12:38 48.19 .386
4254
4255
           [CN= 64.0: N= 3.00]
           [Tp= .68:DT= 1.00]
4256
4257
       100:0120-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
       ADD HYD 01:to PR-CL-B 4.80 .566 No_date 12:03 61.55 n/a + 02:PR-CL-BBP- 22.10 1.145 No_date 12:38 48.19 n/a [DT= 1.00] SUM= 03:TOT 26.90 1.385 No_date 12:30 50.57 n/a
4258
4259
4260
4262
     4263
      100:0121------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-R-BST-1 2.20 .341 No_date 12:07 65.48 .525
4264
4265
           [CN= 74.0: N= 3.00]
4266
           [Tp= .23:DT= 1.00]
       100:0122-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4267
         CALIB STANDHYD 02:PR-CL-BBP- 2.00 .586 No_date 11:55 87.93 .705
4268
4269
           [XIMP=.46:TIMP=.46]
           [LOSS= 2 :CN= 70.0]
4270
           [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
4271
           [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI= .0]
4272
4273 100:0123-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          ADD HYD 01:PR-R-BST-1 2.20 .341 No_date 12:07 65.48 n/a
+ 02:PR-CL-BBP- 2.00 .586 No_date 11:55 87.93 n/a
[DT= 1.00] SUM= 03:TOT 4.20 .811 No_date 12:00 76.17 n/a
4274
4275
4276
       100:0124-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4277
          CALIB STANDHYD 04:PR-R-BST-2 2.00 .555 No_date 11:55 84.06 .674
4278
```

```
[XIMP=.40:TIMP=.40]
4280
            [LOSS= 2 :CN= 70.0]
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI=
4281
4282
                                                                               .01
       100:0125-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4283
           ADD HYD 03:TOT 4.20 .811 No_date 12:00 76.17 n/a
+ 04:PR-R-BST-2 2.00 .555 No_date 11:55 84.06 n/a
[DT= 1.00] SUM= 05:TOT 6.20 1.326 No_date 11:55 78.72 n/a
4284
4285
4286
       100:0126-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4287
           CALIB NASHYD 01:PR-R-BST-3 3.60 .299 No_date 12:26 61.78 .495
4288
4289
            [CN= 72.0: N= 3.00]
            [Tp = .52:DT = 1.00]
4290
       100:0127-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4291
           CALIB STANDHYD 02:PR-CL-BBP- 2.10 .627 No_date 11:55 89.22 .715
4292
4293
            [XIMP=.48:TIMP=.48]
             [LOSS= 2 :CN= 70.0]
4294
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 118.:MNI=.015:SCI= .0]
4295
4296
4297
       100:0128-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
            ADD HYD 01:PR-R-BST-3 3.60 .299 No_date 12:26 61.78 n/a

+ 02:PR-CL-BBP- 2.10 .627 No_date 11:55 89.22 n/a

[DT= 1.00] SUM= 03:TOT 5.70 .714 No_date 11:55 71.89 n/a
4298
           ADD HYD
4299
4300
4301
       100:0129-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
           CALIB STANDHYD 04:PR-R-BST-2 2.00 .556 No_date 11:55 84.06 .674
4302
4303
            [XIMP=.40:TIMP=.40]
            [LOSS= 2 :CN= 70.0]
4304
            [Pervious area: IAper=10.90:SLPP=****:LGP= 40.:MNP=.350:SCP=
4305
4306
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 115.:MNI=.015:SCI=
       100:0130-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4307
        ADD HYD 03:TOT 5.70 .714 No_date 11:55 71.89 n/a + 04:PR-R-BST-2 2.00 .556 No_date 11:55 84.06 n/a [DT= 1.00] SUM= 05:TOT 7.70 1.270 No_date 11:55 75.05 n/a
4308
4309
4310
      4311
      4312
       100:0131-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4313
           CALIB NASHYD 01:PR-R-2CON- 243.60 5.310 No_date 14:35 51.44 .412
4314
            [CN= 66.0: N= 3.00]
4315
4316
            [Tp= 2.31:DT= 1.00]
       100:0132-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4317
           CALIB NASHYD 02:PR-CL-BBP- 37.00 1.560 No_date 12:50 46.62 .374
4318
4319
            [CN= 63.0: N= 3.00]
            [Tp= .85:DT= 1.00]
4320
       100:0133-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4321
           CALIB NASHYD 03:PR-R-LST-1 40.20 1.346 No_date 13:04 43.52 .349
4322
4323
            [CN= 61.0: N= 3.00]
4324
            [Tp= 1.04:DT= 1.00]
       100:0134-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4325
           CALIB STANDHYD 04:PR-CL-BBP- 1.80 .472 No_date 11:55 79.19 .635
4326
4327
            [XIMP=.45:TIMP=.45]
            [LOSS= 2 :CN= 61.0]
4328
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
4329
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 110.:MNI=.015:SCI=
4330
4331
       100:0135-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
           ADD HYD 03:PR-R-LST-1 40.20 1.346 No_date 13:04 43.52 n/a + 04:PR-CL-BBP- 1.80 .472 No_date 11:55 79.19 n/a [DT= 1.00] SUM= 05:TOT 42.00 1.375 No_date 13:03 45.05 n/a
4332
4333
4334
        100:0136-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4335
           CALIB NASHYD 01:PR-R-LST-2 8.80 .429 No_date 12:33 41.99 .336
4336
4337
            [CN=60.0: N=3.00]
4338
            [Tp = .60:DT = 1.00]
        100:0137-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4339
           CALIB STANDHYD 02:PR-CL-BBP- 1.20 .303 No_date 11:54 76.02 .609
4340
4341
            [XIMP=.41:TIMP=.41]
4342
            [LOSS= 2 :CN= 61.0]
            [Pervious area: IAper=16.20:SLPP=****:LGP= 40.:MNP=.350:SCP=
4343
                                                                               .0]
            [Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 89.:MNI=.015:SCI=
       100:0138-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4345
                      01:PR-R-LST-2 8.80 .429 No_date 12:33 41.99 n/a
+ 02:PR-CL-BBP- 1.20 .303 No_date 11:54 76.02 n/a
4346
           ADD HYD
4347
```

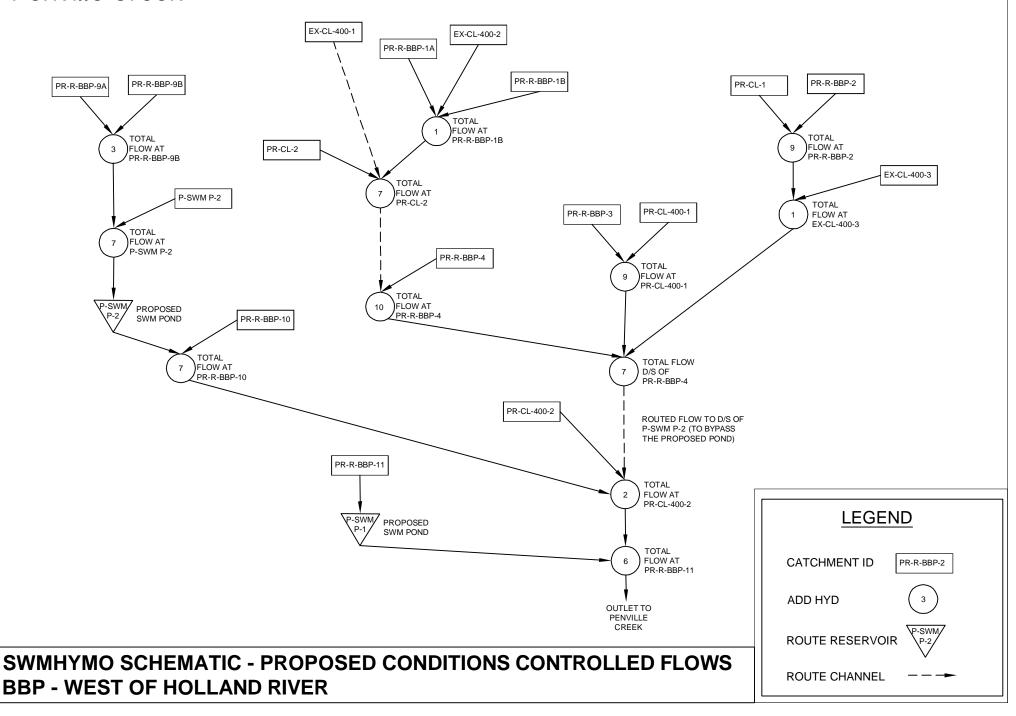
```
[DT= 1.00] SUM= 03:TOT 10.00
4348
                                                 .461 No_date 12:30 46.08 n/a
4349 100:0139-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
         CALIB STANDHYD 04:PR-R-LST-3 1.10 .264 No_date 11:54 72.51 .581
4350
4351
           [XIMP=.40:TIMP=.40]
4352
           [LOSS= 2 :CN= 58.0]
           [Pervious area: IAper=18.40:SLPP=****:LGP= 40.:MNP=.350:SCP= .0]
[Impervious area: IAimp= 2.00:SLPI=1.00:LGI= 86.:MNI=.015:SCI= .0]
4353
4354
4355 100:0140-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
      ADD HYD 03:TOT 10.00 .461 No_date 12:30 46.08 n/a + 04:PR-R-LST-3 1.10 .264 No_date 11:54 72.51 n/a [DT= 1.00] SUM= 05:TOT 11.10 .657 No_date 11:55 48.70 n/a
4356
4357
4358
4359 100:0141-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 01:PR-CL-BBP- 22.00 1.222 No_date 12:36 49.79 .399
4360
           [CN=65.0: N=3.00]
4361
           [Tp= .65:DT= 1.00]
4362
      4363
    4364
     100:0142-----ID:NHYD------AREA---QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4365
          CALIB NASHYD 01:PR-R-404-3 118.50 2.474 No_date 14:16 45.02 .361
4366
4367
           [CN= 62.0: N= 3.00]
           [Tp= 2.02:DT= 1.00]
4368
4369 100:0143-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 02:PR-R-404-2 .90 .075 No_date 12:13 45.02 .361
4370
4371
           [CN= 62.0: N= 3.00]
4372
           [Tp= .32:DT= 1.00]
       100:0144-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4373
          ADD HYD 01:PR-R-404-3 118.50 2.474 No_date 14:16 45.02 n/a + 02:PR-R-404-2 .90 .075 No_date 12:13 45.02 n/a [DT= 1.00] SUM= 03:TOT 119.40 2.481 No_date 14:16 45.02 n/a
4374
4375
4376
      100:0145-----ID:NHYD-----AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
4377
          CALIB NASHYD 04:PR-R-404-1 1.70 .107 No_date 12:23 45.02 .361
4378
4379
           [CN= 62.0: N= 3.00]
4380
           [Tp = .47:DT = 1.00]
       100:0146-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
4381
          ADD HYD 03:TOT 119.40 2.481 No_date 14:16 45.02 n/a + 04:PR-R-404-1 1.70 .107 No_date 12:23 45.02 n/a [DT= 1.00] SUM= 05:TOT 121.10 2.498 No_date 14:15 45.02 n/a
4382
4383
4384
4385
       100:0147-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 08:PR-R-404-8 2.40 .145 No_date 12:26 45.02 .361
4386
4387
           [CN= 62.0: N= 3.00]
4388
           [Tp= .50:DT= 1.00]
4389
      100:0148-----ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 09:PR-R-404-8 2.60 .167 No_date 12:26 48.19 .386
4390
4391
           [CN= 64.0: N= 3.00]
4392
           [Tp= .51:DT= 1.00]
4393
      100:0149------ID:NHYD------AREA----QPEAK-TpeakDate_hh:mm----R.V.-R.C.-
          CALIB NASHYD 10:PR-R-404-9 1.80 .172 No_date 12:09 45.02 .361
4394
           [CN= 62.0: N= 3.00]
4395
4396
           [Tp= .26:DT= 1.00]
    4397
4398 100:0002------
4399
4400
      ************************
4401
          WARNINGS / ERRORS / NOTES
4403
          _____
4404
     002:0005 COMPUTE VOLUME
4405
           *** WARNING: No storage required, RelRate > Inflow Qp.
4406
       002:0046 COMPUTE VOLUME
4407
           *** WARNING: No storage required, RelRate > Inflow Qp.
4408
     002:0059 COMPUTE VOLUME
4409
           *** WARNING: No storage required, RelRate > Inflow Qp.
4410 002:0073 COMPUTE VOLUME
4411
           *** WARNING: No storage required, RelRate > Inflow Qp.
4412 002:0082 COMPUTE VOLUME
           *** WARNING: No storage required, RelRate > Inflow Qp.
4413
4414 002:0089 COMPUTE VOLUME
4415
           *** WARNING: No storage required, RelRate > Inflow Qp.
     002:0092 COMPUTE VOLUME
4416
```



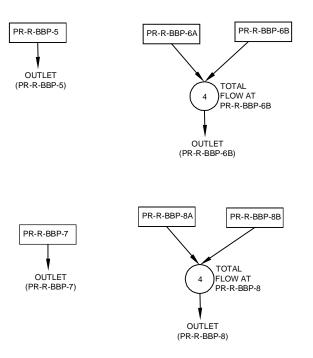
Appendix E.2

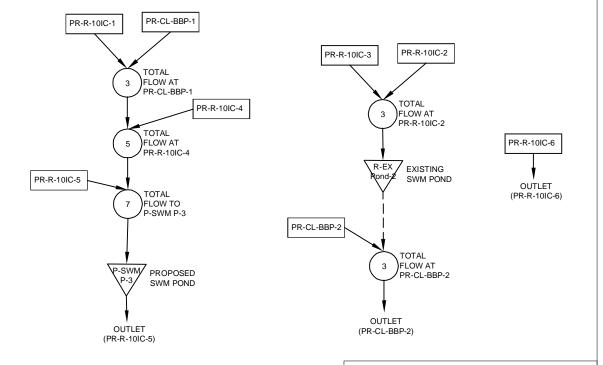
SWMHYMO Schematics - Proposed Conditions Controlled Peak Flows

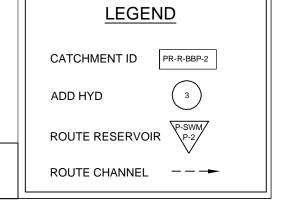
Outlet to Penville Creek



East of Highway 400 & 10th Sideroad Interchange

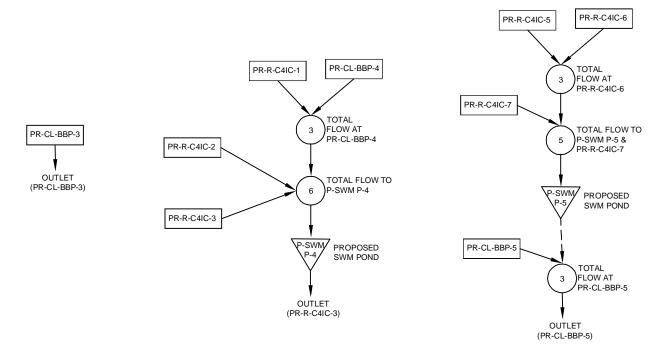


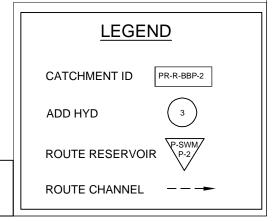




SWMHYMO SCHEMATIC - PROPOSED CONDITIONS CONTROLLED FLOWS BBP - WEST OF HOLLAND RIVER

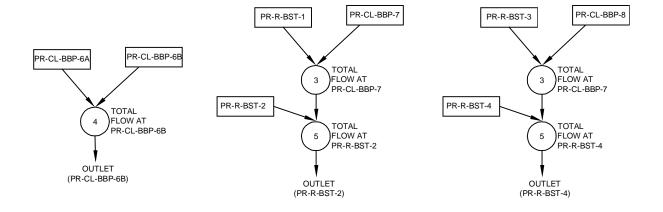
West of County Road 4 & County Road 4 Interchange

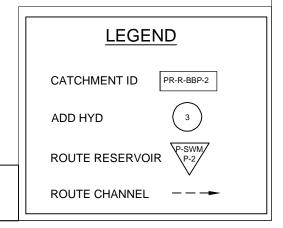




SWMHYMO SCHEMATIC - PROPOSED CONDITIONS CONTROLLED FLOWS BBP - WEST OF HOLLAND RIVER

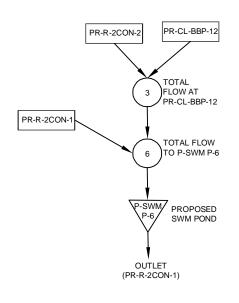
Bathurst Street Interchange

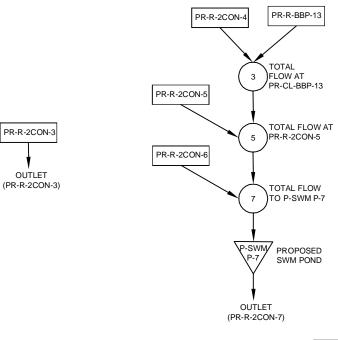


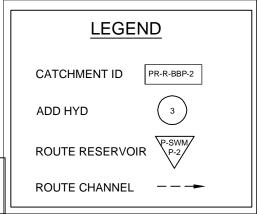


SWMHYMO SCHEMATIC - PROPOSED CONDITIONS CONTROLLED FLOWS BBP - AT BATHURST STREET

2nd Concession Interchange

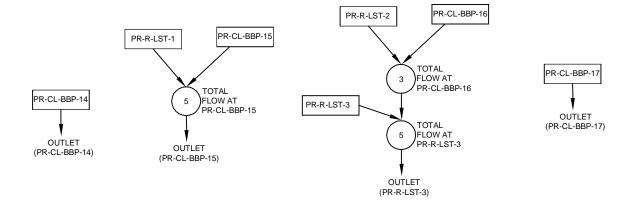


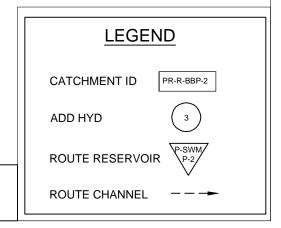




SWMHYMO SCHEMATIC - PROPOSED CONDITIONS CONTROLLED FLOWS BBP - EAST OF HOLLAND RIVER

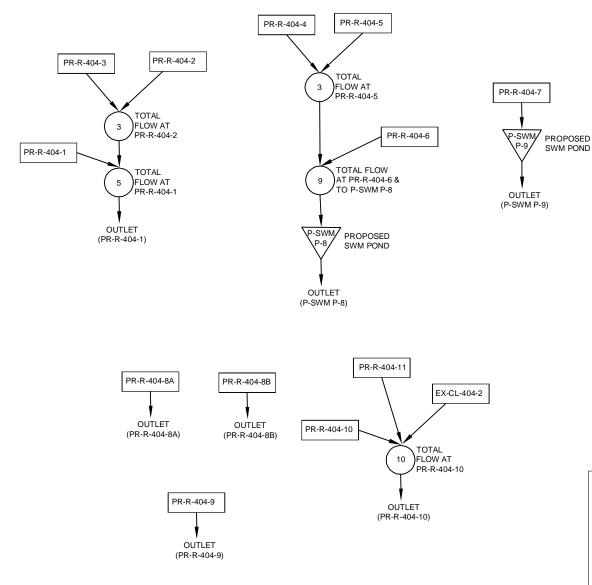
Leslie Street Interchange





SWMHYMO SCHEMATIC - PROPOSED CONDITIONS CONTROLLED FLOWS BBP - EAST OF HOLLAND RIVER

Highway 404 Interchange



SWMHYMO SCHEMATIC - PROPOSED CONDITIONS CONTROLLED FLOWS BBP - EAST OF HOLLAND RIVER

LEGEND

CATCHMENT ID PR-R-BBP-2

ADD HYD 3

ROUTE RESERVOIR P-2

ROUTE CHANNEL ---



Appendix

Table 6.1 and Table 6.2 (from MECP Manual)

Table 6.1: Stormwater Management Practices Operation and Maintenance Activities

		Type of Stormwater Management Practice											
Item No.	Operation or Maintenance Activity	Wet Pond	Wetland	Dry Pond	Infiltration Basin		Filter Strip	Superpipe Storage	Filters	Oil/Grit Separator	Soakaway Pit	Pervious Pipe	Grassed Swales
1	Inspection												
2	Grass cutting												
3	Weed Control												
4	Upland vegetation replanting												
5	Shoreline Fringe and Flood Fringe vegetation replanting												
6	Aquatic vegetation replanting												
7	Removal of accumulated sediments	-	•	•	•		•		•			**	-
8	Outlet valve adjustment												
9	Roof leader filter cleaning/replacement												
10	Pervious pipe flushing												
11	Oil/Grit separator or Catchbasin cleaning												
12	Closing of infiltration facility inlet for winter months				■ g	■ g			■ g			■ g	
13	Trash removal									*	***		
14	Infiltration basin floor tilling												

Normally Required	☐ May be Required

QBased on municipality experience and practices (e.g., may not be required if used on a local road with no salting or sanding).

^{*}Litter removal part of sediment removal.

**Sediment removal part of catchbasin cleaning.

***Litter removal by a filter in the rain gutter.

 Table 6.2: Potential Inspection Routine Questions for SWMPs

SWMP	Inspection Routine
Wet Ponds Wetlands	 Is the pond level higher than the normal permanent pool elevation > 24 hours after a storm (or other design detention time)? (This could indicate blockage of the outlet by trash or sediment. Visually inspect the outlet structure for debris or blockage.) Is the pond level lower than the normal permanent pool elevation? (This could indicate a blockage of the inlet. Visually inspect the inlet structure for debris or blockage.) Is the vegetation around the pond unhealthy or dying? (This could indicate a poor selection of species. If occurs chronically further analysis should be conducted to identify the cause.) Is the pond all open water (no bulrushes or vegetation in the water)? Are there areas around the pond with easy access to open water? (This will indicate a need for replanting the pond) Is there an oily sheen on the water near the inlet or outlet? Is the water frothy? Is there an unusual colouring to the water? (This may indicate the occurrence of an oil or industrial spill and the need for cleanup.) Check the sediment depth in pond. (This will indicate the need for sediment removal. The sediment depth can be checked using a graduated pole with a flat plate attached to the bottom. A marker (pole, buoy) should be placed in the pond to indicate the spot(s) where a measurement should be made. A visual inspection on the pond depth can also be made if the pond is shallow and a graduated marker is located in the pond.)
Dry Ponds	 Is there standing water in the pond > 24 hours after a storm (or other design detention time)? (This could indicate blockage of the outlet by trash or sediment. Visually inspect the outlet structure for debris or blockage.) Is the pond always dry, or relatively dry within 24 hours of a storm (or other design detention time)? (This could indicate a blockage of the inlet or water quality/erosion control outlet which is too large. Visually inspect the inlet structure for debris or blockage.) Is the vegetation around the pond unhealthy or dying? (This could indicate a poor selection of species. If occurs chronically further analysis should be conducted to identify the cause?) Are there areas around the pond with easy access to open water? (This will indicate a need for replanting the pond.) Is there a visible accumulation of sediment in the bottom of the pond or around the high water line of the pond? (This will indicate the need for sediment removal.)
Infiltration Basins	1. Is there standing water in the basin > 24 hours after a storm? (This will indicate a decrease in the permeability of the underlying soils and, depending on the depth of water in the pond after 24 hours, the need for maintenance – sediment removal and rototilling of soils. If there is greater than one third the design depth of water in the pond 48 hours after a storm, the basin needs to be maintained.)

Table 6.2: Potential Inspection Routine Questions for SWMPs (cont'd)

SWMP	Inspection Routine					
	 Is the pond always dry, or relatively dry within 24 hours of a storm? (This could indicate a blockage of the inlet. Visually inspect the inlet structure for debris or blockage.) Is there a visible accumulation of sediment in the bottom of the pond or around the high water line of the pond? (This will indicate the need for sediment removal.) Are the top few inches of soil discoloured? (This may indicate a need for tilling of the soil.) 					
Infiltration Trenches	 Is the trench draining? (Inspect the depth of water in the observation well. If the trench has not drained in 24 hours, the inlet and pre-treatment SWMPs should be cleaned (i.e., oil/grit separator, catchbasins, or grassed swales). If the trench has not drained within 48 hours the trench may need to be partially or wholly re-constructed to restore its performance. Is the trench always dry, or relatively dry within 24 hours of a storm? (This could indicate a blockage of the inlet. Visually inspect the inlet structure for debris or blockage.) 					
Filter Strips	 Are there areas of unhealthy, dead, or no vegetation downstream of the level spreader? (This will indicate the need to revegetate the filter strip.) Are there indications of rill erosion downstream of the level spreader? (This will indicate the need to re-vegetate the filter strip. The rill erosion may be caused by a non-uniform spreader height. The spreader should be checked near the erosion areas to determine if it is in need of repair.) Is there erosion of the level spreader? (The spreader should be re-constructed in areas where the spreader height is non uniform.) Is there standing water upstream of the level spreader? (This will indicate that the level spreader is blocked. The level spreader should be checked for trash, debris, or sedimentation. The blockage should be removed and the spreader re-constructed if necessary.) 					
Buffer Strips	1. Are there areas of unhealthy or dead vegetation along the buffer strip? (This will indicate the need to re-vegetate the buffer strip.)					
Filters	 Are there areas of unhealthy or dead vegetation in a grass surfaced filter or a bioretention area? (This will indicate the need to re-vegetate the filter surface.) Is there standing water in the filter > 24 hours after a storm? (This will indicate a blockage in the filter, possibly in the 					

- 6-6 -

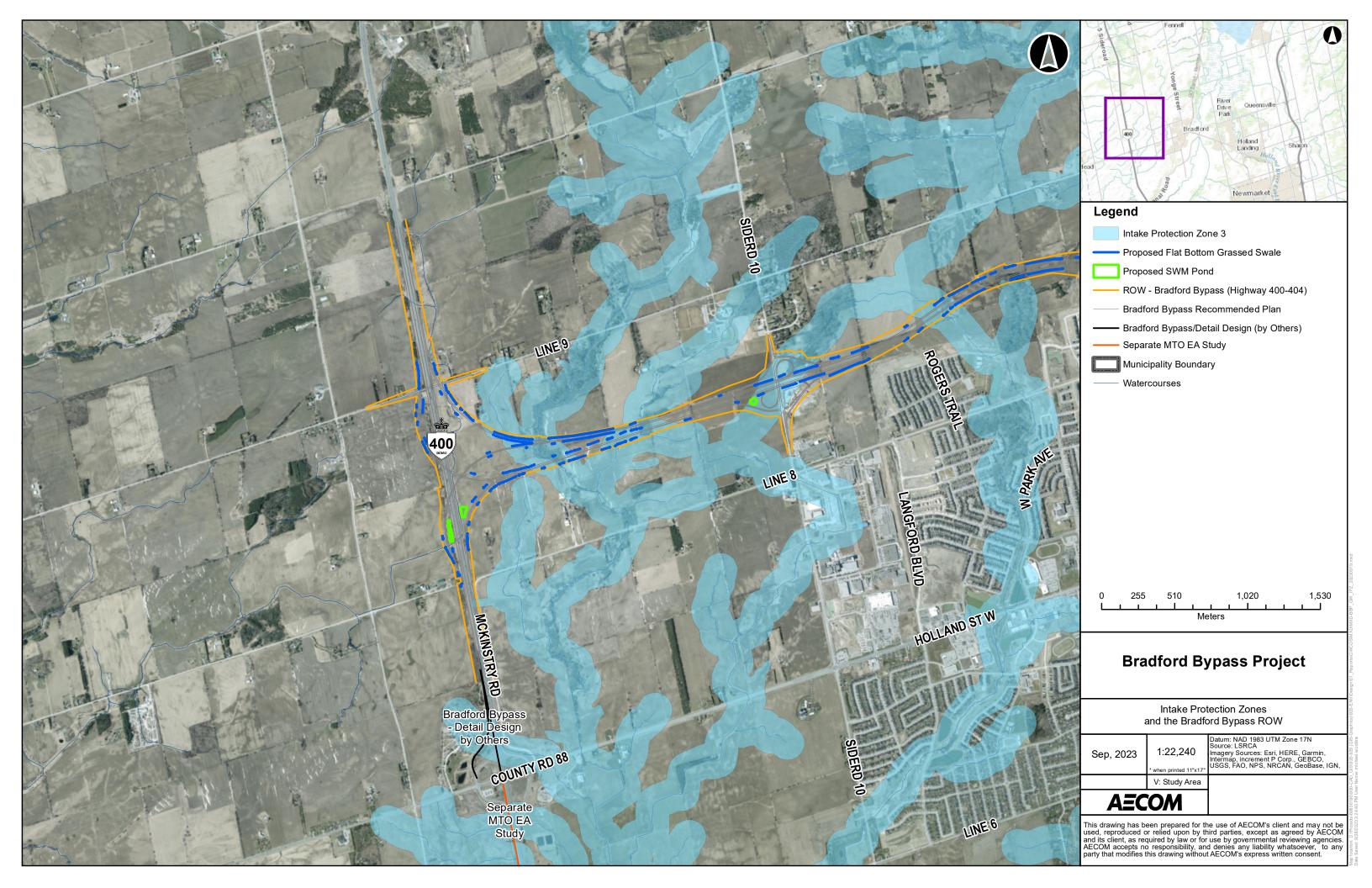
Table 6.2: Potential Inspection Routine Questions for SWMPs (cont'd)

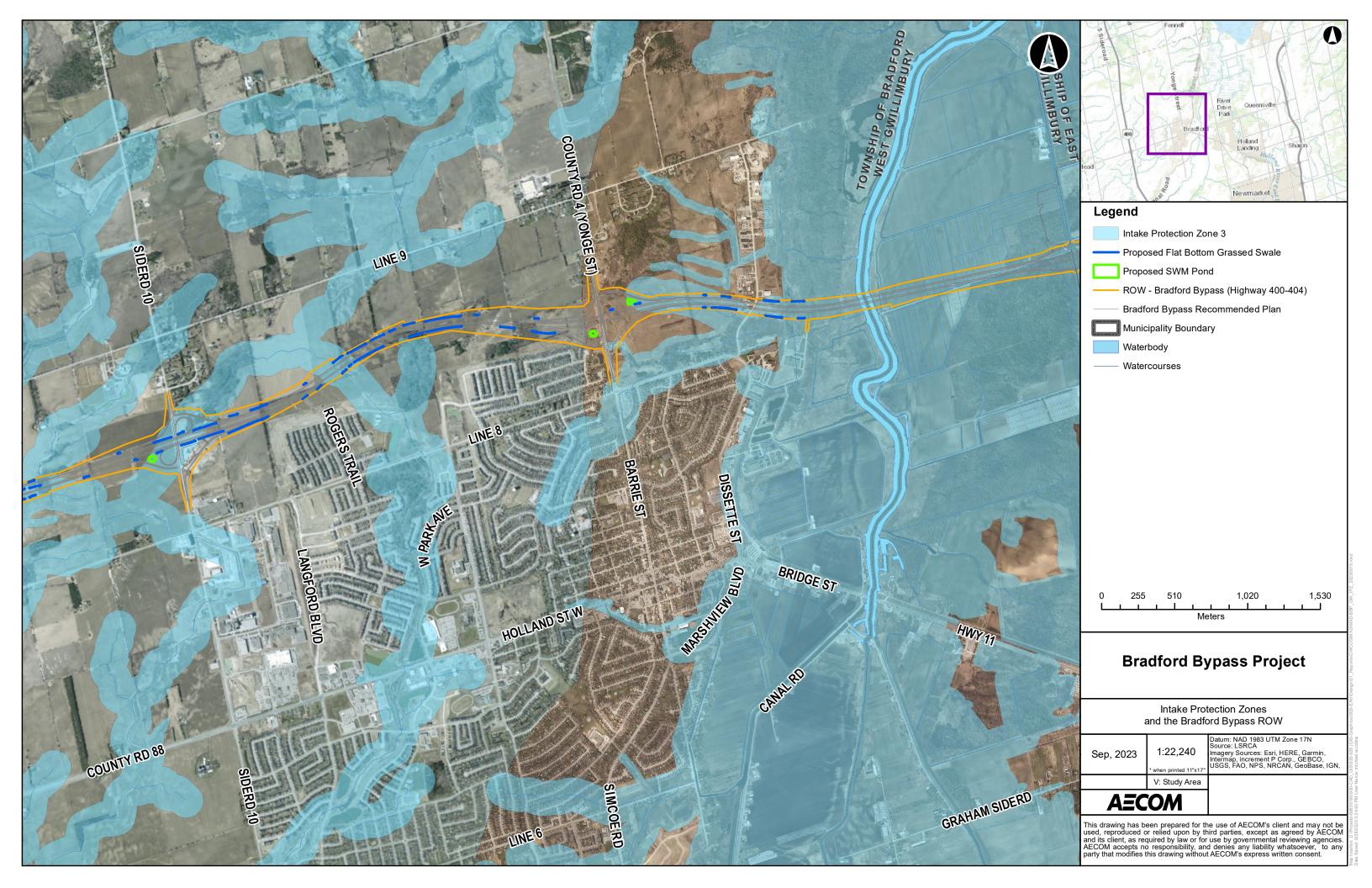
SWMP	Inspection Routine
	perforated pipe collection system or sedimentation on the surface or in the sand layer. The outlet collection system should be inspected for blockage. If there is water in the filter 48 hours after a storm, sediment removal should be undertaken. If sediment removal does not improve the performance (drainage) of the filter, the filter may need to be re-constructed.) 3. Is the filter always dry? (This could indicate a blockage of the inlet. Visually inspect the inlet structure for debris or blockage.) 4. Is there a visible discolouration of the top of the filter or accumulation of sediment on the filter? (This will indicate the need for sediment removal and/or replacement of the top few inches of the filter.)
Oil/Grit Separators (OGS)	 Is there sediment in the separator/catchbasin? (The level of sediment should be measured using a graduated pole with a flat plate attached to the bottom. The pole should be graduated such that the true bottom of the separator/catchbasin compared to the cover/grate is marked for comparison.) Is there oil in the separator/catchbasin? (A visual inspection of the contents should be made from the surface for trash/debris and/or the presence of a oil/industrial spill. An oily sheen, frothing or unusual colouring to the water may indicate the occurrence of an oil or industrial spill. The separator/catchbasin should be cleaned in the event of spill contamination.)
Roof Leader Discharge to Soakaway Pits	1. Are there frequent overflows to the surface during small storm events? (Frequent overflows will indicate that roof leader filter has clogged or the soakaway storage media has become clogged. The filter should be checked for an accumulation of leaves and twigs. If the filter is clean, the pit may need to be reconstructed to restore its performance.)
Perforated Pipe Systems	 Are the pre-treatment SWMPs operating properly? (Pre-treatment SWMPs should be inspected (see oil/grit separators, grassed swales).) Is the perforated pipe operating properly? (The connection to the perforated pipe (i.e., manhole/catchbasin) should be visually inspected for standing water 24 hours after a storm. Standing water will indicate the need for maintenance of the perforated pipe system (flushing, jet washing).)
Grassed Swales	 Is there standing water in an enhanced grass swale. (This will indicate a blocked check dam or decrease in the permeability of the swale. The check dam should be inspected for blockage by trash/debris, or sediment.) Is the grass/vegetation unhealthy or dead? (This will indicate the need to revegetate the swale.) Is there erosion downstream of the swale? (This may indicate frequent overtopping of the swale, and as such, blockage of the dam or decreased swale permeability. The dam should be inspected for blockage and the erosion corrected by sodding. There may be a need to provide further erosion control (rip-rap, plant stakings) to prevent the re-occurrence of erosion.)

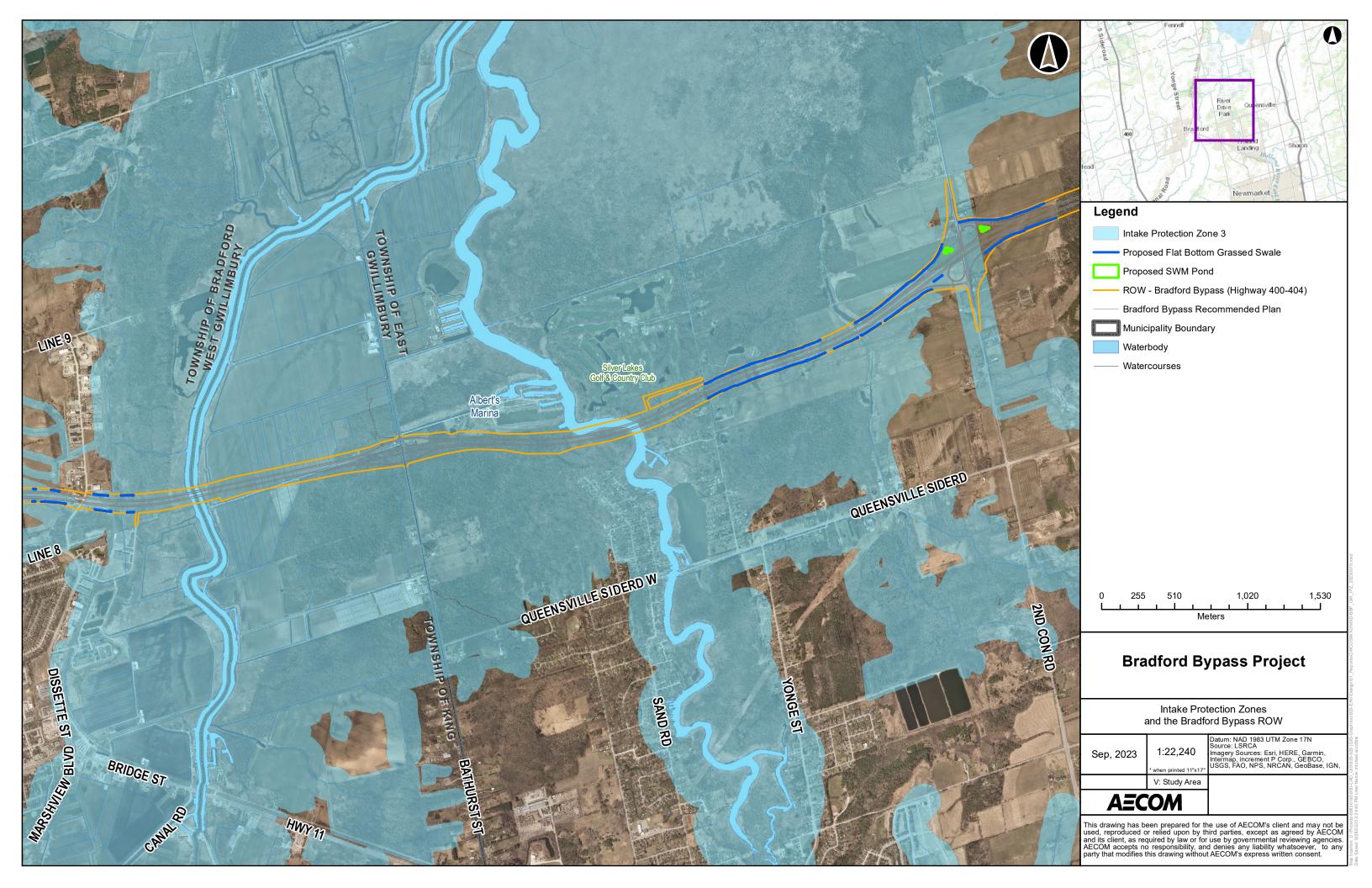


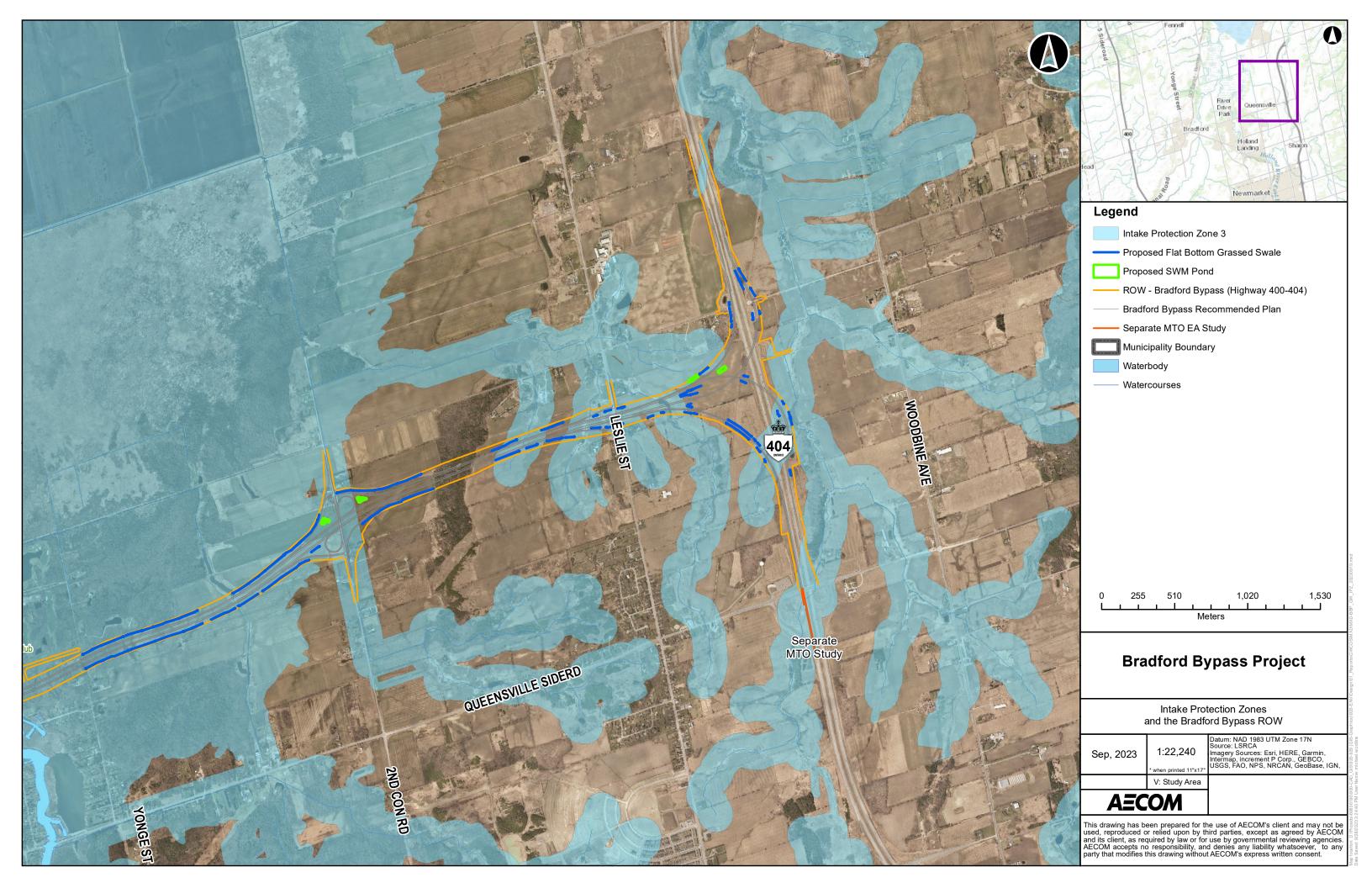
Appendix **G**

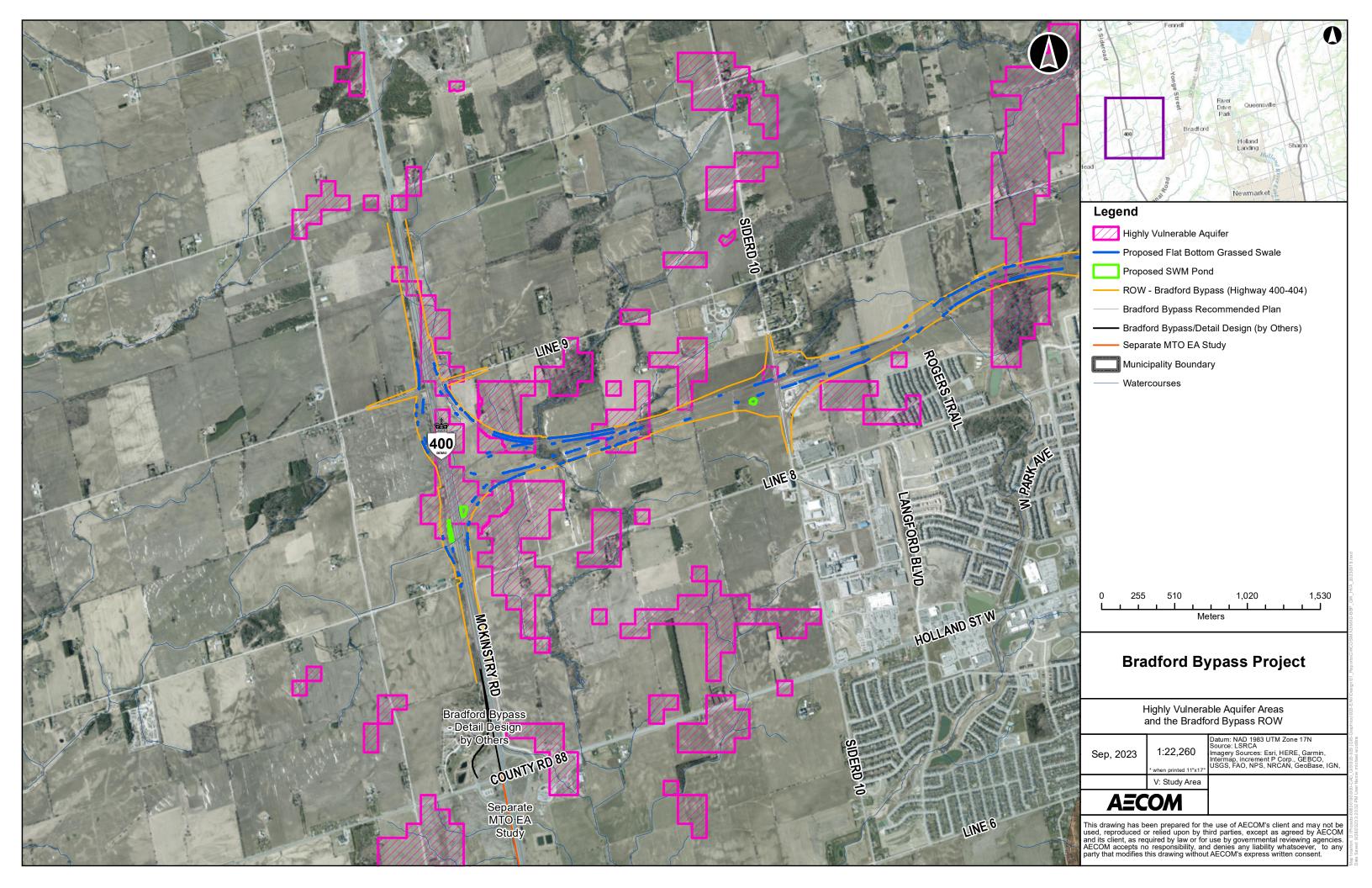
Locations of IPZ, HVA and SGRAs within the Study Area

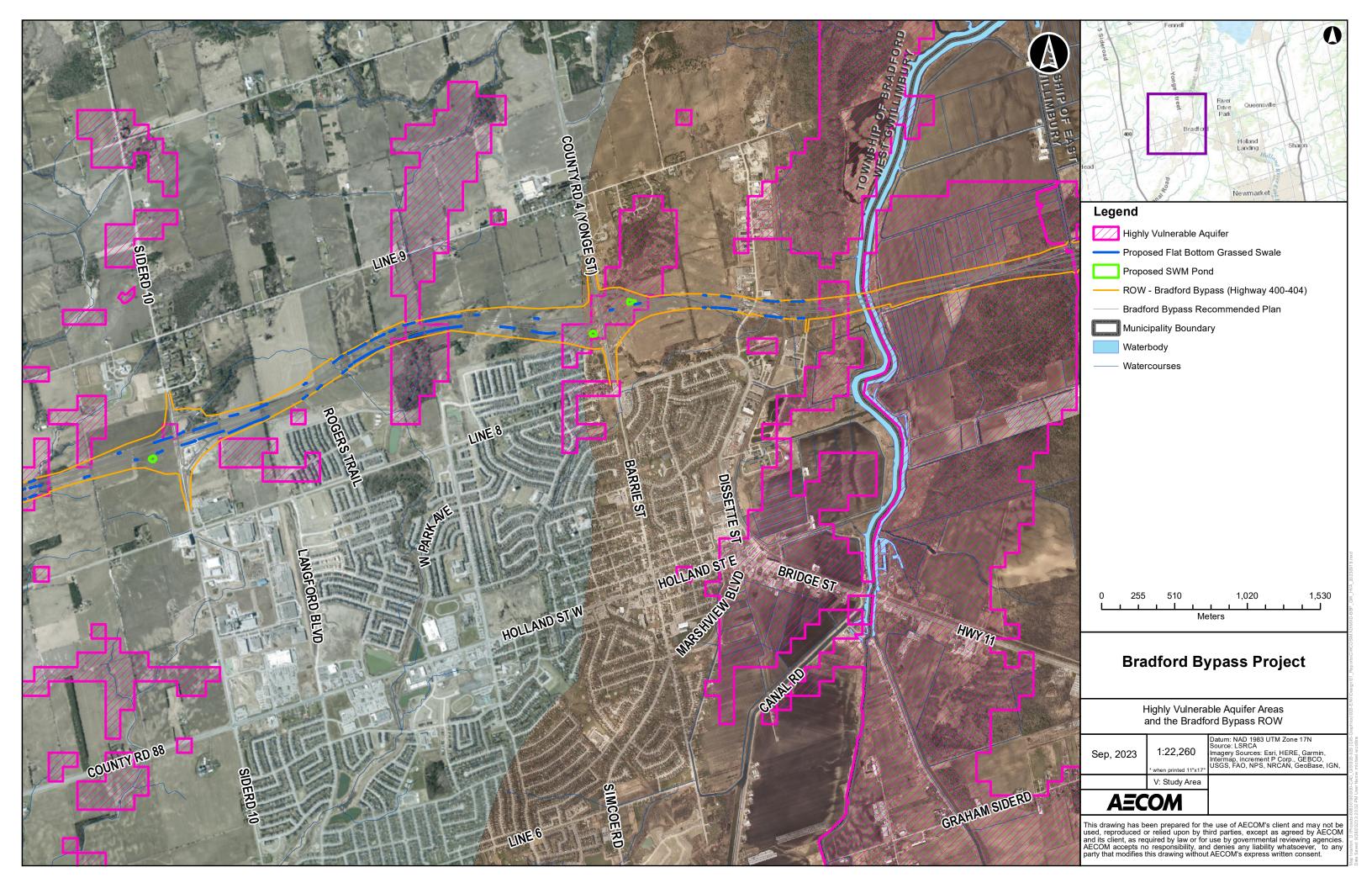


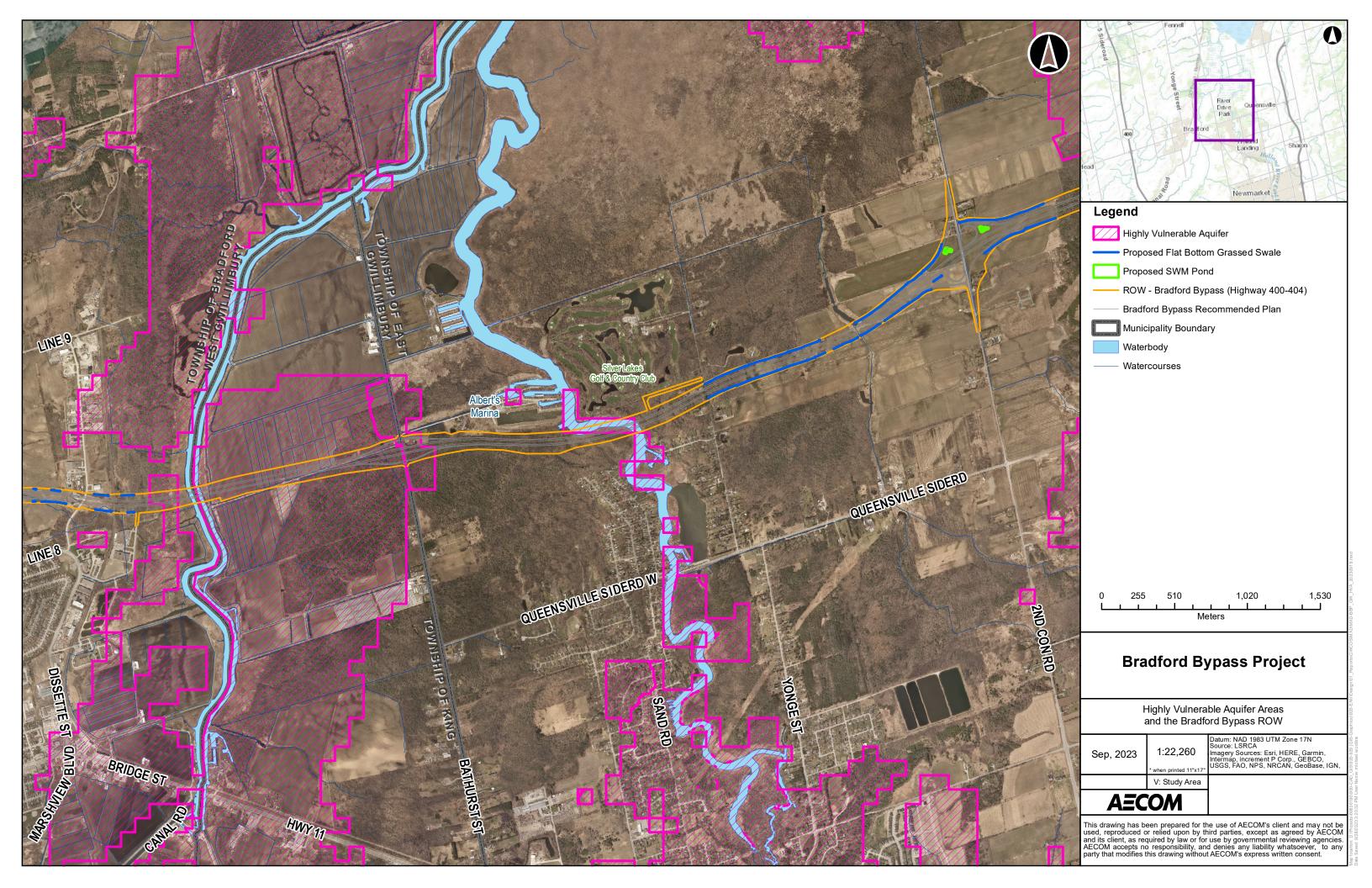


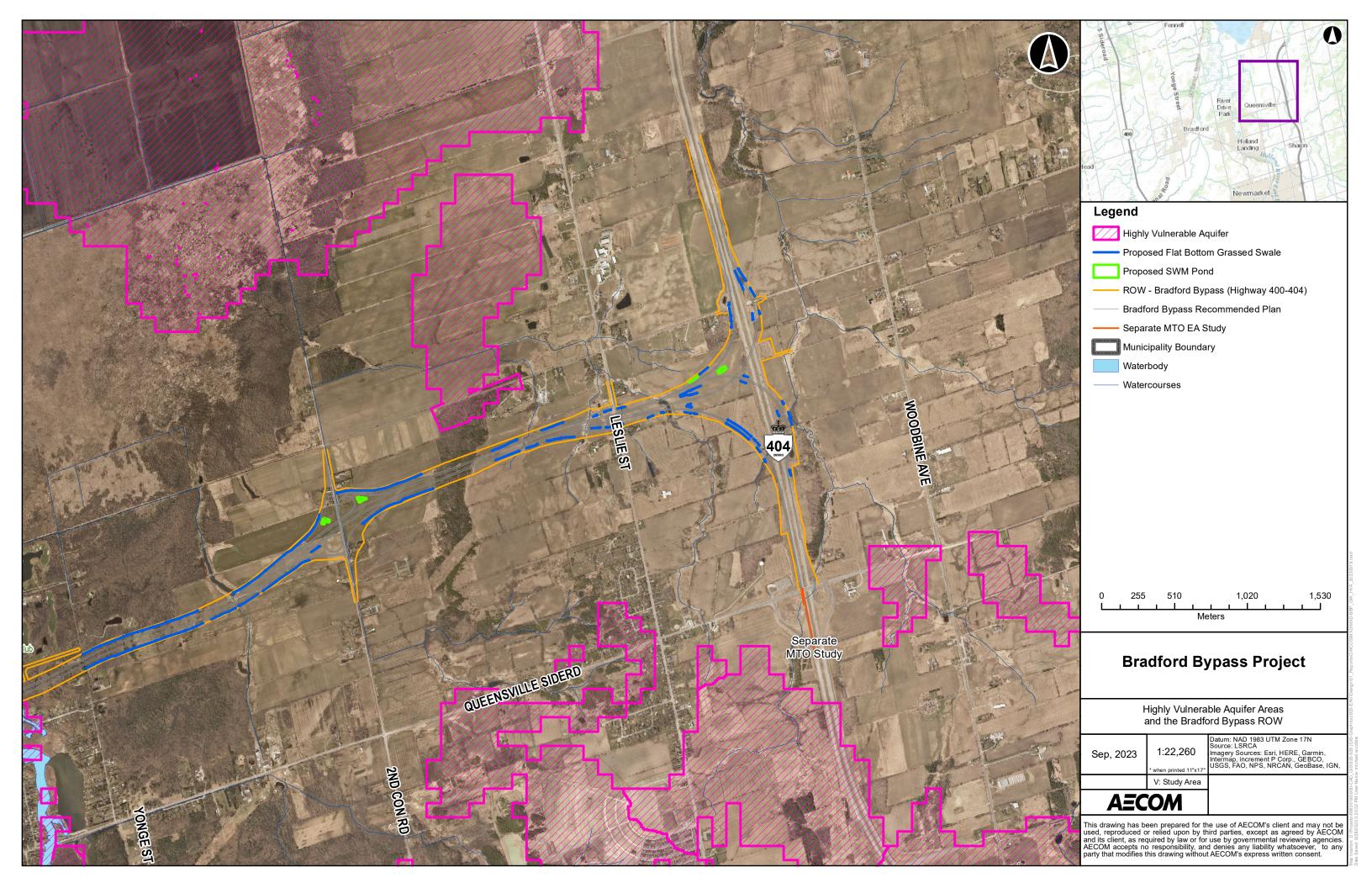


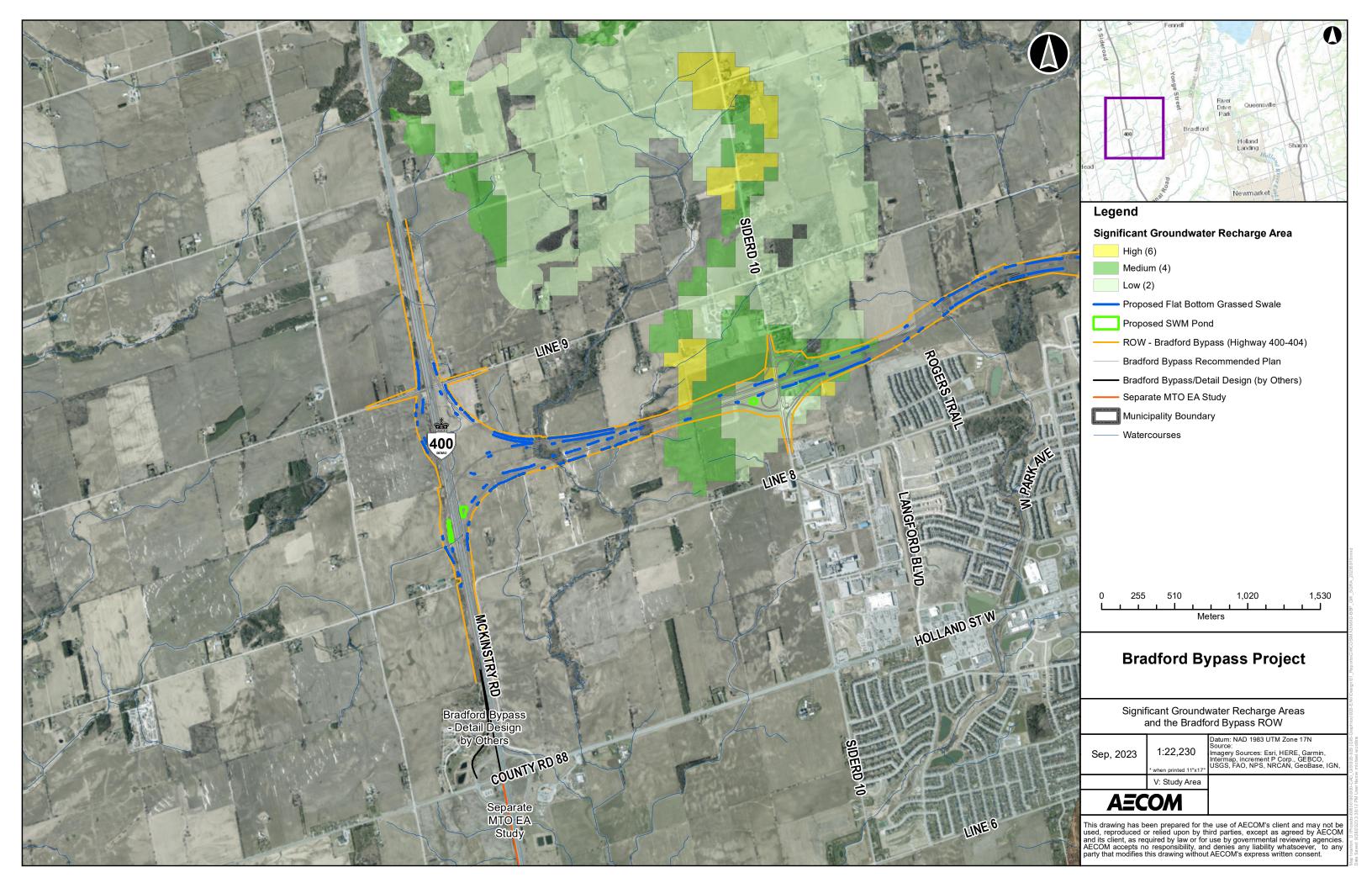


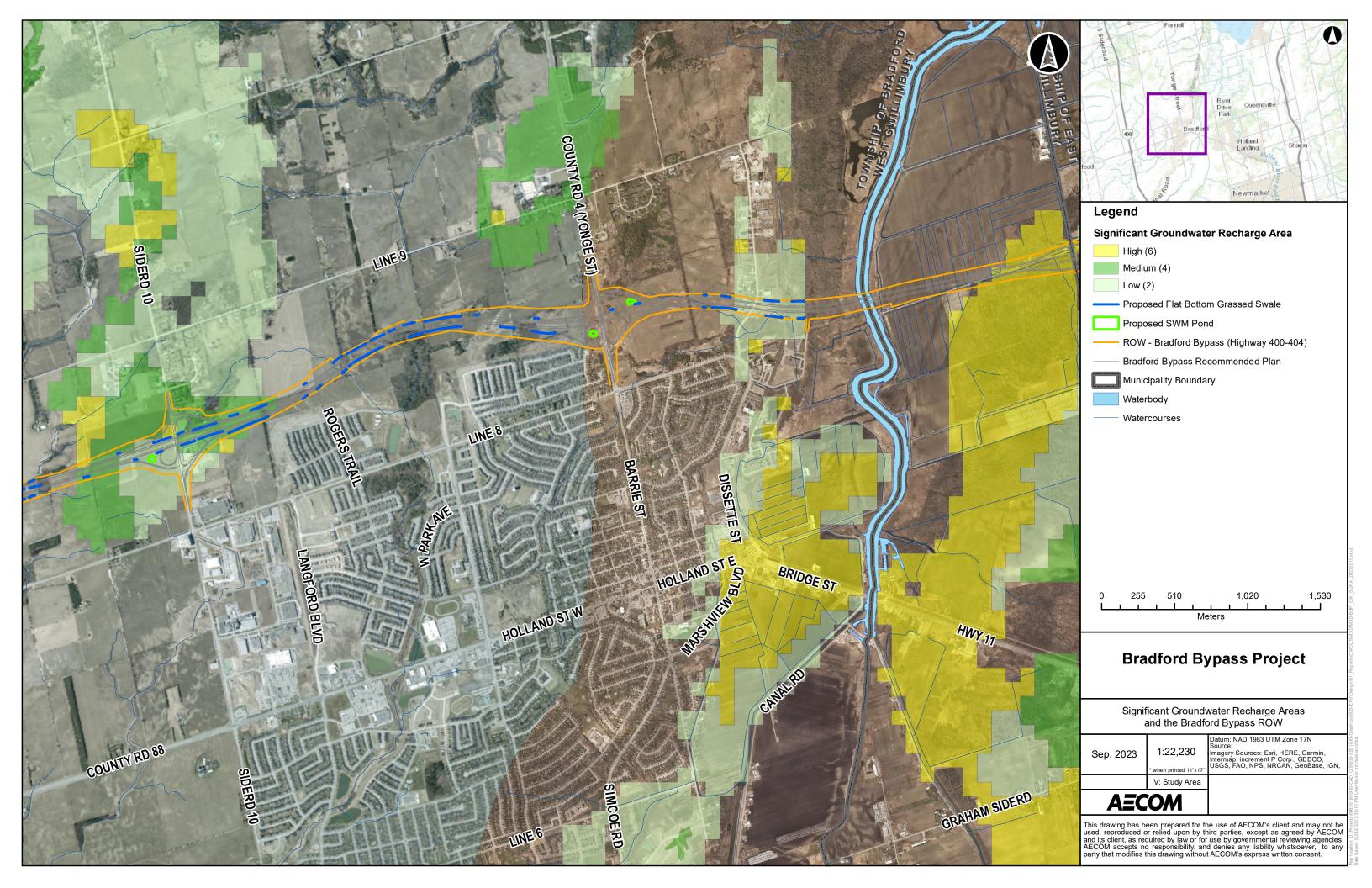


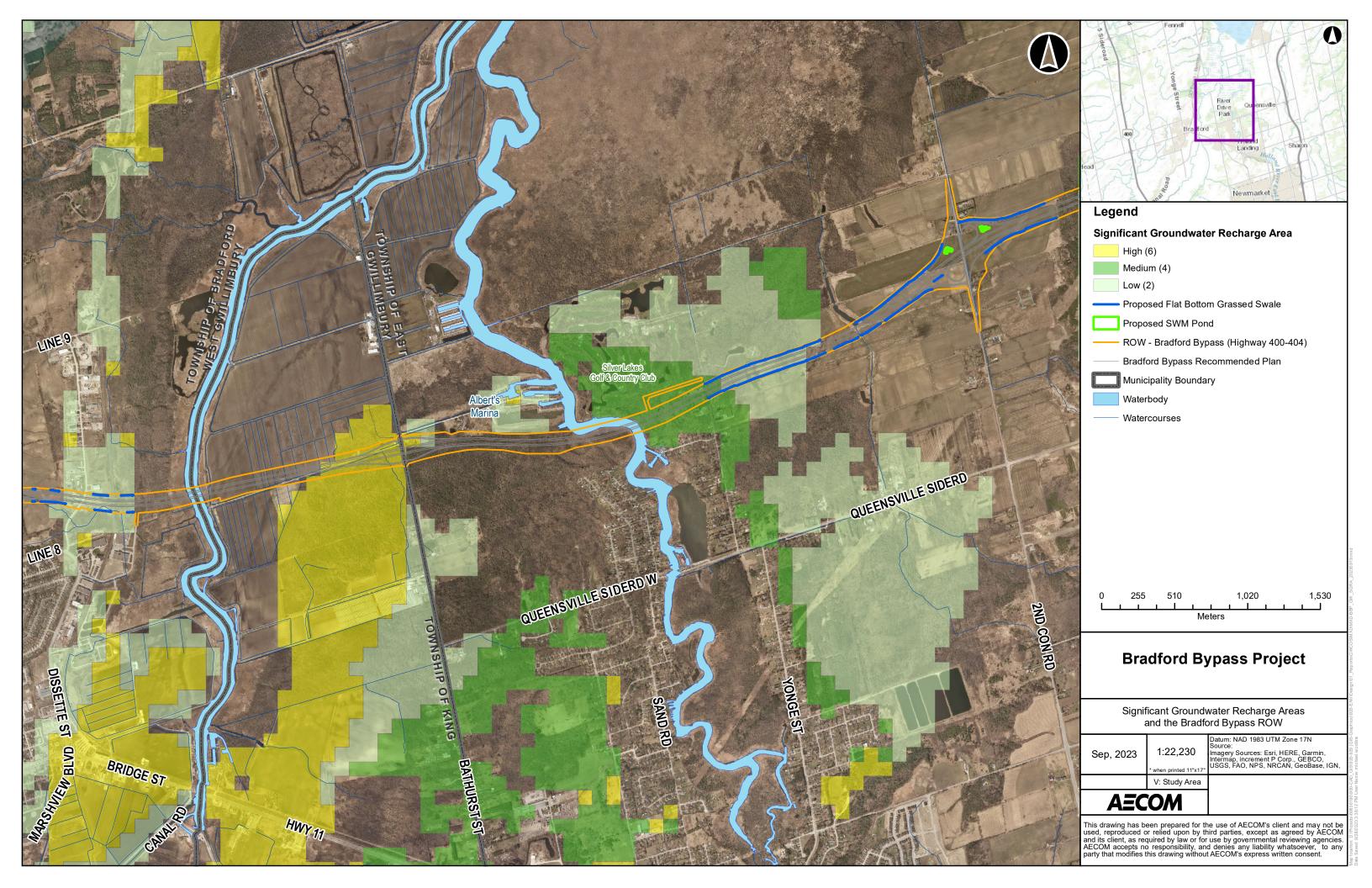


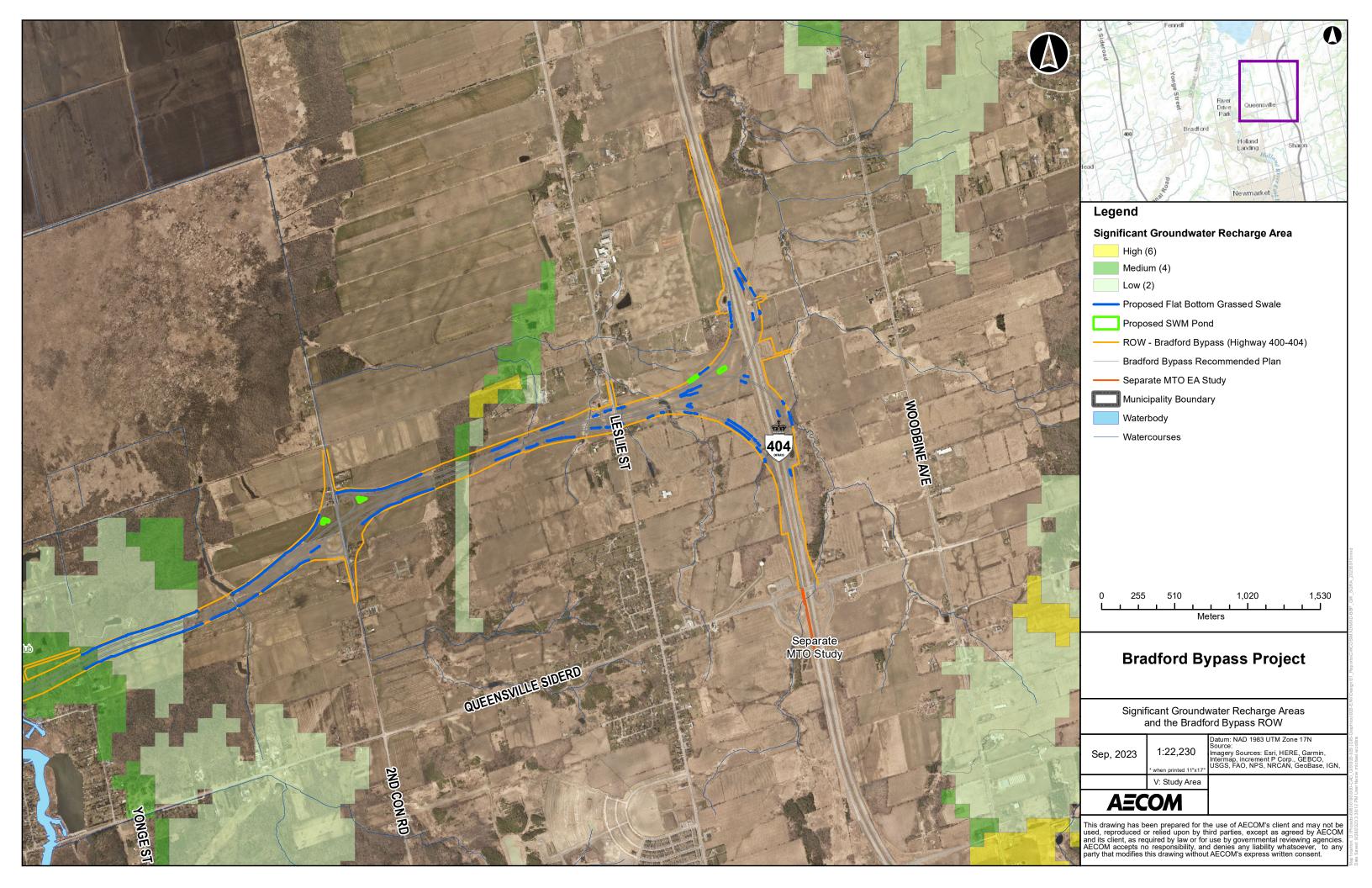












Jhalmar Maltez, M.Eng, P.Eng. Senior Water Resources Engineer, Project Manager

AECOM Canada Ltd. 50 Sportsworld Crossing Road, Suite 290 Kitchener, ON N2P 0A4

Tel: 519.650.5313 Fax:519.650.3424 Aecom.com

