



Rideau Valley Conservation Authority

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Technical Memorandum

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Subject: **Becketts Creek Flood Risk Mapping
from Sarsfield Road to Ottawa River**

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Executive Summary

This report provides a summary of the analytical methods used and underlying assumptions applied in the preparation of flood plain mapping for Becketts Creek from Sarsfield Road to the Ottawa River. The project has been completed in accordance with the technical guidelines set out under the Canada-Ontario Flood Damage Reduction Program (FDRP) (MNR, 1986), and the technical guide for the flood hazard delineation in Ontario (MNR, 2002) as laid out by the Ontario Ministry of Natural Resources. The 1:100 year flood lines delineated here are suitable for use in the RVCA's regulation limits mapping (as per Ontario Regulation 174/06) and in municipal land use planning and development approval processes under the Planning Act.

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1. Introduction

In 2012, The City of Ottawa and three conservation authorities (Mississippi, Rideau and South Nation) initiated a program for flood risk mapping within the boundary of the City. A multi-year plan for mapping a number of high priority rivers and streams was made. As part of this program, the RVCA has identified 12 stream reaches, where the existing mapping would be updated or mapping will be created for the first time.

Mapping along several large rivers has been completed, and smaller streams are now being mapped within the RVCA. Becketts Creek is one of them.

There is no previous flood mapping of Becketts Creek. However, engineered flood risk mapping is available for the Ottawa River (RVCA, 2014). Information from this study, when found useful, is used in the present study. Summary of available information has recently been compiled by RVCA in a catchment report card of Becketts Creek (RVCA, 2011).

This report provides a summary of the analytical methods used and underlying assumptions applied in the preparation of flood plain mapping for Becketts Creek from Sarsfield Road to its confluence with the Ottawa River and associated tributaries (Figures 1 and 2). The project has been done in accordance with the technical guidelines set out under the Canada-Ontario Flood Damage Reduction Program (FDRP) (MNR, 1986), and the technical guide for the flood hazard delineation in Ontario (MNR, 2002) as laid out by the Ontario Ministry of Natural Resources. It also conforms to the ‘generic regulation’ guidelines of Conservation Ontario (2005). The 1:100 year flood lines delineated here are suitable for use in the RVCA’s regulation limits mapping (as per Ontario Regulation 174/06) and in municipal land use planning and development approval processes under the Planning Act.

2. Study Area

The following streams have been mapped during this study:

- Becketts Creek Main Stem (14 km)
- Becketts Creek Tributary A (3.5 km)
- Becketts Creek Tributary B (2 km)
- Becketts Creek Tributary B1 (3 km)
- Becketts Creek Tributary B2 (2.5 km)

In total, 25 km of streams has been mapped (Figures 2 and 17). The study area is in the rural part of the City of Ottawa (Figure 2). The watershed is largely undeveloped, with 56% crop land, and 24% wooded area. Only about 12% is developed or is slated to be developed in near future.

3. Data Used

LIDAR: High quality topography is the key to high quality flood risk mapping. Digital Elevation Models (DEM) were derived from LIDAR data procured by the City of Ottawa. The LIDAR was flown in 2006, 2012, 2014 and 2015. This data set has a density of about 4 to 10 points per square meter, and an estimated consolidated vertical accuracy (CVA) of 20-25 cm (Airborne Imagery, 2013, 2015). As shown in Figure C.3 in Appendix C, the Becketts Creek watershed is covered with LIDAR data from all these years. These four data sets were merged together in a seamless DEM and used in this study. The City also provided 0.25 m contour lines that were derived from LIDAR data. However, we only used the LIDAR points directly for this study, and the contour lines were never used.

The accuracy of the LIDAR data was checked in the field by RVCA staff in August-September 2014¹. The true elevations of the on-the-ground features that are identifiable on the mapping were determined using RVCA's survey grade GPS equipment (Trimble R8), and compared with the elevations indicated by the LIDAR spot heights, to determine that any differences between mapped and true elevations were within the accuracy prescribed by the FDRP standards.

In total, 275 spot heights were verified (see Table C.1 and Figure C.1 in Appendix C). As described in the FDRP guidelines (MNR 1986), the spot height checks are considered satisfactory when 90% of the data points are within 0.33 m of the field measurement. As shown in Table C.1, this criterion has been adequately met². On average, the spot heights are within 4.3 cm (Table C.1).

Drape Imagery: The Drape imagery was collected in April-June 2014 with a horizontal accuracy of ± 0.5 metre. This high quality colored photo clearly shows the rivers, creeks, land use, houses, buildings, roads, infrastructure, vegetation and other details.

¹ This field data was originally collected to check the 2006 and 2012 LIDAR data (which was the best available information at that time). But later on, when 2014 and 2015 LIDAR data became available, the same field data was used to check all LIDAR data (all four years).

² FDRP (1986) Manual also specifies criteria for checking contour crossings. However, in this study we used only LIDAR spot heights, not contour lines. Therefore, we did not check the accuracy of contour lines supplied by the City of Ottawa.

Aerial photo: The 2017 aerial photo was also available from the City of Ottawa. It is accurate, sharp and in colour, and shows various natural and man-made features clearly.

Building footprint: The ‘building footprint’ layer was provided by the City of Ottawa for the area inside the urban boundary. It enables us to accurately draw flood lines around buildings. This data layer contained information collected over a number of years.

Land use: A GIS-based land use data set, based on information up to 2014, was recently compiled by RVCA staff. It has 34 categories of land use (see Table 1 and Figure 4). This data set was used in the hydrologic parameter estimation.

RVCA’s GIS Department has created this land cover dataset for this area. Vector data originally obtained during approximately the early to late 1990s by the Ministry of Natural Resources and Forests (MNR) were used to produce a pre-classification of the area. This pre-classification provided a historical overview of the spatial distribution of transportation, settled areas, aggregate sites, evaluated and unevaluated wetlands, wooded areas and water. Updates to this land cover vector data were based on 20cm ortho-imagery acquired through the Digital Raster Acquisition Project for the East (DRAPE), a program lead by the MNR in 2008 and 2014. DRAPE imagery was also used to incorporate crop and pasture and meadow/thicket as additional land cover classes. Currently RVCA houses two spatially continuous land cover datasets using 10 land cover classes, which are further divided into 24 subclasses. This vector data was produced through heads up digitizing to represent the landscape at a 1:4000 scale. Industry standard techniques were used to ensure topological integrity.

Imperviousness: A GIS-based data layer showing the impervious surfaces was obtained from the City of Ottawa. It identified various impervious surfaces such as roads, parking lots, buildings, etc. (Figure 5). This data was based on information collected over a number of years up to 2011. The imperviousness varied in the range from 0.4% to 10.5% for the sub-catchments, with an average of 3.8% for the entire Becketts catchment (Table 3). This data set was used in the hydrologic analysis.

Soil classification: A soils classification layer was obtained from MNR’s LIO (Land Information Ontario) database, details of which are documented in a report by

MNR (2012). Soil is classified in to four categories (A, B, C and D) based on infiltration capacity.

Group A soils have a high infiltration rate (low runoff potential) when thoroughly wet; these consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B soils have a moderate infiltration rate and consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture; these soils have a moderate rate of water transmission.

Group C soils have a slow infiltration rate and consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture; these soils have a slow rate of water transmission.

Group D soils have a very slow infiltration rate (high runoff potential) and consist chiefly of clays that have high shrink-swell potential, soils that have a permanent high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material; these soils have a very slow rate of water transmission.

This report (MNR, 2012) describes the infiltration rate in qualitative terms without giving numerical values. However, it appears to be based on the SCS's original classification. USDA-SCS (1986) gives specific range of infiltration or transmission rate (Group A: greater than 0.30 inch/hour; Group B: 0.15-0.30 inch/hour; Group C: 0.05-0.15 inch/hour; Group D: 0-0.05 inch/hour). This soil information was used in hydrological parameter estimation.

As shown in Table 2a and Figure 3a, Soil Group D is predominant (55%) in the Becketts catchment, followed by Group B (15%) and Group A (14%). Thus, the soil in this area has a low infiltration rate. It consists chiefly of poorly drained soils. The texture is fine clay with a low rate of water transmission.

Soil Permeability: A GIS-based data layer showing the soil permeability was obtained from the Ontario Geological Survey (2010). Four categories of soil permeability were identified: high, low-medium, variable and low. These categories roughly coincided with the soil groups (A, B, C and D). Table 2b and Figure 3b show soil permeability

information in Becketts catchment. This information was used only indirectly where soil group information was missing. For this study area, the unclassified area coincided with low permeability area, and was therefore assumed to have Group D soil.

4. Hydrological Computations

4.1 Overall Methodology

In the absence of any streamflow measurement – a common situation in many small catchments – we have used a single-event hydrological model to estimate flood flows at key locations along Becketts Creek. This approach is sometimes referred to as the ‘return period design storm’ method, and is one of the acceptable flow estimation procedures discussed in the provincial guidelines (MNR, 1986, 2002). In this method, a synthetic design storm (hyetograph) of specified return period is fed into a rainfall-runoff model to generate the corresponding peak flow, which is generally assumed to have the same return period. This procedure is quite popular and is regularly used in studies related to drainage, stormwater, flooding, and so on.

For small catchments of this size, floods generated by summer storms are expected to be larger compared to spring freshet and should therefore be used in flood risk mapping. Past studies in this area support this notion³.

Suitable data for calibrating the SWMHYMO model was not available. Therefore, we have estimated the flood quantiles based on theoretical (or synthetic) storms and uncalibrated hydrologic modeling as the best available methodology at the present time. As described later in the report, lack of data also prevented calibration of the hydraulic model.

Synthetic storms of various types and durations were first used to estimate the 1:100 year flood flows. Based largely on engineering judgement, one of the storms was selected as suitable for the flood mapping purposes within the Becketts Creek basin. The selected storm was then used to estimate the flood quantiles for various return periods (2, 5, 10, 20, 50, 100, 200, 350 and 500 years).

³ For example, the 1:100 year summer and spring floods of Flowing Creek (with an area of 49.5 km²) were estimated at 51 and 46 cms respectively by PRS/JFSA (2004a, 2005) during a larger mapping study on the Jock watershed; it was recommended that the summer flows be used for flood mapping. MVCA (2015) analyzed snowmelt events using the Ottawa Airport data and concluded that ‘if a location on a river has a response time somewhat longer than 12 hours, it would be expected that snow melt would govern’ (as opposed to summer rainfall). Becketts Creek catchments’ response time (0.5 to 4.0 hours) is much lower than 12 hours; therefore, summer rainfall is expected to produce larger runoff than spring snowmelt.

4.2 SWMHYMO Model

We have used version 4.02 of SWMHYMO model (JFSA 2000) for estimating the summer floods. This model is used widely in Ontario for both urban and rural catchments.

As shown in Figures 2 and 7, the Becketts Creek basin has been divided into eighteen catchments, and flood quantiles have been estimated at twenty nodes and eighteen catchment outlets along the creek and its tributaries (some of them are shown in Figure 13). A schematic of the SWMHYMO model is shown in Figure 8, where both the catchments and channel segments used for flow routing are included.

In accordance with MNR (2002) guidelines, the hydrological analysis has been done with the foreseeable planning horizon in mind. We have consulted the official plans (OPs) of both the City of Ottawa (City of Ottawa 2003) and the United Counties of Prescott and Russell (United Counties of Prescott and Russell, 2017). Within the boundaries of the City of Ottawa, there are three designations that are within the Beckett's Creek catchment area: Agricultural Resource Area, General Rural Area, and Rural Natural Features (City of Ottawa, 2003). In areas identified as General Rural, the City's OP no longer permits Country Estate lot subdivisions, and would only permit up to two severances for each lot. In areas identified as Agricultural Resource, the opportunity to sever is very limited and must meet very specific criteria to qualify. Therefore, the development potential within the City's portion of the Becketts Creek subdivision is relatively low. East to the City is a small area of the Becketts Creek that falls within the jurisdiction of Clarence-Rockland. Clarence Rockland does not have an OP for the rural area and defers entirely to the United Counties of Prescott-Russell OP for their rural planning policy. Based on the County OP (United Counties of Prescott and Russell, 2017), there are two designations: Rural Policy Area, Agricultural Resource Policy Area. The County's OP does not seem to be as restrictive as the City's and does not seem to have any prohibition of rural estate lot subdivisions in the Rural Policy Area. It also seems to allow for the creation of up to 3 new lots per existing lot. Therefore, while there is more opportunity for development in Clarence-Rockland, it is unlikely to result in significant amount of development and could still be considered low potential. For the

hydrologic modeling purposes, the use of the existing land use data⁴, therefore, seems adequate.

Among the available runoff-generating modules in the SWMHYMO model, two commands (CALIB NASHYD and CALIB STANDHYD) were considered for calculating runoff from rural and urban catchments respectively. In case of Becketts Creek, all catchments are essentially rural with imperviousness less than 10.5%. Only the CALIB NASHYD command was therefore used for the rural catchments.

The CALIB NASHYD command, used for rural areas with imperviousness less than 20%, requires the following input:

AREA = area of the catchment (hectares),

DWF = dry weather flow component (m³/s),

CN or *CN ** = original or conjugate (modified) curve number,

IA = initial abstraction (mm),

DT = computational time step (minutes),

N = number of lineal reservoirs, and

T_p = time to peak (hour).

Table 3 lists the parameters for all thirteen catchments within Becketts basin. The dry weather flow or base flow was assumed to be zero (*DWF* = 0.0). A one-minute time step was used (*DT* = 1.0 minute). The number of linear reservoirs was set at three (*N* = 3). These are typical values that hydrologists use in the absence of more site-specific information.

Two parameters (curve number and time to peak) are very important in SWMHYMO modeling and therefore require elaborate discussion.

Curve Number Method: The curve number (*CN*) method of estimating runoff was first introduced by US Department of Agriculture's Soil Conservation Service (USDA-SCS 1986) and is widely used in North America and elsewhere. This method is used in the SWMHYMO model too. The curve number (*CN*) was calculated based on land use and soil type (Tables 1 and 2). Equivalent land use and associated *CN* from TR-55 were

⁴ We have included all known developments in the land use data. For example, two ongoing subdivision plans (Humanics and Taite) within sub-basin M10 have been accounted for.

first selected for each of the 34 land use and 4 soils types found in this region (Table 4). For each elemental area with a particular land use-soil combination, the appropriate *CN* value was chosen; these *CN* values were then area-averaged over the whole catchment to find the aggregate *CN* for the catchment. *CN* values varied from 54 to 84 for different sub-catchments, with an average value of 77.3 for the entire Becketts catchment (Table 3).

Both the original SCS curve number method and its ‘conjugate’ or modified version can be used in SWMHYMO. For this study, we have used the modified method – commonly known as the *CN* * method. For parameter estimation and calculation procedures, we have closely followed the original SCS manual (USDA-SCS, 1986) and a recent, comprehensive state-of-the-art review done by a task committee (Hawkins et al., 2009).

The first step is estimating the *CN* value based on land use and soil type as given in the SCS manual (USDA-SCS, 1986). We have used the following information:

- 2014 land use data set compiled by RVCA
- Future land use information from municipal plans (OPs)
- 2012 soil classification by LIO/OMAFRA/MNR (MNR 2012)
- Soil permeability information from Ontario Geological Survey (2010)

All data sets were available in digital format. Tables 1, 2 and 4 summarizes parameters related to the estimation of *CN* and *CN* *. This process was automated in the GIS system.

Once *CN* was estimated, then the ‘conjugate’ or modified curve number *CN* * was calculated using the following equation:

$$CN^* = \frac{100}{1.879\left(\frac{100}{CN} - 1\right)^{1.15} + 1}$$

Soil storage capacity (*S*) in mm was related to *CN* * by the relation:

$$CN * = \frac{25400}{254 + S}$$

And the initial abstraction (*IA*) in mm was calculated as:

$$IA = 0.05S$$

The above equations were taken from Hawkins et al. (2009; page 35, 9 and 34 respectively).

While the original *CN* was estimated based on the assumption of an initial abstraction equal to 20% of the soil moisture capacity, later research revealed that the initial abstraction equal to 5% of the soil moisture capacity is more appropriate, the new curve number was called *CN **, and the relationship between *CN* and *CN ** was established. At present, both the original and the modified methods are widely used, with more and more practitioners preferring the latter. However, given that they can be readily converted to each other, one has the option to use any of them.

Time to Peak: The time of concentration (T_c) of a watershed is defined as the time required for water to move from the most remote part of the watershed to its outlet. Many methods are available, mostly empirical and developed for specific conditions, to estimate T_c . Here, we have used the ‘velocity method’ originally introduced by Soil Conservation Service (USDA-SCS, 1986) and later elaborated by Natural Resources Conservation Service (USDA-NRCS, 2010). This method has a sound physical basis⁵, i.e., the movement of water over the land and along the channel, although estimating parameters – as the case frequently is in hydrology – is at best an approximation.

⁵ The SCS velocity method is generally considered to have a sound physical basis and is often used as a yardstick to evaluate other methods (see, for instance, McCuen et al. 1984; Grimaldi et al. 2012 and Sharifi and Hosseini 2011). Grimaldi et al. found that as much as 500% variation is quite common when using different methods to estimate time of concentration. They also made an interesting remark: “Indeed, it is a paradox that advanced hydraulic models, such as 2-D flood propagation models for hydraulic risk mapping based on very expensive topographic and remote sensing data, are actually limited by design hydrographs based on anachronistic parameters, such as T_c .” This is consistent with the commonly observed fact that hydraulic calculations are much more accurate than hydrologic calculations. Also, from the practitioner’s point of view, “as a general rule, methods that compute individual travel times for various types of flow segments (for example, overland flows and channelized flows), and then sum the individual travel times to estimate the total travel time, are thought to be the most reliable” (Bentley Systems, 2007b).

The time to peak (T_p) is defined as the time between rainfall event and the corresponding peak flow. It is related to the time of concentration as (USDA-SCS 1986, page 15-3):

$$T_p = 0.6T_c$$

Both T_c and T_p were calculated using the method detailed in the USDA-NRCS (2010) manual. The time to peak (T_p) was an input to SWMHYMO model (Table 3). It varied from 0.4 to 3.8 hours for different sub-catchments.

All estimated parameters necessary for the SWMHYMO modeling of the Becketts Creek catchment are listed in Tables 3.

Channel Routing: The ROUTE CHANNEL command of the SWMHYMO model was used for routing the flow along rivers and streams. The model requires channel length, slope, roughness and a typical channel cross-section. Channel length and slope are given in Table 3. Figure 8 shows how the channels fit within the overall model structure. Typical cross-section for each channel was based on the characteristic main channel and adjacent floodplains where applicable. Manning's roughness coefficients for the main channel and floodplain were also assigned based on land use and expected flow conditions. Care was taken to ensure that parameter values used in SWMHYMO were consistent with those used in HEC-RAS model.

Since wide floodplains are present in certain parts of this watershed, their influence on the mapping was taken into consideration. The influence of the floodplain storage was incorporated into the channel routing routine of the SWMHYMO as overbank flow. This is how floodplains were incorporated in the hydrologic computation for flow estimation. In the hydraulic computation (HEC-RAS modeling), floodplains were incorporated as part of wide cross-sections, providing floodplain storage and flow attenuation. Appropriate roughness coefficients (Manning's n) were also used for floodplains.

4.3 Selection of Design Storm

A wide variety of design (or synthetic) storms are available. However, a particular storm is generally selected for flood mapping purposes after appropriate scrutiny. For this study, synthetic storms of two types (Chicago and SCS Type II) and four durations (3, 6, 12 and 24 hours) were considered for hydrologic modeling (Table 5). These storms are routinely used in Canada for both stormwater management and flood risk studies. Recent studies in neighboring conservation authorities (SNCA 2014; MVCA 2015) as well as within the RVCA (RVCA 2017a, 2017b, 2017c) confirm the suitability of these storms for the purposes of floodplain mapping in small basins.

The following synthetic storms were considered:

- 3 hour SCS Type II storm
- 6 hour SCS Type II storm
- 12 hour SCS Type II storm
- 24 hour SCS Type II storm
- 3 hour Chicago storm
- 6 hour Chicago storm
- 12 hour Chicago storm
- 24 hour Chicago storm

Hyetographs corresponding to these storms were generated from the most recent IDF curve at Ottawa Airport (Station ID 6106000), obtained from Environment Canada⁶. This IDF curve was based on the most recent analysis using 39 years of data from 1967 to 2007 (with 2001 and 2005 data missing)⁷. Generally, the curve for a certain return period follows an equation like:

$$I = \frac{a}{(b + t)^c}$$

⁶ Information on IDF curve was obtained from Environment Canada's website [http://climate.weather.gc.ca/prods_servs/engineering_e.html].

⁷ City of Ottawa's Sewer Design Guidelines (2012) contain an old IDF curve based on 1961-1990 data, which yields somewhat smaller storm depths than the more recent IDF curve (based on 1967-2007 data). We have opted to use the most recent IDF curve because it reflects recent climatic conditions, is based on more data (39 years as opposed to 31 years), and is slightly conservative (produces bigger storms). The FDRP Manual (MNR 1986) also recommends the use of most recent IDF information.

where,

I = rainfall intensity (mm/hour), and

a, b, c = constants.

From the EC IDF curve (Figure 9), equations were fitted via the STORM software and constants determined for all return periods (Figure 10). These equations were then used to generate rainfall hyetographs, for which we used the STORMS 2010 utility software (version 3.0.1) from JFSA (2011). Figure 11 shows the storm hyetographs. Hyetographs were input to SWMHYMO model, where they drive the rainfall-runoff computation. This procedure was followed for all Chicago storms and the SCS 24 hour storm. For all other SCS storms (3, 6 and 12 hour durations), the distribution was taken from the City Sewer Guidelines (2012; page 5.18).

Using the eight synthetic storms, the 1:100 year flows were computed for all sub-catchments and at key locations along the stream (Table 6), which were then scrutinized to select an appropriate storm for the purposes of flood mapping. This step is somewhat subjective and requires engineering judgement. As expected, the longer duration storms produced higher flows; usually the flow corresponding to a 3 hour storm was about 60-70% of that produced by a 24 hour storm. The SCS storms produced slightly higher flows (by about 9-13%) compared to Chicago storms. The estimated flows from various storms were thus within the typical variation associated with hydrologic computation; no storm produced extremely high or low flows. This appears to endorse the notion that all storms considered here and associated flows were within the realm of hydrological plausibility. No storm stood out as an outlier or as unrealistic. In the selection of a storm for flood mapping purposes, we wanted to be as close as possible to reality with a slight degree of conservatism. Considering all, we selected the 24 hour SCS Type II storm as the most suitable for Becketts Creek flood mapping⁸. As can be seen in Table 6 and Figure 12, it produced the higher flows, but only marginally so (9-13% higher than those produced by the Chicago storm). This selection was consistent with our philosophy of being as close

⁸ The hydrological analyses done here and the results obtained therefrom are considered suitable for the purposes of floodplain mapping of Becketts Creek only, and for no other purpose. It should be emphasized that the methodology, storms considered and selected, modeling, and the estimated flood quantiles may not be suitable for any other purpose, including land drainage, stormwater management and infrastructure design. Any subsequent use of the data, model and other information contained in this report should be made only after independent verification and scrutiny by qualified engineers/hydrologists.

as possible to reality, with only a slight degree of conservatism to account for the uncertainty.

4.4 Estimated Flood Quantiles

After the 24 hour SCS Type II storm was selected for the flood mapping purposes, the SYMHYMO model was run for all events with return periods from 2 to 500 years (Table 7). Input and output files of the SWMHYMO model are included in Appendix D. Estimated flood quantiles at key location were tabulated (Table 8 and Figures 13 and 14). Flood flows from this table were then used in the hydraulic modeling; thus, this table is the link between hydrologic and hydraulic computations.

4.5 Comparison with Other Methods

In order to assess the reasonableness of the flood quantiles computed here (with SCS Type II 24 hour storm), a comparison was made to those computed at other small catchments elsewhere (Figures 15 and 16). Besides comparing the data points to each other, two lines were drawn to provide the context. They are:

- 1:100 year floods computed by the Index Flood Method (MNR, 1986)
- Creager envelope curve with a coefficient of 30 (Watt et al. 1989)

Figures 15 and 16 show that, in general, the Becketts Creek flows are within the usual variation of computed floods from other catchments, both within and outside of the RVCA. In particular, the good matching of Becketts data with other small catchments within the RVCA (taken from PSR/JFSA 2005; JFSA 2009; RVCA 2016, 2017a, 2017b, 2017c) gave credence to the hydrologic modeling presented here. Some of the data from highly urban catchments (mainly from Bilberry Creek area; unpublished RVCA data) exhibit high flows, which is expected. In rural areas dominated by lakes and long streams such as the Otter-Hutton system, the flows were lower than even the index floods (RVCA, 2016). We note that all of the estimated floods within the Becketts basin are higher than those given by the Index Flood Method, which was based on measured streamflow data and was prescribed by MNR (1986) for estimating floods in the absence of better information. All data points are well below the Creager envelope curve. On the

balance, we found that the Becketts Creek data compare well with other data and are within the confines of pertinent estimation methods.

5. Hydraulic Computations

5.1 HEC-RAS Model

Following standard procedures (MNR, 1986; USACE, 1990, 2010), a steady-state hydraulic model of Becketts Creek was built. The HEC-RAS software (version 4.1.0) developed by the US Army Corps of Engineers (USACE, 2010) was used. It uses the same back water calculation procedure as HEC-2 (USACE, 1990), which has been the industry standard since the 1970s, but with improved data processing and graphical capabilities. About 25 km of Becketts Creek and its tributaries was included in the HEC-RAS model.

Cross-Sections: The cross-sections used in the modeling were generated from the latest topography (2006, 2012, 2014 and 2015 LIDAR) using GIS tools. While, the above-water part of the cross-sections generated from LIDAR is accurate, the under-water portion of the channel is sometimes not adequate. In such cases, the under-water portion of the cross-section was adjusted from field observation. Since the LIDAR were flown during low flow conditions, the adjustment required for under-water channel was usually minor (less than 30-50 cm). The probable impact of such minor adjustments on 1:100 year flood level is expected to be insignificant as well. Therefore, the cross-sectional data was considered adequate for the purposes of flood mapping.

In total, 291 cross-sections were used in our HEC-RAS model. Figure 17 shows a schematic of the HEC-RAS model. Drawing BK-1 in Appendix F shows the cross-sections in greater detail, along with the computed Regulatory Flood Levels (RFLs) and flood risk limits. The location and alignment of river cross-sections within the model were based on engineering judgment as related to the expected flow during high flood events.

Channel Roughness: The Manning's roughness coefficient was estimated to be 0.035 in the main channel, and in the range of 0.05 to 0.08 for most of the overbank areas depending on the land use and vegetation (Table B.1 in Appendix B). These values were consistent with standard values, such as those recommended by Chow (1959).

Bridges/Culverts: Within the study area there are 14 road crossings (Table 10). As-built drawings were obtained from the City. Moreover, field survey by RVCA technicians during in 2013 and 2015 were used for determining bridge/culvert

dimensions. Road crossings and associated cross-sections were updated to match the as-built information.

Flood Quantiles: The estimated design flows from the hydrologic analysis (discussed above), with return periods ranging from 2 to 500 years (Table 8), were used in the HEC-RAS model. Table 9 shows the flows that were input to the HEC-RAS model.

For each channel reach, flows at both upstream and downstream ends were estimated from the SWMHYMO model, as listed in Table 8. As is the usual practice, the higher of these two flows – almost always the downstream one – was used for the hydraulic calculation in the HEC-RAS model. However, an exception was noticed for two reaches of Becketts Creek. In the first reach bounded by nodes J4 to J5 at the upstream and downstream ends respectively, the SWMHYMO-generated flows at Node J5 were slightly lower than the J4 nodes for all events (Table 8 and Figure 14). In the second reach bounded by nodes J5 to J6 at the upstream and downstream ends respectively, the SWMHYMO-generated flows at Node J6 were slightly lower than the J4 nodes for 20, 50, 100, 200, 350 and 500 year events (Table 8 and Figure 14). For the HEC-RAS model we have taken the greater of the two for all individual events⁹ (Table 9).

Downstream Boundary Condition: Known or estimated water levels are usually used as downstream boundary conditions in HEC-RAS models. In this case, Becketts Creek drains into the Ottawa River. So, the computed the water level of the Ottawa River during floods (RVCA, 2014) were used as the downstream boundary condition of the Becketts Creek model (Table 10). For the 1:100 year event, the RFLs (set equal to energy grade) were matched rather than the water levels. This required slight adjustment of the downstream water level from 44.41 to 44.44 (still lower than the energy grade of 44.46) so that the RFLs and flood risk lines matched better.

⁹ This can be explained by the presence of wide (about 300 m) floodplains along this reach. During small events (2, 5 and 10 year), the flow in the J5-J6 reach is mainly contained within the main channel, the floodplain does not come into play, and the downstream (peak) flow is greater than the upstream flow. However, during high flow events (20 year and up), the flow goes overbank, the floodplain attenuates the flow to a large degree, and the downstream (peak) flow becomes smaller than the upstream flow. In other words, in this case, the attenuating effect of wide floodplains is more profound than the locally generated runoff. For the J4-J5 reach, this effect occurs during all events.

Once the model was set up, the computed profiles and other parameters were scrutinized to assess the reasonableness of model outputs. Special attention was given to the computed water level and energy profiles near road crossings. Adjustments of model parameters – mainly the channel resistance and contraction and expansion coefficients – were made as necessary.

Suitable data to calibrate or validate the HEC-RAS model was not available. Therefore, no calibration was done¹⁰. However, we exercised professional judgement and tried to be slightly on the conservative side. Our approach of slight conservatism (a combination of hydrologic and hydraulic computations) is also congruent with the current notion of the Precautionary Principle, which applies when there exist considerable scientific uncertainties about causality, magnitude, probability, and consequences of different course of action (UNESCO 2005). The Precautionary Principle is also a key policy of Environment Canada¹¹.

5.2 Computed Water Surface Profiles

The HEC-RAS model was run with the design floods. The 1:100 year computed water surface elevations and other parameters are shown in Table 12. Typical water surface profiles and all cross-sections are included in Appendix B.

Computed water surface elevations for various flood events with return periods ranging from 2 to 500 years are presented in Tables 13 and 14. It should be pointed out that the model has been built for the expected conditions prevailing during intense rainfall-generated flood events in the summer. Caution should be used when applying this

¹⁰ Given the constraints, this HEC-RAS model is the best we could build for the limited purpose of floodplain mapping at this time. We recognize that this model may not be suitable for other purposes. Further model improvement/adjustment/modification may be necessary for other purposes; it all depends on the purpose of the modeling and the features and phenomena a model is meant to capture. We therefore caution against using this model for other purposes without first confirming its suitability.

¹¹ Canada's environmental policy is also guided by the precautionary principle and is reflected in the Federal Sustainable Development Act (2008), which states that the Minister of Environment must "develop a Federal Sustainable Development Strategy based on the precautionary principle". The precautionary principle states that: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation". In other words, the absence of complete scientific evidence to take precautions does not mean that precautions should not be taken – especially when there is a possibility of irreversible damage (Environment Canada, 2010).

model to simulate water surface profiles for events of other magnitude and during other seasons of the year.

Computed head losses across road crossings are listed in Table 11.

In cold climate areas like Ontario, spring floods may also be accompanied by ice jams. Here we have only analyzed the summer floods, not the spring floods. We are unaware of any ice-related flooding that caused significant concern in this area.

5.3 Sensitivity Analysis

Flood quantiles have the highest degree of uncertainty in our computation and is most likely to affect the water surface profile. Therefore, we decided to test the sensitivity of water surface profile to a wide variation in flow.

The sensitivity analysis was conducted to determine how much the computed water surface elevations will vary with changes in the value used for the 1:100 year discharge. Six flow conditions were tested:

- 1:100 year flow increased by 10%
- 1:100 year flow increased by 25%
- 1:100 year flow increased by 50%
- 1:100 year flows decreased by 10%
- 1:100 year flow decreased by 25%
- 1:100 year flow decreased by 50%

Figures 18(a-c) and 19(a-c) show the computed water surface profiles and the differences in computed water levels for each condition. Figures 18(a-c) indicates that the computed water surface elevations are less sensitive to the discharge value in the steeper portions of the reach and more sensitive upstream of road crossings. The sensitivity analysis indicates that the computed water level can vary by about 0.10 m for a 10% variation in flow along most of the river reach, which is typical in the hydrologic estimation of design flow. For a 25% increase in flow, the water level can go up by about 0.20 m.

The sensitivity analysis provides an indication of the potential implications of inaccuracies in flow estimation, and changes in the expected flood flows that might result from urbanization and climate change.

6. Selection of Regulatory Flood Levels

As per Section 3 of the Provincial Policy Statement under the Planning Act (MMAH, 2005, 2014), the regulatory flood in Zone 2, which includes the RVCA, is the 1:100 year flood. Depending on the local hydraulic conditions, the computed water surface elevation, the energy grade or a value in between is generally taken as the Regulatory Flood Level (RFL). Engineering judgment is applied to recommend an appropriate value for the regulatory flood level at each cross-section, using the model outputs and considering hydraulic characteristics of the river reach, and the inherent limitations of numerical modeling.

When the stream velocity is relatively low and varies only gradually over relatively long river reaches, the water surface can generally be taken as the RFL.

However, near bridges, culverts and other water control structures and on steeper reaches where streamflow velocities are higher, and may change more abruptly, the computed water surface elevation may be substantially lower than the energy grade level, with the possibility that the water level may rise to the energy grade near obstacles and irregularities in the channel profile or cross-section which may not be represented in the hydraulic model. In such cases, the regulatory flood level is generally based on the computed energy grade as a conservative approach, given that the model-generated water surface elevation is less likely to be a true representation of flood risk in such situations.

Another possible situation arises when the computed water surface profile is undulating, with downstream water levels occasionally higher than upstream levels. When this occurs, it is more often an artifact from the simplifying assumptions of the modeling scheme than a reliable prediction of the actual differences in streamflow velocity and depth (and hence energy grade) from one cross-section to the next. Accordingly, the regulatory flood level at the upstream cross-section is taken to be equivalent to the downstream water surface elevation in these situations.

In all cases, the RFL is always between the computed water level and energy grade line. Hence, for the sake of simplicity and consistency, the energy grade elevation is often used as the RFL as a standard practice in delineating flood hazard areas.

For the present study, the regulatory flood levels were set equal to the computed energy grade and are tabulated in Table 12, along with the computed water surface elevations and energy grades at each cross-section in the model.

7. Flood Line Delineation

7.1 General

Once the RFLs are established, the plotting of 1:100 year flood lines or flood risk limits is a relatively straightforward matter. Given the topographical information in the form of LIDAR spot heights, the inundated area below the RFLs can be easily delineated manually or by using automated computer programs. In the present case, it was done manually with a focus on areas with complex topography, infrastructure, and overbank flow paths. The raw LIDAR spot heights were extensively used in the plotting the flood risk limit.

Field surveys were conducted by RVCA staff in May 2017 to verify hydraulic connectivity through culvert openings and flood prone areas.

The record of site-specific information associated with RVCA's regulatory approval process since 2006 was checked. It was found that no site-specific work affects the flood risk lines.

Drawings BK-1 and BK-2 in Appendix F depict the delineated floodplain.

7.2 Buildings in the Floodplain

Presence of existing buildings within the floodplain and associated variation in the way a building could be exposed to flood risk required special attention. Recently, RVCA has consolidated a few rules for drawing flood lines in the vicinity of buildings (Appendix A), which have been followed in this study. Due to the limitations of the data and methodology used in the current mapping done at a large scale, and the small degree of (inevitable) subjectivity in drawing flood lines around buildings at a smaller scale, RVCA recommends that, should the need arise for accurate flood line delineation near buildings, site-specific information be taken into account when dealing with flood risk at these locations. It is the practice of RVCA to refine flood lines when more accurate information becomes available.

7.3 Islands in the Floodplain

Presence of small islands, especially those associated with septic beds, within the floodplain also requires special attention. Recently, RVCA has decided to show small

islands with an area less than 1000 m² as flood risk area (Appendix C) This guidance was followed during this study.

7.4 Flood Mapping Data in GIS

The regulatory flood lines and cross-sections have been incorporated as separate layers in RVCA's Geographical Information System (GIS). In this system, one can view the flood lines, cross-sections, design flow, water level, energy grade, RFL, and other computed parameters. The flood lines can be overlain on the aerial photography or any other base mapping layers that are in the system and at any scale that suits the user's need.

The regulatory flood line layer is maintained, and updated as required according to the established procedures of the RVCA (RVCA 2005).

Drawings BK-1 and BK-2 show the flood risk limits as delineated in this study. At all cross-section locations, the RFL is indicated. The general surrounding and land marks are also included for easy referencing.

8. Project Deliverables

The key information or knowledge products generated from this project are:

- 1) The Flood Mapping Report (this Technical Memorandum) – which summarizes the analytical methods that were used and the underlying assumptions
- 2) SWMHYMO model files
- 3) HEC-RAS model files
- 4) The flood risk limit lines in GIS format (shape files) – identifying the extent of lands which are considered to be vulnerable to flooding during a regulatory flood event (1:100 year flood)
- 5) The position and orientation of cross-sections used in the HEC-RAS model, in GIS format (shape files) – which, when used in conjunction with the HEC-RAS model output files, informs the user as to the estimated 1:100 year water surface elevation and the regulatory flood level for any location in the study area

A “documentation folder” containing working notes and relevant background information accumulated during the study process is maintained by the water resources engineering unit within RVCA’s Watershed Science and Engineering Services department.

9. Closure

The hydrotechnical and cartographic procedures used in this study generally conform to present day standards for flood hazard delineation, as set out in the MNR's Natural Hazards Technical Guide (MNR, 2002). The resulting 1:100 year flood lines are suitable for use in the RVCA's regulation limits mapping (as per Ontario Regulation 174/06) and in municipal land use planning and development approval processes under the Planning Act.



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Projection note: U.T.M. Zone 18 - NAD 83 Datum

File name: Figure 2: Study Area

Date Modified: 16/11/2017

Created by: TBAUMAN



Ottawa River →

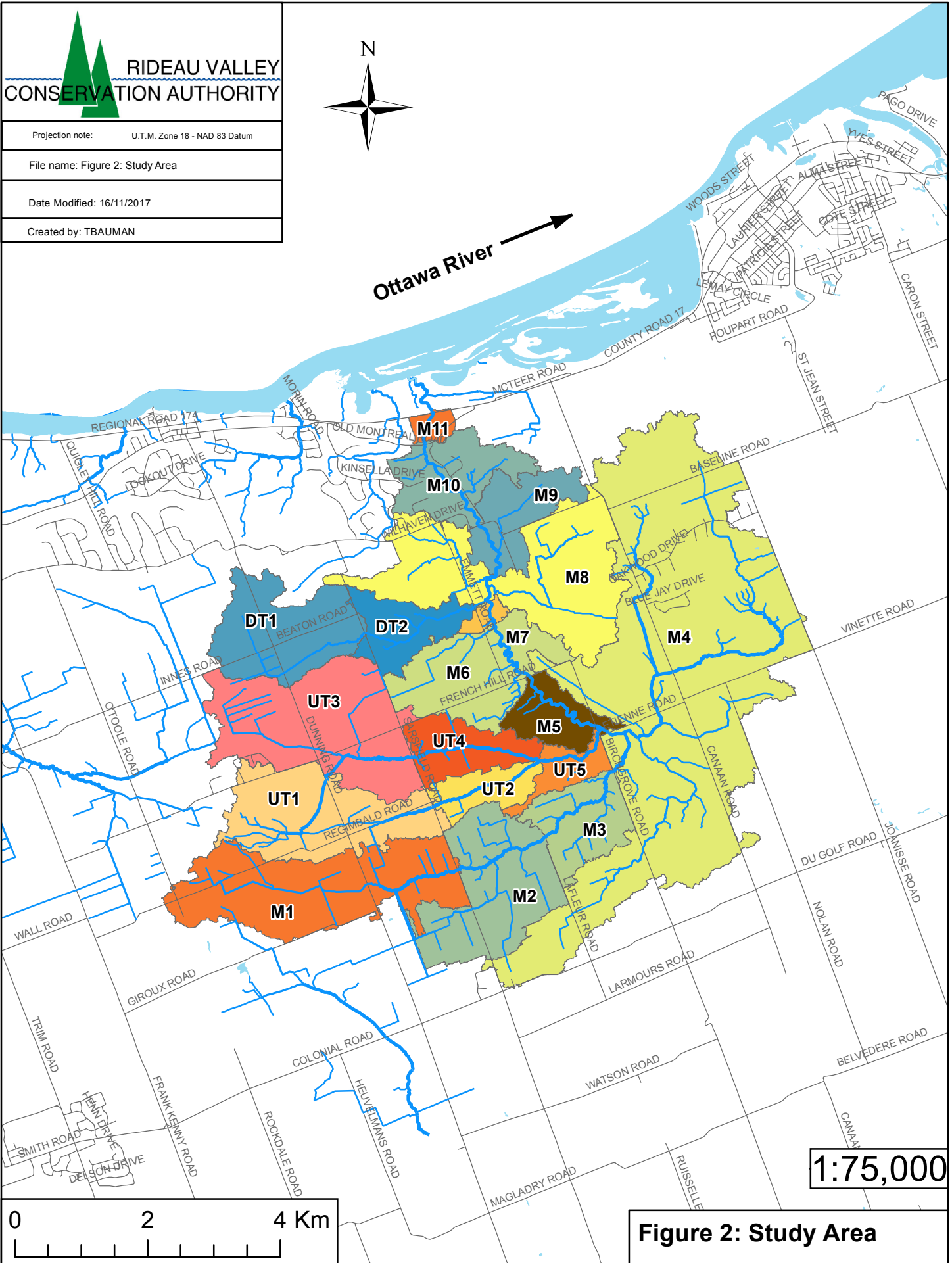
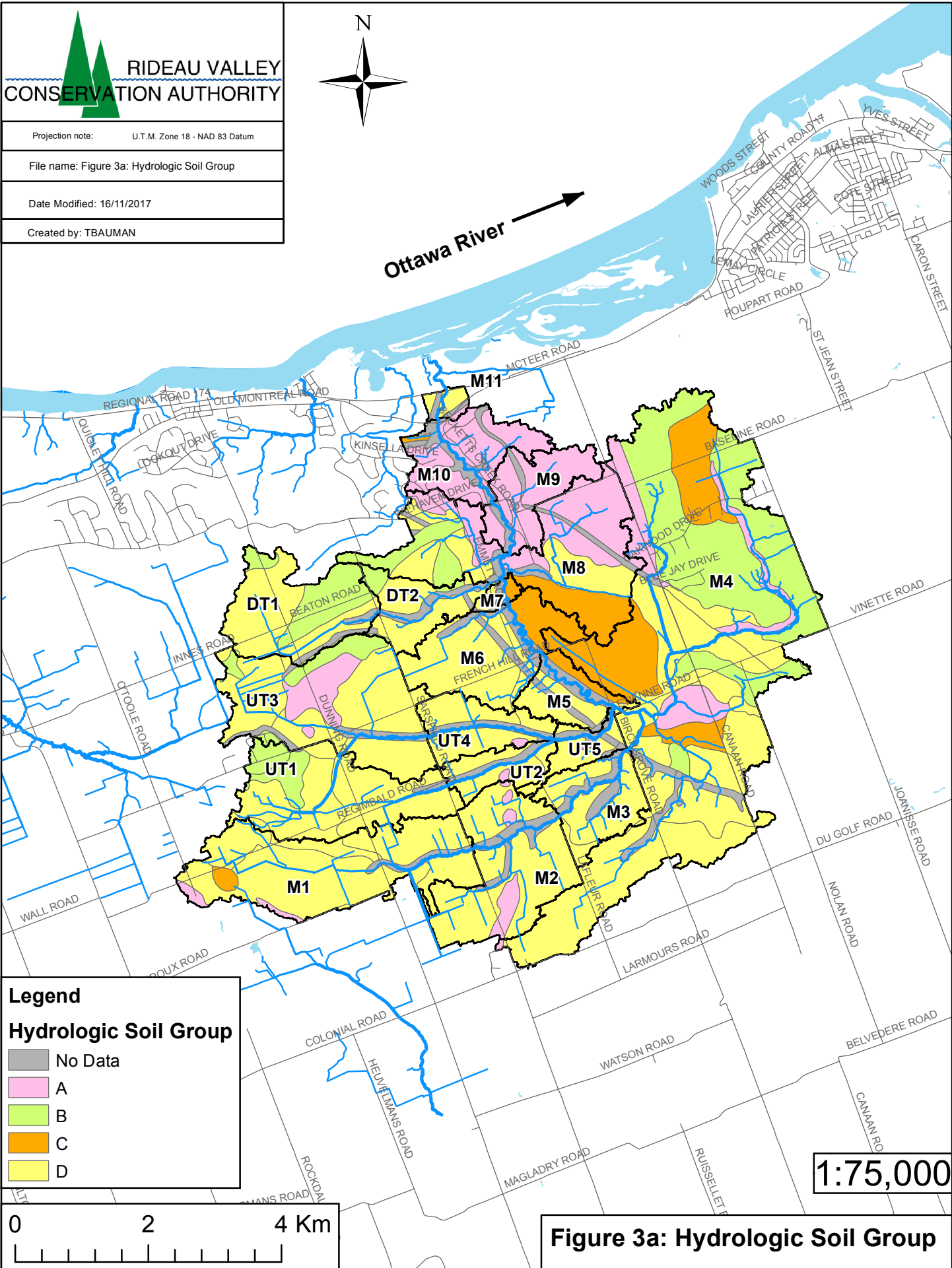


Figure 2: Study Area



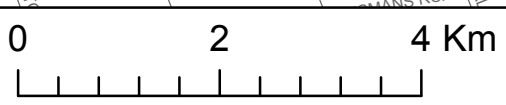
Ottawa River →



Legend


Hydrologic Soil Group

- No Data
- A
- B
- C
- D



1:75,000

Figure 3a: Hydrologic Soil Group



**RIDEAU VALLEY
CONSERVATION AUTHORITY**

Projection note: U.T.M. Zone 18 - NAD 83 Datum

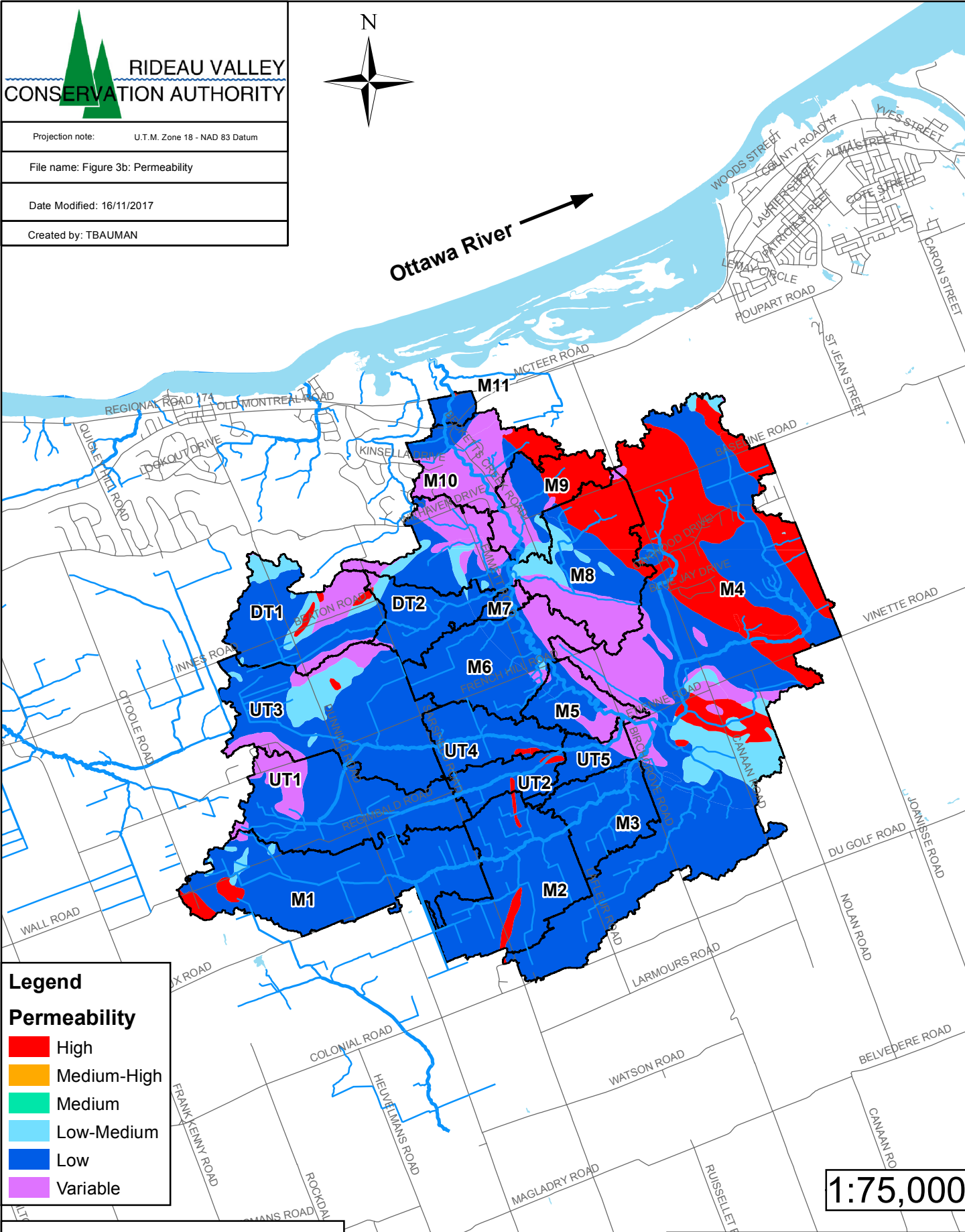
File name: Figure 3b: Permeability

Date Modified: 16/11/2017

Created by: TBAUMAN



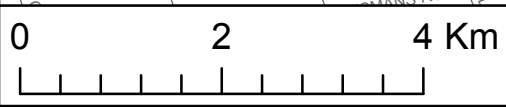
Ottawa River →



Legend

Permeability

- High
- Medium-High
- Medium
- Low-Medium
- Low
- Variable

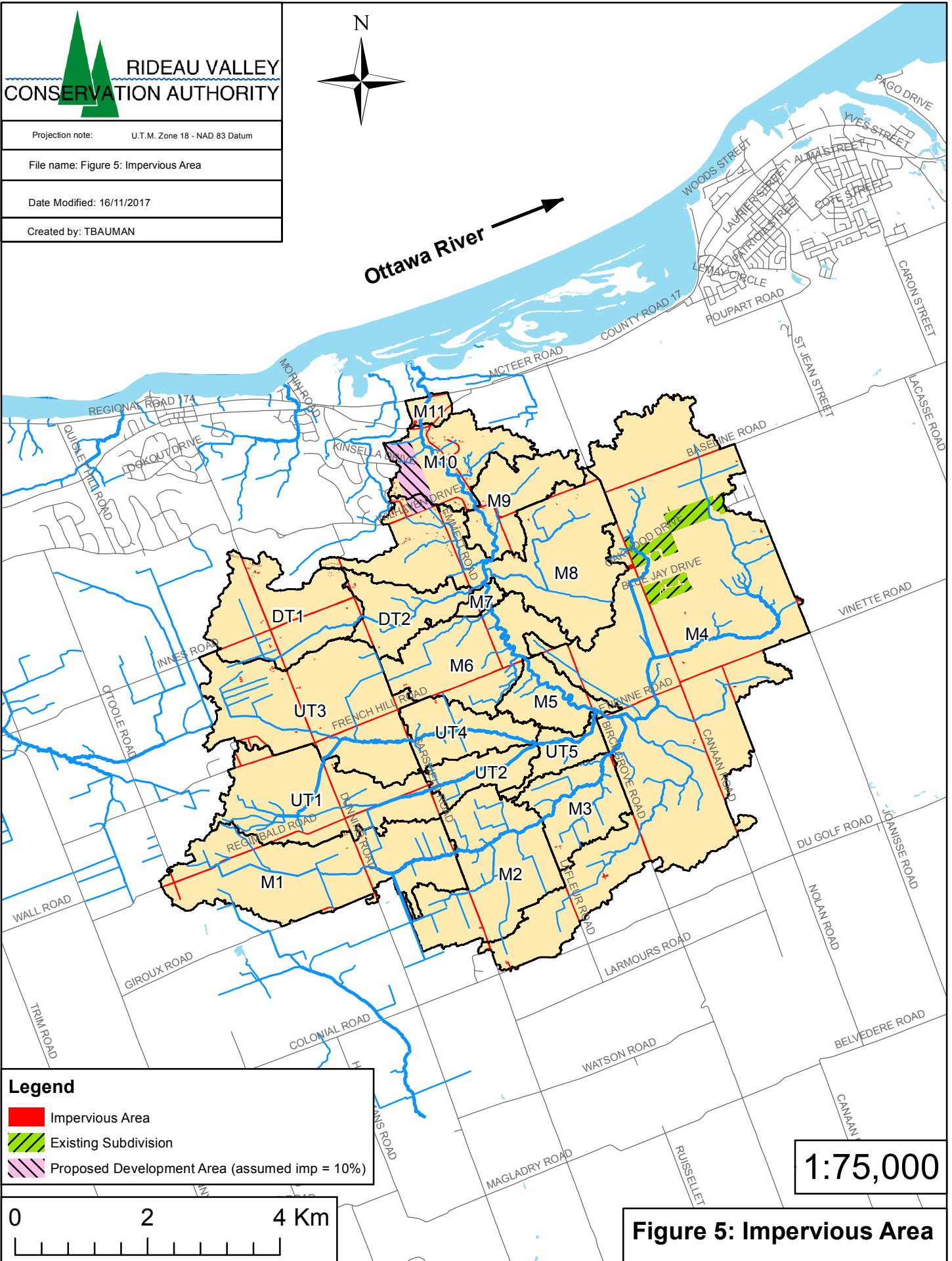


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Figure 3b: Permeability

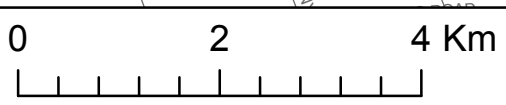


Ottawa River →



Legend

- Impervious Area
- Existing Subdivision
- Proposed Development Area (assumed imp = 10%)

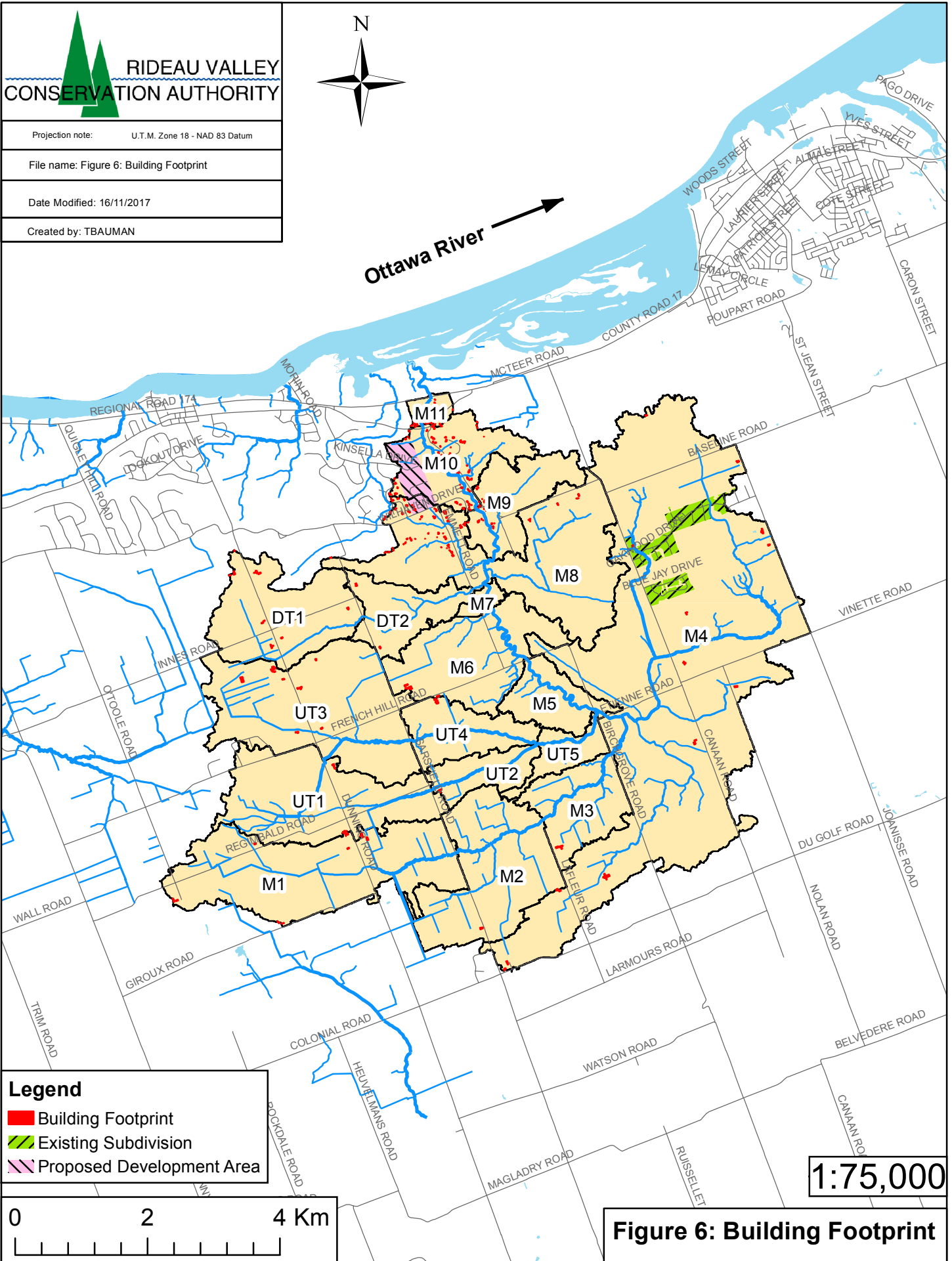


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Figure 5: Impervious Area

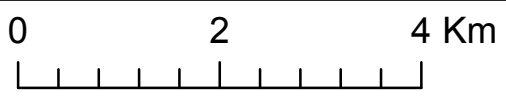


Ottawa River →



Legend

- Building Footprint
- ▨ Existing Subdivision
- ▨ Proposed Development Area



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Figure 6: Building Footprint



Projection note:	U.T.M. Zone 18 - NAD 83 Datum
File name:	Figure 7: SWMHYMO Schematic
Date Modified:	16/11/2017
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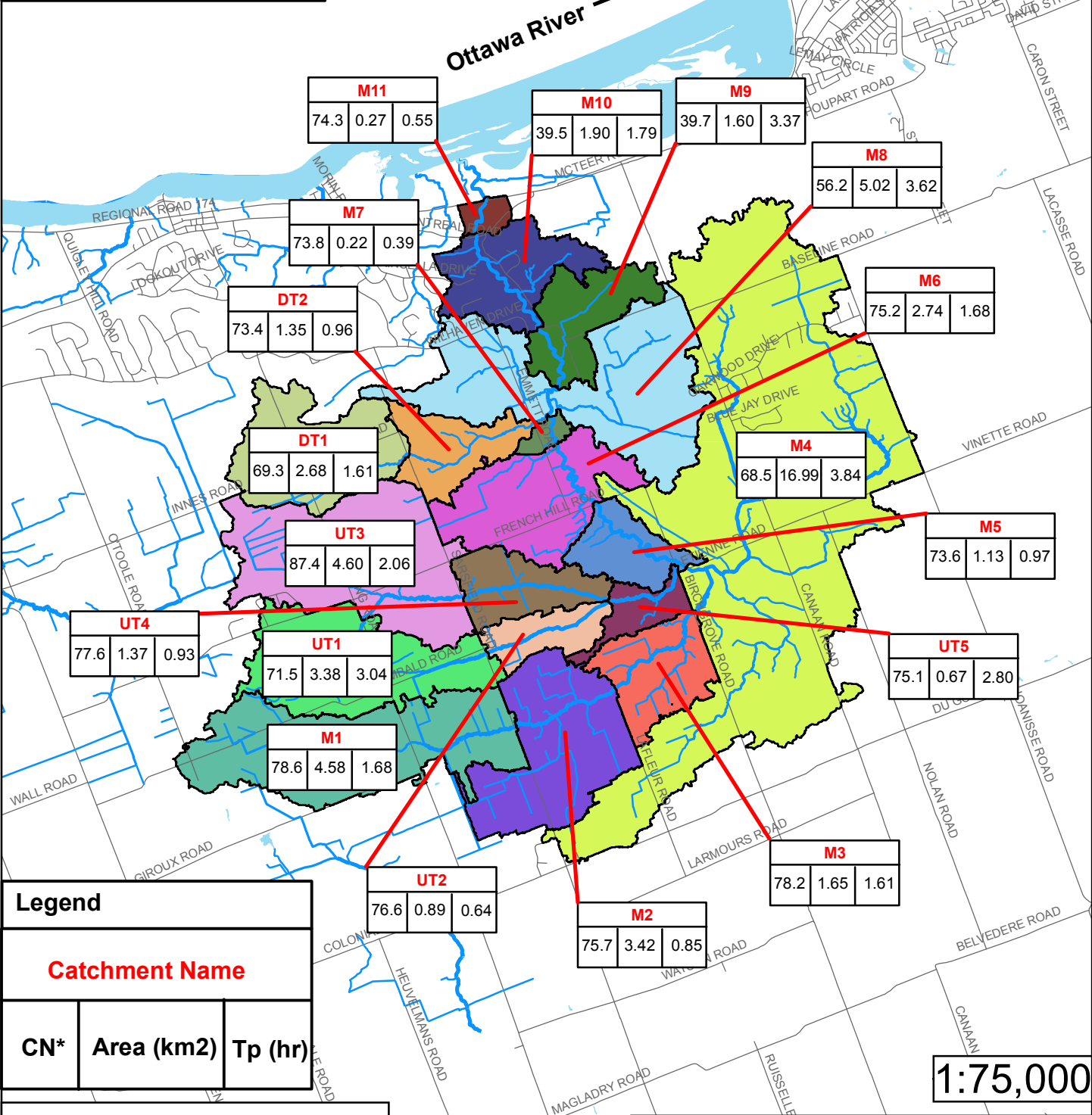


Figure 7: SWMHYMO Schematic

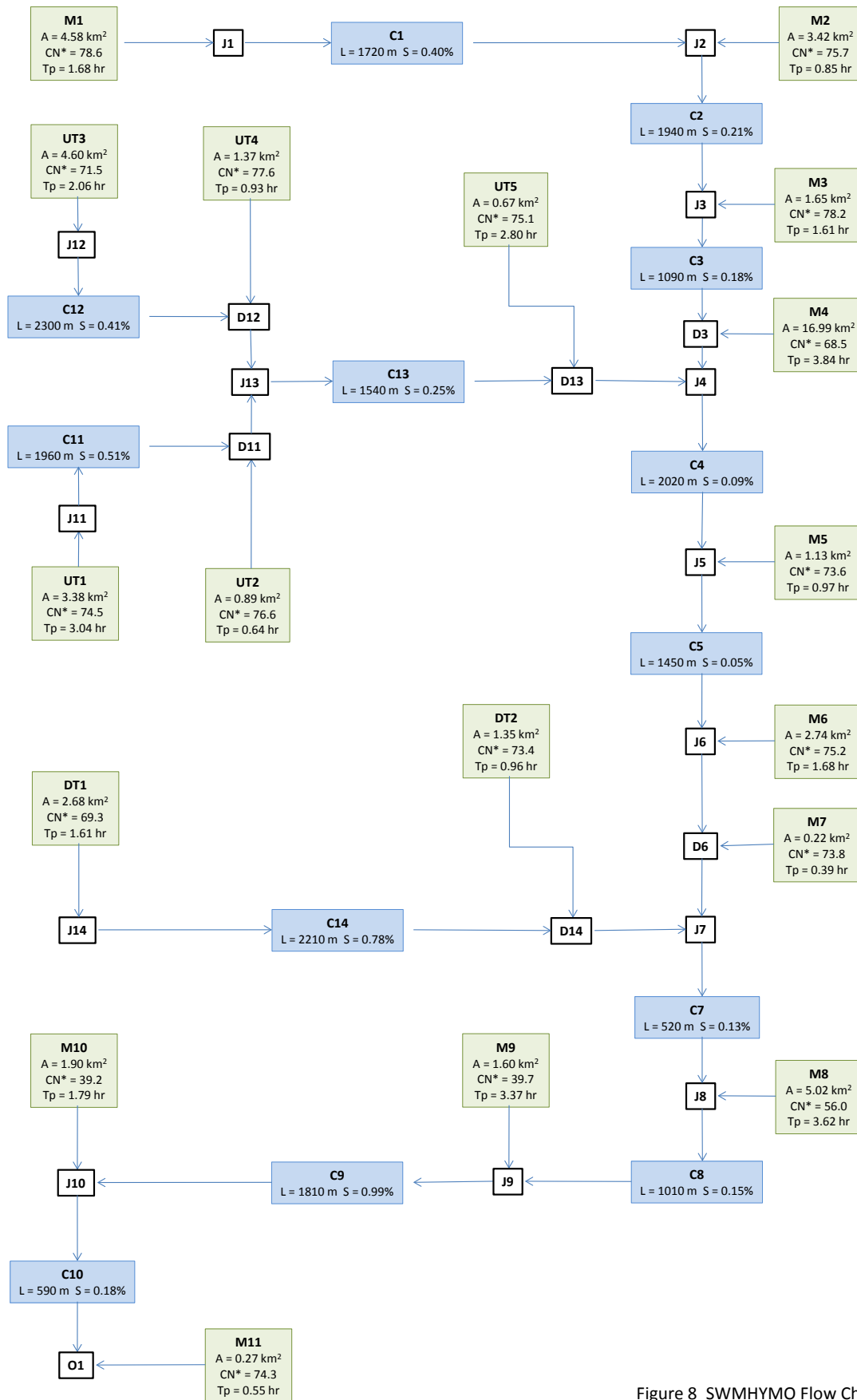


Figure 8 SWMHYMO Flow Chart

Figure 9 IDF curve for Ottawa Airport based on 1967-2007 data

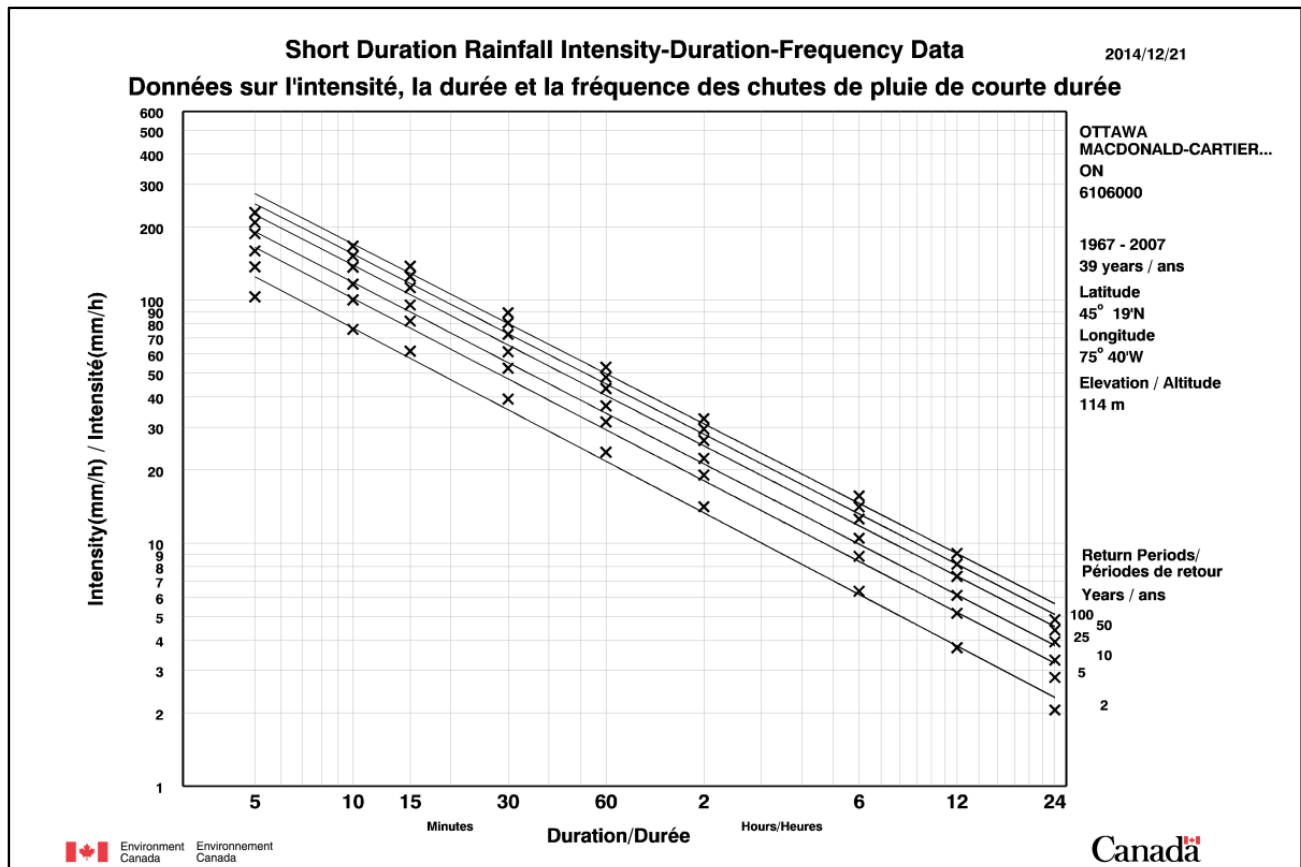


Figure 10 Fitted IDF curves for Ottawa Airport generated by STORMS software

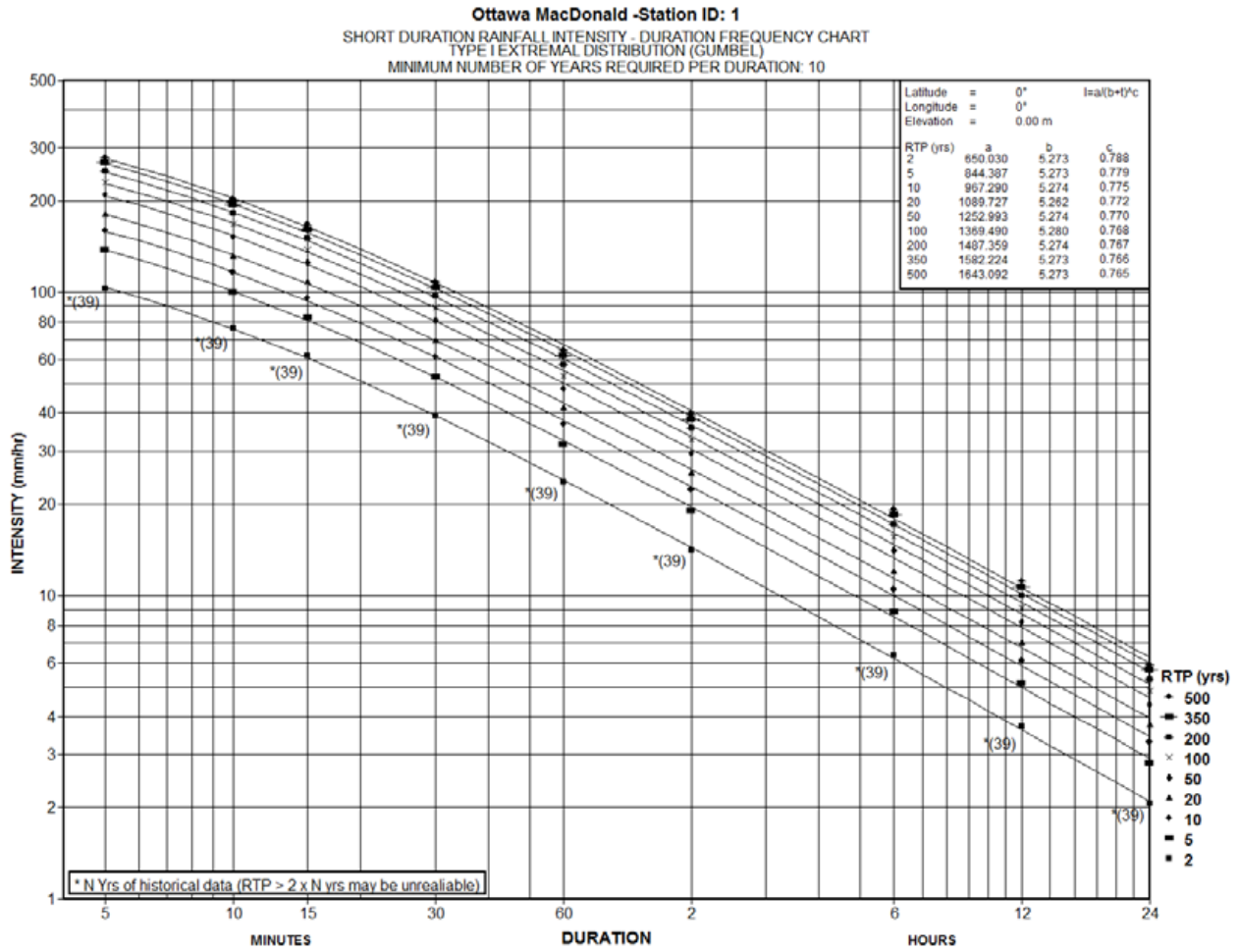


Figure 11 Hyetographs of various design storms

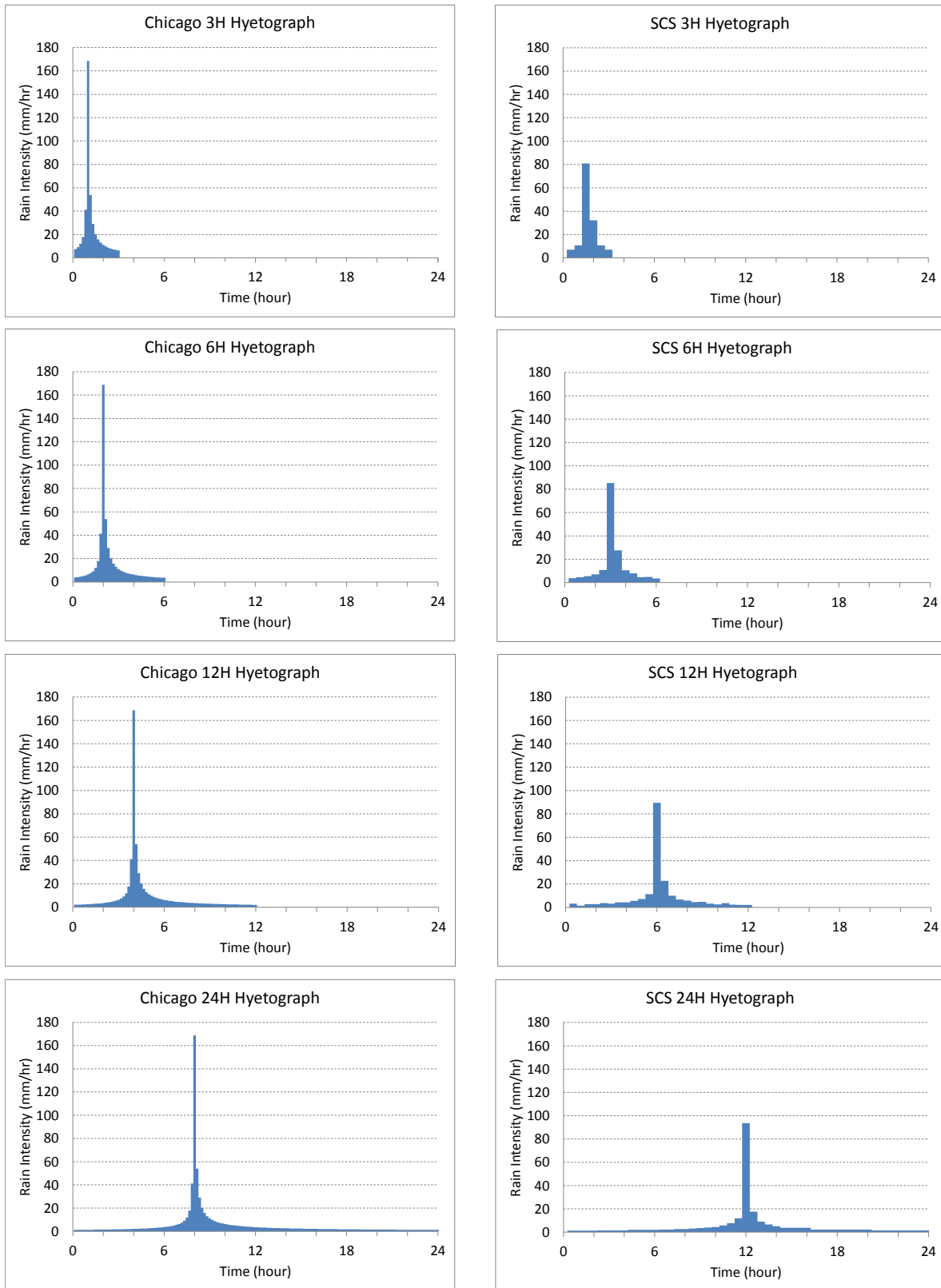
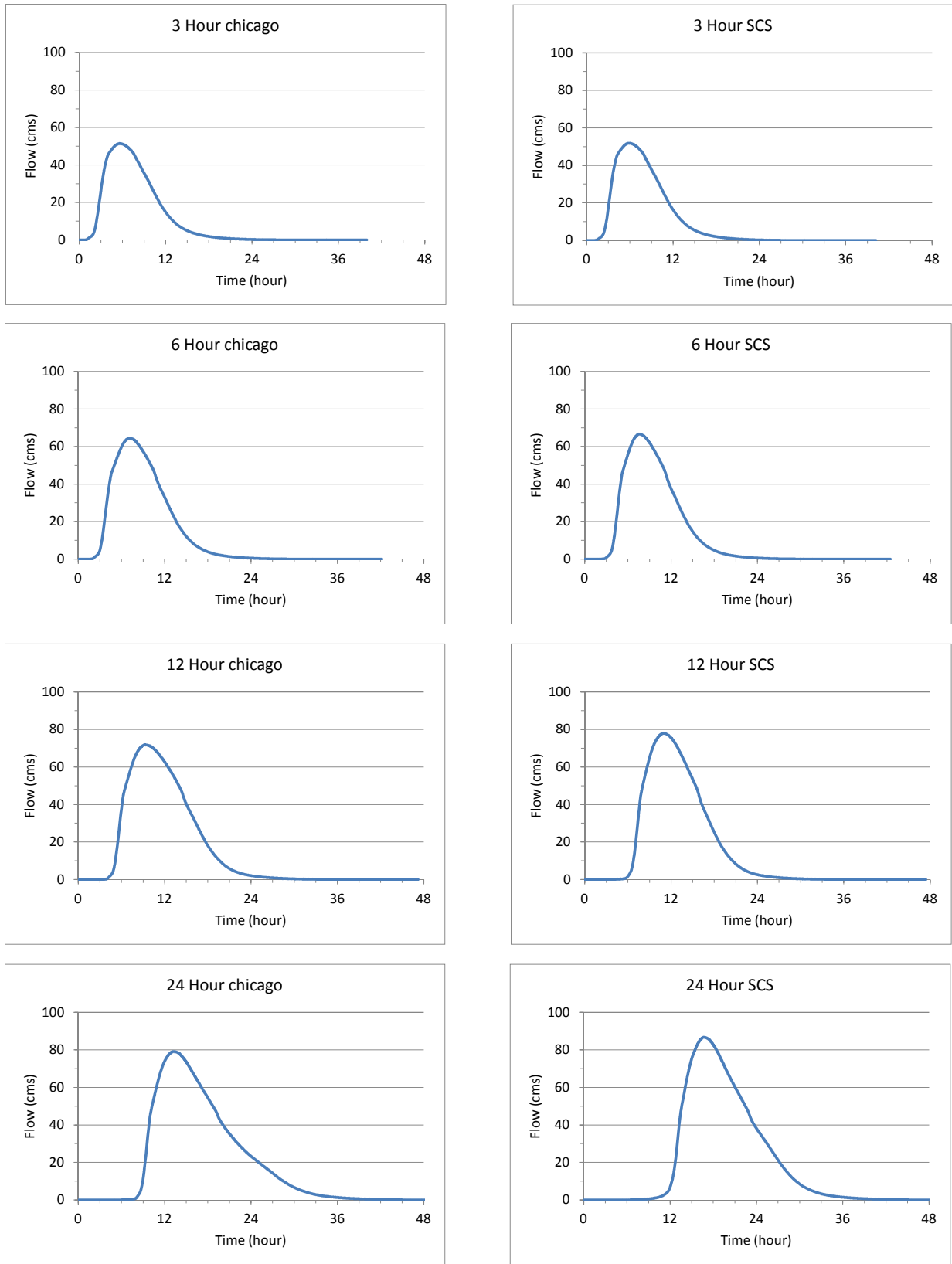



Figure 12 SWMHYMO generated flow at node O1 for different design storms





**RIDEAU VALLEY
CONSERVATION AUTHORITY**

Projection note: U.T.M. Zone 18 - NAD 83 Datum

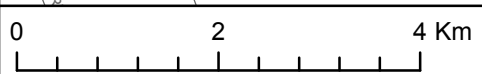
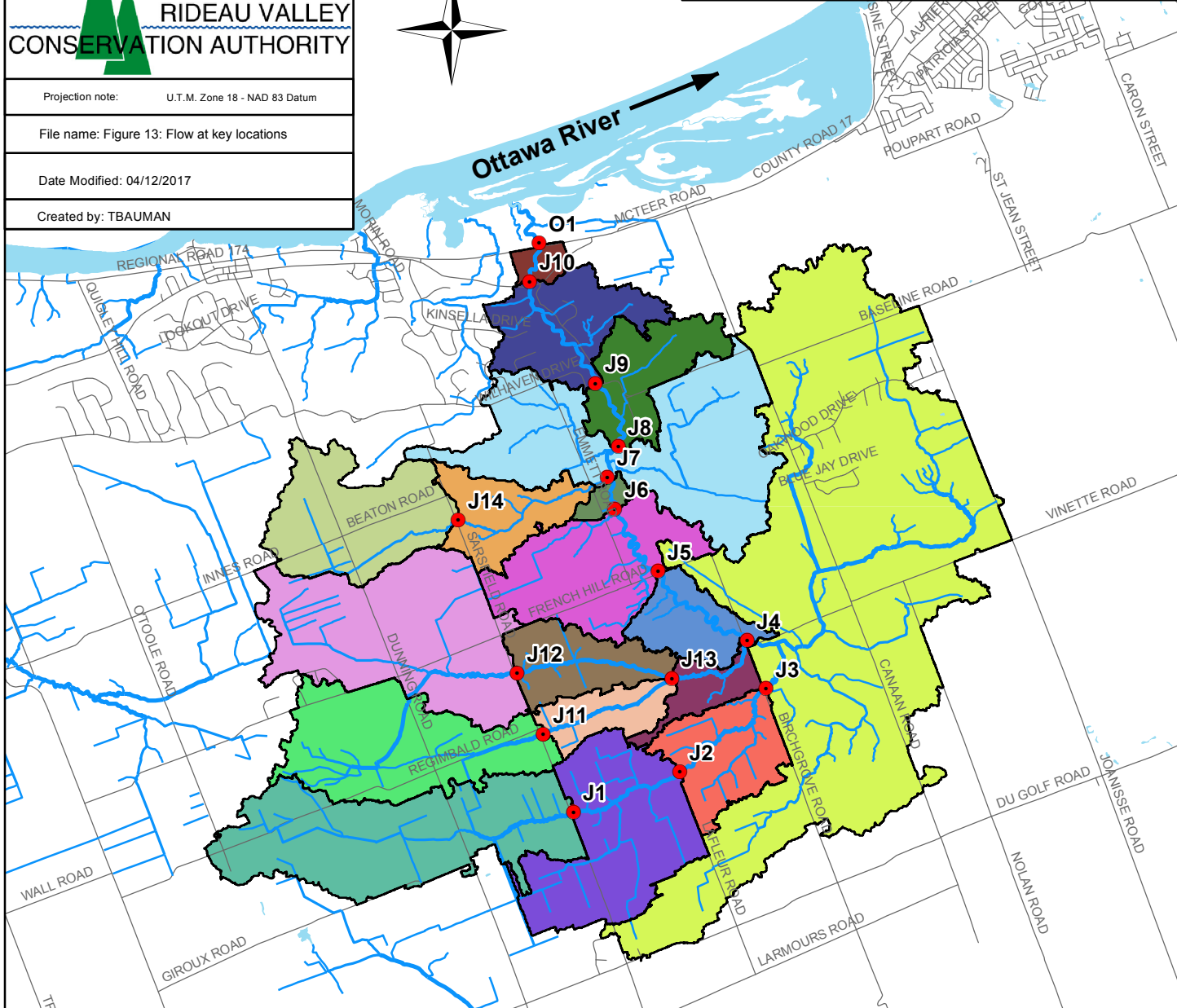
File name: Figure 13: Flow at key locations

Date Modified: 04/12/2017

Created by: TBAUMAN



Figure 13: Flow at key locations



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Return Period (year)	2	5	10	20	50	100	200	350	500
Nodes	Flow (cms)								
J1	4.56	8.05	10.49	13.03	16.39	19.04	21.62	23.80	25.31
J2	7.35	13.74	18.58	23.36	29.53	34.61	39.68	43.95	46.88
J3	8.35	15.30	20.31	25.43	32.60	38.41	44.21	49.01	52.42
J4	17.87	32.91	43.81	56.07	72.65	85.66	97.98	108.38	115.82
J5	17.37	30.70	39.78	49.46	63.78	74.99	85.63	95.35	102.03
J6	17.84	31.03	39.89	49.19	62.43	73.43	83.82	93.01	99.22
J7	19.39	33.42	42.87	52.99	67.14	79.04	90.21	100.07	106.65
J8	20.28	35.36	45.59	56.64	72.08	84.97	97.25	107.89	115.28
J9	20.31	35.51	45.90	57.00	72.75	85.73	98.06	109.05	116.34
J10	20.30	35.75	46.24	57.46	73.49	86.59	99.34	110.48	117.90
J11	1.78	3.24	4.28	5.38	6.85	8.02	9.17	10.15	10.83
J12	2.83	5.29	7.06	8.96	11.52	13.56	15.58	17.30	18.51
J13	4.97	9.24	12.35	15.74	20.45	24.39	28.28	31.23	33.37
J14	1.79	3.41	4.60	5.87	7.59	8.98	10.35	11.52	12.35
O1	20.32	35.82	46.31	57.56	73.59	86.74	99.49	110.69	118.14

Figure 14 Estimated 1:100 year flows along Becketts Creek

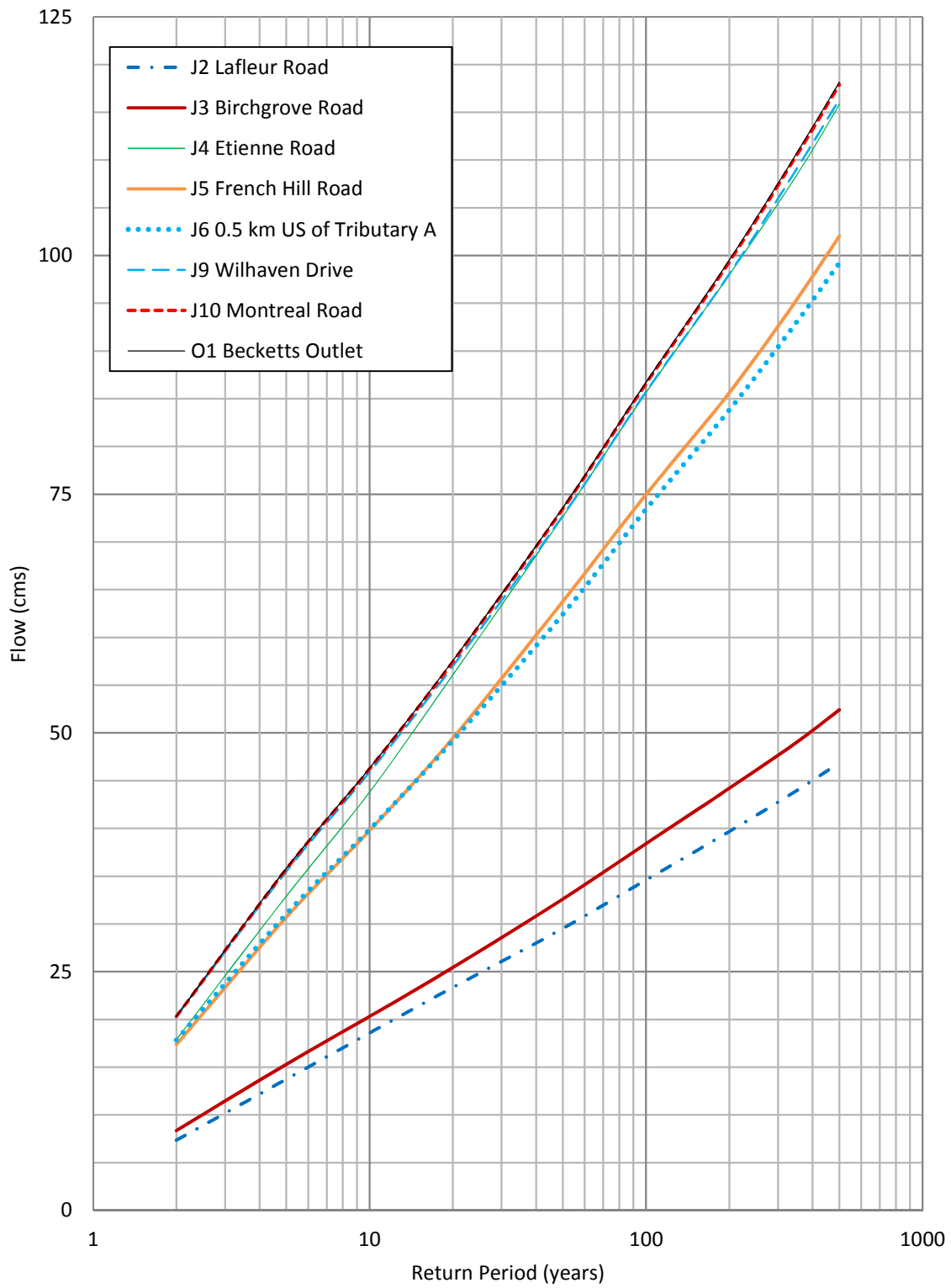


Figure 15 Comparison of estimated 1:100 year flows

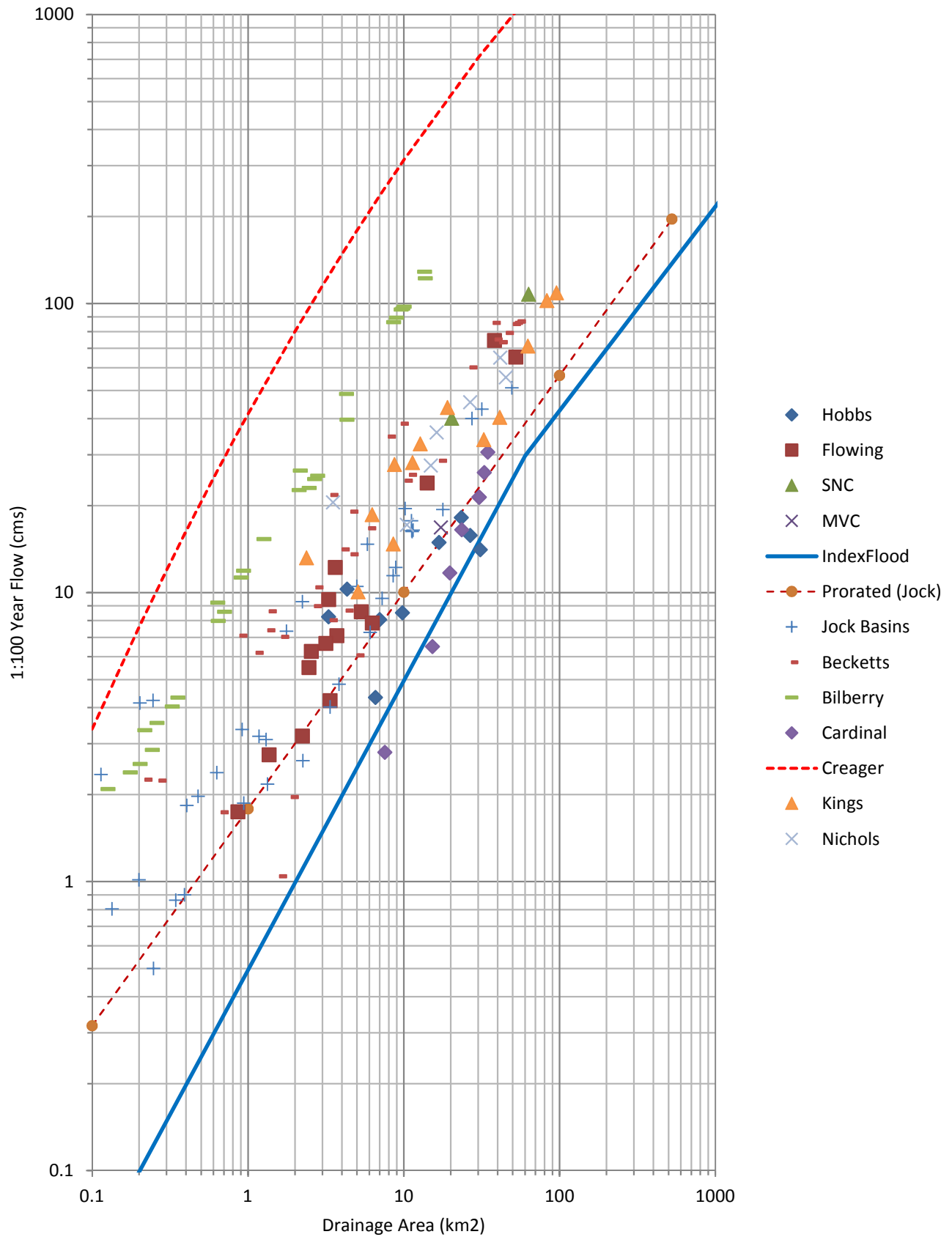
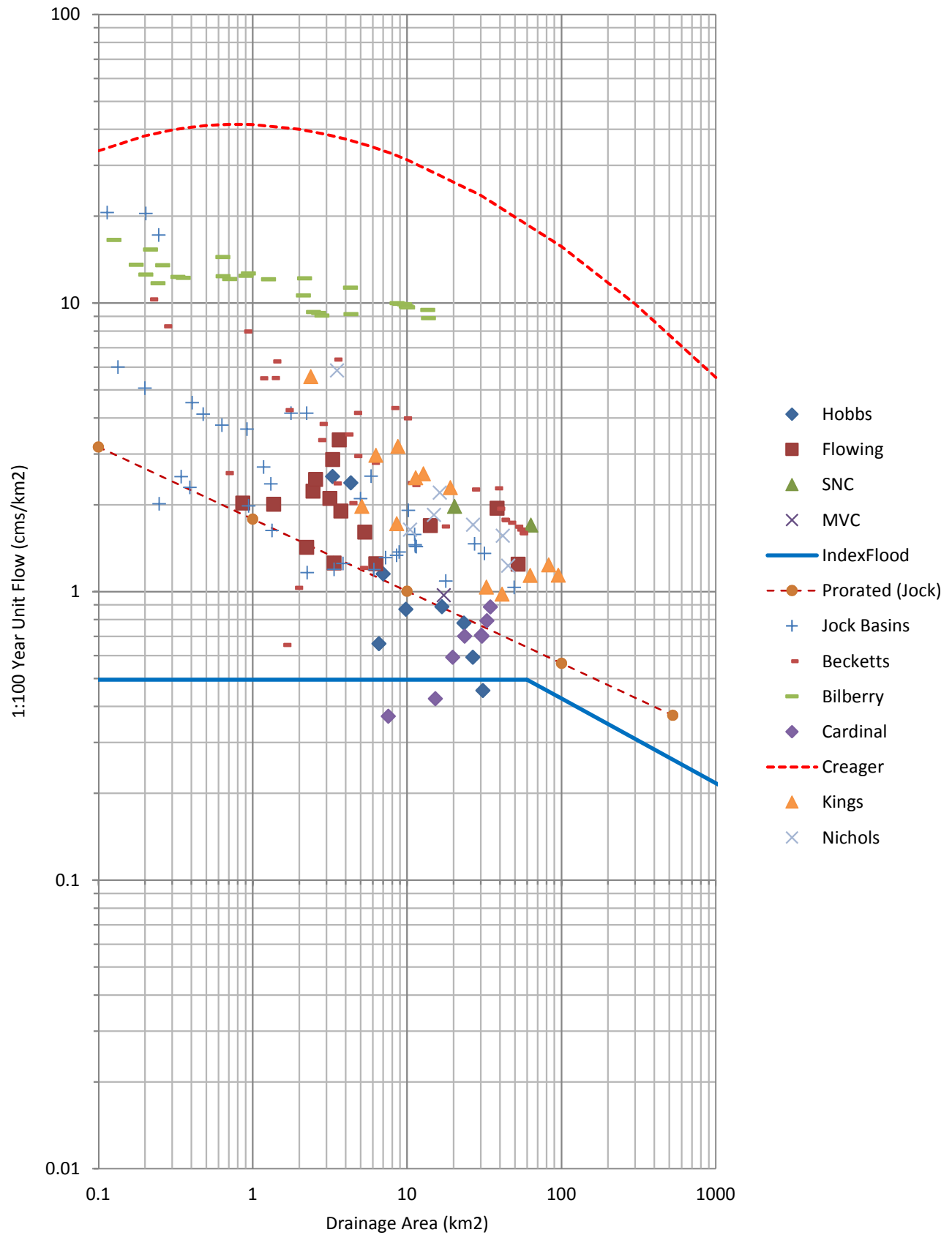



Figure 16 Comparison of 1:100 year flows per unit area





**RIDEAU VALLEY
CONSERVATION AUTHORITY**

Projection note: U.T.M. Zone 18 - NAD 83 Datum

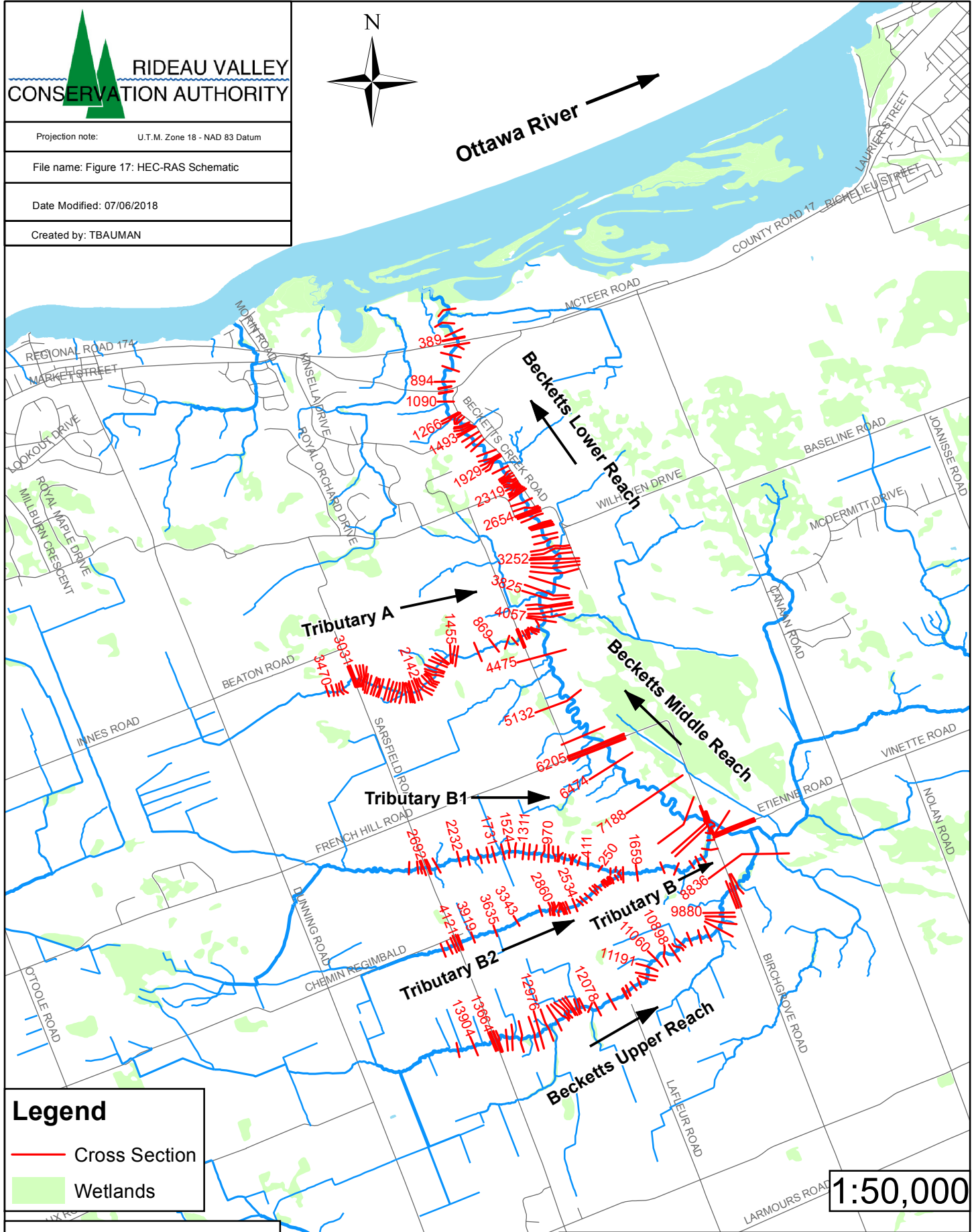
File name: Figure 17: HEC-RAS Schematic

Date Modified: 07/06/2018

Created by: TBAUMAN



Ottawa River



Legend

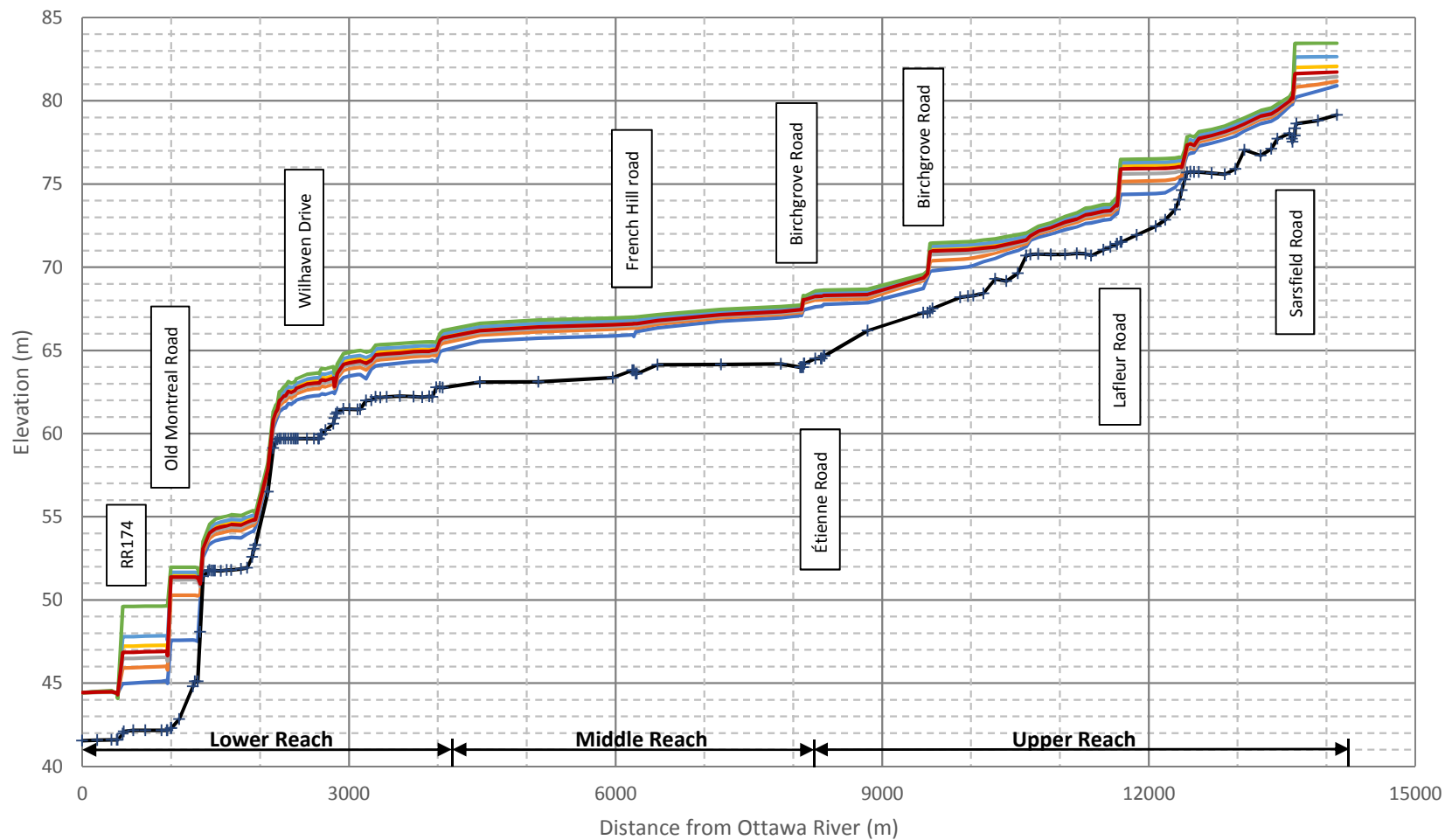
- Cross Section
- Wetlands



1:50,000

Figure 17: HEC-RAS Schematic

Figure 18a Sensitivity analysis of the computed water level for the design flow (Becketts Creek)



-50% -25% -10% +10% +25% +50% Ground Baseline

Figure 18b Sensitivity analysis of the computed water level for the design flow (Tributary A)

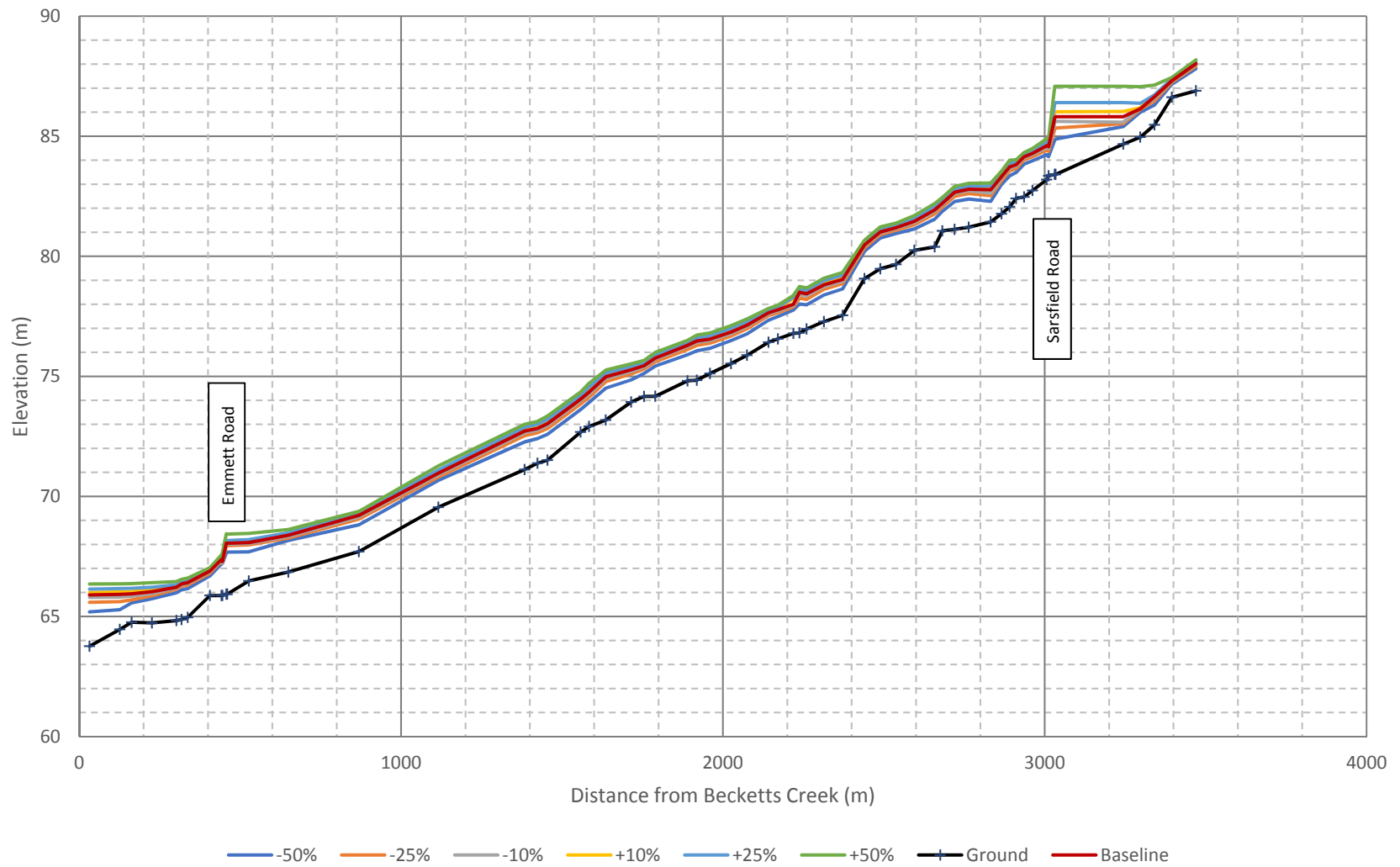
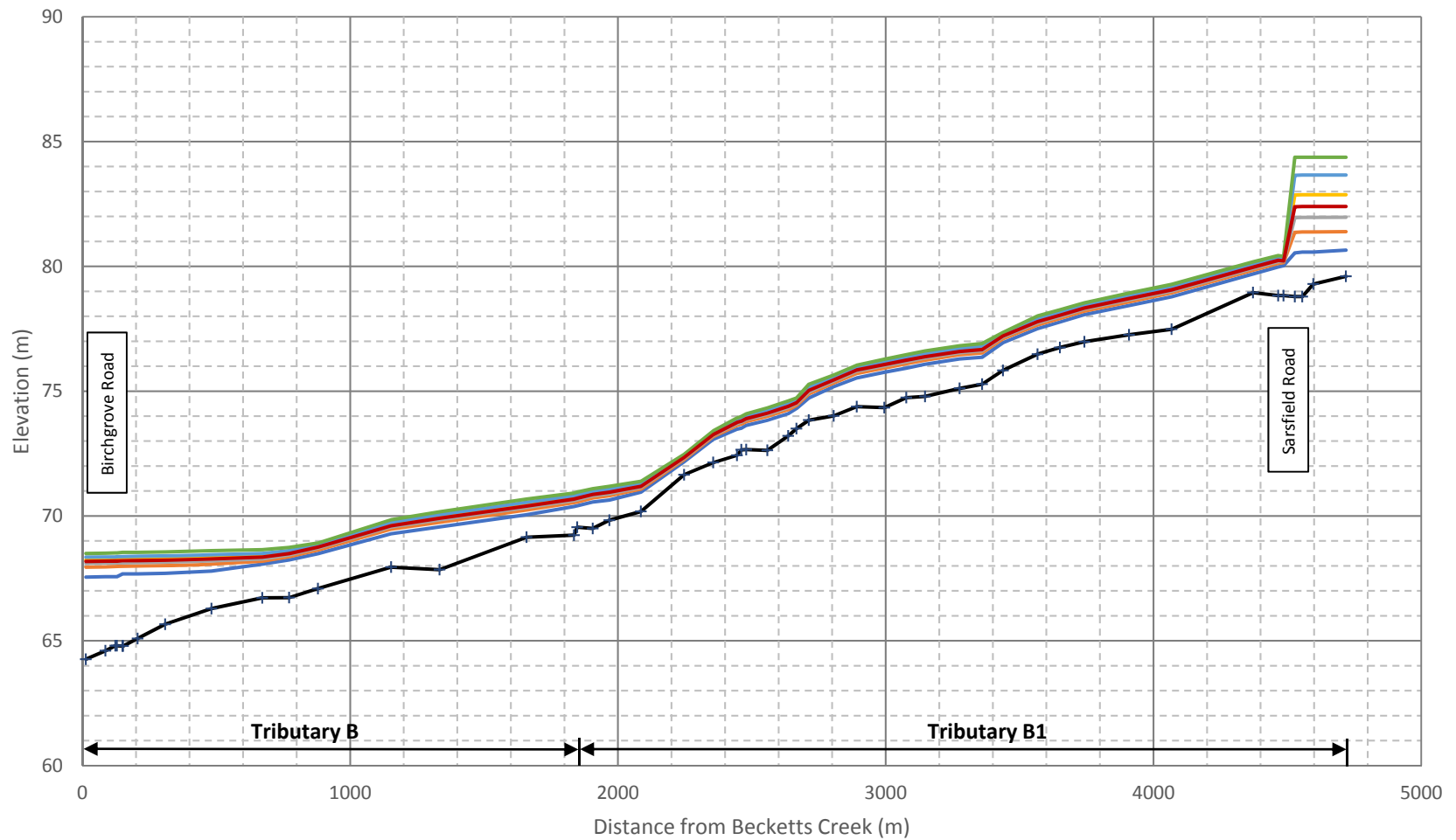


Figure 18c Sensitivity analysis of the computed water level for the design flow (Tributary B1)



-50% -25% -10% +10% +25% +50% Ground Baseline

Figure 18d Sensitivity analysis of the computed water level for the design flow (Tributary B2)

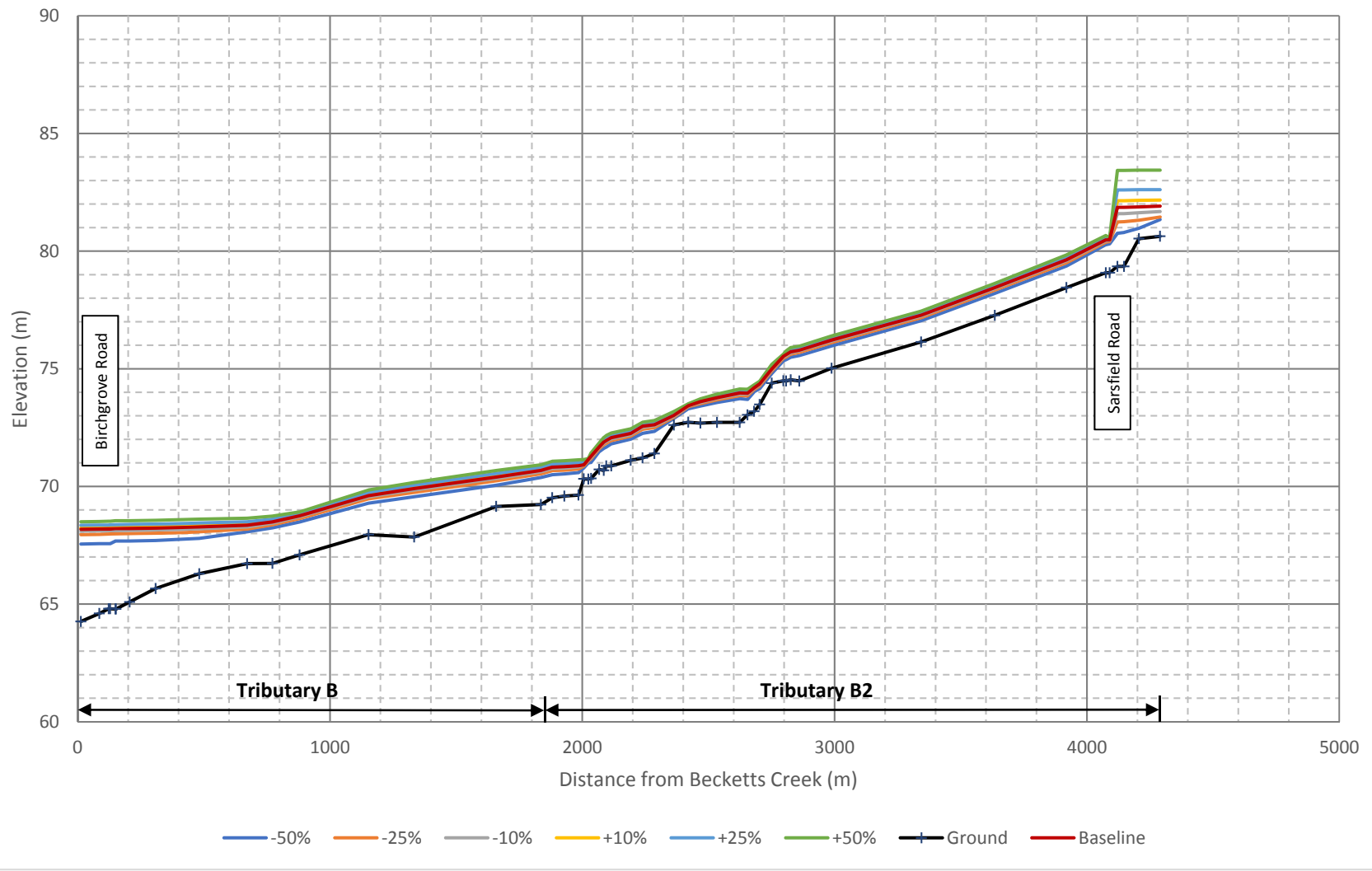


Figure 19a Sensitivity analysis of water level differences (Becketts Creek)

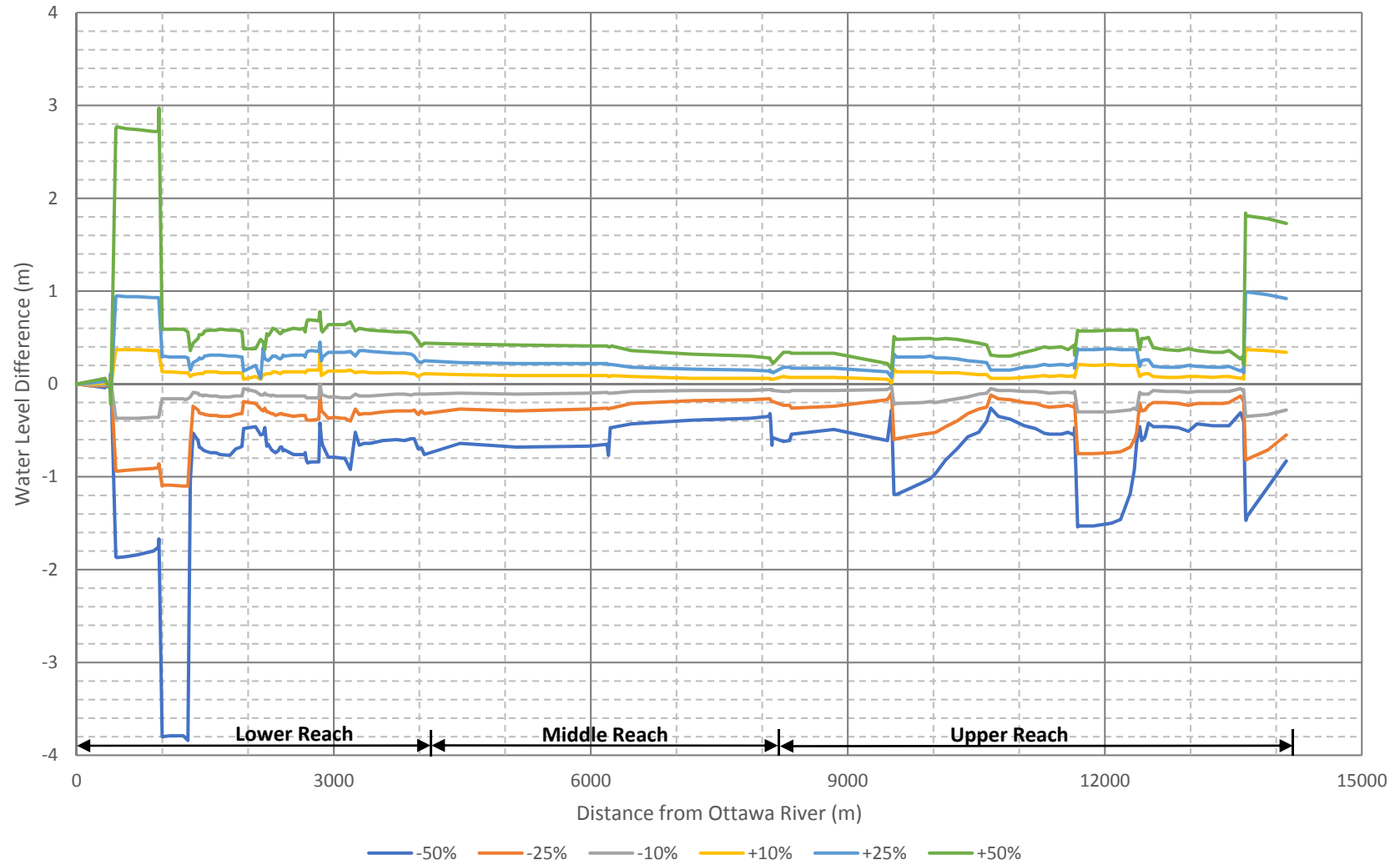


Figure 19b Sensitivity analysis of water level differences (Tributary A)

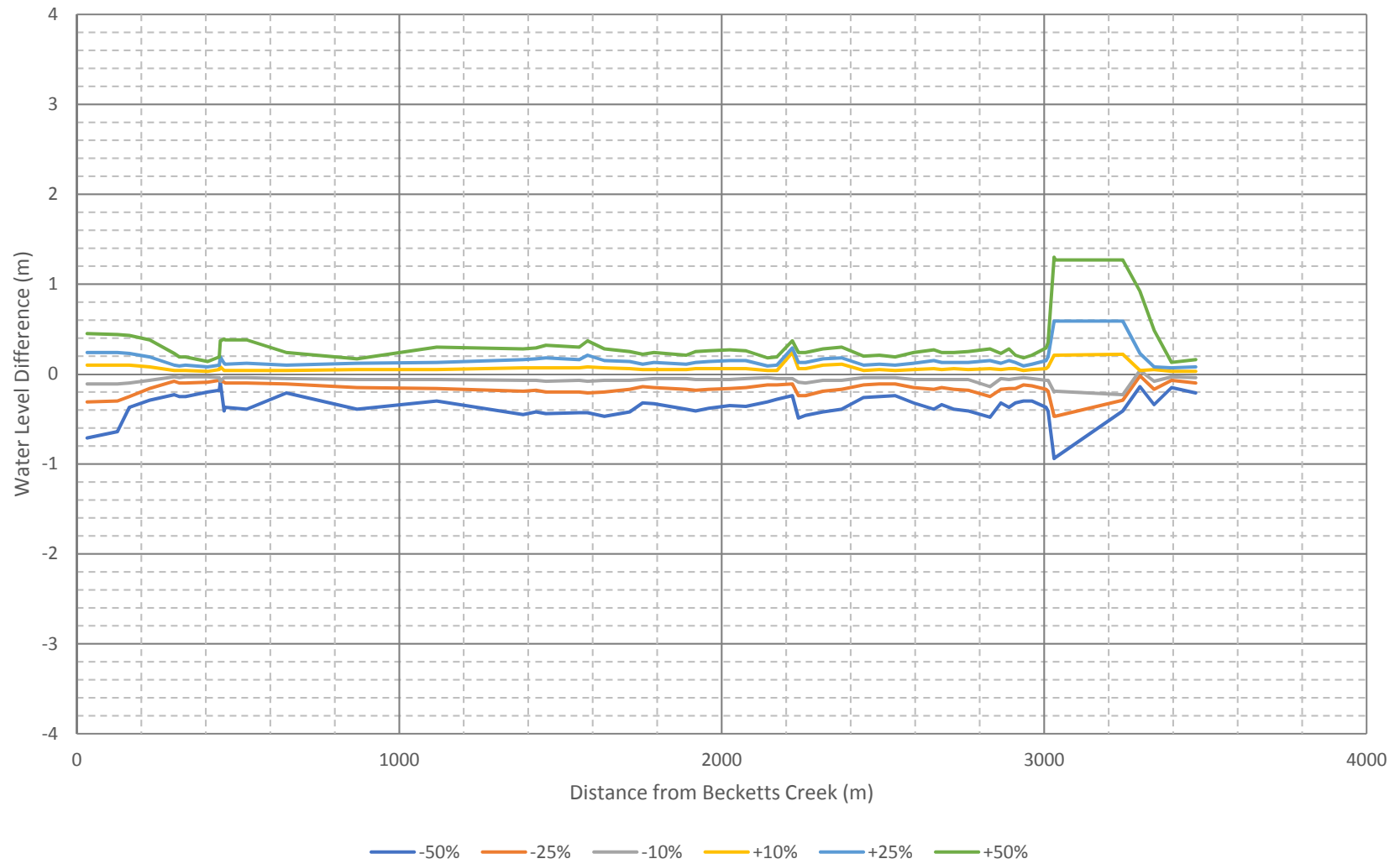
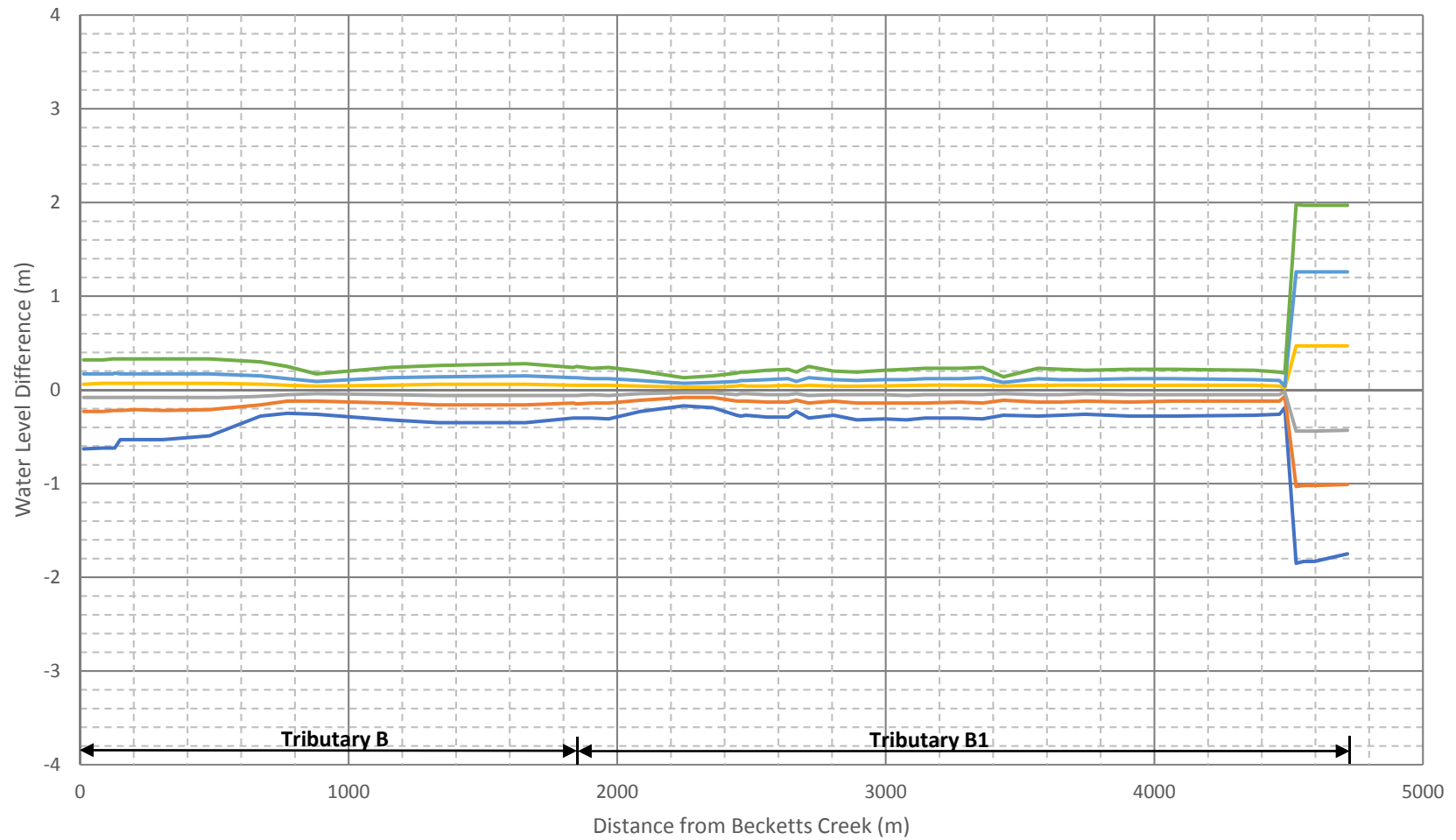
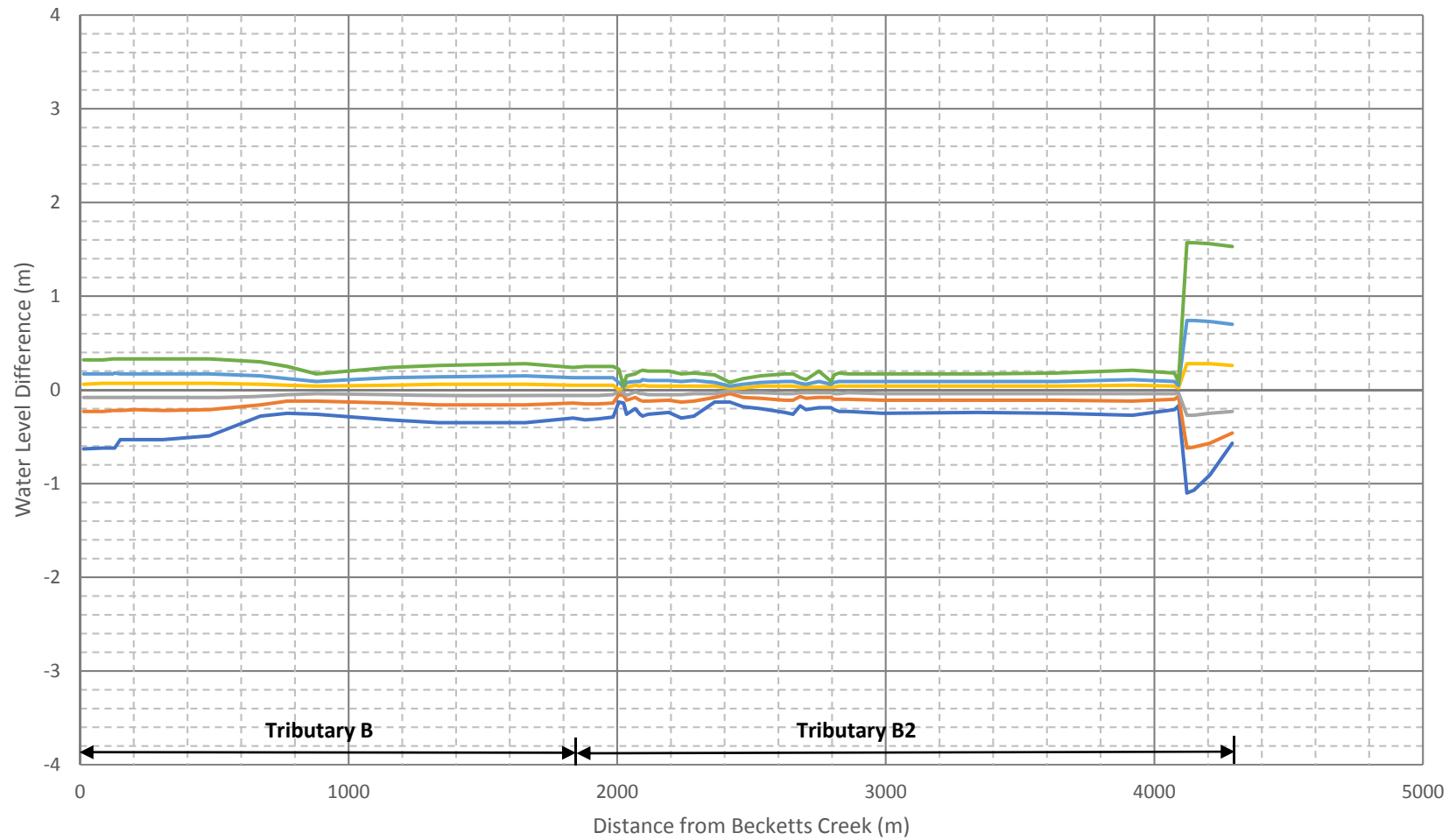


Figure 19c Sensitivity analysis of water level differences (Tributary B1)



— -50% — -25% — -10% — +10% — +25% — +50%

Figure 19d Sensitivity analysis of water level differences (Tributary B2)



— -50% — -25% — -10% — +10% — +25% — +50%

Table 1 Land cover breakdown in the Becketts Basin

Catchment	M1		M2		M3		M4		M5	
	Area (km ²)	%	Area (km ²)	%	Area (km ²)	%	Area (km ²)	%	Area (km ²)	%
1 Aggregate Site	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 Aggregate Site-Pit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 Aggregate Site-Quarry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 Crop and Pasture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 Crop and Pasture-Cultivated	3.90	85.10	2.66	77.99	1.12	67.73	7.84	46.16	0.29	25.91
6 Crop and Pasture-Fallow	0.00	0.00	0.00	0.00	0.00	0.00	0.21	1.23	0.00	0.00
7 Evaluated Wetland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8 Evaluated Wetland-Bog	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9 Evaluated Wetland-Fen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10 Evaluated Wetland-Marsh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11 Evaluated Wetland-Open Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12 Evaluated Wetland-Swamp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13 Meadow Thicket	0.05	0.99	0.14	4.21	0.10	5.79	0.75	4.44	0.15	13.36
14 Settlement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 Settlement-Impervious	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.00	0.00
16 Settlement-Pervious	0.00	0.00	0.02	0.54	0.00	0.00	0.26	1.50	0.00	0.00
17 Settlement-Pervious Homestead	0.21	4.68	0.12	3.62	0.04	2.40	1.07	6.30	0.07	6.30
18 Settlement-Residential	0.00	0.00	0.00	0.00	0.00	0.00	0.54	3.18	0.00	0.00
19 Subdivision	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20 Transportation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21 Transportation-Rail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22 Transportation-Road	0.11	2.50	0.04	1.23	0.02	1.46	0.50	2.96	0.02	1.46
23 Unevaluated Wetland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24 Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25 Water-Buffer around wetland	0.08	1.68	0.03	0.82	0.04	2.21	1.40	8.26	0.00	0.01
26 Water-Lake	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
27 Water-Pond	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
28 Water-River	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29 Wooded Area	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	1.30
30 Wooded Area-Fallow	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.69	0.01	1.31
31 Wooded Area-Hedgerow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32 Wooded Area-Island	0.02	0.46	0.00	0.06	0.00	0.00	0.05	0.32	0.00	0.00
33 Wooded Area-Plantation	0.04	0.82	0.03	0.84	0.00	0.28	0.36	2.13	0.03	2.58
34 Wooded Area-Treed	0.17	3.78	0.37	10.70	0.33	20.15	3.87	22.78	0.54	47.76
Total	4.58	100	3.42	100	1.65	100	16.99	100	1.13	100

Catchment	M6		M7		M8		M9		M10	
	Area (km2)	%	Area (km2)	%	Area (km2)	%	Area (km2)	%	Area (km2)	%
1 Aggregate Site	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2 Aggregate Site-Pit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3 Aggregate Site-Quarry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4 Crop and Pasture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5 Crop and Pasture-Cultivated	1.50	54.90	0.11	48.99	2.14	42.60	0.32	20.08	0.19	10.02
6 Crop and Pasture-Fallow	0.00	0.00	0.00	0.00	0.15	2.91	0.22	13.65	0.11	5.74
7 Evaluated Wetland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8 Evaluated Wetland-Bog	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9 Evaluated Wetland-Fen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10 Evaluated Wetland-Marsh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11 Evaluated Wetland-Open Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12 Evaluated Wetland-Swamp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13 Meadow Thicket	0.15	5.34	0.00	0.00	0.19	3.73	0.03	1.74	0.02	1.18
14 Settlement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 Settlement-Impervious	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
16 Settlement-Pervious	0.00	0.00	0.00	0.00	0.03	0.54	0.03	2.04	0.00	0.19
17 Settlement-Pervious Homestead	0.14	5.29	0.02	9.90	0.39	7.78	0.19	12.10	0.23	11.91
18 Settlement-Residential	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19 Subdivision	0.00	0.00	0.00	0.00	0.05	1.05	0.00	0.00	0.32	16.84
20 Transportation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21 Transportation-Rail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22 Transportation-Road	0.07	2.54	0.01	3.62	0.10	2.09	0.05	2.88	0.07	3.73
23 Unevaluated Wetland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24 Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25 Water-Buffer around wetland	0.02	0.61	0.00	0.00	0.27	5.41	0.08	5.13	0.09	4.50
26 Water-Lake	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27 Water-Pond	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
28 Water-River	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29 Wooded Area	0.01	0.49	0.00	2.25	0.01	0.11	0.01	0.87	0.02	1.04
30 Wooded Area-Fallow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31 Wooded Area-Hedgerow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32 Wooded Area-Island	0.01	0.18	0.00	0.98	0.01	0.28	0.00	0.00	0.00	0.00
33 Wooded Area-Plantation	0.04	1.32	0.00	0.00	0.05	0.94	0.04	2.25	0.03	1.74
34 Wooded Area-Treed	0.80	29.33	0.07	34.26	1.63	32.47	0.63	39.26	0.82	43.12
Total	2.74	100	0.22	100	5.02	100	1.60	100	1.90	100

Note: Land cover is based on in-house RVCA work using DRAPE imagery, and represents conditions of spring 2014.

Table 1 Land cover breakdown in the Becketts Basin (continued)

Catchment	M11		UT1		UT2		UT3		UT4		
	Area (km ²)	%	Area (km ²)	%	Area (km ²)	%	Area (km ²)	%	Area (km ²)	%	
1	Aggregate Site	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Aggregate Site-Pit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	Aggregate Site-Quarry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Crop and Pasture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Crop and Pasture-Cultivated	0.14	52.69	2.26	66.73	0.61	68.67	3.46	75.22	0.94	68.47
6	Crop and Pasture-Fallow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Evaluated Wetland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Evaluated Wetland-Bog	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Evaluated Wetland-Fen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Evaluated Wetland-Marsh	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Evaluated Wetland-Open Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Evaluated Wetland-Swamp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Meadow Thicket	0.02	7.81	0.20	5.84	0.06	6.74	0.04	0.76	0.08	5.60
14	Settlement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Settlement-Impervious	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	Settlement-Pervious	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
17	Settlement-Pervious Homestead	0.03	11.17	0.24	7.19	0.02	2.11	0.44	9.63	0.04	3.07
18	Settlement-Residential	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	Subdivision	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	Transportation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Transportation-Rail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Transportation-Road	0.02	8.10	0.14	4.25	0.00	0.29	0.13	2.77	0.01	1.03
23	Unevaluated Wetland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Water-Buffer around wetland	0.00	0.24	0.01	0.18	0.00	0.35	0.05	1.10	0.03	2.39
26	Water-Lake	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	Water-Pond	0.00	0.00	0.01	0.18	0.00	0.00	0.00	0.00	0.00	0.00
28	Water-River	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Wooded Area	0.01	2.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	Wooded Area-Fallow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	Wooded Area-Hedgerow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	Wooded Area-Island	0.00	0.00	0.01	0.26	0.00	0.00	0.05	1.07	0.00	0.15
33	Wooded Area-Plantation	0.00	0.00	0.00	0.09	0.01	0.58	0.03	0.67	0.03	2.00
34	Wooded Area-Treed	0.05	17.65	0.51	15.19	0.19	21.26	0.40	8.77	0.24	17.28
	Total	0.27	100	3.38	100	0.89	100	4.60	100	1.37	100

Catchment	UT5		DT1		DT2		Entire Becketts		
	Area (km ²)	%	Area (km ²)	%	Area (km ²)	%	Area (km ²)	%	
1	Aggregate Site	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	Aggregate Site-Pit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3	Aggregate Site-Quarry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4	Crop and Pasture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5	Crop and Pasture-Cultivated	0.05	7.36	1.72	64.09	0.76	56.40	30.01	55.11
6	Crop and Pasture-Fallow	0.00	0.00	0.00	0.00	0.03	1.93	0.71	1.30
7	Evaluated Wetland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Evaluated Wetland-Bog	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Evaluated Wetland-Fen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	Evaluated Wetland-Marsh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Evaluated Wetland-Open Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	Evaluated Wetland-Swamp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Meadow Thicket	0.13	18.80	0.08	3.15	0.04	2.72	2.21	4.06
14	Settlement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Settlement-Impervious	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
16	Settlement-Pervious	0.00	0.00	0.00	0.11	0.00	0.00	0.34	0.63
17	Settlement-Pervious Homestead	0.02	3.26	0.18	6.88	0.03	2.28	3.51	6.45
18	Settlement-Residential	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.99
19	Subdivision	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.69
20	Transportation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	Transportation-Rail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Transportation-Road	0.01	1.30	0.11	4.09	0.02	1.70	1.45	2.66
23	Unevaluated Wetland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Water-Buffer around wetland	0.04	5.53	0.00	0.00	0.00	0.00	2.13	3.91
26	Water-Lake	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	Water-Pond	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02
28	Water-River	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Wooded Area	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.14
30	Wooded Area-Fallow	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.24
31	Wooded Area-Hedgerow	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	Wooded Area-Island	0.00	0.00	0.00	0.15	0.00	0.00	0.16	0.30
33	Wooded Area-Plantation	0.05	7.93	0.01	0.55	0.00	0.00	0.75	1.38
34	Wooded Area-Treed	0.38	55.83	0.56	20.97	0.47	34.97	12.04	22.10
	Total	0.67	100	2.68	100	1.35	100	54.46	100

Note: Land cover is based on in-house RVCA work using DRAPE imagery, and represents conditions of spring 2014.

Table 2a Hydrological Soil Groups in Becketts Basin

Catchment	Area (km ²)	Soil Group area (km ²)					as percent (%) of catchment area				
		A	B	C	D	Unclassified	A	B	C	D	Unclassified
M1	4.58	0.14	0.00	0.11	4.17	0.16	2.96	0.00	2.40	91.15	3.49
M2	3.42	0.29	0.00	0.00	2.79	0.34	8.36	0.00	0.00	81.82	9.82
M3	1.65	0.00	0.00	0.00	1.31	0.34	0.00	0.00	0.00	79.44	20.56
M4	16.99	1.42	5.54	2.63	7.00	0.41	8.33	32.59	15.47	41.20	2.41
M5	1.13	0.00	0.00	0.20	0.57	0.37	0.00	0.00	17.57	50.07	32.36
M6	2.74	0.00	0.00	0.54	1.81	0.38	0.00	0.00	19.69	66.25	14.05
M7	0.22	0.00	0.00	0.07	0.08	0.07	0.00	0.00	31.51	34.62	33.86
M8	5.02	1.99	0.61	0.76	1.33	0.34	39.58	12.16	15.04	26.43	6.79
M9	1.60	1.42	0.00	0.00	0.00	0.18	88.92	0.00	0.00	0.01	11.07
M10	1.90	1.52	0.00	0.04	0.00	0.34	80.18	0.00	1.85	0.20	17.77
M11	0.27	0.02	0.00	0.00	0.18	0.07	8.99	0.00	0.00	65.39	25.62
UT1	3.38	0.00	0.57	0.00	2.75	0.06	0.00	16.87	0.00	81.27	1.85
UT2	0.89	0.03	0.00	0.00	0.70	0.17	2.88	0.00	0.00	78.57	18.56
UT3	4.60	0.65	0.49	0.00	3.17	0.29	14.17	10.63	0.00	68.99	6.20
UT4	1.37	0.03	0.00	0.00	1.12	0.23	1.96	0.00	0.00	81.46	16.57
UT5	0.67	0.00	0.00	0.00	0.49	0.18	0.00	0.00	0.00	73.17	26.83
DT1	2.68	0.00	0.95	0.00	1.58	0.15	0.00	35.51	0.00	59.08	5.41
DT2	1.35	0.00	0.18	0.00	0.93	0.24	0.00	13.08	0.00	69.34	17.58
Entire Becketts	54.46	7.50	8.34	4.34	30.00	4.30	13.77	15.31	7.96	55.08	7.89

Note: Based on MNR's LIO (Land Information System) database and documentation by MNR (2012)

Note: Unclassified soils were treated as Hydrologic Soil Group D. This was guided by a general relation between soil groups and permeability (OGS 2010), the later of which had data for unclassified soil areas. This approach was deemed the most conservative.

Table 2b Soil permeability in Becketts Basin

Catchment	Area (km ²)	Premeability area (km ²)				as percent (%) of catchment area			
		High	Low-medium	Variable	Low	High	Low-medium	Variable	Low
M1	4.58	0.21	0.10	0.03	4.24	4.68	2.24	0.55	92.52
M2	3.42	0.13	0.00	0.00	3.28	3.92	0.00	0.00	96.08
M3	1.65	0.00	0.00	0.00	1.65	0.00	0.00	0.04	99.96
M4	16.99	5.12	1.26	1.82	8.78	30.15	7.42	10.73	51.69
M5	1.13	0.00	0.00	0.43	0.70	0.00	0.00	38.20	61.80
M6	2.74	0.00	0.01	0.49	2.23	0.00	0.46	18.07	81.47
M7	0.22	0.00	0.00	0.05	0.17	0.00	0.00	22.64	77.36
M8	5.02	0.96	0.57	1.79	1.71	19.02	11.36	35.63	34.00
M9	1.60	0.55	0.12	0.48	0.44	34.75	7.48	30.19	27.58
M10	1.90	0.27	0.00	1.28	0.35	14.33	0.00	67.48	18.18
M11	0.27	0.01	0.00	0.00	0.26	2.37	0.00	0.00	97.63
UT1	3.38	0.00	0.00	0.52	2.86	0.00	0.00	15.47	84.53
UT2	0.89	0.05	0.00	0.00	0.84	5.45	0.00	0.00	94.55
UT3	4.60	0.02	0.57	0.47	3.54	0.38	12.50	10.21	76.91
UT4	1.37	0.03	0.00	0.00	1.34	2.07	0.00	0.00	97.93
UT5	0.67	0.00	0.00	0.13	0.54	0.00	0.00	19.36	80.64
DT1	2.68	0.09	0.42	0.53	1.64	3.31	15.73	19.65	61.31
DT2	1.35	0.00	0.06	0.05	1.23	0.27	4.51	3.83	91.39
Entire Becketts	54.46	7.45	3.12	8.08	35.81	13.67	5.74	14.84	65.75

Note: Based on Ontario Geological Survey surficial geology layer (OGS 2010)

Table 3 Estimated watershed parameters

Catchment	Area (km ²)	Imperviousness (%)	CN ¹	CN* ²	IA (mm)	Channel Slope (%)	Channel Length (m)	Tc ³ (hr)	Tp ⁴ (hr)
M1	4.58	2.64	84.28	78.59	3.46	0.40	5340	2.79	1.68
M2	3.42	1.26	82.27	75.66	4.09	0.40	1720	1.42	0.85
M3	1.65	1.56	84.02	78.21	3.54	0.21	1940	2.69	1.61
M4	16.99	6.24	77.28	68.51	5.84	0.18	1090	6.40	3.84
M5	1.13	1.46	80.84	73.60	4.56	0.09	2020	1.61	0.97
M6	2.74	2.65	81.94	75.19	4.19	0.05	1450	2.79	1.68
M7	0.22	3.62	80.99	73.81	4.51	0.05	510	0.66	0.39
M8	5.02	2.45	68.25	56.20	9.90	0.13	520	6.04	3.62
M9	1.60	3.03	54.63	39.73	19.27	0.15	1010	5.62	3.37
M10	1.90	4.45	54.39	39.45	19.49	0.99	1810	2.99	1.79
M11	0.27	10.52	81.33	74.31	4.39	0.18	590	0.91	0.55
UT1	3.38	4.49	81.45	74.47	4.35	0.59	4320	5.07	3.04
UT2	0.89	1.84	82.95	76.64	3.87	0.51	1960	1.07	0.64
UT3	4.60	4.31	79.35	71.45	5.07	0.35	4890	3.43	2.06
UT4	1.37	0.39	83.59	77.58	3.67	0.41	2300	1.55	0.93
UT5	0.67	2.93	81.92	75.15	4.20	0.25	1540	4.67	2.80
DT1	2.68	1.16	77.84	69.30	5.63	0.57	3950	2.68	1.61
DT2	1.35	1.30	80.72	73.42	4.60	0.78	2210	1.61	0.96
Entire Becketts	54.46	3.80	77.29	68.82	6.28	0.28	18000	7.96	4.78

1) Calculated from land use and TR-55 Curve Number tables (Urban Hydrology for Small Watersheds by USDA-SCS, 1986)

2) Calculated based on equation $CN^* = 100 / (1.879((100/CN) - 1)^{1.15} + 1)$ (Curve Number Hydrology by Hawkins et al., 2009)

3) Calculated based on the velocity method (National engineering handbook Chapter 15 by USDA-NRCS, 2010)

4) Calculated based on $t_p = 0.6 \times t_c$

Table 4 Curve number for different land cover and soil groups

	RVCA Land Cover ¹	Corresponding TR-55 land cover category ²		Assigned Curve Number (CN)			
	Land cover Class	Cover description		Soil group			
		Cover type	Hydrologic condition	A	B	C	D
1	Aggregate Site - Quarry	Industrial	N/A	81	88	91	93
2	Aggregate Site - Pit	Industrial	N/A	81	88	91	93
3	Aggregate Site - unclassified	Industrial	N/A	81	88	91	93
4	Settlement - Pervious	Open space (lawns, parks, golf courses, cemeteries, etc)	Good condition (grass cover >75%)	39	61	74	80
5	Settlement - Impervious	Commercial and business	N/A	89	92	94	95
6	Settlement - Pervious Homestead	Residential district (average lot size 2 acres)	N/A	46	65	77	82
7	Settlement - Residential	Residential district (average lot size 1/8 acre or less (townhouse))	N/A	77	85	90	92
8	Settlement - unclassified			77	85	90	92
9	Transportation - Rail	Streets and roads	N/A	98	98	98	98
10	Transportation - Road	Streets and roads	N/A	98	98	98	98
11	Transportation - unclassified	Streets and roads	N/A	98	98	98	98
12	Water - Lake	N/A	N/A	98	98	98	98
13	Water - River	N/A	N/A	98	98	98	98
14	Water - Buffer around wetland	N/A	N/A	98	98	98	98
15	Water - Pond	N/A	N/A	98	98	98	98
16	Water - unclassified	N/A	N/A	98	98	98	98
17	Unevaluated Wetland	N/A	N/A	98	98	98	98
18	Evaluated Wetland - Swamp	N/A	N/A	98	98	98	98
19	Evaluated Wetland - Open Water	N/A	N/A	98	98	98	98
20	Evaluated Wetland - Bog	N/A	N/A	98	98	98	98
21	Evaluated Wetland - Marsh	N/A	N/A	98	98	98	98
22	Evaluated Wetland - Fen	N/A	N/A	98	98	98	98
23	Evaluated Wetland - unclassified	N/A	N/A	98	98	98	98
24	Wooded Area - Treed	Wood	Good	30	55	70	77
25	Wooded Area - Plantation	Wood	Poor	45	66	77	83
26	Wooded Area - Hedgerow	Wood	Poor	45	66	77	83
27	Wooded Area - Island	Wood	Good	30	55	70	77
28	Wooded Area - Fallow	Pasture	Fair	49	69	79	84
29	Wooded Area - unclassified	Wood	Good	30	55	70	77
30	Crop and Pasture - Cultivated	Row Crops	Good	64	75	82	85
31	Crop and Pasture - Fallow	Fallow	Poor	76	85	90	93
32	Crop and Pasture - unclassified			64	75	82	85
33	Meadow Thicket	Herbaceous - mixture of grass, weeds, and low-growing brush, with brush the minor element.	Fair	60	71	81	89
34	Subdivision ³			46	65	77	82

1) Land cover classifications based on in-house RVCA work which represent conditions in the spring of 2014

2) Values and descriptors extracted from TR-55 "Urban Hydrology for Small Watersheds", USDA, Natural Resources Conservation Service, June 1986

3) Proposed subdivision development area has a designed density such that projected CN values can be based on TR-55 category "Settlement-Pervious Homestead"

Table 5 Characteristics of design storms

	Duration	Total volume	Peak intensity	Time step	Source of hyetograph shape
	(hour)	(mm)	(mm/hr)	(minutes)	
Chicago 3 hour	3	74.43	168.71	10	Generated by STORMS software
Chicago 6 hour	6	88.42	168.71	10	Generated by STORMS software
Chicago 12 hour	12	104.44	168.71	10	Generated by STORMS software
Chicago 24 hour	24	123.02	168.71	10	Generated by STORMS software
SCS 3 hour	3	74.47	80.87	30	City of Ottawa Sewer Design Guidelines 2012
SCS 6 hour	6	88.43	85.25	30	City of Ottawa Sewer Design Guidelines 2012
SCS 12 hour	12	104.44	89.40	30	City of Ottawa Sewer Design Guidelines 2012
SCS 24 hour	24	123.01	93.49	30	Generated by STORMS software

Table 6 Estimated peak flows generated by various storms

Storm	3H Chicago	6H Chicago	12H Chicago	24H Chicago	3H SCS	6H SCS	12H SCS	24H SCS
Return Period	100 year	100 year	100 year	100 year	100 year	100 year	100 year	100 year
Flow	(cms)	(cms)	(cms)	(cms)	(cms)	(cms)	(cms)	(cms)

Catchments								
M1	12.97	14.32	15.76	17.24	13.59	15.55	17.29	19.04
M2	14.17	15.85	17.59	19.35	15.12	17.24	19.45	21.76
M3	4.76	5.26	5.80	6.34	5.01	5.72	6.37	7.02
M4	16.71	20.92	23.29	25.79	16.88	21.84	25.46	28.58
M5	3.97	4.44	4.95	5.47	4.25	4.87	5.51	6.19
M6	6.90	7.66	8.48	9.34	7.24	8.36	9.36	10.42
M7	1.43	1.62	1.80	1.99	1.38	1.63	1.93	2.25
M8	3.26	4.21	4.75	5.35	3.30	4.43	5.28	6.07
M9	0.48	0.66	0.77	0.89	0.49	0.70	0.87	1.04
M10	0.97	1.16	1.35	1.59	1.02	1.31	1.59	1.96
M11	1.43	1.61	1.80	1.98	1.49	1.70	1.95	2.23
UT1	5.08	6.01	6.61	7.27	5.16	6.40	7.23	8.02
UT2	4.66	5.22	5.78	6.34	4.90	5.58	6.30	7.10
UT3	8.70	9.81	10.89	12.08	9.00	10.68	12.07	13.56
UT4	5.73	6.38	7.05	7.71	6.10	6.92	7.76	8.61
UT5	1.12	1.30	1.43	1.57	1.14	1.39	1.57	1.74
DT1	5.67	6.35	7.09	7.90	5.99	6.99	7.94	8.98
DT2	4.73	5.30	5.91	6.53	5.07	5.81	6.58	7.40

Nodes								
J1	12.97	14.32	15.76	17.24	13.59	15.55	17.29	19.04
J2	22.60	25.06	27.79	30.68	24.11	27.48	30.98	34.61
J3	25.09	27.94	31.01	34.25	26.34	30.57	34.39	38.41
J4	53.77	62.07	69.01	76.70	55.00	67.21	76.34	85.66
J5	45.40	55.81	61.75	68.10	46.01	58.79	67.49	74.99
J6	44.51	54.99	60.97	67.13	44.93	57.01	66.23	73.43
J7	47.66	59.43	65.74	72.31	48.06	61.36	71.26	79.04
J8	50.81	63.56	70.42	77.58	51.28	65.71	76.45	84.97
J9	51.13	63.91	71.00	78.24	51.57	66.16	77.12	85.73
J10	51.45	64.46	71.72	78.98	51.88	66.72	77.88	86.59
J11	5.08	6.01	6.61	7.27	5.16	6.40	7.23	8.02
J12	8.70	9.81	10.89	12.08	9.00	10.68	12.07	13.56
J13	15.07	17.76	19.65	21.80	15.25	19.00	21.60	24.39
J14	5.67	6.35	7.09	7.90	5.99	6.99	7.94	8.98
O1	51.43	64.43	71.87	79.15	51.85	66.70	78.00	86.74
D3	38.24	43.52	48.48	53.80	39.26	47.35	53.63	60.13
D6	44.51	55.00	61.11	67.29	44.93	57.01	66.37	73.57
D11	5.17	6.63	7.29	7.99	5.56	6.72	7.88	8.65
D12	10.20	11.71	13.08	14.65	10.46	12.73	14.60	16.68
D13	15.56	18.71	20.69	22.92	15.75	19.98	22.74	25.54

Table 7 SCS Type II 24 hour design storms for different return periods

Return Period (year)	Total volume (mm)	Peak intensity (mm/hr)	Time step (minutes)	hyetograph generated by
2	50.48	38.08	30	STORMS software
5	70.01	53.21	30	STORMS software
10	82.57	62.75	30	STORMS software
20	95.07	72.25	30	STORMS software
50	110.92	84.3	30	STORMS software
100	123.01	93.49	30	STORMS software
200	134.57	102.27	30	STORMS software
350	144.20	109.59	30	STORMS software
500	150.84	114.64	30	STORMS software

Table 8 Estimated peak flows for SCS Type II 24 hour design storm

Storm	24 hour SCS Type II								
Return Period (year)	2	5	10	20	50	100	200	350	500
Flow	(cms)	(cms)	(cms)	(cms)	(cms)	(cms)	(cms)	(cms)	(cms)

Catchments									
M1	4.56	8.05	10.49	13.03	16.39	19.04	21.62	23.80	25.31
M2	4.90	8.88	11.69	14.66	18.62	21.76	24.82	27.43	29.24
M3	1.67	2.96	3.85	4.80	6.04	7.02	7.98	8.78	9.35
M4	5.69	10.84	14.60	18.65	24.15	28.58	32.96	36.72	39.36
M5	1.34	2.47	3.27	4.13	5.28	6.19	7.09	7.85	8.38
M6	2.33	4.24	5.58	7.01	8.91	10.42	11.90	13.15	14.03
M7	0.49	0.90	1.19	1.50	1.92	2.25	2.57	2.85	3.04
M8	0.94	2.00	2.82	3.73	5.01	6.07	7.13	8.06	8.72
M9	0.09	0.26	0.40	0.58	0.83	1.04	1.27	1.47	1.61
M10	0.16	0.47	0.74	1.07	1.55	1.96	2.39	2.78	3.05
M11	0.49	0.90	1.19	1.50	1.91	2.23	2.56	2.83	3.02
UT1	1.78	3.24	4.28	5.38	6.85	8.02	9.17	10.15	10.83
UT2	1.63	2.93	3.84	4.81	6.08	7.10	8.08	8.92	9.50
UT3	2.83	5.29	7.06	8.96	11.52	13.56	15.58	17.30	18.51
UT4	2.02	3.59	4.70	5.86	7.40	8.61	9.79	10.79	11.48
UT5	0.39	0.71	0.93	1.17	1.49	1.74	1.98	2.19	2.34
DT1	1.79	3.41	4.60	5.87	7.59	8.98	10.35	11.52	12.35
DT2	1.60	2.94	3.90	4.93	6.30	7.40	8.47	9.39	10.03

Nodes									
J1	4.56	8.05	10.49	13.03	16.39	19.04	21.62	23.80	25.31
J2	7.35	13.74	18.58	23.36	29.53	34.61	39.68	43.95	46.88
J3	8.35	15.30	20.31	25.43	32.60	38.41	44.21	49.01	52.42
J4	17.87	32.91	43.81	56.07	72.65	85.66	97.98	108.38	115.82
J5	17.37	30.70	39.78	49.46	63.78	74.99	85.63	95.35	102.03
J6	17.84	31.03	39.89	49.19	62.43	73.43	83.82	93.01	99.22
J7	19.39	33.42	42.87	52.99	67.14	79.04	90.21	100.07	106.65
J8	20.28	35.36	45.59	56.64	72.08	84.97	97.25	107.89	115.28
J9	20.31	35.51	45.90	57.00	72.75	85.73	98.06	109.05	116.34
J10	20.30	35.75	46.24	57.46	73.49	86.59	99.34	110.48	117.90
J11	1.78	3.24	4.28	5.38	6.85	8.02	9.17	10.15	10.83
J12	2.83	5.29	7.06	8.96	11.52	13.56	15.58	17.30	18.51
J13	4.97	9.24	12.35	15.74	20.45	24.39	28.28	31.23	33.37
J14	1.79	3.41	4.60	5.87	7.59	8.98	10.35	11.52	12.35
O1	20.32	35.82	46.31	57.56	73.59	86.74	99.49	110.69	118.14
D3	12.56	23.26	30.96	39.58	51.19	60.13	68.44	75.61	80.77
D6	17.89	31.09	39.96	49.27	62.55	73.57	83.96	93.17	99.38
D11	1.95	3.52	4.63	5.80	7.39	8.65	9.90	10.96	11.70
D12	3.20	6.05	8.17	10.53	13.86	16.68	19.41	21.60	22.98
D13	5.34	9.82	13.08	16.59	21.48	25.54	29.56	32.78	35.06

Table 9 Estimated flows for hydraulic modeling (HEC-RAS)

			Return Period (year)	2	5	10	20	50	100	200	350	500
Stream	Reach	Nearest Cross Section	Distance from Ottawa Confluence (m)	Flow (cms)								
Becketts	Upper Reach	14118	14118	4.56	8.05	10.49	13.03	16.39	19.04	21.62	23.80	25.31
Becketts	Upper Reach	13583	13583	7.35	13.74	18.58	23.36	29.53	34.61	39.68	43.95	46.88
Becketts	Upper Reach	11571	11571	8.35	15.30	20.31	25.43	32.60	38.41	44.21	49.01	52.42
Becketts	Middle Reach	9463	9463	12.56	23.26	30.96	39.58	51.19	60.13	68.44	75.61	80.77
Becketts	Middle Reach	8127	8127	17.87	32.91	43.81	56.07	72.65	85.66	97.98	108.38	115.82
Becketts	Middle Reach	6190	6190	17.84	31.03	39.89	49.46	63.78	74.99	85.63	95.35	102.03
Becketts	Middle Reach	4475	4475	17.89	31.09	39.96	49.27	62.55	73.57	83.96	93.17	99.38
Becketts	Lower Reach	4057	4057	20.28	35.36	45.59	56.64	72.08	84.97	97.25	107.89	115.28
Becketts	Lower Reach	3575	3575	20.31	35.51	45.90	57.00	72.75	85.73	98.06	109.05	116.34
Becketts	Lower Reach	2607	2607	20.31	35.75	46.24	57.46	73.49	86.59	99.34	110.48	117.90
Becketts	Lower Reach	894	894	20.32	35.82	46.31	57.56	73.59	86.74	99.49	110.69	118.14
Becketts	Lower Reach	330	330	20.32	35.82	46.31	57.56	73.59	86.74	99.49	110.69	118.14
Tributary A	Main Reach	3470	3470	1.79	3.41	4.60	5.87	7.59	8.98	10.35	11.52	12.35
Tributary A	Main Reach	2962	2962	2.87	5.38	7.20	9.16	11.89	14.10	16.30	18.20	19.54
Tributary B	Main Reach	1836	1836	5.34	9.82	13.08	16.59	21.48	25.54	29.56	32.78	35.06
Tributary B1	North Reach	2883	2883	2.83	5.29	7.06	8.96	11.52	13.56	15.58	17.30	18.51
Tributary B1	North Reach	2536	2536	3.20	6.05	8.17	10.53	13.86	16.68	19.41	21.60	22.98
Tributary B2	South Reach	4290	4290	1.78	3.24	4.28	5.38	6.85	8.02	9.17	10.15	10.83
Tributary B2	South Reach	3919	3919	1.95	3.52	4.63	5.80	7.39	8.65	9.90	10.96	11.70

Table 10 Downstream boundary conditions at Ottawa River

Return Period (years)	Water Level in Ottawa River Cross Section 1003 (m)	Source
2	42.47	RVCA 2014 ¹
5	43.02	RVCA 2014 ¹
10	43.36	RVCA 2014 ¹
20	43.68	RVCA 2014 ¹
50	44.11	RVCA 2014 ¹
100	44.41	RVCA 2014 ¹
200	44.70	RVCA 2014 ¹
350	44.95	Interpolated
500	45.10	RVCA 2014 ¹

1) Ottawa River Flood Risk Mapping from Shirley's Bay to Cumberland, RVCA, October 2014.

Table 11 Structures on Becketts Creek

Stream	Location	Bridge or Culvert	Chainage (m)	Bounding Cross Sections	Width ¹ (m)	Height ¹ (m)	Length ² (m)	Upstream Invert ¹ (m)	Downstream Invert ¹ (m)	Upstream Obvert ¹ (m)	Downstream Obvert ¹ (m)	Source(s)
Becketts Creek	Sarsfield Road	C	13633	13643 & 13619	circular	2.70	19.00	77.61	77.24	80.31	79.94	RVCA Survey July 29th 2015, and City of Ottawa drawing: Sarsfield Road Culvert Replacement, Drawing # B89014001-002 Dillon Consulting. April 2007.
Becketts Creek	LaFleur Road	C	11667	11683 & 11646	circular	3.60	21.96	71.51	71.40	75.11	75.00	RVCA Survey July 29th 2015, and City of Ottawa drawing: LaFleur Road Culvert - Emergency Replacement, Drawing # B-901001-001 Harmer Podolak. January 2005.
Becketts Creek	Birchgrove Road	C	9525	9539 & 9511	5.00	3.33	16.57	67.05	66.97	70.38	70.30	RVCA Survey July 29th 2015, and City of Ottawa drawing: Birchgrove Road Bridge Culvert over Becketts Creek Replacement, Drawing # SN897180-001 AECOM. December 2014.
Becketts Creek	Etienne Road	B	8337	8344 & 8321	8.54	2.36	9.70	64.67	64.50	66.90	66.86	RVCA Survey July 29th 2015, and City of Ottawa drawing: Becketts Creek Bridge - Etienne Road, Drawing # 121-16917-00-897140-01 Genivar. June 2012
Becketts Creek	Birchgrove Road	B	8105	8114 & 8095	7.00	3.02	15.00	63.98	63.98	67.00	67.00	RVCA Survey July 29th 2015, and City of Ottawa drawing: Becketts Creek Bridge - Birchgrove Road, Drawing # 121-16917-00-897130-01 Genivar. June 2012
Becketts Creek	French Hill Road	C	6216	6228 & 6205	9.23	2.47	8.50	63.60	63.60	66.07	66.07	RVCA Survey July 29th 2015, and City of Ottawa drawing: French Hill Road - Becketts Creek Bridge, Drawing # B-89712002-002,-005 Harmer Podolak. March 2006.
Becketts Creek	Wilhaven Drive	B	2674	2683 & 2665	15.13	4.16	6.12	59.94	59.69	63.86	63.85	RVCA Survey July 29th 2015, and City of Ottawa drawing: Township Front Bridge Rehabilitation Wilhaven Drive, Drawing # B89716001-003 TSH Engineers. June 2008.
Becketts Creek	Old Montreal Road	C	979	997 & 960	circular	5.23	29.00	41.60	41.46	46.83	46.69	RVCA Survey July 29th 2015, and City of Ottawa drawing: Beckett's Creek Culvert Replacement, Drawing # B89711002-003,-004 Dillon Consulting. July 2012.
Becketts Creek	RR174	C	429	456 & 397	7.00	4.46	53.20	41.98	41.59	46.44	46.05	City of Ottawa drawing: Becketts Creek OR174 Culvert, Drawing # 121-16917-00-897150-01 Genivar. June 2012
Tributary A	Sarsfield Road	C	3022	3031 & 3012	circular	1.85	15.30	83.41	83.48	85.26	85.33	RVCA Survey July 29th 2015, and City of Ottawa drawing: Culvert Replacement Cumberland Culverts, Drawing # SN890110-16 CIMA. September 2016.
Tributary A	Emmett Road	C	451	457 & 445	circular	1.90	9.20	65.93	65.87	67.83	67.77	RVCA Survey July 29th 2015
Tributary B	Birchgrove Road	C	138	150 & 129	6.00	2.10	17.56	64.79	64.80	66.89	66.90	RVCA Survey July 29th 2015, and City of Ottawa drawing: Birchgrove Road Bridge - Bridge Renewal, Drawing # SN897060-004 J.L. Richards. January 2014.
Tributary B1	Sarsfield Road	C	2670	2692 & 2650	circular	2.00	27.70	78.23	78.15	80.23	80.15	RVCA Survey May 14th 2013
Tributary B2	Sarsfield Road	C	4106	4121 & 4090	circular	1.80	23.05	79.14	79.13	80.94	80.93	RVCA Survey July 29th 2015

1) RVCA Surveys 2013/2015 as well as design drawings

2) From DRAPE imagery as well as GPS coordinates from RVCA Survey 2013/2015

Table 12 Calculated head loss at road crossings (during 1:100 Year flood)

Stream	Location	Chainage (m)	Bounding Cross Sections	Upstream Energy Grade (m)	Downstream Energy Grade (m)	Head Loss (cm)	Road Overtopped
Becketts Creek	RR174	429	456 & 397	46.87	44.74	213	No
Becketts Creek	Old Montreal Drive	979	997 & 960	51.37	47.22	415	Yes
Becketts Creek	Wilhaven Drive	2674	2683 & 2665	63.27	63.19	8	No
Becketts Creek	French Hill Road	6216	6228 & 6205	66.62	66.61	1	Yes
Becketts Creek	Birchgrove Road	8105	8114 & 8095	68.13	67.54	59	Yes
Becketts Creek	Étienne Road	8337	8344 & 8321	68.30	68.27	3	Yes
Becketts Creek	Birchgrove Road	9525	9539 & 9511	70.97	69.89	108	Yes
Becketts Creek	Lafleur Road	11667	11683 & 11646	75.91	74.08	183	No
Becketts Creek	Sarsfield Road	13633	13643 & 13619	81.64	80.32	132	No
Tributary A	Emmett Road	451	457 & 445	68.06	67.89	17	Yes
Tributary A	Sarsfield Road	3022	3031 & 3012	85.82	85.13	69	No
Tributary B	Birchgrove Road	138	150 & 129	68.22	68.20	2	Yes
Tributary B1	Sarsfield Road	2670	2692 & 2650	82.40	80.59	181	No
Tributary B2	Sarsfield Road	4106	4121 & 4090	81.87	80.70	117	No

Table 13 Regulatory Flood Levels for 100 Year Flood Event

River	Reach	Xsec ID #	Q (total) (cms)	Computed WSEL (m)	EGL (m)	RFL (m)	
Becketts Creek	Lower Reach	0	86.74	44.44	44.46	44.46	
	Lower Reach	170	86.74	44.47	44.48	44.48	
	Lower Reach	330	86.74	44.49	44.51	44.51	
	Lower Reach	389	86.74	44.41	44.59	44.59	
	Lower Reach	397	86.74	44.3	44.74	44.74	
	Lower Reach	429	RR174				
	Lower Reach	456	86.74	46.84	46.87	46.87	
	Lower Reach	467	86.74	46.85	46.87	46.87	
	Lower Reach	574	86.74	46.86	46.89	46.89	
	Lower Reach	710	86.74	46.89	46.91	46.91	
	Lower Reach	894	86.74	46.91	46.94	46.94	
	Lower Reach	953	86.59	46.92	46.95	46.95	
	Lower Reach	960	86.59	46.65	47.22	47.22	
	Lower Reach	979	Old Montreal Drive				
	Lower Reach	997	86.59	51.37	51.37	51.37	
	Lower Reach	1002	86.59	51.37	51.37	51.37	
	Lower Reach	1090	86.59	51.37	51.38	51.38	
	Lower Reach	1244	86.59	51.37	51.38	51.38	
	Lower Reach	1266	86.59	51.37	51.38	51.38	
	Lower Reach	1298	86.59	51.34	51.4	51.4	
	Lower Reach	1326	86.59	50.94	51.59	51.59	
	Lower Reach	1359	86.59	53.09	53.76	53.76	
	Lower Reach	1416	86.59	53.83	54.2	54.2	
	Lower Reach	1430	86.59	54.01	54.26	54.26	
	Lower Reach	1452	86.59	54.12	54.32	54.32	
	Lower Reach	1475	86.59	54.2	54.37	54.37	
	Lower Reach	1493	86.59	54.27	54.4	54.4	
	Lower Reach	1560	86.59	54.38	54.47	54.47	
	Lower Reach	1625	86.59	54.46	54.53	54.53	
	Lower Reach	1675	86.59	54.53	54.55	54.55	
	Lower Reach	1787	86.59	54.5	54.66	54.66	
	Lower Reach	1855	86.59	54.67	54.78	54.78	
	Lower Reach	1913	86.59	54.79	54.84	54.84	
	Lower Reach	1929	86.59	54.8	54.86	54.86	
	Lower Reach	1948	86.59	54.83	55.21	55.21	
	Lower Reach	2088	86.59	57.88	58.48	58.48	
	Lower Reach	2147	86.59	60.84	61.51	61.51	
	Lower Reach	2176	86.59	61.27	61.86	61.86	
	Lower Reach	2195	86.59	61.44	62.13	62.13	
	Lower Reach	2218	86.59	61.98	62.31	62.31	
	Lower Reach	2236	86.59	62.05	62.38	62.38	
	Lower Reach	2267	86.59	62.25	62.48	62.48	
Lower Reach	2287	86.59	62.27	62.55	62.55		
Lower Reach	2319	86.59	62.54	62.62	62.62		
Lower Reach	2351	86.59	62.47	62.72	62.72		
Lower Reach	2376	86.59	62.54	62.8	62.8		
Lower Reach	2393	86.59	62.59	62.85	62.85		
Lower Reach	2408	86.59	62.72	62.89	62.89		
Lower Reach	2426	86.59	62.75	62.93	62.93		

River	Reach	Xsec ID #	Q (total) (cms)	Computed WSEL (m)	EGL (m)	RFL (m)	
Becketts Creek	Lower Reach	2530	86.59	62.97	63.06	63.06	
	Lower Reach	2607	86.59	63.03	63.11	63.11	
	Lower Reach	2654	85.73	63.05	63.14	63.14	
	Lower Reach	2665	85.73	63.03	63.19	63.19	
	Lower Reach	2674	Wilhaven Drive				
	Lower Reach	2683	85.73	63.19	63.27	63.27	
	Lower Reach	2695	85.73	63.23	63.28	63.28	
	Lower Reach	2736	85.73	63.2	63.32	63.32	
	Lower Reach	2826	85.73	63.34	63.39	63.39	
	Lower Reach	2839	85.73	62.83	63.67	63.67	
	Lower Reach	2855	85.73	63.21	63.94	63.94	
	Lower Reach	2870	85.73	63.62	64.08	64.08	
	Lower Reach	2937	85.73	64.16	64.26	64.26	
	Lower Reach	3008	85.73	64.26	64.32	64.32	
	Lower Reach	3099	85.73	64.34	64.36	64.36	
	Lower Reach	3128	85.73	64.35	64.36	64.36	
	Lower Reach	3194	85.73	64.22	64.46	64.46	
	Lower Reach	3252	85.73	64.41	64.67	64.67	
	Lower Reach	3299	85.73	64.72	64.76	64.76	
	Lower Reach	3353	85.73	64.76	64.78	64.78	
	Lower Reach	3426	85.73	64.79	64.81	64.81	
	Lower Reach	3575	85.73	64.84	64.89	64.89	
	Lower Reach	3728	84.97	64.92	64.94	64.94	
	Lower Reach	3825	84.97	64.94	64.96	64.96	
	Lower Reach	3906	84.97	64.94	65.03	65.03	
	Lower Reach	3939	84.97	64.99	65.06	65.06	
	Lower Reach	3985	84.97	65.02	65.59	65.59	
	Lower Reach	4023	84.97	65.6	65.8	65.8	
	Lower Reach	4057	84.97	65.75	65.88	65.88	
	Middle Reach	4475	73.57	66.19	66.24	66.24	
	Middle Reach	5132	74.99	66.41	66.43	66.43	
	Middle Reach	5971	74.99	66.54	66.56	66.56	
	Middle Reach	6190	74.99	66.59	66.6	66.6	
	Middle Reach	6205	85.66	66.6	66.61	66.61	
	Middle Reach	6216	French Hill Road				
	Middle Reach	6228	85.66	66.61	66.62	66.62	
	Middle Reach	6242	85.66	66.6	66.64	66.64	
	Middle Reach	6474	85.66	66.79	66.84	66.84	
	Middle Reach	7188	85.66	67.14	67.15	67.15	
	Middle Reach	7862	85.66	67.33	67.35	67.35	
	Middle Reach	8079	85.66	67.44	67.47	67.47	
	Middle Reach	8091	85.66	67.47	67.5	67.5	
Middle Reach	8095	85.66	67.44	67.54	67.54		
Middle Reach	8105	Birchgrove Road					
Middle Reach	8114	85.66	68.06	68.13	68.13		
Middle Reach	8119	85.66	68.04	68.15	68.15		
Middle Reach	8127	85.66	68.03	68.17	68.17		
Upper Reach	8248	60.13	68.24	68.25	68.25		
Upper Reach	8311	60.13	68.26	68.26	68.26		
Upper Reach	8321	60.13	68.26	68.27	68.27		

River	Reach	Xsec ID #	Q (total) (cms)	Computed WSEL (m)	EGL (m)	RFL (m)
Becketts Creek	Upper Reach	8337	Étienne Road			
	Upper Reach	8344	60.13	68.3	68.3	68.3
	Upper Reach	8352	60.13	68.3	68.3	68.3
	Upper Reach	8836	60.13	68.35	68.36	68.36
	Upper Reach	9463	60.13	69.34	69.66	69.66
	Upper Reach	9511	38.41	69.62	69.89	69.89
	Upper Reach	9525	Birchgrove Road			
	Upper Reach	9539	38.41	70.92	70.97	70.97
	Upper Reach	9569	38.41	70.97	70.98	70.98
	Upper Reach	9880	38.41	71.02	71.05	71.05
	Upper Reach	9966	38.41	71.04	71.08	71.08
	Upper Reach	10028	38.41	71.07	71.11	71.11
	Upper Reach	10142	38.41	71.14	71.18	71.18
	Upper Reach	10274	38.41	71.22	71.29	71.29
	Upper Reach	10400	38.41	71.37	71.44	71.44
	Upper Reach	10528	38.41	71.51	71.58	71.58
	Upper Reach	10621	38.41	71.64	71.8	71.8
	Upper Reach	10668	38.41	71.88	72.01	72.01
	Upper Reach	10757	38.41	72.15	72.21	72.21
	Upper Reach	10898	38.41	72.37	72.5	72.5
	Upper Reach	11060	38.41	72.7	72.8	72.8
	Upper Reach	11191	38.41	72.9	73.06	73.06
	Upper Reach	11291	38.41	73.15	73.22	73.22
	Upper Reach	11352	38.41	73.2	73.3	73.3
	Upper Reach	11492	38.41	73.37	73.47	73.47
	Upper Reach	11571	38.41	73.39	73.7	73.7
	Upper Reach	11642	34.61	73.79	73.95	73.95
	Upper Reach	11646	34.61	73.69	74.08	74.08
	Upper Reach	11667	Lafleur Road			
	Upper Reach	11683	34.61	75.89	75.91	75.91
	Upper Reach	11695	34.61	75.9	75.92	75.92
	Upper Reach	11866	34.61	75.92	75.93	75.93
	Upper Reach	12078	34.61	75.93	75.95	75.95
	Upper Reach	12185	34.61	75.94	75.97	75.97
	Upper Reach	12297	34.61	75.98	76.03	76.03
	Upper Reach	12345	34.61	76.03	76.06	76.06
	Upper Reach	12372	34.61	76.01	76.11	76.11
	Upper Reach	12407	34.61	76.75	77.31	77.31
	Upper Reach	12431	34.61	77.35	77.42	77.42
	Upper Reach	12470	34.61	77.41	77.48	77.48
	Upper Reach	12510	34.61	77.31	77.66	77.66
	Upper Reach	12565	34.61	77.74	77.81	77.81
Upper Reach	12708	34.61	77.91	78	78	
Upper Reach	12858	34.61	78.13	78.26	78.26	
Upper Reach	12976	34.61	78.38	78.49	78.49	
Upper Reach	13076	34.61	78.61	78.79	78.79	
Upper Reach	13261	34.61	79.08	79.16	79.16	
Upper Reach	13380	34.61	79.22	79.38	79.38	
Upper Reach	13449	34.61	79.44	79.61	79.61	
Upper Reach	13583	34.61	79.97	80.16	80.16	

River	Reach	Xsec ID #	Q (total) (cms)	Computed WSEL (m)	EGL (m)	RFL (m)
Becketts Creek	Upper Reach	13614	19.04	80.19	80.23	80.23
	Upper Reach	13619	19.04	80.11	80.32	80.32
	Upper Reach	13633	Sarsfield Road			
	Upper Reach	13643	19.04	81.6	81.64	81.64
	Upper Reach	13647	19.04	81.64	81.65	81.65
	Upper Reach	13664	19.04	81.64	81.65	81.65
	Upper Reach	13904	19.04	81.68	81.7	81.7
	Upper Reach	14118	19.04	81.73	81.8	81.8
Tributary A	Main Reach	32	14.1	65.9	65.91	65.91
	Main Reach	126	14.1	65.92	65.94	65.94
	Main Reach	163	14.1	65.94	65.98	65.98
	Main Reach	226	14.1	66.03	66.08	66.08
	Main Reach	302	14.1	66.22	66.39	66.39
	Main Reach	318	14.1	66.36	66.46	66.46
	Main Reach	337	14.1	66.41	66.54	66.54
	Main Reach	406	14.1	66.89	67.12	67.12
	Main Reach	442	14.1	67.37	67.55	67.55
	Main Reach	445	14.1	67.29	67.89	67.89
	Main Reach	451	Emmett Road			
	Main Reach	457	14.1	68.05	68.06	68.06
	Main Reach	460	14.1	68.05	68.07	68.07
	Main Reach	527	14.1	68.08	68.14	68.14
	Main Reach	650	14.1	68.38	68.48	68.48
	Main Reach	869	14.1	69.21	69.37	69.37
	Main Reach	1116	14.1	70.97	71.31	71.31
	Main Reach	1384	14.1	72.72	72.86	72.86
	Main Reach	1424	14.1	72.83	73.07	73.07
	Main Reach	1455	14.1	73.03	73.33	73.33
	Main Reach	1558	14.1	74.05	74.39	74.39
	Main Reach	1584	14.1	74.34	74.77	74.77
	Main Reach	1636	14.1	74.98	75.1	75.1
	Main Reach	1715	14.1	75.27	75.39	75.39
	Main Reach	1755	14.1	75.44	75.67	75.67
	Main Reach	1790	14.1	75.76	75.91	75.91
	Main Reach	1890	14.1	76.29	76.47	76.47
	Main Reach	1919	14.1	76.47	76.58	76.58
	Main Reach	1960	14.1	76.55	76.72	76.72
	Main Reach	2025	14.1	76.84	77.01	77.01
	Main Reach	2075	14.1	77.13	77.38	77.38
	Main Reach	2142	14.1	77.65	77.77	77.77
	Main Reach	2171	14.1	77.77	77.92	77.92
	Main Reach	2219	14.1	78	78.45	78.45
	Main Reach	2238	14.1	78.5	78.55	78.55
	Main Reach	2260	14.1	78.44	78.65	78.65
Main Reach	2314	14.1	78.81	78.94	78.94	
Main Reach	2372	14.1	79.03	79.27	79.27	
Main Reach	2440	14.1	80.47	80.76	80.76	
Main Reach	2489	14.1	81.01	81.1	81.1	
Main Reach	2538	14.1	81.19	81.28	81.28	
Main Reach	2595	14.1	81.46	81.79	81.79	

River	Reach	Xsec ID #	Q (total) (cms)	Computed WSEL (m)	EGL (m)	RFL (m)	
Tributary A	Main Reach	2658	14.1	81.93	81.98	81.98	
	Main Reach	2682	14.1	82.21	82.53	82.53	
	Main Reach	2720	14.1	82.67	82.76	82.76	
	Main Reach	2764	14.1	82.79	82.82	82.82	
	Main Reach	2832	14.1	82.77	83.18	83.18	
	Main Reach	2866	14.1	83.32	83.65	83.65	
	Main Reach	2891	14.1	83.72	83.83	83.83	
	Main Reach	2911	14.1	83.81	84.12	84.12	
	Main Reach	2936	14.1	84.14	84.33	84.33	
	Main Reach	2962	14.1	84.28	84.49	84.49	
	Main Reach	3006	8.98	84.6	84.66	84.66	
	Main Reach	3012	8.98	84.56	85.13	85.13	
	Main Reach	3022	Sarsfield Road				
	Main Reach	3031	8.98	85.78	85.82	85.82	
	Main Reach	3034	8.98	85.81	85.82	85.82	
	Main Reach	3244	8.98	85.81	85.93	85.93	
	Main Reach	3297	8.98	86.14	86.44	86.44	
	Main Reach	3341	8.98	86.64	86.77	86.77	
	Main Reach	3395	8.98	87.31	87.52	87.52	
	Main Reach	3470	8.98	88.02	88.13	88.13	
Tributary B	Main Reach	13	25.54	68.18	68.19	68.19	
	Main Reach	86	25.54	68.19	68.2	68.2	
	Main Reach	123	25.54	68.19	68.2	68.2	
	Main Reach	129	25.54	68.19	68.2	68.2	
	Main Reach	138	Birchgrove Road				
	Main Reach	150	25.54	68.21	68.22	68.22	
	Main Reach	152	25.54	68.21	68.22	68.22	
	Main Reach	206	25.54	68.21	68.22	68.22	
	Main Reach	309	25.54	68.23	68.24	68.24	
	Main Reach	482	25.54	68.28	68.29	68.29	
	Main Reach	672	25.54	68.35	68.4	68.4	
	Main Reach	772	25.54	68.49	68.57	68.57	
	Main Reach	880	25.54	68.75	68.93	68.93	
	Main Reach	1153	25.54	69.61	69.68	69.68	
	Main Reach	1334	25.54	69.91	69.98	69.98	
	Main Reach	1659	25.54	70.4	70.44	70.44	
Main Reach	1836	25.54	70.68	70.76	70.76		
Tributary B1	North Reach	12	16.68	70.71	70.79	70.79	
	North Reach	70	16.68	70.86	70.9	70.9	
	North Reach	132	16.68	70.95	70.98	70.98	
	North Reach	250	16.68	71.19	71.31	71.31	
	North Reach	411	16.68	72.34	72.46	72.46	
	North Reach	520	16.68	73.26	73.43	73.43	
	North Reach	609	16.68	73.75	73.87	73.87	
	North Reach	625	16.68	73.8	73.93	73.93	
	North Reach	643	16.68	73.9	74	74	
	North Reach	722	16.68	74.12	74.23	74.23	
	North Reach	800	16.68	74.39	74.57	74.57	
	North Reach	831	16.68	74.54	74.85	74.85	
	North Reach	877	16.68	75.03	75.16	75.16	

River	Reach	Xsec ID #	Q (total) (cms)	Computed WSEL (m)	EGL (m)	RFL (m)	
Tributary B1	North Reach	970	16.68	75.45	75.61	75.61	
	North Reach	1056	16.68	75.85	75.92	75.92	
	North Reach	1159	16.68	76.07	76.15	76.15	
	North Reach	1241	16.68	76.24	76.31	76.31	
	North Reach	1311	16.68	76.38	76.45	76.45	
	North Reach	1440	16.68	76.59	76.63	76.63	
	North Reach	1524	16.68	76.67	76.88	76.88	
	North Reach	1602	16.68	77.21	77.38	77.38	
	North Reach	1731	16.68	77.78	77.85	77.85	
	North Reach	1815	16.68	78.04	78.13	78.13	
	North Reach	1906	16.68	78.33	78.4	78.4	
	North Reach	2073	16.68	78.71	78.77	78.77	
	North Reach	2232	16.68	79.06	79.19	79.19	
	North Reach	2536	16.68	79.97	80.04	80.04	
	North Reach	2630	13.56	80.24	80.34	80.34	
	North Reach	2650	13.56	80.22	80.59	80.59	
	North Reach	2670	Sarsfield Road				
	North Reach	2692	13.56	82.39	82.4	82.4	
	North Reach	2720	13.56	82.4	82.4	82.4	
	North Reach	2761	13.56	82.4	82.4	82.4	
North Reach	2883	13.56	82.4	82.41	82.41		
Tributary B2	South Reach	1881	8.65	70.82	70.83	70.83	
	South Reach	1929	8.65	70.84	70.86	70.86	
	South Reach	1985	8.65	70.88	70.92	70.92	
	South Reach	2006	8.65	70.92	71.06	71.06	
	South Reach	2024	8.65	71.14	71.28	71.28	
	South Reach	2035	8.65	71.28	71.53	71.53	
	South Reach	2067	8.65	71.69	71.88	71.88	
	South Reach	2085	8.65	71.88	72	72	
	South Reach	2095	8.65	71.96	72.06	72.06	
	South Reach	2115	8.65	72.07	72.13	72.13	
	South Reach	2192	8.65	72.25	72.44	72.44	
	South Reach	2239	8.65	72.56	72.6	72.6	
	South Reach	2286	8.65	72.62	72.71	72.71	
	South Reach	2363	8.65	73.02	73.11	73.11	
	South Reach	2420	8.65	73.43	73.49	73.49	
	South Reach	2468	8.65	73.6	73.64	73.64	
	South Reach	2534	8.65	73.77	73.84	73.84	
	South Reach	2624	8.65	73.97	74	74	
	South Reach	2655	8.65	73.96	74.1	74.1	
	South Reach	2681	8.65	74.19	74.34	74.34	
	South Reach	2703	8.65	74.36	74.57	74.57	
	South Reach	2751	8.65	74.99	75.19	75.19	
	South Reach	2797	8.65	75.53	75.66	75.66	
	South Reach	2808	8.65	75.6	75.72	75.72	
	South Reach	2826	8.65	75.72	75.78	75.78	
	South Reach	2860	8.65	75.79	75.89	75.89	
	South Reach	2988	8.65	76.22	76.28	76.28	
South Reach	3343	8.65	77.28	77.37	77.37		
South Reach	3635	8.65	78.45	78.53	78.53		

River	Reach	Xsec ID #	Q (total) (cms)	Computed WSEL (m)	EGL (m)	RFL (m)
Tributary B2	South Reach	3919	8.65	79.63	79.77	79.77
	South Reach	4075	8.02	80.48	80.56	80.56
	South Reach	4090	8.02	80.48	80.7	80.7
	South Reach	4106	Sarsfield Road			
	South Reach	4121	8.02	81.86	81.87	81.87
	South Reach	4147	8.02	81.86	81.88	81.88
	South Reach	4206	8.02	81.88	81.89	81.89
	South Reach	4290	8.02	81.91	81.92	81.92

Table 14 Flows and computed water levels for the 2, 5, 10, and 20 year flood events

River	Reach	Xsec ID	Flow (m ³ /s) and Computed WSEL (m) for Different Flood Events							
			Q2	WL2	Q5	WL5	Q10	WL10	Q20	WL20
Becketts Creek	Lower Reach	0	20.32	42.47	35.82	43.02	46.31	43.36	57.56	43.68
	Lower Reach	170	20.32	42.57	35.82	43.08	46.31	43.41	57.56	43.72
	Lower Reach	330	20.32	42.72	35.82	43.15	46.31	43.45	57.56	43.75
	Lower Reach	389	20.32	42.79	35.82	43.14	46.31	43.42	57.56	43.7
	Lower Reach	397	20.32	42.8	35.82	43.12	46.31	43.37	57.56	43.64
	Lower Reach	429	RR174							
	Lower Reach	456	20.32	43.73	35.82	44.56	46.31	45.07	57.56	45.58
	Lower Reach	467	20.32	43.73	35.82	44.56	46.31	45.07	57.56	45.58
	Lower Reach	574	20.32	43.79	35.82	44.59	46.31	45.09	57.56	45.6
	Lower Reach	710	20.32	43.89	35.82	44.65	46.31	45.14	57.56	45.64
	Lower Reach	894	20.32	44.03	35.82	44.75	46.31	45.2	57.56	45.68
	Lower Reach	953	20.31	44.1	35.75	44.81	46.24	45.24	57.46	45.71
	Lower Reach	960	20.31	44.02	35.75	44.66	46.24	45.06	57.46	45.5
	Lower Reach	979	Old Montreal Drive							
	Lower Reach	997	20.31	45.64	35.75	46.88	46.24	47.86	57.46	49.21
	Lower Reach	1002	20.31	45.65	35.75	46.89	46.24	47.87	57.46	49.21
	Lower Reach	1090	20.31	45.65	35.75	46.89	46.24	47.87	57.46	49.21
	Lower Reach	1244	20.31	45.67	35.75	46.91	46.24	47.88	57.46	49.22
	Lower Reach	1266	20.31	45.86	35.75	46.88	46.24	47.87	57.46	49.22
	Lower Reach	1298	20.31	46.19	35.75	46.8	46.24	47.81	57.46	49.18
	Lower Reach	1326	20.31	49.29	35.75	49.73	46.24	49.96	57.46	50.18
	Lower Reach	1359	20.31	52.16	35.75	52.45	46.24	52.6	57.46	52.75
	Lower Reach	1416	20.31	52.75	35.75	53.08	46.24	53.27	57.46	53.44
	Lower Reach	1430	20.31	52.82	35.75	53.18	46.24	53.38	57.46	53.57
	Lower Reach	1452	20.31	52.9	35.75	53.28	46.24	53.49	57.46	53.68
	Lower Reach	1475	20.31	52.95	35.75	53.34	46.24	53.55	57.46	53.75
	Lower Reach	1493	20.31	52.99	35.75	53.39	46.24	53.61	57.46	53.81
	Lower Reach	1560	20.31	53.06	35.75	53.48	46.24	53.7	57.46	53.91
	Lower Reach	1625	20.31	53.14	35.75	53.56	46.24	53.78	57.46	53.99
	Lower Reach	1675	20.31	53.18	35.75	53.6	46.24	53.83	57.46	54.04
	Lower Reach	1787	20.31	53.16	35.75	53.57	46.24	53.79	57.46	54.01
	Lower Reach	1855	20.31	53.44	35.75	53.83	46.24	54.02	57.46	54.21
	Lower Reach	1913	20.31	53.6	35.75	53.97	46.24	54.16	57.46	54.35
	Lower Reach	1929	20.31	53.65	35.75	54	46.24	54.18	57.46	54.36
	Lower Reach	1948	20.31	53.98	35.75	54.23	46.24	54.39	57.46	54.55
	Lower Reach	2088	20.31	57.1	35.75	57.32	46.24	57.45	57.46	57.58
	Lower Reach	2147	20.31	59.92	35.75	60.18	46.24	60.33	57.46	60.48
	Lower Reach	2176	20.31	60.36	35.75	60.62	46.24	60.77	57.46	60.92
	Lower Reach	2195	20.31	60.61	35.75	60.89	46.24	60.98	57.46	61.09
	Lower Reach	2218	20.31	60.81	35.75	61.16	46.24	61.36	57.46	61.56
Lower Reach	2236	20.31	60.9	35.75	61.26	46.24	61.45	57.46	61.64	
Lower Reach	2267	20.31	61.02	35.75	61.4	46.24	61.61	57.46	61.81	
Lower Reach	2287	20.31	61.04	35.75	61.4	46.24	61.61	57.46	61.82	
Lower Reach	2319	20.31	61.23	35.75	61.63	46.24	61.86	57.46	62.07	
Lower Reach	2351	20.31	61.21	35.75	61.59	46.24	61.81	57.46	62.01	
Lower Reach	2376	20.31	61.31	35.75	61.7	46.24	61.91	57.46	62.11	
Lower Reach	2393	20.31	61.35	35.75	61.75	46.24	61.96	57.46	62.15	
Lower Reach	2408	20.31	61.39	35.75	61.82	46.24	62.06	57.46	62.26	
Lower Reach	2426	20.31	61.44	35.75	61.86	46.24	62.09	57.46	62.29	
Lower Reach	2530	20.31	61.55	35.75	62.03	46.24	62.27	57.46	62.49	
Lower Reach	2607	20.31	61.6	35.75	62.09	46.24	62.34	57.46	62.55	

River	Reach	Xsec ID	Flow (m ³ /s) and Computed WSEL (m) for Different Flood Events							
			Q2	WL2	Q5	WL5	Q10	WL10	Q20	WL20
Becketts Creek	Lower Reach	2654	20.31	61.62	35.5	62.11	45.9	62.36	57	62.57
	Lower Reach	2665	20.31	61.62	35.5	62.11	45.9	62.35	57	62.56
	Lower Reach	2674	Wilhaven Drive							
	Lower Reach	2683	20.31	61.65	35.5	62.16	45.9	62.42	57	62.66
	Lower Reach	2695	20.31	61.67	35.5	62.18	45.9	62.45	57	62.69
	Lower Reach	2736	20.31	61.66	35.5	62.17	45.9	62.43	57	62.66
	Lower Reach	2826	20.31	61.8	35.5	62.31	45.9	62.57	57	62.81
	Lower Reach	2839	20.31	61.94	35.5	62.29	45.9	62.46	57	62.61
	Lower Reach	2855	20.31	62.22	35.5	62.48	45.9	62.66	57	62.83
	Lower Reach	2870	20.31	62.45	35.5	62.82	45.9	63.01	57	63.2
	Lower Reach	2937	20.31	62.82	35.5	63.21	45.9	63.43	57	63.65
	Lower Reach	3008	20.31	62.93	35.5	63.31	45.9	63.54	57	63.76
	Lower Reach	3099	20.31	62.99	35.5	63.38	45.9	63.6	57	63.83
	Lower Reach	3128	20.31	63	35.5	63.39	45.9	63.61	57	63.84
	Lower Reach	3194	20.31	62.93	35.5	63.22	45.9	63.4	57	63.66
	Lower Reach	3252	20.31	63.42	35.5	63.74	45.9	63.92	57	64.05
	Lower Reach	3299	20.31	63.53	35.5	63.9	45.9	64.11	57	64.28
	Lower Reach	3353	20.31	63.62	35.5	63.97	45.9	64.16	57	64.33
	Lower Reach	3426	20.31	63.65	35.5	64	45.9	64.2	57	64.37
	Lower Reach	3575	20.31	63.78	35.5	64.1	45.9	64.28	57	64.44
	Lower Reach	3728	20.28	63.85	35.36	64.18	45.59	64.36	56.64	64.53
	Lower Reach	3825	20.28	63.85	35.36	64.2	45.59	64.38	56.64	64.54
	Lower Reach	3906	20.28	63.89	35.36	64.22	45.59	64.4	56.64	64.55
	Lower Reach	3939	20.28	63.92	35.36	64.26	45.59	64.45	56.64	64.61
	Lower Reach	3985	20.28	63.79	35.36	64.18	45.59	64.37	56.64	64.54
	Lower Reach	4023	20.28	64.3	35.36	64.75	45.59	64.98	56.64	65.2
	Lower Reach	4057	20.28	64.37	35.36	64.83	45.59	65.06	56.64	65.3
	Middle Reach	4475	17.89	64.91	31.09	65.4	39.96	65.62	49.27	65.81
	Middle Reach	5132	17.84	65.09	31.03	65.57	39.89	65.81	49.46	66.01
	Middle Reach	5971	17.84	65.26	31.03	65.71	39.89	65.94	49.46	66.16
	Middle Reach	6190	17.84	65.36	31.03	65.78	39.89	66	49.46	66.22
	Middle Reach	6205	17.87	65.35	32.91	65.72	43.81	66	56.07	66.22
	Middle Reach	6216	French Hill Road							
	Middle Reach	6228	17.87	65.39	32.91	65.86	43.81	66.16	56.07	66.28
	Middle Reach	6242	17.87	65.4	32.91	65.97	43.81	66.14	56.07	66.27
	Middle Reach	6474	17.87	65.88	32.91	66.22	43.81	66.37	56.07	66.5
	Middle Reach	7188	17.87	66.33	32.91	66.62	43.81	66.76	56.07	66.89
	Middle Reach	7862	17.87	66.56	32.91	66.85	43.81	66.97	56.07	67.09
	Middle Reach	8079	17.87	66.64	32.91	66.97	43.81	67.1	56.07	67.21
	Middle Reach	8091	17.87	66.65	32.91	67.01	43.81	67.16	56.07	67.25
	Middle Reach	8095	17.87	66.64	32.91	66.98	43.81	67.1	56.07	67.12
	Middle Reach	8105	Birchgrove Road							
Middle Reach	8114	17.87	66.67	32.91	67.06	43.81	67.42	56.07	67.72	
Middle Reach	8119	17.87	66.67	32.91	67.08	43.81	67.49	56.07	67.71	
Middle Reach	8127	17.87	66.66	32.91	67.06	43.81	67.48	56.07	67.7	
Upper Reach	8248	12.56	66.81	23.26	67.3	30.96	67.65	39.58	67.87	
Upper Reach	8311	12.56	66.9	23.26	67.35	30.96	67.67	39.58	67.89	
Upper Reach	8321	12.56	66.91	23.26	67.35	30.96	67.67	39.58	67.89	
Upper Reach	8337	Étienne Road								
Upper Reach	8344	12.56	66.94	23.26	67.47	30.96	67.78	39.58	67.92	
Upper Reach	8352	12.56	66.94	23.26	67.49	30.96	67.78	39.58	67.92	
Upper Reach	8836	12.56	67.37	23.26	67.66	30.96	67.87	39.58	68.01	

River	Reach	Xsec ID	Flow (m ³ /s) and Computed WSEL (m) for Different Flood Events							
			Q2	WL2	Q5	WL5	Q10	WL10	Q20	WL20
Becketts Creek	Upper Reach	9463	12.56	68.63	23.26	68.89	30.96	68.75	39.58	69.04
	Upper Reach	9511	8.35	68.78	15.3	69.13	20.31	69.36	25.43	69.49
	Upper Reach	9525	Birchgrove Road							
	Upper Reach	9539	8.35	68.89	15.3	69.42	20.31	69.79	25.43	70.12
	Upper Reach	9569	8.35	68.93	15.3	69.47	20.31	69.85	25.43	70.18
	Upper Reach	9880	8.35	69.45	15.3	69.76	20.31	70.01	25.43	70.29
	Upper Reach	9966	8.35	69.55	15.3	69.84	20.31	70.07	25.43	70.33
	Upper Reach	10028	8.35	69.69	15.3	69.96	20.31	70.15	25.43	70.38
	Upper Reach	10142	8.35	69.89	15.3	70.18	20.31	70.36	25.43	70.54
	Upper Reach	10274	8.35	70.14	15.3	70.39	20.31	70.55	25.43	70.71
	Upper Reach	10400	8.35	70.45	15.3	70.69	20.31	70.83	25.43	70.96
	Upper Reach	10528	8.35	70.61	15.3	70.87	20.31	71.02	25.43	71.15
	Upper Reach	10621	8.35	71.08	15.3	71.18	20.31	71.25	25.43	71.31
	Upper Reach	10668	8.35	71.37	15.3	71.54	20.31	71.64	25.43	71.72
	Upper Reach	10757	8.35	71.5	15.3	71.71	20.31	71.82	25.43	71.93
	Upper Reach	10898	8.35	71.67	15.3	71.89	20.31	72.02	25.43	72.13
	Upper Reach	11060	8.35	71.87	15.3	72.14	20.31	72.29	25.43	72.42
	Upper Reach	11191	8.35	72.01	15.3	72.3	20.31	72.46	25.43	72.6
	Upper Reach	11291	8.35	72.16	15.3	72.48	20.31	72.65	25.43	72.81
	Upper Reach	11352	8.35	72.2	15.3	72.52	20.31	72.7	25.43	72.86
	Upper Reach	11492	8.35	72.34	15.3	72.68	20.31	72.87	25.43	73.03
	Upper Reach	11571	8.35	72.37	15.3	72.71	20.31	72.9	25.43	73.07
	Upper Reach	11642	7.34	72.73	13.74	73.1	18.58	73.28	23.36	73.44
	Upper Reach	11646	7.34	72.73	13.74	73.08	18.58	73.25	23.36	73.39
	Upper Reach	11667	Lafleur Road							
	Upper Reach	11683	7.34	73.26	13.74	74	18.58	74.48	23.36	74.91
	Upper Reach	11695	7.34	73.28	13.74	74.01	18.58	74.49	23.36	74.92
	Upper Reach	11866	7.34	73.33	13.74	74.04	18.58	74.51	23.36	74.95
	Upper Reach	12078	7.34	73.47	13.74	74.09	18.58	74.54	23.36	74.97
	Upper Reach	12185	7.34	73.92	13.74	74.22	18.58	74.59	23.36	74.99
	Upper Reach	12297	7.34	74.48	13.74	74.72	18.58	74.85	23.36	75.12
	Upper Reach	12345	7.34	74.76	13.74	75.01	18.58	75.14	23.36	75.3
	Upper Reach	12372	7.34	75.19	13.74	75.32	18.58	75.4	23.36	75.46
	Upper Reach	12407	7.34	75.93	13.74	76.18	18.58	76.33	23.36	76.46
	Upper Reach	12431	7.34	76.3	13.74	76.6	18.58	76.79	23.36	76.97
	Upper Reach	12470	7.34	76.48	13.74	76.72	18.58	76.89	23.36	77.05
	Upper Reach	12510	7.34	76.64	13.74	76.82	18.58	76.91	23.36	77.02
	Upper Reach	12565	7.34	76.85	13.74	77.14	18.58	77.32	23.36	77.47
	Upper Reach	12708	7.34	77.05	13.74	77.32	18.58	77.5	23.36	77.64
	Upper Reach	12858	7.34	77.23	13.74	77.53	18.58	77.7	23.36	77.85
	Upper Reach	12976	7.34	77.39	13.74	77.73	18.58	77.92	23.36	78.07
	Upper Reach	13076	7.34	77.8	13.74	78.07	18.58	78.21	23.36	78.34
Upper Reach	13261	7.34	78.22	13.74	78.51	18.58	78.67	23.36	78.8	
Upper Reach	13380	7.34	78.33	13.74	78.64	18.58	78.81	23.36	78.94	
Upper Reach	13449	7.34	78.55	13.74	78.88	18.58	79.03	23.36	79.17	
Upper Reach	13583	7.34	79.34	13.74	79.57	18.58	79.69	23.36	79.79	
Upper Reach	13614	4.56	79.42	8.05	79.69	10.49	79.83	13.03	79.95	
Upper Reach	13619	4.56	79.41	8.05	79.67	10.49	79.81	13.03	79.91	
Upper Reach	13633	Sarsfield Road								
Upper Reach	13643	4.56	79.54	8.05	79.98	10.49	80.29	13.03	80.62	
Upper Reach	13647	4.56	79.47	8.05	79.96	10.49	80.28	13.03	80.63	
Upper Reach	13664	4.56	79.64	8.05	80.03	10.49	80.32	13.03	80.64	

River	Reach	Xsec ID	Flow (m ³ /s) and Computed WSEL (m) for Different Flood Events								
			Q2	WL2	Q5	WL5	Q10	WL10	Q20	WL20	
	Upper Reach	13904	4.56	80.21	8.05	80.48	10.49	80.63	13.03	80.83	
	Upper Reach	14118	4.56	80.55	8.05	80.82	10.49	80.95	13.03	81.1	
Tributary A	Main Reach	32	2.86	64.5	5.38	65.03	7.2	65.25	9.16	65.47	
	Main Reach	126	2.86	65.01	5.38	65.2	7.2	65.28	9.16	65.5	
	Main Reach	163	2.86	65.33	5.38	65.5	7.2	65.58	9.16	65.62	
	Main Reach	226	2.86	65.49	5.38	65.67	7.2	65.75	9.16	65.83	
	Main Reach	302	2.86	65.69	5.38	65.89	7.2	66	9.16	66.1	
	Main Reach	318	2.86	65.75	5.38	65.99	7.2	66.12	9.16	66.21	
	Main Reach	337	2.86	65.77	5.38	66.03	7.2	66.17	9.16	66.26	
	Main Reach	406	2.86	66.35	5.38	66.58	7.2	66.7	9.16	66.76	
	Main Reach	442	2.86	66.83	5.38	67.04	7.2	67.2	9.16	67.26	
	Main Reach	445	2.86	66.93	5.38	67.19	7.2	67.2	9.16	67.22	
	Main Reach	451	Emmett Road								
	Main Reach	457	2.86	67.02	5.38	67.44	7.2	67.67	9.16	67.92	
	Main Reach	460	2.86	67.01	5.38	67.47	7.2	67.71	9.16	67.92	
	Main Reach	527	2.86	67.33	5.38	67.52	7.2	67.72	9.16	67.94	
	Main Reach	650	2.86	67.8	5.38	68.08	7.2	68.18	9.16	68.21	
	Main Reach	869	2.86	68.39	5.38	68.66	7.2	68.84	9.16	68.99	
	Main Reach	1116	2.86	70.31	5.38	70.55	7.2	70.67	9.16	70.74	
	Main Reach	1384	2.86	71.85	5.38	72.12	7.2	72.28	9.16	72.45	
	Main Reach	1424	2.86	72.02	5.38	72.27	7.2	72.43	9.16	72.57	
	Main Reach	1455	2.86	72.22	5.38	72.46	7.2	72.6	9.16	72.74	
	Main Reach	1558	2.86	73.25	5.38	73.49	7.2	73.63	9.16	73.76	
	Main Reach	1584	2.86	73.56	5.38	73.78	7.2	73.92	9.16	74.05	
	Main Reach	1636	2.86	74.06	5.38	74.36	7.2	74.53	9.16	74.68	
	Main Reach	1715	2.86	74.5	5.38	74.73	7.2	74.86	9.16	75.01	
	Main Reach	1755	2.86	74.83	5.38	75	7.2	75.13	9.16	75.24	
	Main Reach	1790	2.86	75.05	5.38	75.3	7.2	75.44	9.16	75.54	
	Main Reach	1890	2.86	75.51	5.38	75.78	7.2	75.91	9.16	76.05	
	Main Reach	1919	2.86	75.66	5.38	75.93	7.2	76.08	9.16	76.21	
	Main Reach	1960	2.86	75.79	5.38	76.05	7.2	76.18	9.16	76.3	
	Main Reach	2025	2.86	76.17	5.38	76.38	7.2	76.5	9.16	76.61	
	Main Reach	2075	2.86	76.47	5.38	76.67	7.2	76.78	9.16	76.89	
	Main Reach	2142	2.86	77.05	5.38	77.24	7.2	77.35	9.16	77.45	
	Main Reach	2171	2.86	77.22	5.38	77.39	7.2	77.49	9.16	77.58	
	Main Reach	2219	2.86	77.5	5.38	77.68	7.2	77.77	9.16	77.85	
Main Reach	2238	2.86	77.61	5.38	77.87	7.2	78.02	9.16	78.16		
Main Reach	2260	2.86	77.63	5.38	77.85	7.2	77.99	9.16	78.11		
Main Reach	2314	2.86	77.96	5.38	78.23	7.2	78.4	9.16	78.54		
Main Reach	2372	2.86	78.23	5.38	78.47	7.2	78.65	9.16	78.78		
Main Reach	2440	2.86	79.79	5.38	80.13	7.2	80.22	9.16	80.3		
Main Reach	2489	2.86	80.37	5.38	80.67	7.2	80.77	9.16	80.85		
Main Reach	2538	2.86	80.53	5.38	80.86	7.2	80.95	9.16	81.03		
Main Reach	2595	2.86	80.8	5.38	81.06	7.2	81.14	9.16	81.24		
Main Reach	2658	2.86	81.17	5.38	81.41	7.2	81.55	9.16	81.68		
Main Reach	2682	2.86	81.56	5.38	81.77	7.2	81.88	9.16	81.99		
Main Reach	2720	2.86	81.9	5.38	82.15	7.2	82.29	9.16	82.42		
Main Reach	2764	2.86	81.98	5.38	82.24	7.2	82.39	9.16	82.52		
Main Reach	2832	2.86	82.03	5.38	82.21	7.2	82.3	9.16	82.43		
Main Reach	2866	2.86	82.49	5.38	82.84	7.2	83.01	9.16	83.1		
Main Reach	2891	2.86	82.92	5.38	83.24	7.2	83.36	9.16	83.48		
Main Reach	2911	2.86	83.1	5.38	83.39	7.2	83.5	9.16	83.59		

River	Reach	Xsec ID	Flow (m ³ /s) and Computed WSEL (m) for Different Flood Events							
			Q2	WL2	Q5	WL5	Q10	WL10	Q20	WL20
Tributary A	Main Reach	2936	2.86	83.51	5.38	83.75	7.2	83.85	9.16	83.95
	Main Reach	2962	2.86	83.65	5.38	83.87	7.2	83.98	9.16	84.08
	Main Reach	3006	1.79	83.88	3.41	84.11	4.6	84.24	5.87	84.35
	Main Reach	3012	1.79	83.87	3.41	84.03	4.6	84.15	5.87	84.29
	Main Reach	3022	Sarsfield Road							
	Main Reach	3031	1.79	84.19	3.41	84.6	4.6	84.87	5.87	85.13
	Main Reach	3034	1.79	84.2	3.41	84.65	4.6	84.91	5.87	85.17
	Main Reach	3244	1.79	85.39	3.41	85.34	4.6	85.41	5.87	85.47
	Main Reach	3297	1.79	85.61	3.41	85.92	4.6	86.01	5.87	86.09
	Main Reach	3341	1.79	85.97	3.41	86.19	4.6	86.31	5.87	86.41
	Main Reach	3395	1.79	87.02	3.41	87.11	4.6	87.16	5.87	87.21
	Main Reach	3470	1.79	87.6	3.41	87.74	4.6	87.81	5.87	87.88
Tributary B	Main Reach	13	5.34	66.72	9.82	67.19	13.08	67.58	16.59	67.81
	Main Reach	86	5.34	66.75	9.82	67.21	13.08	67.59	16.59	67.82
	Main Reach	123	5.34	66.75	9.82	67.21	13.08	67.6	16.59	67.82
	Main Reach	129	5.34	66.76	9.82	67.21	13.08	67.6	16.59	67.82
	Main Reach	138	Birchgrove Road							
	Main Reach	150	5.34	66.77	9.82	67.27	13.08	67.71	16.59	67.89
	Main Reach	152	5.34	66.77	9.82	67.27	13.08	67.71	16.59	67.89
	Main Reach	206	5.34	66.78	9.82	67.28	13.08	67.71	16.59	67.89
	Main Reach	309	5.34	66.83	9.82	67.31	13.08	67.73	16.59	67.9
	Main Reach	482	5.34	67.17	9.82	67.55	13.08	67.81	16.59	67.97
	Main Reach	672	5.34	67.7	9.82	67.97	13.08	68.07	16.59	68.13
	Main Reach	772	5.34	67.85	9.82	68.14	13.08	68.25	16.59	68.32
	Main Reach	880	5.34	68.1	9.82	68.4	13.08	68.5	16.59	68.58
	Main Reach	1153	5.34	68.96	9.82	69.19	13.08	69.3	16.59	69.41
	Main Reach	1334	5.34	69.22	9.82	69.45	13.08	69.57	16.59	69.68
	Main Reach	1659	5.34	69.73	9.82	69.95	13.08	70.06	16.59	70.17
Main Reach	1836	5.34	70.14	9.82	70.3	13.08	70.39	16.59	70.48	
Tributary B1	North Reach	12	3.2	70.16	6.05	70.33	8.17	70.42	10.53	70.5
	North Reach	70	3.2	70.26	6.05	70.45	8.17	70.56	10.53	70.66
	North Reach	132	3.2	70.35	6.05	70.53	8.17	70.64	10.53	70.74
	North Reach	250	3.2	70.76	6.05	70.88	8.17	70.95	10.53	71.03
	North Reach	411	3.2	71.96	6.05	72.09	8.17	72.16	10.53	72.22
	North Reach	520	3.2	72.86	6.05	72.99	8.17	73.07	10.53	73.13
	North Reach	609	3.2	73.17	6.05	73.36	8.17	73.47	10.53	73.57
	North Reach	625	3.2	73.21	6.05	73.41	8.17	73.51	10.53	73.61
	North Reach	643	3.2	73.32	6.05	73.52	8.17	73.63	10.53	73.72
	North Reach	722	3.2	73.49	6.05	73.71	8.17	73.82	10.53	73.92
	North Reach	800	3.2	73.79	6.05	73.99	8.17	74.09	10.53	74.18
	North Reach	831	3.2	74.05	6.05	74.21	8.17	74.3	10.53	74.38
	North Reach	877	3.2	74.43	6.05	74.63	8.17	74.72	10.53	74.81
	North Reach	970	3.2	74.84	6.05	75.05	8.17	75.17	10.53	75.26
	North Reach	1056	3.2	75.17	6.05	75.39	8.17	75.52	10.53	75.63
	North Reach	1159	3.2	75.41	6.05	75.64	8.17	75.75	10.53	75.85
	North Reach	1241	3.2	75.54	6.05	75.8	8.17	75.91	10.53	76.02
	North Reach	1311	3.2	75.69	6.05	75.96	8.17	76.07	10.53	76.17
	North Reach	1440	3.2	75.9	6.05	76.16	8.17	76.28	10.53	76.38
	North Reach	1524	3.2	76.04	6.05	76.23	8.17	76.35	10.53	76.46
	North Reach	1602	3.2	76.61	6.05	76.81	8.17	76.93	10.53	77.04
North Reach	1731	3.2	77.22	6.05	77.39	8.17	77.49	10.53	77.58	
North Reach	1815	3.2	77.54	6.05	77.68	8.17	77.76	10.53	77.85	

River	Reach	Xsec ID	Flow (m ³ /s) and Computed WSEL (m) for Different Flood Events							
			Q2	WL2	Q5	WL5	Q10	WL10	Q20	WL20
Tributary B1	North Reach	1906	3.2	77.8	6.05	77.97	8.17	78.06	10.53	78.15
	North Reach	2073	3.2	78.16	6.05	78.33	8.17	78.43	10.53	78.51
	North Reach	2232	3.2	78.5	6.05	78.68	8.17	78.78	10.53	78.87
	North Reach	2536	3.2	79.42	6.05	79.59	8.17	79.69	10.53	79.78
	North Reach	2630	2.83	79.77	5.29	79.89	7.06	79.98	8.96	80.06
	North Reach	2650	2.83	79.82	5.29	79.96	7.06	80.04	8.96	80.11
	North Reach	2670	Sarsfield Road							
	North Reach	2692	2.83	79.91	5.29	80.27	7.06	80.6	8.96	81.04
	North Reach	2720	2.83	79.94	5.29	80.3	7.06	80.62	8.96	81.06
	North Reach	2761	2.83	79.98	5.29	80.31	7.06	80.63	8.96	81.06
	North Reach	2883	2.83	80.32	5.29	80.47	7.06	80.69	8.96	81.08
Tributary B2	South Reach	1881	1.95	70.22	3.52	70.4	4.63	70.51	5.8	70.6
	South Reach	1929	1.95	70.26	3.52	70.44	4.63	70.54	5.8	70.63
	South Reach	1985	1.95	70.35	3.52	70.52	4.63	70.61	5.8	70.69
	South Reach	2006	1.95	70.66	3.52	70.75	4.63	70.8	5.8	70.85
	South Reach	2024	1.95	70.85	3.52	70.96	4.63	71.01	5.8	71.05
	South Reach	2035	1.95	70.86	3.52	70.95	4.63	71.04	5.8	71.13
	South Reach	2067	1.95	71.23	3.52	71.42	4.63	71.5	5.8	71.57
	South Reach	2085	1.95	71.39	3.52	71.56	4.63	71.65	5.8	71.73
	South Reach	2095	1.95	71.43	3.52	71.6	4.63	71.7	5.8	71.79
	South Reach	2115	1.95	71.6	3.52	71.75	4.63	71.83	5.8	71.91
	South Reach	2192	1.95	71.79	3.52	71.95	4.63	72.03	5.8	72.1
	South Reach	2239	1.95	71.98	3.52	72.18	4.63	72.28	5.8	72.38
	South Reach	2286	1.95	72.08	3.52	72.26	4.63	72.37	5.8	72.46
	South Reach	2363	1.95	72.82	3.52	72.87	4.63	72.9	5.8	72.93
	South Reach	2420	1.95	73.18	3.52	73.27	4.63	73.32	5.8	73.36
	South Reach	2468	1.95	73.27	3.52	73.38	4.63	73.44	5.8	73.49
	South Reach	2534	1.95	73.38	3.52	73.52	4.63	73.59	5.8	73.65
	South Reach	2624	1.95	73.5	3.52	73.66	4.63	73.75	5.8	73.82
	South Reach	2655	1.95	73.53	3.52	73.66	4.63	73.72	5.8	73.81
	South Reach	2681	1.95	73.81	3.52	73.96	4.63	74.04	5.8	74.09
	South Reach	2703	1.95	73.92	3.52	74.08	4.63	74.16	5.8	74.23
	South Reach	2751	1.95	74.65	3.52	74.76	4.63	74.82	5.8	74.88
	South Reach	2797	1.95	75.12	3.52	75.27	4.63	75.36	5.8	75.42
	South Reach	2808	1.95	75.17	3.52	75.32	4.63	75.41	5.8	75.47
	South Reach	2826	1.95	75.24	3.52	75.42	4.63	75.51	5.8	75.58
	South Reach	2860	1.95	75.31	3.52	75.5	4.63	75.59	5.8	75.66
	South Reach	2988	1.95	75.71	3.52	75.9	4.63	75.99	5.8	76.07
	South Reach	3343	1.95	76.81	3.52	76.99	4.63	77.06	5.8	77.13
	South Reach	3635	1.95	77.95	3.52	78.13	4.63	78.23	5.8	78.3
	South Reach	3919	1.95	79.16	3.52	79.29	4.63	79.38	5.8	79.46
	South Reach	4075	1.78	80.05	3.24	80.23	4.28	80.29	5.38	80.35
	South Reach	4090	1.78	80.1	3.24	80.26	4.28	80.32	5.38	80.38
	South Reach	4106	Sarsfield Road							
South Reach	4121	1.78	80.23	3.24	80.59	4.28	80.83	5.38	81.09	
South Reach	4147	1.78	80.32	3.24	80.63	4.28	80.85	5.38	81.1	
South Reach	4206	1.78	80.81	3.24	80.9	4.28	81.01	5.38	81.18	
South Reach	4290	1.78	81.19	3.24	81.3	4.28	81.35	5.38	81.39	

Table 15 Flows and computed water levels for the 50, 100, 200, 350, and 500 year flood events

River	Reach	Xsec ID	Flow (m ³ /s) and Computed WSEL (m) for Different Flood Events									
			Q50	WL50	Q100	WL100	Q200	WL200	Q350	WL350	Q500	WL500
Becketts Creek	Lower Reach	0	73.59	44.11	86.74	44.44	99.49	44.7	110.69	44.95	118.14	45.1
	Lower Reach	170	73.59	44.14	86.74	44.47	99.49	44.72	110.69	44.97	118.14	45.12
	Lower Reach	330	73.59	44.17	86.74	44.49	99.49	44.74	110.69	44.99	118.14	45.14
	Lower Reach	389	73.59	44.1	86.74	44.41	99.49	44.66	110.69	44.89	118.14	45.04
	Lower Reach	397	73.59	44	86.74	44.3	99.49	44.52	110.69	44.75	118.14	44.88
	Lower Reach	429	RR174									
	Lower Reach	456	73.59	46.28	86.74	46.84	99.49	47.38	110.69	48.09	118.14	48.84
	Lower Reach	467	73.59	46.29	86.74	46.85	99.49	47.39	110.69	48.11	118.14	48.86
	Lower Reach	574	73.59	46.3	86.74	46.86	99.49	47.4	110.69	48.11	118.14	48.86
	Lower Reach	710	73.59	46.33	86.74	46.89	99.49	47.43	110.69	48.13	118.14	48.88
	Lower Reach	894	73.59	46.36	86.74	46.91	99.49	47.44	110.69	48.14	118.14	48.88
	Lower Reach	953	73.49	46.38	86.59	46.92	99.34	47.45	110.48	48.15	117.9	48.89
	Lower Reach	960	73.49	46.13	86.59	46.65	99.34	47.17	110.48	47.88	117.9	48.88
	Lower Reach	979	Old Montreal Drive									
	Lower Reach	997	73.49	51.09	86.59	51.37	99.34	51.54	110.48	51.71	117.9	51.82
	Lower Reach	1002	73.49	51.1	86.59	51.37	99.34	51.55	110.48	51.71	117.9	51.83
	Lower Reach	1090	73.49	51.1	86.59	51.37	99.34	51.55	110.48	51.71	117.9	51.82
	Lower Reach	1244	73.49	51.1	86.59	51.37	99.34	51.55	110.48	51.72	117.9	51.83
	Lower Reach	1266	73.49	51.1	86.59	51.37	99.34	51.55	110.48	51.71	117.9	51.83
	Lower Reach	1298	73.49	51.07	86.59	51.34	99.34	51.51	110.48	51.67	117.9	51.78
	Lower Reach	1326	73.49	50.68	86.59	50.94	99.34	51.04	110.48	51.15	117.9	51.25
	Lower Reach	1359	73.49	52.95	86.59	53.09	99.34	53.23	110.48	53.34	117.9	53.42
	Lower Reach	1416	73.49	53.67	86.59	53.83	99.34	53.98	110.48	54.11	117.9	54.19
	Lower Reach	1430	73.49	53.82	86.59	54.01	99.34	54.18	110.48	54.32	117.9	54.4
	Lower Reach	1452	73.49	53.93	86.59	54.12	99.34	54.28	110.48	54.42	117.9	54.51
	Lower Reach	1475	73.49	54.01	86.59	54.2	99.34	54.37	110.48	54.51	117.9	54.6
	Lower Reach	1493	73.49	54.08	86.59	54.27	99.34	54.45	110.48	54.6	117.9	54.69
	Lower Reach	1560	73.49	54.18	86.59	54.38	99.34	54.57	110.48	54.72	117.9	54.81
	Lower Reach	1625	73.49	54.26	86.59	54.46	99.34	54.65	110.48	54.8	117.9	54.89
	Lower Reach	1675	73.49	54.32	86.59	54.53	99.34	54.71	110.48	54.87	117.9	54.97
	Lower Reach	1787	73.49	54.29	86.59	54.5	99.34	54.68	110.48	54.83	117.9	54.93
	Lower Reach	1855	73.49	54.47	86.59	54.67	99.34	54.85	110.48	55	117.9	55.09
	Lower Reach	1913	73.49	54.6	86.59	54.79	99.34	54.96	110.48	55.11	117.9	55.21
	Lower Reach	1929	73.49	54.61	86.59	54.8	99.34	54.97	110.48	55.12	117.9	55.21
	Lower Reach	1948	73.49	54.75	86.59	54.83	99.34	54.9	110.48	54.99	117.9	55.03
	Lower Reach	2088	73.49	57.75	86.59	57.88	99.34	58	110.48	58.1	117.9	58.16
	Lower Reach	2147	73.49	60.67	86.59	60.84	99.34	60.93	110.48	61.13	117.9	61.21
	Lower Reach	2176	73.49	61.1	86.59	61.27	99.34	61.41	110.48	61.48	117.9	61.52
	Lower Reach	2195	73.49	61.29	86.59	61.44	99.34	61.58	110.48	61.73	117.9	61.79
	Lower Reach	2218	73.49	61.8	86.59	61.98	99.34	62.14	110.48	62.26	117.9	62.35
	Lower Reach	2236	73.49	61.87	86.59	62.05	99.34	62.2	110.48	62.33	117.9	62.41
	Lower Reach	2267	73.49	62.06	86.59	62.25	99.34	62.42	110.48	62.56	117.9	62.65
Lower Reach	2287	73.49	62.08	86.59	62.27	99.34	62.46	110.48	62.6	117.9	62.7	
Lower Reach	2319	73.49	62.34	86.59	62.54	99.34	62.72	110.48	62.87	117.9	62.96	
Lower Reach	2351	73.49	62.27	86.59	62.47	99.34	62.64	110.48	62.78	117.9	62.87	
Lower Reach	2376	73.49	62.35	86.59	62.54	99.34	62.7	110.48	62.83	117.9	62.92	
Lower Reach	2393	73.49	62.4	86.59	62.59	99.34	62.76	110.48	62.9	117.9	62.99	
Lower Reach	2408	73.49	62.52	86.59	62.72	99.34	62.91	110.48	63.05	117.9	63.15	
Lower Reach	2426	73.49	62.55	86.59	62.75	99.34	62.93	110.48	63.07	117.9	63.17	
Lower Reach	2530	73.49	62.76	86.59	62.97	99.34	63.16	110.48	63.31	117.9	63.41	
Lower Reach	2607	73.49	62.83	86.59	63.03	99.34	63.22	110.48	63.37	117.9	63.47	
Lower Reach	2654	72.75	62.85	85.73	63.05	98.06	63.24	109.05	63.39	116.34	63.49	
Lower Reach	2665	72.75	62.83	85.73	63.03	98.06	63.21	109.05	63.35	116.34	63.44	
Lower Reach	2674	Wilhaven Drive										
Lower Reach	2683	72.75	62.96	85.73	63.19	98.06	63.39	109.05	63.56	116.34	63.67	
Lower Reach	2695	72.75	63	85.73	63.23	98.06	63.44	109.05	63.62	116.34	63.73	
Lower Reach	2736	72.75	62.97	85.73	63.2	98.06	63.42	109.05	63.59	116.34	63.71	
Lower Reach	2826	72.75	63.11	85.73	63.34	98.06	63.55	109.05	63.72	116.34	63.84	
Lower Reach	2839	72.75	62.79	85.73	62.83	98.06	63.18	109.05	63.3	116.34	63.39	

River	Reach	Xsec ID	Flow (m ³ /s) and Computed WSEL (m) for Different Flood Events									
			Q50	WL50	Q100	WL100	Q200	WL200	Q350	WL350	Q500	WL500
Becketts Creek	Lower Reach	2855	72.75	63.05	85.73	63.21	98.06	63.36	109.05	63.43	116.34	63.47
	Lower Reach	2870	72.75	63.44	85.73	63.62	98.06	63.78	109.05	63.95	116.34	64.07
	Lower Reach	2937	72.75	63.94	85.73	64.16	98.06	64.36	109.05	64.53	116.34	64.65
	Lower Reach	3008	72.75	64.04	85.73	64.26	98.06	64.46	109.05	64.63	116.34	64.75
	Lower Reach	3099	72.75	64.12	85.73	64.34	98.06	64.54	109.05	64.71	116.34	64.83
	Lower Reach	3128	72.75	64.13	85.73	64.35	98.06	64.55	109.05	64.72	116.34	64.84
	Lower Reach	3194	72.75	63.99	85.73	64.22	98.06	64.43	109.05	64.61	116.34	64.73
	Lower Reach	3252	72.75	64.25	85.73	64.41	98.06	64.58	109.05	64.71	116.34	64.82
	Lower Reach	3299	72.75	64.52	85.73	64.72	98.06	64.9	109.05	65.1	116.34	65.19
	Lower Reach	3353	72.75	64.57	85.73	64.76	98.06	64.94	109.05	65.13	116.34	65.22
	Lower Reach	3426	72.75	64.6	85.73	64.79	98.06	64.96	109.05	65.15	116.34	65.24
	Lower Reach	3575	72.75	64.66	85.73	64.84	98.06	65.01	109.05	65.19	116.34	65.28
	Lower Reach	3728	72.08	64.75	84.97	64.92	97.25	65.09	107.89	65.26	115.28	65.35
	Lower Reach	3825	72.08	64.77	84.97	64.94	97.25	65.11	107.89	65.28	115.28	65.37
	Lower Reach	3906	72.08	64.76	84.97	64.94	97.25	65.1	107.89	65.27	115.28	65.36
	Lower Reach	3939	72.08	64.82	84.97	64.99	97.25	65.15	107.89	65.31	115.28	65.39
	Lower Reach	3985	72.08	64.86	84.97	65.02	97.25	65.15	107.89	65.28	115.28	65.36
	Lower Reach	4023	72.08	65.43	84.97	65.6	97.25	65.74	107.89	65.84	115.28	65.91
	Lower Reach	4057	72.08	65.57	84.97	65.75	97.25	65.9	107.89	66.01	115.28	66.08
	Middle Reach	4475	62.55	66.03	73.57	66.19	83.96	66.33	93.17	66.44	99.38	66.51
	Middle Reach	5132	63.78	66.24	74.99	66.41	85.63	66.54	95.35	66.65	102.03	66.72
	Middle Reach	5971	63.78	66.39	74.99	66.54	85.63	66.67	95.35	66.78	102.03	66.85
	Middle Reach	6190	63.78	66.44	74.99	66.59	85.63	66.72	95.35	66.82	102.03	66.89
	Middle Reach	6205	72.65	66.44	85.66	66.6	97.98	66.72	108.38	66.82	115.82	66.9
	Middle Reach	6216	French Hill Road									
	Middle Reach	6228	72.65	66.46	85.66	66.61	97.98	66.72	108.38	66.83	115.82	66.9
	Middle Reach	6242	72.65	66.45	85.66	66.6	97.98	66.72	108.38	66.83	115.82	66.9
	Middle Reach	6474	72.65	66.67	85.66	66.79	97.98	66.89	108.38	66.98	115.82	67.05
	Middle Reach	7188	72.65	67.03	85.66	67.14	97.98	67.23	108.38	67.31	115.82	67.37
	Middle Reach	7862	72.65	67.23	85.66	67.33	97.98	67.42	108.38	67.49	115.82	67.54
	Middle Reach	8079	72.65	67.34	85.66	67.44	97.98	67.52	108.38	67.59	115.82	67.64
	Middle Reach	8091	72.65	67.38	85.66	67.47	97.98	67.56	108.38	67.63	115.82	67.67
	Middle Reach	8095	72.65	67.35	85.66	67.44	97.98	67.51	108.38	67.58	115.82	67.62
	Middle Reach	8105	Birchgrove Road									
	Middle Reach	8114	72.65	67.96	85.66	68.06	97.98	68.14	108.38	68.2	115.82	68.24
	Middle Reach	8119	72.65	67.94	85.66	68.04	97.98	68.12	108.38	68.17	115.82	68.21
	Middle Reach	8127	72.65	67.93	85.66	68.03	97.98	68.1	108.38	68.16	115.82	68.19
	Upper Reach	8248	51.19	68.11	60.13	68.24	68.44	68.35	75.61	68.43	80.77	68.49
	Upper Reach	8311	51.19	68.13	60.13	68.26	68.44	68.36	75.61	68.45	80.77	68.51
	Upper Reach	8321	51.19	68.13	60.13	68.26	68.44	68.36	75.61	68.45	80.77	68.51
	Upper Reach	8337	Étienne Road									
	Upper Reach	8344	51.19	68.14	60.13	68.3	68.44	68.4	75.61	68.48	80.77	68.54
Upper Reach	8352	51.19	68.14	60.13	68.3	68.44	68.4	75.61	68.48	80.77	68.54	
Upper Reach	8836	51.19	68.21	60.13	68.35	68.44	68.45	75.61	68.53	80.77	68.59	
Upper Reach	9463	51.19	69.25	60.13	69.34	68.44	69.39	75.61	69.47	80.77	69.51	
Upper Reach	9511	32.6	69.58	38.41	69.62	44.21	69.65	49.01	69.69	52.42	69.72	
Upper Reach	9525	Birchgrove Road										
Upper Reach	9539	32.6	70.57	38.41	70.92	44.21	71.14	49.01	71.27	52.42	71.34	
Upper Reach	9569	32.6	70.63	38.41	70.97	44.21	71.16	49.01	71.28	52.42	71.35	
Upper Reach	9880	32.6	70.7	38.41	71.02	44.21	71.21	49.01	71.34	52.42	71.41	
Upper Reach	9966	32.6	70.73	38.41	71.04	44.21	71.23	49.01	71.36	52.42	71.43	
Upper Reach	10028	32.6	70.76	38.41	71.07	44.21	71.25	49.01	71.38	52.42	71.45	
Upper Reach	10142	32.6	70.86	38.41	71.14	44.21	71.32	49.01	71.44	52.42	71.52	
Upper Reach	10274	32.6	70.97	38.41	71.22	44.21	71.4	49.01	71.52	52.42	71.59	
Upper Reach	10400	32.6	71.16	38.41	71.37	44.21	71.53	49.01	71.65	52.42	71.72	
Upper Reach	10528	32.6	71.34	38.41	71.51	44.21	71.66	49.01	71.77	52.42	71.84	
Upper Reach	10621	32.6	71.49	38.41	71.64	44.21	71.78	49.01	71.89	52.42	71.96	
Upper Reach	10668	32.6	71.81	38.41	71.88	44.21	71.97	49.01	72.05	52.42	72.11	
Upper Reach	10757	32.6	72.05	38.41	72.15	44.21	72.24	49.01	72.32	52.42	72.37	
Upper Reach	10898	32.6	72.27	38.41	72.37	44.21	72.46	49.01	72.54	52.42	72.59	

River	Reach	Xsec ID	Flow (m ³ /s) and Computed WSEL (m) for Different Flood Events									
			Q50	WL50	Q100	WL100	Q200	WL200	Q350	WL350	Q500	WL500
Becketts Creek	Upper Reach	11060	32.6	72.58	38.41	72.7	44.21	72.81	49.01	72.89	52.42	72.95
	Upper Reach	11191	32.6	72.78	38.41	72.9	44.21	73.02	49.01	73.11	52.42	73.17
	Upper Reach	11291	32.6	73.01	38.41	73.15	44.21	73.28	49.01	73.38	52.42	73.45
	Upper Reach	11352	32.6	73.05	38.41	73.2	44.21	73.32	49.01	73.42	52.42	73.49
	Upper Reach	11492	32.6	73.23	38.41	73.37	44.21	73.5	49.01	73.6	52.42	73.67
	Upper Reach	11571	32.6	73.26	38.41	73.39	44.21	73.51	49.01	73.61	52.42	73.67
	Upper Reach	11642	29.53	73.64	34.61	73.79	39.68	73.93	43.95	74.03	46.88	74.11
	Upper Reach	11646	29.53	73.57	34.61	73.69	39.68	73.79	43.95	73.87	46.88	73.93
	Upper Reach	11667	Lafleur Road									
	Upper Reach	11683	29.53	75.45	34.61	75.89	39.68	76.16	43.95	76.29	46.88	76.36
	Upper Reach	11695	29.53	75.46	34.61	75.9	39.68	76.16	43.95	76.29	46.88	76.36
	Upper Reach	11866	29.53	75.48	34.61	75.92	39.68	76.18	43.95	76.31	46.88	76.39
	Upper Reach	12078	29.53	75.5	34.61	75.93	39.68	76.19	43.95	76.33	46.88	76.4
	Upper Reach	12185	29.53	75.51	34.61	75.94	39.68	76.2	43.95	76.33	46.88	76.41
	Upper Reach	12297	29.53	75.57	34.61	75.98	39.68	76.24	43.95	76.37	46.88	76.45
	Upper Reach	12345	29.53	75.66	34.61	76.03	39.68	76.29	43.95	76.42	46.88	76.5
	Upper Reach	12372	29.53	75.6	34.61	76.01	39.68	76.27	43.95	76.4	46.88	76.47
	Upper Reach	12407	29.53	76.62	34.61	76.75	39.68	76.86	43.95	76.96	46.88	77.01
	Upper Reach	12431	29.53	77.19	34.61	77.35	39.68	77.5	43.95	77.62	46.88	77.7
	Upper Reach	12470	29.53	77.25	34.61	77.41	39.68	77.56	43.95	77.69	46.88	77.77
	Upper Reach	12510	29.53	77.16	34.61	77.31	39.68	77.47	43.95	77.59	46.88	77.68
	Upper Reach	12565	29.53	77.63	34.61	77.74	39.68	77.85	43.95	77.95	46.88	78.02
	Upper Reach	12708	29.53	77.8	34.61	77.91	39.68	78.02	43.95	78.11	46.88	78.17
	Upper Reach	12858	29.53	78.01	34.61	78.13	39.68	78.24	43.95	78.33	46.88	78.39
	Upper Reach	12976	29.53	78.25	34.61	78.38	39.68	78.5	43.95	78.59	46.88	78.66
	Upper Reach	13076	29.53	78.49	34.61	78.61	39.68	78.72	43.95	78.81	46.88	78.87
	Upper Reach	13261	29.53	78.96	34.61	79.08	39.68	79.18	43.95	79.27	46.88	79.33
	Upper Reach	13380	29.53	79.1	34.61	79.22	39.68	79.33	43.95	79.42	46.88	79.47
	Upper Reach	13449	29.53	79.33	34.61	79.44	39.68	79.55	43.95	79.64	46.88	79.7
	Upper Reach	13583	29.53	79.89	34.61	79.97	39.68	80.06	43.95	80.12	46.88	80.16
	Upper Reach	13614	16.39	80.09	19.04	80.19	21.62	80.28	23.8	80.36	25.31	80.41
	Upper Reach	13619	16.39	80.02	19.04	80.11	21.62	80.18	23.8	80.24	25.31	80.27
Upper Reach	13633	Sarsfield Road										
Upper Reach	13643	16.39	81.12	19.04	81.6	21.62	82.13	23.8	82.61	25.31	82.96	
Upper Reach	13647	16.39	81.14	19.04	81.64	21.62	82.16	23.8	82.64	25.31	82.99	
Upper Reach	13664	16.39	81.15	19.04	81.64	21.62	82.16	23.8	82.64	25.31	82.99	
Upper Reach	13904	16.39	81.23	19.04	81.68	21.62	82.18	23.8	82.65	25.31	83	
Upper Reach	14118	16.39	81.36	19.04	81.73	21.62	82.21	23.8	82.67	25.31	83.01	
Tributary A	Main Reach	32	11.89	65.72	14.1	65.9	16.3	66.05	18.2	66.16	19.54	66.23
	Main Reach	126	11.89	65.75	14.1	65.92	16.3	66.06	18.2	66.18	19.54	66.25
	Main Reach	163	11.89	65.79	14.1	65.94	16.3	66.08	18.2	66.19	19.54	66.26
	Main Reach	226	11.89	65.92	14.1	66.03	16.3	66.14	18.2	66.24	19.54	66.31
	Main Reach	302	11.89	66.17	14.1	66.22	16.3	66.28	18.2	66.33	19.54	66.38
	Main Reach	318	11.89	66.3	14.1	66.36	16.3	66.42	18.2	66.47	19.54	66.5
	Main Reach	337	11.89	66.35	14.1	66.41	16.3	66.47	18.2	66.52	19.54	66.55
	Main Reach	406	11.89	66.84	14.1	66.89	16.3	66.93	18.2	66.98	19.54	67
	Main Reach	442	11.89	67.31	14.1	67.37	16.3	67.44	18.2	67.48	19.54	67.52
	Main Reach	445	11.89	67.19	14.1	67.29	16.3	67.41	18.2	67.51	19.54	67.58
	Main Reach	451	Emmett Road									
	Main Reach	457	11.89	67.99	14.1	68.05	16.3	68.12	18.2	68.21	19.54	68.32
	Main Reach	460	11.89	67.99	14.1	68.05	16.3	68.11	18.2	68.21	19.54	68.31
	Main Reach	527	11.89	68.02	14.1	68.08	16.3	68.15	18.2	68.24	19.54	68.34
	Main Reach	650	11.89	68.31	14.1	68.38	16.3	68.44	18.2	68.5	19.54	68.55
	Main Reach	869	11.89	69.12	14.1	69.21	16.3	69.29	18.2	69.35	19.54	69.37
	Main Reach	1116	11.89	70.87	14.1	70.97	16.3	71.05	18.2	71.13	19.54	71.19
	Main Reach	1384	11.89	72.6	14.1	72.72	16.3	72.83	18.2	72.9	19.54	72.96
	Main Reach	1424	11.89	72.72	14.1	72.83	16.3	72.94	18.2	73.02	19.54	73.08
	Main Reach	1455	11.89	72.91	14.1	73.03	16.3	73.14	18.2	73.23	19.54	73.3
Main Reach	1558	11.89	73.93	14.1	74.05	16.3	74.15	18.2	74.24	19.54	74.29	
Main Reach	1584	11.89	74.21	14.1	74.34	16.3	74.48	18.2	74.59	19.54	74.65	

River	Reach	Xsec ID	Flow (m ³ /s) and Computed WSEL (m) for Different Flood Events									
			Q50	WL50	Q100	WL100	Q200	WL200	Q350	WL350	Q500	WL500
Tributary A	Main Reach	1636	11.89	74.86	14.1	74.98	16.3	75.08	18.2	75.15	19.54	75.2
	Main Reach	1715	11.89	75.17	14.1	75.27	16.3	75.36	18.2	75.43	19.54	75.47
	Main Reach	1755	11.89	75.35	14.1	75.44	16.3	75.51	18.2	75.57	19.54	75.62
	Main Reach	1790	11.89	75.67	14.1	75.76	16.3	75.84	18.2	75.91	19.54	75.95
	Main Reach	1890	11.89	76.2	14.1	76.29	16.3	76.36	18.2	76.42	19.54	76.46
	Main Reach	1919	11.89	76.37	14.1	76.47	16.3	76.56	18.2	76.62	19.54	76.67
	Main Reach	1960	11.89	76.45	14.1	76.55	16.3	76.64	18.2	76.71	19.54	76.76
	Main Reach	2025	11.89	76.74	14.1	76.84	16.3	76.94	18.2	77.01	19.54	77.06
	Main Reach	2075	11.89	77.05	14.1	77.13	16.3	77.23	18.2	77.3	19.54	77.34
	Main Reach	2142	11.89	77.58	14.1	77.65	16.3	77.71	18.2	77.76	19.54	77.79
	Main Reach	2171	11.89	77.7	14.1	77.77	16.3	77.83	18.2	77.89	19.54	77.92
	Main Reach	2219	11.89	77.93	14.1	78	16.3	78.26	18.2	78.3	19.54	78.33
	Main Reach	2238	11.89	78.35	14.1	78.5	16.3	78.58	18.2	78.65	19.54	78.69
	Main Reach	2260	11.89	78.29	14.1	78.44	16.3	78.53	18.2	78.59	19.54	78.64
	Main Reach	2314	11.89	78.69	14.1	78.81	16.3	78.94	18.2	79	19.54	79.04
	Main Reach	2372	11.89	78.92	14.1	79.03	16.3	79.17	18.2	79.23	19.54	79.28
	Main Reach	2440	11.89	80.4	14.1	80.47	16.3	80.53	18.2	80.59	19.54	80.63
	Main Reach	2489	11.89	80.94	14.1	81.01	16.3	81.08	18.2	81.14	19.54	81.18
	Main Reach	2538	11.89	81.13	14.1	81.19	16.3	81.25	18.2	81.3	19.54	81.34
	Main Reach	2595	11.89	81.37	14.1	81.46	16.3	81.54	18.2	81.6	19.54	81.64
	Main Reach	2658	11.89	81.83	14.1	81.93	16.3	82.02	18.2	82.1	19.54	82.15
	Main Reach	2682	11.89	82.11	14.1	82.21	16.3	82.29	18.2	82.36	19.54	82.41
	Main Reach	2720	11.89	82.58	14.1	82.67	16.3	82.76	18.2	82.82	19.54	82.86
	Main Reach	2764	11.89	82.69	14.1	82.79	16.3	82.88	18.2	82.94	19.54	82.99
	Main Reach	2832	11.89	82.59	14.1	82.77	16.3	82.86	18.2	82.94	19.54	82.99
	Main Reach	2866	11.89	83.23	14.1	83.32	16.3	83.39	18.2	83.46	19.54	83.5
	Main Reach	2891	11.89	83.62	14.1	83.72	16.3	83.82	18.2	83.89	19.54	83.94
	Main Reach	2911	11.89	83.72	14.1	83.81	16.3	83.89	18.2	83.95	19.54	83.99
	Main Reach	2936	11.89	84.07	14.1	84.14	16.3	84.2	18.2	84.25	19.54	84.28
	Main Reach	2962	11.89	84.2	14.1	84.28	16.3	84.35	18.2	84.41	19.54	84.45
	Main Reach	3006	7.59	84.49	8.98	84.6	10.35	84.7	11.52	84.78	12.35	84.83
	Main Reach	3012	7.59	84.44	8.98	84.56	10.35	84.68	11.52	84.77	12.35	84.83
	Main Reach	3022	Sarsfield Road									
	Main Reach	3031	7.59	85.48	8.98	85.78	10.35	86.12	11.52	86.46	12.35	86.71
Main Reach	3034	7.59	85.52	8.98	85.81	10.35	86.15	11.52	86.49	12.35	86.74	
Main Reach	3244	7.59	85.56	8.98	85.81	10.35	86.16	11.52	86.49	12.35	86.74	
Main Reach	3297	7.59	86.16	8.98	86.14	10.35	86.2	11.52	86.46	12.35	86.72	
Main Reach	3341	7.59	86.53	8.98	86.64	10.35	86.72	11.52	86.74	12.35	86.85	
Main Reach	3395	7.59	87.27	8.98	87.31	10.35	87.35	11.52	87.39	12.35	87.41	
Main Reach	3470	7.59	87.96	8.98	88.02	10.35	88.07	11.52	88.11	12.35	88.14	
Tributary B	Main Reach	13	21.48	68.05	25.54	68.18	29.56	68.27	32.78	68.35	35.06	68.41
	Main Reach	86	21.48	68.06	25.54	68.19	29.56	68.29	32.78	68.37	35.06	68.42
	Main Reach	123	21.48	68.07	25.54	68.19	29.56	68.29	32.78	68.37	35.06	68.43
	Main Reach	129	21.48	68.07	25.54	68.19	29.56	68.29	32.78	68.38	35.06	68.43
	Main Reach	138	Birchgrove Road									
	Main Reach	150	21.48	68.08	25.54	68.21	29.56	68.31	32.78	68.39	35.06	68.45
	Main Reach	152	21.48	68.08	25.54	68.21	29.56	68.31	32.78	68.39	35.06	68.45
	Main Reach	206	21.48	68.09	25.54	68.21	29.56	68.31	32.78	68.4	35.06	68.45
	Main Reach	309	21.48	68.1	25.54	68.23	29.56	68.33	32.78	68.42	35.06	68.47
	Main Reach	482	21.48	68.15	25.54	68.28	29.56	68.38	32.78	68.47	35.06	68.52
	Main Reach	672	21.48	68.25	25.54	68.35	29.56	68.44	32.78	68.52	35.06	68.57
	Main Reach	772	21.48	68.41	25.54	68.49	29.56	68.56	32.78	68.63	35.06	68.67
	Main Reach	880	21.48	68.68	25.54	68.75	29.56	68.81	32.78	68.85	35.06	68.88
	Main Reach	1153	21.48	69.53	25.54	69.61	29.56	69.69	32.78	69.75	35.06	69.79
Main Reach	1334	21.48	69.81	25.54	69.91	29.56	70	32.78	70.06	35.06	70.11	
Main Reach	1659	21.48	70.3	25.54	70.4	29.56	70.49	32.78	70.56	35.06	70.61	
Main Reach	1836	21.48	70.59	25.54	70.68	29.56	70.76	32.78	70.82	35.06	70.86	
Tributary B1	North Reach	12	13.86	70.62	16.68	70.71	19.41	70.79	21.6	70.85	22.98	70.9
	North Reach	70	13.86	70.77	16.68	70.86	19.41	70.94	21.6	71	22.98	71.04
	North Reach	132	13.86	70.85	16.68	70.95	19.41	71.03	21.6	71.09	22.98	71.13

River	Reach	Xsec ID	Flow (m ³ /s) and Computed WSEL (m) for Different Flood Events									
			Q50	WL50	Q100	WL100	Q200	WL200	Q350	WL350	Q500	WL500
Tributary B1	North Reach	250	13.86	71.12	16.68	71.19	19.41	71.26	21.6	71.31	22.98	71.34
	North Reach	411	13.86	72.29	16.68	72.34	19.41	72.39	21.6	72.42	22.98	72.44
	North Reach	520	13.86	73.2	16.68	73.26	19.41	73.31	21.6	73.35	22.98	73.37
	North Reach	609	13.86	73.67	16.68	73.75	19.41	73.81	21.6	73.86	22.98	73.89
	North Reach	625	13.86	73.72	16.68	73.8	19.41	73.87	21.6	73.92	22.98	73.95
	North Reach	643	13.86	73.82	16.68	73.9	19.41	73.97	21.6	74.02	22.98	74.05
	North Reach	722	13.86	74.03	16.68	74.12	19.41	74.19	21.6	74.25	22.98	74.28
	North Reach	800	13.86	74.3	16.68	74.39	19.41	74.47	21.6	74.53	22.98	74.57
	North Reach	831	13.86	74.47	16.68	74.54	19.41	74.6	21.6	74.65	22.98	74.68
	North Reach	877	13.86	74.94	16.68	75.03	19.41	75.11	21.6	75.18	22.98	75.22
	North Reach	970	13.86	75.37	16.68	75.45	19.41	75.52	21.6	75.57	22.98	75.61
	North Reach	1056	13.86	75.76	16.68	75.85	19.41	75.92	21.6	75.97	22.98	76
	North Reach	1159	13.86	75.98	16.68	76.07	19.41	76.14	21.6	76.2	22.98	76.23
	North Reach	1241	13.86	76.15	16.68	76.24	19.41	76.32	21.6	76.37	22.98	76.41
	North Reach	1311	13.86	76.29	16.68	76.38	19.41	76.46	21.6	76.52	22.98	76.56
	North Reach	1440	13.86	76.5	16.68	76.59	19.41	76.67	21.6	76.73	22.98	76.76
	North Reach	1524	13.86	76.58	16.68	76.67	19.41	76.75	21.6	76.82	22.98	76.86
	North Reach	1602	13.86	77.14	16.68	77.21	19.41	77.27	21.6	77.3	22.98	77.32
	North Reach	1731	13.86	77.69	16.68	77.78	19.41	77.86	21.6	77.92	22.98	77.96
	North Reach	1815	13.86	77.95	16.68	78.04	19.41	78.11	21.6	78.17	22.98	78.21
	North Reach	1906	13.86	78.25	16.68	78.33	19.41	78.4	21.6	78.46	22.98	78.49
	North Reach	2073	13.86	78.63	16.68	78.71	19.41	78.79	21.6	78.84	22.98	78.88
	North Reach	2232	13.86	78.98	16.68	79.06	19.41	79.14	21.6	79.19	22.98	79.23
	North Reach	2536	13.86	79.89	16.68	79.97	19.41	80.04	21.6	80.1	22.98	80.13
	North Reach	2630	11.52	80.16	13.56	80.24	15.58	80.3	17.3	80.35	18.51	80.39
	North Reach	2650	11.52	80.18	13.56	80.22	15.58	80.25	17.3	80.27	18.51	80.32
	North Reach	2670	Sarsfield Road									
	North Reach	2692	11.52	81.74	13.56	82.39	15.58	83.11	17.3	83.8	18.51	84.27
North Reach	2720	11.52	81.75	13.56	82.4	15.58	83.12	17.3	83.81	18.51	84.27	
North Reach	2761	11.52	81.75	13.56	82.4	15.58	83.12	17.3	83.81	18.51	84.27	
North Reach	2883	11.52	81.76	13.56	82.4	15.58	83.12	17.3	83.81	18.51	84.27	
Tributary B2	South Reach	1881	7.39	70.72	8.65	70.82	9.89	70.9	10.96	70.97	11.7	71.01
	South Reach	1929	7.39	70.75	8.65	70.84	9.89	70.92	10.96	70.99	11.7	71.03
	South Reach	1985	7.39	70.8	8.65	70.88	9.89	70.96	10.96	71.02	11.7	71.07
	South Reach	2006	7.39	70.9	8.65	70.92	9.89	70.94	10.96	71.02	11.7	71.07
	South Reach	2024	7.39	71.1	8.65	71.14	9.89	71.17	10.96	71.16	11.7	71.15
	South Reach	2035	7.39	71.2	8.65	71.28	9.89	71.33	10.96	71.37	11.7	71.42
	South Reach	2067	7.39	71.65	8.65	71.69	9.89	71.74	10.96	71.78	11.7	71.78
	South Reach	2085	7.39	71.82	8.65	71.88	9.89	71.94	10.96	71.98	11.7	72.01
	South Reach	2095	7.39	71.89	8.65	71.96	9.89	72.02	10.96	72.07	11.7	72.1
	South Reach	2115	7.39	72	8.65	72.07	9.89	72.13	10.96	72.18	11.7	72.21
	South Reach	2192	7.39	72.18	8.65	72.25	9.89	72.31	10.96	72.36	11.7	72.39
	South Reach	2239	7.39	72.49	8.65	72.56	9.89	72.61	10.96	72.66	11.7	72.69
	South Reach	2286	7.39	72.55	8.65	72.62	9.89	72.68	10.96	72.72	11.7	72.75
	South Reach	2363	7.39	72.97	8.65	73.02	9.89	73.07	10.96	73.11	11.7	73.13
	South Reach	2420	7.39	73.41	8.65	73.43	9.89	73.46	10.96	73.47	11.7	73.49
	South Reach	2468	7.39	73.55	8.65	73.6	9.89	73.64	10.96	73.67	11.7	73.69
	South Reach	2534	7.39	73.72	8.65	73.77	9.89	73.82	10.96	73.86	11.7	73.88
	South Reach	2624	7.39	73.91	8.65	73.97	9.89	74.02	10.96	74.07	11.7	74.09
	South Reach	2655	7.39	73.89	8.65	73.96	9.89	74.01	10.96	74.06	11.7	74.08
	South Reach	2681	7.39	74.15	8.65	74.19	9.89	74.23	10.96	74.26	11.7	74.28
	South Reach	2703	7.39	74.31	8.65	74.36	9.89	74.4	10.96	74.43	11.7	74.44
	South Reach	2751	7.39	74.94	8.65	74.99	9.89	75.04	10.96	75.09	11.7	75.12
	South Reach	2797	7.39	75.49	8.65	75.53	9.89	75.57	10.96	75.59	11.7	75.6
	South Reach	2808	7.39	75.54	8.65	75.6	9.89	75.65	10.96	75.69	11.7	75.71
	South Reach	2826	7.39	75.66	8.65	75.72	9.89	75.78	10.96	75.82	11.7	75.85
	South Reach	2860	7.39	75.74	8.65	75.79	9.89	75.85	10.96	75.89	11.7	75.92
	South Reach	2988	7.39	76.16	8.65	76.22	9.89	76.27	10.96	76.32	11.7	76.34
	South Reach	3343	7.39	77.22	8.65	77.28	9.89	77.34	10.96	77.38	11.7	77.41
South Reach	3635	7.39	78.39	8.65	78.45	9.89	78.5	10.96	78.55	11.7	78.58	

River	Reach	Xsec ID	Flow (m ³ /s) and Computed WSEL (m) for Different Flood Events									
			Q50	WL50	Q100	WL100	Q200	WL200	Q350	WL350	Q500	WL500
Tributary B2	South Reach	3919	7.39	79.56	8.65	79.63	9.89	79.7	10.96	79.75	11.7	79.78
	South Reach	4075	6.85	80.43	8.02	80.48	9.17	80.54	10.15	80.58	10.83	80.61
	South Reach	4090	6.85	80.44	8.02	80.48	9.17	80.51	10.15	80.54	10.83	80.55
	South Reach	4106	Sarsfield Road									
	South Reach	4121	6.85	81.47	8.02	81.86	9.17	82.27	10.15	82.64	10.83	82.91
	South Reach	4147	6.85	81.47	8.02	81.86	9.17	82.27	10.15	82.64	10.83	82.92
	South Reach	4206	6.85	81.52	8.02	81.88	9.17	82.29	10.15	82.65	10.83	82.92
	South Reach	4290	6.85	81.59	8.02	81.91	9.17	82.3	10.15	82.66	10.83	82.93

Table 16 List of RVCA Regulation Permit Files (2005 to 29 Mar, 2018)

RVCA File #	Location	Year of Application	Flood Line Change Required?	Breif Description
RV8-6717	1530 LOUGH DRIVE	2017	No	1200 MM DIAMETER CSP CULVERT
RV8-5917	1530 STACKHOUSE CRT	2017	No	PROPOSED CULVERT & EROSION CONTROL
RV8-2017	INNES RD	2017	No	DRAIN MAINTENANCE
RV8-1217	SARFIELD RD, 0.30 KM SOUTH OF BEATON RD	2017	No	REPLACE CULVERT
RV8-0917	CONC 1 OS PT LOT 7	2017	No	BANK STABILIZATION
RV8-3616	STACKHOUSE CRT	2016	No	CULVERT CROSSING
RV8-0816	FRENCH HILL RD	2016	No	CULVERT REPLACEMENT ON BECKETT CREEK TRIB
RV8-3615	DUNNING ROAD, NORTH OF REGIMBALD ROAD	2015	No	EMERGENCY REPLACEMENT OF CULVERT SN898170
RV8-1015	BIRCHGROVE RD 2.4 KM NORTH OF COLONIAL RD	2015	No	REPLACE BIRCHGROVE RD CULVERT OVER BECKETTS CREEK
RV8-0615	DUNNING RD	2015	No	EMERGENCY REPLACEMENT OF BECKETTS CREEK TRIB CULVERT
RV8-0315	OLD MONTREAL ROAD	2015	No	REPLACE EXISTING CULVERT ON OLD MONTREAL RD
RV8-0514	BIRCHGROVE RD	2014	No	REPLACE EXISTING CONCRETE BRIDGE WITH A NEW STRUCTURAL METAL MULTI-PLATE CULVERT
RV8-1413	WILHAVEN DR	2013	No	STABILIZE WILHAVEN BRIDGE ABUTMENT SLOPE
RV8-3312T	2951 BIRCHGROVE RD	2012	No	INSTALL A CULVERT OF 100 FT AND PUT ABOUT 6-7 FEET OF EARTH ON IT - COMMENTS FIELD FROM OLD DATABASE: CULVERT
RV8-0812T	SARFIELD RD	2012	No	REPLACEMENT OF AN EXISTING 2.06 M SPAN CORRUGATED STEEL PIPE ARCH WITH A NEW 1.8 M DIAM CSP CULVERT -COMMENTS FIELD FROM OLD DATABASE: CULVERT
RV8-0712T	BECKETT'S CK	2012	No	REPLACEMENT OF AN EXISTING 1200 MM DIAM. CSP CULVERT WITH A NEW 1400 MM DIAM. CSP CULVERT -COMMENTS FIELD FROM OLD DATABASE: CULVERT
RV8-0612T	BECKETT'S CK	2012	No	REPLACEMENT OF AN EXISTING DETERIORATED CONCRETE BOX CULVERT WITH A NEW 5230 MM DIA CSP CULVERT -COMMENTS FIELD FROM OLD DATABASE: CULVERT
RV8-3410T	BIRCHGROVE RD	2010	No	CULVERT REPLACEMENT -COMMENTS FIELD FROM OLD DATABASE: CULVERT
RV8-2110T	O'TOOLE RD	2010	No	CULVERT REPLACEMENT
RV8-0910T	3145 WILHAVEN DR	2010	No	STORMWATER OUTLET FOR SUBDIVISION & CULVERT
RV8-0110T	CANAAN RD	2010	No	CULVERT REPLACEMENT ON BECKETTS CREEK TRIBUTARY
RV8-3208T	CANAAN RD	2008	No	REPLACE CULVERT AND REINSTATE SIDE SLOPE -COMMENTS FIELD FROM OLD DATABASE: RV8280T
RV8-2808T	CANAAN RD	2008	No	REPLACE CULVERT - ON CITY OF OTTAWA AND CARENCE-ROCKLAND BORDER SEE RV8-3208T -COMMENTS FIELD FROM OLD DATABASE: CLOSED
RV8-1908T	FRENCH HILL R	2008	No	REPLACE CULVERT -COMMENTS FIELD FROM OLD DATABASE: CULVERT
RV8-1708T	FRENCH HILL R	2008	No	CULVERT REPLACEMENT -COMMENTS FIELD FROM OLD DATABASE: CULVERT
RV8-1608	WILHAVEN	2008	No	BRIDGE REHABILITATION -COMMENTS FIELD FROM OLD DATABASE: BRIDGE
RV8-1207T	SARFIELD RD	2007	No	NEW CULVERT -COMMENTS FIELD FROM OLD DATABASE: CULVERT
RV8-1306T	FRENCH HILL R	2006	No	BRIDGE REPLACEMENT -COMMENTS FIELD FROM OLD DATABASE: BRIDGE
RV8-0305T	FRENCH HILL R	2005	No	CULVERT REPLACEMENT BUT WITH LONGER CULVERT -COMMENTS FIELD FROM OLD DATABASE: CULVERT
RV8-0205T	LAFLEUR RD	2005	No	"EMERGENCY" CULVERT REPLACEMENT - ORIGINAL WASHED OUT SEPTEMBER 2004 AND WAS REMOVED (NO PERMITS)

Appendix A

Buildings and Islands in Floodplain – RVCA Policy

Ferdous Ahmed

From: Ewan Hardie
Sent: Wednesday, June 29, 2016 10:35 AM
To: Ferdous Ahmed
Subject: Buildings in the Floodplain Guidelines

Hi Ferdous,

As discussed at recent meetings please consider the following guidelines when undertaking floodplain mapping projects

Effective June 13th 2016, when plotting floodlines RVCA staff will use the following guidelines in order to apply a conservative approach to the delineation of the regulatory floodplain, specifically in areas that have buildings that are in the floodplain or affected by the floodplain:

1. Include any buildings in the floodplain that have any part of the footprint touching the floodplain. This is done to be conservative based on the lack of knowledge on the conditions around the buildings: soil conditions, window wells, walk out doors, building egress are all not known at the time of a floodplain mapping study so it is wise to adopt a conservative approach and include building footprints in the floodplain.
2. With regards to dry islands in and around buildings, islands will be removed if they did not meet the minimum mapping unit acceptable for the data. An envelope of 2 metres around building footprints is to be considered. If the floodplain comes close to or is in this 2m building envelope the entire envelope should be included in the floodplain. This approach is also consistent with the above approach (building footprints) in that the lack of knowledge of the conditions around the building forces the uses of a conservative approach, which is to remove the islands
3. In cases where a building has been included in the floodplain (because of the above criteria), the adjacent building will need to be included in the floodplain as well because of a lack of data in between the buildings and/or the 2m building envelope rule.
4. In the case of townhome or connected type buildings and the floodplain touching the foundations, the building footprint should be included up to the next visible unit partition where the elevation changes

Thanks

Ewan Hardie

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Ferdous Ahmed

From: Ewan Hardie
Sent: Thursday, July 6, 2017 5:12 PM
To: Ferdous Ahmed
Cc: Brian Stratton
Subject: Floodplain delineation guidance

Good Afternoon Ferdous,

As discussed here is the documentation of the guidance that was given to RVCA staff when it comes to plotting floodlines using LiDAR data for this most recent project.

Guidance:

When delineating the regulatory flood water levels, RVCA staff will follow a precautionary principle to include island areas in the floodplain that are up to 1000 square metres.

Ewan Hardie

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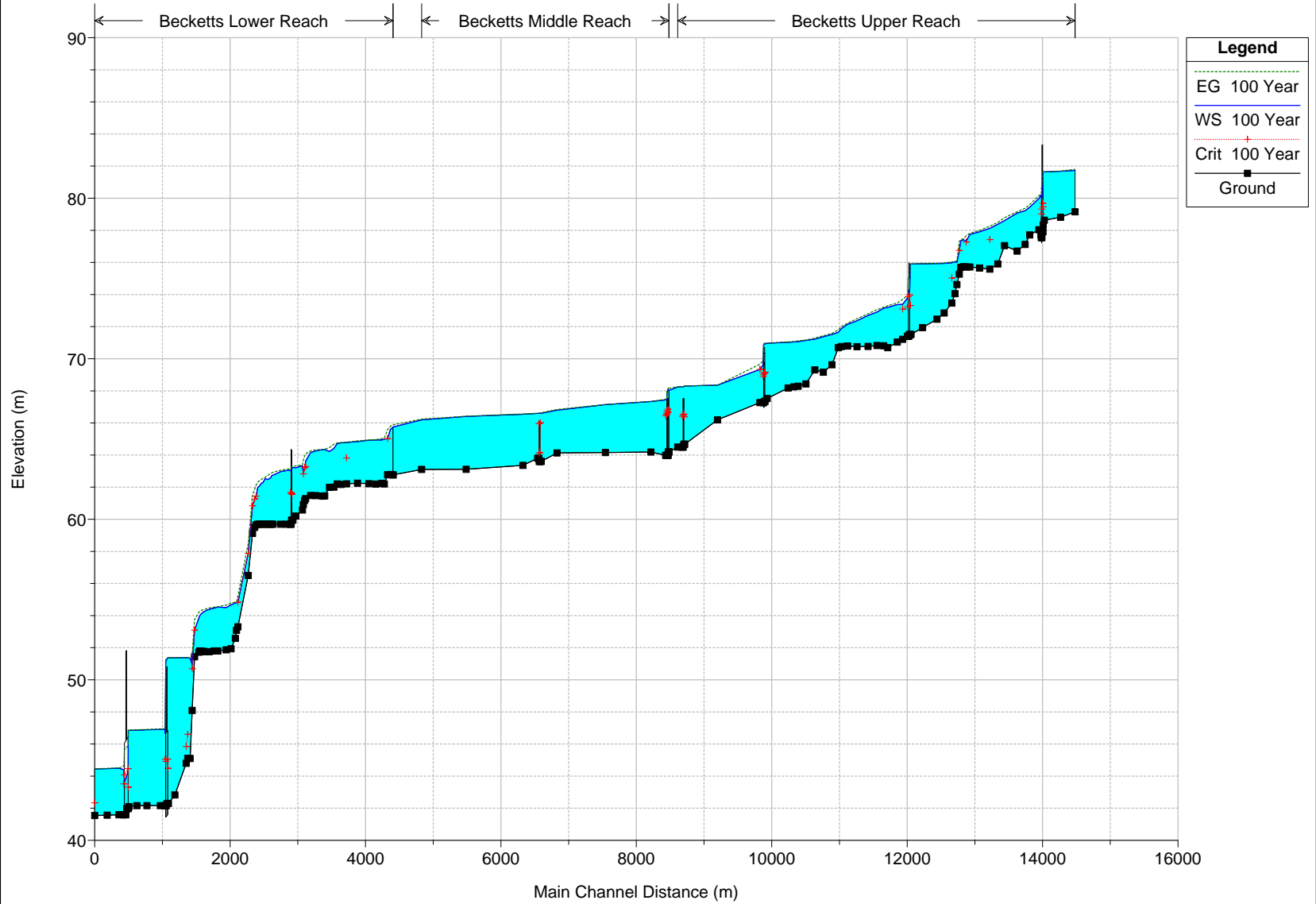
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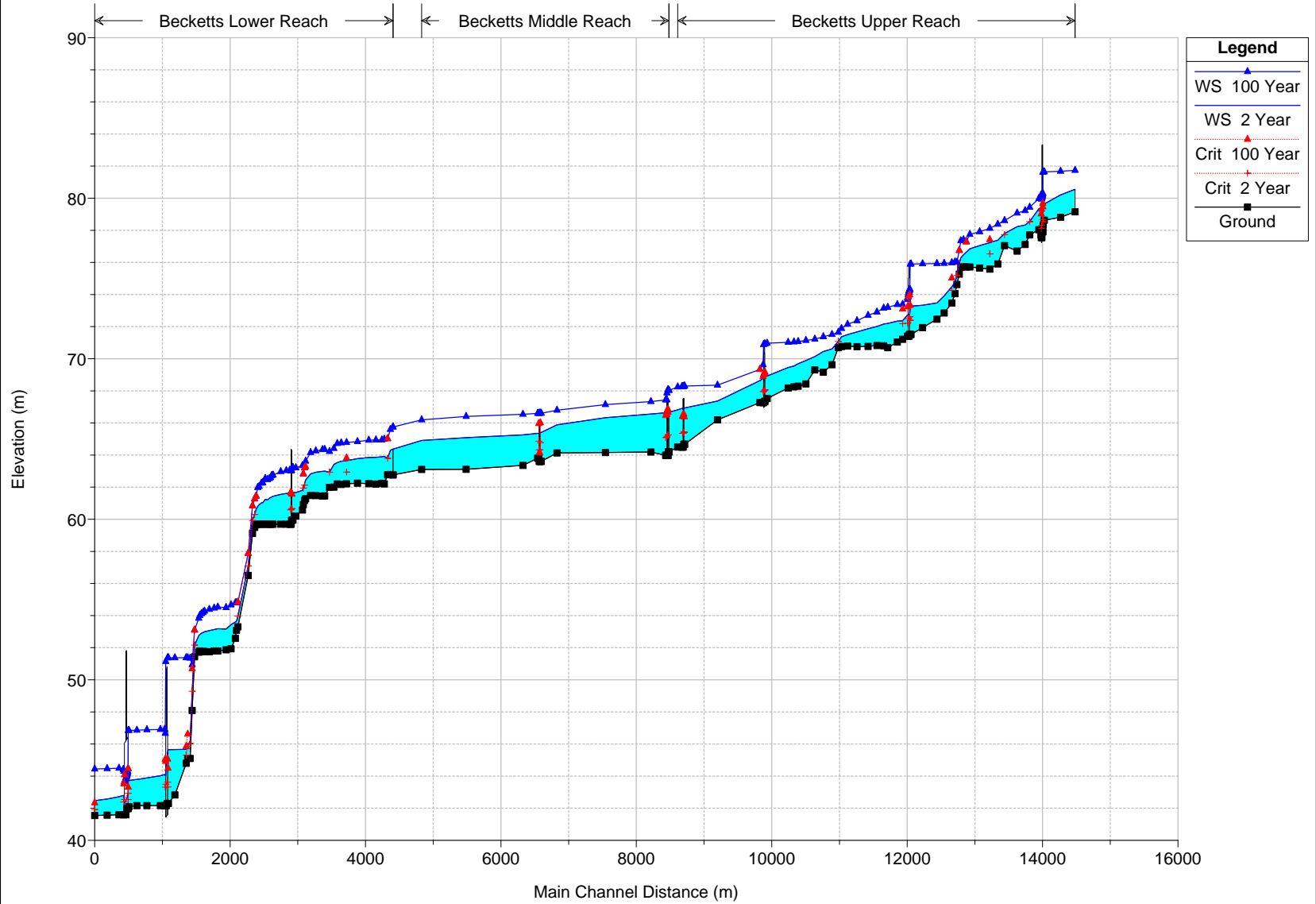
Appendix B

HEC-RAS Profiles and Cross-Sections

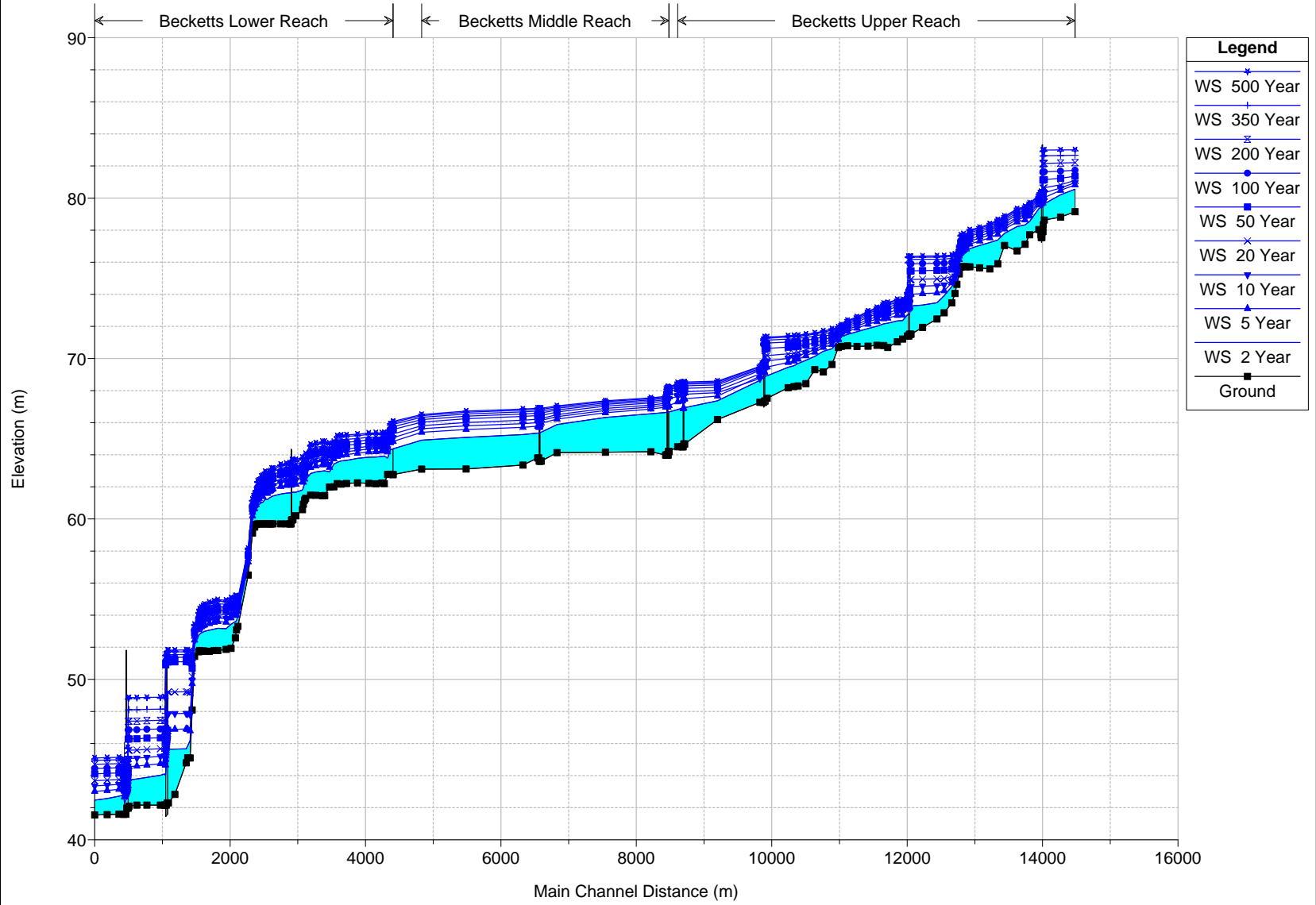
Becketts Plan: Becketts_V11 6/11/2018



Becketts Plan: Becketts_V11 6/11/2018

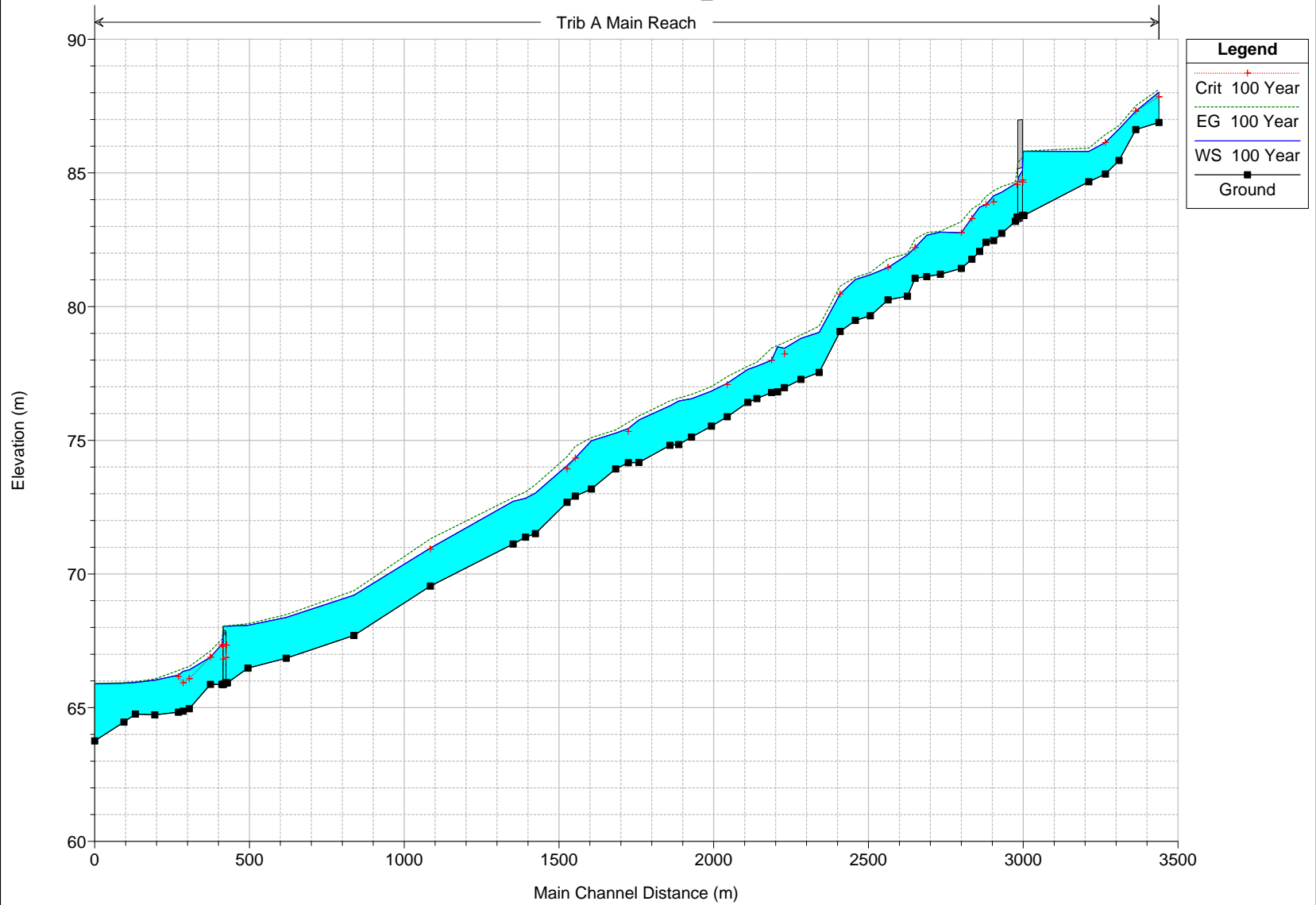


Becketts Plan: Becketts_V11 6/11/2018



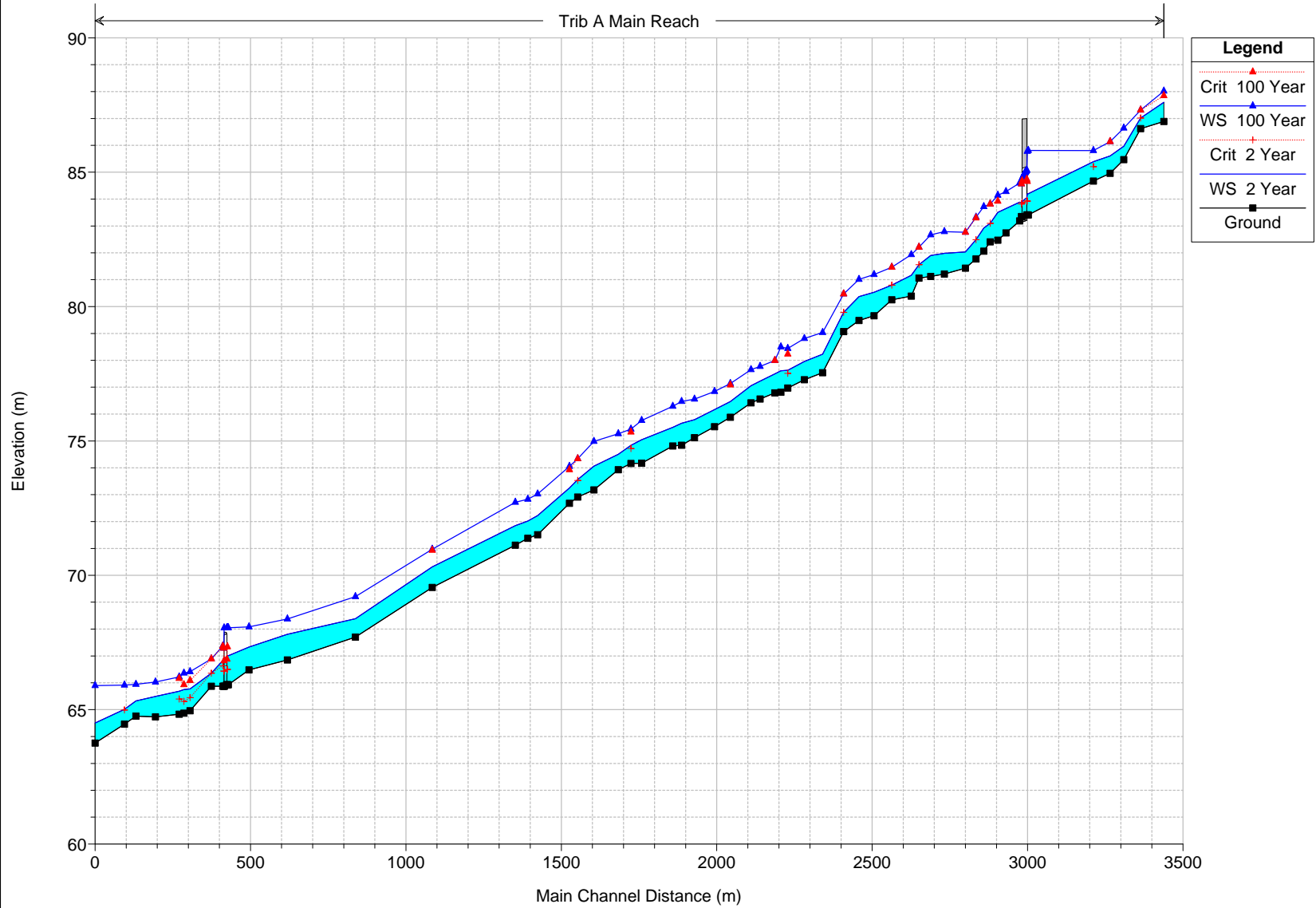
Becketts Plan: Becketts_V11 6/11/2018

Trib A Main Reach



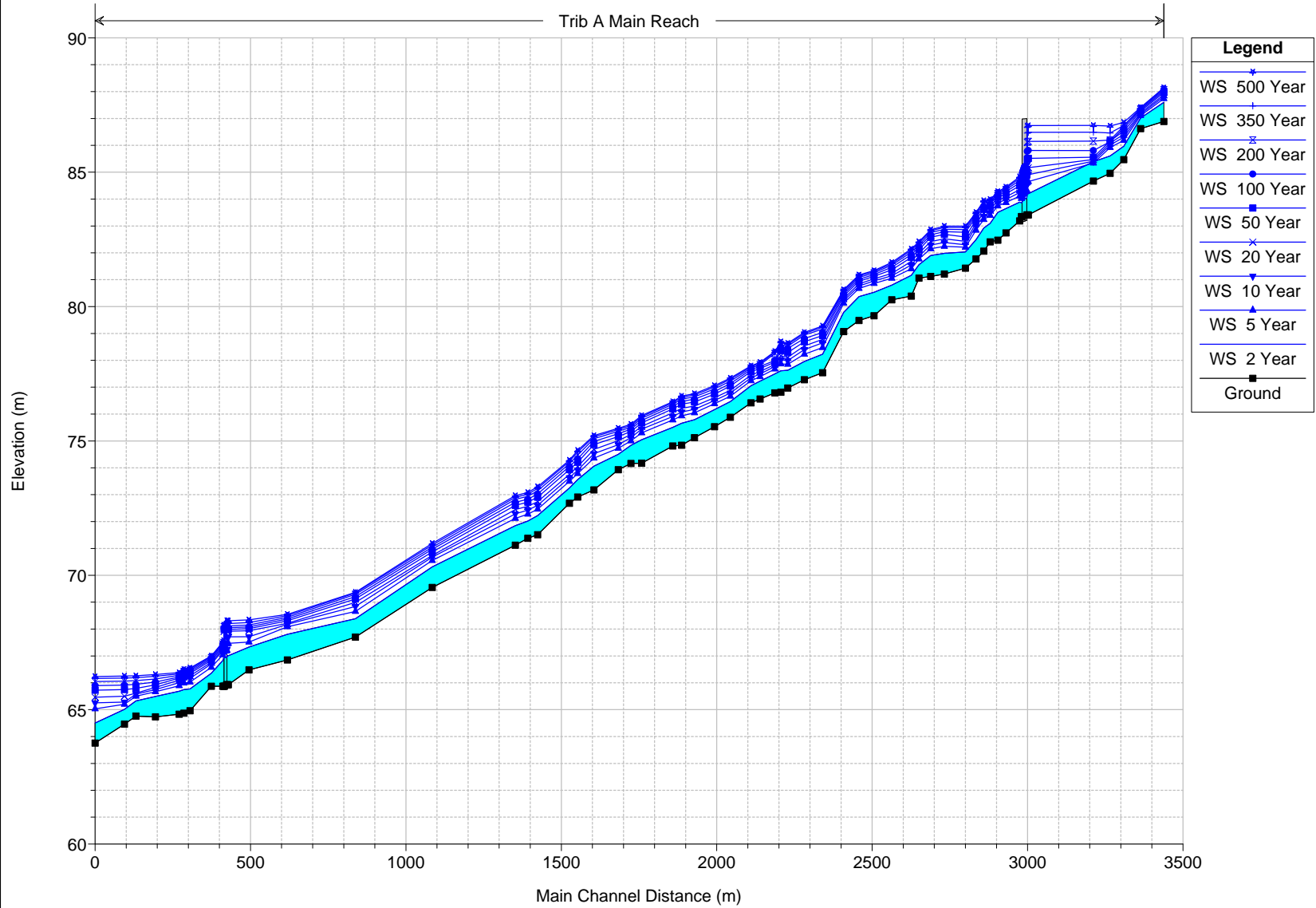
Becketts Plan: Becketts_V11 6/11/2018

Trib A Main Reach

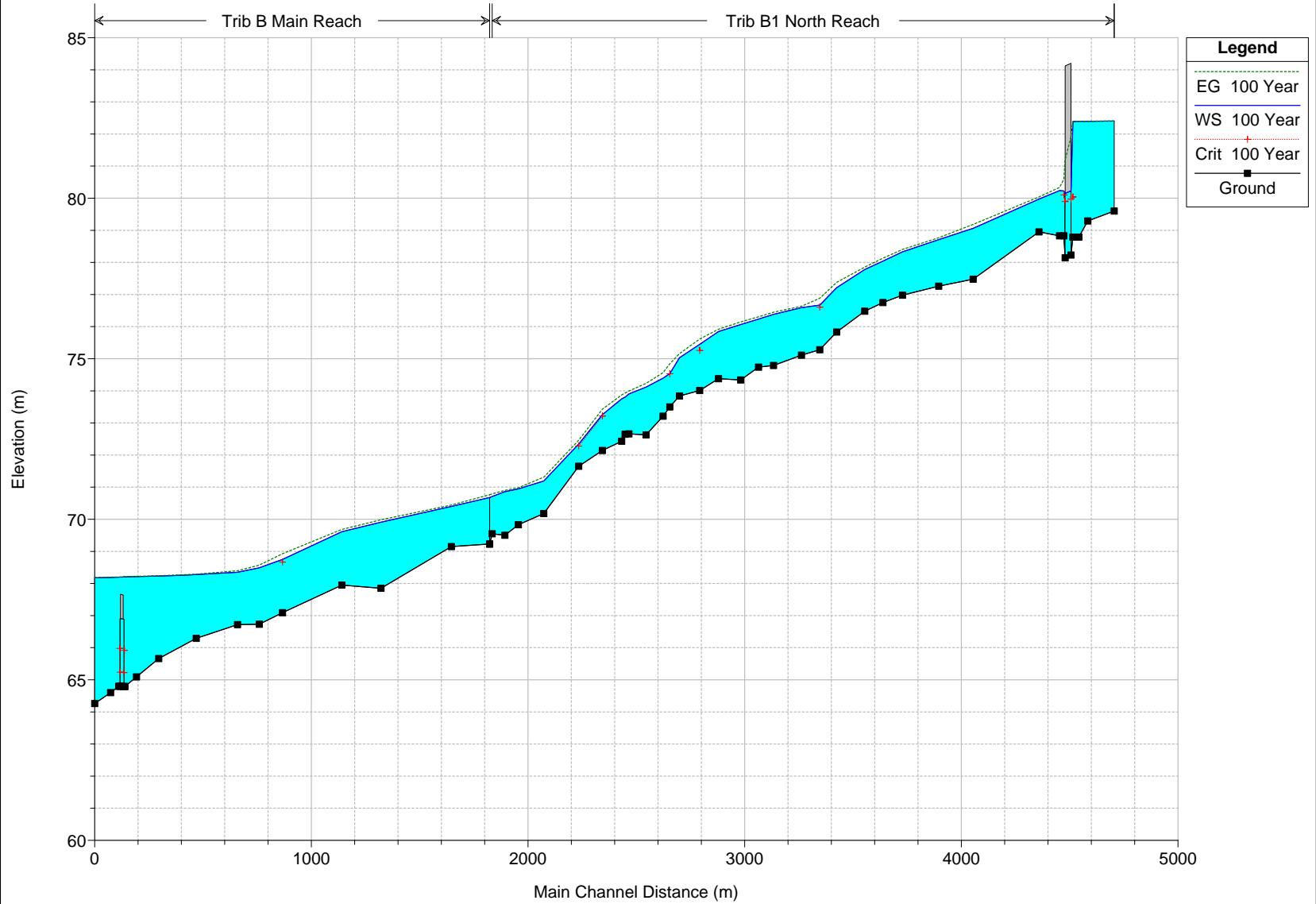


Becketts Plan: Becketts_V11 6/11/2018

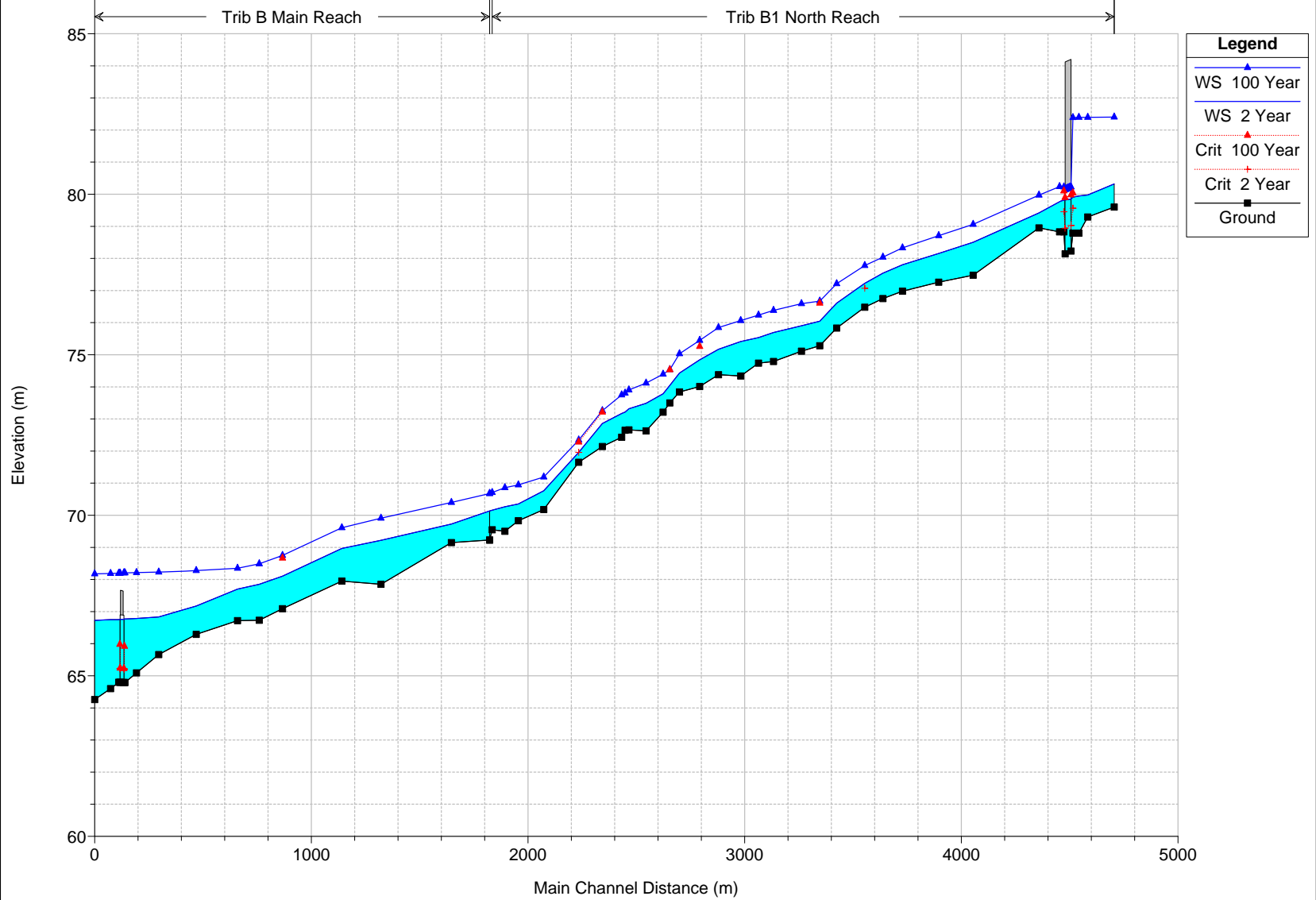
Trib A Main Reach



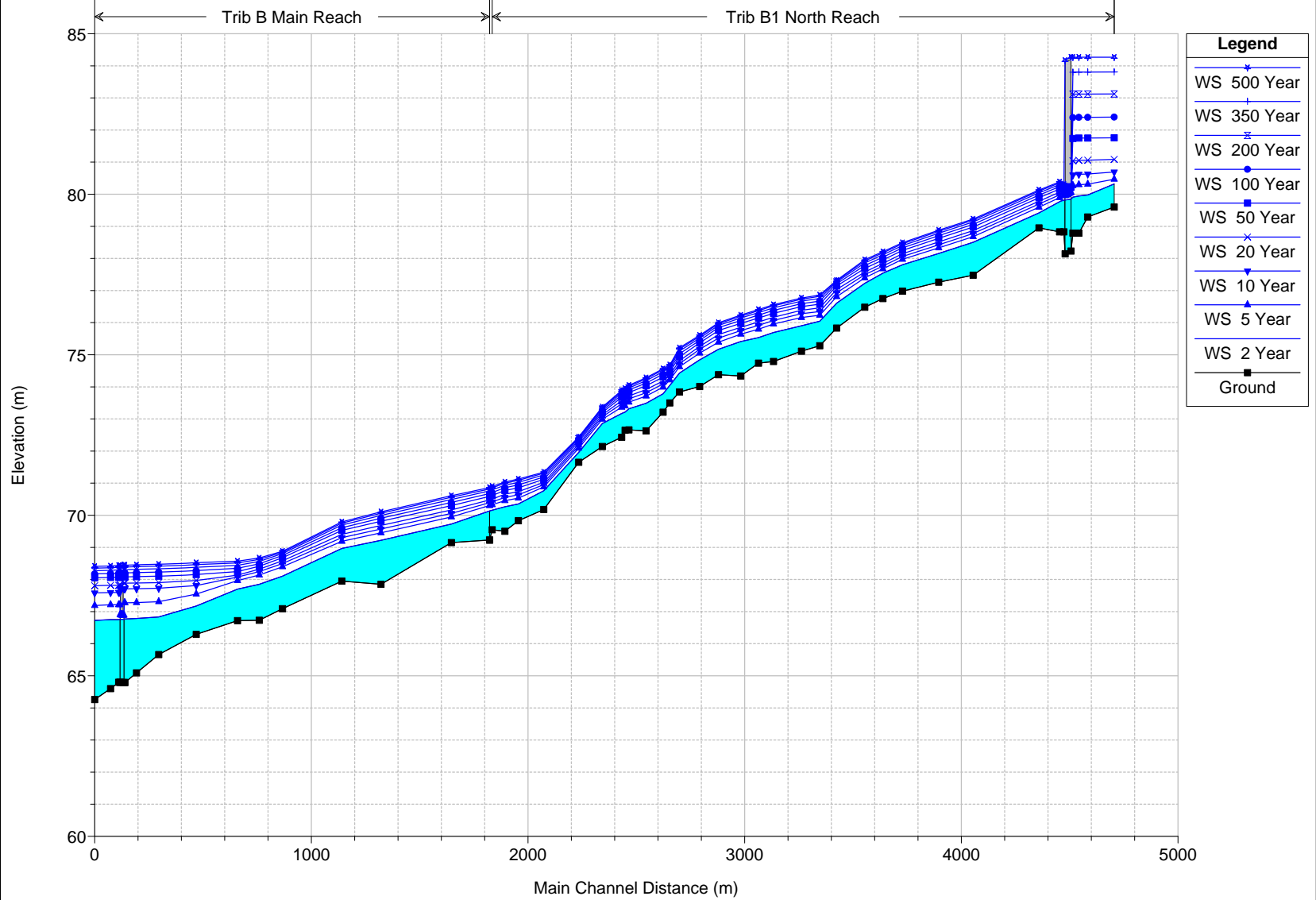
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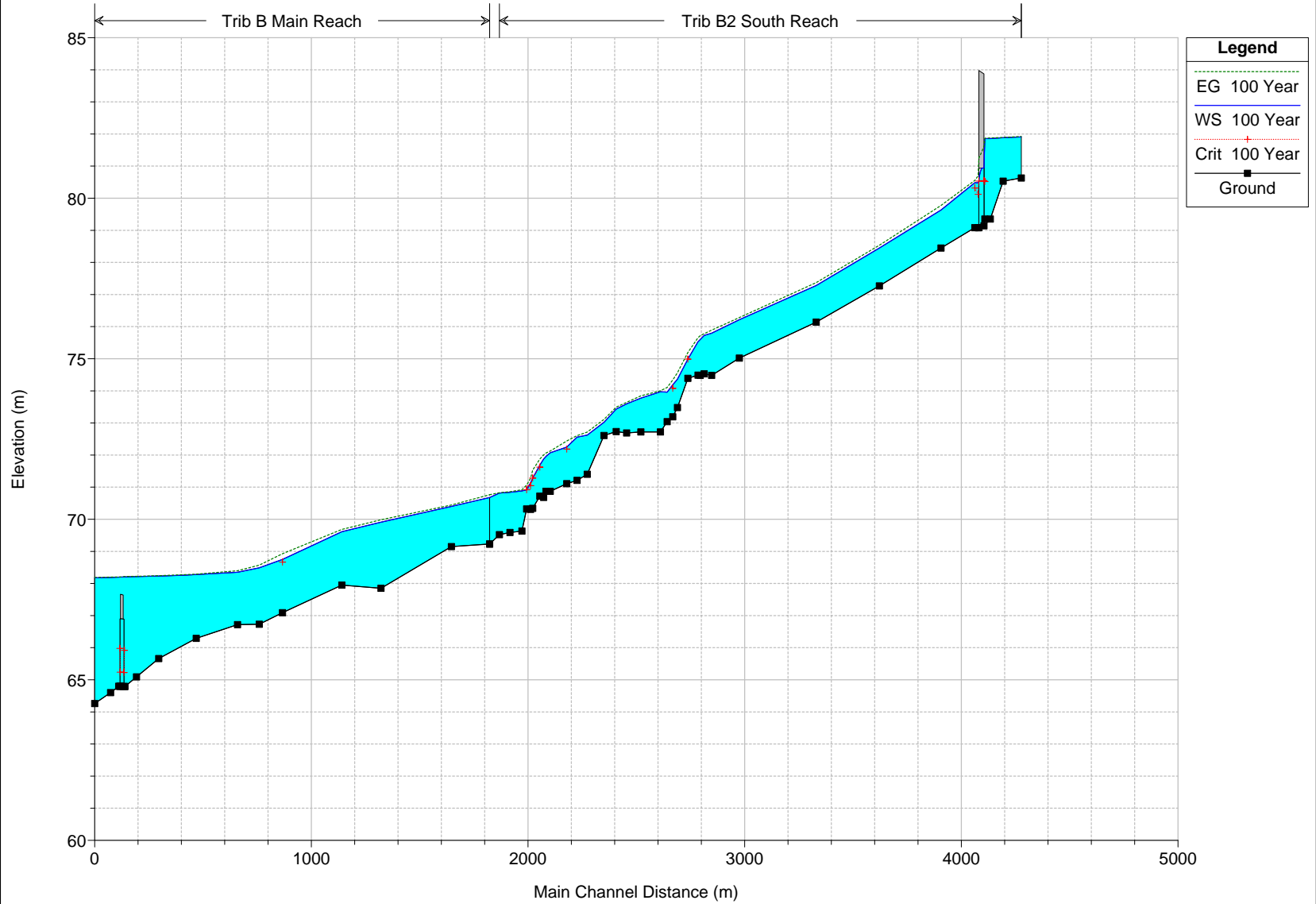
Becketts Plan: Becketts_V11 6/11/2018



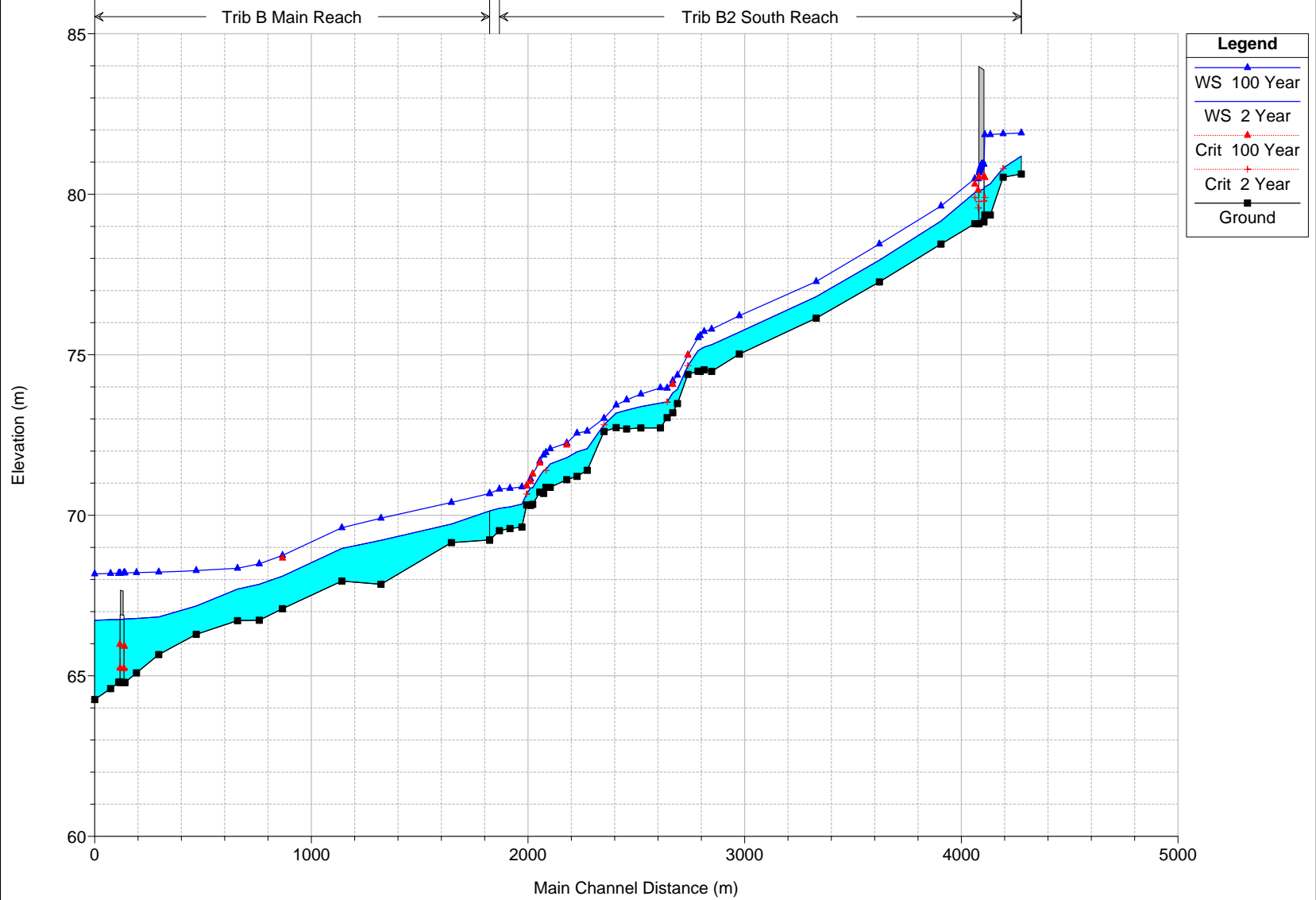
Becketts Plan: Becketts_V11 6/11/2018



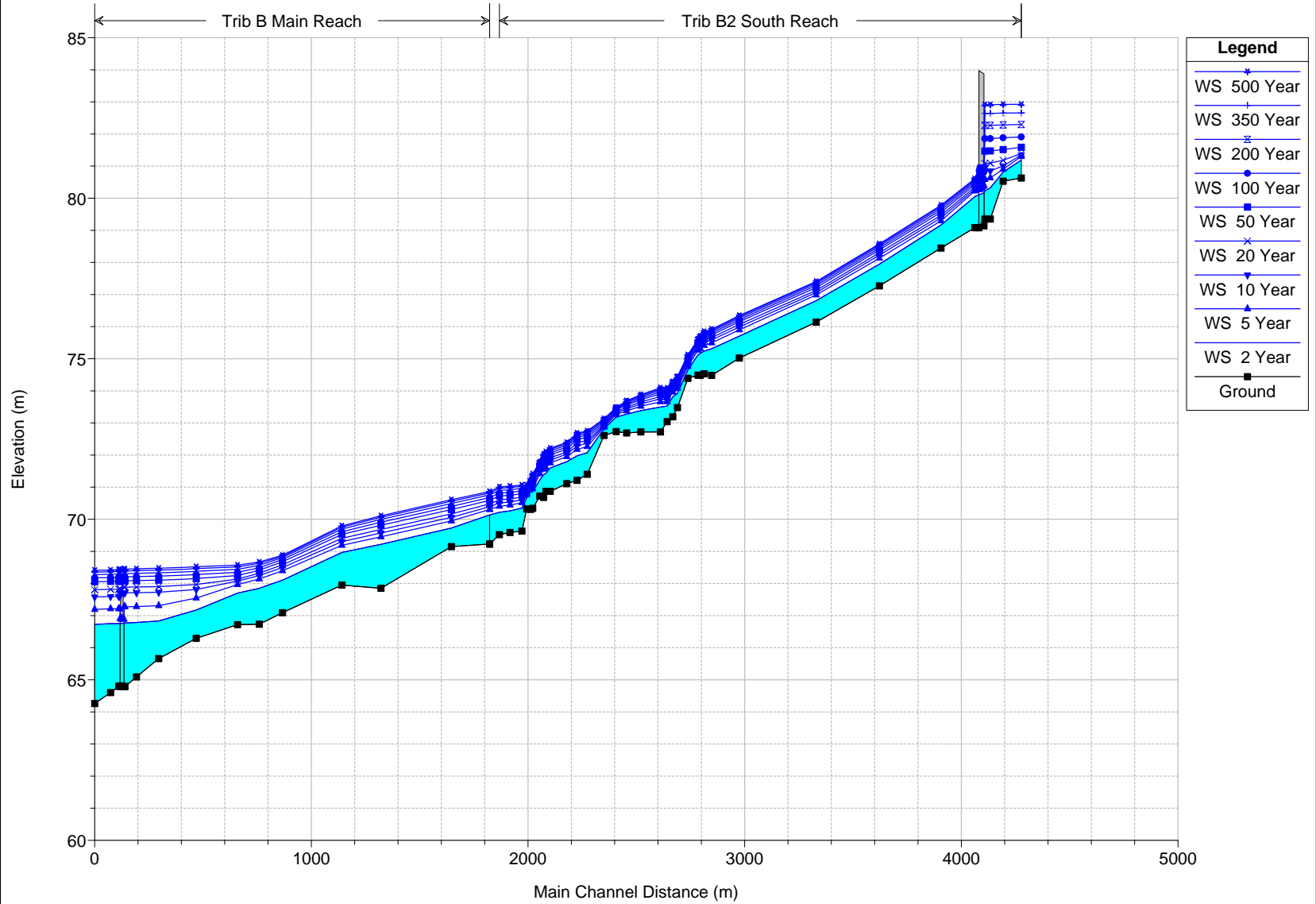
Becketts Plan: Becketts_V11 6/11/2018

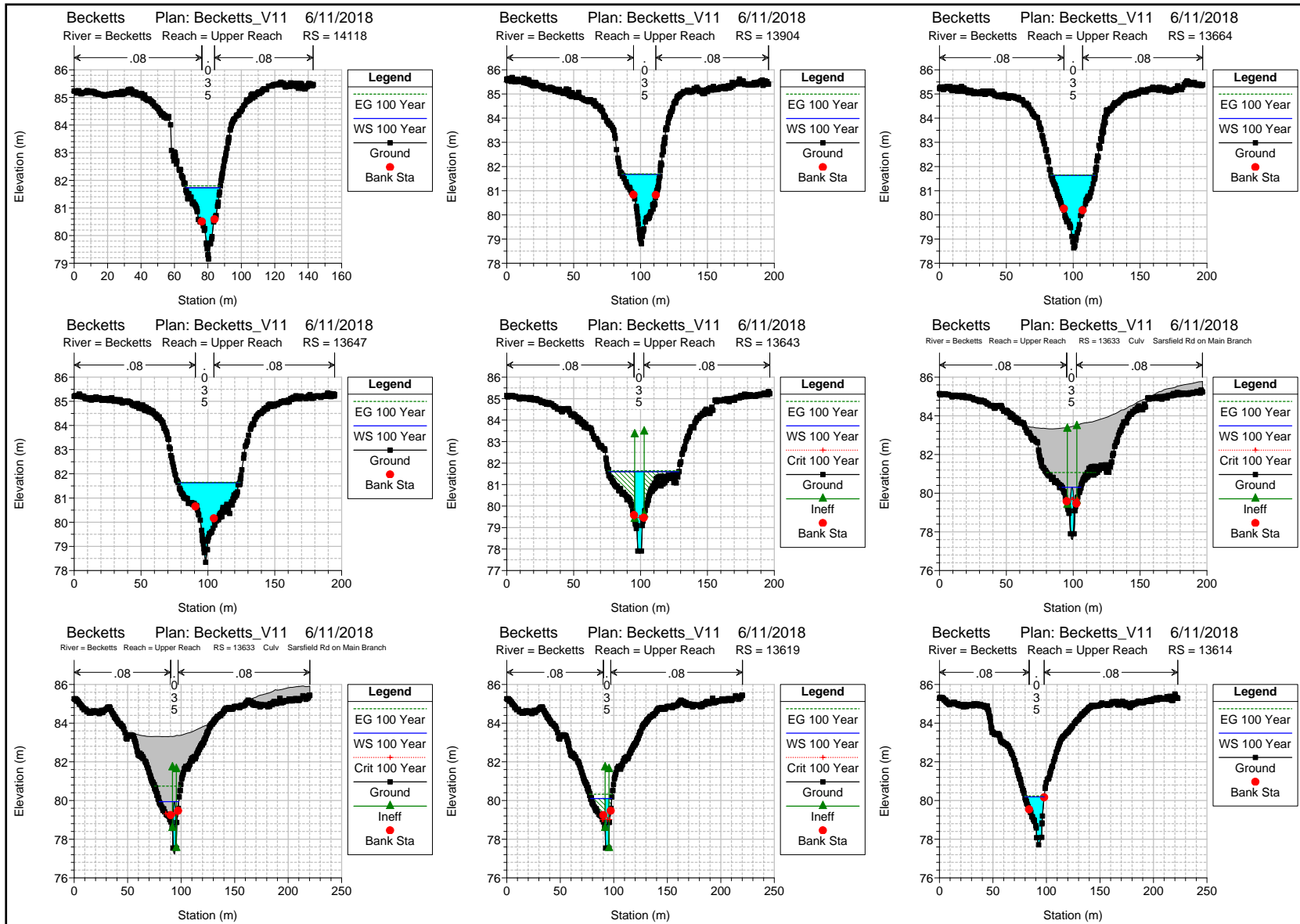


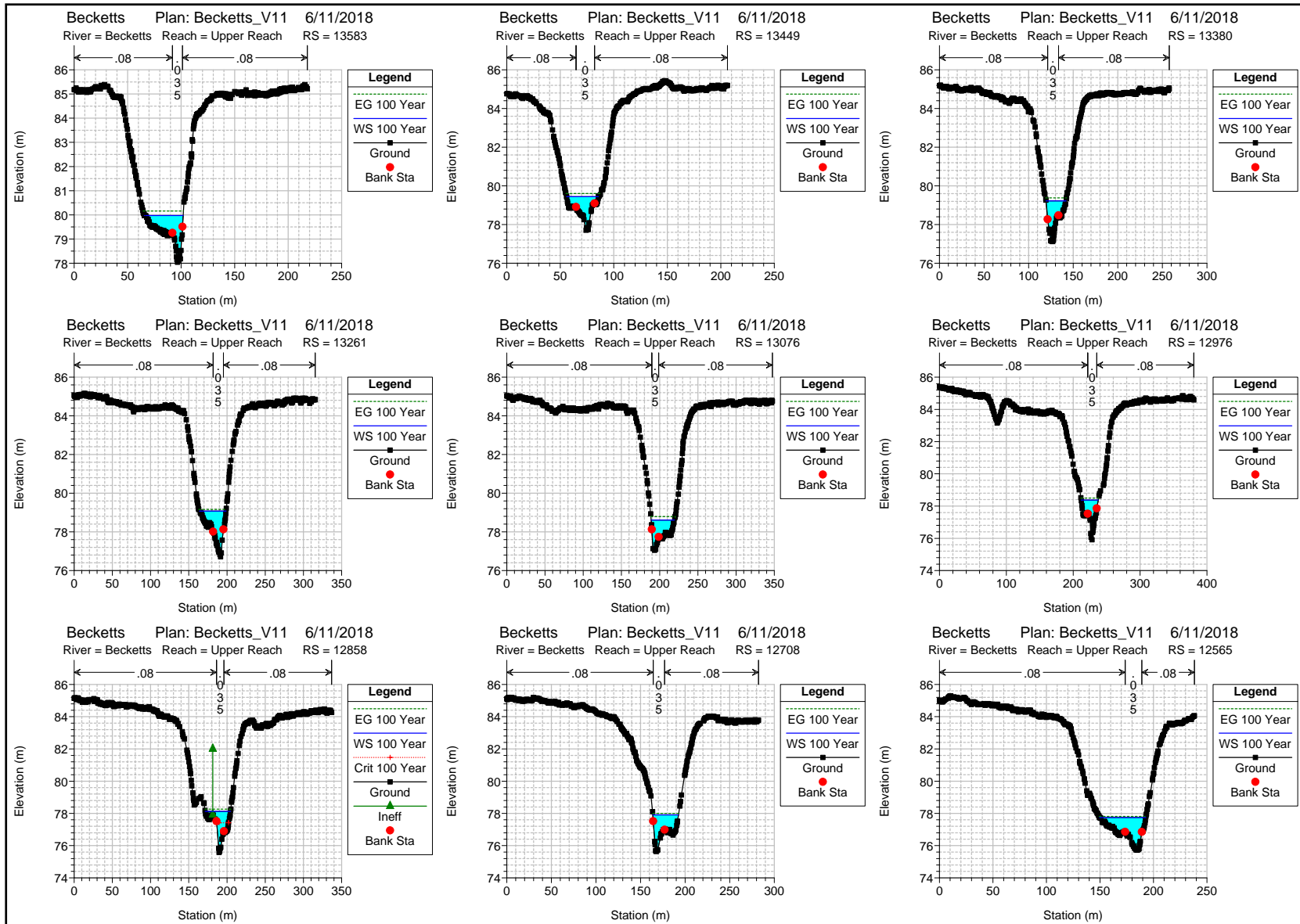
Becketts Plan: Becketts_V11 6/11/2018

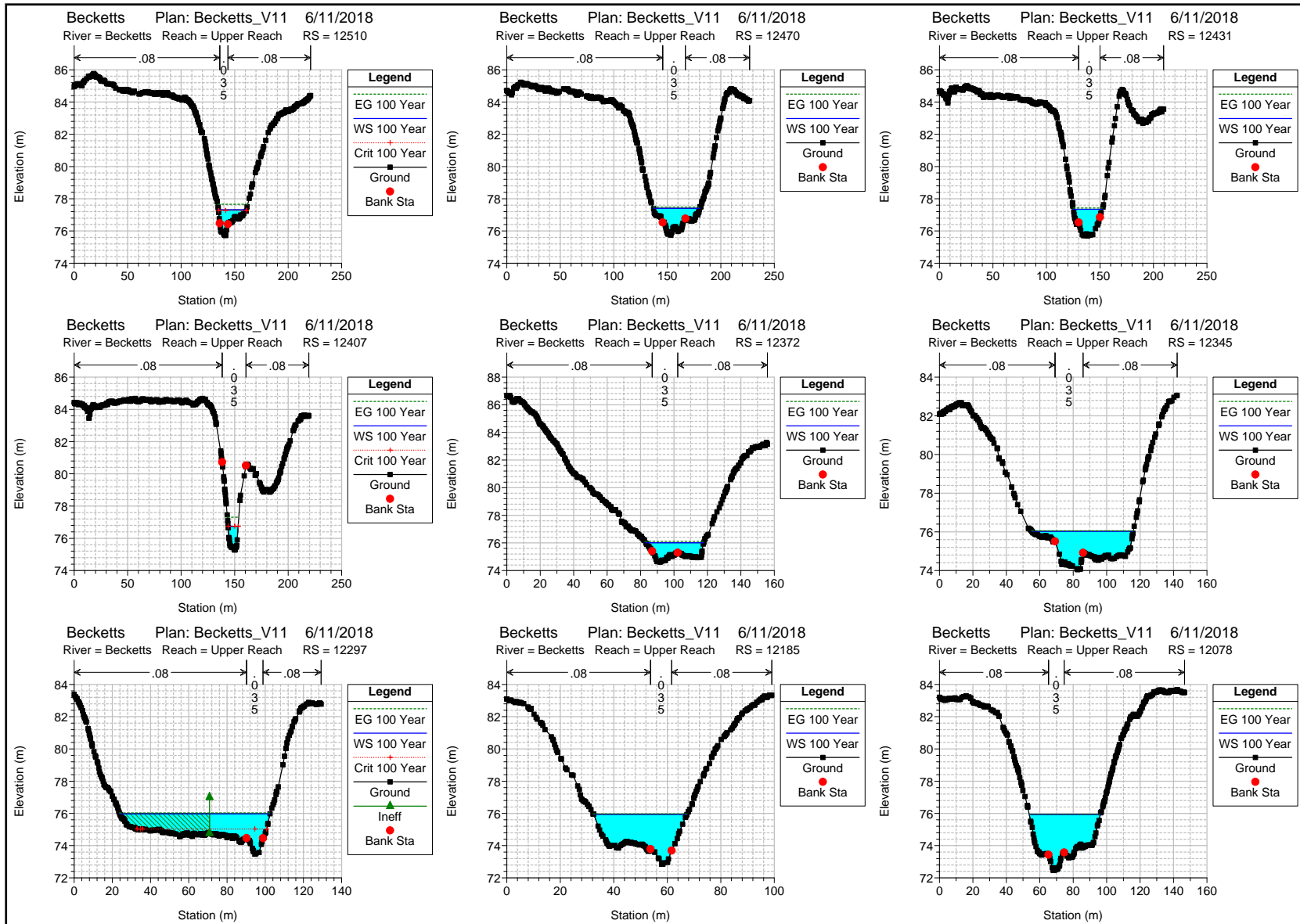


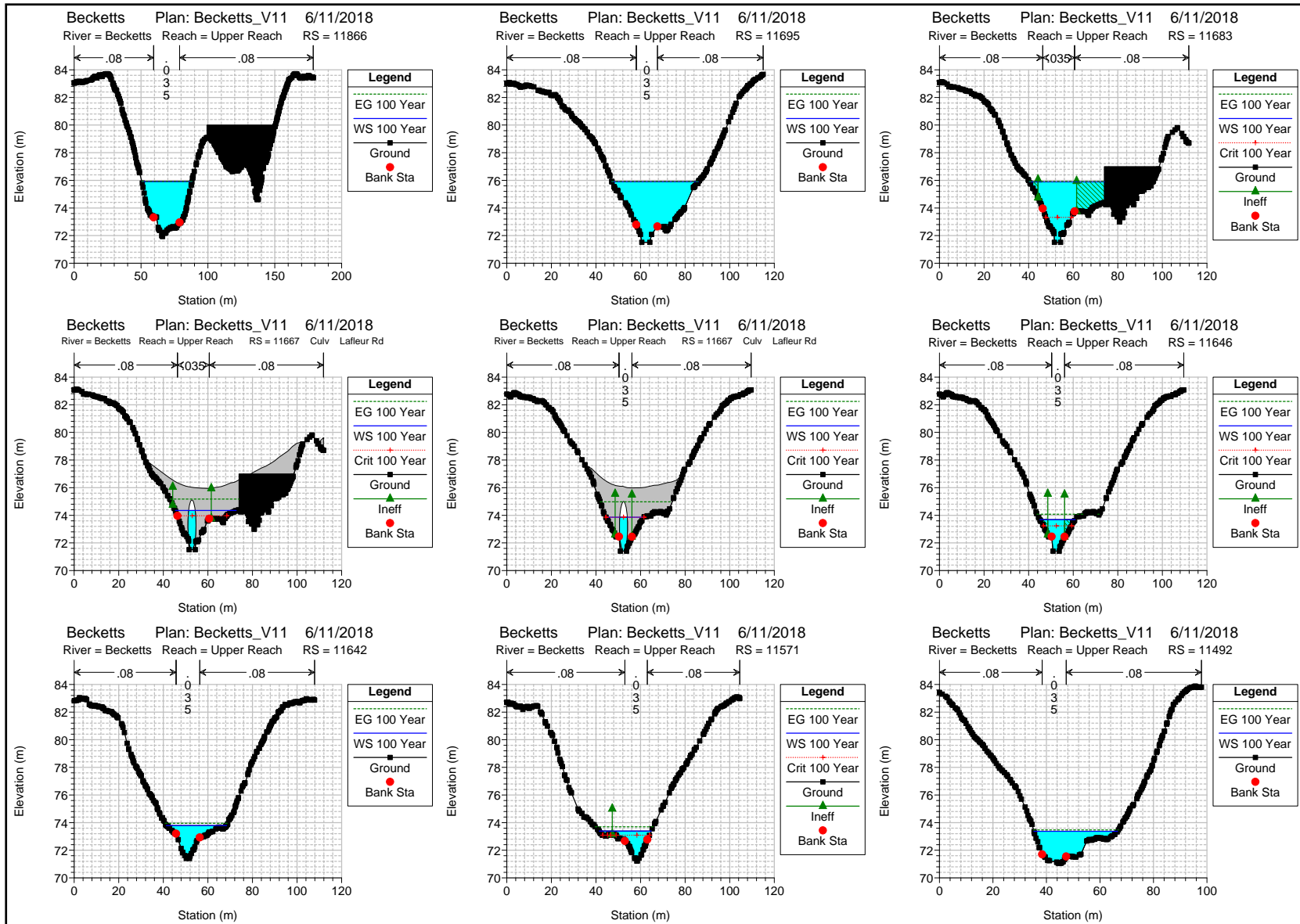
Becketts Plan: Becketts_V11 6/11/2018

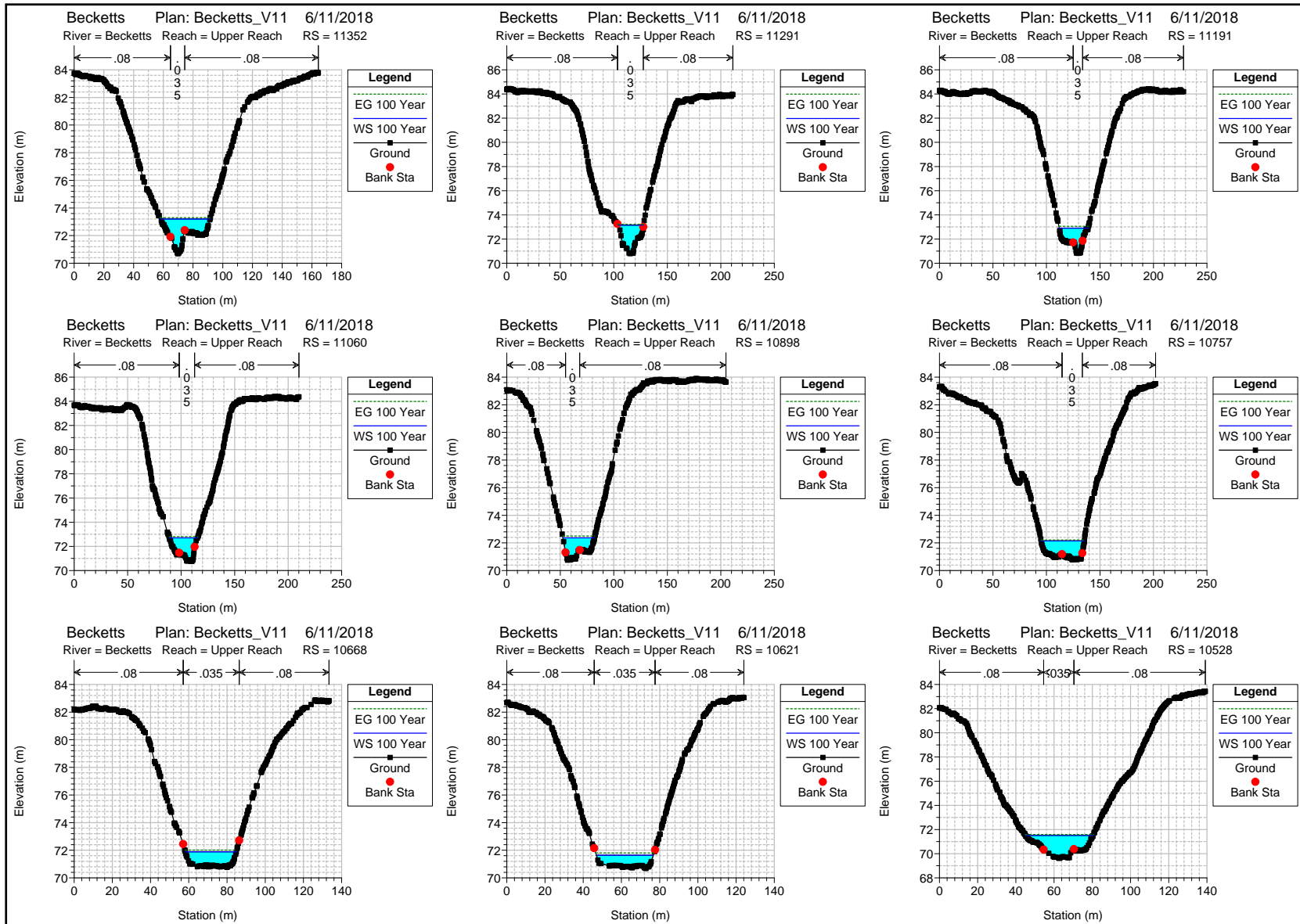


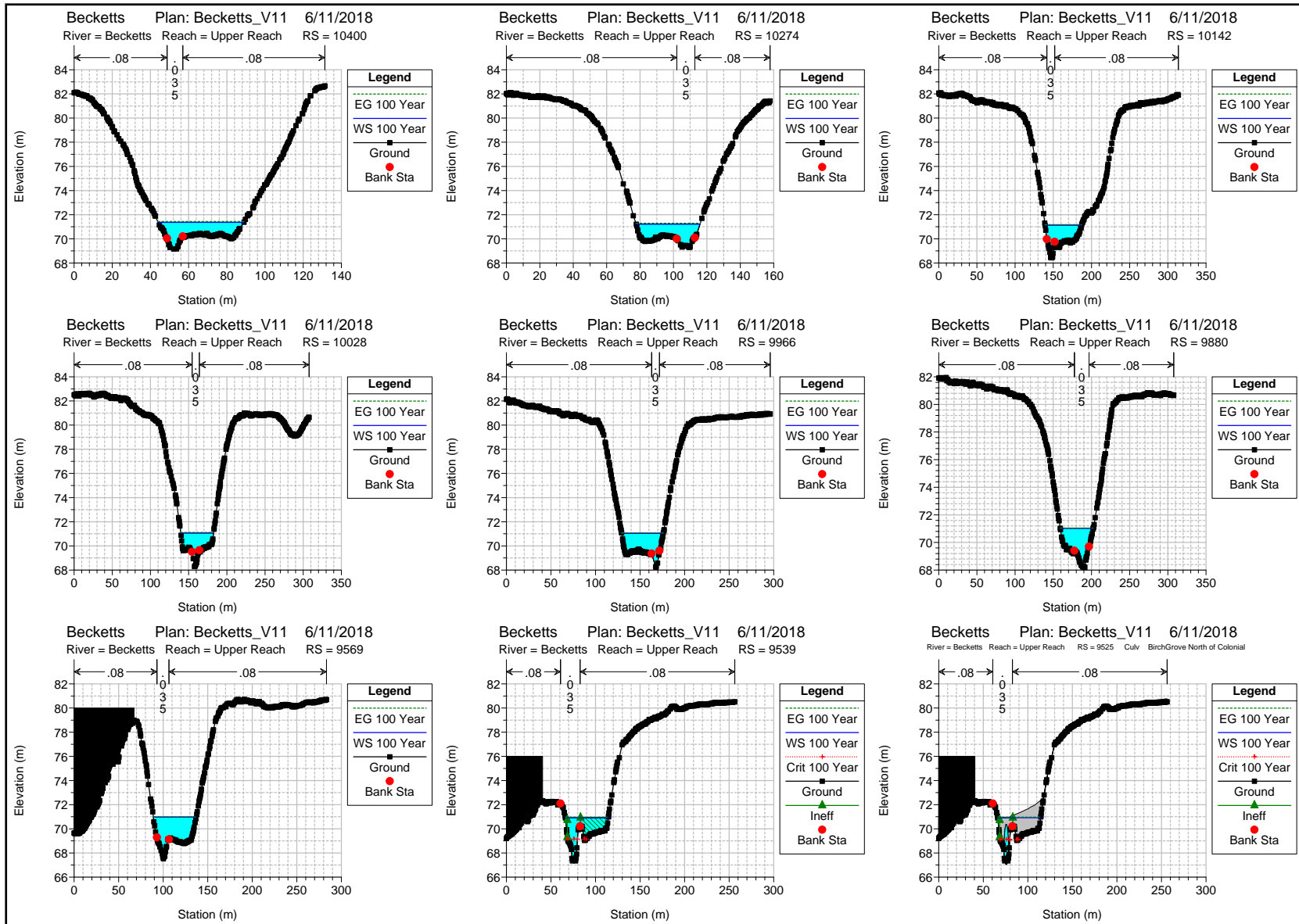


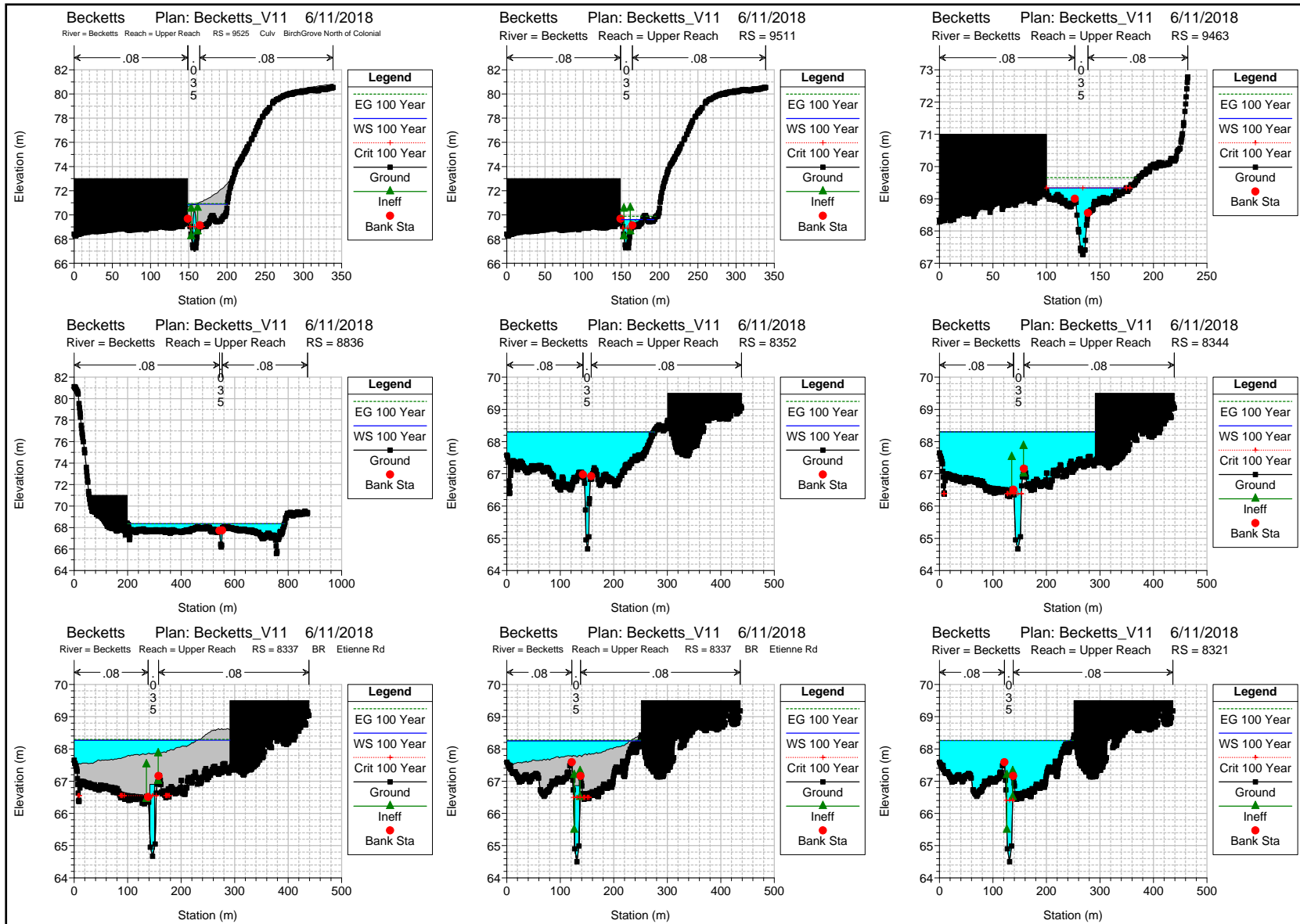




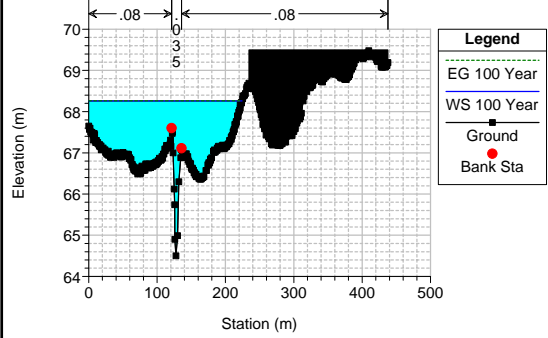




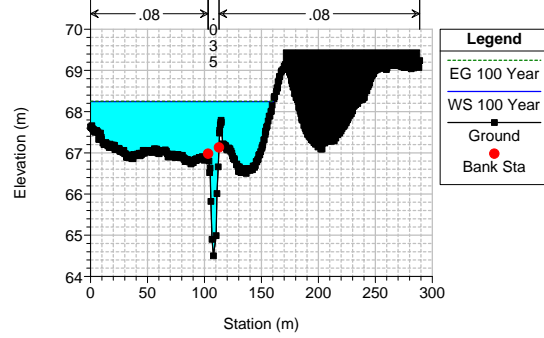


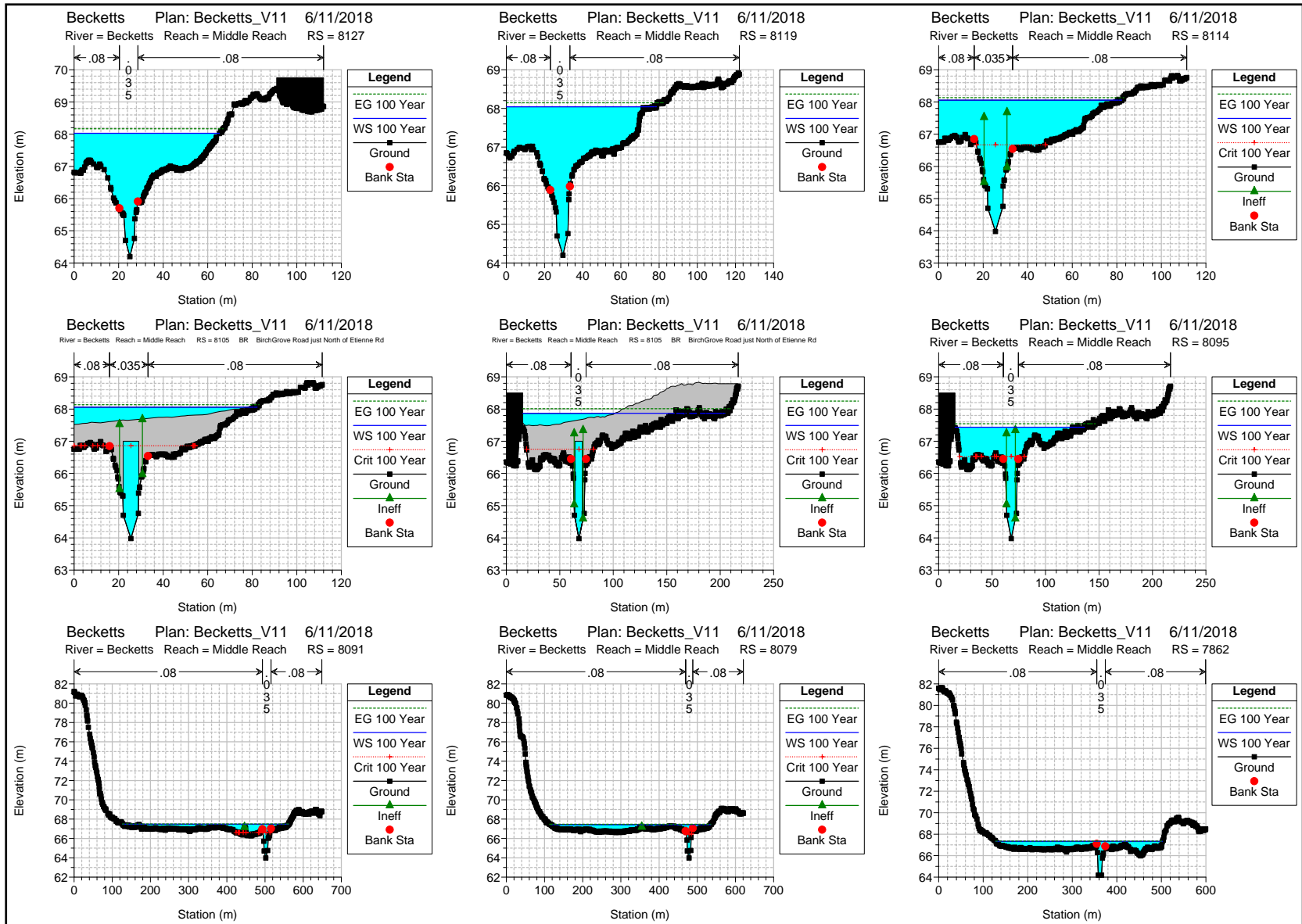


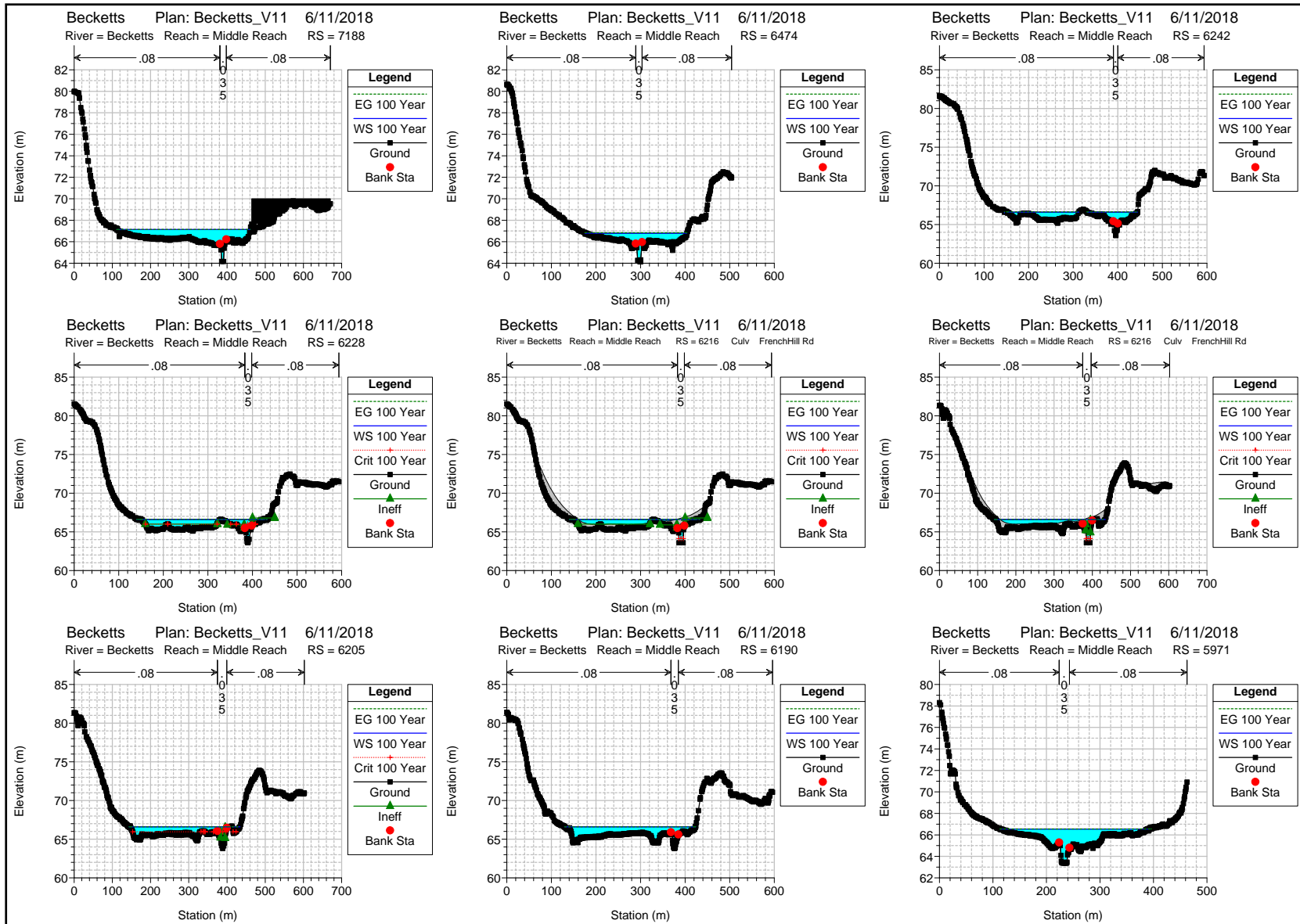
Becketts Plan: Becketts_V11 6/11/2018
River = Becketts Reach = Upper Reach RS = 8311



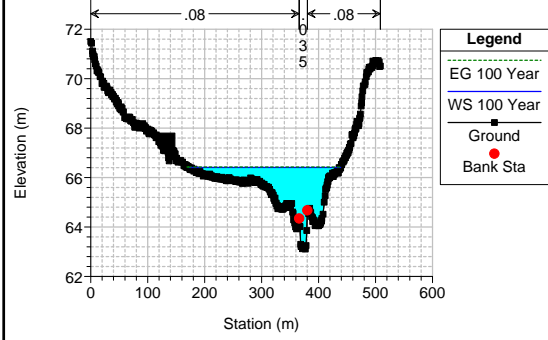
Becketts Plan: Becketts_V11 6/11/2018
River = Becketts Reach = Upper Reach RS = 8248



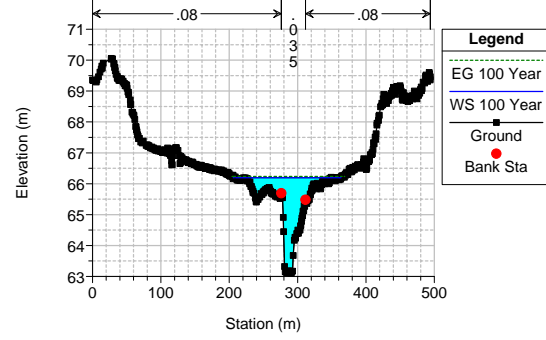


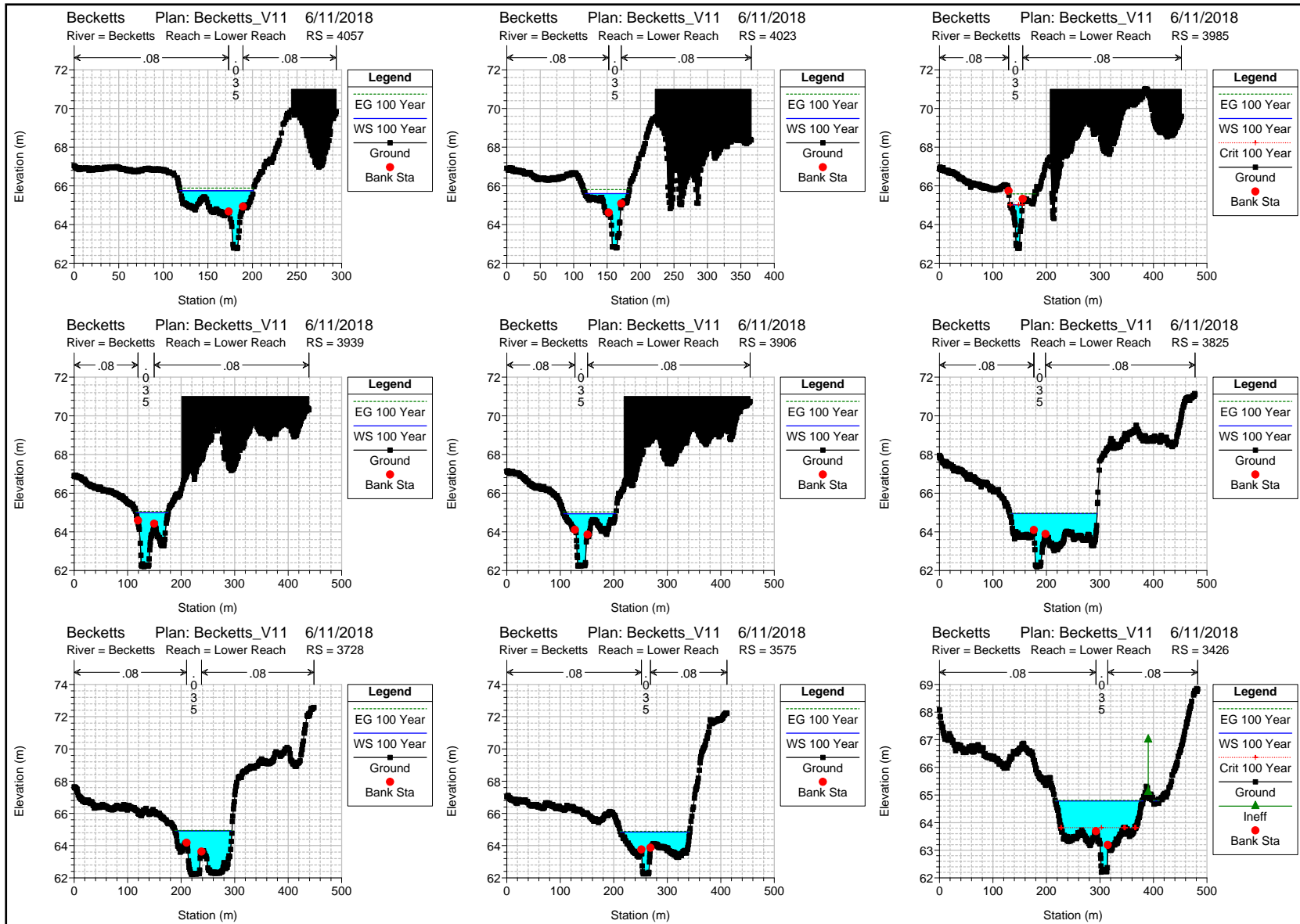


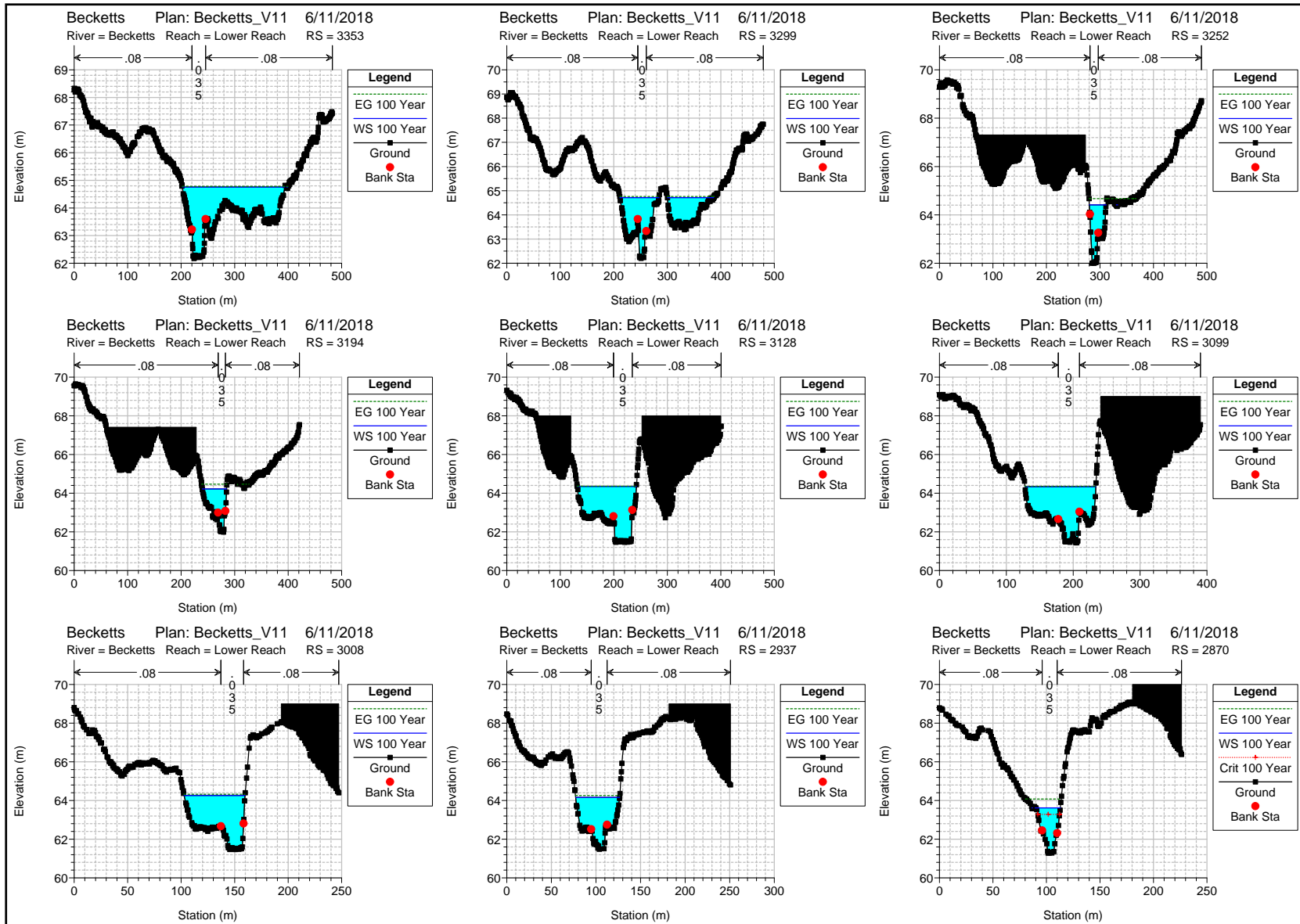
Becketts Plan: Becketts_V11 6/11/2018
River = Becketts Reach = Middle Reach RS = 5132

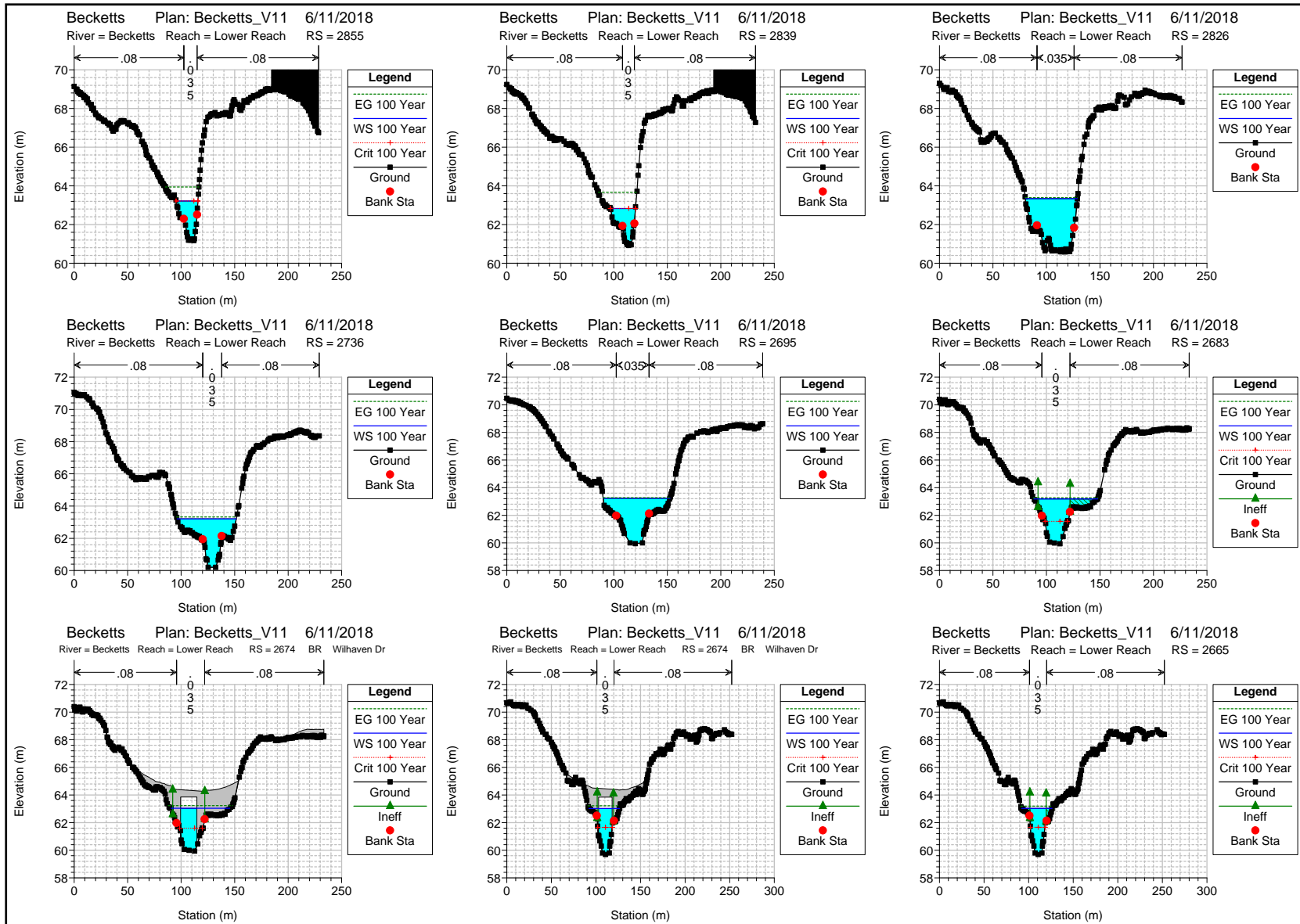


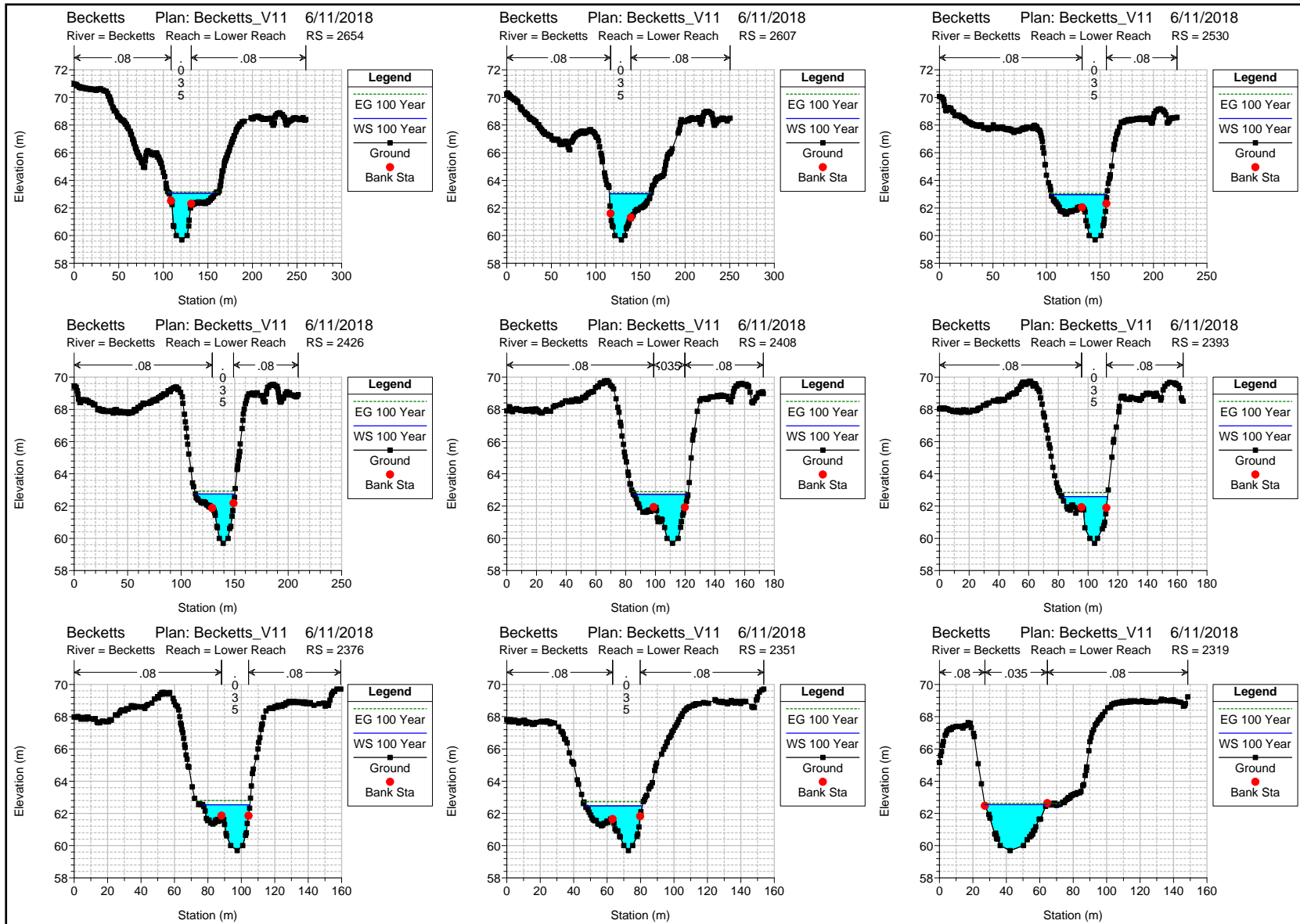
Becketts Plan: Becketts_V11 6/11/2018
River = Becketts Reach = Middle Reach RS = 4475

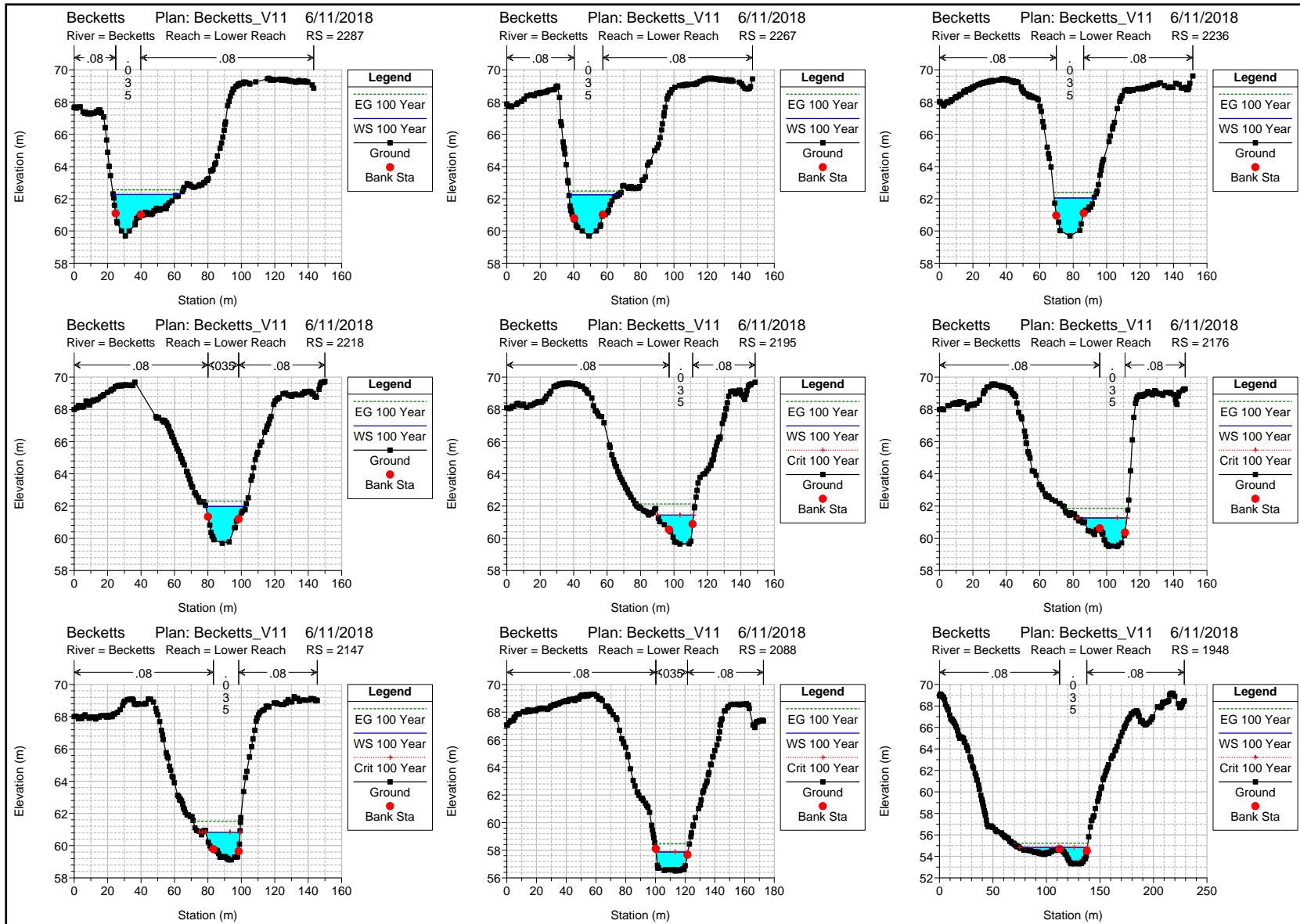


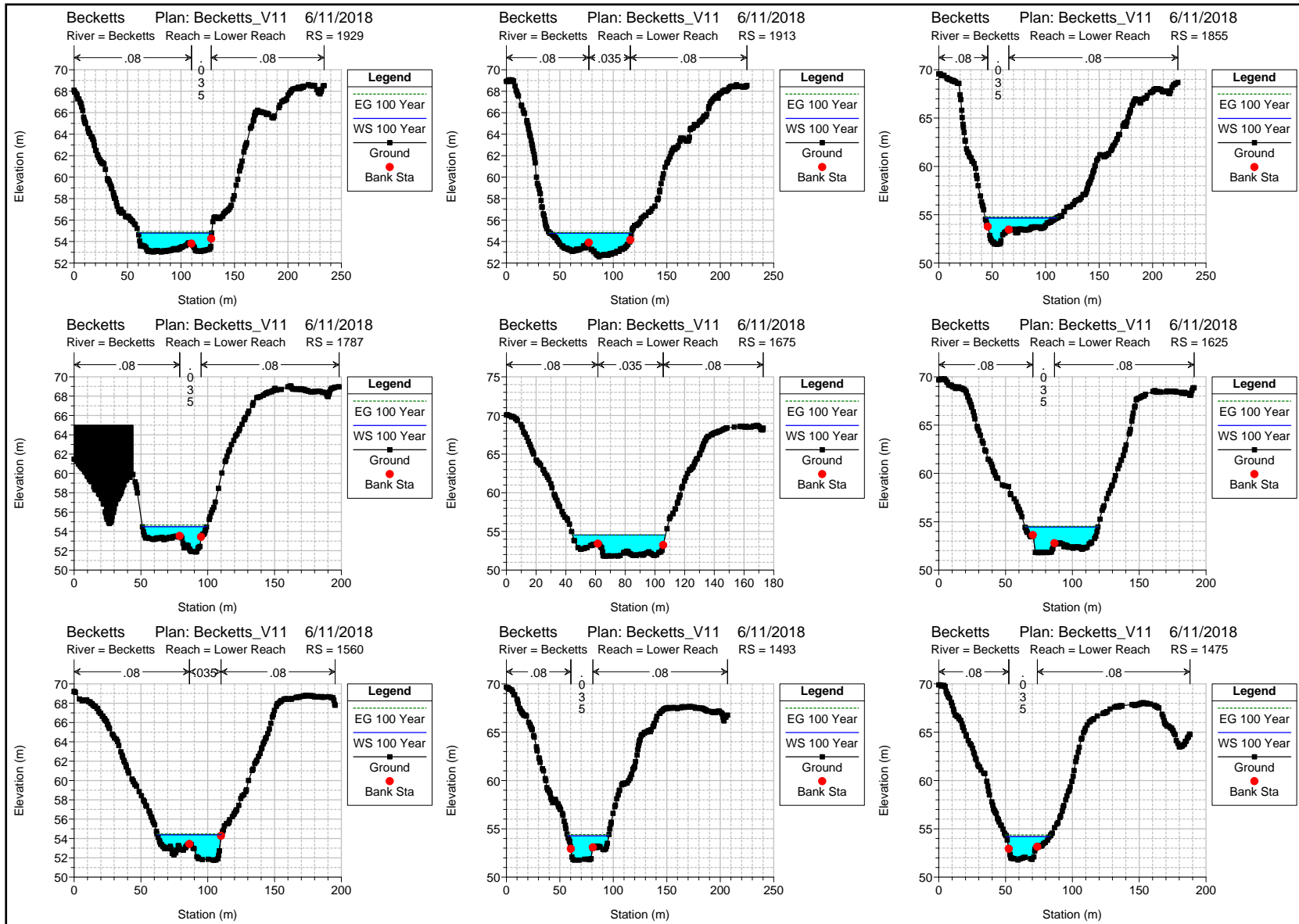


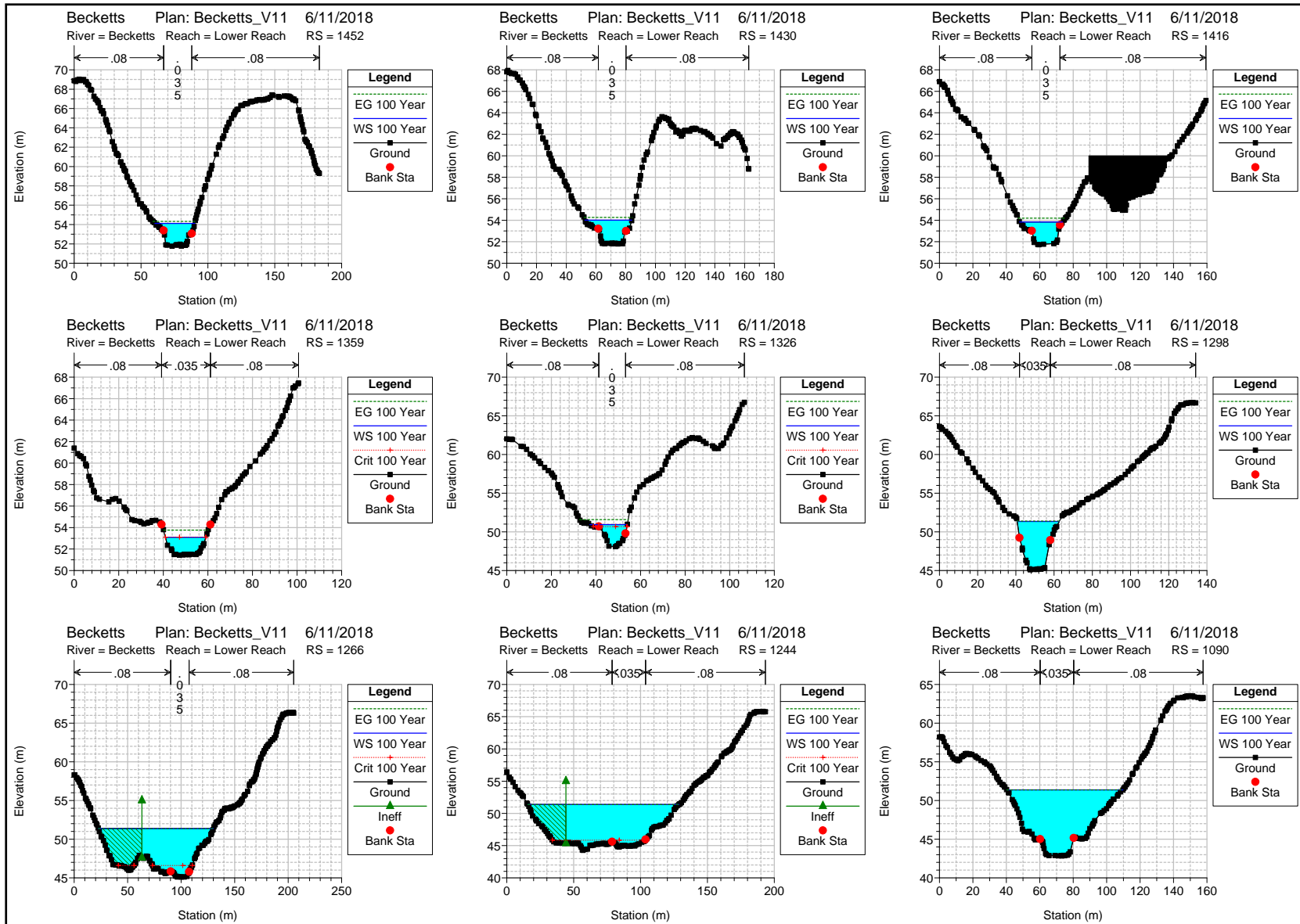


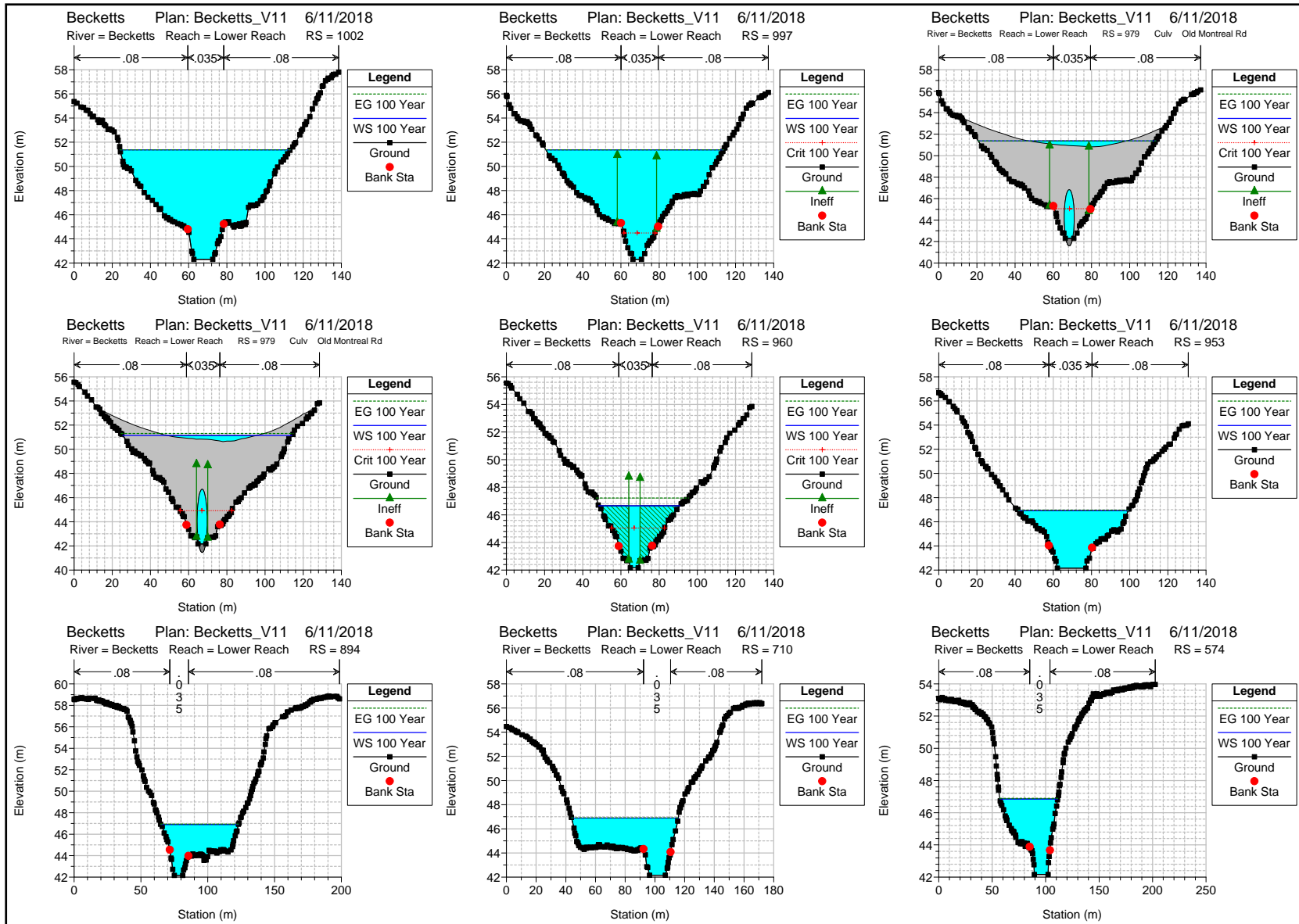


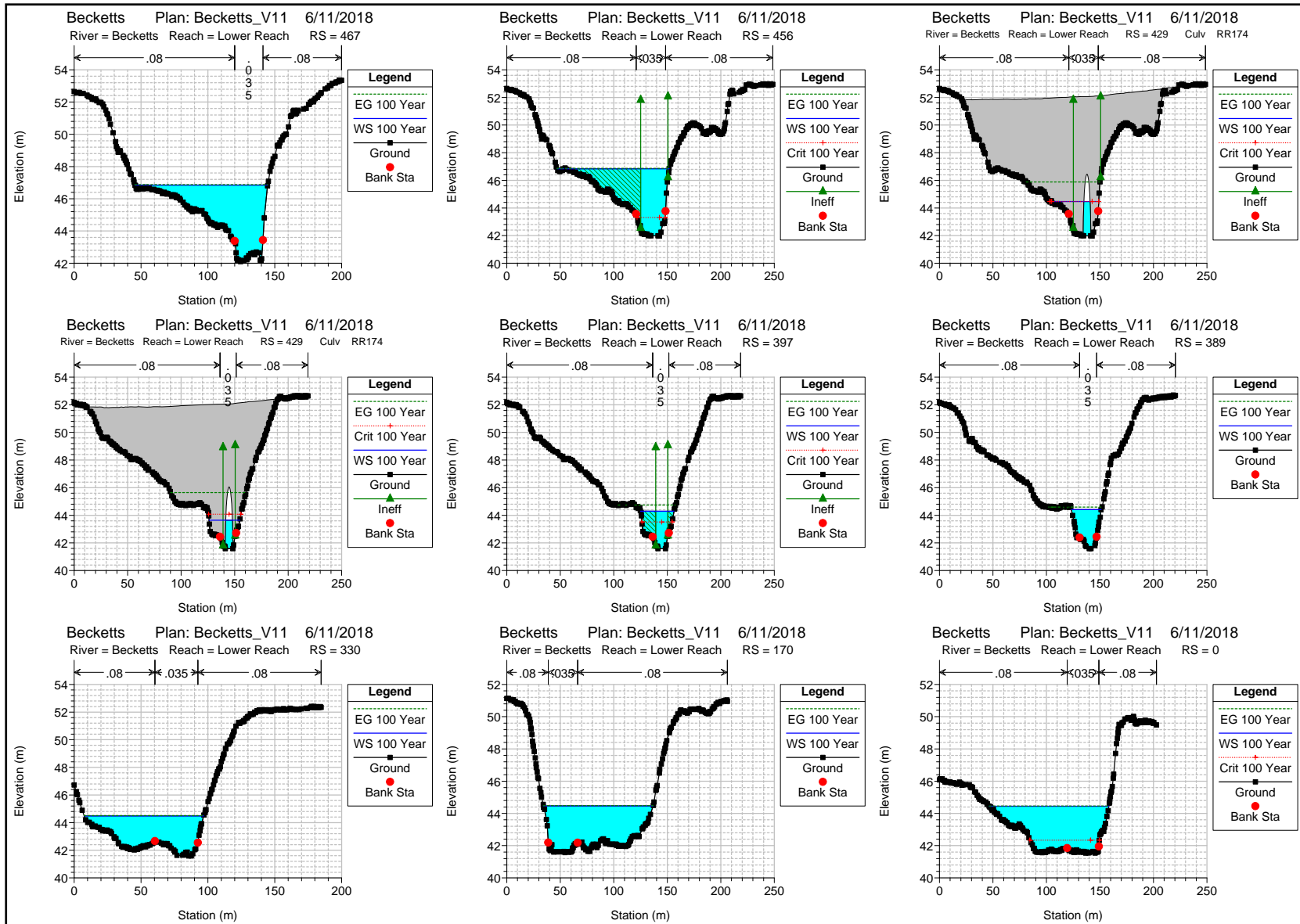


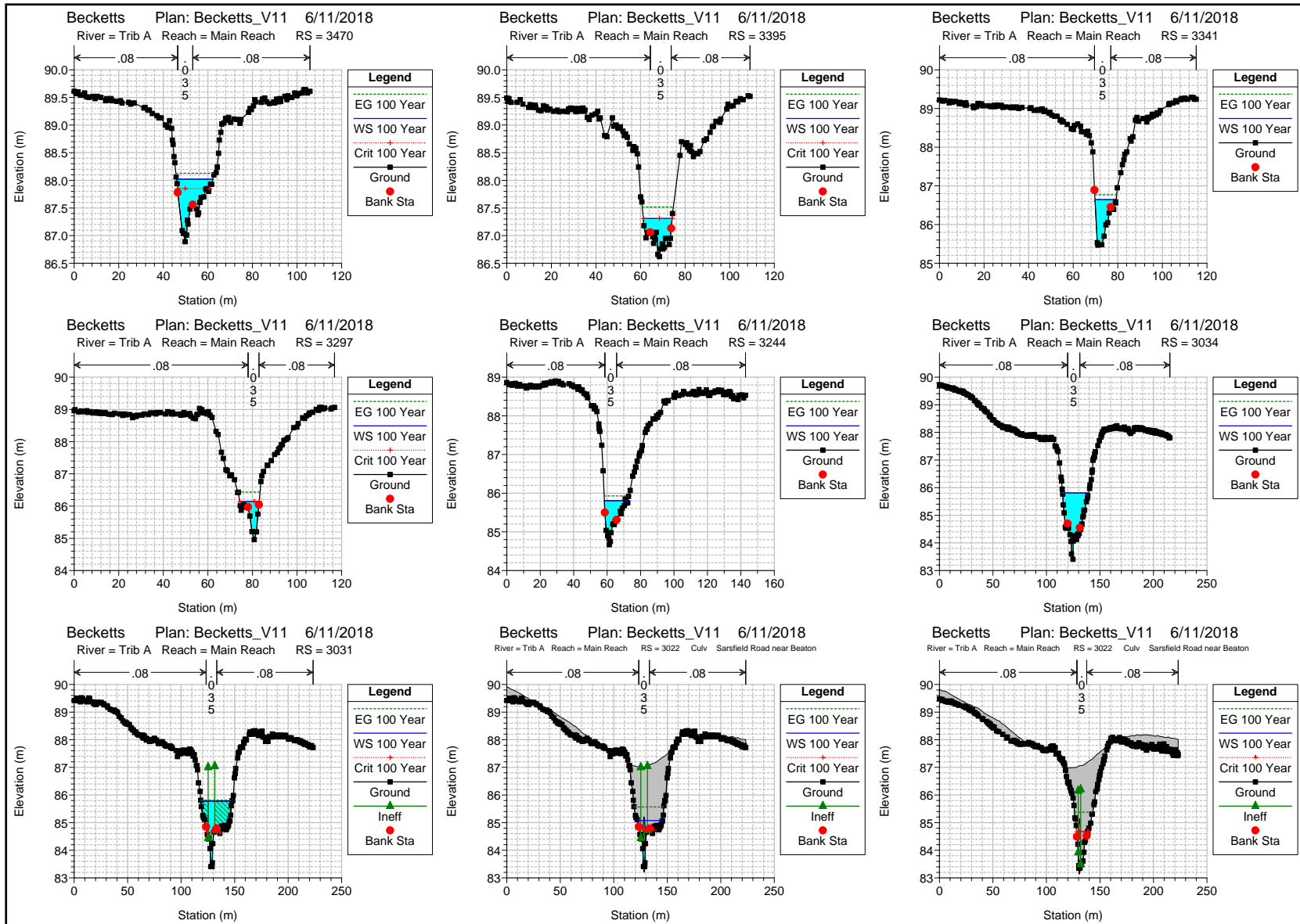


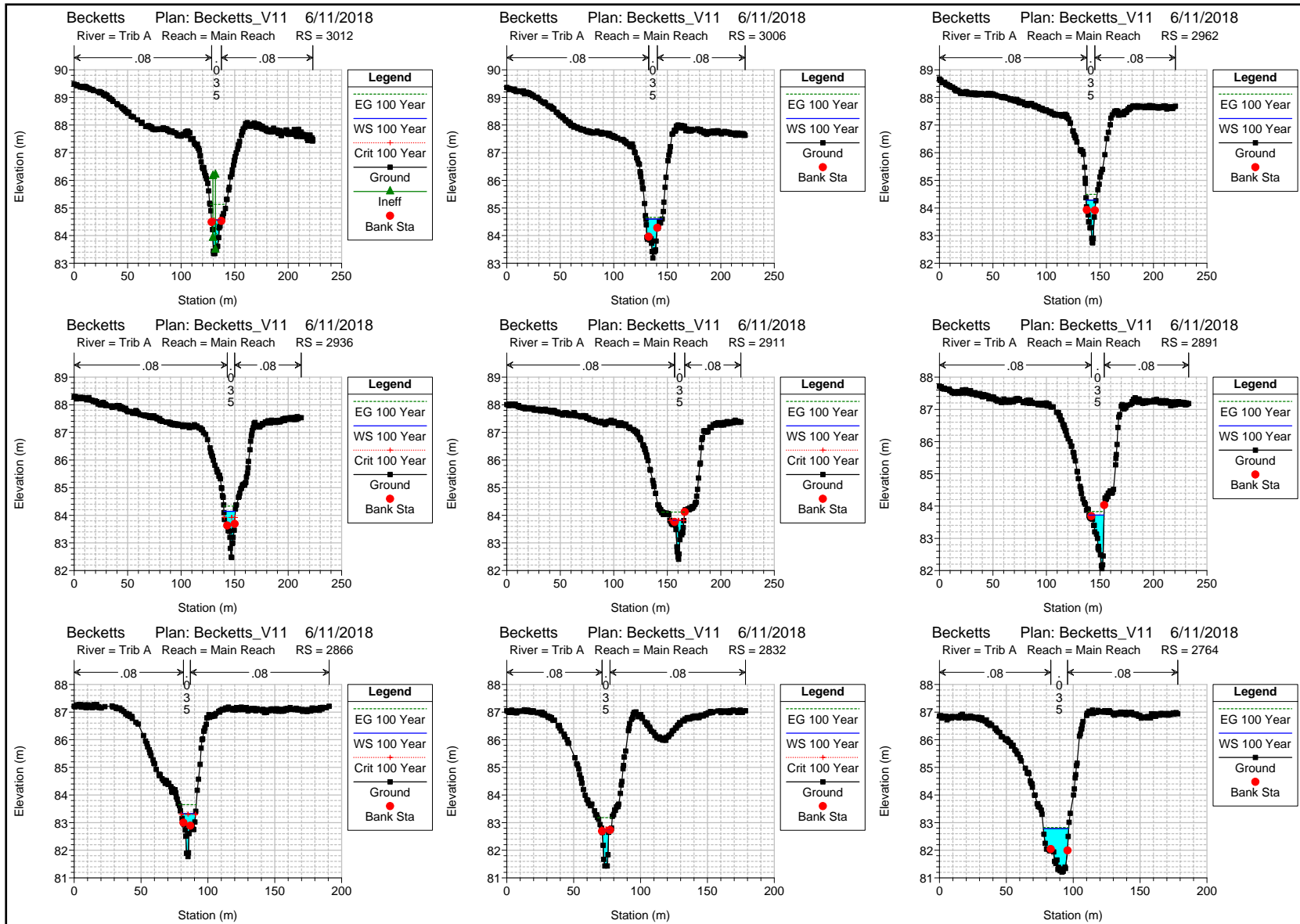


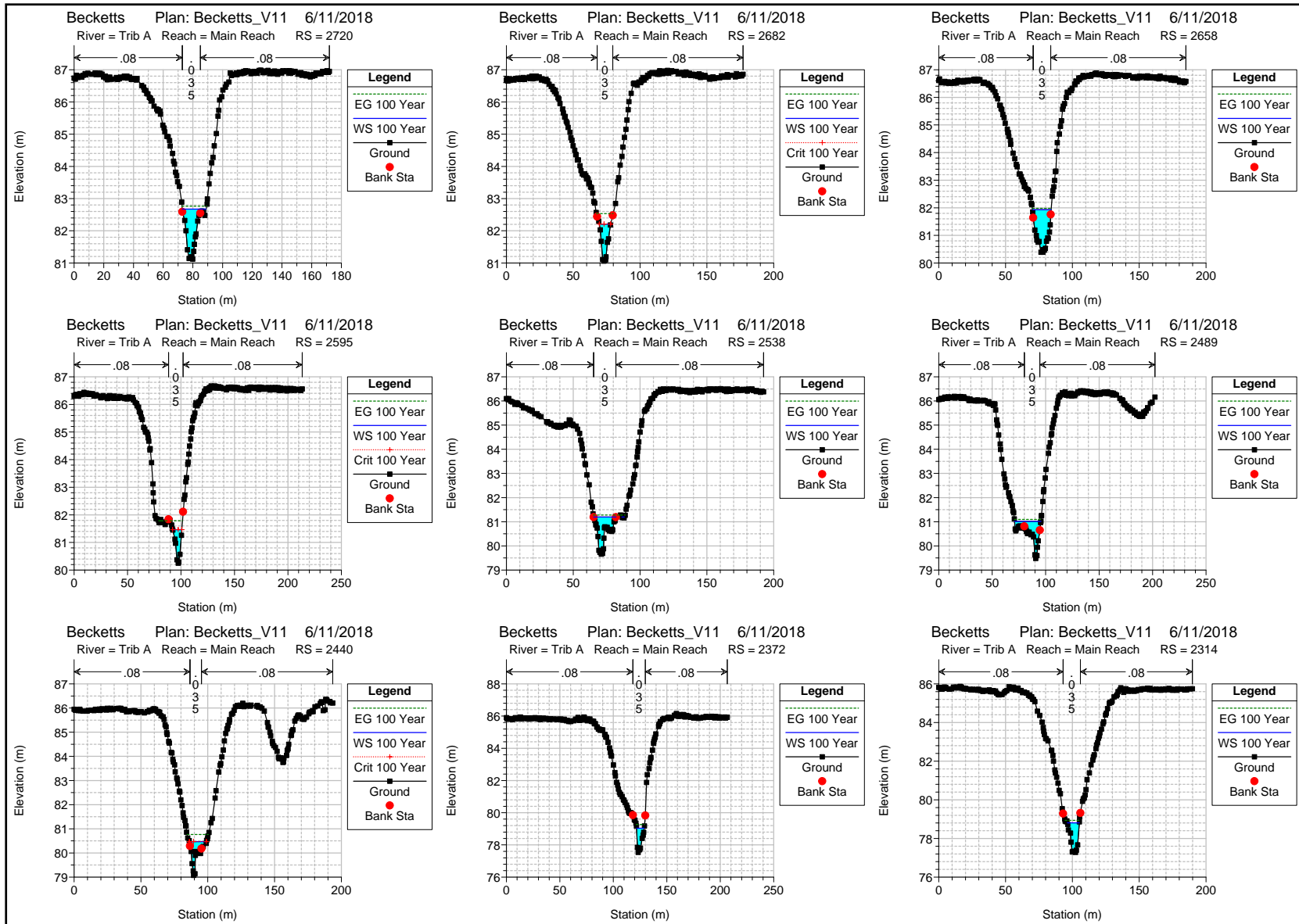


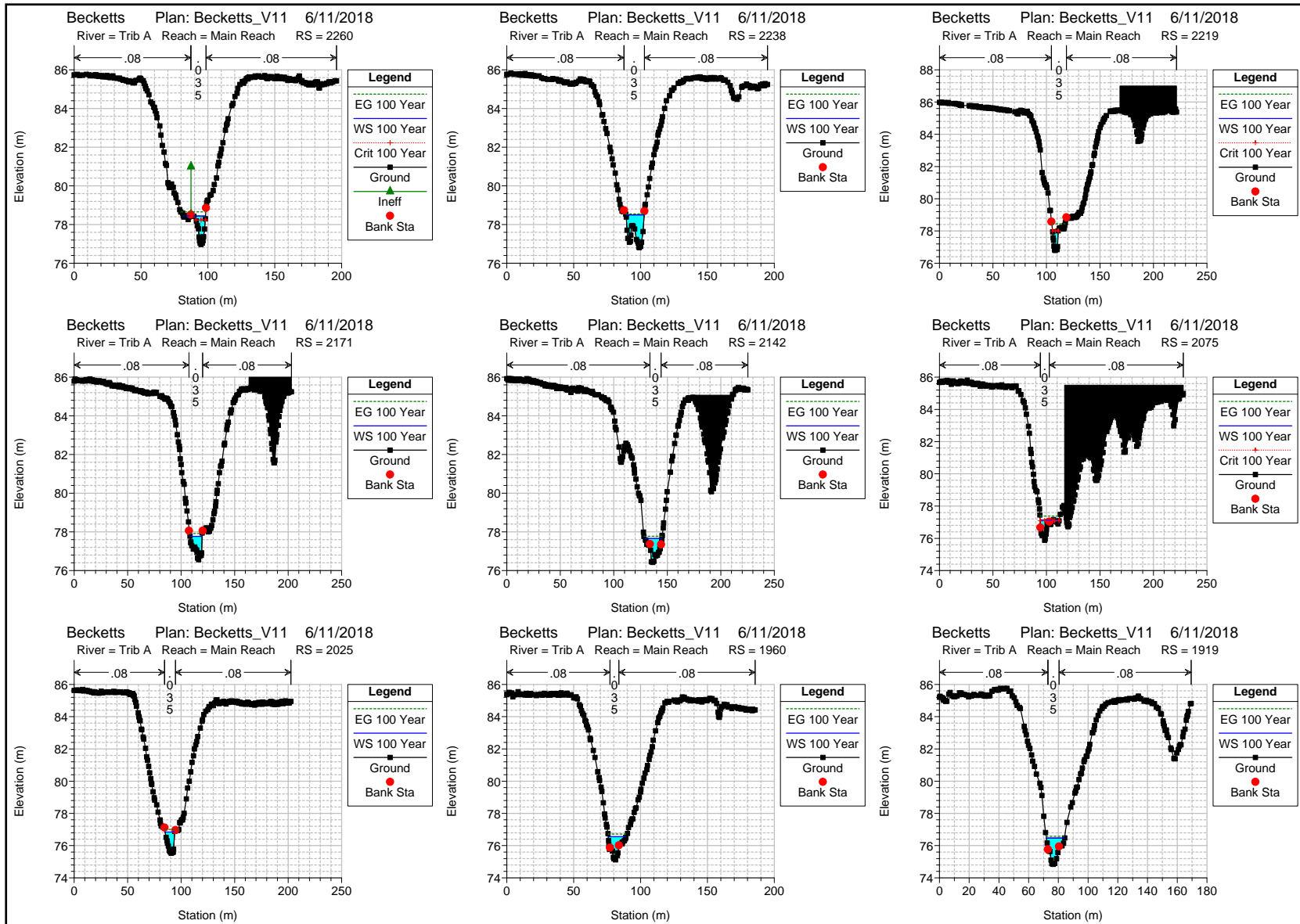


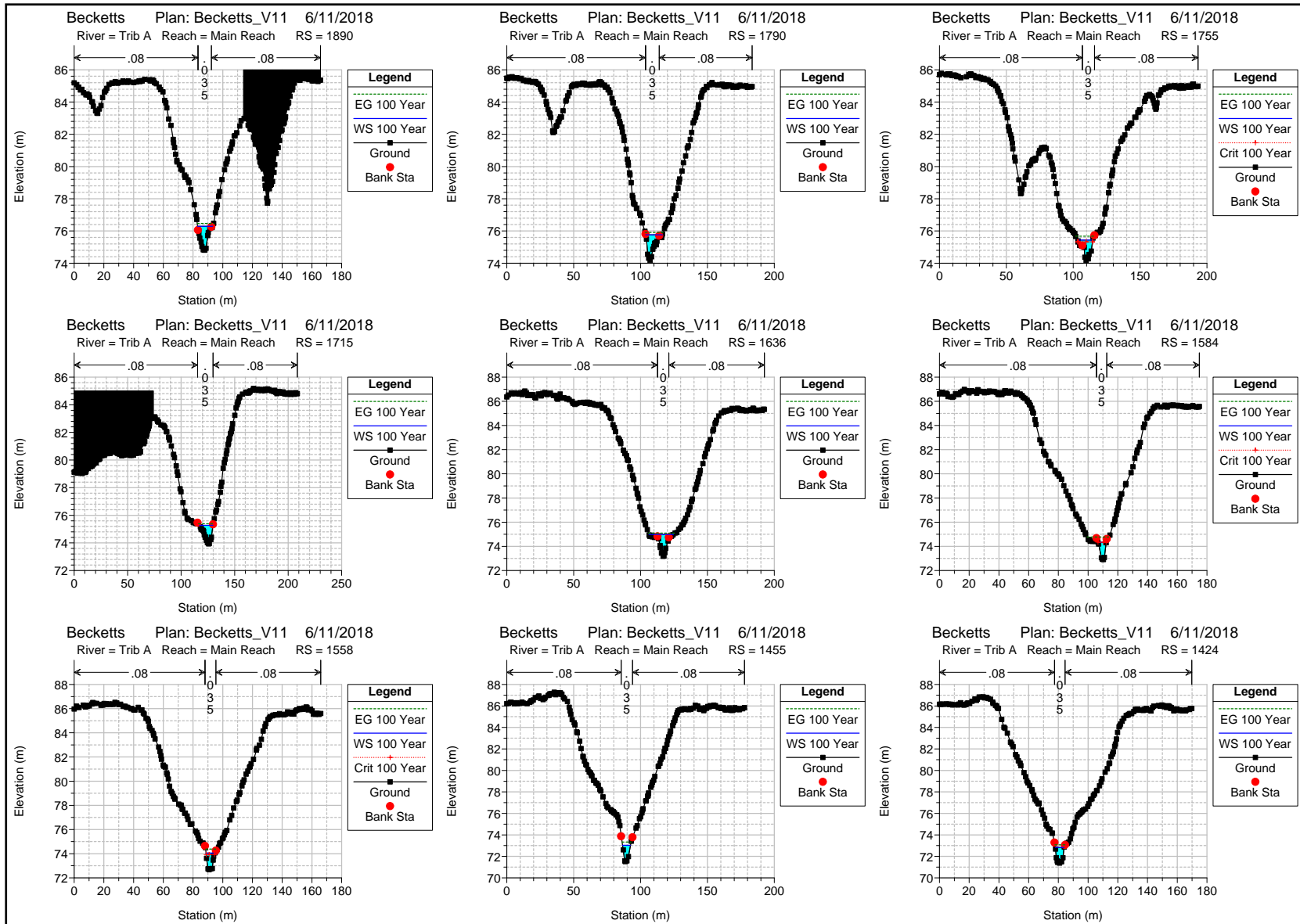


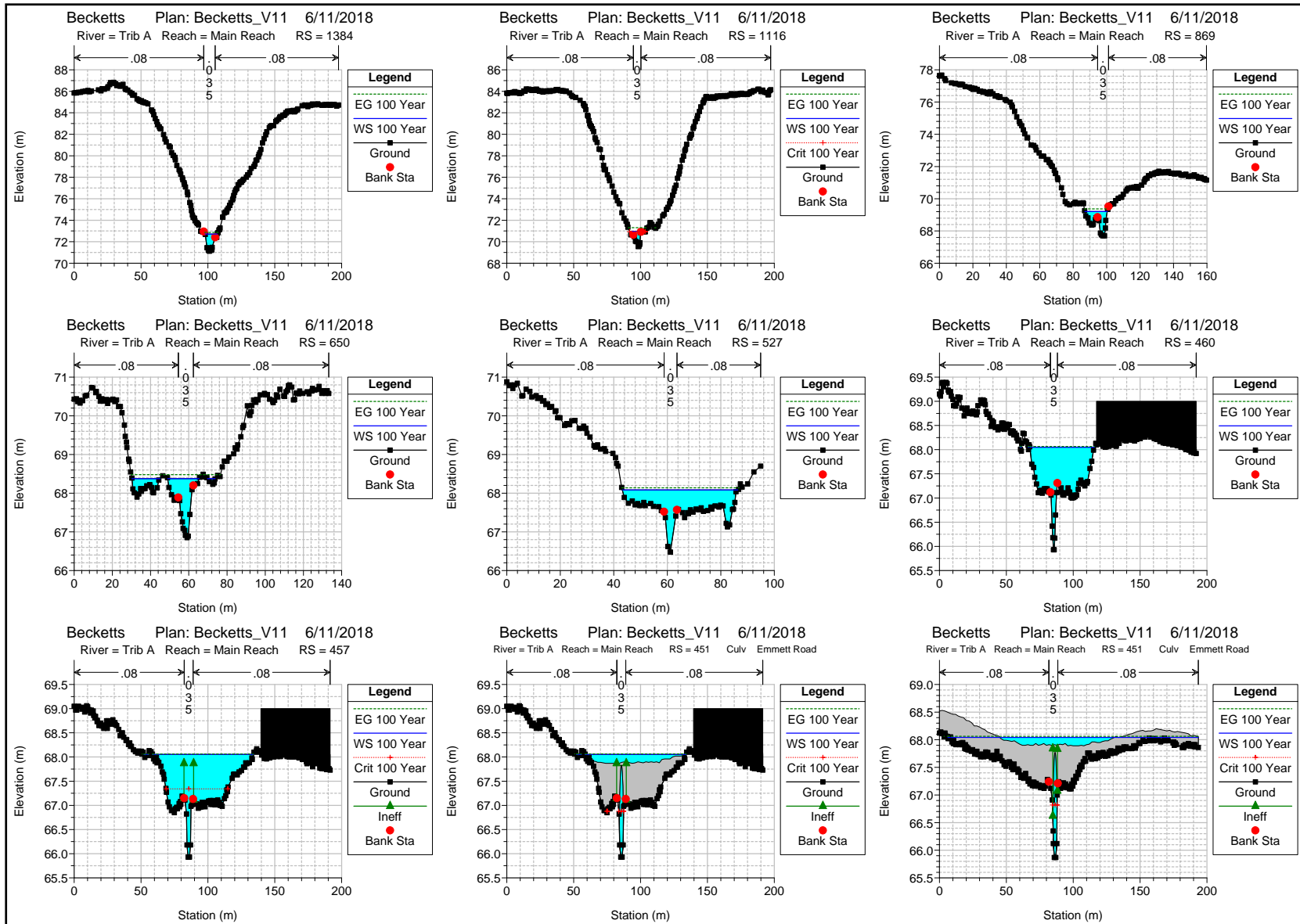


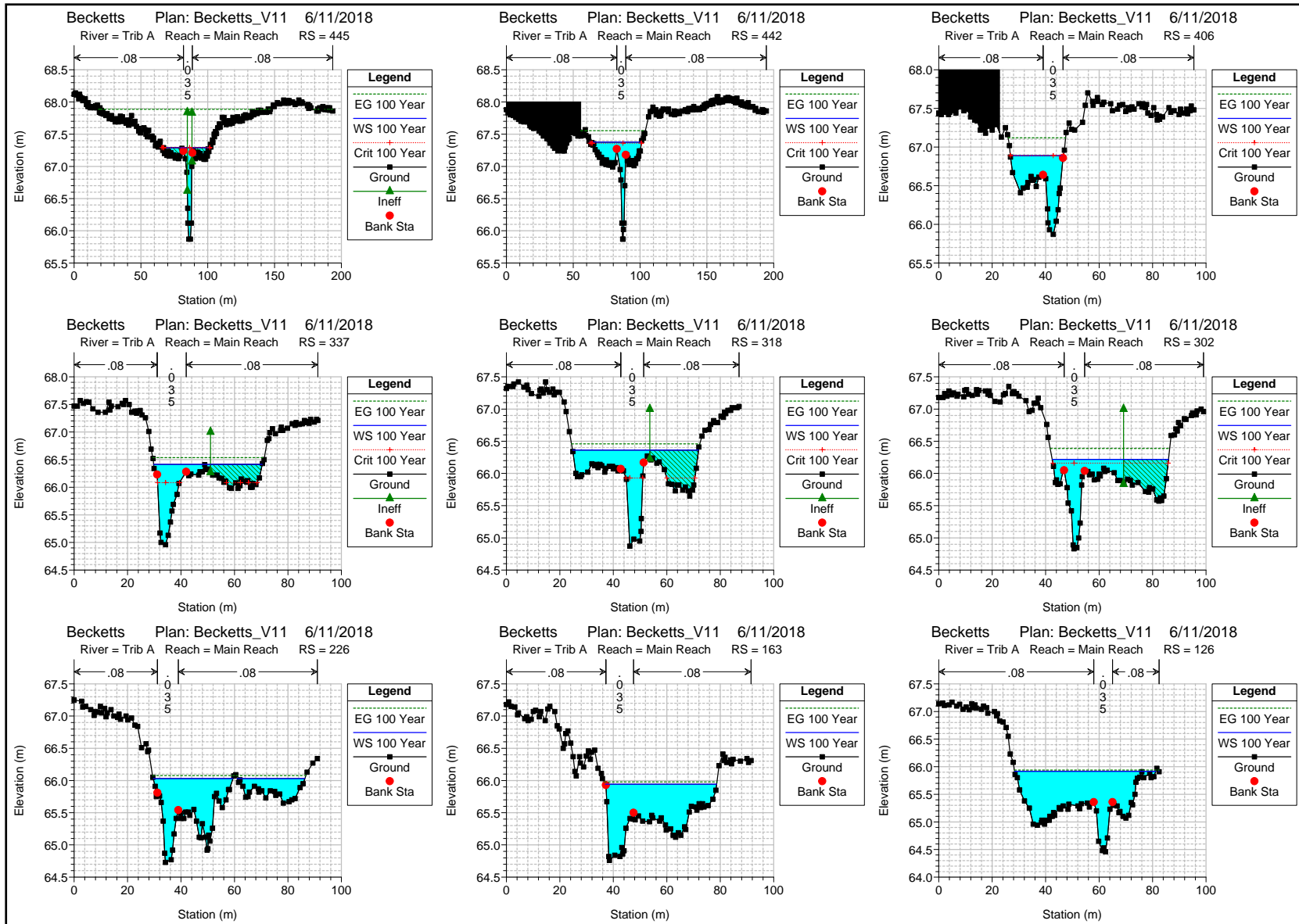






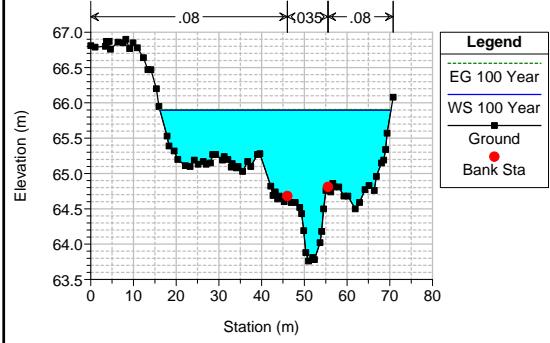


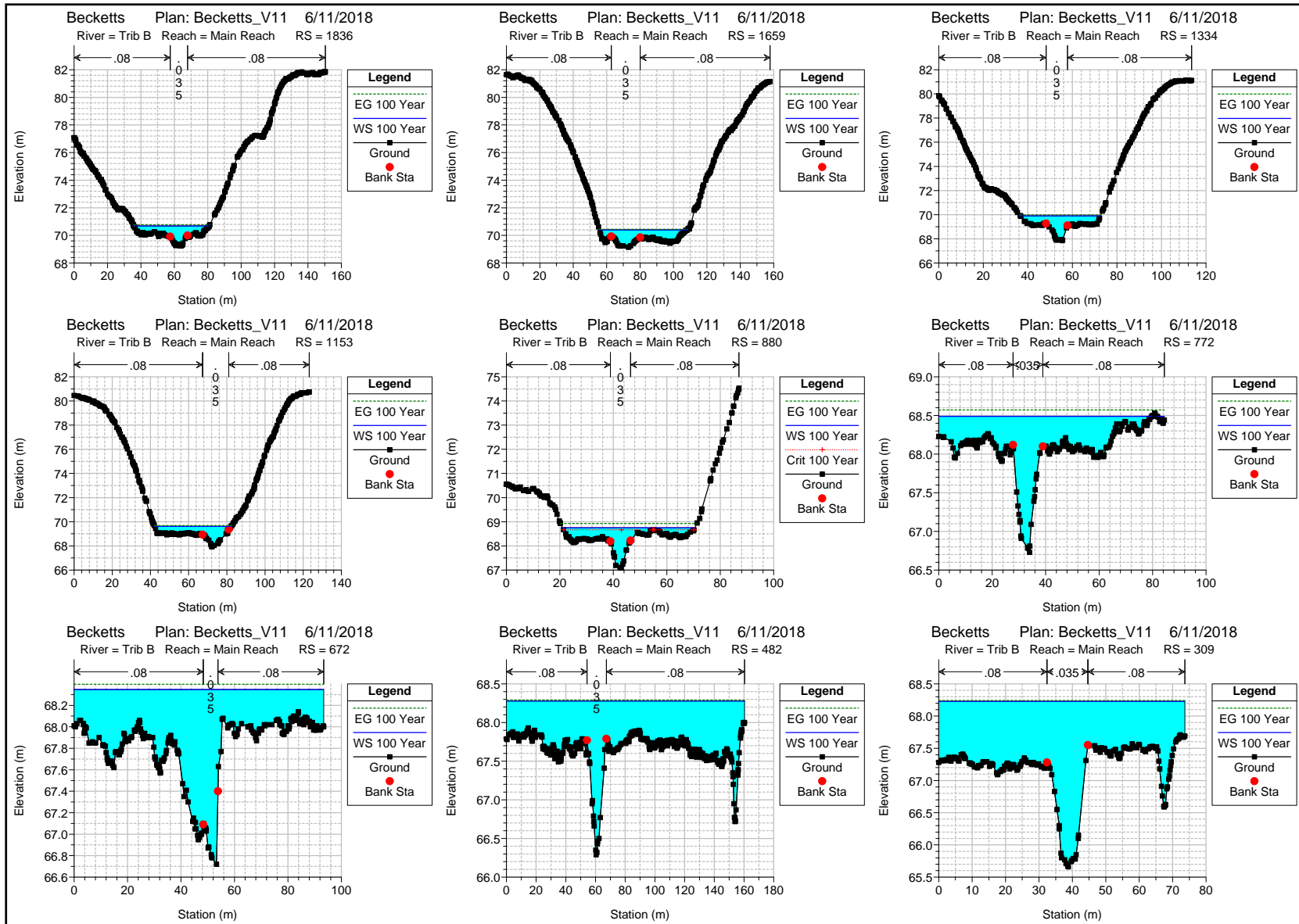


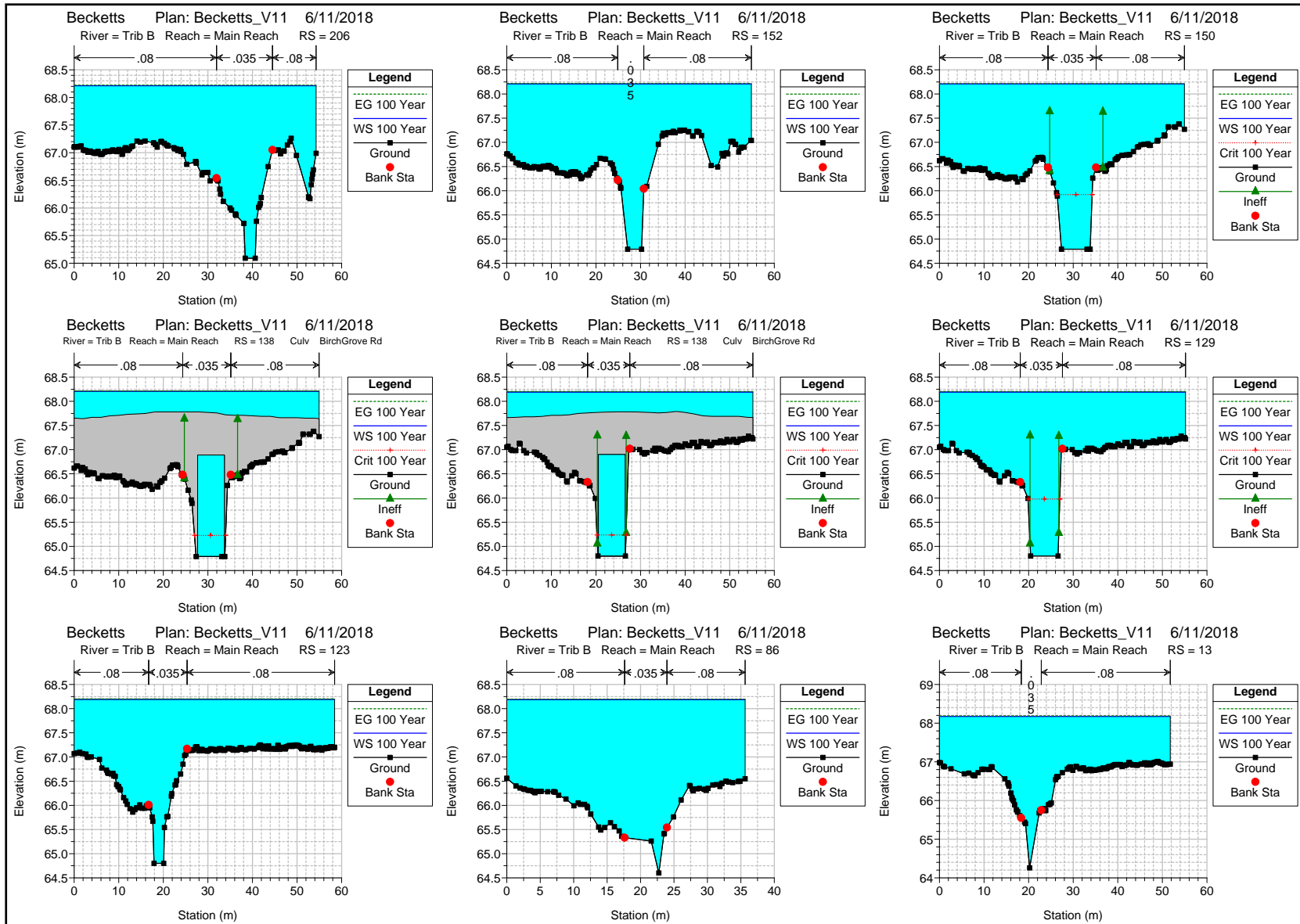


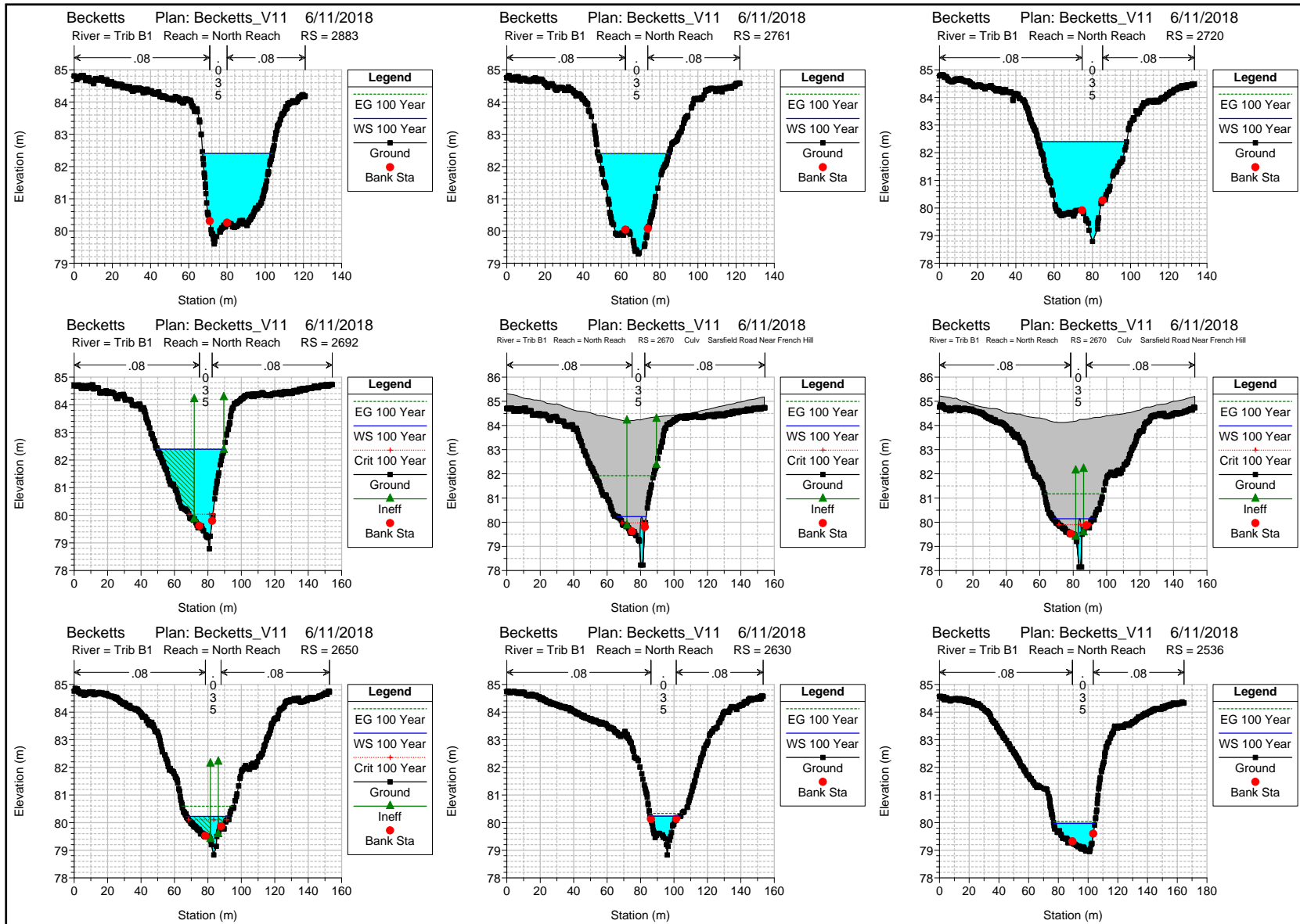
Becketts Plan: Becketts_V11 6/11/2018

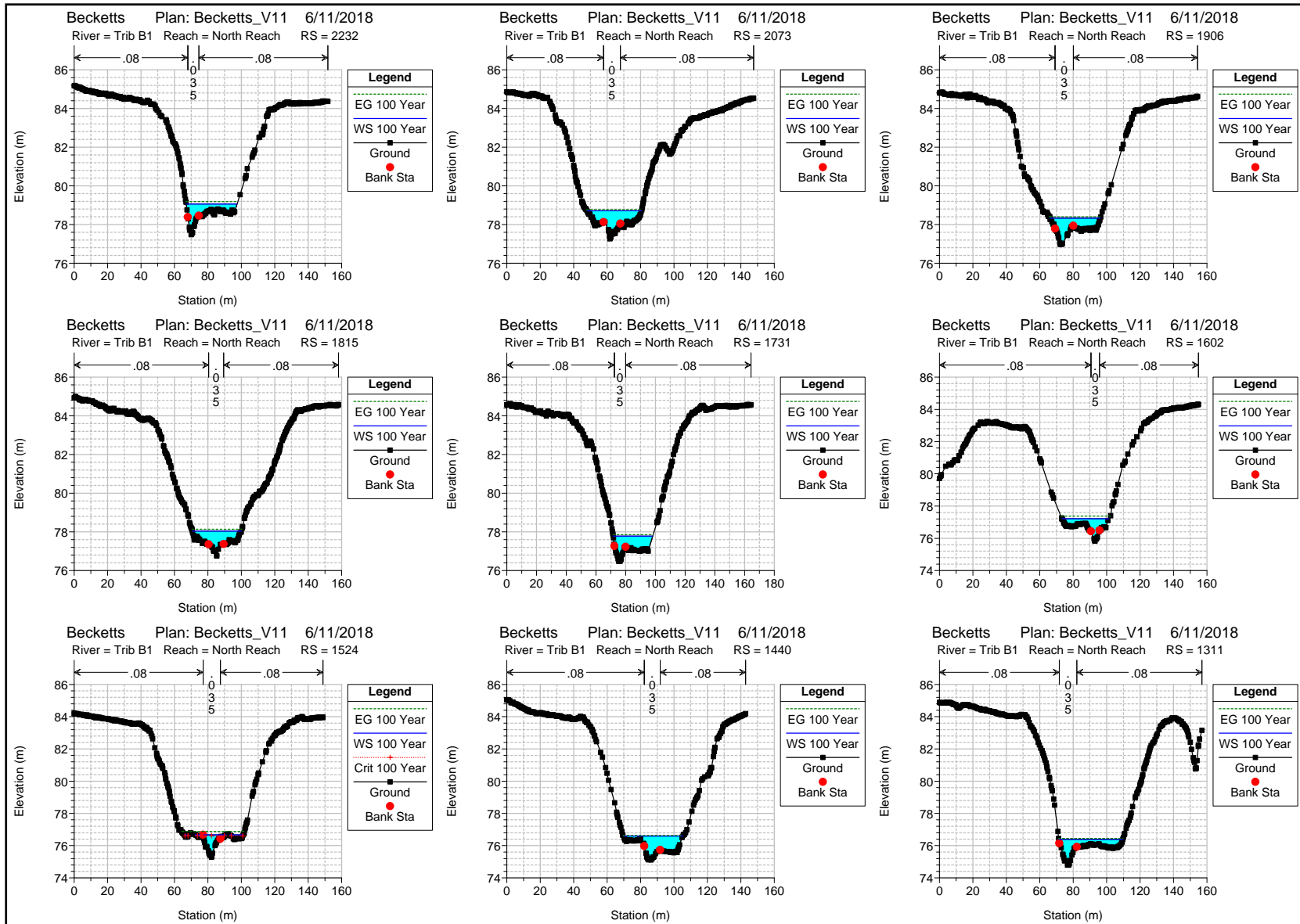
River = Trib A Reach = Main Reach RS = 32

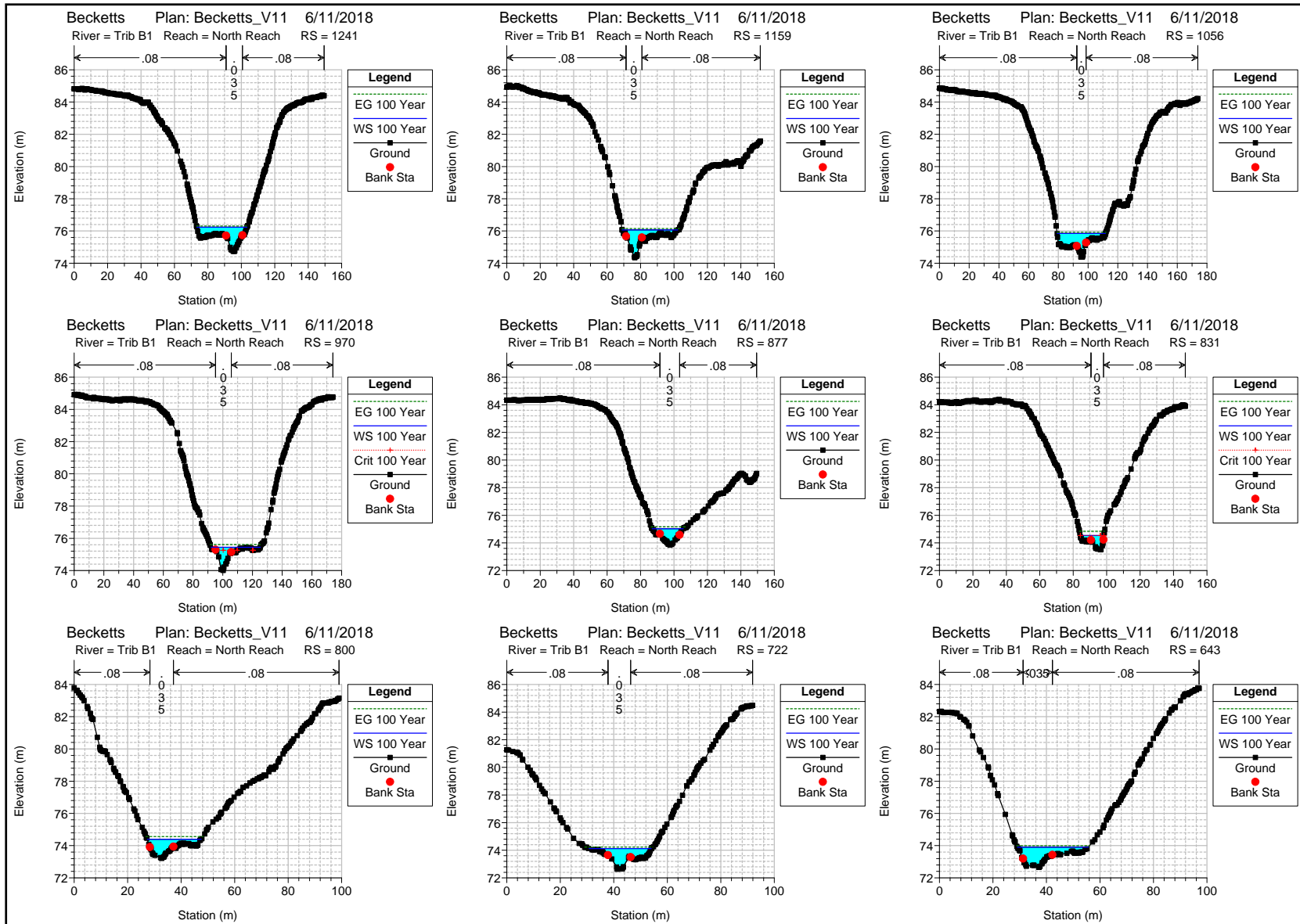


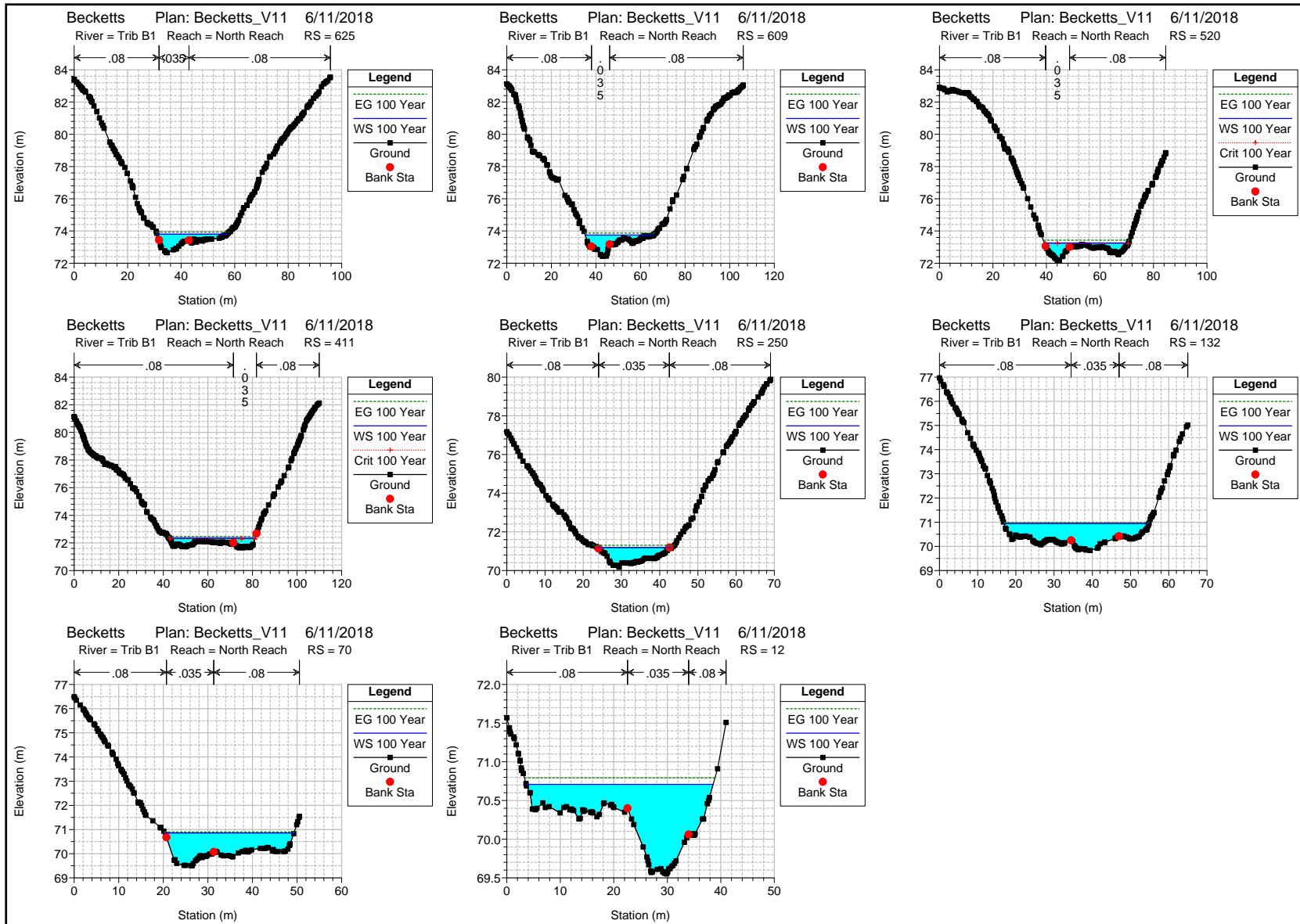


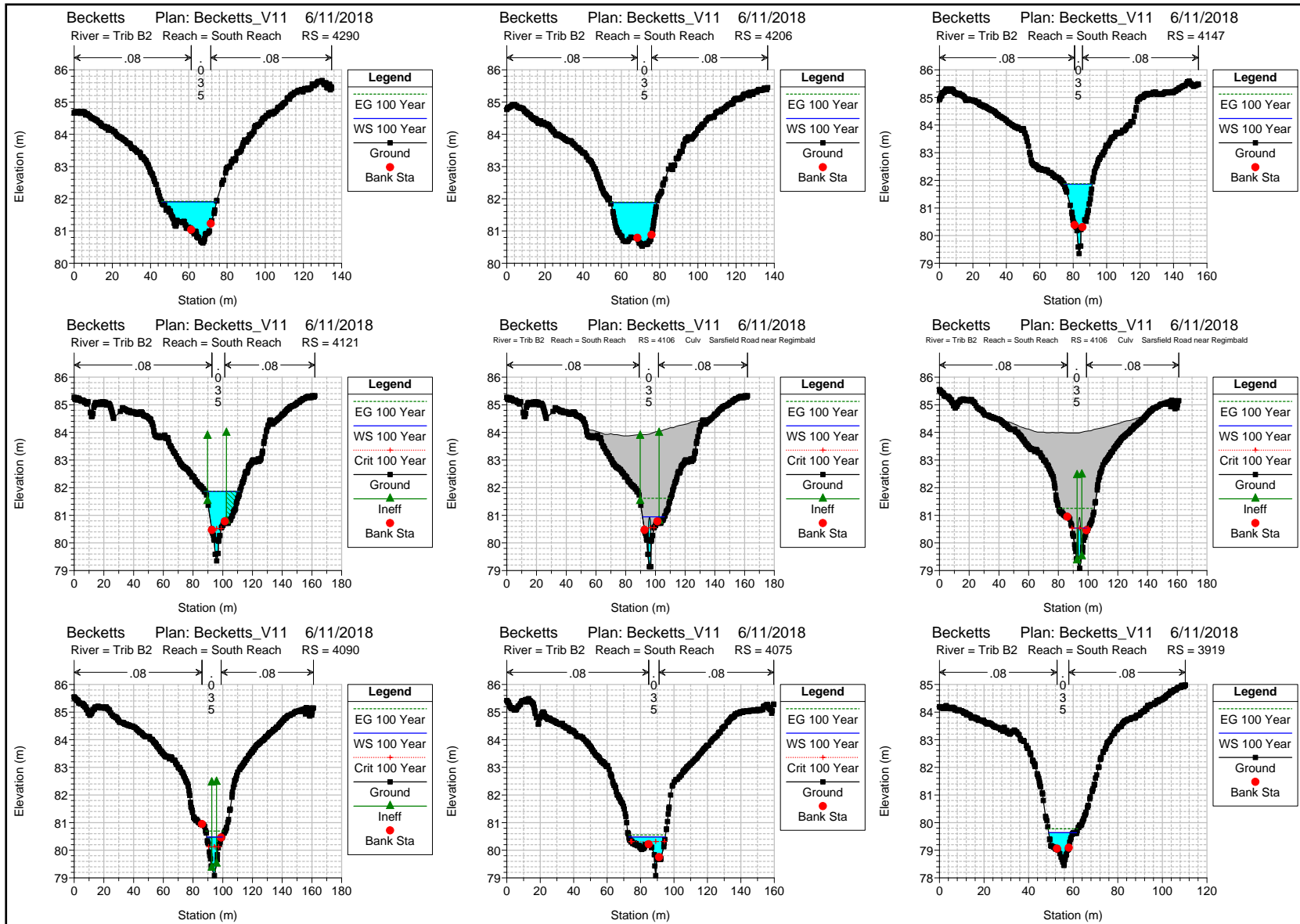


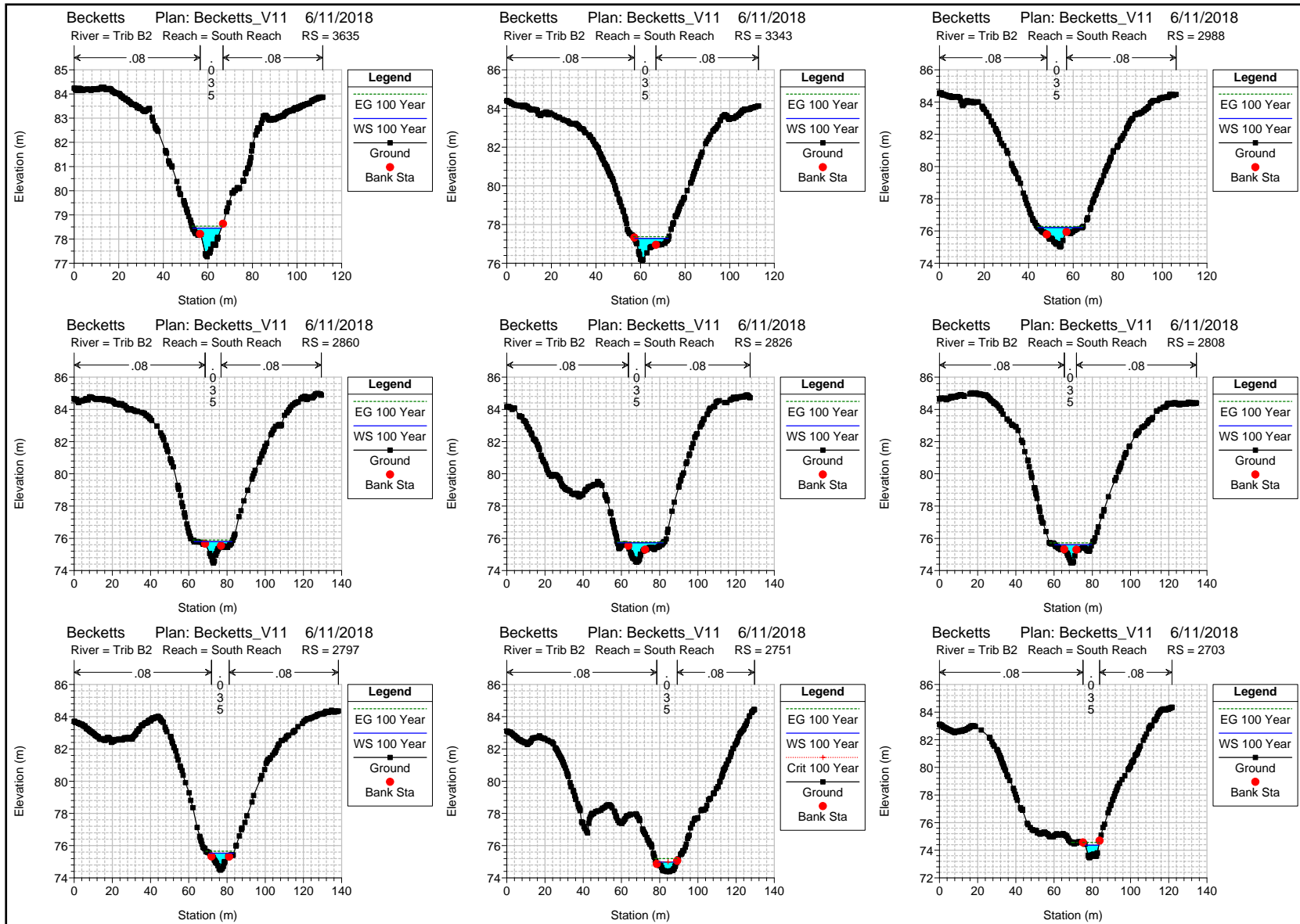


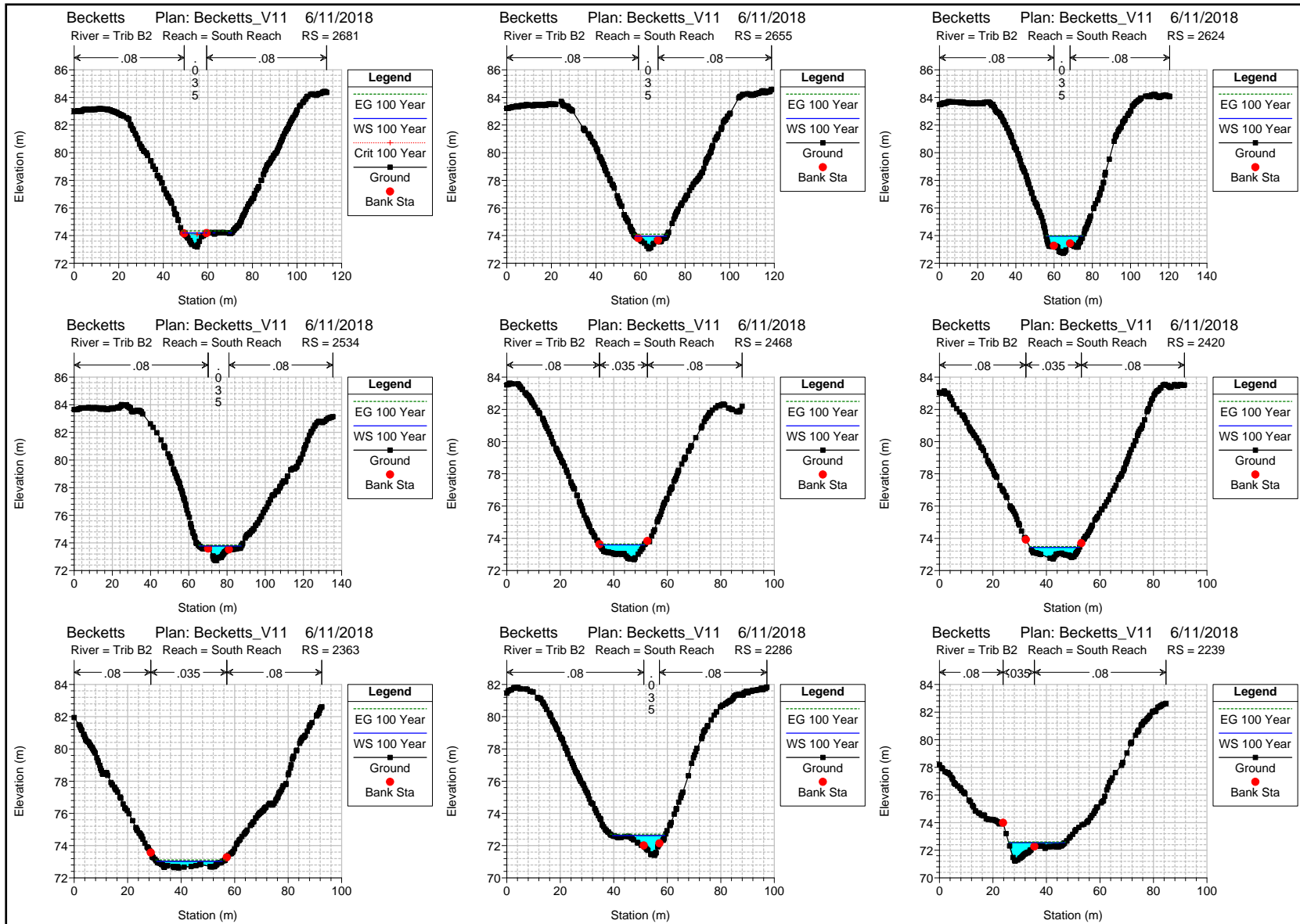


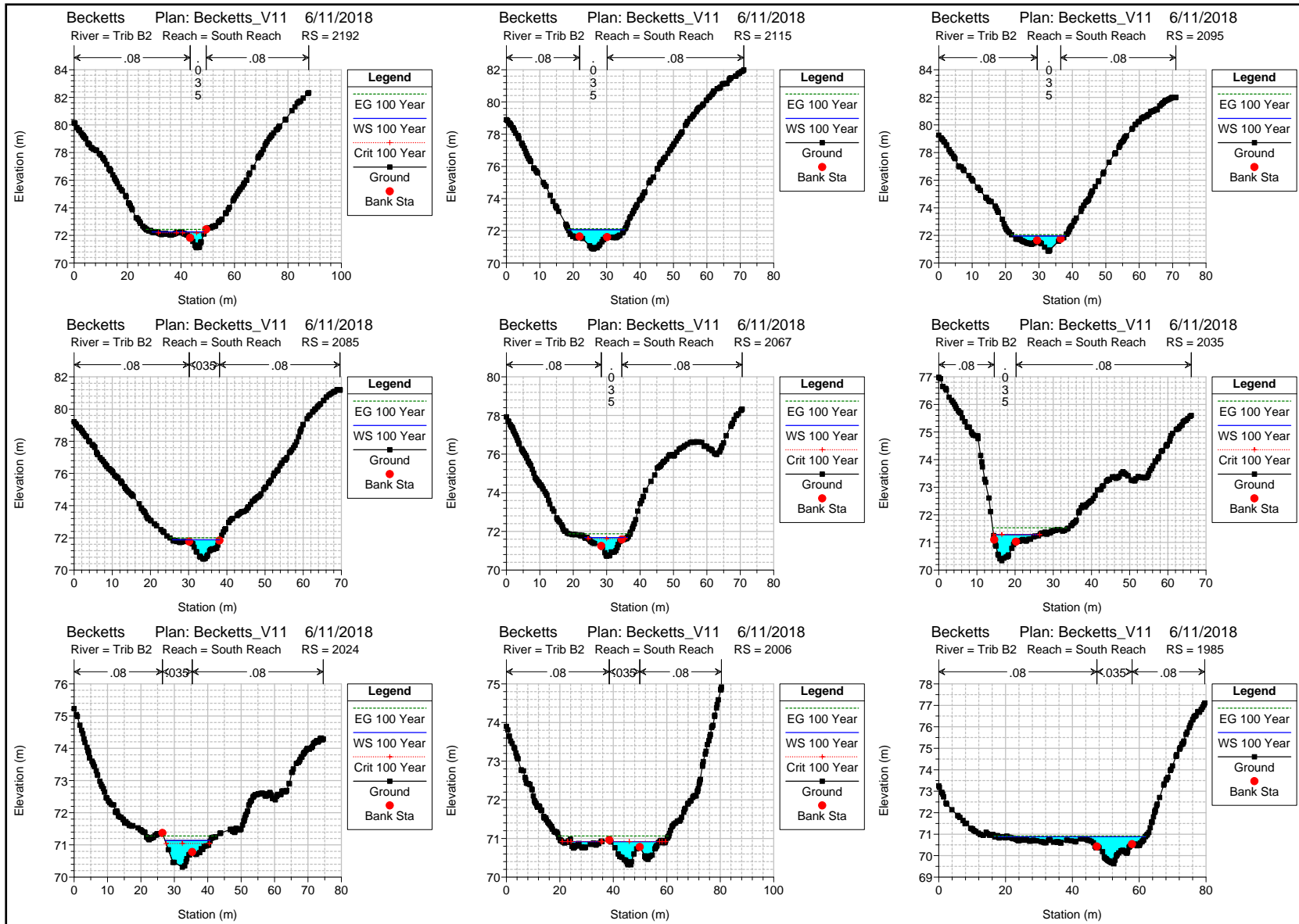












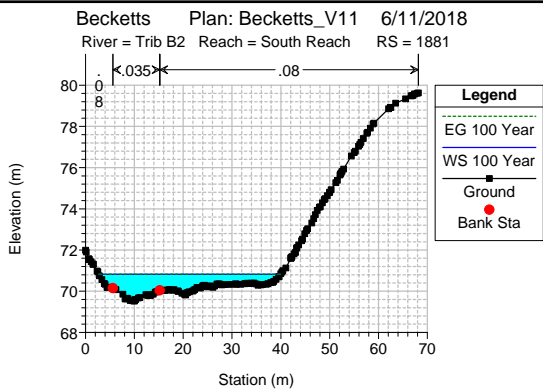
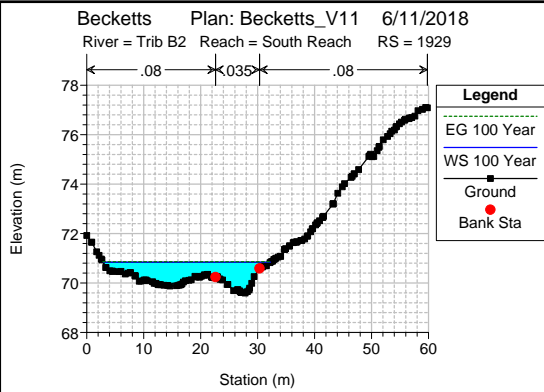


Table B1 Manning n values

River	Reach	Xsec ID	Left Overbank n	Channel n	Right Overbank n	
Becketts Creek	Lower Reach	0	0.080	0.035	0.080	
	Lower Reach	170	0.080	0.035	0.080	
	Lower Reach	330	0.080	0.035	0.080	
	Lower Reach	389	0.080	0.035	0.080	
	Lower Reach	397	0.080	0.035	0.080	
	Lower Reach	429	RR174			
	Lower Reach	456	0.080	0.035	0.080	
	Lower Reach	467	0.080	0.035	0.080	
	Lower Reach	574	0.080	0.035	0.080	
	Lower Reach	710	0.080	0.035	0.080	
	Lower Reach	894	0.080	0.035	0.080	
	Lower Reach	953	0.080	0.035	0.080	
	Lower Reach	960	0.080	0.035	0.080	
	Lower Reach	979	Old Montreal Drive			
	Lower Reach	997	0.080	0.035	0.080	
	Lower Reach	1002	0.080	0.035	0.080	
	Lower Reach	1090	0.080	0.035	0.080	
	Lower Reach	1244	0.080	0.035	0.080	
	Lower Reach	1266	0.080	0.035	0.080	
	Lower Reach	1298	0.080	0.035	0.080	
	Lower Reach	1326	0.080	0.035	0.080	
	Lower Reach	1359	0.080	0.035	0.080	
	Lower Reach	1416	0.080	0.035	0.080	
	Lower Reach	1430	0.080	0.035	0.080	
	Lower Reach	1452	0.080	0.035	0.080	
	Lower Reach	1475	0.080	0.035	0.080	
	Lower Reach	1493	0.080	0.035	0.080	
	Lower Reach	1560	0.080	0.035	0.080	
	Lower Reach	1625	0.080	0.035	0.080	
	Lower Reach	1675	0.080	0.035	0.080	
	Lower Reach	1787	0.080	0.035	0.080	
	Lower Reach	1855	0.080	0.035	0.080	
	Lower Reach	1913	0.080	0.035	0.080	
	Lower Reach	1929	0.080	0.035	0.080	
	Lower Reach	1948	0.080	0.035	0.080	
	Lower Reach	2088	0.080	0.035	0.080	
Lower Reach	2147	0.080	0.035	0.080		
Lower Reach	2176	0.080	0.035	0.080		
Lower Reach	2195	0.080	0.035	0.080		
Lower Reach	2218	0.080	0.035	0.080		
Lower Reach	2236	0.080	0.035	0.080		

River	Reach	Xsec ID	Left Overbank n	Channel n	Right Overbank n	
Becketts Creek	Lower Reach	2267	0.080	0.035	0.080	
	Lower Reach	2287	0.080	0.035	0.080	
	Lower Reach	2319	0.080	0.035	0.080	
	Lower Reach	2351	0.080	0.035	0.080	
	Lower Reach	2376	0.080	0.035	0.080	
	Lower Reach	2393	0.080	0.035	0.080	
	Lower Reach	2408	0.080	0.035	0.080	
	Lower Reach	2426	0.080	0.035	0.080	
	Lower Reach	2530	0.080	0.035	0.080	
	Lower Reach	2607	0.080	0.035	0.080	
	Lower Reach	2654	0.080	0.035	0.080	
	Lower Reach	2665	0.080	0.035	0.080	
	Lower Reach	2674	Wilhaven Drive			
	Lower Reach	2683	0.080	0.035	0.080	
	Lower Reach	2695	0.080	0.035	0.080	
	Lower Reach	2736	0.080	0.035	0.080	
	Lower Reach	2826	0.080	0.035	0.080	
	Lower Reach	2839	0.080	0.035	0.080	
	Lower Reach	2855	0.080	0.035	0.080	
	Lower Reach	2870	0.080	0.035	0.080	
	Lower Reach	2937	0.080	0.035	0.080	
	Lower Reach	3008	0.080	0.035	0.080	
	Lower Reach	3099	0.080	0.035	0.080	
	Lower Reach	3128	0.080	0.035	0.080	
	Lower Reach	3194	0.080	0.035	0.080	
	Lower Reach	3252	0.080	0.035	0.080	
	Lower Reach	3299	0.080	0.035	0.080	
	Lower Reach	3353	0.080	0.035	0.080	
	Lower Reach	3426	0.080	0.035	0.080	
	Lower Reach	3575	0.080	0.035	0.080	
	Lower Reach	3728	0.080	0.035	0.080	
	Lower Reach	3825	0.080	0.035	0.080	
	Lower Reach	3906	0.080	0.035	0.080	
	Lower Reach	3939	0.080	0.035	0.080	
	Lower Reach	3985	0.080	0.035	0.080	
	Lower Reach	4023	0.080	0.035	0.080	
	Lower Reach	4057	0.080	0.035	0.080	
	Middle Reach	4475	0.080	0.035	0.080	
	Middle Reach	5132	0.080	0.035	0.080	
	Middle Reach	5971	0.080	0.035	0.080	
Middle Reach	6190	0.080	0.035	0.080		
Middle Reach	6205	0.080	0.035	0.080		
Middle Reach	6216	French Hill Road				

River	Reach	Xsec ID	Left Overbank n	Channel n	Right Overbank n	
Becketts Creek	Middle Reach	6228	0.080	0.035	0.080	
	Middle Reach	6242	0.080	0.035	0.080	
	Middle Reach	6474	0.080	0.035	0.080	
	Middle Reach	7188	0.080	0.035	0.080	
	Middle Reach	7862	0.080	0.035	0.080	
	Middle Reach	8079	0.080	0.035	0.080	
	Middle Reach	8091	0.080	0.035	0.080	
	Middle Reach	8095	0.080	0.035	0.080	
	Middle Reach	8105	Birchgrove Road			
	Middle Reach	8114	0.080	0.035	0.080	
	Middle Reach	8119	0.080	0.035	0.080	
	Middle Reach	8127	0.080	0.035	0.080	
	Upper Reach	8248	0.080	0.035	0.080	
	Upper Reach	8311	0.080	0.035	0.080	
	Upper Reach	8321	0.080	0.035	0.080	
	Upper Reach	8337	Étienne Road			
	Upper Reach	8344	0.080	0.035	0.080	
	Upper Reach	8352	0.080	0.035	0.080	
	Upper Reach	8836	0.080	0.035	0.080	
	Upper Reach	9463	0.080	0.035	0.080	
	Upper Reach	9511	0.080	0.035	0.080	
	Upper Reach	9525	Birchgrove Road			
	Upper Reach	9539	0.080	0.035	0.080	
	Upper Reach	9569	0.080	0.035	0.080	
	Upper Reach	9880	0.080	0.035	0.080	
	Upper Reach	9966	0.080	0.035	0.080	
	Upper Reach	10028	0.080	0.035	0.080	
	Upper Reach	10142	0.080	0.035	0.080	
	Upper Reach	10274	0.080	0.035	0.080	
	Upper Reach	10400	0.080	0.035	0.080	
	Upper Reach	10528	0.080	0.035	0.080	
	Upper Reach	10621	0.080	0.035	0.080	
	Upper Reach	10668	0.080	0.035	0.080	
	Upper Reach	10757	0.080	0.035	0.080	
	Upper Reach	10898	0.080	0.035	0.080	
	Upper Reach	11060	0.080	0.035	0.080	
	Upper Reach	11191	0.080	0.035	0.080	
	Upper Reach	11291	0.080	0.035	0.080	
	Upper Reach	11352	0.080	0.035	0.080	
	Upper Reach	11492	0.080	0.035	0.080	
Upper Reach	11571	0.080	0.035	0.080		
Upper Reach	11642	0.080	0.035	0.080		
Upper Reach	11646	0.080	0.035	0.080		

River	Reach	Xsec ID	Left Overbank n	Channel n	Right Overbank n
Becketts Creek	Upper Reach	11667	Lafleur Road		
	Upper Reach	11683	0.080	0.035	0.080
	Upper Reach	11695	0.080	0.035	0.080
	Upper Reach	11866	0.080	0.035	0.080
	Upper Reach	12078	0.080	0.035	0.080
	Upper Reach	12185	0.080	0.035	0.080
	Upper Reach	12297	0.080	0.035	0.080
	Upper Reach	12345	0.080	0.035	0.080
	Upper Reach	12372	0.080	0.035	0.080
	Upper Reach	12407	0.080	0.035	0.080
	Upper Reach	12431	0.080	0.035	0.080
	Upper Reach	12470	0.080	0.035	0.080
	Upper Reach	12510	0.080	0.035	0.080
	Upper Reach	12565	0.080	0.035	0.080
	Upper Reach	12708	0.080	0.035	0.080
	Upper Reach	12858	0.080	0.035	0.080
	Upper Reach	12976	0.080	0.035	0.080
	Upper Reach	13076	0.080	0.035	0.080
	Upper Reach	13261	0.080	0.035	0.080
	Upper Reach	13380	0.080	0.035	0.080
	Upper Reach	13449	0.080	0.035	0.080
	Upper Reach	13583	0.080	0.035	0.080
	Upper Reach	13614	0.080	0.035	0.080
	Upper Reach	13619	0.080	0.035	0.080
	Upper Reach	13633	Sarsfield Road		
	Upper Reach	13643	0.080	0.035	0.080
	Upper Reach	13647	0.080	0.035	0.080
	Upper Reach	13664	0.080	0.035	0.080
	Upper Reach	13904	0.080	0.035	0.080
	Upper Reach	14118	0.080	0.035	0.080
Tributary A	Main Reach	32	0.080	0.035	0.080
	Main Reach	126	0.080	0.035	0.080
	Main Reach	163	0.080	0.035	0.080
	Main Reach	226	0.080	0.035	0.080
	Main Reach	302	0.080	0.035	0.080
	Main Reach	318	0.080	0.035	0.080
	Main Reach	337	0.080	0.035	0.080
	Main Reach	406	0.080	0.035	0.080
	Main Reach	442	0.080	0.035	0.080
	Main Reach	445	0.080	0.035	0.080
	Main Reach	451	Emmett Road		
	Main Reach	457	0.080	0.035	0.080
	Main Reach	460	0.080	0.035	0.080

River	Reach	Xsec ID	Left Overbank n	Channel n	Right Overbank n
Tributary A	Main Reach	527	0.080	0.035	0.080
	Main Reach	650	0.080	0.035	0.080
	Main Reach	869	0.080	0.035	0.080
	Main Reach	1116	0.080	0.035	0.080
	Main Reach	1384	0.080	0.035	0.080
	Main Reach	1424	0.080	0.035	0.080
	Main Reach	1455	0.080	0.035	0.080
	Main Reach	1558	0.080	0.035	0.080
	Main Reach	1584	0.080	0.035	0.080
	Main Reach	1636	0.080	0.035	0.080
	Main Reach	1715	0.080	0.035	0.080
	Main Reach	1755	0.080	0.035	0.080
	Main Reach	1790	0.080	0.035	0.080
	Main Reach	1890	0.080	0.035	0.080
	Main Reach	1919	0.080	0.035	0.080
	Main Reach	1960	0.080	0.035	0.080
	Main Reach	2025	0.080	0.035	0.080
	Main Reach	2075	0.080	0.035	0.080
	Main Reach	2142	0.080	0.035	0.080
	Main Reach	2171	0.080	0.035	0.080
	Main Reach	2219	0.080	0.035	0.080
	Main Reach	2238	0.080	0.035	0.080
	Main Reach	2260	0.080	0.035	0.080
	Main Reach	2314	0.080	0.035	0.080
	Main Reach	2372	0.080	0.035	0.080
	Main Reach	2440	0.080	0.035	0.080
	Main Reach	2489	0.080	0.035	0.080
	Main Reach	2538	0.080	0.035	0.080
	Main Reach	2595	0.080	0.035	0.080
	Main Reach	2658	0.080	0.035	0.080
	Main Reach	2682	0.080	0.035	0.080
	Main Reach	2720	0.080	0.035	0.080
	Main Reach	2764	0.080	0.035	0.080
	Main Reach	2832	0.080	0.035	0.080
	Main Reach	2866	0.080	0.035	0.080
	Main Reach	2891	0.080	0.035	0.080
	Main Reach	2911	0.080	0.035	0.080
	Main Reach	2936	0.080	0.035	0.080
	Main Reach	2962	0.080	0.035	0.080
	Main Reach	3006	0.080	0.035	0.080
Main Reach	3012	0.080	0.035	0.080	
Main Reach	3022	Sarsfield Road			
Main Reach	3031	0.080	0.035	0.080	

River	Reach	Xsec ID	Left Overbank n	Channel n	Right Overbank n
Tributary A	Main Reach	3034	0.080	0.035	0.080
	Main Reach	3244	0.080	0.035	0.080
	Main Reach	3297	0.080	0.035	0.080
	Main Reach	3341	0.080	0.035	0.080
	Main Reach	3395	0.080	0.035	0.080
	Main Reach	3470	0.080	0.035	0.080
Tributary B	Main Reach	13	0.080	0.035	0.080
	Main Reach	86	0.080	0.035	0.080
	Main Reach	123	0.080	0.035	0.080
	Main Reach	129	0.080	0.035	0.080
	Main Reach	138	Birchgrove Road		
	Main Reach	150	0.080	0.035	0.080
	Main Reach	152	0.080	0.035	0.080
	Main Reach	206	0.080	0.035	0.080
	Main Reach	309	0.080	0.035	0.080
	Main Reach	482	0.080	0.035	0.080
	Main Reach	672	0.080	0.035	0.080
	Main Reach	772	0.080	0.035	0.080
	Main Reach	880	0.080	0.035	0.080
	Main Reach	1153	0.080	0.035	0.080
	Main Reach	1334	0.080	0.035	0.080
	Main Reach	1659	0.080	0.035	0.080
	Main Reach	1836	0.080	0.035	0.080
Tributary B1	North Reach	12	0.080	0.035	0.080
	North Reach	70	0.080	0.035	0.080
	North Reach	132	0.080	0.035	0.080
	North Reach	250	0.080	0.035	0.080
	North Reach	411	0.080	0.035	0.080
	North Reach	520	0.080	0.035	0.080
	North Reach	609	0.080	0.035	0.080
	North Reach	625	0.080	0.035	0.080
	North Reach	643	0.080	0.035	0.080
	North Reach	722	0.080	0.035	0.080
	North Reach	800	0.080	0.035	0.080
	North Reach	831	0.080	0.035	0.080
	North Reach	877	0.080	0.035	0.080
	North Reach	970	0.080	0.035	0.080
	North Reach	1056	0.080	0.035	0.080
	North Reach	1159	0.080	0.035	0.080
	North Reach	1241	0.080	0.035	0.080
	North Reach	1311	0.080	0.035	0.080
	North Reach	1440	0.080	0.035	0.080

River	Reach	Xsec ID	Left Overbank n	Channel n	Right Overbank n	
Tributary B1	North Reach	1524	0.080	0.035	0.080	
	North Reach	1602	0.080	0.035	0.080	
	North Reach	1731	0.080	0.035	0.080	
	North Reach	1815	0.080	0.035	0.080	
	North Reach	1906	0.080	0.035	0.080	
	North Reach	2073	0.080	0.035	0.080	
	North Reach	2232	0.080	0.035	0.080	
	North Reach	2536	0.080	0.035	0.080	
	North Reach	2630	0.080	0.035	0.080	
	North Reach	2650	0.080	0.035	0.080	
	North Reach	2670	Sarsfield Road			
	North Reach	2692	0.080	0.035	0.080	
	North Reach	2720	0.080	0.035	0.080	
	North Reach	2761	0.080	0.035	0.080	
	North Reach	2883	0.080	0.035	0.080	
	Tributary B2	South Reach	1881	0.080	0.035	0.080
		South Reach	1929	0.080	0.035	0.080
South Reach		1985	0.080	0.035	0.080	
South Reach		2006	0.080	0.035	0.080	
South Reach		2024	0.080	0.035	0.080	
South Reach		2035	0.080	0.035	0.080	
South Reach		2067	0.080	0.035	0.080	
South Reach		2085	0.080	0.035	0.080	
South Reach		2095	0.080	0.035	0.080	
South Reach		2115	0.080	0.035	0.080	
South Reach		2192	0.080	0.035	0.080	
South Reach		2239	0.080	0.035	0.080	
South Reach		2286	0.080	0.035	0.080	
South Reach		2363	0.080	0.035	0.080	
South Reach		2420	0.080	0.035	0.080	
South Reach		2468	0.080	0.035	0.080	
South Reach		2534	0.080	0.035	0.080	
South Reach		2624	0.080	0.035	0.080	
South Reach		2655	0.080	0.035	0.080	
South Reach		2681	0.080	0.035	0.080	
South Reach		2703	0.080	0.035	0.080	
South Reach		2751	0.080	0.035	0.080	
South Reach		2797	0.080	0.035	0.080	
South Reach		2808	0.080	0.035	0.080	
South Reach		2826	0.080	0.035	0.080	
South Reach		2860	0.080	0.035	0.080	
South Reach		2988	0.080	0.035	0.080	

River	Reach	Xsec ID	Left Overbank n	Channel n	Right Overbank n
Tributary B2	South Reach	3343	0.080	0.035	0.080
	South Reach	3635	0.080	0.035	0.080
	South Reach	3919	0.080	0.035	0.080
	South Reach	4075	0.080	0.035	0.080
	South Reach	4090	0.080	0.035	0.080
	South Reach	4106	Sarsfield Road		
	South Reach	4121	0.080	0.035	0.080
	South Reach	4147	0.080	0.035	0.080
	South Reach	4206	0.080	0.035	0.080
	South Reach	4290	0.080	0.035	0.080

Table B2 HEC-RAS Detailed Output

HEC-RAS Plan: V11 Profile: 100 Year

River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Becketts	Lower Reach	0	100 Year	86.74	41.54	44.44	42.34	44.46	0.000139	0.67	227.59	111.75	0.13
Becketts	Lower Reach	170	100 Year	86.74	41.57	44.47		44.48	0.000144	0.66	227.14	102.53	0.13
Becketts	Lower Reach	330	100 Year	86.74	41.59	44.49		44.51	0.000248	0.81	167.32	89.26	0.17
Becketts	Lower Reach	389	100 Year	86.74	41.59	44.41		44.59	0.001446	1.99	54.34	27.69	0.40
Becketts	Lower Reach	397	100 Year	86.74	41.59	44.30	43.52	44.74	0.003083	2.95	29.41	31.31	0.59
Becketts	Lower Reach	429		Culvert									
Becketts	Lower Reach	456	100 Year	86.74	41.97	46.84	43.31	46.87	0.000104	0.80	111.73	103.21	0.12
Becketts	Lower Reach	467	100 Year	86.74	42.10	46.85		46.87	0.000106	0.76	196.58	99.31	0.12
Becketts	Lower Reach	574	100 Year	86.74	42.16	46.86		46.89	0.000145	0.87	148.34	54.09	0.13
Becketts	Lower Reach	710	100 Year	86.74	42.16	46.89		46.91	0.000110	0.76	199.41	71.80	0.12
Becketts	Lower Reach	894	100 Year	86.74	42.16	46.91		46.94	0.000192	0.97	158.21	58.08	0.15
Becketts	Lower Reach	953	100 Year	86.59	42.16	46.92		46.95	0.000107	0.77	154.19	57.61	0.12
Becketts	Lower Reach	960	100 Year	86.59	42.16	46.65	45.05	47.22	0.002030	3.34	25.95	42.34	0.51
Becketts	Lower Reach	979		Culvert									
Becketts	Lower Reach	997	100 Year	86.59	42.30	51.37	44.49	51.37	0.000013	0.39	415.70	93.02	0.04
Becketts	Lower Reach	1002	100 Year	86.59	42.30	51.37		51.37	0.000011	0.36	443.52	89.12	0.04
Becketts	Lower Reach	1090	100 Year	86.59	42.83	51.37		51.38	0.000014	0.41	348.01	69.48	0.05
Becketts	Lower Reach	1244	100 Year	86.59	44.80	51.37	45.84	51.38	0.000011	0.32	441.10	112.96	0.04
Becketts	Lower Reach	1266	100 Year	86.59	45.11	51.37	46.61	51.38	0.000030	0.51	295.02	107.39	0.07
Becketts	Lower Reach	1298	100 Year	86.59	45.10	51.34		51.40	0.000180	1.02	90.37	22.03	0.14
Becketts	Lower Reach	1326	100 Year	86.59	48.09	50.94	50.69	51.59	0.007021	3.58	25.46	16.83	0.81
Becketts	Lower Reach	1359	100 Year	86.59	51.43	53.09	53.09	53.76	0.011646	3.61	23.98	18.11	1.00
Becketts	Lower Reach	1416	100 Year	86.59	51.72	53.83		54.20	0.004250	2.71	35.45	25.70	0.63
Becketts	Lower Reach	1430	100 Year	86.59	51.80	54.01		54.26	0.002647	2.25	44.45	31.56	0.51
Becketts	Lower Reach	1452	100 Year	86.59	51.76	54.12		54.32	0.002033	2.01	46.42	29.71	0.45
Becketts	Lower Reach	1475	100 Year	86.59	51.77	54.20		54.37	0.001600	1.85	52.76	32.25	0.41
Becketts	Lower Reach	1493	100 Year	86.59	51.76	54.27		54.40	0.001071	1.62	67.46	38.59	0.34
Becketts	Lower Reach	1560	100 Year	86.59	51.75	54.38		54.47	0.000924	1.41	83.19	48.04	0.30
Becketts	Lower Reach	1625	100 Year	86.59	51.80	54.46		54.53	0.000769	1.38	103.30	54.55	0.28
Becketts	Lower Reach	1675	100 Year	86.59	51.80	54.53		54.55	0.000230	0.77	130.22	62.60	0.16
Becketts	Lower Reach	1787	100 Year	86.59	51.87	54.50		54.66	0.001974	2.00	67.60	47.97	0.44
Becketts	Lower Reach	1855	100 Year	86.59	51.93	54.67		54.78	0.001313	1.65	84.65	66.85	0.37
Becketts	Lower Reach	1913	100 Year	86.59	52.58	54.79		54.84	0.000710	1.08	108.27	76.37	0.26
Becketts	Lower Reach	1929	100 Year	86.59	53.08	54.80		54.86	0.001543	1.46	100.62	68.63	0.38
Becketts	Lower Reach	1948	100 Year	86.59	53.30	54.83	54.83	55.21	0.009244	2.86	40.78	63.52	0.88
Becketts	Lower Reach	2088	100 Year	86.59	56.50	57.88	57.88	58.48	0.012002	3.44	25.20	21.43	1.01
Becketts	Lower Reach	2147	100 Year	86.59	59.12	60.84	60.84	61.51	0.010061	3.70	26.37	22.21	0.97
Becketts	Lower Reach	2176	100 Year	86.59	59.49	61.27	61.27	61.86	0.009288	3.55	30.72	29.73	0.93
Becketts	Lower Reach	2195	100 Year	86.59	59.65	61.44	61.44	62.13	0.009809	3.74	26.29	21.60	0.95
Becketts	Lower Reach	2218	100 Year	86.59	59.69	61.98		62.31	0.003756	2.56	35.55	23.93	0.61
Becketts	Lower Reach	2236	100 Year	86.59	59.69	62.05		62.38	0.003460	2.60	36.79	23.78	0.59
Becketts	Lower Reach	2267	100 Year	86.59	59.69	62.25		62.48	0.002198	2.22	46.19	29.35	0.48
Becketts	Lower Reach	2287	100 Year	86.59	59.69	62.27		62.55	0.003130	2.49	49.73	39.83	0.56
Becketts	Lower Reach	2319	100 Year	86.59	59.69	62.54		62.62	0.000862	1.26	68.95	38.21	0.29
Becketts	Lower Reach	2351	100 Year	86.59	59.69	62.47		62.72	0.002762	2.34	47.70	34.09	0.52
Becketts	Lower Reach	2376	100 Year	86.59	59.69	62.54		62.80	0.002666	2.35	44.48	28.26	0.51
Becketts	Lower Reach	2393	100 Year	86.59	59.69	62.59		62.85	0.002621	2.32	44.42	30.59	0.51
Becketts	Lower Reach	2408	100 Year	86.59	59.69	62.72		62.89	0.001701	1.87	55.55	36.57	0.41
Becketts	Lower Reach	2426	100 Year	86.59	59.69	62.75		62.93	0.001657	1.91	52.74	36.75	0.41
Becketts	Lower Reach	2530	100 Year	86.59	59.69	62.97		63.06	0.000745	1.38	84.54	52.05	0.28
Becketts	Lower Reach	2607	100 Year	86.59	59.69	63.03		63.11	0.000546	1.29	85.34	46.59	0.25
Becketts	Lower Reach	2654	100 Year	85.73	59.69	63.05		63.14	0.000693	1.38	75.92	51.72	0.27
Becketts	Lower Reach	2665	100 Year	85.73	59.69	63.03	61.66	63.19	0.001243	1.81	47.40	34.13	0.36
Becketts	Lower Reach	2674		Bridge									
Becketts	Lower Reach	2683	100 Year	85.73	59.94	63.19	61.56	63.27	0.000600	1.28	69.86	59.64	0.26
Becketts	Lower Reach	2695	100 Year	85.73	59.95	63.23		63.28	0.000363	1.01	106.67	62.37	0.20
Becketts	Lower Reach	2736	100 Year	85.73	60.20	63.20		63.32	0.001057	1.66	77.38	55.29	0.33
Becketts	Lower Reach	2826	100 Year	85.73	60.58	63.34		63.39	0.000371	0.98	99.39	48.58	0.20
Becketts	Lower Reach	2839	100 Year	85.73	60.92	62.83	62.83	63.67	0.012993	4.30	26.33	23.44	1.09
Becketts	Lower Reach	2855	100 Year	85.73	61.17	63.21	63.21	63.94	0.009631	3.88	25.97	20.39	0.95
Becketts	Lower Reach	2870	100 Year	85.73	61.28	63.62	63.28	64.08	0.005082	3.08	32.56	24.05	0.71
Becketts	Lower Reach	2937	100 Year	85.73	61.48	64.16		64.26	0.001053	1.59	83.30	49.27	0.33
Becketts	Lower Reach	3008	100 Year	85.73	61.47	64.26		64.32	0.000590	1.24	104.78	56.98	0.25
Becketts	Lower Reach	3099	100 Year	85.73	61.44	64.34		64.36	0.000214	0.76	188.37	106.04	0.15
Becketts	Lower Reach	3128	100 Year	85.73	61.46	64.35		64.36	0.000153	0.67	204.01	110.80	0.13
Becketts	Lower Reach	3194	100 Year	85.73	61.99	64.22		64.46	0.003568	2.52	55.98	45.62	0.59
Becketts	Lower Reach	3252	100 Year	85.73	62.00	64.41		64.67	0.003009	2.40	47.26	34.17	0.54
Becketts	Lower Reach	3299	100 Year	85.73	62.20	64.72		64.76	0.000765	1.26	164.68	159.78	0.28
Becketts	Lower Reach	3353	100 Year	85.73	62.17	64.76		64.78	0.000289	0.84	225.48	193.69	0.18
Becketts	Lower Reach	3426	100 Year	85.73	62.21	64.79	63.82	64.81	0.000390	0.89	210.72	172.36	0.20
Becketts	Lower Reach	3575	100 Year	85.73	62.25	64.84		64.89	0.000662	1.24	154.23	130.03	0.26
Becketts	Lower Reach	3728	100 Year	84.97	62.22	64.92		64.94	0.000212	0.71	204.01	106.46	0.15
Becketts	Lower Reach	3825	100 Year	84.97	62.19	64.94		64.96	0.000327	0.84	222.04	163.35	0.18
Becketts	Lower Reach	3906	100 Year	84.97	62.24	64.94		65.03	0.000906	1.42	94.11	97.28	0.31
Becketts	Lower Reach	3939	100 Year	84.97	62.20	64.99		65.06	0.000787	1.23	89.97	60.16	0.28
Becketts	Lower Reach	3985	100 Year	84.97	62.77	65.02	65.02	65.59	0.012424	3.33	25.48	22.80	1.01
Becketts	Lower Reach	4023	100 Year	84.97	62.79	65.60		65.80	0.002203	2.08	56.59	65.07	0.47
Becketts	Lower Reach	4057	100 Year	84.97	62.76	65.75		65.88	0.001735	1.86	85.35	82.48	0.41
Becketts	Middle Reach	4475	100 Year	73.57	63.10	66.19		66.24	0.000441	0.95	109.63	154.24	0.21
Becketts	Middle Reach	5132	100 Year	74.99	63.11	66.41		66.43	0.000221	0.85	264.55	266.87	0.16
Becketts	Middle Reach	5971	100 Year	74.99	63.36	66.54		66.56	0.000212	0.77	267.93	278.96	0.15
Becketts	Middle Reach	6190	100 Year	74.99	63.80	66.59		66.60	0.000214	0.62	321.74	293.53	0.14
Becketts	Middle Reach	6205	100 Year	85.66	63.80	66.60	65.96	66.61	0.000383	0.75	274.79	283.79	0.19

HEC-RAS Plan: V11 Profile: 100 Year (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Becketts	Middle Reach	6216											
			Culvert										
Becketts	Middle Reach	6228	100 Year	85.66	63.60	66.61	66.01	66.62	0.000399	0.90	260.61	280.62	0.20
Becketts	Middle Reach	6242	100 Year	85.66	63.60	66.60		66.64	0.000858	1.38	209.38	273.76	0.29
Becketts	Middle Reach	6474	100 Year	85.66	64.13	66.79		66.84	0.000976	1.39	175.63	228.14	0.31
Becketts	Middle Reach	7188	100 Year	85.66	64.16	67.14		67.15	0.000314	0.79	323.38	347.57	0.18
Becketts	Middle Reach	7862	100 Year	85.66	64.19	67.33		67.35	0.000500	0.96	269.91	374.38	0.22
Becketts	Middle Reach	8079	100 Year	85.66	63.98	67.44	66.46	67.47	0.000672	1.13	242.77	419.21	0.25
Becketts	Middle Reach	8091	100 Year	85.66	63.98	67.47	66.61	67.50	0.000602	1.05	247.65	434.89	0.24
Becketts	Middle Reach	8095	100 Year	85.66	63.98	67.44	66.53	67.54	0.001185	1.71	104.31	120.07	0.34
Becketts	Middle Reach	8105											
			Bridge										
Becketts	Middle Reach	8114	100 Year	85.66	63.98	68.06	66.67	68.13	0.000706	1.38	111.29	81.61	0.27
Becketts	Middle Reach	8119	100 Year	85.66	64.20	68.04		68.15	0.000963	1.76	104.91	77.99	0.32
Becketts	Middle Reach	8127	100 Year	85.66	64.20	68.03		68.17	0.001403	2.08	90.78	65.30	0.38
Becketts	Upper Reach	8248	100 Year	60.13	64.50	68.24		68.25	0.000255	0.77	207.53	160.36	0.15
Becketts	Upper Reach	8311	100 Year	60.13	64.50	68.26		68.26	0.000121	0.50	303.64	224.27	0.11
Becketts	Upper Reach	8321	100 Year	60.13	64.50	68.26	66.41	68.27	0.000100	0.52	313.82	250.23	0.10
Becketts	Upper Reach	8337											
			Bridge										
Becketts	Upper Reach	8344	100 Year	60.13	64.67	68.30	66.38	68.30	0.000044	0.36	444.15	291.13	0.07
Becketts	Upper Reach	8352	100 Year	60.13	64.67	68.30		68.30	0.000094	0.47	349.43	275.73	0.10
Becketts	Upper Reach	8836	100 Year	60.13	66.19	68.35		68.36	0.000180	0.50	412.44	586.62	0.13
Becketts	Upper Reach	9463	100 Year	60.13	67.27	69.34	69.34	69.66	0.006300	2.78	40.58	77.90	0.75
Becketts	Upper Reach	9511	100 Year	38.41	67.27	69.62	68.90	69.89	0.002768	2.29	16.80	36.54	0.51
Becketts	Upper Reach	9525											
			Culvert										
Becketts	Upper Reach	9539	100 Year	38.41	67.35	70.92	69.15	70.97	0.000552	1.05	36.93	48.26	0.22
Becketts	Upper Reach	9569	100 Year	38.41	67.52	70.97		70.98	0.000181	0.70	93.42	48.02	0.14
Becketts	Upper Reach	9880	100 Year	38.41	68.18	71.02		71.05	0.000261	0.77	70.09	43.10	0.17
Becketts	Upper Reach	9966	100 Year	38.41	68.25	71.04		71.08	0.000456	1.02	73.77	46.61	0.22
Becketts	Upper Reach	10028	100 Year	38.41	68.29	71.07		71.11	0.000654	1.19	60.02	42.97	0.26
Becketts	Upper Reach	10142	100 Year	38.41	68.43	71.14		71.18	0.000552	1.06	67.28	47.80	0.23
Becketts	Upper Reach	10274	100 Year	38.41	69.30	71.22		71.29	0.001300	1.41	46.50	38.16	0.35
Becketts	Upper Reach	10400	100 Year	38.41	69.16	71.37		71.44	0.001275	1.50	50.60	44.93	0.35
Becketts	Upper Reach	10528	100 Year	38.41	69.63	71.51		71.58	0.001054	1.28	41.05	35.38	0.32
Becketts	Upper Reach	10621	100 Year	38.41	70.69	71.64		71.80	0.005779	1.75	21.90	29.83	0.65
Becketts	Upper Reach	10668	100 Year	38.41	70.76	71.88		72.01	0.003489	1.57	24.46	26.78	0.52
Becketts	Upper Reach	10757	100 Year	38.41	70.79	72.15		72.21	0.001549	1.28	42.31	40.48	0.37
Becketts	Upper Reach	10898	100 Year	38.41	70.75	72.37		72.50	0.002514	1.75	30.78	29.48	0.48
Becketts	Upper Reach	11060	100 Year	38.41	70.77	72.70		72.80	0.001511	1.49	32.26	26.30	0.38
Becketts	Upper Reach	11191	100 Year	38.41	70.82	72.90		73.06	0.002409	1.97	30.28	27.01	0.48
Becketts	Upper Reach	11291	100 Year	38.41	70.81	73.15		73.22	0.001012	1.13	33.99	23.92	0.30
Becketts	Upper Reach	11352	100 Year	38.41	70.69	73.20		73.30	0.001456	1.61	39.10	33.16	0.37
Becketts	Upper Reach	11492	100 Year	38.41	71.04	73.37		73.47	0.001163	1.59	39.67	31.26	0.35
Becketts	Upper Reach	11571	100 Year	38.41	71.21	73.39	73.09	73.70	0.005067	2.52	17.77	23.38	0.67
Becketts	Upper Reach	11642	100 Year	34.61	71.40	73.79		73.95	0.002253	1.83	24.26	26.99	0.45
Becketts	Upper Reach	11646	100 Year	34.61	71.40	73.69	73.23	74.08	0.004842	2.85	13.55	15.84	0.65
Becketts	Upper Reach	11667											
			Culvert										
Becketts	Upper Reach	11683	100 Year	34.61	71.51	75.89	73.31	75.91	0.000146	0.71	52.23	33.59	0.13
Becketts	Upper Reach	11695	100 Year	34.61	71.51	75.90		75.92	0.000091	0.65	93.94	38.83	0.10
Becketts	Upper Reach	11866	100 Year	34.61	71.94	75.92		75.93	0.000055	0.47	97.43	37.42	0.08
Becketts	Upper Reach	12078	100 Year	34.61	72.46	75.93		75.95	0.000146	0.71	92.09	42.46	0.13
Becketts	Upper Reach	12185	100 Year	34.61	72.85	75.94		75.97	0.000354	1.01	63.41	34.82	0.20
Becketts	Upper Reach	12297	100 Year	34.61	73.47	75.98	75.03	76.03	0.000733	1.23	48.72	78.62	0.27
Becketts	Upper Reach	12345	100 Year	34.61	74.05	76.03		76.06	0.000488	0.84	67.49	60.67	0.21
Becketts	Upper Reach	12372	100 Year	34.61	74.62	76.01		76.11	0.002873	1.58	31.43	34.70	0.49
Becketts	Upper Reach	12407	100 Year	34.61	75.27	76.75	76.75	77.31	0.013397	3.32	10.44	9.45	1.01
Becketts	Upper Reach	12431	100 Year	34.61	75.69	77.35		77.42	0.001270	1.24	30.88	27.09	0.34
Becketts	Upper Reach	12470	100 Year	34.61	75.73	77.41		77.48	0.001309	1.18	38.18	43.26	0.34
Becketts	Upper Reach	12510	100 Year	34.61	75.72	77.31	77.27	77.66	0.007166	2.86	19.19	26.22	0.79
Becketts	Upper Reach	12565	100 Year	34.61	75.72	77.74		77.81	0.001111	1.24	41.23	43.17	0.32
Becketts	Upper Reach	12708	100 Year	34.61	75.65	77.91		78.00	0.001607	1.44	33.90	28.81	0.38
Becketts	Upper Reach	12858	100 Year	34.61	75.58	78.13	77.42	78.26	0.001873	1.73	27.47	33.19	0.41
Becketts	Upper Reach	12976	100 Year	34.61	75.91	78.38		78.49	0.002117	1.60	27.36	25.63	0.43
Becketts	Upper Reach	13076	100 Year	34.61	77.05	78.61		78.79	0.004385	2.17	26.39	30.42	0.61
Becketts	Upper Reach	13261	100 Year	34.61	76.71	79.08		79.16	0.001177	1.37	34.70	34.60	0.33
Becketts	Upper Reach	13380	100 Year	34.61	77.12	79.22		79.38	0.002540	1.81	23.57	22.57	0.48
Becketts	Upper Reach	13449	100 Year	34.61	77.71	79.44		79.61	0.004436	1.86	22.57	29.70	0.60
Becketts	Upper Reach	13583	100 Year	34.61	78.04	79.97		80.16	0.004082	2.13	26.77	35.24	0.58
Becketts	Upper Reach	13614	100 Year	19.04	77.71	80.19		80.23	0.000719	0.92	21.80	18.16	0.24
Becketts	Upper Reach	13619	100 Year	19.04	77.54	80.11	79.02	80.32	0.001960	2.07	9.22	19.60	0.42
Becketts	Upper Reach	13633											
			Culvert										
Becketts	Upper Reach	13643	100 Year	19.04	77.91	81.60	79.46	81.64	0.000289	0.90	21.63	52.55	0.16
Becketts	Upper Reach	13647	100 Year	19.04	78.34	81.64		81.65	0.000152	0.54	56.19	46.47	0.12
Becketts	Upper Reach	13664	100 Year	19.04	78.63	81.64		81.65	0.000148	0.57	45.14	33.14	0.12
Becketts	Upper Reach	13904	100 Year	19.04	78.81	81.68		81.70	0.000236	0.62	35.18	28.56	0.15
Becketts	Upper Reach	14118	100 Year	19.04	79.15	81.73		81.80	0.000951	1.23	22.02	20.63	0.29
Trib A	Main Reach	32	100 Year	14.10	63.76	65.90		65.91	0.000187	0.53	53.69	54.09	0.13
Trib A	Main Reach	126	100 Year	14.10	64.46	65.92		65.94	0.000991	0.90	33.85	52.88	0.28
Trib A	Main Reach	163	100 Year	14.10	64.76	65.94		65.98	0.001528	0.99	25.27	41.64	0.34
Trib A	Main Reach	226	100 Year	14.10	64.73	66.03		66.08	0.002495	1.23	23.70	55.16	0.43
Trib A	Main Reach	302	100 Year	14.10	64.83	66.22	66.16	66.39	0.006954	1.96	10.95	43.51	0.70
Trib A	Main Reach	318	100 Year	14.10	64.87	66.36	65.93	66.46	0.003021	1.46	14.06	47.11	0.47
Trib A	Main Reach	337	100 Year	14.10	64.96	66.41	66.08	66.54	0.004240	1.56	10.30	40.62	0.55
Trib A	Main Reach	406	100 Year	14.10	65.87	66.89	66.89	67.12	0.012724	2.35	8.90	19.85	0.93
Trib A	Main Reach	442	100 Year	14.10	65.87	67.37	67.36	67.55	0.010812	2.18	12.42	38.88	0.83

HEC-RAS Plan: V11 Profile: 100 Year (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Trib A	Main Reach	445	100 Year	14.10	65.87	67.29	67.29	67.89	0.015927	3.42	4.12	35.74	1.00
Trib A	Main Reach	451		Culvert									
Trib A	Main Reach	457	100 Year	14.10	65.93	68.05	67.34	68.06	0.000294	0.58	58.97	79.14	0.15
Trib A	Main Reach	460	100 Year	14.10	65.93	68.05		68.07	0.000536	0.79	40.86	49.85	0.21
Trib A	Main Reach	527	100 Year	14.10	66.48	68.08		68.14	0.002432	1.40	23.09	43.22	0.43
Trib A	Main Reach	650	100 Year	14.10	66.85	68.38		68.48	0.003169	1.53	14.79	35.33	0.49
Trib A	Main Reach	869	100 Year	14.10	67.70	69.21		69.37	0.005532	1.96	10.09	13.39	0.61
Trib A	Main Reach	1116	100 Year	14.10	69.55	70.97	70.93	71.31	0.011691	2.65	6.03	10.99	0.88
Trib A	Main Reach	1384	100 Year	14.10	71.12	72.72		72.86	0.003376	1.67	8.80	9.06	0.50
Trib A	Main Reach	1424	100 Year	14.10	71.38	72.83		73.07	0.006408	2.17	6.51	5.93	0.66
Trib A	Main Reach	1455	100 Year	14.10	71.51	73.03		73.33	0.009334	2.45	5.76	5.98	0.80
Trib A	Main Reach	1558	100 Year	14.10	72.68	74.05	73.93	74.39	0.011203	2.55	5.52	6.08	0.85
Trib A	Main Reach	1584	100 Year	14.10	72.91	74.34	74.34	74.77	0.015656	2.94	4.80	5.56	1.01
Trib A	Main Reach	1636	100 Year	14.10	73.18	74.98		75.10	0.002909	1.53	10.47	18.36	0.47
Trib A	Main Reach	1715	100 Year	14.10	73.93	75.27		75.39	0.004678	1.54	9.14	12.56	0.58
Trib A	Main Reach	1755	100 Year	14.10	74.16	75.44	75.33	75.67	0.008723	2.19	7.22	11.72	0.78
Trib A	Main Reach	1790	100 Year	14.10	74.17	75.76		75.91	0.005082	1.70	8.52	12.45	0.60
Trib A	Main Reach	1890	100 Year	14.10	74.81	76.29		76.47	0.006050	1.89	7.54	10.10	0.66
Trib A	Main Reach	1919	100 Year	14.10	74.84	76.47		76.58	0.002241	1.48	10.99	12.34	0.43
Trib A	Main Reach	1960	100 Year	14.10	75.12	76.55		76.72	0.003992	1.84	9.61	13.26	0.57
Trib A	Main Reach	2025	100 Year	14.10	75.53	76.84		77.01	0.005182	1.80	7.82	8.81	0.61
Trib A	Main Reach	2075	100 Year	14.10	75.88	77.13	77.08	77.38	0.009623	2.23	7.33	17.42	0.82
Trib A	Main Reach	2142	100 Year	14.10	76.42	77.65		77.77	0.003813	1.54	10.12	15.90	0.53
Trib A	Main Reach	2171	100 Year	14.10	76.56	77.77		77.92	0.005930	1.71	8.26	11.25	0.64
Trib A	Main Reach	2219	100 Year	14.10	76.79	78.00	78.00	78.45	0.015628	2.98	4.74	5.32	1.01
Trib A	Main Reach	2238	100 Year	14.10	76.81	78.50		78.55	0.001237	0.97	14.49	13.66	0.30
Trib A	Main Reach	2260	100 Year	14.10	76.97	78.44	78.23	78.65	0.008106	2.05	6.88	12.53	0.75
Trib A	Main Reach	2314	100 Year	14.10	77.28	78.81		78.94	0.003651	1.60	8.83	9.00	0.51
Trib A	Main Reach	2372	100 Year	14.10	77.54	79.03		79.27	0.007495	2.15	6.56	7.17	0.72
Trib A	Main Reach	2440	100 Year	14.10	79.07	80.47	80.47	80.76	0.014468	2.43	6.33	12.80	0.96
Trib A	Main Reach	2489	100 Year	14.10	79.48	81.01		81.10	0.003612	1.32	12.58	24.61	0.50
Trib A	Main Reach	2538	100 Year	14.10	79.66	81.19		81.28	0.003856	1.29	10.97	18.68	0.51
Trib A	Main Reach	2595	100 Year	14.10	80.25	81.46	81.46	81.79	0.014798	2.52	5.60	8.67	1.00
Trib A	Main Reach	2658	100 Year	14.10	80.39	81.93		81.98	0.001057	0.97	14.63	13.98	0.29
Trib A	Main Reach	2682	100 Year	14.10	81.06	82.21	82.21	82.53	0.014794	2.53	5.57	8.51	1.00
Trib A	Main Reach	2720	100 Year	14.10	81.12	82.67		82.76	0.002797	1.34	10.90	16.08	0.46
Trib A	Main Reach	2764	100 Year	14.10	81.21	82.79		82.82	0.000672	0.84	19.50	18.94	0.24
Trib A	Main Reach	2832	100 Year	14.10	81.43	82.77	82.77	83.18	0.015642	2.85	4.98	7.17	1.00
Trib A	Main Reach	2866	100 Year	14.10	81.77	83.32	83.30	83.65	0.011856	2.67	6.80	10.89	0.89
Trib A	Main Reach	2891	100 Year	14.10	82.06	83.72		83.83	0.004008	1.48	9.64	14.14	0.53
Trib A	Main Reach	2911	100 Year	14.10	82.41	83.81	83.81	84.12	0.013988	2.45	6.09	12.80	0.96
Trib A	Main Reach	2936	100 Year	14.10	82.47	84.14	83.92	84.33	0.005447	1.97	8.20	10.68	0.63
Trib A	Main Reach	2962	100 Year	14.10	82.74	84.28		84.49	0.006210	2.04	7.23	9.26	0.67
Trib A	Main Reach	3006	100 Year	8.98	83.19	84.60		84.66	0.001727	1.10	9.73	15.24	0.36
Trib A	Main Reach	3012	100 Year	8.98	83.35	84.56	84.56	85.13	0.013136	3.33	2.70	9.59	1.00
Trib A	Main Reach	3022		Culvert									
Trib A	Main Reach	3031	100 Year	8.98	83.41	85.78	84.65	85.82	0.000526	0.85	10.50	29.21	0.21
Trib A	Main Reach	3034	100 Year	8.98	83.41	85.81		85.82	0.000124	0.42	28.42	24.19	0.11
Trib A	Main Reach	3244	100 Year	8.98	84.67	85.81		85.93	0.004924	1.61	6.79	13.89	0.59
Trib A	Main Reach	3297	100 Year	8.98	84.96	86.14	86.14	86.44	0.012795	2.45	4.15	8.80	0.92
Trib A	Main Reach	3341	100 Year	8.98	85.47	86.64		86.77	0.004554	1.57	6.08	9.45	0.56
Trib A	Main Reach	3395	100 Year	8.98	86.62	87.31	87.31	87.52	0.016377	2.07	4.92	12.92	1.00
Trib A	Main Reach	3470	100 Year	8.98	86.89	88.02	87.85	88.13	0.004824	1.57	7.96	16.35	0.59
Trib B	Main Reach	13	100 Year	25.54	64.26	68.18		68.19	0.000202	0.75	83.05	51.78	0.14
Trib B	Main Reach	86	100 Year	25.54	64.60	68.19		68.20	0.000137	0.65	78.97	35.63	0.12
Trib B	Main Reach	123	100 Year	25.54	64.80	68.19		68.20	0.000209	0.64	81.31	58.43	0.14
Trib B	Main Reach	129	100 Year	25.54	64.80	68.19	65.98	68.20	0.000130	0.58	85.33	55.21	0.11
Trib B	Main Reach	138		Culvert									
Trib B	Main Reach	150	100 Year	25.54	64.79	68.21	65.92	68.22	0.000081	0.48	101.09	54.93	0.09
Trib B	Main Reach	152	100 Year	25.54	64.79	68.21		68.22	0.000146	0.63	92.10	54.85	0.12
Trib B	Main Reach	206	100 Year	25.54	65.09	68.21		68.22	0.000156	0.58	80.66	54.28	0.12
Trib B	Main Reach	309	100 Year	25.54	65.66	68.23		68.24	0.000269	0.68	77.28	73.67	0.16
Trib B	Main Reach	482	100 Year	25.54	66.29	68.28		68.29	0.000388	0.64	103.50	160.36	0.18
Trib B	Main Reach	672	100 Year	25.54	66.72	68.35		68.40	0.001646	1.43	51.35	93.38	0.38
Trib B	Main Reach	772	100 Year	25.54	66.73	68.49		68.57	0.002393	1.48	36.01	82.54	0.44
Trib B	Main Reach	880	100 Year	25.54	67.09	68.75	68.66	68.93	0.004828	2.14	23.33	49.52	0.63
Trib B	Main Reach	1153	100 Year	25.54	67.95	69.61		69.68	0.001971	1.32	29.95	39.95	0.40
Trib B	Main Reach	1334	100 Year	25.54	67.85	69.91		69.98	0.001472	1.36	31.50	35.98	0.36
Trib B	Main Reach	1659	100 Year	25.54	69.15	70.40		70.44	0.001485	1.07	38.98	52.69	0.35
Trib B	Main Reach	1836	100 Year	25.54	69.23	70.68		70.76	0.002325	1.50	30.84	45.20	0.45
Trib B1	North Reach	12	100 Year	16.68	69.55	70.71		70.79	0.002851	1.40	18.04	34.94	0.47
Trib B1	North Reach	70	100 Year	16.68	69.50	70.86		70.90	0.001311	1.05	24.58	28.99	0.33
Trib B1	North Reach	132	100 Year	16.68	69.83	70.95		70.98	0.001515	1.02	26.35	37.95	0.35
Trib B1	North Reach	250	100 Year	16.68	70.18	71.19		71.31	0.005640	1.51	11.09	19.52	0.62
Trib B1	North Reach	411	100 Year	16.68	71.65	72.34	72.28	72.46	0.009540	1.88	15.88	38.40	0.80
Trib B1	North Reach	520	100 Year	16.68	72.14	73.26	73.21	73.43	0.008344	2.05	13.34	31.42	0.77
Trib B1	North Reach	609	100 Year	16.68	72.43	73.75		73.87	0.003455	1.68	15.65	30.58	0.53
Trib B1	North Reach	625	100 Year	16.68	72.65	73.80		73.93	0.004758	1.67	13.49	26.20	0.60
Trib B1	North Reach	643	100 Year	16.68	72.66	73.90		74.00	0.002689	1.43	15.81	26.56	0.46
Trib B1	North Reach	722	100 Year	16.68	72.63	74.12		74.23	0.003180	1.60	14.80	23.24	0.50
Trib B1	North Reach	800	100 Year	16.68	73.21	74.39		74.57	0.005510	1.93	11.46	20.19	0.65
Trib B1	North Reach	831	100 Year	16.68	73.50	74.54	74.53	74.85	0.011981	2.58	8.22	14.14	0.94
Trib B1	North Reach	877	100 Year	16.68	73.84	75.03		75.16	0.004127	1.62	11.80	18.62	0.56

HEC-RAS Plan: V11 Profile: 100 Year (Continued)

River	Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
Trib B1	North Reach	970	100 Year	16.68	74.01	75.45	75.26	75.61	0.005624	1.83	11.69	33.20	0.65
Trib B1	North Reach	1056	100 Year	16.68	74.38	75.85		75.92	0.002553	1.48	21.20	32.47	0.45
Trib B1	North Reach	1159	100 Year	16.68	74.34	76.07		76.15	0.002076	1.36	18.74	33.35	0.41
Trib B1	North Reach	1241	100 Year	16.68	74.74	76.24		76.31	0.001958	1.29	19.95	29.98	0.40
Trib B1	North Reach	1311	100 Year	16.68	74.79	76.38		76.45	0.002195	1.29	21.29	38.34	0.41
Trib B1	North Reach	1440	100 Year	16.68	75.11	76.59		76.63	0.001134	1.06	25.96	35.61	0.31
Trib B1	North Reach	1524	100 Year	16.68	75.28	76.67	76.61	76.88	0.008501	2.09	10.03	27.82	0.78
Trib B1	North Reach	1602	100 Year	16.68	75.83	77.21		77.38	0.005061	2.11	15.31	28.10	0.64
Trib B1	North Reach	1731	100 Year	16.68	76.48	77.78		77.85	0.003064	1.48	19.22	26.58	0.49
Trib B1	North Reach	1815	100 Year	16.68	76.75	78.04		78.13	0.003719	1.57	17.49	29.31	0.54
Trib B1	North Reach	1906	100 Year	16.68	76.98	78.33		78.40	0.002595	1.33	18.96	30.12	0.45
Trib B1	North Reach	2073	100 Year	16.68	77.26	78.71		78.77	0.002039	1.25	21.90	32.57	0.40
Trib B1	North Reach	2232	100 Year	16.68	77.48	79.06		79.19	0.003703	1.77	16.92	30.43	0.54
Trib B1	North Reach	2536	100 Year	16.68	78.95	79.97		80.04	0.002313	1.23	17.87	27.74	0.42
Trib B1	North Reach	2630	100 Year	13.56	78.83	80.24		80.34	0.004526	1.40	9.83	18.44	0.56
Trib B1	North Reach	2650	100 Year	13.56	78.83	80.22	80.10	80.59	0.008895	2.69	5.04	25.73	0.83
Trib B1	North Reach	2670		Culvert									
Trib B1	North Reach	2692	100 Year	13.56	78.79	82.39	80.04	82.40	0.000069	0.48	39.13	39.88	0.09
Trib B1	North Reach	2720	100 Year	13.56	78.79	82.40		82.40	0.000022	0.26	92.54	46.14	0.05
Trib B1	North Reach	2761	100 Year	13.56	79.29	82.40		82.40	0.000033	0.32	68.63	37.15	0.06
Trib B1	North Reach	2883	100 Year	13.56	79.60	82.40		82.41	0.000051	0.36	67.74	36.44	0.07
Trib B2	South Reach	1881	100 Year	8.65	69.52	70.82		70.83	0.000444	0.60	25.28	37.19	0.19
Trib B2	South Reach	1929	100 Year	8.65	69.59	70.84		70.86	0.000831	0.75	20.00	29.38	0.25
Trib B2	South Reach	1985	100 Year	8.65	69.63	70.88		70.92	0.001381	0.90	14.73	43.93	0.32
Trib B2	South Reach	2006	100 Year	8.65	70.32	70.92	70.92	71.06	0.018546	1.87	6.81	32.89	1.03
Trib B2	South Reach	2024	100 Year	8.65	70.31	71.14	71.04	71.28	0.007913	1.72	6.12	13.53	0.73
Trib B2	South Reach	2035	100 Year	8.65	70.34	71.28	71.28	71.53	0.011950	2.26	4.63	12.03	0.90
Trib B2	South Reach	2067	100 Year	8.65	70.72	71.69	71.62	71.88	0.009236	2.01	5.30	12.58	0.79
Trib B2	South Reach	2085	100 Year	8.65	70.68	71.88		72.00	0.005402	1.58	5.86	12.36	0.61
Trib B2	South Reach	2095	100 Year	8.65	70.87	71.96		72.06	0.005207	1.55	7.62	15.62	0.60
Trib B2	South Reach	2115	100 Year	8.65	70.87	72.07		72.13	0.002044	1.12	10.12	16.80	0.39
Trib B2	South Reach	2192	100 Year	8.65	71.11	72.25	72.19	72.44	0.008157	2.01	5.81	19.39	0.75
Trib B2	South Reach	2239	100 Year	8.65	71.21	72.56		72.60	0.001667	1.00	11.08	21.05	0.35
Trib B2	South Reach	2286	100 Year	8.65	71.40	72.62		72.71	0.002761	1.41	8.71	19.69	0.46
Trib B2	South Reach	2363	100 Year	8.65	72.61	73.02		73.11	0.012845	1.33	6.50	24.54	0.83
Trib B2	South Reach	2420	100 Year	8.65	72.73	73.43		73.49	0.003972	1.05	8.27	18.50	0.50
Trib B2	South Reach	2468	100 Year	8.65	72.69	73.60		73.64	0.002586	0.96	9.04	16.67	0.42
Trib B2	South Reach	2534	100 Year	8.65	72.72	73.77		73.84	0.003448	1.21	8.74	21.96	0.49
Trib B2	South Reach	2624	100 Year	8.65	72.72	73.97		74.00	0.001018	0.87	14.28	19.34	0.29
Trib B2	South Reach	2655	100 Year	8.65	73.04	73.96		74.10	0.008759	1.74	5.77	14.14	0.76
Trib B2	South Reach	2681	100 Year	8.65	73.19	74.19	74.08	74.34	0.009269	1.71	5.14	13.14	0.77
Trib B2	South Reach	2703	100 Year	8.65	73.48	74.36		74.57	0.010189	2.00	4.33	7.02	0.81
Trib B2	South Reach	2751	100 Year	8.65	74.39	74.99	74.99	75.19	0.016454	2.01	4.32	10.86	1.00
Trib B2	South Reach	2797	100 Year	8.65	74.49	75.53		75.66	0.006487	1.58	5.83	12.78	0.66
Trib B2	South Reach	2808	100 Year	8.65	74.48	75.60		75.72	0.005046	1.62	7.76	19.30	0.60
Trib B2	South Reach	2826	100 Year	8.65	74.53	75.72		75.78	0.002113	1.11	10.67	23.91	0.40
Trib B2	South Reach	2860	100 Year	8.65	74.48	75.79		75.89	0.004377	1.42	7.54	19.71	0.55
Trib B2	South Reach	2988	100 Year	8.65	75.02	76.22		76.28	0.002287	1.16	9.37	19.94	0.41
Trib B2	South Reach	3343	100 Year	8.65	76.14	77.28		77.37	0.004367	1.36	7.43	15.15	0.55
Trib B2	South Reach	3635	100 Year	8.65	77.27	78.45		78.53	0.003698	1.31	7.10	12.86	0.51
Trib B2	South Reach	3919	100 Year	8.65	78.45	79.63		79.77	0.005155	1.76	6.48	12.30	0.62
Trib B2	South Reach	4075	100 Year	8.02	79.08	80.48	80.32	80.56	0.004948	1.40	9.37	21.69	0.56
Trib B2	South Reach	4090	100 Year	8.02	79.08	80.48	80.12	80.70	0.004147	2.07	3.88	10.55	0.60
Trib B2	South Reach	4106		Culvert									
Trib B2	South Reach	4121	100 Year	8.02	79.35	81.86	80.52	81.87	0.000173	0.51	18.43	23.26	0.12
Trib B2	South Reach	4147	100 Year	8.02	79.35	81.86		81.88	0.000305	0.69	18.93	16.97	0.16
Trib B2	South Reach	4206	100 Year	8.02	80.53	81.88		81.89	0.000287	0.56	23.89	24.34	0.16
Trib B2	South Reach	4290	100 Year	8.02	80.63	81.91		81.92	0.000444	0.61	19.80	28.71	0.19

Appendix C

Field Verification of LIDAR Data

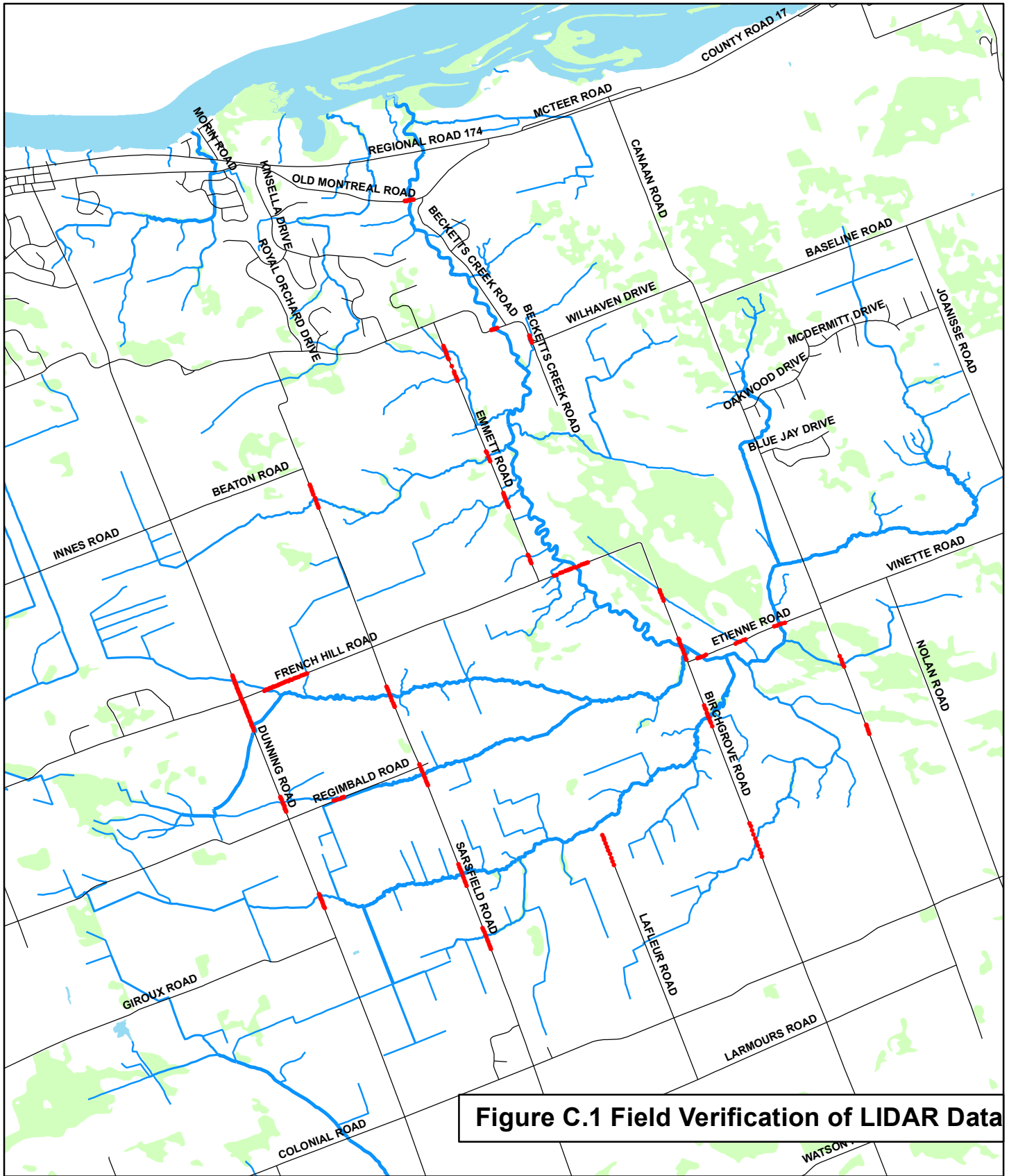


Figure C.1 Field Verification of LIDAR Data

Map Scale: 1:50,000 Date Modified: 11/14/2017

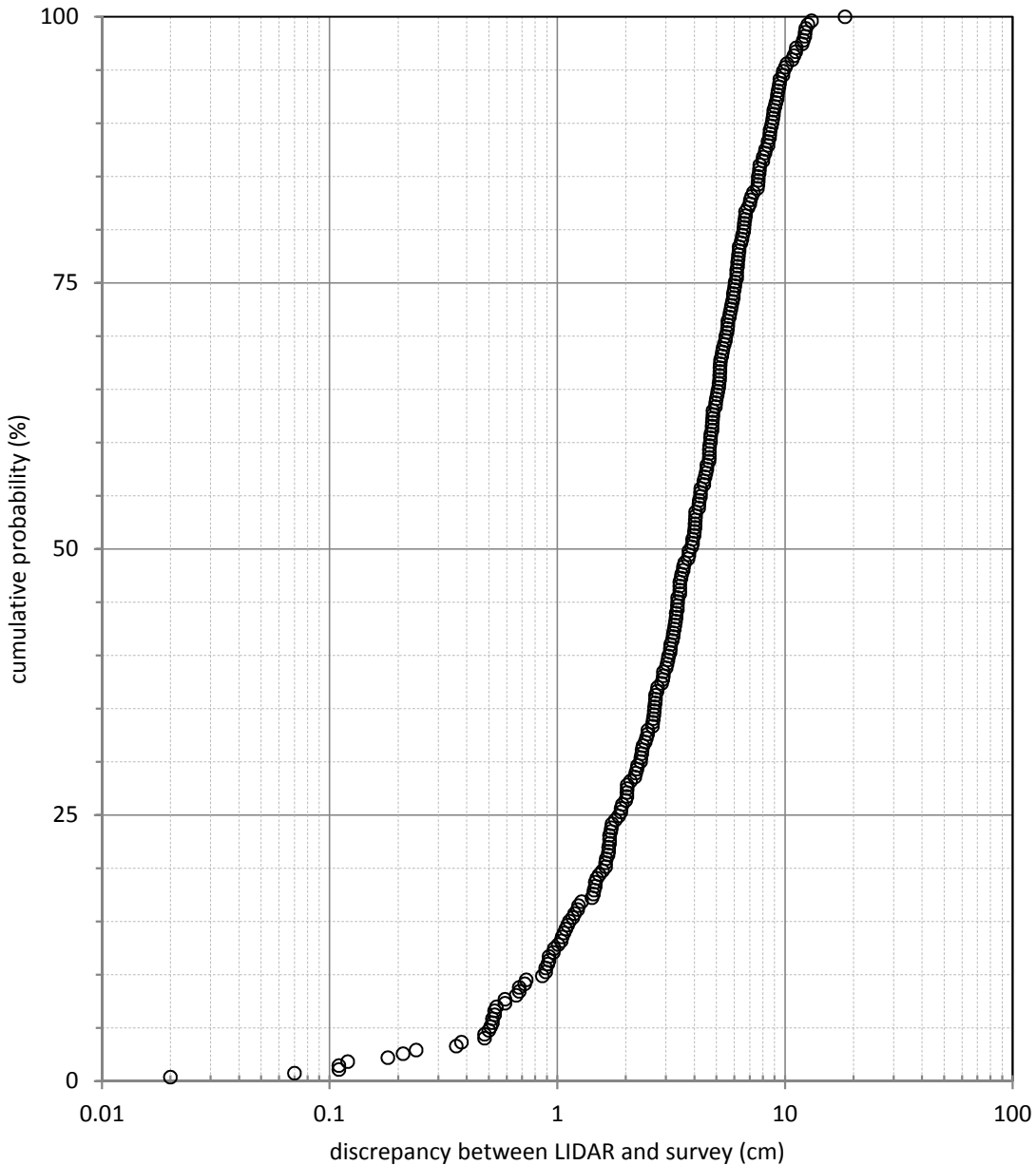


- Trimble points
- Wetlands

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Figure C.2 Field verification of LIDAR data
(Becketts Creek - October 2014)



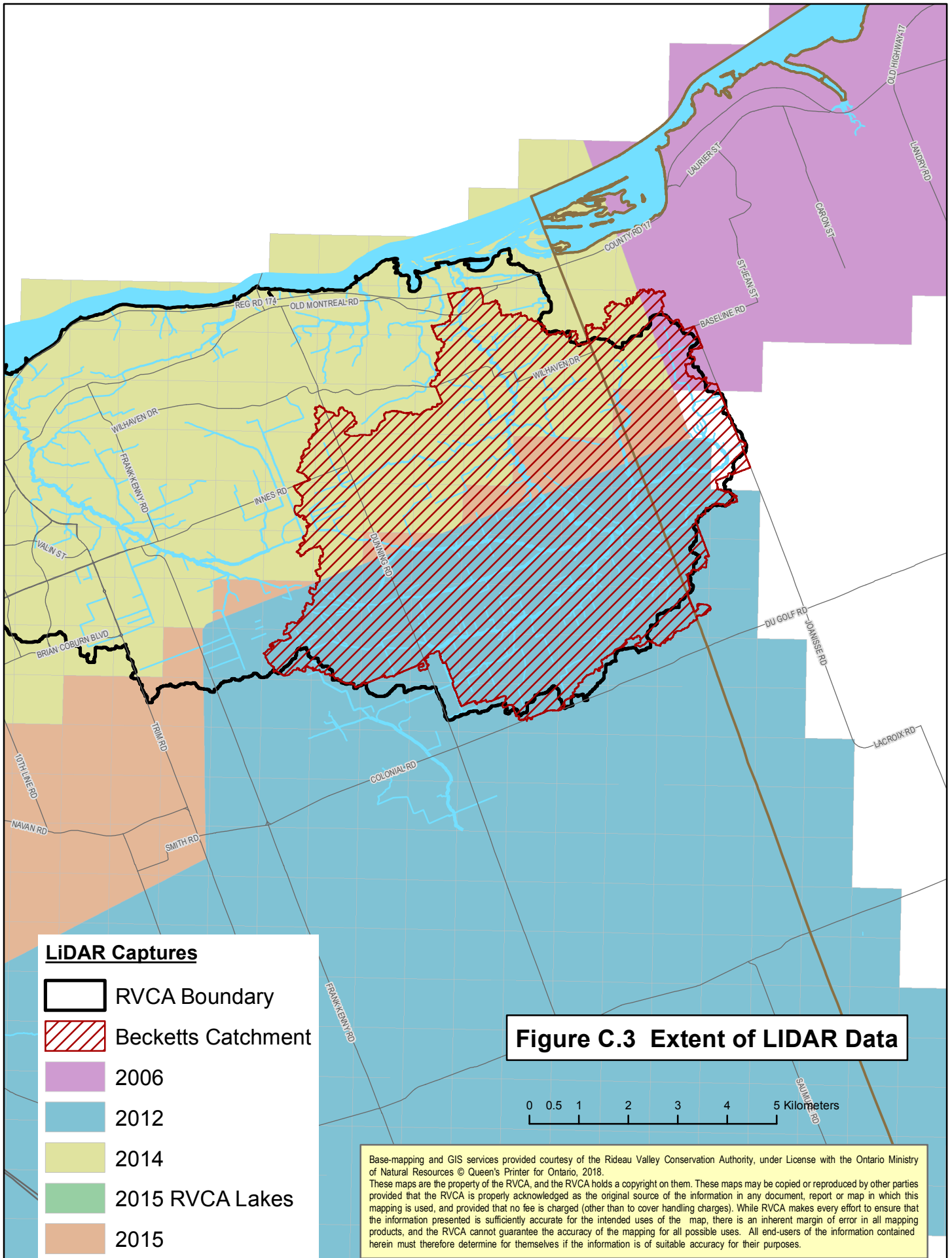


Table C.1 Field verification of LIDAR data (spot heights)

Location ID	RVCA Field Survey (October 9, 2014)							Nearest Lidar Point	Comparison		
	X (m)	Y (m)	Z (m)	Horizontal Accuracy (m)	Vertical Accuracy (m)	Date/Time	Field Observations	Z (m)	ΔZ (m)	$ \Delta Z $ (cm)	$ \Delta Z > 0.33m$
dunning1	471033.019	5033739.019	86.71	0.009	0.013	10/6/2014 10:14	edge of road	86.829	0.119	11.9	
dunning2	471039.637	5033722.578	86.67	0.009	0.012	10/6/2014 10:15	edge of road	86.700	0.034	3.4	
dunning3	471045.649	5033707.534	86.69	0.009	0.013	10/6/2014 10:15	edge of road	86.713	0.025	2.5	
dunning4	471051.339	5033693.202	86.69	0.009	0.013	10/6/2014 10:16	edge of road	86.779	0.089	8.9	
dunning5	471056.884	5033679.240	86.80	0.009	0.013	10/6/2014 10:17	edge of road	86.846	0.048	4.8	
dunning6	471062.876	5033664.363	86.81	0.009	0.013	10/6/2014 10:17	edge of road	86.856	0.047	4.7	
dunning7	471068.673	5033650.012	86.82	0.009	0.013	10/6/2014 10:17	edge of road	86.841	0.017	1.7	
dunning8	471074.636	5033635.233	86.83	0.009	0.013	10/6/2014 10:18	edge of road	86.893	0.067	6.7	
dunning9	471080.444	5033620.684	86.89	0.009	0.013	10/6/2014 10:18	edge of road	86.979	0.093	9.3	
dunning10	471086.315	5033606.001	86.96	0.009	0.013	10/6/2014 10:19	edge of road	87.009	0.052	5.2	
dunning11	470664.260	5034665.534	86.12	0.011	0.015	10/6/2014 10:26	edge of road	86.160	0.040	4.0	
dunning12	470670.198	5034650.623	86.05	0.011	0.014	10/6/2014 10:27	edge of road	86.095	0.050	5.0	
dunning13	470676.046	5034635.895	86.09	0.010	0.014	10/6/2014 10:27	edge of road	86.154	0.062	6.2	
dunning14	470685.449	5034612.414	86.25	0.010	0.014	10/6/2014 10:28	edge of road	86.308	0.058	5.8	
dunning15	470691.344	5034597.695	86.40	0.010	0.014	10/6/2014 10:28	edge of road	86.461	0.062	6.2	
dunning16	470697.234	5034582.782	86.63	0.010	0.014	10/6/2014 10:29	edge of road	86.722	0.091	9.1	
dunning17	470703.409	5034567.521	86.97	0.010	0.014	10/6/2014 10:29	edge of road	87.028	0.059	5.9	
dunning18	470709.069	5034553.145	87.34	0.010	0.017	10/6/2014 10:30	edge of road	87.388	0.052	5.2	
dunning19	470714.873	5034538.814	87.56	0.011	0.017	10/6/2014 10:30	edge of road	87.644	0.082	8.2	
dunning20	470720.649	5034524.472	87.72	0.012	0.016	10/6/2014 10:31	edge of road	87.774	0.055	5.5	
dunning21	470205.819	5035819.598	88.04	0.012	0.015	10/6/2014 10:37	edge of road	88.086	0.045	4.5	
dunning22	470211.288	5035805.690	87.83	0.011	0.015	10/6/2014 10:38	edge of road	87.902	0.071	7.1	
dunning23	470217.110	5035791.034	87.72	0.012	0.015	10/6/2014 10:38	edge of road	87.724	0.007	0.7	
dunning24	470222.932	5035776.353	87.63	0.012	0.015	10/6/2014 10:39	edge of road	87.641	0.010	1.0	
dunning25	470227.736	5035764.197	87.56	0.012	0.015	10/6/2014 10:39	edge of road	87.565	0.005	0.5	
dunning26	470233.453	5035749.799	87.62	0.012	0.016	10/6/2014 10:39	edge of road	87.688	0.073	7.3	
dunning27	470239.849	5035733.492	87.79	0.012	0.016	10/6/2014 10:40	edge of road	87.849	0.064	6.4	
dunning28	470245.646	5035718.877	87.97	0.013	0.015	10/6/2014 10:40	edge of road	88.020	0.052	5.2	
dunning29	470251.381	5035704.355	88.16	0.012	0.015	10/6/2014 10:41	edge of road	88.212	0.050	5.0	
dunning30	470258.327	5035686.859	88.30	0.012	0.015	10/6/2014 10:41	edge of road	88.311	0.015	1.5	
dunning31	470264.104	5035671.785	88.39	0.014	0.018	10/6/2014 10:42	edge of road	88.405	0.013	1.3	
dunning32	470270.185	5035657.128	88.39	0.012	0.016	10/6/2014 10:42	edge of road	88.437	0.044	4.4	
dunning33	470276.006	5035642.373	88.37	0.012	0.016	10/6/2014 10:42	edge of road	88.423	0.054	5.4	
dunning34	470282.104	5035627.309	88.33	0.013	0.017	10/6/2014 10:43	edge of road	88.351	0.023	2.3	
dunning35	470288.277	5035612.138	88.24	0.013	0.018	10/6/2014 10:43	edge of road	88.298	0.055	5.5	
dunning36	470294.471	5035596.261	88.27	0.012	0.017	10/6/2014 10:44	edge of road	88.320	0.053	5.3	
dunning37	470302.364	5035578.310	88.22	0.014	0.018	10/6/2014 10:44	edge of road	88.255	0.032	3.2	
dunning38	470307.884	5035563.446	88.09	0.013	0.017	10/6/2014 10:45	edge of road	88.130	0.040	4.0	
dunning39	470313.890	5035548.382	88.01	0.012	0.016	10/6/2014 10:45	edge of road	88.017	0.009	0.9	
dunning40	470319.794	5035533.431	87.94	0.012	0.017	10/6/2014 10:45	edge of road	87.961	0.019	1.9	
dunning41	470325.829	5035518.362	87.89	0.012	0.017	10/6/2014 10:46	edge of road	87.909	0.017	1.7	
dunning42	470331.707	5035503.573	87.78	0.011	0.017	10/6/2014 10:46	edge of road	87.791	0.014	1.4	
dunning43	470336.940	5035490.376	87.77	0.012	0.016	10/6/2014 10:46	edge of road	87.799	0.033	3.3	
dunning44	470342.847	5035475.462	87.73	0.012	0.016	10/6/2014 10:47	edge of road	87.675	-0.059	5.9	
dunning45	470348.634	5035460.623	87.69	0.012	0.016	10/6/2014 10:47	edge of road	87.607	-0.086	8.6	
dunning46	470354.557	5035445.699	87.63	0.012	0.016	10/6/2014 10:48	edge of road	87.564	-0.063	6.3	
dunning47	470360.451	5035430.742	87.53	0.011	0.016	10/6/2014 10:48	edge of road	87.467	-0.065	6.5	
dunning48	470366.425	5035415.625	87.47	0.011	0.016	10/6/2014 10:49	edge of road	87.441	-0.030	3.0	

Table C.1 Field verification of LIDAR data (spot heights)

Location ID	RVCA Field Survey (October 9, 2014)							Nearest Lidar Point	Comparison		
	X (m)	Y (m)	Z (m)	Horizontal Accuracy (m)	Vertical Accuracy (m)	Date/Time	Field Observations	Z (m)	ΔZ (m)	$ \Delta Z $ (cm)	$ \Delta Z > 0.33m$
dunning49	470372.239	5035400.682	87.44	0.012	0.016	10/6/2014 10:49	edge of road	87.400	-0.043	4.3	
dunning50	470377.896	5035386.583	87.38	0.011	0.016	10/6/2014 10:49	edge of road	87.378	-0.005	0.5	
dunning51	470383.682	5035371.671	87.37	0.011	0.015	10/6/2014 10:50	edge of road	87.356	-0.011	1.1	
dunning52	470390.680	5035353.919	87.35	0.011	0.016	10/6/2014 10:50	edge of road	87.389	0.036	3.6	
dunning53	470396.456	5035339.118	87.29	0.011	0.016	10/6/2014 10:51	edge of road	87.277	-0.017	1.7	
dunning54	470402.248	5035324.669	87.25	0.011	0.016	10/6/2014 10:51	edge of road	87.246	-0.002	0.2	
dunning55	470411.015	5035302.709	87.29	0.011	0.015	10/6/2014 10:52	edge of road	87.293	0.006	0.6	
frenchhill1	470512.553	5035679.534	86.30	0.009	0.013	10/6/2014 11:04	edge of road	86.261	-0.040	4.0	
frenchhill2	470530.853	5035686.895	86.34	0.010	0.014	10/6/2014 11:05	edge of road	86.306	-0.035	3.5	
frenchhill3	470545.635	5035692.968	86.40	0.010	0.014	10/6/2014 11:05	edge of road	86.390	-0.009	0.9	
frenchhill4	470561.677	5035699.461	86.56	0.010	0.015	10/6/2014 11:05	edge of road	86.502	-0.062	6.2	
frenchhill5	470577.225	5035705.668	86.82	0.010	0.015	10/6/2014 11:06	edge of road	86.748	-0.072	7.2	
frenchhill6	470592.189	5035711.760	87.14	0.009	0.014	10/6/2014 11:06	edge of road	87.102	-0.040	4.0	
frenchhill7	470607.008	5035717.661	87.35	0.009	0.014	10/6/2014 11:07	edge of road	87.295	-0.057	5.7	
frenchhill8	470622.117	5035723.814	87.47	0.009	0.014	10/6/2014 11:07	edge of road	87.411	-0.061	6.1	
frenchhill9	470637.231	5035729.944	87.49	0.009	0.014	10/6/2014 11:08	edge of road	87.434	-0.056	5.6	
frenchhill10	470652.363	5035736.134	87.53	0.009	0.014	10/6/2014 11:08	edge of road	87.480	-0.046	4.6	
frenchhill11	470667.246	5035742.118	87.50	0.010	0.015	10/6/2014 11:08	edge of road	87.492	-0.005	0.5	
frenchhill12	470682.018	5035748.134	87.54	0.009	0.014	10/6/2014 11:09	edge of road	87.483	-0.056	5.6	
frenchhill13	470696.851	5035754.140	87.58	0.009	0.014	10/6/2014 11:09	edge of road	87.528	-0.053	5.3	
frenchhill14	470711.793	5035760.029	87.57	0.010	0.015	10/6/2014 11:10	edge of road	87.593	0.020	2.0	
frenchhill15	470726.668	5035765.942	87.58	0.010	0.015	10/6/2014 11:10	edge of road	87.542	-0.040	4.0	
frenchhill16	470742.152	5035772.195	87.54	0.009	0.014	10/6/2014 11:10	edge of road	87.459	-0.077	7.7	
frenchhill17	470757.455	5035778.347	87.45	0.009	0.014	10/6/2014 11:11	edge of road	87.394	-0.056	5.6	
frenchhill18	470776.377	5035785.902	87.39	0.009	0.014	10/6/2014 11:11	edge of road	87.365	-0.027	2.7	
frenchhill19	470795.507	5035793.506	87.27	0.009	0.014	10/6/2014 11:12	edge of road	87.235	-0.034	3.4	
frenchhill20	470817.978	5035802.586	87.22	0.009	0.014	10/6/2014 11:13	edge of road	87.186	-0.033	3.3	
frenchhill21	470840.265	5035811.512	87.22	0.009	0.014	10/6/2014 11:13	edge of road	87.184	-0.035	3.5	
frenchhill22	470862.685	5035820.517	87.28	0.009	0.014	10/6/2014 11:14	edge of road	87.222	-0.062	6.2	
frenchhill23	470885.494	5035829.679	87.31	0.009	0.013	10/6/2014 11:14	edge of road	87.222	-0.089	8.9	
frenchhill24	470900.760	5035835.847	87.32	0.009	0.014	10/6/2014 11:14	edge of road	87.256	-0.060	6.0	
frenchhill25	470917.245	5035842.527	87.33	0.009	0.014	10/6/2014 11:15	edge of road	87.303	-0.031	3.1	
sarsfield1	470943.727	5037637.486	90.12	0.008	0.013	10/6/2014 11:29	road centre line	90.129	0.012	1.2	
sarsfield2	470951.065	5037618.917	89.71	0.008	0.013	10/6/2014 11:30	road centre line	89.730	0.021	2.1	
sarsfield3	470959.985	5037596.627	89.19	0.008	0.013	10/6/2014 11:30	road centre line	89.223	0.035	3.5	
sarsfield4	470969.128	5037573.792	88.61	0.008	0.013	10/6/2014 11:31	road centre line	88.629	0.017	1.7	
sarsfield5	470977.835	5037551.105	87.88	0.008	0.013	10/6/2014 11:31	road centre line	87.891	0.012	1.2	
sarsfield6	470993.639	5037510.052	86.98	0.008	0.013	10/6/2014 11:32	road centre line	87.059	0.076	7.6	
sarsfield7	471002.891	5037487.631	87.51	0.007	0.013	10/6/2014 11:33	road centre line	87.561	0.051	5.1	
sarsfield8	471011.744	5037465.371	88.08	0.008	0.013	10/6/2014 11:33	road centre line	88.104	0.027	2.7	
sarsfield9	471020.959	5037443.584	88.16	0.008	0.013	10/6/2014 11:34	road centre line	88.184	0.028	2.8	
sarsfield10	471029.490	5037421.468	88.01	0.008	0.013	10/6/2014 11:34	road centre line	88.041	0.032	3.2	
sarsfield11	471754.318	5035520.889	85.89	0.007	0.013	10/6/2014 11:47	road centre line	85.936	0.043	4.3	
sarsfield12	471747.008	5035539.107	85.63	0.007	0.013	10/6/2014 11:47	road centre line	85.663	0.033	3.3	
sarsfield13	471738.445	5035560.538	85.33	0.007	0.013	10/6/2014 11:47	road centre line	85.349	0.023	2.3	
sarsfield14	471729.341	5035583.362	84.98	0.007	0.013	10/6/2014 11:48	road centre line	85.002	0.024	2.4	
sarsfield15	471720.592	5035606.266	84.60	0.007	0.013	10/6/2014 11:49	road centre line	84.620	0.023	2.3	
sarsfield16	471712.103	5035628.313	84.35	0.008	0.014	10/6/2014 11:49	road centre line	84.365	0.020	2.0	

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Location ID	RVCA Field Survey (October 9, 2014)							Nearest Lidar Point	Comparison		
	X (m)	Y (m)	Z (m)	Horizontal Accuracy (m)	Vertical Accuracy (m)	Date/Time	Field Observations	Z (m)	ΔZ (m)	$ \Delta Z $ (cm)	$ \Delta Z > 0.33m$
sarsfield17	471703.438	5035650.620	84.30	0.008	0.014	10/6/2014 11:49	road centre line	84.287	-0.012	1.2	
sarsfield18	471695.100	5035672.569	84.66	0.008	0.014	10/6/2014 11:50	road centre line	84.612	-0.047	4.7	
sarsfield19	471686.680	5035694.884	85.06	0.008	0.014	10/6/2014 11:50	road centre line	85.042	-0.017	1.7	
sarsfield20	471678.487	5035717.025	85.45	0.008	0.014	10/6/2014 11:51	road centre line	85.426	-0.024	2.4	
regimbald1	471174.730	5034626.665	84.50	0.008	0.014	10/6/2014 12:00	road centre line	84.584	0.089	8.9	
regimbald2	471197.046	5034635.357	84.42	0.008	0.015	10/6/2014 12:01	road centre line	84.514	0.093	9.3	
regimbald3	471225.851	5034647.213	84.28	0.008	0.015	10/6/2014 12:01	road centre line	84.405	0.122	12.2	
regimbald4	471247.693	5034656.232	84.10	0.008	0.014	10/6/2014 12:02	road centre line	84.218	0.123	12.3	
regimbald5	471270.121	5034665.551	84.02	0.008	0.014	10/6/2014 12:02	road centre line	84.122	0.098	9.8	
sarsfield21	472069.322	5034775.457	85.78	0.007	0.012	10/6/2014 12:30	road centre line	85.869	0.086	8.6	
sarsfield22	472061.197	5034796.421	85.54	0.007	0.012	10/6/2014 12:31	road centre line	85.632	0.090	9.0	
sarsfield23	472052.758	5034817.540	85.22	0.007	0.012	10/6/2014 12:31	road centre line	85.343	0.120	12.0	
sarsfield24	472044.435	5034838.813	84.68	0.007	0.012	10/6/2014 12:31	road centre line	84.713	0.032	3.2	
sarsfield25	472035.701	5034861.028	84.29	0.007	0.012	10/6/2014 12:32	road centre line	84.329	0.041	4.1	
sarsfield26	472026.490	5034884.259	83.96	0.007	0.012	10/6/2014 12:32	road centre line	84.058	0.098	9.8	
sarsfield27	472017.224	5034907.407	83.95	0.007	0.012	10/6/2014 12:33	road centre line	84.055	0.108	10.8	
sarsfield28	472008.325	5034929.109	84.30	0.007	0.012	10/6/2014 12:34	road centre line	84.372	0.076	7.6	
sarsfield29	471997.619	5034955.163	84.94	0.007	0.012	10/6/2014 12:34	road centre line	85.020	0.082	8.2	
sarsfield30	471988.241	5034976.547	85.38	0.007	0.012	10/6/2014 12:35	road centre line	85.447	0.070	7.0	
sarsfield31	472439.600	5033819.193	85.90	0.007	0.012	10/6/2014 12:41	road centre line	85.926	0.027	2.7	
sarsfield32	472431.251	5033840.982	85.72	0.007	0.014	10/6/2014 12:42	road centre line	85.801	0.080	8.0	
sarsfield33	472422.184	5033864.863	85.31	0.007	0.013	10/6/2014 12:42	road centre line	85.333	0.027	2.7	
sarsfield34	472413.690	5033886.819	84.61	0.007	0.013	10/6/2014 12:43	road centre line	84.654	0.043	4.3	
sarsfield35	472404.593	5033910.205	83.82	0.007	0.013	10/6/2014 12:43	road centre line	83.883	0.061	6.1	
sarsfield36	472395.921	5033932.799	83.35	0.007	0.013	10/6/2014 12:44	road centre line	83.390	0.038	3.8	
sarsfield37	472387.375	5033954.673	83.34	0.007	0.013	10/6/2014 12:44	road centre line	83.398	0.062	6.2	
sarsfield38	472378.529	5033977.326	83.62	0.007	0.013	10/6/2014 12:44	road centre line	83.673	0.051	5.1	
sarsfield39	472370.109	5033999.287	84.33	0.007	0.013	10/6/2014 12:45	road centre line	84.347	0.019	1.9	
sarsfield40	472361.796	5034020.665	85.14	0.007	0.013	10/6/2014 12:46	road centre line	85.190	0.052	5.2	
sarsfield41	472591.633	5033412.072	86.27	0.010	0.020	10/6/2014 12:54	road centre line	86.260	-0.005	0.5	
sarsfield42	472600.018	5033390.307	86.22	0.009	0.017	10/6/2014 12:54	road centre line	86.245	0.022	2.2	
sarsfield43	472611.429	5033368.978	86.33	0.008	0.015	10/6/2014 12:55	road centre line	86.354	0.025	2.5	
sarsfield44	472619.650	5033347.544	86.16	0.008	0.015	10/6/2014 12:55	road centre line	86.229	0.066	6.6	
sarsfield45	472628.428	5033325.154	86.16	0.008	0.015	10/6/2014 12:56	road centre line	86.189	0.029	2.9	
sarsfield46	472637.027	5033302.825	86.26	0.008	0.015	10/6/2014 12:56	road centre line	86.269	0.009	0.9	
sarsfield47	472645.280	5033281.038	86.43	0.008	0.014	10/6/2014 12:57	road centre line	86.434	0.005	0.5	
sarsfield48	472653.843	5033258.712	86.58	0.007	0.014	10/6/2014 12:57	road centre line	86.644	0.067	6.7	
sarsfield49	472662.142	5033237.044	86.64	0.007	0.014	10/6/2014 12:57	road centre line	86.705	0.065	6.5	
sarsfield50	472670.607	5033215.072	86.69	0.007	0.014	10/6/2014 12:58	road centre line	86.746	0.053	5.3	
lafleur1	473735.678	5034296.755	84.97	0.009	0.016	10/6/2014 13:13	road centre line	84.964	-0.004	0.4	
lafleur2	473744.750	5034273.100	85.04	0.010	0.017	10/6/2014 13:13	road centre line	85.057	0.022	2.2	
lafleur3	473752.633	5034253.172	85.02	0.012	0.020	10/6/2014 13:14	road centre line	85.028	0.010	1.0	
lafleur4	473765.071	5034221.426	85.09	0.009	0.016	10/6/2014 13:14	road centre line	85.113	0.024	2.4	
lafleur5	473777.991	5034188.367	85.29	0.009	0.015	10/6/2014 13:15	road centre line	85.323	0.033	3.3	
lafleur6	473790.953	5034155.566	85.38	0.009	0.014	10/6/2014 13:16	road centre line	85.416	0.035	3.5	
lafleur7	473805.310	5034118.920	85.32	0.009	0.013	10/6/2014 13:16	road centre line	85.336	0.019	1.9	
lafleur8	473820.108	5034080.902	85.39	0.009	0.013	10/6/2014 13:17	road centre line	85.438	0.045	4.5	
lafleur9	473832.562	5034048.975	85.31	0.008	0.013	10/6/2014 13:17	road centre line	85.322	0.016	1.6	

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lafeur10	473845.866	5034014.846	85.27	0.008	0.013	10/6/2014 13:18	road centre line	85.258	-0.007	0.7	
b_grove1	475255.063	5034095.320	83.84	0.008	0.014	10/6/2014 13:25	road centre line	83.932	0.093	9.3	
b_grove2	475245.243	5034122.800	83.77	0.008	0.014	10/6/2014 13:25	road centre line	83.868	0.094	9.4	
b_grove3	475230.424	5034162.822	83.60	0.008	0.014	10/6/2014 13:26	road centre line	83.668	0.069	6.9	
b_grove4	475216.054	5034200.893	82.76	0.008	0.013	10/6/2014 13:27	road centre line	82.852	0.088	8.8	
b_grove5	475202.892	5034234.760	81.87	0.008	0.014	10/6/2014 13:27	road centre line	81.906	0.039	3.9	
b_grove6	475191.213	5034265.335	81.87	0.008	0.013	10/6/2014 13:28	road centre line	81.884	0.017	1.7	
b_grove7	475174.483	5034308.087	83.33	0.008	0.014	10/6/2014 13:29	road centre line	83.413	0.084	8.4	
b_grove8	475159.669	5034346.287	84.07	0.008	0.014	10/6/2014 13:29	road centre line	84.157	0.086	8.6	
b_grove9	475145.880	5034382.542	83.96	0.008	0.013	10/6/2014 13:30	road centre line	84.076	0.112	11.2	
b_grove10	475133.395	5034413.501	84.04	0.009	0.013	10/6/2014 13:30	road centre line	84.098	0.056	5.6	
canaan1	476278.169	5035268.759	69.28	0.009	0.013	10/6/2014 13:43	road centre line	69.318	0.036	3.6	
canaan2	476270.155	5035287.825	69.15	0.010	0.015	10/6/2014 13:44	road centre line	69.198	0.052	5.2	
canaan3	476260.305	5035313.906	69.02	0.011	0.016	10/6/2014 13:44	road centre line	69.014	-0.001	0.1	
canaan4	476252.902	5035334.921	68.90	0.012	0.017	10/6/2014 13:45	road centre line	68.893	-0.007	0.7	
canaan5	476246.567	5035352.082	68.80	0.012	0.016	10/6/2014 13:45	road centre line	68.880	0.076	7.6	
canaan6	476035.323	5035904.762	67.88	0.009	0.013	10/6/2014 13:49	road centre line	67.935	0.059	5.9	
canaan7	476025.549	5035928.984	67.85	0.009	0.013	10/6/2014 13:50	road centre line	67.918	0.066	6.6	
canaan8	476019.331	5035944.231	67.83	0.009	0.013	10/6/2014 13:50	road centre line	67.827	0.002	0.2	
canaan9	476009.777	5035969.819	67.80	0.010	0.014	10/6/2014 13:51	road centre line	67.850	0.048	4.8	
canaan10	475995.466	5036006.831	67.90	0.010	0.015	10/6/2014 13:51	road centre line	67.913	0.016	1.6	
etienne1	475471.794	5036327.750	67.88	0.010	0.016	10/6/2014 13:55	road centre line	67.971	0.095	9.5	
etienne2	475442.645	5036316.295	68.09	0.010	0.015	10/6/2014 13:55	road centre line	68.086	0.001	0.1	
etienne3	475422.786	5036308.055	68.32	0.009	0.014	10/6/2014 13:56	road centre line	68.383	0.060	6.0	
etienne4	475398.112	5036298.203	68.49	0.010	0.015	10/6/2014 13:56	road centre line	68.529	0.038	3.8	
etienne5	475372.188	5036288.022	68.52	0.008	0.013	10/6/2014 13:57	road centre line	68.569	0.045	4.5	
etienne6	475097.734	5036165.957	68.80	0.008	0.013	10/6/2014 13:59	road centre line	68.830	0.027	2.7	
etienne7	475074.840	5036156.708	68.75	0.009	0.013	10/6/2014 13:59	road centre line	68.807	0.057	5.7	
etienne8	475044.916	5036144.823	68.74	0.010	0.015	10/6/2014 14:00	road centre line	68.786	0.048	4.8	
etienne9	475026.015	5036137.057	68.80	0.009	0.013	10/6/2014 14:00	road centre line	68.811	0.012	1.2	
etienne10	475002.725	5036128.500	68.85	0.009	0.012	10/6/2014 14:01	road centre line	68.882	0.031	3.1	
etienne11	474720.624	5036017.028	67.94	0.012	0.018	10/6/2014 14:03	road centre line	67.972	0.029	2.9	
etienne12	474699.114	5036009.489	67.84	0.013	0.020	10/6/2014 14:03	road centre line	67.885	0.044	4.4	
etienne13	474675.684	5036000.077	67.83	0.012	0.018	10/6/2014 14:04	road centre line	67.905	0.080	8.0	
etienne14	474661.287	5035994.199	67.80	0.012	0.018	10/6/2014 14:04	road centre line	67.851	0.051	5.1	
etienne15	474641.202	5035986.675	67.75	0.011	0.017	10/6/2014 14:04	road centre line	67.791	0.042	4.2	
b_grove11	474777.891	5035339.710	76.25	0.008	0.012	10/6/2014 14:09	road centre line	76.297	0.047	4.7	
b_grove12	474767.602	5035367.439	73.50	0.009	0.014	10/6/2014 14:10	road centre line	73.587	0.084	8.4	
b_grove13	474758.365	5035392.227	71.78	0.010	0.015	10/6/2014 14:10	road centre line	71.907	0.124	12.4	
b_grove14	474750.277	5035413.676	71.00	0.009	0.014	10/6/2014 14:11	road centre line	71.091	0.087	8.7	
b_grove15	474742.918	5035432.796	70.53	0.010	0.014	10/6/2014 14:11	road centre line	70.642	0.110	11.0	
b_grove16	474736.670	5035449.494	70.12	0.010	0.016	10/6/2014 14:12	road centre line	70.233	0.112	11.2	
b_grove17	474729.351	5035467.214	69.76	0.011	0.016	10/6/2014 14:12	road centre line	69.865	0.102	10.2	
b_grove18	474718.996	5035495.264	69.41	0.010	0.015	10/6/2014 14:13	road centre line	69.456	0.051	5.1	
b_grove19	474711.320	5035514.811	69.25	0.010	0.015	10/6/2014 14:13	road centre line	69.347	0.095	9.5	
b_grove20	474704.118	5035533.025	69.12	0.009	0.014	10/6/2014 14:13	road centre line	69.221	0.101	10.1	
b_grove21	474535.049	5035972.893	67.67	0.008	0.012	10/6/2014 14:15	road centre line	67.651	-0.020	2.0	
b_grove22	474525.253	5035996.592	67.79	0.009	0.013	10/6/2014 14:16	road centre line	67.779	-0.015	1.5	

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b_grove23	474517.348	5036016.348	67.77	0.009	0.013	10/6/2014 14:16	road centre line	67.793	0.024	2.4	
b_grove24	474507.361	5036041.796	67.66	0.010	0.013	10/6/2014 14:17	road centre line	67.630	-0.025	2.5	
b_grove25	474498.466	5036066.289	67.67	0.009	0.014	10/6/2014 14:17	road centre line	67.595	-0.078	7.8	
b_grove26	474488.542	5036092.484	67.69	0.009	0.014	10/6/2014 14:18	road centre line	67.654	-0.039	3.9	
b_grove27	474479.053	5036117.643	67.85	0.009	0.013	10/6/2014 14:18	road centre line	67.771	-0.077	7.7	
b_grove28	474471.307	5036138.360	67.99	0.009	0.013	10/6/2014 14:19	road centre line	67.927	-0.067	6.7	
b_grove29	474464.277	5036157.160	68.25	0.009	0.013	10/6/2014 14:19	road centre line	68.197	-0.050	5.0	
b_grove30	474458.655	5036172.199	68.55	0.009	0.013	10/6/2014 14:20	road centre line	68.366	-0.184	18.4	
b_grove31	474316.912	5036534.936	68.95	0.010	0.015	10/6/2014 14:26	road centre line	68.887	-0.058	5.8	
b_grove32	474305.415	5036564.903	68.82	0.010	0.015	10/6/2014 14:26	road centre line	68.776	-0.048	4.8	
b_grove33	474295.625	5036588.843	68.78	0.010	0.014	10/6/2014 14:27	road centre line	68.734	-0.047	4.7	
b_grove34	474285.790	5036614.006	68.78	0.010	0.014	10/6/2014 14:27	road centre line	68.649	-0.131	13.1	
b_grove35	474278.386	5036633.013	68.80	0.013	0.018	10/6/2014 14:28	road centre line	68.678	-0.126	12.6	
frenchhill26	473596.227	5036902.438	70.95	0.008	0.014	10/6/2014 14:33	road centre line	70.882	-0.063	6.3	
frenchhill27	473577.313	5036894.744	70.66	0.009	0.015	10/6/2014 14:33	road centre line	70.613	-0.047	4.7	
frenchhill28	473556.147	5036886.397	69.78	0.013	0.020	10/6/2014 14:34	road centre line	69.706	-0.077	7.7	
frenchhill29	473536.024	5036878.051	68.90	0.014	0.020	10/6/2014 14:36	road centre line	68.829	-0.066	6.6	
frenchhill30	473510.496	5036867.681	67.73	0.014	0.019	10/6/2014 14:37	road centre line	67.703	-0.031	3.1	
frenchhill31	473483.313	5036856.875	67.01	0.011	0.016	10/6/2014 14:37	road centre line	67.007	0.000	0.0	
frenchhill32	473461.569	5036849.094	66.60	0.011	0.016	10/6/2014 14:38	road centre line	66.566	-0.032	3.2	
frenchhill33	473439.494	5036840.236	66.43	0.010	0.015	10/6/2014 14:38	road centre line	66.449	0.016	1.6	
frenchhill34	473419.718	5036832.299	66.39	0.010	0.015	10/6/2014 14:39	road centre line	66.363	-0.027	2.7	
frenchhill35	473401.979	5036825.551	66.15	0.010	0.015	10/6/2014 14:39	road centre line	66.136	-0.010	1.0	
frenchhill36	473380.938	5036817.419	66.03	0.010	0.014	10/6/2014 14:40	road centre line	65.996	-0.031	3.1	
frenchhill37	473354.462	5036806.938	66.04	0.010	0.014	10/6/2014 14:40	road centre line	66.002	-0.033	3.3	
frenchhill38	473331.609	5036798.078	66.06	0.010	0.014	10/6/2014 14:41	road centre line	66.062	0.007	0.7	
frenchhill39	473295.882	5036784.355	66.01	0.010	0.014	10/6/2014 14:42	road centre line	66.016	0.011	1.1	
frenchhill40	473272.933	5036775.504	66.22	0.010	0.014	10/6/2014 14:42	road centre line	66.219	0.001	0.1	
emmett1	473055.715	5036895.103	69.99	0.012	0.018	10/6/2014 14:50	road centre line	70.012	0.020	2.0	
emmett2	473049.891	5036908.964	69.73	0.012	0.019	10/6/2014 14:50	road centre line	69.778	0.047	4.7	
emmett3	473041.983	5036928.977	69.67	0.013	0.020	10/6/2014 14:50	road centre line	69.682	0.017	1.7	
emmett4	473031.417	5036955.061	70.00	0.013	0.019	10/6/2014 14:51	road centre line	69.999	-0.004	0.4	
emmett5	473024.126	5036973.611	69.97	0.013	0.020	10/6/2014 14:52	road centre line	69.990	0.020	2.0	
emmett6	472840.426	5037430.220	67.08	0.011	0.015	10/6/2014 14:55	road centre line	67.099	0.022	2.2	
emmett7	472834.011	5037446.200	67.06	0.010	0.014	10/6/2014 14:55	road centre line	67.077	0.018	1.8	
emmett8	472827.201	5037463.205	67.05	0.010	0.013	10/6/2014 14:56	road centre line	67.081	0.030	3.0	
emmett9	472819.832	5037480.407	67.06	0.009	0.013	10/6/2014 14:56	road centre line	67.067	0.005	0.5	
emmett10	472812.236	5037499.027	67.12	0.009	0.012	10/6/2014 14:56	road centre line	67.133	0.011	1.1	
emmett11	472806.420	5037513.944	67.15	0.009	0.013	10/6/2014 14:57	road centre line	67.186	0.038	3.8	
emmett12	472802.134	5037524.766	67.18	0.009	0.012	10/6/2014 14:57	road centre line	67.215	0.035	3.5	
emmett13	472798.073	5037534.811	67.17	0.009	0.012	10/6/2014 14:58	road centre line	67.181	0.009	0.9	
emmett14	472793.651	5037544.880	67.16	0.009	0.012	10/6/2014 14:58	road centre line	67.145	-0.010	1.0	
emmett15	472789.333	5037555.854	67.10	0.009	0.013	10/6/2014 14:58	road centre line	67.120	0.017	1.7	
emmett16	472663.774	5037865.651	68.09	0.011	0.014	10/6/2014 15:02	road centre line	68.088	0.001	0.1	
emmett17	472656.094	5037885.414	67.94	0.009	0.015	10/6/2014 15:02	road centre line	67.969	0.034	3.4	
emmett18	472645.487	5037911.161	67.90	0.012	0.016	10/6/2014 15:03	road centre line	67.884	-0.011	1.1	
emmett19	472632.659	5037941.809	68.00	0.012	0.016	10/6/2014 15:03	road centre line	68.005	0.009	0.9	
emmett20	472625.184	5037960.133	68.22	0.012	0.017	10/6/2014 15:04	road centre line	68.204	-0.019	1.9	

Table C.1 Field verification of LIDAR data (spot heights)

Location ID	RVCA Field Survey (October 9, 2014)							Nearest Lidar Point	Comparison		
	X (m)	Y (m)	Z (m)	Horizontal Accuracy (m)	Vertical Accuracy (m)	Date/Time	Field Observations	Z (m)	ΔZ (m)	$ \Delta Z $ (cm)	$ \Delta Z > 0.33m$
emmett21	472353.632	5038629.980	70.68	0.013	0.017	10/6/2014 15:13	road centre line	70.696	0.015	1.5	
emmett22	472344.771	5038652.381	70.54	0.011	0.016	10/6/2014 15:13	road centre line	70.588	0.048	4.8	
emmett23	472336.714	5038672.932	70.649	0.01	0.014	10/6/2014 15:14	road centre line	70.656	0.007	0.7	
emmett24	472326.213	5038698.956	70.741	0.01	0.014	10/6/2014 15:14	road centre line	70.732	-0.009	0.9	
emmett25	472317.930	5038719.679	70.965	0.01	0.014	10/6/2014 15:15	road centre line	70.999	0.034	3.4	
emmett26	472298.138	5038768.074	71.645	0.01	0.014	10/6/2014 15:16	road centre line	71.656	0.011	1.1	
emmett27	472269.421	5038835.117	71.744	0.011	0.016	10/6/2014 15:17	road centre line	71.783	0.039	3.9	
emmett28	472260.734	5038855.232	70.858	0.011	0.016	10/6/2014 15:17	road centre line	70.887	0.029	2.9	
emmett29	472251.995	5038875.816	70.052	0.011	0.015	10/6/2014 15:18	road centre line	70.078	0.026	2.6	
emmett30	472246.213	5038890.504	69.804	0.011	0.014	10/6/2014 15:18	road centre line	69.802	-0.002	0.2	
emmett31	472238.330	5038909.569	69.67	0.011	0.014	10/6/2014 15:19	road centre line	69.656	-0.017	1.7	
emmett32	472234.309	5038919.273	69.65	0.010	0.014	10/6/2014 15:20	road centre line	69.654	0.005	0.5	
emmett33	472227.883	5038935.366	69.721	0.01	0.014	10/6/2014 15:20	road centre line	69.694	-0.027	2.7	
emmett34	472222.284	5038949.467	69.821	0.01	0.014	10/6/2014 15:21	road centre line	69.816	-0.005	0.5	
emmett35	472217.442	5038961.432	69.919	0.01	0.014	10/6/2014 15:21	road centre line	69.893	-0.026	2.6	
wilhaven1	472731.172	5039135.350	64.358	0.013	0.02	10/6/2014 15:38	road centre line	64.384	0.026	2.6	
wilhaven4	472689.863	5039119.756	64.838	0.012	0.018	10/6/2014 15:41	road centre line	64.833	-0.005	0.5	
wilhaven5	472676.531	5039114.240	65.334	0.015	0.018	10/6/2014 15:42	road centre line	65.376	0.042	4.2	
becketts_cr1	473044.188	5039043.207	65.273	0.011	0.017	10/6/2014 15:48	road centre line	65.325	0.052	5.2	
becketts_cr2	473046.478	5039032.712	65.314	0.011	0.017	10/6/2014 15:49	road centre line	65.356	0.042	4.2	
becketts_cr3	473056.133	5039008.665	65.163	0.011	0.018	10/6/2014 15:49	road centre line	65.208	0.045	4.5	
becketts_cr4	473062.551	5038991.787	64.85	0.013	0.02	10/6/2014 15:50	road centre line	64.865	0.015	1.5	
becketts_cr5	473036.933	5039066.018	65.359	0.013	0.02	10/6/2014 16:06	edge of road	65.345	-0.015	1.5	
old-ntl1	471848.222	5040346.877	53.462	0.008	0.012	10/6/2014 16:14	edge of road	53.503	0.041	4.1	
old-ntl2	471854.124	5040347.475	53.043	0.008	0.012	10/6/2014 16:14	edge of road	53.106	0.063	6.3	
old-ntl3	471861.468	5040348.296	52.516	0.008	0.012	10/6/2014 16:15	edge of road	52.552	0.036	3.6	
old-ntl4	471871.001	5040349.474	51.887	0.011	0.017	10/6/2014 16:15	edge of road	51.922	0.035	3.5	
old-ntl5	471881.080	5040350.844	51.375	0.011	0.016	10/6/2014 16:15	edge of road	51.422	0.047	4.7	
old-ntl6	471890.079	5040352.094	51.087	0.011	0.016	10/6/2014 16:16	edge of road	51.116	0.029	2.9	
old-ntl7	471899.494	5040353.467	50.897	0.011	0.016	10/6/2014 16:16	edge of road	50.911	0.014	1.4	
old-ntl8	471908.847	5040354.926	50.779	0.01	0.016	10/6/2014 16:16	edge of road	50.827	0.048	4.8	
old-ntl9	471918.295	5040356.577	50.752	0.008	0.012	10/6/2014 16:17	edge of road	50.758	0.006	0.6	
old-ntl10	471936.586	5040360.517	51.389	0.009	0.012	10/6/2014 16:17	edge of road	51.373	-0.016	1.6	

Mean ΔZ :	4.3	0 Yes out of 275
Median ΔZ :	3.9	
Max ΔZ :	18.4	
Min ΔZ :	0.0	

Discarded Points

wilhaven2	472716.039	5039129.696	64.517	0.012	0.019	10/6/2014 15:39	road centre line	no nearby LiDAR point			
wilhaven3	472702.377	5039124.499	64.542	0.012	0.019	10/6/2014 15:39	road centre line	no nearby LiDAR point			

Appendix D

SWMHYMO Model Files

```

2      Metric units
*****
** Project Name: [Becketts Creek FPM]      Project Number: [M800-200030-207]
** Date       : 29-11-2017
** Modeller   : [AA, TB, SN]
** Company    : Rideau Valley Conservation Authority
** License #  : 5329846
*****
*%100 Year 3 Hour Chicago Design Storm
START      TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[3]
*%         ["100YC3H.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----
READ STORM  STORM_FILENAME=["storm.001"]
*%-----|-----
DEFAULT VALUES  ICASEdef=[1], read and print values
DEFVAL_FILENAME=["BeckVal.val"]
*%-----|-----
** Upstream Tributary
CALIB NASHYD  ID=[1], NHYD=["UT1"], DT=[1]min, AREA=[338.44](ha),
              DWF=[0](cms), CN/C=[74.47], IA=[4.35](mm),
              N=[3], TP=[3.04]hrs,
              RAINFALL=[ , , , ](mm/hr), END=-1
*%-----|-----
SAVE HYD     ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Runoff Hydrograph for UT1"]
*%-----|-----
ROUTE CHANNEL IDout=[2], NHYD=["C11"], IDin=[1],
              RDT=[1](min),
              CHLGTH=[1960](m), CHSLOPE=[0.51](%),
              FPSLOPE=[0.51](%),
              SECNUM=[2987.842], NSEG=[3]
              ( SEGROUGH, SEGDIST (m))=[0.08, 42.02] NSEG times
              -0.035, 66.38
              0.08, 106.18
              ( DISTANCE (m), ELEVATION (m))=[0.00, 84.56]
              17.46, 84.00
              42.02, 76.66
              48.87, 75.07
              62.00, 75.07
              66.38, 76.77
              85.57, 82.83
              106.18, 84.47
*%-----|-----
SAVE HYD     ID=[2], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Routing Hydrograph for C11"]
*%-----|-----
CALIB NASHYD  ID=[3], NHYD=["UT2"], DT=[1]min, AREA=[89.11](ha),
              DWF=[0](cms), CN/C=[76.64], IA=[3.87](mm),
              N=[3], TP=[0.64]hrs,
              RAINFALL=[ , , , ](mm/hr), END=-1
*%-----|-----
SAVE HYD     ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Runoff Hydrograph for UT2"]
*%-----|-----
ADD HYD      IDsum=[4], NHYD=["D11"], IDs to add=[2 + 3]
*%-----|-----
SAVE HYD     ID=[4], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Downstream Hydrograph for C11"]
*%-----|-----
CALIB NASHYD  ID=[1], NHYD=["UT3"], DT=[1]min, AREA=[459.85](ha),
              DWF=[0](cms), CN/C=[71.45], IA=[5.07](mm),
              N=[3], TP=[2.06]hrs,
              RAINFALL=[ , , , ](mm/hr), END=-1
*%-----|-----
SAVE HYD     ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Runoff Hydrograph for UT3"]
*%-----|-----
ROUTE CHANNEL IDout=[2], NHYD=["C12"], IDin=[1],
              RDT=[1](min),
              CHLGTH=[2300](m), CHSLOPE=[0.41](%),
              FPSLOPE=[0.41](%),
              SECNUM=[1310.57], NSEG=[3]
              ( SEGROUGH, SEGDIST (m))=[0.08, 71.40] NSEG times
              -0.035, 109.27
              0.08, 157.01

```

```

( DISTANCE (m), ELEVATION (m))=[0.00, 84.89
                                     51.19, 84.12
                                     71.40, 76.28
                                     77.69, 74.87
                                     106.57, 75.89
                                     109.27, 76.23
                                     133.99, 83.62
                                     157.01, 84.5
*%-----|-----
SAVE HYD      ID=[2], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Routing Hydrograph for C12"]
*%-----|-----
CALIB NASHYD  ID=[3], NHYD=["UT4"], DT=[1]min, AREA=[137.12](ha),
              DWF=[0](cms), CN/C=[77.58], IA=[3.67](mm),
              N=[3], TP=[0.93]hrs,
              RAINFALL=[ , , , , ](mm/hr), END=-1
*%-----|-----
SAVE HYD      ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Runoff Hydrograph for UT4"]
*%-----|-----
ADD HYD      IDsum=[5], NHYD=["D12"], IDs to add=[2 + 3]
*%-----|-----
SAVE HYD      ID=[5], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Downstream Hydrograph for C12"]
*%-----|-----
ADD HYD      IDsum=[1], NHYD=["J13"], IDs to add=[4 + 5]
*%-----|-----
SAVE HYD      ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Hydrograph for J13"]
*%-----|-----
ROUTE CHANNEL IDout=[2], NHYD=["C13"], IDin=[1],
              RDT=[1](min),
              CHLGTH=[1540](m), CHSLOPE=[0.25](%),
              FPSLOPE=[0.25](%),
              SECNUM=[879.86], NSEG=[3]
              ( SEGROUGH, SEGDIST (m))=[0.08, 38.90] NSEG times
              -0.035, 46.42
              0.08, 87.00
              ( DISTANCE (m), ELEVATION (m))=[0.00, 70.55]
              22.18, 68.50
              38.90, 68.19
              40.91, 67.09
              43.00, 67.09
              46.42, 68.22
              65.03, 68.34
              87.00, 74.53
*%-----|-----
SAVE HYD      ID=[2], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Routing Hydrograph for C13"]
*%-----|-----
CALIB NASHYD  ID=[3], NHYD=["UT5"], DT=[1]min, AREA=[67.49](ha),
              DWF=[0](cms), CN/C=[75.15], IA=[4.20](mm),
              N=[3], TP=[2.80]hrs,
              RAINFALL=[ , , , , ](mm/hr), END=-1
*%-----|-----
SAVE HYD      ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Runoff Hydrograph for UT5"]
*%-----|-----
ADD HYD      IDsum=[4], NHYD=["D13"], IDs to add=[2 + 3]
*%-----|-----
SAVE HYD      ID=[4], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Downstream Hydrograph for C13"]
*%-----|-----
*# Downstream Tributary
CALIB NASHYD  ID=[1], NHYD=["DT1"], DT=[1]min, AREA=[268.29](ha),
              DWF=[0](cms), CN/C=[69.30], IA=[5.63](mm),
              N=[3], TP=[1.61]hrs,
              RAINFALL=[ , , , , ](mm/hr), END=-1
*%-----|-----
SAVE HYD      ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Runoff Hydrograph for DT1"]
*%-----|-----
ROUTE CHANNEL IDout=[2], NHYD=["C14"], IDin=[1],
              RDT=[1](min),
              CHLGTH=[2210](m), CHSLOPE=[0.78](%),

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```

                                FPSLOPE=[0.78](%),
SECNUM=[1383.74],              NSEG=[3]
( SEGROUGH, SEGDIST (m))=[0.08, 90.25] NSEG times
                                -0.035, 108.59
                                0.08, 197.66
( DISTANCE (m), ELEVATION (m))=[0.00, 85.90]
                                38.77, 85.70
                                90.25, 73.94
                                97.33, 71.1
                                101.59, 71.00
                                108.59, 73.60
                                156.37, 83.93
                                197.66, 84.70
*%-----|-----|
SAVE HYD          ID=[2], # OF PCYCLES=[1], ICASEsh=[1]
                  HYD_COMMENT=["Routing Hydrograph for C14"]
*%-----|-----|
CALIB NASHYD     ID=[3], NHYD=["DT2"], DT=[1]min, AREA=[134.58](ha),
                  DWF=[0](cms), CN/C=[73.42], IA=[4.60](mm),
                  N=[3], TP=[0.96]hrs,
                  RAINFALL=[ , , , ](mm/hr), END=-1
*%-----|-----|
SAVE HYD          ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
                  HYD_COMMENT=["Runoff Hydrograph for DT2"]
*%-----|-----|
ADD HYD          IDsum=[5], NHYD=["D14"], IDs to add=[2 + 3]
*%-----|-----|
SAVE HYD          ID=[5], # OF PCYCLES=[1], ICASEsh=[1]
                  HYD_COMMENT=["Downstream Hydrograph for C14"]
*%-----|-----|
*# Main Channel
CALIB NASHYD     ID=[1], NHYD=["M1"], DT=[1]min, AREA=[457.96](ha),
                  DWF=[0](cms), CN/C=[78.59], IA=[3.46](mm),
                  N=[3], TP=[1.68]hrs,
                  RAINFALL=[ , , , ](mm/hr), END=-1
*%-----|-----|
SAVE HYD          ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
                  HYD_COMMENT=["Runoff Hydrograph for M1"]
*%-----|-----|
ROUTE CHANNEL    IDout=[2], NHYD=["C1"], IDin=[1],
                  RDT=[1](min),
                  CHLGTH=[1720](m), CHSLOPE=[0.40](%),
                                FPSLOPE=[0.40](%),
SECNUM=[12976.33],          NSEG=[3]
( SEGROUGH, SEGDIST (m))=[0.08, 215.03] NSEG times
                                -0.035, 235.26
                                0.08, 380.30
( DISTANCE (m), ELEVATION (m))=[0.00, 85.40]
                                183.02, 83.61
                                215.03, 77.44
                                220.00, 76.00
                                228.16, 75.91
                                235.26, 77.86
                                278.28, 84.40
                                380.30, 84.59
*%-----|-----|
SAVE HYD          ID=[2], # OF PCYCLES=[1], ICASEsh=[1]
                  HYD_COMMENT=["Routing Hydrograph for C1"]
*%-----|-----|
CALIB NASHYD     ID=[3], NHYD=["M2"], DT=[1]min, AREA=[341.59](ha),
                  DWF=[0](cms), CN/C=[75.66], IA=[4.09](mm),
                  N=[3], TP=[0.85]hrs,
                  RAINFALL=[ , , , ](mm/hr), END=-1
*%-----|-----|
SAVE HYD          ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
                  HYD_COMMENT=["Runoff Hydrograph for M2"]
*%-----|-----|
ADD HYD          IDsum=[1], NHYD=["J2"], IDs to add=[2 + 3]
*%-----|-----|
SAVE HYD          ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
                  HYD_COMMENT=["Hydrograph for J2"]
*%-----|-----|
ROUTE CHANNEL    IDout=[2], NHYD=["C2"], IDin=[1],
                  RDT=[1](min),
                  CHLGTH=[1940](m), CHSLOPE=[0.21](%),

```

```

                                FPSLOPE=[0.21](%),
SECNUM=[10757.49],           NSEG=[3]
( SEGROUGH, SEGDIST (m))=[0.08, 81.72] NSEG times
                                -0.035, 147.26
                                0.08, 202.05
( DISTANCE (m), ELEVATION (m))=[0.00, 83.28]
                                52.49, 81.14
                                81.72, 76.32
                                99.29, 70.84
                                132.34, 70.84
                                147.26, 76.56
                                179.57, 82.85
                                202.05, 83.53
*%-----|-----
SAVE HYD           ID=[2], # OF PCYCLES=[1], ICASEsh=[1]
                   HYD_COMMENT=["Routing Hydrograph for C2"]
*%-----|-----
CALIB NASHYD      ID=[3], NHYD=["M3"], DT=[1]min, AREA=[165.13](ha),
                   DWF=[0](cms), CN/C=[78.21], IA=[3.54](mm),
                   N=[3], TP=[1.61]hrs,
                   RAINFALL=[ , , , , ](mm/hr), END=-1
*%-----|-----
SAVE HYD           ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
                   HYD_COMMENT=["Runoff Hydrograph for M3"]
*%-----|-----
ADD HYD           IDsum=[1], NHYD=["J3"], IDs to add=[2 + 3]
*%-----|-----
SAVE HYD           ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
                   HYD_COMMENT=["Hydrograph for J3"]
*%-----|-----
ROUTE CHANNEL     IDout=[2], NHYD=["C3"], IDin=[1],
                   RDT=[1](min),
                   CHLGTH=[1090](m), CHSLOPE=[0.18](%),
                   FPSLOPE=[0.18](%),
                   SECNUM=[8352.297], NSEG=[3]
                   ( SEGROUGH, SEGDIST (m))=[0.08, 145.33] NSEG times
                                   -0.035, 156.50
                                   0.08, 284.40
                   ( DISTANCE (m), ELEVATION (m))=[0.00, 68.52]
                                   8.68, 67.27
                                   145.33, 66.71
                                   147.92, 64.80
                                   153.00, 64.80
                                   156.50, 66.88
                                   222.83, 67.29
                                   284.40, 68.52
*%-----|-----
SAVE HYD           ID=[2], # OF PCYCLES=[1], ICASEsh=[1]
                   HYD_COMMENT=["Routing Hydrograph for C3"]
*%-----|-----
CALIB NASHYD      ID=[3], NHYD=["M4"], DT=[1]min, AREA=[1698.95](ha),
                   DWF=[0](cms), CN/C=[68.51], IA=[5.84](mm),
                   N=[3], TP=[3.84]hrs,
                   RAINFALL=[ , , , , ](mm/hr), END=-1
*%-----|-----
SAVE HYD           ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
                   HYD_COMMENT=["Runoff Hydrograph for M4"]
*%-----|-----
ADD HYD           IDsum=[6], NHYD=["D3"], IDs to add=[2 + 3]
*%-----|-----
SAVE HYD           ID=[6], # OF PCYCLES=[1], ICASEsh=[1]
                   HYD_COMMENT=["Downstream Hydrograph for C3"]
*%-----|-----
*# Stream Junction of Main Channel and Upstream Tributary
ADD HYD           IDsum=[1], NHYD=["J4"], IDs to add=[4 + 6]
*%-----|-----
SAVE HYD           ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
                   HYD_COMMENT=["Hydrograph for J4"]
*%-----|-----
ROUTE CHANNEL     IDout=[2], NHYD=["C4"], IDin=[1],
                   RDT=[1](min),
                   CHLGTH=[2020](m), CHSLOPE=[0.09](%),
                   FPSLOPE=[0.09](%),
                   SECNUM=[7188.429], NSEG=[3]
                   ( SEGROUGH, SEGDIST (m))=[0.08, 381.54] NSEG times

```

```

-0.035, 398.03
0.08, 595.60
( DISTANCE (m), ELEVATION (m))=[0.00, 79.96]
83.33, 67.53
381.54, 65.81
385.95, 64.16
390.93, 64.16
398.03, 66.23
455.56, 66.48
595.60, 71.00
*%-----|-----
SAVE HYD      ID=[2], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Routing Hydrograph for C4"]
*%-----|-----
CALIB NASHYD  ID=[3], NHYD=["M5"], DT=[1]min, AREA=[112.92](ha),
              DWF=[0](cms), CN/C=[73.60], IA=[4.56](mm),
              N=[3], TP=[0.97]hrs,
              RAINFALL=[ , , , , ](mm/hr), END=-1
*%-----|-----
SAVE HYD      ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Runoff Hydrograph for M5"]
*%-----|-----
ADD HYD      IDsum=[1], NHYD=["J5"], IDs to add=[2 + 3]
*%-----|-----
SAVE HYD      ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Hydrograph for J5"]
*%-----|-----
ROUTE CHANNEL IDout=[2], NHYD=["C5"], IDin=[1],
              RDT=[1](min),
              CHLGTH=(1450)(m), CHSLOPE=[0.05](%),
              FPSLOPE=[0.05](%),
              SECNUM=[5970.846], NSEG=[3]
              ( SEGROUGH, SEGDIST (m))=[0.08, 224.85] NSEG times
              -0.035, 244.23
              0.08, 462.86
              ( DISTANCE (m), ELEVATION (m))=[0.00, 78.26]
              59.14, 67.98
              224.85, 65.20
              227.73, 63.48
              237.51, 63.48
              244.23, 64.69
              424.71, 66.81
              462.86, 70.87
*%-----|-----
SAVE HYD      ID=[2], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Routing Hydrograph for C5"]
*%-----|-----
CALIB NASHYD  ID=[3], NHYD=["M6"], DT=[1]min, AREA=[273.75](ha),
              DWF=[0](cms), CN/C=[75.19], IA=[4.19](mm),
              N=[3], TP=[1.68]hrs,
              RAINFALL=[ , , , , ](mm/hr), END=-1
*%-----|-----
SAVE HYD      ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Runoff Hydrograph for M6"]
*%-----|-----
ADD HYD      IDsum=[4], NHYD=["J6"], IDs to add=[2 + 3]
*%-----|-----
SAVE HYD      ID=[4], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Hydrograph for J6"]
*%-----|-----
CALIB NASHYD  ID=[3], NHYD=["M7"], DT=[1]min, AREA=[21.88](ha),
              DWF=[0](cms), CN/C=[73.81], IA=[4.51](mm),
              N=[3], TP=[0.39]hrs,
              RAINFALL=[ , , , , ](mm/hr), END=-1
*%-----|-----
SAVE HYD      ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Runoff Hydrograph for M7"]
*%-----|-----
ADD HYD      IDsum=[6], NHYD=["D6"], IDs to add=[3 + 4]
*%-----|-----
SAVE HYD      ID=[6], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Downstream Hydrograph for C6"]
*%-----|-----
*# Stream Junction of Main Channel and Downstream Tributary
ADD HYD      IDsum=[1], NHYD=["J7"], IDs to add=[5 + 6]

```



```

*%-----|-----|
SAVE HYD      ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Hydrograph for J7"]
*%-----|-----|
ROUTE CHANNEL IDout=[2], NHYD=["C7"], IDin=[1],
              RDT=[1](min),
              CHLGTH=[520](m), CHSLOPE=[0.13](%),
              FPSLOPE=[0.13](%),
              SECNUM=[4051.996], NSEG=[3]
              ( SEGROUGH, SEGDIST (m))=[0.08, 165.00] NSEG times
              -0.035, 189.65
              0.08, 293.93
              ( DISTANCE (m), ELEVATION (m))=[0.00, 67.00]
              93.50, 66.89
              165.00, 64.85
              177.93, 63.09
              183.00, 63.09
              189.65, 65.06
              243.66, 69.80
              293.93, 69.84
*%-----|-----|
SAVE HYD      ID=[2], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Routing Hydrograph for C7"]
*%-----|-----|
CALIB NASHYD  ID=[3], NHYD=["M8"], DT=[1]min, AREA=[502.47](ha),
              DWF=[0](cms), CN/C=[56.20], IA=[9.90](mm),
              N=[3], TP=[3.62]hrs,
              RAINFALL=[ , , , , ](mm/hr), END=-1
*%-----|-----|
SAVE HYD      ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Runoff Hydrograph for M8"]
*%-----|-----|
ADD HYD      IDsum=[1], NHYD=["J8"], IDs to add=[2 + 3]
*%-----|-----|
SAVE HYD      ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Hydrograph for J8"]
*%-----|-----|
ROUTE CHANNEL IDout=[2], NHYD=["C8"], IDin=[1],
              RDT=[1](min),
              CHLGTH=[1010](m), CHSLOPE=[0.15](%),
              FPSLOPE=[0.15](%),
              SECNUM=[2762.366], NSEG=[3]
              ( SEGROUGH, SEGDIST (m))=[0.08, 57.78] NSEG times
              -0.035, 117.00
              0.08, 175.72
              ( DISTANCE (m), ELEVATION (m))=[0.00, 68.82]
              57.78, 65.91
              90.24, 63.59
              96.68, 61.90
              106.81, 61.80
              117.00, 65.91
              125.28, 67.25
              175.72, 69.01
*%-----|-----|
SAVE HYD      ID=[2], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Routing Hydrograph for C8"]
*%-----|-----|
CALIB NASHYD  ID=[3], NHYD=["M9"], DT=[1]min, AREA=[159.64](ha),
              DWF=[0](cms), CN/C=[39.73], IA=[19.27](mm),
              N=[3], TP=[3.37]hrs,
              RAINFALL=[ , , , , ](mm/hr), END=-1
*%-----|-----|
SAVE HYD      ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Runoff Hydrograph for M9"]
*%-----|-----|
ADD HYD      IDsum=[1], NHYD=["J9"], IDs to add=[2 + 3]
*%-----|-----|
SAVE HYD      ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Hydrograph for J9"]
*%-----|-----|
ROUTE CHANNEL IDout=[2], NHYD=["C9"], IDin=[1],
              RDT=[1](min),
              CHLGTH=[1810](m), CHSLOPE=[0.99](%),
              FPSLOPE=[0.99](%),
              SECNUM=[1586.155], NSEG=[3]

```

```

( SEGROUGH, SEGDIST (m))=[0.08, 50.34] NSEG times
      -0.035, 97.00
      0.08, 198.27
( DISTANCE (m), ELEVATION (m))=[0.00, 61.68]
      40.00, 58.00
      50.34, 55.08
      55.23, 52.93
      93.65, 52.31
      97.00, 55.00
      134.20, 67.81
      198.27, 69.03

*%-----|-----
SAVE HYD      ID=[2], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Routing Hydrograph for C9"]
*%-----|-----
CALIB NASHYD  ID=[3], NHYD=["M10"], DT=[1]min, AREA=[190.19](ha),
              DWF=[0](cms), CN/C=[39.45], IA=[19.49](mm),
              N=[3], TP=[1.79]hrs,
              RAINFALL=[ , , , , ](mm/hr), END=-1
*%-----|-----
SAVE HYD      ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Runoff Hydrograph for M10"]
*%-----|-----
ADD HYD      IDsum=[1], NHYD=["J10"], IDs to add=[2 + 3]
*%-----|-----
SAVE HYD      ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Hydrograph for J10"]
*%-----|-----
ROUTE CHANNEL IDout=[2], NHYD=["C10"], IDin=[1],
              RDT=[1](min),
              CHLGTH=[590](m), CHSLOPE=[0.18](%),
              FPSLOPE=[0.18](%),
              SECNUM=[269.5264], NSEG=[3]
              ( SEGROUGH, SEGDIST (m))=[0.08, 78.00] NSEG times
                -0.035, 104.86
                0.08, 202.47
              ( DISTANCE (m), ELEVATION (m))=[0.00, 53.13]
                35.99, 51.50
                78.00, 44.05
                92.30, 42.16
                97.25, 42.16
                104.86, 44.32
                129.49, 51.76
                202.47, 53.91

*%-----|-----
SAVE HYD      ID=[2], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Routing Hydrograph for C10"]
*%-----|-----
CALIB NASHYD  ID=[3], NHYD=["M11"], DT=[1]min, AREA=[26.92](ha),
              DWF=[0](cms), CN/C=[74.31], IA=[4.39](mm),
              N=[3], TP=[0.55]hrs,
              RAINFALL=[ , , , , ](mm/hr), END=-1
*%-----|-----
SAVE HYD      ID=[3], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Runoff Hydrograph for M11"]
*%-----|-----
ADD HYD      IDsum=[1], NHYD=["O1"], IDs to add=[2 + 3]
*%-----|-----
SAVE HYD      ID=[1], # OF PCYCLES=[1], ICASEsh=[1]
              HYD_COMMENT=["Hydrograph for O1"]
*%-----|-----
*% 100 Year 3 Hour SCS Design Storm
START        TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[4]
*            ["100YS3.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----
*% 100 Year 6 Hour Chicago Design Storm
START        TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[6]
*            ["100YC6H.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----
*%100 Year 6 Hour SCS Design Storm
START        TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[7]
*            ["100YS6.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----
*% 100 Year 12 Hour Chicago Design Storm
START        TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[12]

```

```

*          ["100YC12H.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----|
*%100 Year 12 Hour SCS Design Storm
START      TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[13]
*          ["100YS12.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----|
*% 100 Year 24 Hour Chicago Design Storm
START      TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[24]
*          ["100YC24H.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----|
*%100 Year 24 Hour SCS Design Storm
START      TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[25]
*          ["100YS24.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----|
*%2 Year 24 Hour SCS Design Storm
START      TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[241]
*          ["2YS24.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----|
*%5 Year 24 Hour SCS Design Storm
START      TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[242]
*          ["5YS24.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----|
*%10 Year 24 Hour SCS Design Storm
START      TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[243]
*          ["10YS24.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----|
*%20 Year 24 Hour SCS Design Storm
START      TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[244]
*          ["20YS24.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----|
*%50 Year 24 Hour SCS Design Storm
START      TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[245]
*          ["50YS24.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----|
*%200 Year 24 Hour SCS Design Storm
START      TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[246]
*          ["200YS24.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----|
*%350 Year 24 Hour SCS Design Storm
START      TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[247]
*          ["350YS24.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----|
*%500 Year 24 Hour SCS Design Storm
START      TZERO=[0.0]hrs or date, METOUT=[2], NSTORM=[1], NRUN=[248]
*          ["500YS24.stm"] <--storm filename, one per line for NSTORM time
*%-----|-----|
FINISH

```

```

=====
SSSSS W W M M H H Y Y M M O O O 999 999 =====
S W W W M M M H H Y Y M M M O O # 9 9 9 9 9 Ver 4.05
S W W M M M H H Y M M O O 9999 9999 Sept 2011
SSSSS W W M M H H Y M M O O O 9 9 9 # 5329846
StormWater Management Hydrologic Model 999 999 =====

*****
***** SWMHYMO Ver/4.05 *****
***** A single event and continuous hydrologic simulation model *****
***** based on the principles of HYMO and its successors *****
***** OTHYMO-83 and OTHYMO-89. *****
***** Distributed by: J.F. Sabourin and Associates Inc. *****
***** Ottawa, Ontario: (613) 836-3884 *****
***** Gatineau, Quebec: (819) 243-6858 *****
***** E-Mail: swmhyom@jfsa.com *****

*****
***** Licensed user: Rideau Valley Conservation Authority *****
***** Manotick SERIAL#5329846 *****

*****
***** +++++ PROGRAM ARRAY DIMENSIONS +++++ *****
***** Maximum value for ID numbers : 10 *****
***** Max. number of rainfall points: 105408 *****
***** Max. number of flow points : 105408 *****

**** DESCRIPTION SUMMARY TABLE HEADERS (units depend on METOUT in START) ****
**** ID: Hydrograph Identification numbers, (1-10). ****
**** NYHD: Hydrograph reference numbers, (6 digits or characters). ****
**** AREA: Drainage area associated with hydrograph, (ac.) or (ha.). ****
**** QPEAK: Peak flow of simulated hydrograph, (ft3/s) or (m3/s). ****
**** TpeakDate_hh:mm is the date and time of the peak flow. ****
**** R.V.: Runoff Volume of simulated hydrograph, (in) or (mm). ****
**** R.C.: Runoff Coefficient of simulated hydrograph, (ratio). ****
**** *: see WARNING or NOTE message printed at end of run. ****
**** **: see ERROR message printed at end of run. ****

*****
***** SUMMARY OUTPUT *****
*****
* DATE: 2017-11-29 TIME: 15:24:13 RUN COUNTER: 000178 *
*****
* Input filename: N:\BECKETT-1\HYDROL-1\BEA161-1\Beck_D.dat *
* Output filename: N:\BECKETT-1\HYDROL-1\BEA161-1\Beck_D.out *
* Summary filename: N:\BECKETT-1\HYDROL-1\BEA161-1\Beck_D.sum *
* User comments: *
* 1: *
* 2: *
* 3: *

*****
# *****
# Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
# Date : 29-11-2017
# Modeller : [AA, TB, SN]
# Company : Rideau Valley Conservation Authority
# License # : 5329846
# *****
# ** END OF RUN : 2
# *****

*****
RUN:COMMAND#
003:0001-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
START
[ TZERO = .00 hrs on 0 ]
[ METOUT = 2 (1=imperial, 2=metric output) ]
[ NSTORM = 1 ]
[ NRUN = 3 ]
# *****
# Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
# Date : 29-11-2017
# Modeller : [AA, TB, SN]
# Company : Rideau Valley Conservation Authority
# License # : 5329846
# *****
003:0002-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
READ STORM
Filename = storm.001
Comment =
[ SDT=10.00:SDUR= 3.00:PTOT= 74.43 ]
003:0003-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
DEFAULT VALUES
Filename = N:\BECKETT-1\HYDROL-1\BEA161-1\BeckVal.val
ICASEDV = 1 (read and print data)
FileTitle = File comment: [RVCA Becketts Creek FPM]
THE FOLLOWING PARAMETERS ARE USED IN THE DESIGN STANDHYD COM
Horton's infiltration equation parameters:
[Fo = 76.20 mm/hr] [Fc=13.20 mm/hr] [DCAV= 4.14 /hr] [F = .00 mm]
Parameters for PERVIOUS surfaces in STANDHYD:
[IAper = 4.67 mm] [LGP=40.00 m] [MNV = .250]
Parameters for IMPERVIOUS surfaces in STANDHYD:
[IAimp = 1.57 mm] [CLI = 1.50] [MNV = .013]
Parameters used in NASHYD:
[Is = 1.50 mm] [N = 3.00]
# Upstream Tributary
003:0004-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT1 338.44 5.083 No_date 4:31 31.25 .420
[CN = 74.5: N = 3.00]
[Tp = 3.04:DT = 1.00]
003:0005-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT1 338.44 5.083 No_date 4:31 31.25 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.003
remark:Runoff Hydrograph for UT1

003:0006-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT1 338.44 5.083 No_date 4:31 31.25 n/a
[ RDT = 1.00 ] out<- 02:C11 338.44 4.926 No_date 5:05 31.25 n/a
[ L/S/n = 1960. / .510 / .035 ]
[ Vmax = 1.034:Dmax = 3.33 ]
003:0007-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C11 338.44 4.926 No_date 5:05 31.25 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-C11.003
remark:Routing Hydrograph for C11
003:0008-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT2 89.11 4.664 No_date 1:48 33.64 .452
[CN = 76.6: N = 3.00]
[Tp = .64:DT = 1.00]
003:0009-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT2 89.11 4.664 No_date 1:48 33.64 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.003
remark:Runoff Hydrograph for UT2
003:0010-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C11 338.44 4.926 No_date 5:05 31.25 n/a
[DT = 1.00] SUM = + 03:UT2 89.11 4.664 No_date 1:48 33.64 n/a
04:D11 427.55 5.172 No_date 1:57 31.75 n/a
003:0011-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D11 427.55 5.172 No_date 1:57 31.75 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.003
remark:Downstream Hydrograph for C11
003:0012-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT3 459.85 8.700 No_date 3:35 28.16 .378
[CN = 71.4: N = 3.00]
[Tp = 2.06:DT = 1.00]
003:0013-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT3 459.85 8.700 No_date 3:35 28.16 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.003
remark:Runoff Hydrograph for UT3
003:0014-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT3 459.85 8.700 No_date 3:35 28.16 n/a
[ RDT = 1.00 ] out<- 02:C12 459.85 7.880 No_date 4:14 28.16 n/a
[ L/S/n = 2300. / .410 / .035 ]
[ Vmax = .842:Dmax = .691 ]
003:0015-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C12 459.85 7.880 No_date 4:14 28.16 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.003
remark:Routing Hydrograph for C12
003:0016-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT4 137.12 5.725 No_date 2:11 34.73 .467
[CN = 77.6: N = 3.00]
[Tp = .93:DT = 1.00]
003:0017-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT4 137.12 5.725 No_date 2:11 34.73 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.003
remark:Runoff Hydrograph for UT4
003:0018-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C12 459.85 7.880 No_date 4:14 28.16 n/a
[DT = 1.00] SUM = + 03:UT4 137.12 5.725 No_date 2:11 34.73 n/a
05:D12 596.97 10.196 No_date 3:29 29.67 n/a
003:0019-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D12 596.97 10.196 No_date 3:29 29.67 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.003
remark:Downstream Hydrograph for C12
003:0020-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D11 427.55 5.172 No_date 1:57 31.75 n/a
[DT = 1.00] SUM = + 05:D12 596.97 10.196 No_date 3:29 29.67 n/a
01:J13 1024.52 15.071 No_date 3:28 30.54 n/a
003:0021-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J13 1024.52 15.071 No_date 3:28 30.54 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.003
remark:Hydrograph for J13
003:0022-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J13 1024.52 15.071 No_date 3:28 30.54 n/a
[ RDT = 1.00 ] out<- 02:C13 1024.52 14.447 No_date 4:07 30.54 n/a
[ L/S/n = 1540. / .250 / .035 ]
[ Vmax = .804:Dmax = 1.510 ]
003:0023-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C13 1024.52 14.447 No_date 4:07 30.54 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.003
remark:Routing Hydrograph for C13
003:0024-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT5 67.49 1.117 No_date 4:17 31.98 .430
[CN = 75.2: N = 3.00]
[Tp = 2.80:DT = 1.00]
003:0025-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT5 67.49 1.117 No_date 4:17 31.98 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.003
remark:Runoff Hydrograph for UT5
003:0026-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C13 1024.52 14.447 No_date 4:07 30.54 n/a
[DT = 1.00] SUM = + 03:UT5 67.49 1.117 No_date 4:17 31.98 n/a
04:D13 1092.01 15.562 No_date 4:12 30.62 n/a
003:0027-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D13 1092.01 15.562 No_date 4:12 30.62 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.003
remark:Downstream Hydrograph for C13
# Downstream Tributary
003:0028-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:DT1 268.29 5.672 No_date 3:09 26.10 .351
[CN = 69.3: N = 3.00]
[Tp = 1.61:DT = 1.00]
003:0029-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:DT1 268.29 5.672 No_date 3:09 26.10 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.003
remark:Runoff Hydrograph for DT1
003:0030-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1 268.29 5.672 No_date 3:09 26.10 n/a
[ RDT = 1.00 ] out<- 02:C14 268.29 5.433 No_date 3:32 26.10 n/a
[ L/S/n = 2210. / .780 / .035 ]
[ Vmax = 1.517:Dmax = .667 ]
003:0031-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C14 268.29 5.433 No_date 3:32 26.10 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.003
remark:Routing Hydrograph for C14
003:0032-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:DT2 134.58 4.729 No_date 2:15 30.14 .405
[CN = 73.4: N = 3.00]
[Tp = .96:DT = 1.00]
003:0033-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:DT2 134.58 4.729 No_date 2:15 30.14 n/a
fname : N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.003
remark:Runoff Hydrograph for DT2
003:0034-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C14 268.29 5.433 No_date 3:32 26.10 n/a
[DT = 1.00] SUM = + 03:DT2 134.58 4.729 No_date 2:15 30.14 n/a
05:D14 402.87 8.839 No_date 2:57 27.46 n/a
003:0035-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D14 402.87 8.839 No_date 2:57 27.46 n/a

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fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.003
remark:Downstream Hydrograph for C14
# Main Channel
003:0036-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:M1 457.96 12.970 No_date 3:09 35.93 4.83
[CN= 78.6: N= 3.00]
[TP= 1.68:DT= 1.00]
003:0037-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:M1 457.96 12.970 No_date 3:09 35.93 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.003
remark:Runoff Hydrograph for M1
003:0038-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:M1 457.96 12.970 No_date 3:09 35.93 n/a
[RD= 1.00] out<- 02:C1 457.96 12.624 No_date 3:27 35.93 n/a
[L/S/n= 1720./ .400/.035]
{Vmax= 1.329:Dmax= .877}
003:0039-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C1 457.96 12.624 No_date 3:27 35.93 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.003
remark:Routing Hydrograph for C1
003:0040-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M2 341.59 14.170 No_date 2:05 32.54 4.37
[CN= 75.7: N= 3.00]
[TP= .85:DT= 1.00]
003:0041-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M2 341.59 14.170 No_date 2:05 32.54 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.003
remark:Runoff Hydrograph for M2
003:0042-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C1 457.96 12.624 No_date 3:27 35.93 n/a
+ 03:M2 341.59 14.170 No_date 2:05 32.54 n/a
[DT= 1.00] SUM= 01:J2 799.55 22.601 No_date 2:34 34.48 n/a
003:0043-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J2 799.55 22.601 No_date 2:34 34.48 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.003
remark:Hydrograph for J2
003:0044-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J2 799.55 22.601 No_date 2:34 34.48 n/a
[RD= 1.00] out<- 02:C2 799.55 20.369 No_date 3:18 34.48 n/a
[L/S/n= 1940./ .210/.035]
{Vmax= .932:Dmax= .657}
003:0045-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C2 799.55 20.369 No_date 3:18 34.48 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.003
remark:Routing Hydrograph for C2
003:0046-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M3 165.13 4.762 No_date 3:05 35.47 4.77
[CN= 78.2: N= 3.00]
[TP= 1.61:DT= 1.00]
003:0047-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M3 165.13 4.762 No_date 3:05 35.47 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.003
remark:Runoff Hydrograph for M3
003:0048-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C2 799.55 20.369 No_date 3:18 34.48 n/a
+ 03:M3 165.13 4.762 No_date 3:05 35.47 n/a
[DT= 1.00] SUM= 01:J3 964.68 25.086 No_date 3:16 34.65 n/a
003:0049-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J3 964.68 25.086 No_date 3:16 34.65 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.003
remark:Hydrograph for J3
003:0050-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J3 964.68 25.086 No_date 3:16 34.65 n/a
[RD= 1.00] out<- 02:C3 964.68 24.457 No_date 3:29 34.65 n/a
[L/S/n= 1090./ .180/.035]
{Vmax= 1.283:Dmax= 2.034}
003:0051-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C3 964.68 24.457 No_date 3:29 34.65 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.003
remark:Routing Hydrograph for C3
003:0052-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M4 1698.95 16.711 No_date 5:19 25.38 3.41
[CN= 68.5: N= 3.00]
[TP= 3.84:DT= 1.00]
003:0053-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M4 1698.95 16.711 No_date 5:19 25.38 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.003
remark:Runoff Hydrograph for M4
003:0054-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C3 964.68 24.457 No_date 3:29 34.65 n/a
+ 03:M4 1698.95 16.711 No_date 5:19 25.38 n/a
[DT= 1.00] SUM= 06:D3 2663.63 38.236 No_date 4:01 28.74 n/a
003:0055-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D3 2663.63 38.236 No_date 4:01 28.74 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.003
remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
003:0056-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D13 1092.01 15.562 No_date 4:12 30.62 n/a
+ 06:D3 2663.63 38.236 No_date 4:01 28.74 n/a
[DT= 1.00] SUM= 01:J4 3755.64 53.774 No_date 4:01 29.29 n/a
003:0057-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J4 3755.64 53.774 No_date 4:01 29.29 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.003
remark:Hydrograph for J4
003:0058-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J4 3755.64 53.774 No_date 4:01 29.29 n/a
[RD= 1.00] out<- 02:C4 3755.64 44.967 No_date 5:13 29.29 n/a
[L/S/n= 2020./ .090/.035]
{Vmax= .502:Dmax= 2.478}
003:0059-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C4 3755.64 44.967 No_date 5:13 29.29 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.003
remark:Routing Hydrograph for C4
003:0060-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M5 112.92 3.965 No_date 2:16 30.32 4.07
[CN= 73.6: N= 3.00]
[TP= .97:DT= 1.00]
003:0061-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M5 112.92 3.965 No_date 2:16 30.32 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.003
remark:Runoff Hydrograph for M5
003:0062-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C4 3755.64 44.967 No_date 5:13 29.29 n/a
+ 03:M5 112.92 3.965 No_date 2:16 30.32 n/a
[DT= 1.00] SUM= 01:J5 3868.56 45.403 No_date 4:59 29.32 n/a
003:0063-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J5 3868.56 45.403 No_date 4:59 29.32 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.003
remark:Hydrograph for J5
003:0064-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J5 3868.56 45.403 No_date 4:59 29.32 n/a
[RD= 1.00] out<- 02:C5 3868.56 42.434 No_date 6:08 29.32 n/a
[L/S/n= 1450./ .050/.035]
{Vmax= .499:Dmax= 2.234}
003:0065-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C5 3868.56 42.434 No_date 6:08 29.32 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.003
remark:Routing Hydrograph for C5
003:0066-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M6 273.75 6.900 No_date 3:11 32.03 4.30
[CN= 75.2: N= 3.00]
[TP= 1.68:DT= 1.00]
003:0067-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M6 273.75 6.900 No_date 3:11 32.03 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.003
remark:Runoff Hydrograph for M6
003:0068-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C5 3868.56 42.434 No_date 6:08 29.32 n/a
+ 03:M6 273.75 6.900 No_date 3:11 32.03 n/a
[DT= 1.00] SUM= 04:J6 4142.31 44.510 No_date 5:37 29.50 n/a
003:0069-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:J6 4142.31 44.510 No_date 5:37 29.50 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.003
remark:Hydrograph for J6
003:0070-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M7 21.88 1.431 No_date 1:28 30.55 4.10
[CN= 73.8: N= 3.00]
[TP= .39:DT= 1.00]
003:0071-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M7 21.88 1.431 No_date 1:28 30.55 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.003
remark:Runoff Hydrograph for M7
003:0072-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 03:M7 21.88 1.431 No_date 1:28 30.55 n/a
+ 04:J6 4142.31 44.510 No_date 5:37 29.50 n/a
[DT= 1.00] SUM= 06:D6 4164.19 44.510 No_date 5:37 29.50 n/a
003:0073-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D6 4164.19 44.510 No_date 5:37 29.50 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.003
remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
003:0074-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 05:D14 402.87 8.839 No_date 2:57 27.46 n/a
+ 06:D6 4164.19 44.510 No_date 5:37 29.50 n/a
[DT= 1.00] SUM= 01:J7 4567.06 47.657 No_date 5:05 29.32 n/a
003:0075-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J7 4567.06 47.657 No_date 5:05 29.32 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.003
remark:Hydrograph for J7
003:0076-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J7 4567.06 47.657 No_date 5:05 29.32 n/a
[RD= 1.00] out<- 02:C7 4567.06 47.555 No_date 5:18 29.32 n/a
[L/S/n= 520./ .130/.035]
{Vmax= 1.209:Dmax= 2.186}
003:0077-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C7 4567.06 47.555 No_date 5:18 29.32 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.003
remark:Routing Hydrograph for C7
003:0078-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M8 502.47 3.261 No_date 5:10 15.86 2.13
[CN= 56.2: N= 3.00]
[TP= 3.62:DT= 1.00]
003:0079-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M8 502.47 3.261 No_date 5:10 15.86 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.003
remark:Runoff Hydrograph for M8
003:0080-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C7 4567.06 47.555 No_date 5:18 29.32 n/a
+ 03:M8 502.47 3.261 No_date 5:10 15.86 n/a
[DT= 1.00] SUM= 01:J8 5069.53 50.812 No_date 5:18 27.99 n/a
003:0081-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J8 5069.53 50.812 No_date 5:18 27.99 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.003
remark:Hydrograph for J8
003:0082-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J8 5069.53 50.812 No_date 5:18 27.99 n/a
[RD= 1.00] out<- 02:C8 5069.53 50.658 No_date 5:26 27.99 n/a
[L/S/n= 1010./ .150/.035]
{Vmax= 1.328:Dmax= 2.232}
003:0083-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C8 5069.53 50.658 No_date 5:26 27.99 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.003
remark:Routing Hydrograph for C8
003:0084-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M9 159.64 4.82 No_date 5:02 6.91 0.93
[CN= 39.7: N= 3.00]
[TP= 3.37:DT= 1.00]
003:0085-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M9 159.64 4.82 No_date 5:02 6.91 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.003
remark:Runoff Hydrograph for M9
003:0086-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C8 5069.53 50.658 No_date 5:26 27.99 n/a
+ 03:M9 159.64 4.82 No_date 5:02 6.91 n/a
[DT= 1.00] SUM= 01:J9 5229.17 51.134 No_date 5:26 27.34 n/a
003:0087-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J9 5229.17 51.134 No_date 5:26 27.34 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.003
remark:Hydrograph for J9
003:0088-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J9 5229.17 51.134 No_date 5:26 27.34 n/a
[RD= 1.00] out<- 02:C9 5229.17 50.974 No_date 5:37 27.34 n/a
[L/S/n= 1810./ .990/.035]
{Vmax= 2.006:Dmax= 934}
003:0089-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C9 5229.17 50.974 No_date 5:37 27.34 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.003
remark:Routing Hydrograph for C9
003:0090-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M10 190.19 9.65 No_date 3:32 6.79 0.91
[CN= 39.5: N= 3.00]
[TP= 1.79:DT= 1.00]
003:0091-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M10 190.19 9.65 No_date 3:32 6.79 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.003
remark:Runoff Hydrograph for M10
003:0092-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C9 5229.17 50.974 No_date 5:37 27.34 n/a
+ 03:M10 190.19 9.65 No_date 3:32 6.79 n/a
[DT= 1.00] SUM= 01:J10 5419.36 51.446 No_date 5:33 26.62 n/a
003:0093-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J10 5419.36 51.446 No_date 5:33 26.62 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.003
remark:Hydrograph for J10
003:0094-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-

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ROUTE CHANNEL -> 01:J10 5419.36 51.446 No_date 5:33 26.62 n/a
[RDT= 1.00] out<- 02:C10 5419.36 51.424 No_date 5:38 26.62 n/a
[L/S/n= 590./ .180/.035]
[Vmax= 1.404;Dmax= 2.099]
003:0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C10 5419.36 51.424 No_date 5:38 26.62 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.003
remark:Routing Hydrograph for C10
003:0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M11 26.92 1.432 No_date 1:41 31.08 4.18
[CN= 74.3; N= 3.00]
[Tp= .55;DT= 1.00]
003:0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M11 26.92 1.432 No_date 1:41 31.08 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.003
remark:Runoff Hydrograph for M11
003:0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C10 5419.36 51.424 No_date 5:38 26.62 n/a
+ 03:M11 26.92 1.432 No_date 1:41 31.08 n/a
[DT= 1.00] SUM= 01:01 5446.28 51.425 No_date 5:38 26.65 n/a
003:0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:01 5446.28 51.425 No_date 5:38 26.65 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-O1.003
remark:Hydrograph for O1
** END OF RUN : 3

RUN:COMMAND#
004:0001-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
START
[TZERO = .00 hrs on 0]
[METOUT= 2 (1=imperial, 2=metric output)]
[NSTORM= 1]
[NRUN = 4]

Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
Date : 29-11-2017
Modeller : [AA, TB, SN]
Company : Rideau Valley Conservation Authority
License # : 5329846

004:0002-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
READ STORM
Filename = storm.001
Comment =
[SDT=30.00;SDUR= 3.00;PTOT= 74.46]
004:0003-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
DEFAULT VALUES
Filename = N:\BECKETT-1\HYDROL-1\BEA161-1\BeckVal.val
ICASEdv = 1 (read and print data)
FileTitle= File comment: [RVCA Becketts Creek FPM]
THE FOLLOWING PARAMETERS ARE USED IN THE DESIGN STANDHYD COM
Horton's infiltration equation parameters:
[Fo= 76.20 mm/hr] [Fc=13.20 mm/hr] [DCAY= 4.14 /hr] [F= .00 mm]
Parameters for PERVIOUS surfaces in STANDHYD:
[Iaper= 4.67 mm] [LGP=40.00 mm] [MNP= .250]
Parameters for IMPERVIOUS surfaces in STANDHYD:
[Iaimp= 1.57 mm] [CLI= 1.50] [MNI= .013]
Parameters used in NASHYD:
[Ia= 1.50 mm] [N= 3.00]
Upstream Tributary
004:0004-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT1 338.44 5.160 No_date 4:46 31.27 4.20
[CN= 74.5; N= 3.00]
[Tp= 3.04;DT= 1.00]
004:0005-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT1 338.44 5.160 No_date 4:46 31.27 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.004
remark:Runoff Hydrograph for UT1
004:0006-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT1 338.44 5.160 No_date 4:46 31.27 n/a
[RDT= 1.00] out<- 02:C11 338.44 4.995 No_date 5:21 31.27 n/a
[L/S/n= 1960./ .510/.035]
[Vmax= 1.034;Dmax= .344]
004:0007-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C11 338.44 4.995 No_date 5:21 31.27 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C11.004
remark:Routing Hydrograph for C11
004:0008-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT2 89.11 4.899 No_date 2:15 33.67 4.52
[CN= 76.6; N= 3.00]
[Tp= .64;DT= 1.00]
004:0009-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT2 89.11 4.899 No_date 2:15 33.67 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.004
remark:Runoff Hydrograph for UT2
004:0010-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C11 338.44 4.995 No_date 5:21 31.27 n/a
+ 03:UT2 89.11 4.899 No_date 2:15 33.67 n/a
[DT= 1.00] SUM= 04:D11 427.55 5.558 No_date 2:24 31.77 n/a
004:0011-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D11 427.55 5.558 No_date 2:24 31.77 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.004
remark:Downstream Hydrograph for C11
004:0012-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT3 459.85 8.998 No_date 3:50 28.18 3.78
[CN= 71.4; N= 3.00]
[Tp= 2.06;DT= 1.00]
004:0013-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT3 459.85 8.998 No_date 3:50 28.18 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.004
remark:Runoff Hydrograph for UT3
004:0014-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT3 459.85 8.998 No_date 3:50 28.18 n/a
[RDT= 1.00] out<- 02:C12 459.85 8.081 No_date 4:29 28.18 n/a
[L/S/n= 2300./ .410/.035]
[Vmax= .851;Dmax= .702]
004:0015-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C12 459.85 8.081 No_date 4:29 28.18 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.004
remark:Routing Hydrograph for C12
004:0016-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT4 137.12 6.101 No_date 2:36 34.76 4.67
[CN= 77.6; N= 3.00]
[Tp= .93;DT= 1.00]
004:0017-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT4 137.12 6.101 No_date 2:36 34.76 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.004

remark:Runoff Hydrograph for UT4
004:0018-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C12 459.85 8.081 No_date 4:29 28.18 n/a
+ 03:UT4 137.12 6.101 No_date 2:36 34.76 n/a
[DT= 1.00] SUM= 05:D12 596.97 10.455 No_date 3:38 29.69 n/a
004:0019-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D12 596.97 10.455 No_date 3:38 29.69 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.004
remark:Downstream Hydrograph for C12
004:0020-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D11 427.55 5.558 No_date 2:24 31.77 n/a
+ 05:D12 596.97 10.455 No_date 3:38 29.69 n/a
[DT= 1.00] SUM= 01:J13 1024.52 15.251 No_date 3:29 30.56 n/a
004:0021-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J13 1024.52 15.251 No_date 3:29 30.56 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.004
remark:Hydrograph for J13
004:0022-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J13 1024.52 15.251 No_date 3:29 30.56 n/a
[RDT= 1.00] out<- 02:C13 1024.52 14.624 No_date 4:17 30.56 n/a
[L/S/n= 1540./ .250/.035]
[Vmax= .805;Dmax= 1.515]
004:0023-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C13 1024.52 14.624 No_date 4:17 30.56 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.004
remark:Routing Hydrograph for C13
004:0024-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT5 67.49 1.137 No_date 4:32 32.01 4.30
[CN= 75.2; N= 3.00]
[Tp= 2.80;DT= 1.00]
004:0025-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT5 67.49 1.137 No_date 4:32 32.01 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.004
remark:Runoff Hydrograph for UT5
004:0026-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C13 1024.52 14.624 No_date 4:17 30.56 n/a
+ 03:UT5 67.49 1.137 No_date 4:32 32.01 n/a
[DT= 1.00] SUM= 04:D13 1092.01 15.754 No_date 4:19 30.65 n/a
004:0027-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D13 1092.01 15.754 No_date 4:19 30.65 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.004
remark:Downstream Hydrograph for C13
Downstream Tributary
004:0028-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:DT1 268.29 5.989 No_date 3:24 26.13 3.51
[CN= 69.3; N= 3.00]
[Tp= 1.61;DT= 1.00]
004:0029-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:DT1 268.29 5.989 No_date 3:24 26.13 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.004
remark:Runoff Hydrograph for DT1
004:0030-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1 268.29 5.989 No_date 3:24 26.13 n/a
[RDT= 1.00] out<- 02:C14 268.29 5.688 No_date 3:48 26.13 n/a
[L/S/n= 2210./ .780/.035]
[Vmax= 1.528;Dmax= .680]
004:0031-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C14 268.29 5.688 No_date 3:48 26.13 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.004
remark:Routing Hydrograph for C14
004:0032-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:DT2 134.58 5.074 No_date 2:39 30.16 4.05
[CN= 73.4; N= 3.00]
[Tp= .96;DT= 1.00]
004:0033-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:DT2 134.58 5.074 No_date 2:39 30.16 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.004
remark:Runoff Hydrograph for DT2
004:0034-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C14 268.29 5.688 No_date 3:48 26.13 n/a
+ 03:DT2 134.58 5.074 No_date 2:39 30.16 n/a
[DT= 1.00] SUM= 05:D14 402.87 9.403 No_date 3:13 27.48 n/a
004:0035-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D14 402.87 9.403 No_date 3:13 27.48 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.004
remark:Downstream Hydrograph for C14
Main Channel
004:0036-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:M1 457.96 13.588 No_date 3:26 35.96 4.83
[CN= 78.6; N= 3.00]
[Tp= 1.68;DT= 1.00]
004:0037-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:M1 457.96 13.588 No_date 3:26 35.96 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.004
remark:Runoff Hydrograph for M1
004:0038-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:M1 457.96 13.588 No_date 3:26 35.96 n/a
[RDT= 1.00] out<- 02:C1 457.96 13.151 No_date 3:43 35.96 n/a
[L/S/n= 1720./ .400/.035]
[Vmax= 1.345;Dmax= .897]
004:0039-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C1 457.96 13.151 No_date 3:43 35.96 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.004
remark:Routing Hydrograph for C1
004:0040-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M2 341.59 15.122 No_date 2:30 32.56 4.37
[CN= 75.7; N= 3.00]
[Tp= .85;DT= 1.00]
004:0041-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M2 341.59 15.122 No_date 2:30 32.56 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.004
remark:Runoff Hydrograph for M2
004:0042-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C1 457.96 13.151 No_date 3:43 35.96 n/a
+ 03:M2 341.59 15.122 No_date 2:30 32.56 n/a
[DT= 1.00] SUM= 01:J2 799.55 24.108 No_date 2:56 34.51 n/a
004:0043-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J2 799.55 24.108 No_date 2:56 34.51 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.004
remark:Hydrograph for J2
004:0044-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J2 799.55 24.108 No_date 2:56 34.51 n/a
[RDT= 1.00] out<- 02:C2 799.55 21.375 No_date 3:32 34.51 n/a
[L/S/n= 1940./ .210/.035]
[Vmax= .944;Dmax= .678]
004:0045-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C2 799.55 21.375 No_date 3:32 34.51 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.004
remark:Routing Hydrograph for C2
004:0046-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M3 165.13 5.007 No_date 3:22 35.50 4.77
[CN= 78.2; N= 3.00]
[Tp= 1.61;DT= 1.00]

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004:0047-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M3 165.13 5.007 No_date 3:22 35.50 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.004
remark:Runoff Hydrograph for M3
004:0048-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C2 799.55 21.375 No_date 3:32 34.51 n/a
[DT= 1.00] SUM= 03:M3 165.13 5.007 No_date 3:22 35.50 n/a
004:0049-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J3 964.68 26.341 No_date 3:31 34.68 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.004
remark:Hydrograph for J3
004:0050-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J3 964.68 26.341 No_date 3:31 34.68 n/a
[RDT= 1.00] out<- 02:C3 964.68 25.506 No_date 3:47 34.68 n/a
[L/S/n= 1090./ .180/.035]
[Vmax= 1.240:Dmax= 2.379]
004:0051-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C3 964.68 25.506 No_date 3:47 34.68 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.004
remark:Routing Hydrograph for C3
004:0052-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M4 1698.95 16.878 No_date 5:35 25.40 341
[CN= 68.5: N= 3.00]
[Tp= 3.84:DT= 1.00]
004:0053-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M4 1698.95 16.878 No_date 5:35 25.40 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.004
remark:Runoff Hydrograph for M4
004:0054-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C3 964.68 25.506 No_date 3:47 34.68 n/a
[DT= 1.00] SUM= 03:M4 1698.95 16.878 No_date 5:35 25.40 n/a
004:0055-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D3 2663.63 39.255 No_date 4:15 28.76 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.004
remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
004:0056-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D13 1092.01 15.754 No_date 4:19 30.65 n/a
[DT= 1.00] SUM= 06:D3 2663.63 39.255 No_date 4:15 28.76 n/a
004:0057-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J4 3755.64 55.002 No_date 4:15 29.31 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.004
remark:Hydrograph for J4
004:0058-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J4 3755.64 55.002 No_date 4:15 29.31 n/a
[RDT= 1.00] out<- 02:C4 3755.64 45.660 No_date 5:27 29.31 n/a
[L/S/n= 2020./ .090/.035]
[Vmax= .500:Dmax= 2.490]
004:0059-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C4 3755.64 45.660 No_date 5:27 29.31 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.004
remark:Routing Hydrograph for C4
004:0060-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M5 112.92 4.253 No_date 2:40 30.35 408
[CN= 73.6: N= 3.00]
[Tp= .97:DT= 1.00]
004:0061-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M5 112.92 4.253 No_date 2:40 30.35 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.004
remark:Runoff Hydrograph for M5
004:0062-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C4 3755.64 45.660 No_date 5:27 29.31 n/a
[DT= 1.00] SUM= 03:M5 112.92 4.253 No_date 2:40 30.35 n/a
004:0063-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J5 3868.56 46.012 No_date 5:17 29.34 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.004
remark:Hydrograph for J5
004:0064-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J5 3868.56 46.012 No_date 5:17 29.34 n/a
[RDT= 1.00] out<- 02:C5 3868.56 42.891 No_date 6:16 29.34 n/a
[L/S/n= 1450./ .050/.035]
[Vmax= .497:Dmax= 2.244]
004:0065-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C5 3868.56 42.891 No_date 6:16 29.34 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.004
remark:Routing Hydrograph for C5
004:0066-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M6 273.75 7.240 No_date 3:27 32.05 430
[CN= 75.2: N= 3.00]
[Tp= 1.68:DT= 1.00]
004:0067-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M6 273.75 7.240 No_date 3:27 32.05 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.004
remark:Runoff Hydrograph for M6
004:0068-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C5 3868.56 42.891 No_date 6:16 29.34 n/a
[DT= 1.00] SUM= 03:M6 273.75 7.240 No_date 3:27 32.05 n/a
004:0069-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:J6 4142.31 44.933 No_date 5:53 29.52 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.004
remark:Hydrograph for J6
004:0070-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M7 21.88 1.379 No_date 1:57 30.57 411
[CN= 73.8: N= 3.00]
[Tp= .39:DT= 1.00]
004:0071-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M7 21.88 1.379 No_date 1:57 30.57 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.004
remark:Runoff Hydrograph for M7
004:0072-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 03:M7 21.88 1.379 No_date 1:57 30.57 n/a
[DT= 1.00] SUM= 04:J6 4142.31 44.933 No_date 5:53 29.52 n/a
004:0073-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D6 4164.19 44.933 No_date 5:53 29.53 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.004
remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
004:0074-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 05:D14 402.87 9.403 No_date 3:13 27.48 n/a
[DT= 1.00] SUM= 06:D6 4164.19 44.933 No_date 5:53 29.53 n/a
004:0075-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J7 4567.06 48.060 No_date 5:21 29.35 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.004
remark:Hydrograph for J7
004:0076-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J7 4567.06 48.060 No_date 5:21 29.35 n/a

[RDT= 1.00] out<- 02:C7 4567.06 47.982 No_date 5:27 29.35 n/a
[L/S/n= 520./ .130/.035]
[Vmax= 1.211:Dmax= 2.193]
004:0077-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C7 4567.06 47.982 No_date 5:27 29.35 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.004
remark:Routing Hydrograph for C7
004:0078-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M8 502.47 3.300 No_date 5:25 15.88 .213
[CN= 56.2: N= 3.00]
[Tp= 3.62:DT= 1.00]
004:0079-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M8 502.47 3.300 No_date 5:25 15.88 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.004
remark:Runoff Hydrograph for M8
004:0080-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C7 4567.06 47.982 No_date 5:27 29.35 n/a
[DT= 1.00] SUM= 03:M8 502.47 3.300 No_date 5:25 15.88 n/a
004:0081-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J8 5069.53 51.282 No_date 5:27 28.01 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.004
remark:Hydrograph for J8
004:0082-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J8 5069.53 51.282 No_date 5:27 28.01 n/a
[RDT= 1.00] out<- 02:C8 5069.53 51.089 No_date 5:42 28.01 n/a
[L/S/n= 1010./ .150/.035]
[Vmax= 1.329:Dmax= 2.243]
004:0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C8 5069.53 51.089 No_date 5:42 28.01 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.004
remark:Routing Hydrograph for C8
004:0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M9 159.64 4.89 No_date 5:16 6.92 .093
[CN= 39.7: N= 3.00]
[Tp= 3.37:DT= 1.00]
004:0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M9 159.64 4.89 No_date 5:16 6.92 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.004
remark:Runoff Hydrograph for M9
004:0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C9 5069.53 51.089 No_date 5:42 28.01 n/a
[DT= 1.00] SUM= 03:M9 159.64 4.89 No_date 5:16 6.92 n/a
004:0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J9 5229.17 51.571 No_date 5:42 27.37 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.004
remark:Hydrograph for J9
004:0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J9 5229.17 51.571 No_date 5:42 27.37 n/a
[RDT= 1.00] out<- 02:C9 5229.17 51.410 No_date 5:53 27.37 n/a
[L/S/n= 1810./ .990/.035]
[Vmax= 2.010:Dmax= 9.37]
004:0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C9 5229.17 51.410 No_date 5:53 27.37 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.004
remark:Routing Hydrograph for C9
004:0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M10 190.19 1.016 No_date 3:44 6.79 .091
[CN= 39.5: N= 3.00]
[Tp= 1.79:DT= 1.00]
004:0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M10 190.19 1.016 No_date 3:44 6.79 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.004
remark:Runoff Hydrograph for M10
004:0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C9 5229.17 51.410 No_date 5:53 27.37 n/a
[DT= 1.00] SUM= 03:M10 190.19 1.016 No_date 3:44 6.79 n/a
004:0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J10 5419.36 51.875 No_date 5:49 26.65 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.004
remark:Hydrograph for J10
004:0094-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J10 5419.36 51.875 No_date 5:49 26.65 n/a
[RDT= 1.00] out<- 02:C10 5419.36 51.852 No_date 5:54 26.65 n/a
[L/S/n= 590./ .180/.035]
[Vmax= 1.408:Dmax= 2.105]
004:0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C10 5419.36 51.852 No_date 5:54 26.65 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.004
remark:Routing Hydrograph for C10
004:0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M11 26.92 1.487 No_date 2:10 31.10 418
[CN= 74.3: N= 3.00]
[Tp= .55:DT= 1.00]
004:0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M11 26.92 1.487 No_date 2:10 31.10 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.004
remark:Runoff Hydrograph for M11
004:0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C10 5419.36 51.852 No_date 5:54 26.65 n/a
[DT= 1.00] SUM= 03:M11 26.92 1.487 No_date 2:10 31.10 n/a
004:0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:O1 5446.28 51.852 No_date 5:54 26.67 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-O1.004
remark:Hydrograph for O1
** END OF RUN : 5
*****
RUN:COMMAND#
006:0001-----
START
[TZERO = .00 hrs on 0]
[METOUT= 2 (1=imperial, 2=metric output)]
[INSTOUR= 1]
[Vmax= 6]
[INRUN = 6]
*****
# Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
# Date : 29-11-2017
# Modeller : [AA, TB, SN]
# Company : Rideau Valley Conservation Authority
# License # : 5329846
*****
006:0002-----
READ STORM
Filename = storm.001

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Comment =
[SDT=10.00:SDUR= 6.00:PTOT= 88.42]
-----
006:0003-----
DEFAULT VALUES
Filename = N:\BECKETT-1\HYDROL-1\BEA161-1\BckVal.val
TCASEBv = 1 (read and print data)
FileTitle= File comment: [RVCA Becketts Creek FPM]
THE FOLLOWING PARAMETERS ARE USED IN THE DESIGN STANDHYD COM
Horton's infiltration equation parameters:
[Fo= 76.20 mm/hr] [Fc=13.20 mm/hr] [DCAY= 4.14 /hr] [F= .00 mm]
Parameters for PERVIOUS surfaces in STANDHYD:
[L/S/n= 4.67 mm] [LGP=40.00 mm] [MNP=.250]
Parameters for IMPVIOUS surfaces in STANDHYD:
[L/Aimp= 1.57 mm] [CLi= 1.50] [MNI=.013]
Parameters used in NASHYD:
[L/a= 1.50 mm] [N= 3.00]
# Upstream Tributary
006:0004-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT1 338.44 6.008 No_date 5:57 41.30 .467
[CN= 74.5: N= 3.00]
[TP= 3.04:DT= 1.00]
006:0005-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT1 338.44 6.008 No_date 5:57 41.30 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.006
remark:Runoff Hydrograph for UT1
006:0006-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT1 338.44 6.008 No_date 5:57 41.30 n/a
[RDT= 1.00] out<- 02:C11 338.44 5.886 No_date 6:31 41.30 n/a
[L/S/n= 1960./ .510/.035]
[Vmax= 1.035:Dmax= .399]
006:0007-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C11 338.44 5.886 No_date 6:31 41.30 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C11.006
remark:Routing Hydrograph for C11
006:0008-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT2 89.11 5.221 No_date 2:46 44.14 .499
[CN= 76.6: N= 3.00]
[TP= .64:DT= 1.00]
006:0009-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT2 89.11 5.221 No_date 2:46 44.14 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.006
remark:Runoff Hydrograph for UT2
006:0010-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C11 338.44 5.886 No_date 6:31 41.30 n/a
+ 03:UT2 89.11 5.221 No_date 2:46 44.14 n/a
[DT= 1.00] SUM= 04:D11 427.55 6.634 No_date 6:07 41.89 n/a
006:0011-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D11 427.55 6.634 No_date 6:07 41.89 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.006
remark:Downstream Hydrograph for C11
006:0012-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT3 459.85 9.809 No_date 4:41 37.59 .425
[CN= 71.4: N= 3.00]
[TP= 2.06:DT= 1.00]
006:0013-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT3 459.85 9.809 No_date 4:41 37.59 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.006
remark:Runoff Hydrograph for UT3
006:0014-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT3 459.85 9.809 No_date 4:41 37.59 n/a
[RDT= 1.00] out<- 02:C12 459.85 9.155 No_date 5:22 37.59 n/a
[L/S/n= 2300./ .410/.035]
[Vmax= .879:Dmax= .732]
006:0015-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C12 459.85 9.155 No_date 5:22 37.59 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.006
remark:Routing Hydrograph for C12
006:0016-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT4 137.12 6.375 No_date 3:08 45.42 .514
[CN= 77.6: N= 3.00]
[TP= .93:DT= 1.00]
006:0017-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT4 137.12 6.375 No_date 3:08 45.42 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.006
remark:Runoff Hydrograph for UT4
006:0018-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C12 459.85 9.155 No_date 5:22 37.59 n/a
+ 03:UT4 137.12 6.375 No_date 3:08 45.42 n/a
[DT= 1.00] SUM= 05:D12 596.97 11.709 No_date 4:45 39.39 n/a
006:0019-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D12 596.97 11.709 No_date 4:45 39.39 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.006
remark:Downstream Hydrograph for C12
006:0020-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D11 427.55 6.634 No_date 6:07 41.89 n/a
+ 05:D12 596.97 11.709 No_date 4:45 39.39 n/a
[DT= 1.00] SUM= 01:J13 1024.52 17.757 No_date 5:08 40.43 n/a
006:0021-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J13 1024.52 17.757 No_date 5:08 40.43 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.006
remark:Hydrograph for J13
006:0022-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J13 1024.52 17.757 No_date 5:08 40.43 n/a
[RDT= 1.00] out<- 02:C13 1024.52 17.412 No_date 5:43 40.43 n/a
[L/S/n= 1540./ .250/.035]
[Vmax= .807:Dmax= 1.580]
006:0023-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C13 1024.52 17.412 No_date 5:43 40.43 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.006
remark:Routing Hydrograph for C13
006:0024-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT5 67.49 1.299 No_date 5:37 42.17 .477
[CN= 75.2: N= 3.00]
[TP= 2.80:DT= 1.00]
006:0025-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT5 67.49 1.299 No_date 5:37 42.17 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.006
remark:Runoff Hydrograph for UT5
006:0026-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C13 1024.52 17.412 No_date 5:43 40.43 n/a
+ 03:UT5 67.49 1.299 No_date 5:37 42.17 n/a
[DT= 1.00] SUM= 04:D13 1092.01 18.711 No_date 5:42 40.54 n/a
006:0027-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D13 1092.01 18.711 No_date 5:42 40.54 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.006
remark:Downstream Hydrograph for C13
# Downstream Tributary
006:0028-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:DT1 268.29 6.346 No_date 4:06 35.10 .397
[CN= 69.3: N= 3.00]
[TP= 1.61:DT= 1.00]
006:0029-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:DT1 268.29 6.346 No_date 4:06 35.10 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.006
remark:Runoff Hydrograph for DT1
006:0030-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1 268.29 6.346 No_date 4:06 35.10 n/a
[RDT= 1.00] out<- 02:C14 268.29 6.119 No_date 4:32 35.10 n/a
[L/S/n= 2210./ .780/.035]
[Vmax= 1.539:Dmax= .694]
006:0031-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C14 268.29 6.119 No_date 4:32 35.10 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.006
remark:Routing Hydrograph for C14
006:0032-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:DT2 134.58 5.301 No_date 3:12 39.97 .452
[CN= 73.4: N= 3.00]
[TP= .96:DT= 1.00]
006:0033-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:DT2 134.58 5.301 No_date 3:12 39.97 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.006
remark:Runoff Hydrograph for DT2
006:0034-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C14 268.29 6.119 No_date 4:32 35.10 n/a
+ 03:DT2 134.58 5.301 No_date 3:12 39.97 n/a
[DT= 1.00] SUM= 05:D14 402.87 9.893 No_date 3:54 36.73 n/a
006:0035-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D14 402.87 9.893 No_date 3:54 36.73 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.006
remark:Downstream Hydrograph for C14
# Main Channel
006:0036-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:M1 457.96 14.323 No_date 4:07 46.83 .530
[CN= 78.6: N= 3.00]
[TP= 1.68:DT= 1.00]
006:0037-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:M1 457.96 14.323 No_date 4:07 46.83 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.006
remark:Runoff Hydrograph for M1
006:0038-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:M1 457.96 14.323 No_date 4:07 46.83 n/a
[RDT= 1.00] out<- 02:C1 457.96 13.987 No_date 4:25 46.83 n/a
[L/S/n= 1720./ .400/.035]
[Vmax= 1.365:Dmax= .922]
006:0039-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C1 457.96 13.987 No_date 4:25 46.83 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.006
remark:Routing Hydrograph for C1
006:0040-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M2 341.59 15.850 No_date 3:03 42.83 .484
[CN= 75.7: N= 3.00]
[TP= .85:DT= 1.00]
006:0041-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M2 341.59 15.850 No_date 3:03 42.83 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.006
remark:Runoff Hydrograph for M2
006:0042-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C1 457.96 13.987 No_date 4:25 46.83 n/a
+ 03:M2 341.59 15.850 No_date 3:03 42.83 n/a
[DT= 1.00] SUM= 01:J2 799.55 25.061 No_date 3:32 45.12 n/a
006:0043-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J2 799.55 25.061 No_date 3:32 45.12 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.006
remark:Hydrograph for J2
006:0044-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J2 799.55 25.061 No_date 3:32 45.12 n/a
[RDT= 1.00] out<- 02:C2 799.55 22.717 No_date 4:14 45.12 n/a
[L/S/n= 1940./ .210/.035]
[Vmax= .952:Dmax= .692]
006:0045-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C2 799.55 22.717 No_date 4:14 45.12 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.006
remark:Routing Hydrograph for C2
006:0046-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M3 165.13 5.263 No_date 4:01 46.29 .524
[CN= 78.2: N= 3.00]
[TP= 1.61:DT= 1.00]
006:0047-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M3 165.13 5.263 No_date 4:01 46.29 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.006
remark:Runoff Hydrograph for M3
006:0048-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C2 799.55 22.717 No_date 4:14 45.12 n/a
+ 03:M3 165.13 5.263 No_date 4:01 46.29 n/a
[DT= 1.00] SUM= 01:J3 964.68 27.940 No_date 4:12 45.32 n/a
006:0049-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J3 964.68 27.940 No_date 4:12 45.32 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.006
remark:Hydrograph for J3
006:0050-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J3 964.68 27.940 No_date 4:12 45.32 n/a
[RDT= 1.00] out<- 02:C3 964.68 27.245 No_date 4:37 45.32 n/a
[L/S/n= 1090./ .180/.035]
[Vmax= 1.172:Dmax= 2.126]
006:0051-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C3 964.68 27.245 No_date 4:37 45.32 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.006
remark:Routing Hydrograph for C3
006:0052-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M4 1698.95 20.924 No_date 6:54 34.21 .387
[CN= 68.5: N= 3.00]
[TP= 3.84:DT= 1.00]
006:0053-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M4 1698.95 20.924 No_date 6:54 34.21 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.006
remark:Runoff Hydrograph for M4
006:0054-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C3 964.68 27.245 No_date 4:37 45.32 n/a
+ 03:M4 1698.95 20.924 No_date 6:54 34.21 n/a
[DT= 1.00] SUM= 06:D3 2663.63 43.521 No_date 5:16 38.24 n/a
006:0055-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D3 2663.63 43.521 No_date 5:16 38.24 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.006
remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
006:0056-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD + 06:D3 2663.63 43.521 No_date 5:16 38.24 n/a
[DT= 1.00] SUM= 01:J4 3755.64 62.074 No_date 5:21 38.91 n/a
006:0057-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J4 3755.64 62.074 No_date 5:21 38.91 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.006
remark:Hydrograph for J4
006:0058-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J4 3755.64 62.074 No_date 5:21 38.91 n/a
[RDT= 1.00] out<- 02:C4 3755.64 54.846 No_date 6:41 38.91 n/a

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[L/S/n= 2020. / .090 / .035]
[Vmax= .492;Dmax= 2.559]
006/0059-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C4 3755.64 54.846 No_date 6:41 38.91 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.006
remark:Routing Hydrograph for C4
006/0060-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M5 112.92 4.443 No_date 3:13 40.20 .455
[CN= 73.6: N= 3.00]
[Tp= .97;DT= 1.00]
006/0061-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M5 112.92 4.443 No_date 3:13 40.20 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.006
remark:Runoff Hydrograph for M5
006/0062-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C5 3755.64 54.846 No_date 6:41 38.91 n/a
[DT= 1.00] SUM= 03:M5 112.92 4.443 No_date 3:13 40.20 n/a
006/0063-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J5 3868.56 55.813 No_date 6:27 38.94 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.006
remark:Hydrograph for J5
006/0064-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J5 3868.56 55.813 No_date 6:27 38.94 n/a
[RDT= 1.00] out<- 02:C5 3868.56 51.906 No_date 7:29 38.94 n/a
[L/S/n= 1450. / .050 / .035]
[Vmax= .476;Dmax= 2.416]
006/0065-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C5 3868.56 51.906 No_date 7:29 38.94 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.006
remark:Routing Hydrograph for C5
006/0066-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M6 273.75 7.658 No_date 4:09 42.22 .478
[CN= 75.2: N= 3.00]
[Tp= 1.68;DT= 1.00]
006/0067-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M6 273.75 7.658 No_date 4:09 42.22 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.006
remark:Runoff Hydrograph for M6
006/0068-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C6 3868.56 51.906 No_date 7:29 38.94 n/a
[DT= 1.00] SUM= 04:J6 4142.31 54.985 No_date 7:00 39.16 n/a
006/0069-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:J6 4142.31 54.985 No_date 7:00 39.16 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.006
remark:Hydrograph for J6
006/0070-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M7 21.88 1.616 No_date 2:27 40.46 .458
[CN= 73.8: N= 3.00]
[Tp= .39;DT= 1.00]
006/0071-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M7 21.88 1.616 No_date 2:27 40.46 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.006
remark:Runoff Hydrograph for M7
006/0072-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 03:M7 21.88 1.616 No_date 2:27 40.46 n/a
[DT= 1.00] SUM= 04:J6 4142.31 54.985 No_date 7:00 39.16 n/a
006/0073-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D6 4164.19 55.003 No_date 7:00 39.17 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.006
remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
006/0074-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 05:J4 402.87 9.893 No_date 3:54 36.73 n/a
[DT= 1.00] SUM= 06:D6 4164.19 55.003 No_date 7:00 39.17 n/a
006/0075-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J7 4567.06 59.434 No_date 6:47 38.95 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.006
remark:Hydrograph for J7
006/0076-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J7 4567.06 59.434 No_date 6:47 38.95 n/a
[RDT= 1.00] out<- 02:C7 4567.06 59.348 No_date 6:47 38.95 n/a
[L/S/n= 520. / .130 / .035]
[Vmax= 1.228;Dmax= 2.376]
006/0077-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C7 4567.06 59.348 No_date 6:47 38.95 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.006
remark:Routing Hydrograph for C7
006/0078-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M8 502.47 4.208 No_date 6:48 22.30 .252
[CN= 56.2: N= 3.00]
[Tp= 3.62;DT= 1.00]
006/0079-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M8 502.47 4.208 No_date 6:48 22.30 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.006
remark:Runoff Hydrograph for M8
006/0080-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C7 4567.06 59.348 No_date 6:47 38.95 n/a
[DT= 1.00] SUM= 03:M8 502.47 4.208 No_date 6:48 22.30 n/a
006/0081-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J8 5069.53 63.556 No_date 6:47 37.30 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.006
remark:Hydrograph for J8
006/0082-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J8 5069.53 63.556 No_date 6:47 37.30 n/a
* [RDT= 1.00] out<- 02:C8 5069.53 63.249 No_date 7:00 37.30 n/a
[L/S/n= 1010. / .150 / .035]
[Vmax= 1.371;Dmax= 2.497]
006/0083-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C8 5069.53 63.249 No_date 7:00 37.30 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.006
remark:Routing Hydrograph for C8
006/0084-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M9 159.64 .663 No_date 6:47 10.52 .119
[CN= 39.7: N= 3.00]
[Tp= 3.37;DT= 1.00]
006/0085-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M9 159.64 .663 No_date 6:47 10.52 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.006
remark:Runoff Hydrograph for M9
006/0086-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C8 5069.53 63.249 No_date 7:00 37.30 n/a
[DT= 1.00] SUM= 03:M9 159.64 .663 No_date 6:47 10.52 n/a
006/0087-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J9 5229.17 63.910 No_date 7:00 36.48 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.006
remark:Hydrograph for J9
006/0088-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-

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ROUTE CHANNEL -> 01:J9 5229.17 63.910 No_date 7:00 36.48 n/a
[RDT= 1.00] out<- 02:C9 5229.17 63.699 No_date 7:02 36.48 n/a
[L/S/n= 1810. / .990 / .035]
[Vmax= 2.124;Dmax= 1.015]
006/0089-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C9 5229.17 63.699 No_date 7:02 36.48 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.006
remark:Routing Hydrograph for C9
006/0090-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M10 190.19 1.155 No_date 4:43 10.36 .117
[CN= 39.5: N= 3.00]
[Tp= 1.79;DT= 1.00]
006/0091-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M10 190.19 1.155 No_date 4:43 10.36 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.006
remark:Runoff Hydrograph for M10
006/0092-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C9 5229.17 63.699 No_date 7:02 36.48 n/a
[DT= 1.00] SUM= 03:M10 190.19 1.155 No_date 4:43 10.36 n/a
006/0093-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J10 5419.36 64.456 No_date 7:02 35.57 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.006
remark:Hydrograph for J10
006/0094-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J10 5419.36 64.456 No_date 7:02 35.57 n/a
* [RDT= 1.00] out<- 02:C10 5419.36 64.370 No_date 6:59 35.57 n/a
[L/S/n= 590. / .180 / .035]
[Vmax= 1.523;Dmax= 2.239]
006/0095-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C10 5419.36 64.370 No_date 6:59 35.57 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.006
remark:Routing Hydrograph for C10
006/0096-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M11 26.92 1.612 No_date 2:39 41.09 .465
[CN= 74.3: N= 3.00]
[Tp= .55;DT= 1.00]
006/0097-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M11 26.92 1.612 No_date 2:39 41.09 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.006
remark:Runoff Hydrograph for M11
006/0098-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C10 5419.36 64.370 No_date 6:59 35.57 n/a
[DT= 1.00] SUM= 03:M11 26.92 1.612 No_date 2:39 41.09 n/a
006/0099-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:O1 5446.28 64.433 No_date 6:59 35.59 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-O1.006
remark:Hydrograph for O1
** END OF RUN : 6

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RUN:COMMAND#
007/0001-----START
[TZROU = .00 hrs on 0]
[METOUT= 2 (1=imperial, 2=metric output)]
[INSTORM = 1]
[INRN = 7]
# Project Name: Becketts Creek FPM Project Number: [M800-200030-207]
# Date : 29-11-2017
# Modeller : [AA, TB, SN]
# Company : Rideau Valley Conservation Authority
# License # : 5329846
007/0002-----READ STORM
Filename = storm.001
Comment =
[SDT=30.00;SDUR= 6.00;PTOT= 88.43]
007/0003-----DEFAULT VALUES
Filename = N:\BECKETT-1\HYDROL-1\BEA161-1\BeckVal.val
ICASEdv = 1 (read and print data)
FileTitle = File comment: [RVCA Becketts Creek FPM]
THE FOLLOWING PARAMETERS ARE USED IN THE DESIGN STANDHYD COM
Horton's infiltration equation parameters:
[Fo= 76.20 mm/hr] [Fc=13.20 mm/hr] [DCAY= 4.14 /hr] [F= .00 mm]
Parameters for PERVIOUS surfaces in STANDHYD:
[IAper= 4.67 mm] [LGP=40.00 m] [MNP=.250]
Parameters for IMPERVIOUS surfaces in STANDHYD:
[IAimp= 1.57 mm] [CLI= 1.50] [MNI=.013]
Parameters used in NASHYD:
[Is = 1.50 mm] [Ns = 3.00]
# Upstream Tributary
007/0004-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT1 338.44 6.396 No_date 6:33 41.31 .467
[CN= 74.5: N= 3.00]
[Tp= 3.04;DT= 1.00]
007/0005-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT1 338.44 6.396 No_date 6:33 41.31 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.007
remark:Runoff Hydrograph for UT1
007/0006-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT1 338.44 6.396 No_date 6:33 41.31 n/a
[RDT= 1.00] out<- 02:C11 338.44 6.236 No_date 7:03 41.31 n/a
[L/S/n= 1960. / .510 / .035]
[Vmax= 1.045;Dmax= .410]
007/0007-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C11 338.44 6.236 No_date 7:03 41.31 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C11.007
remark:Routing Hydrograph for C11
007/0008-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT2 89.11 5.575 No_date 3:40 44.15 .499
[CN= 76.6: N= 3.00]
[Tp= .64;DT= 1.00]
007/0009-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT2 89.11 5.575 No_date 3:40 44.15 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.007
remark:Runoff Hydrograph for UT2
007/0010-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C11 338.44 6.236 No_date 7:03 41.31 n/a
[DT= 1.00] SUM= 03:UT2 89.11 5.575 No_date 3:40 44.15 n/a
007/0011-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D11 427.55 6.719 No_date 6:26 41.90 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.007

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remark:Downstream Hydrograph for C11
0070012-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT3 459.85 10.675 No_date 5:26 37.59 425
[CN= 71.4: N= 3.00]
[Tp= 2.06:DT= 1.00]
0070013-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT3 459.85 10.675 No_date 5:26 37.59 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.007
remark:Runoff Hydrograph for UT3
0070014-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT3 459.85 10.675 No_date 5:26 37.59 n/a
[RD= 1.00] out<- 02:C12 459.85 9.956 No_date 6:04 37.59 n/a
[L/S/n= 2300./ .410/.035]
[Vmax= .909:Dmax= .765]
0070015-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C12 459.85 9.956 No_date 6:04 37.59 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.007
remark:Routing Hydrograph for C12
0070016-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT4 137.12 6.924 No_date 4:00 45.43 514
[CN= 77.6: N= 3.00]
[Tp= .93:DT= 1.00]
0070017-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT4 137.12 6.924 No_date 4:00 45.43 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.007
remark:Runoff Hydrograph for UT4
0070018-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C12 459.85 9.956 No_date 6:04 37.59 n/a
+ 03:UT4 137.12 6.924 No_date 4:00 45.43 n/a
[DT= 1.00] SUM= 05:D12 596.97 12.734 No_date 5:25 39.39 n/a
0070019-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D12 596.97 12.734 No_date 5:25 39.39 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.007
remark:Downstream Hydrograph for C12
0070020-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D11 427.55 6.719 No_date 6:26 41.90 n/a
+ 05:D12 596.97 12.734 No_date 5:25 39.39 n/a
[DT= 1.00] SUM= 01:J13 1024.52 18.998 No_date 5:48 40.44 n/a
0070021-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J13 1024.52 18.998 No_date 5:48 40.44 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.007
remark:Hydrograph for J13
0070022-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J13 1024.52 18.998 No_date 5:48 40.44 n/a
[RD= 1.00] out<- 02:C13 1024.52 18.592 No_date 6:15 40.44 n/a
[L/S/n= 1540./ .250/.035]
[Vmax= .809:Dmax= 1.613]
0070023-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C13 1024.52 18.592 No_date 6:15 40.44 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.007
remark:Routing Hydrograph for C13
0070024-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT5 67.49 1.391 No_date 6:17 42.18 477
[CN= 75.2: N= 3.00]
[Tp= 2.80:DT= 1.00]
0070025-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT5 67.49 1.391 No_date 6:17 42.18 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.007
remark:Runoff Hydrograph for UT5
0070026-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C13 1024.52 18.592 No_date 6:15 40.44 n/a
+ 03:UT5 67.49 1.391 No_date 6:17 42.18 n/a
[DT= 1.00] SUM= 04:D13 1092.01 19.982 No_date 6:15 40.55 n/a
0070027-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D13 1092.01 19.982 No_date 6:15 40.55 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.007
remark:Downstream Hydrograph for C13
# Downstream Tributary
0070028-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:DT1 268.29 6.987 No_date 4:54 35.10 397
[CN= 69.3: N= 3.00]
[Tp= 1.61:DT= 1.00]
0070029-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:DT1 268.29 6.987 No_date 4:54 35.10 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.007
remark:Runoff Hydrograph for DT1
0070030-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1 268.29 6.987 No_date 4:54 35.10 n/a
[RD= 1.00] out<- 02:C14 268.29 6.720 No_date 5:18 35.10 n/a
[L/S/n= 2210./ .780/.035]
[Vmax= 1.561:Dmax= .721]
0070031-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C14 268.29 6.720 No_date 5:18 35.10 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.007
remark:Routing Hydrograph for C14
0070032-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:DT2 134.58 5.812 No_date 4:04 39.98 452
[CN= 73.4: N= 3.00]
[Tp= .96:DT= 1.00]
0070033-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:DT2 134.58 5.812 No_date 4:04 39.98 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.007
remark:Runoff Hydrograph for DT2
0070034-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C14 268.29 6.720 No_date 5:18 35.10 n/a
+ 03:DT2 134.58 5.812 No_date 4:04 39.98 n/a
[DT= 1.00] SUM= 05:D14 402.87 10.932 No_date 4:42 36.74 n/a
0070035-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D14 402.87 10.932 No_date 4:42 36.74 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.007
remark:Downstream Hydrograph for C14
# Main Channel
0070036-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:M1 457.96 15.554 No_date 4:55 46.84 530
[CN= 78.6: N= 3.00]
[Tp= 1.68:DT= 1.00]
0070037-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:M1 457.96 15.554 No_date 4:55 46.84 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.007
remark:Runoff Hydrograph for M1
0070038-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:M1 457.96 15.554 No_date 4:55 46.84 n/a
[RD= 1.00] out<- 02:C1 457.96 15.187 No_date 5:12 46.84 n/a
[L/S/n= 1720./ .400/.035]
[Vmax= 1.400:Dmax= .963]
0070039-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C1 457.96 15.187 No_date 5:12 46.84 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.007
remark:Routing Hydrograph for C1
0070040-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M2 341.59 17.244 No_date 3:55 42.84 484
[CN= 75.7: N= 3.00]
[Tp= .85:DT= 1.00]
0070041-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M2 341.59 17.244 No_date 3:55 42.84 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.007
remark:Runoff Hydrograph for M2
0070042-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C1 457.96 15.187 No_date 5:12 46.84 n/a
+ 03:M2 341.59 17.244 No_date 3:55 42.84 n/a
[DT= 1.00] SUM= 01:J2 799.55 27.484 No_date 4:23 45.13 n/a
0070043-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J2 799.55 27.484 No_date 4:23 45.13 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.007
remark:Hydrograph for J2
0070044-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J2 799.55 27.484 No_date 4:23 45.13 n/a
[RD= 1.00] out<- 02:C2 799.55 24.874 No_date 5:00 45.13 n/a
[L/S/n= 1940./ .210/.035]
[Vmax= .972:Dmax= .726]
0070045-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C2 799.55 24.874 No_date 5:00 45.13 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.007
remark:Routing Hydrograph for C2
0070046-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M3 165.13 5.723 No_date 4:50 46.30 524
[CN= 78.2: N= 3.00]
[Tp= 1.61:DT= 1.00]
0070047-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M3 165.13 5.723 No_date 4:50 46.30 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.007
remark:Runoff Hydrograph for M3
0070048-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C2 799.55 24.874 No_date 5:00 45.13 n/a
+ 03:M3 165.13 5.723 No_date 4:50 46.30 n/a
[DT= 1.00] SUM= 01:J3 964.68 30.567 No_date 4:58 45.33 n/a
0070049-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J3 964.68 30.567 No_date 4:58 45.33 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.007
remark:Hydrograph for J3
0070050-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J3 964.68 30.567 No_date 4:58 45.33 n/a
[RD= 1.00] out<- 02:C3 964.68 29.544 No_date 5:26 45.33 n/a
[L/S/n= 1090./ .180/.035]
[Vmax= 1.048:Dmax= 2.182]
0070051-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C3 964.68 29.544 No_date 5:26 45.33 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.007
remark:Routing Hydrograph for C3
0070052-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M4 1698.95 21.844 No_date 7:23 34.22 387
[CN= 68.5: N= 3.00]
[Tp= 3.84:DT= 1.00]
0070053-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M4 1698.95 21.844 No_date 7:23 34.22 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.007
remark:Runoff Hydrograph for M4
0070054-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C3 964.68 29.544 No_date 5:26 45.33 n/a
+ 03:M4 1698.95 21.844 No_date 7:23 34.22 n/a
[DT= 1.00] SUM= 06:D3 2663.63 47.351 No_date 5:56 38.24 n/a
0070055-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D3 2663.63 47.351 No_date 5:56 38.24 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.007
remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
0070056-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D13 1092.01 19.982 No_date 6:15 40.55 n/a
+ 06:D3 2663.63 47.351 No_date 5:56 38.24 n/a
[DT= 1.00] SUM= 01:J4 3755.64 67.212 No_date 6:01 38.91 n/a
0070057-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J4 3755.64 67.212 No_date 6:01 38.91 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.007
remark:Hydrograph for J4
0070058-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J4 3755.64 67.212 No_date 6:01 38.91 n/a
[RD= 1.00] out<- 02:C4 3755.64 57.994 No_date 7:11 38.91 n/a
[L/S/n= 2020./ .090/.035]
[Vmax= .486:Dmax= 2.609]
0070059-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C4 3755.64 57.994 No_date 7:11 38.91 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.007
remark:Routing Hydrograph for C4
0070060-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M5 112.92 4.869 No_date 4:05 40.20 455
[CN= 73.6: N= 3.00]
[Tp= .97:DT= 1.00]
0070061-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M5 112.92 4.869 No_date 4:05 40.20 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.007
remark:Runoff Hydrograph for M5
0070062-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C4 3755.64 57.994 No_date 7:11 38.91 n/a
+ 03:M5 112.92 4.869 No_date 4:05 40.20 n/a
[DT= 1.00] SUM= 01:J5 3868.56 58.785 No_date 7:00 38.95 n/a
0070063-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J5 3868.56 58.785 No_date 7:00 38.95 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.007
remark:Hydrograph for J5
0070064-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J5 3868.56 58.785 No_date 7:00 38.95 n/a
[RD= 1.00] out<- 02:C5 3868.56 53.864 No_date 7:55 38.95 n/a
[L/S/n= 1450./ .050/.035]
[Vmax= .472:Dmax= 2.461]
0070065-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C5 3868.56 53.864 No_date 7:55 38.95 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.007
remark:Routing Hydrograph for C5
0070066-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M6 273.75 8.356 No_date 4:56 42.23 478
[CN= 75.2: N= 3.00]
[Tp= 1.68:DT= 1.00]
0070067-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M6 273.75 8.356 No_date 4:56 42.23 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.007
remark:Runoff Hydrograph for M6
0070068-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C5 3868.56 53.864 No_date 7:55 38.95 n/a
+ 03:M6 273.75 8.356 No_date 4:56 42.23 n/a
[DT= 1.00] SUM= 04:J6 4142.31 57.008 No_date 7:37 39.17 n/a
0070069-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:J6 4142.31 57.008 No_date 7:37 39.17 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.007
remark:Hydrograph for J6
0070070-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M7 21.88 1.632 No_date 3:19 40.47 458

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[CN= 73.8: N= 3.00]
[Tp= .39:DT= 1.00]
007:0071-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M7 21.88 1.632 No_date 3:19 40.47 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.007
remark:Runoff Hydrograph for M7
007:0072-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 03:M7 21.88 1.632 No_date 3:19 40.47 n/a
+ 04:J6 4142.31 57.008 No_date 7:37 39.17 n/a
[DT= 1.00] SUM= 06:D6 4164.19 57.009 No_date 7:37 39.18 n/a
007:0073-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D6 4164.19 57.009 No_date 7:37 39.18 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.007
remark:Downstream Hydrograph for C6
Stream Junction of Main Channel and Downstream Tributary
007:0074-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 03:D14 402.87 10.932 No_date 4:42 36.74 n/a
+ 06:D6 4164.19 57.009 No_date 7:37 39.18 n/a
[DT= 1.00] SUM= 01:J7 4567.06 61.360 No_date 7:16 38.96 n/a
007:0075-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J7 4567.06 61.360 No_date 7:16 38.96 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.007
remark:Hydrograph for J7
007:0076-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J7 4567.06 61.360 No_date 7:16 38.96 n/a
* [RDT= 1.00] out<- 02:C7 4567.06 61.281 No_date 7:16 38.96 n/a
[L/S/n= 520./ .130/.035]
[Vmax= 1.231:Dmax= 2.407]
007:0077-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C7 4567.06 61.281 No_date 7:16 38.96 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.007
remark:Routing Hydrograph for C7
007:0078-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M8 502.47 4.427 No_date 7:15 22.31 .252
[CN= 56.2: N= 3.00]
[Tp= 3.62:DT= 1.00]
007:0079-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M8 502.47 4.427 No_date 7:15 22.31 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.007
remark:Runoff Hydrograph for M8
007:0080-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C7 4567.06 61.281 No_date 7:16 38.96 n/a
+ 03:M8 502.47 4.427 No_date 7:15 22.31 n/a
[DT= 1.00] SUM= 01:J8 5069.53 65.707 No_date 7:16 37.31 n/a
007:0081-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J8 5069.53 65.707 No_date 7:16 37.31 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.007
remark:Hydrograph for J8
007:0082-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J8 5069.53 65.707 No_date 7:16 37.31 n/a
[RDT= 1.00] out<- 02:C8 5069.53 65.458 No_date 7:25 37.31 n/a
[L/S/n= 1010./ .150/.035]
[Vmax= 1.379:Dmax= 2.535]
007:0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C8 5069.53 65.458 No_date 7:25 37.31 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.007
remark:Routing Hydrograph for C8
007:0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M9 159.64 .704 No_date 7:10 10.53 .119
[CN= 39.7: N= 3.00]
[Tp= 3.37:DT= 1.00]
007:0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M9 159.64 .704 No_date 7:10 10.53 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.007
remark:Runoff Hydrograph for M9
007:0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C8 5069.53 65.458 No_date 7:25 37.31 n/a
+ 03:M9 159.64 .704 No_date 7:10 10.53 n/a
[DT= 1.00] SUM= 01:J9 5229.17 66.158 No_date 7:25 36.49 n/a
007:0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J9 5229.17 66.158 No_date 7:25 36.49 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.007
remark:Hydrograph for J9
007:0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J9 5229.17 66.158 No_date 7:25 36.49 n/a
* [RDT= 1.00] out<- 02:C9 5229.17 65.970 No_date 7:37 36.49 n/a
[L/S/n= 1810./ .990/.035]
[Vmax= 2.147:Dmax= 1.929]
007:0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C9 5229.17 65.970 No_date 7:37 36.49 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.007
remark:Routing Hydrograph for C9
007:0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M10 190.19 1.312 No_date 5:24 10.36 .117
[CN= 39.5: N= 3.00]
[Tp= 1.79:DT= 1.00]
007:0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M10 190.19 1.312 No_date 5:24 10.36 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.007
remark:Runoff Hydrograph for M10
007:0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C9 5229.17 65.970 No_date 7:37 36.49 n/a
+ 03:M10 190.19 1.312 No_date 5:24 10.36 n/a
[DT= 1.00] SUM= 01:J10 5419.36 66.723 No_date 7:31 35.57 n/a
007:0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J10 5419.36 66.723 No_date 7:31 35.57 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.007
remark:Hydrograph for J10
007:0094-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J10 5419.36 66.723 No_date 7:31 35.57 n/a
* [RDT= 1.00] out<- 02:C10 5419.36 66.684 No_date 7:37 35.57 n/a
[L/S/n= 590./ .180/.035]
[Vmax= 1.546:Dmax= 2.334]
007:0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C10 5419.36 66.684 No_date 7:37 35.57 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.007
remark:Routing Hydrograph for C10
007:0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M11 26.92 1.702 No_date 3:35 41.10 .465
[CN= 74.3: N= 3.00]
[Tp= .55:DT= 1.00]
007:0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M11 26.92 1.702 No_date 3:35 41.10 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.007
remark:Runoff Hydrograph for M11
007:0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C10 5419.36 66.684 No_date 7:37 35.57 n/a
+ 03:M11 26.92 1.702 No_date 3:35 41.10 n/a
[DT= 1.00] SUM= 01:O1 5446.28 66.698 No_date 7:37 35.60 n/a
007:0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:O1 5446.28 66.698 No_date 7:37 35.60 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-O1.007
remark:Hydrograph for O1

** END OF RUN : 11

RUN:COMMAND#
012:0001-----
START
[TZERO = .00 hrs on 0]
[METOUT= 2 (1=imperial, 2=metric output)]
[NSTORM= 1]
[NRUN = 12]

Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
Date : 29-11-2017
Modeller : [AA, TB, SN]
Company : Rideau Valley Conservation Authority
License # : 5329846

012:0002-----
READ STORM
Filename = storm.001
Comment =
[SDT=10.00:SDUR= 12.00:PTOT= 104.44]
012:0003-----
DEFAULT VALUES
Filename = N:\BECKETT-1\HYDROL-1\BEA161-1\BeckVal.val
ICASEdy = 1 (read and print data)
FileType = File comment: [RVCA Becketts Creek FPM]
THE FOLLOWING PARAMETERS ARE USED IN THE DESIGN STANDHYD COM
Horton's infiltration equation parameters:
[Fo= 76.20 mm/hr] [Fc=13.20 mm/hr] [DCAV= 4.14 /hr] [F= .00 mm]
Parameters for PERVIOUS surfaces in STANDHYD:
[IAper= 4.67 mm] [LGP=40.00 m] [MNP=.250]
Parameters for IMPERVIOUS surfaces in STANDHYD:
[IAimp= 1.57 mm] [CLI= 1.50] [MNI=.013]
Parameters used in NASHYD:
[Is= 1.50 mm] [N= 3.00]
Upstream Tributary
012:0004-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT1 338.44 6.610 No_date 7:51 53.52 .512
[CN= 74.5: N= 3.00]
[Tp= 3.04:DT= 1.00]
012:0005-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT1 338.44 6.610 No_date 7:51 53.52 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.012
remark:Runoff Hydrograph for UT1
012:0006-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT1 338.44 6.610 No_date 7:51 53.52 n/a
[RDT= 1.00] out<- 02:C11 338.44 6.488 No_date 8:23 53.52 n/a
[L/S/n= 1960./ .510/.035]
[Vmax= 1.050:Dmax= .416]
012:0007-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C11 338.44 6.488 No_date 8:23 53.52 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C11.012
remark:Routing Hydrograph for C11
012:0008-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT2 89.11 5.784 No_date 4:44 56.83 .544
[CN= 76.6: N= 3.00]
[Tp= .64:DT= 1.00]
012:0009-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT2 89.11 5.784 No_date 4:44 56.83 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.012
remark:Runoff Hydrograph for UT2
012:0010-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C11 338.44 6.488 No_date 8:23 53.52 n/a
+ 03:UT2 89.11 5.784 No_date 4:44 56.83 n/a
[DT= 1.00] SUM= 04:D11 427.55 7.293 No_date 8:09 54.21 n/a
012:0011-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D11 427.55 7.293 No_date 8:09 54.21 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.012
remark:Downstream Hydrograph for C11
012:0012-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT3 459.85 10.892 No_date 6:36 49.16 .471
[CN= 71.4: N= 3.00]
[Tp= 2.06:DT= 1.00]
012:0013-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT3 459.85 10.892 No_date 6:36 49.16 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.012
remark:Runoff Hydrograph for UT3
012:0014-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT3 459.85 10.892 No_date 6:36 49.16 n/a
[RDT= 1.00] out<- 02:C12 459.85 10.220 No_date 7:13 49.16 n/a
[L/S/n= 2300./ .410/.035]
[Vmax= .917:Dmax= .773]
012:0015-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C12 459.85 10.220 No_date 7:13 49.16 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.012
remark:Routing Hydrograph for C12
012:0016-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT4 137.12 7.047 No_date 5:06 58.30 .558
[CN= 77.6: N= 3.00]
[Tp= .93:DT= 1.00]
012:0017-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT4 137.12 7.047 No_date 5:06 58.30 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.012
remark:Runoff Hydrograph for UT4
012:0018-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C12 459.85 10.220 No_date 7:13 49.16 n/a
+ 03:UT4 137.12 7.047 No_date 5:06 58.30 n/a
[DT= 1.00] SUM= 05:D12 596.97 13.084 No_date 6:37 51.26 n/a
012:0019-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D12 596.97 13.084 No_date 6:37 51.26 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.012
remark:Downstream Hydrograph for C12
012:0020-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D11 427.55 7.293 No_date 8:09 54.21 n/a
+ 05:D12 596.97 13.084 No_date 6:37 51.26 n/a
[DT= 1.00] SUM= 01:J13 1024.52 19.651 No_date 6:58 52.49 n/a
012:0021-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J13 1024.52 19.651 No_date 6:58 52.49 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.012
remark:Hydrograph for J13
012:0022-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J13 1024.52 19.651 No_date 6:58 52.49 n/a
[RDT= 1.00] out<- 02:C13 1024.52 19.256 No_date 7:34 52.49 n/a
[L/S/n= 1540./ .250/.035]
[Vmax= .810:Dmax= 1.630]
012:0023-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C13 1024.52 19.256 No_date 7:34 52.49 n/a

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fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.012
remark:Routing Hydrograph for C13
012:0024-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:U75 67.49 1.430 No_date 7:32 54.54 .522
[CN= 75.2: N= 3.00]
[TP= 2.80:DT= 1.00]
012:0025-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:U75 67.49 1.430 No_date 7:32 54.54 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-U75.012
remark:Runoff Hydrograph for U75
012:0026-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C13 1024.52 19.256 No_date 7:34 52.49 n/a
+ 03:U75 67.49 1.430 No_date 7:32 54.54 n/a
[DT= 1.00] SUM= 04:D13 1092.01 20.686 No_date 7:33 52.62 n/a
012:0027-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D13 1092.01 20.686 No_date 7:33 52.62 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.012
remark:Downstream Hydrograph for C13
# Downstream Tributary
012:0028-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:DT1 268.29 7.091 No_date 6:02 46.20 .442
[CN= 69.3: N= 3.00]
[TP= 1.61:DT= 1.00]
012:0029-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:DT1 268.29 7.091 No_date 6:02 46.20 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.012
remark:Runoff Hydrograph for DT1
012:0030-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1 268.29 7.091 No_date 6:02 46.20 n/a
[RD7= 1.00] out<- 02:C14 268.29 6.838 No_date 6:27 46.20 n/a
[LS/n= 2210./ .780/.035]
[Vmax= 1.564:Dmax= .725]
012:0031-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C14 268.29 6.838 No_date 6:27 46.20 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.012
remark:Routing Hydrograph for C14
012:0032-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:DT2 134.58 5.909 No_date 5:10 51.97 .498
[CN= 73.4: N= 3.00]
[TP= .96:DT= 1.00]
012:0033-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:DT2 134.58 5.909 No_date 5:10 51.97 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.012
remark:Runoff Hydrograph for DT2
012:0034-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C14 268.29 6.838 No_date 6:27 46.20 n/a
+ 03:DT2 134.58 5.909 No_date 5:10 51.97 n/a
[DT= 1.00] SUM= 05:D14 402.87 11.081 No_date 5:50 48.13 n/a
012:0035-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D14 402.87 11.081 No_date 5:50 48.13 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.012
remark:Downstream Hydrograph for C14
# Main Channel
012:0036-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:M1 457.96 15.762 No_date 6:03 59.92 .574
[CN= 78.6: N= 3.00]
[TP= 1.68:DT= 1.00]
012:0037-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:M1 457.96 15.762 No_date 6:03 59.92 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.012
remark:Runoff Hydrograph for M1
012:0038-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:M1 457.96 15.762 No_date 6:03 59.92 n/a
[RD7= 1.00] out<- 02:C1 457.96 15.414 No_date 6:20 59.92 n/a
[LS/n= 1720./ .400/.035]
[Vmax= 1.406:Dmax= .979]
012:0039-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C1 457.96 15.414 No_date 6:20 59.92 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.012
remark:Routing Hydrograph for C1
012:0040-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M2 341.59 17.594 No_date 5:01 55.31 .530
[CN= 75.7: N= 3.00]
[TP= .85:DT= 1.00]
012:0041-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M2 341.59 17.594 No_date 5:01 55.31 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.012
remark:Runoff Hydrograph for M2
012:0042-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C1 457.96 15.414 No_date 6:20 59.92 n/a
+ 03:M2 341.59 17.594 No_date 5:01 55.31 n/a
[DT= 1.00] SUM= 01:J2 799.55 27.789 No_date 5:30 57.95 n/a
012:0043-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J2 799.55 27.789 No_date 5:30 57.95 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.012
remark:Hydrograph for J2
012:0044-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J2 799.55 27.789 No_date 5:30 57.95 n/a
[RD7= 1.00] out<- 02:C2 799.55 25.240 No_date 6:08 57.95 n/a
[LS/n= 1940./ .210/.035]
[Vmax= .975:Dmax= .730]
012:0045-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C2 799.55 25.240 No_date 6:08 57.95 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.012
remark:Routing Hydrograph for C2
012:0046-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M3 165.13 5.797 No_date 5:58 59.31 .568
[CN= 78.2: N= 3.00]
[TP= 1.61:DT= 1.00]
012:0047-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M3 165.13 5.797 No_date 5:58 59.31 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.012
remark:Runoff Hydrograph for M3
012:0048-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C2 799.55 25.240 No_date 6:08 57.95 n/a
+ 03:M3 165.13 5.797 No_date 5:58 59.31 n/a
[DT= 1.00] SUM= 01:J3 964.68 31.005 No_date 6:06 58.18 n/a
012:0049-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J3 964.68 31.005 No_date 6:06 58.18 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.012
remark:Hydrograph for J3
012:0050-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J3 964.68 31.005 No_date 6:06 58.18 n/a
[RD7= 1.00] out<- 02:C3 964.68 29.973 No_date 6:35 58.18 n/a
[LS/n= 1090./ .180/.035]
[Vmax= 1.030:Dmax= 2.191]
012:0051-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C3 964.68 29.973 No_date 6:35 58.18 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.012
remark:Routing Hydrograph for C3
012:0052-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M4 1698.95 23.287 No_date 8:59 45.15 .432
[CN= 68.5: N= 3.00]

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[TP= 3.84:DT= 1.00]
012:0053-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M4 1698.95 23.287 No_date 8:59 45.15 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.012
remark:Runoff Hydrograph for M4
012:0054-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C3 964.68 29.973 No_date 6:35 58.18 n/a
+ 03:M4 1698.95 23.287 No_date 8:59 45.15 n/a
[DT= 1.00] SUM= 06:D3 2663.63 48.483 No_date 7:07 49.87 n/a
012:0055-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D3 2663.63 48.483 No_date 7:07 49.87 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.012
remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
012:0056-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D13 1092.01 20.686 No_date 7:33 52.62 n/a
+ 06:D3 2663.63 48.483 No_date 7:07 49.87 n/a
[DT= 1.00] SUM= 01:J4 3755.64 69.006 No_date 7:15 50.67 n/a
012:0057-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J4 3755.64 69.006 No_date 7:15 50.67 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.012
remark:Hydrograph for J4
012:0058-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J4 3755.64 69.006 No_date 7:15 50.67 n/a
[RD7= 1.00] out<- 02:C4 3755.64 60.657 No_date 8:36 50.67 n/a
[LS/n= 2020./ .090/.035]
[Vmax= .484:Dmax= 2.626]
012:0059-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C4 3755.64 60.657 No_date 8:36 50.67 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.012
remark:Routing Hydrograph for C4
012:0060-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M5 112.92 4.950 No_date 5:10 52.23 .500
[CN= 73.6: N= 3.00]
[TP= .97:DT= 1.00]
012:0061-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M5 112.92 4.950 No_date 5:10 52.23 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.012
remark:Runoff Hydrograph for M5
012:0062-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C4 3755.64 60.657 No_date 8:36 50.67 n/a
+ 03:M5 112.92 4.950 No_date 5:10 52.23 n/a
[DT= 1.00] SUM= 01:J5 3868.56 61.745 No_date 8:33 50.71 n/a
012:0063-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J5 3868.56 61.745 No_date 8:33 50.71 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.012
remark:Hydrograph for J5
012:0064-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J5 3868.56 61.745 No_date 8:33 50.71 n/a
[RD7= 1.00] out<- 02:C5 3868.56 57.471 No_date 9:36 50.71 n/a
[LS/n= 1450./ .050/.035]
[Vmax= .471:Dmax= 2.496]
012:0065-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C5 3868.56 57.471 No_date 9:36 50.71 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.012
remark:Routing Hydrograph for C5
012:0066-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M6 273.75 8.475 No_date 6:05 54.60 .523
[CN= 75.2: N= 3.00]
[TP= 1.68:DT= 1.00]
012:0067-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M6 273.75 8.475 No_date 6:05 54.60 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.012
remark:Runoff Hydrograph for M6
012:0068-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C5 3868.56 57.471 No_date 9:36 50.71 n/a
+ 03:M6 273.75 8.475 No_date 6:05 54.60 n/a
[DT= 1.00] SUM= 04:J6 4142.31 60.966 No_date 9:15 50.97 n/a
012:0069-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:J6 4142.31 60.966 No_date 9:15 50.97 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.012
remark:Hydrograph for J6
012:0070-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M7 21.88 1.803 No_date 4:26 52.54 .503
[CN= 73.8: N= 3.00]
[TP= .39:DT= 1.00]
012:0071-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M7 21.88 1.803 No_date 4:26 52.54 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.012
remark:Runoff Hydrograph for M7
012:0072-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 03:M7 21.88 1.803 No_date 4:26 52.54 n/a
+ 04:J6 4142.31 60.966 No_date 9:15 50.97 n/a
[DT= 1.00] SUM= 06:D6 4164.19 61.110 No_date 9:15 50.98 n/a
012:0073-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D6 4164.19 61.110 No_date 9:15 50.98 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.012
remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
012:0074-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 05:D14 402.87 11.081 No_date 5:50 48.13 n/a
+ 06:D6 4164.19 61.110 No_date 9:15 50.98 n/a
[DT= 1.00] SUM= 01:J7 4567.06 65.744 No_date 8:58 50.73 n/a
012:0075-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J7 4567.06 65.744 No_date 8:58 50.73 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.012
remark:Hydrograph for J7
012:0076-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J7 4567.06 65.744 No_date 8:58 50.73 n/a
[RD7= 1.00] out<- 02:C7 4567.06 65.673 No_date 8:58 50.73 n/a
[LS/n= 520./ .130/.035]
[Vmax= 1.232:Dmax= 2.468]
012:0077-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C7 4567.06 65.673 No_date 8:58 50.73 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.012
remark:Routing Hydrograph for C7
012:0078-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M8 502.47 4.751 No_date 8:54 30.56 .293
[CN= 56.2: N= 3.00]
[TP= 3.62:DT= 1.00]
012:0079-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M8 502.47 4.751 No_date 8:54 30.56 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.012
remark:Runoff Hydrograph for M8
012:0080-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C7 4567.06 65.673 No_date 8:58 50.73 n/a
+ 03:M8 502.47 4.751 No_date 8:54 30.56 n/a
[DT= 1.00] SUM= 01:J8 5069.53 70.424 No_date 8:58 48.73 n/a
012:0081-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J8 5069.53 70.424 No_date 8:58 48.73 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.012
remark:Hydrograph for J8
012:0082-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-

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ROUTE CHANNEL -> 01:J8      5069.53  70.424 No_date  8:58  48.73 n/a
* [RDT= 1.00] out<- 02:C8      5069.53  70.232 No_date  9:15  48.73 n/a
  [L/S/= 1010./ .150/.035]
  [Vmax= 1.395;Dmax= 2.618]
012:0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C8      5069.53  70.232 No_date  9:15  48.73 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.012
  remark:Routing Hydrograph for C8
012:0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M9      159.64   .769 No_date  8:56  15.42 148
  [CN= 39.7; N= 3.00]
  [Tp= 3.37;DT= 1.00]
012:0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M9      159.64   .769 No_date  8:56  15.42 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.012
  remark:Runoff Hydrograph for M9
012:0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C8      5069.53  70.232 No_date  9:15  48.73 n/a
  [DT= 1.00] SUM= 01:J9      5229.17  70.998 No_date  9:15  47.71 n/a
012:0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J9      5229.17  70.998 No_date  9:15  47.71 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.012
  remark:Hydrograph for J9
012:0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J9      5229.17  70.998 No_date  9:15  47.71 n/a
* [RDT= 1.00] out<- 02:C9      5229.17  70.872 No_date  9:16  47.71 n/a
  [L/S/= 1810./ .990/.035]
  [Vmax= 2.196;Dmax= 1.059]
012:0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C9      5229.17  70.872 No_date  9:16  47.71 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.012
  remark:Routing Hydrograph for C9
012:0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M10     190.19   1.349 No_date  6:36  15.20 146
  [CN= 39.5; N= 3.00]
  [Tp= 1.79;DT= 1.00]
012:0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M10     190.19   1.349 No_date  6:36  15.20 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.012
  remark:Runoff Hydrograph for M10
012:0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C9      5229.17  70.872 No_date  9:16  47.71 n/a
  [DT= 1.00] SUM= 01:J10     5419.36  71.722 No_date  9:16  46.57 n/a
012:0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J10     5419.36  71.722 No_date  9:16  46.57 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.012
  remark:Hydrograph for J10
012:0094-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J10     5419.36  71.722 No_date  9:16  46.57 n/a
* [RDT= 1.00] out<- 02:C10     5419.36  71.680 No_date  9:14  46.57 n/a
  [L/S/= 590./ .180/.035]
  [Vmax= 1.598;Dmax= 2.410]
012:0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C10     5419.36  71.680 No_date  9:14  46.57 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.012
  remark:Routing Hydrograph for C10
012:0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M11     26.92   1.796 No_date  4:38  53.28 510
  [CN= 74.3; N= 3.00]
  [Tp= .55;DT= 1.00]
012:0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M11     26.92   1.796 No_date  4:38  53.28 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.012
  remark:Runoff Hydrograph for M11
012:0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C10     5419.36  71.680 No_date  9:14  46.57 n/a
  [DT= 1.00] SUM= 01:O1     5446.28  71.866 No_date  9:14  46.60 n/a
012:0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:O1     5446.28  71.866 No_date  9:14  46.60 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-O1.012
  remark:Hydrograph for O1
** END OF RUN : 12
*****
RUN:COMMAND#
013:0001-----
START
[TZERO = .00 hrs on 0]
[MEOUT= 2 (1=imperial, 2=metric output)]
[NSTORM= 1]
[NRNUN = 13 ]
*****
# Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
# Date : 29-11-2017
# Modeller : [AA, TB, SN]
# Company : Rideau Valley Conservation Authority
# License # : 5329846
*****
013:0002-----
READ STORM
Filename = storm.001
Comment =
[SRT=30.00;SDUR= 12.00;PTOT= 104.44]
013:0003-----
DEFAULT VALUES
Filename = N:\BECKETT-1\HYDROL-1\BEA161-1\BecKVal.val
ICASEdv = 1 (read and print data)
FileTitle= File comment: [RVCA Becketts Creek FPM]
THE FOLLOWING PARAMETERS ARE USED IN THE DESIGN STANDHYD COM
Horton's infiltration equation parameters:
[Fo= 76.20 mm/hr] [Fc=13.20 mm/hr] [DCAV= 4.14 /hr] [F= .00 mm]
Parameters for PERVIOUS surfaces in STANDHYD:
[IAper= 4.67 mm] [LGP=40.00 m] [MNP= .250]
Parameters for IMPERVIOUS surfaces in STANDHYD:
[IAImp= 1.57 mm] [CLI= 1.50] [MNI= .013]
Parameters used in NASHYD:
[Is= 1.50 mm] [N= 3.00]
# Upstream Tributary
013:0004-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  01:UT1      338.44   7.228 No_date  9:31  53.53 513
  [CN= 74.5; N= 3.00]
  [Tp= 3.04;DT= 1.00]
013:0005-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:UT1      338.44   7.228 No_date  9:31  53.53 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.013
  remark:Runoff Hydrograph for UT1
013:0006-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT1      338.44   7.228 No_date  9:31  53.53 n/a
[RDT= 1.00] out<- 02:C11      338.44   7.095 No_date  10:00  53.53 n/a
  [L/S/= 1960./ .510/.035]
  [Vmax= 1.067;Dmax= 434]
013:0007-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C11      338.44   7.095 No_date  10:00  53.53 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C11.013
  remark:Routing Hydrograph for C11
013:0008-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:UT2      89.11   6.302 No_date  6:35  56.83 544
  [CN= 76.6; N= 3.00]
  [Tp= .64;DT= 1.00]
013:0009-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:UT2      89.11   6.302 No_date  6:35  56.83 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.013
  remark:Runoff Hydrograph for UT2
013:0010-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C11      338.44   7.095 No_date  10:00  53.53 n/a
  [DT= 1.00] SUM= 03:UT2     89.11   6.302 No_date  6:35  56.83 n/a
013:0011-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      04:D11      427.55   7.880 No_date  9:38  54.22 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.013
  remark:Downstream Hydrograph for C11
013:0012-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  01:UT3     459.85  12.067 No_date  8:19  49.16 471
  [CN= 71.4; N= 3.00]
  [Tp= 2.06;DT= 1.00]
013:0013-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:UT3     459.85  12.067 No_date  8:19  49.16 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.013
  remark:Runoff Hydrograph for UT3
013:0014-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT3     459.85  12.067 No_date  8:19  49.16 n/a
[RDT= 1.00] out<- 02:C12     459.85  11.357 No_date  8:52  49.16 n/a
  [L/S/= 2300./ .410/.035]
  [Vmax= .964;Dmax= .816]
013:0015-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C12     459.85  11.357 No_date  8:52  49.16 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.013
  remark:Routing Hydrograph for C12
013:0016-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:UT4     137.12   7.758 No_date  6:55  58.31 558
  [CN= 77.6; N= 3.00]
  [Tp= .93;DT= 1.00]
013:0017-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:UT4     137.12   7.758 No_date  6:55  58.31 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.013
  remark:Runoff Hydrograph for UT4
013:0018-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C12     459.85  11.357 No_date  8:52  49.16 n/a
  [DT= 1.00] SUM= 03:UT4     137.12   7.758 No_date  6:55  58.31 n/a
013:0019-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      05:D12     596.97  14.595 No_date  8:17  51.26 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.013
  remark:Downstream Hydrograph for C12
013:0020-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      04:D11     427.55   7.880 No_date  9:38  54.22 n/a
  [DT= 1.00] SUM= 05:D12     596.97  14.595 No_date  8:17  51.26 n/a
013:0021-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J13     1024.52  21.596 No_date  8:36  52.50 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.013
  remark:Hydrograph for J13
013:0022-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J13     1024.52  21.596 No_date  8:36  52.50 n/a
[RDT= 1.00] out<- 02:C13     1024.52  21.176 No_date  9:10  52.50 n/a
  [L/S/= 1540./ .250/.035]
  [Vmax= .812;Dmax= 1.681]
013:0023-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C13     1024.52  21.176 No_date  9:10  52.50 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.013
  remark:Routing Hydrograph for C13
013:0024-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:UT5     67.49   1.565 No_date  9:12  54.54 522
  [CN= 75.2; N= 3.00]
  [Tp= 2.80;DT= 1.00]
013:0025-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:UT5     67.49   1.565 No_date  9:12  54.54 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.013
  remark:Runoff Hydrograph for UT5
013:0026-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C13     1024.52  21.176 No_date  9:10  52.50 n/a
  [DT= 1.00] SUM= 03:UT5     67.49   1.565 No_date  9:12  54.54 n/a
013:0027-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      04:D13     1092.01  22.740 No_date  9:10  52.62 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.013
  remark:Downstream Tributary
013:0028-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  01:DT1     268.29   7.935 No_date  7:46  46.20 442
  [CN= 69.3; N= 3.00]
  [Tp= 1.61;DT= 1.00]
013:0029-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:DT1     268.29   7.935 No_date  7:46  46.20 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.013
  remark:Runoff Hydrograph for DT1
013:0030-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1     268.29   7.935 No_date  7:46  46.20 n/a
[RDT= 1.00] out<- 02:C14     268.29   7.643 No_date  8:10  46.20 n/a
  [L/S/= 2210./ .780/.035]
  [Vmax= 1.593;Dmax= .760]
013:0031-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C14     268.29   7.643 No_date  8:10  46.20 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.013
  remark:Routing Hydrograph for C14
013:0032-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:DT2     134.58   6.584 No_date  6:58  51.98 498
  [CN= 73.4; N= 3.00]
  [Tp= .96;DT= 1.00]
013:0033-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:DT2     134.58   6.584 No_date  6:58  51.98 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.013
  remark:Runoff Hydrograph for DT2
013:0034-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C14     268.29   7.643 No_date  8:10  46.20 n/a
  [DT= 1.00] SUM= 03:DT2     134.58   6.584 No_date  6:58  51.98 n/a
013:0035-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      05:D14     402.87  12.443 No_date  7:34  48.13 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.013
  remark:Downstream Tributary

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SAVE HYD          05:D14          402.87  12.443 No_date  7:34  48.13  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.013
remark:Downstream Hydrograph for C14
# Main Channel
013\0036-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     01:M1          457.96  17.286 No_date  7:47  59.92  .574
[CN= 78.6: N= 3.00]
[TP= 1.68:DT= 1.00]
013\0037-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         01:M1          457.96  17.286 No_date  7:47  59.92  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.013
remark:Runoff Hydrograph for M1
013\0038-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:M1          457.96  17.286 No_date  7:47  59.92  n/a
[RD= 1.00] out<- 02:C1          457.96  16.915 No_date  8:03  59.92  n/a
[L/S/n= 1720./ .400/.035]
[Vmax= 1.452:Dmax= 1.021]
013\0039-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         02:C1          457.96  16.915 No_date  8:03  59.92  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.013
remark:Routing Hydrograph for C1
013\0040-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M2          341.59  19.449 No_date  6:50  55.32  .530
[CN= 75.7: N= 3.00]
[TP= .85:DT= 1.00]
013\0041-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         03:M2          341.59  19.449 No_date  6:50  55.32  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.013
remark:Runoff Hydrograph for M2
013\0042-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD         02:C1          457.96  16.915 No_date  8:03  59.92  n/a
[DT= 1.00] SUM= 01:J2          341.59  19.449 No_date  6:50  55.32  n/a
[DT= 1.00] SUM= 01:J2          799.55  30.984 No_date  7:16  57.96  n/a
013\0043-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         01:J2          799.55  30.984 No_date  7:16  57.96  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.013
remark:Hydrograph for J2
013\0044-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:J2          799.55  30.984 No_date  7:16  57.96  n/a
[RD= 1.00] out<- 02:C2          799.55  28.042 No_date  7:50  57.95  n/a
[L/S/n= 1940./ .210/.035]
[Vmax= 1.003:Dmax= .776]
013\0045-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         02:C2          799.55  28.042 No_date  7:50  57.95  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.013
remark:Routing Hydrograph for C2
013\0046-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M3          165.13  6.367 No_date  7:43  59.31  .568
[CN= 78.2: N= 3.00]
[TP= 1.61:DT= 1.00]
013\0047-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         03:M3          165.13  6.367 No_date  7:43  59.31  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.013
remark:Runoff Hydrograph for M3
013\0048-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD         02:C2          799.55  28.042 No_date  7:50  57.95  n/a
[DT= 1.00] SUM= 01:J3          165.13  6.367 No_date  7:43  59.31  n/a
[DT= 1.00] SUM= 01:J3          964.68  34.392 No_date  7:48  58.19  n/a
013\0049-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         01:J3          964.68  34.392 No_date  7:48  58.19  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.013
remark:Hydrograph for J3
013\0050-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:J3          964.68  34.392 No_date  7:48  58.19  n/a
[RD= 1.00] out<- 02:C3          964.68  32.751 No_date  8:18  58.19  n/a
[L/S/n= 1090./ .180/.035]
[Vmax= .908:Dmax= 2.262]
013\0051-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         02:C3          964.68  32.751 No_date  8:18  58.19  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.013
remark:Routing Hydrograph for C3
013\0052-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M4          1698.95  25.462 No_date  10:34  45.15  .432
[CN= 68.5: N= 3.00]
[TP= 3.84:DT= 1.00]
013\0053-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         03:M4          1698.95  25.462 No_date  10:34  45.15  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.013
remark:Runoff Hydrograph for M4
013\0054-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD         02:C3          964.68  32.751 No_date  8:18  58.19  n/a
[DT= 1.00] SUM= 03:M4          1698.95  25.462 No_date  10:34  45.15  n/a
[DT= 1.00] SUM= 06:D3          2663.63  53.630 No_date  8:58  49.87  n/a
013\0055-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         06:D3          2663.63  53.630 No_date  8:58  49.87  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.013
remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
013\0056-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD         04:D13          1092.01  22.740 No_date  9:10  52.62  n/a
[DT= 1.00] SUM= 06:D3          3755.64  76.344 No_date  9:03  50.67  n/a
[DT= 1.00] SUM= 01:J4          3755.64  76.344 No_date  9:03  50.67  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.013
remark:Hydrograph for J4
013\0058-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:J4          3755.64  76.344 No_date  9:03  50.67  n/a
[RD= 1.00] out<- 02:C4          3755.64  66.412 No_date  10:13  50.67  n/a
[L/S/n= 2020./ .090/.035]
[Vmax= .475:Dmax= 2.697]
013\0059-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         02:C4          3755.64  66.412 No_date  10:13  50.67  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.013
remark:Routing Hydrograph for C4
013\0060-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M5          112.92  5.514 No_date  6:59  52.24  .500
[CN= 73.6: N= 3.00]
[TP= .97:DT= 1.00]
013\0061-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         03:M5          112.92  5.514 No_date  6:59  52.24  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.013
remark:Runoff Hydrograph for M5
013\0062-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD         02:C4          3755.64  66.412 No_date  10:13  50.67  n/a
[DT= 1.00] SUM= 03:M5          112.92  5.514 No_date  6:59  52.24  n/a
[DT= 1.00] SUM= 01:J5          3868.56  67.489 No_date  10:12  50.72  n/a
013\0063-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         01:J5          3868.56  67.489 No_date  10:12  50.72  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.013
remark:Hydrograph for J5
013\0064-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:J5          3868.56  67.489 No_date  10:12  50.72  n/a
[RD= 1.00] out<- 02:C5          3868.56  62.589 No_date  11:08  50.72  n/a
[L/S/n= 1450./ .050/.035]
[Vmax= .468:Dmax= 2.564]
013\0065-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         02:C5          3868.56  62.589 No_date  11:08  50.72  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.013
remark:Routing Hydrograph for C5
013\0066-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M6          273.75  9.364 No_date  7:49  54.61  .523
[CN= 75.2: N= 3.00]
[TP= 1.68:DT= 1.00]
013\0067-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         03:M6          273.75  9.364 No_date  7:49  54.61  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.013
remark:Runoff Hydrograph for M6
013\0068-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD         02:C5          3868.56  62.589 No_date  11:08  50.72  n/a
[DT= 1.00] SUM= 04:J6          4142.31  66.228 No_date  10:49  50.97  n/a
013\0069-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         04:J6          4142.31  66.228 No_date  10:49  50.97  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.013
remark:Hydrograph for J6
013\0070-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M7          21.88  1.930 No_date  6:16  52.55  .503
[CN= 73.8: N= 3.00]
[TP= .39:DT= 1.00]
013\0071-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         03:M7          21.88  1.930 No_date  6:16  52.55  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.013
remark:Runoff Hydrograph for M7
013\0072-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD         03:M7          21.88  1.930 No_date  6:16  52.55  n/a
[DT= 1.00] SUM= 04:J6          4142.31  66.228 No_date  10:49  50.97  n/a
[DT= 1.00] SUM= 06:D6          4164.19  66.371 No_date  10:49  50.98  n/a
013\0073-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         06:D6          4164.19  66.371 No_date  10:49  50.98  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.013
remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
013\0074-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD         05:D14          402.87  12.443 No_date  7:34  48.13  n/a
[DT= 1.00] SUM= 06:D6          4164.19  66.371 No_date  10:49  50.98  n/a
[DT= 1.00] SUM= 01:J7          4567.06  71.259 No_date  10:35  50.73  n/a
013\0075-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         01:J7          4567.06  71.259 No_date  10:35  50.73  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.013
remark:Hydrograph for J7
013\0076-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:J7          4567.06  71.259 No_date  10:35  50.73  n/a
[RD= 1.00] out<- 02:C7          4567.06  71.179 No_date  10:35  50.73  n/a
[L/S/n= 520./ .130/.035]
[Vmax= 1.234:Dmax= 2.345]
013\0077-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         02:C7          4567.06  71.179 No_date  10:35  50.73  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.013
remark:Routing Hydrograph for C7
013\0078-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M8          502.47  5.275 No_date  10:27  30.56  .293
[CN= 56.2: N= 3.00]
[TP= 3.62:DT= 1.00]
013\0079-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         03:M8          502.47  5.275 No_date  10:27  30.56  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.013
remark:Runoff Hydrograph for M8
013\0080-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD         02:C7          4567.06  71.179 No_date  10:35  50.73  n/a
[DT= 1.00] SUM= 03:M8          502.47  5.275 No_date  10:27  30.56  n/a
[DT= 1.00] SUM= 01:J8          5069.53  76.450 No_date  10:35  48.73  n/a
013\0081-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         01:J8          5069.53  76.450 No_date  10:35  48.73  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.013
remark:Hydrograph for J8
013\0082-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:J8          5069.53  76.450 No_date  10:35  48.73  n/a
[RD= 1.00] out<- 02:C8          5069.53  76.250 No_date  10:49  48.73  n/a
[L/S/n= 1010./ .150/.035]
[Vmax= 1.417:Dmax= 2.725]
013\0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         02:C8          5069.53  76.250 No_date  10:49  48.73  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.013
remark:Routing Hydrograph for C8
013\0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M9          159.64  .873 No_date  10:24  15.42  .148
[CN= 39.7: N= 3.00]
[TP= 3.37:DT= 1.00]
013\0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         03:M9          159.64  .873 No_date  10:24  15.42  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.013
remark:Runoff Hydrograph for M9
013\0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD         02:C8          5069.53  76.250 No_date  10:49  48.73  n/a
[DT= 1.00] SUM= 03:M9          159.64  .873 No_date  10:24  15.42  n/a
[DT= 1.00] SUM= 01:J9          5229.17  77.117 No_date  10:49  47.71  n/a
013\0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         01:J9          5229.17  77.117 No_date  10:49  47.71  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.013
remark:Hydrograph for J9
013\0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:J9          5229.17  77.117 No_date  10:49  47.71  n/a
[RD= 1.00] out<- 02:C9          5229.17  76.944 No_date  10:51  47.71  n/a
[L/S/n= 1810./ .990/.035]
[Vmax= 2.262:Dmax= 1.098]
013\0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         02:C9          5229.17  76.944 No_date  10:51  47.71  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.013
remark:Routing Hydrograph for C9
013\0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M10         190.19  1.590 No_date  8:15  15.20  .146
[CN= 39.5: N= 3.00]
[TP= 1.79:DT= 1.00]
013\0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         03:M10         190.19  1.590 No_date  8:15  15.20  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.013
remark:Runoff Hydrograph for M10
013\0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD         02:C9          5229.17  76.944 No_date  10:51  47.71  n/a
[DT= 1.00] SUM= 03:M10         190.19  1.590 No_date  8:15  15.20  n/a
[DT= 1.00] SUM= 01:J10         5419.36  77.883 No_date  10:50  46.57  n/a
013\0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD         01:J10         5419.36  77.883 No_date  10:50  46.57  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.013
remark:Hydrograph for J10

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013 0094-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J10 5419.36 77.883 No_date 10:50 46.57 n/a
* [RDT= 1.00] out<- 02:C10 5419.36 77.821 No_date 10:56 46.57 n/a
  [L/S/n= 590./ .180/.035]
  [Vmax= 1.664:Dmax= 2.503]
013 0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C10 5419.36 77.821 No_date 10:56 46.57 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.013
  remark:Routing Hydrograph for C10
013 0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M11 26.92 1.950 No_date 6:29 53.29 .510
  [CN= 74.3: N= 3.00]
  [Tp= .55:DT= 1.00]
013 0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M11 26.92 1.950 No_date 6:29 53.29 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.013
  remark:Runoff Hydrograph for M11
013 0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C10 5419.36 77.821 No_date 10:56 46.57 n/a
  + 03:M11 26.92 1.950 No_date 6:29 53.29 n/a
  [DT= 1.00] SUM= 01:01 5446.28 77.996 No_date 10:56 46.61 n/a
013 0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:01 5446.28 77.996 No_date 10:56 46.61 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-O1.013
  remark:Hydrograph for O1
** END OF RUN : 23

*****
RUN:COMMAND#
024 0001-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
START
  [TZERO = .00 hrs on 0]
  [METOUT= 2 (1=imperial, 2=metric output)]
  [NSTORM= 1 ]
  [NRUN = 24 ]
#*****
# Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
# Date : 29-11-2017
# Modeller : [AA, TB, SN]
# Company : Rideau Valley Conservation Authority
# License # : 5329846
#*****
024 0002-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
READ STORM
  Filename = storm.001
  Comment =
  [SDT=10.00:SDUR= 24.00:PTOT= 123.02]
024 0003-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
DEFAULT VALUES
  Filename = N:\BECKETT-1\HYDROL-1\BEA161-1\BeckVal.val
  ICASEDV = 1 (read and print data)
  FileTitle= File comment: [RVCA Becketts Creek FPM]
  THE FOLLOWING PARAMETERS ARE USED IN THE DESIGN STANDHYD COM
  Horton's infiltration equation parameters:
  [Fo = 76.20 mm/hr] [Fc=13.20 mm/hr] [DCAY= 4.14 /hr] [F= .00 mm]
  Parameters for PERVIOUS surfaces in STANDHYD:
  [IAper= 4.67 mm] [LGP=40.00 mm] [MNP= .250]
  Parameters for IMPVIOUS surfaces in STANDHYD:
  [IAimp= 1.57 mm] [CLI= 1.50] [MNI= .013]
  Parameters used in NASHYD:
  [Ia = 1.50 mm] [N= 3.00]
# Upstream Tributary
024 0004-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT1 338.44 7.274 No_date 11:45 68.44 .556
  [CN= 74.5: N= 3.00]
  [Tp= 3.04:DT= 1.00]
024 0005-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT1 338.44 7.274 No_date 11:45 68.44 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.024
  remark:Runoff Hydrograph for UT1
024 0006-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT1 338.44 7.274 No_date 11:45 68.44 n/a
  [RDT= 1.00] out<- 02:C11 338.44 7.145 No_date 12:15 68.44 n/a
  [L/S/n= 1960./ .510/.035]
  [Vmax= 1.068:Dmax= .436]
024 0007-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C11 338.44 7.145 No_date 12:15 68.44 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C11.024
  remark:Routing Hydrograph for C11
024 0008-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT2 89.11 6.341 No_date 8:43 72.22 .587
  [CN= 76.6: N= 3.00]
  [Tp= .64:DT= 1.00]
024 0009-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT2 89.11 6.341 No_date 8:43 72.22 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.024
  remark:Runoff Hydrograph for UT2
024 0010-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C11 338.44 7.145 No_date 12:15 68.44 n/a
  + 03:UT2 89.11 6.341 No_date 8:43 72.22 n/a
  [DT= 1.00] SUM= 04:D11 427.55 7.993 No_date 12:00 69.23 n/a
024 0011-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D11 427.55 7.993 No_date 12:00 69.23 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.024
  remark:Downstream Hydrograph for C11
024 0012-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT3 459.85 12.075 No_date 10:32 63.39 .515
  [CN= 71.4: N= 3.00]
  [Tp= 2.06:DT= 1.00]
024 0013-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT3 459.85 12.075 No_date 10:32 63.39 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.024
  remark:Runoff Hydrograph for UT3
024 0014-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT3 459.85 12.075 No_date 10:32 63.39 n/a
  [RDT= 1.00] out<- 02:C12 459.85 11.387 No_date 11:05 63.39 n/a
  [L/S/n= 2300./ .410/.035]
  [Vmax= .964:Dmax= .816]
024 0015-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C12 459.85 11.387 No_date 11:05 63.39 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.024
  remark:Routing Hydrograph for C12
024 0016-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT4 137.12 7.714 No_date 9:04 73.90 .601
  [CN= 77.6: N= 3.00]
  [Tp= .93:DT= 1.00]
024 0017-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT4 137.12 7.714 No_date 9:04 73.90 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.024
  remark:Runoff Hydrograph for UT4
024 0018-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C12 459.85 11.387 No_date 11:05 63.39 n/a
  + 03:UT4 137.12 7.714 No_date 9:04 73.90 n/a
  [DT= 1.00] SUM= 05:D12 596.97 14.654 No_date 10:31 65.81 n/a
024 0019-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D12 596.97 14.654 No_date 10:31 65.81 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.024
  remark:Downstream Hydrograph for C12
024 0020-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D11 427.55 7.993 No_date 12:00 69.23 n/a
  + 05:D12 596.97 14.654 No_date 10:31 65.81 n/a
  [DT= 1.00] SUM= 01:J13 1024.52 21.803 No_date 10:52 67.23 n/a
024 0021-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J13 1024.52 21.803 No_date 10:52 67.23 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.024
  remark:Hydrograph for J13
024 0022-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J13 1024.52 21.803 No_date 10:52 67.23 n/a
  [RDT= 1.00] out<- 02:C13 1024.52 21.349 No_date 11:23 67.23 n/a
  [L/S/n= 1540./ .250/.035]
  [Vmax= .812:Dmax= 1.686]
024 0023-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C13 1024.52 21.349 No_date 11:23 67.23 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.024
  remark:Routing Hydrograph for C13
024 0024-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT5 67.49 1.573 No_date 11:26 69.61 .566
  [CN= 75.2: N= 3.00]
  [Tp= 2.80:DT= 1.00]
024 0025-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT5 67.49 1.573 No_date 11:26 69.61 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.024
  remark:Runoff Hydrograph for UT5
024 0026-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C13 1024.52 21.349 No_date 11:23 67.23 n/a
  + 03:UT5 67.49 1.573 No_date 11:26 69.61 n/a
  [DT= 1.00] SUM= 04:D13 1092.01 22.921 No_date 11:23 67.38 n/a
024 0027-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D13 1092.01 22.921 No_date 11:23 67.38 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.024
  remark:Downstream Hydrograph for C13
# Downstream Tributary
024 0028-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:DT1 268.29 7.902 No_date 9:58 59.93 .487
  [CN= 69.3: N= 3.00]
  [Tp= 1.61:DT= 1.00]
024 0029-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:DT1 268.29 7.902 No_date 9:58 59.93 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.024
  remark:Runoff Hydrograph for DT1
024 0030-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1 268.29 7.902 No_date 9:58 59.93 n/a
  [RDT= 1.00] out<- 02:C14 268.29 7.628 No_date 10:22 59.93 n/a
  [L/S/n= 2210./ .780/.035]
  [Vmax= 1.592:Dmax= .758]
024 0031-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C14 268.29 7.628 No_date 10:22 59.93 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.024
  remark:Routing Hydrograph for C14
024 0032-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:DT2 134.58 6.533 No_date 9:08 66.65 .542
  [CN= 73.4: N= 3.00]
  [Tp= .96:DT= 1.00]
024 0033-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:DT2 134.58 6.533 No_date 9:08 66.65 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.024
  remark:Runoff Hydrograph for DT2
024 0034-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C14 268.29 7.628 No_date 10:22 59.93 n/a
  + 03:DT2 134.58 6.533 No_date 9:08 66.65 n/a
  [DT= 1.00] SUM= 05:D14 402.87 12.368 No_date 9:46 62.18 n/a
024 0035-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D14 402.87 12.368 No_date 9:46 62.18 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.024
  remark:Downstream Hydrograph for C14
# Main Channel
024 0036-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:M1 457.96 17.237 No_date 10:00 75.73 .616
  [CN= 78.6: N= 3.00]
  [Tp= 1.68:DT= 1.00]
024 0037-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:M1 457.96 17.237 No_date 10:00 75.73 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.024
  remark:Runoff Hydrograph for M1
024 0038-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:M1 457.96 17.237 No_date 10:00 75.73 n/a
  [RDT= 1.00] out<- 02:C1 457.96 16.867 No_date 10:16 75.73 n/a
  [L/S/n= 1720./ .400/.035]
  [Vmax= 1.451:Dmax= 1.020]
024 0039-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C1 457.96 16.867 No_date 10:16 75.73 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.024
  remark:Routing Hydrograph for C1
024 0040-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M2 341.59 19.347 No_date 8:59 70.49 .573
  [CN= 75.7: N= 3.00]
  [Tp= .85:DT= 1.00]
024 0041-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:M2 341.59 19.347 No_date 8:59 70.49 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.024
  remark:Runoff Hydrograph for M2
024 0042-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C1 457.96 16.867 No_date 10:16 75.73 n/a
  + 03:M2 341.59 19.347 No_date 8:59 70.49 n/a
  [DT= 1.00] SUM= 01:J2 799.55 30.681 No_date 9:27 73.49 n/a
024 0043-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J2 799.55 30.681 No_date 9:27 73.49 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.024
  remark:Hydrograph for J2
024 0044-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J2 799.55 30.681 No_date 9:27 73.49 n/a
  [RDT= 1.00] out<- 02:C2 799.55 27.924 No_date 10:02 73.49 n/a
  [L/S/n= 1940./ .210/.035]
  [Vmax= 1.000:Dmax= .771]
024 0045-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C2 799.55 27.924 No_date 10:02 73.49 n/a
  fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.024
  remark:Routing Hydrograph for C2
024 0046-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M3 165.13 6.344 No_date 9:55 75.03 .610
  [CN= 78.2: N= 3.00]

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[TP= 1.61:DT= 1.00]
024:0047-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M3      165.13      6.344 No_date      9:55      75.03 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.024
remark:Runoff Hydrograph for M3
024:0048-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C2      799.55      27.924 No_date      10:02      73.49 n/a
+ 03:M3      165.13      6.344 No_date      9:55      75.03 n/a
[DT= 1.00] SUM= 01:J3      964.68      34.249 No_date      10:01      73.75 n/a
024:0049-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J3      964.68      34.249 No_date      10:01      73.75 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.024
remark:Hydrograph for J3
024:0050-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J3      964.68      34.249 No_date      10:01      73.75 n/a
[RDT= 1.00] out<- 02:C3
[L/S/n= 1090./ .180/.035]
[Vmax= .912:Dmax= 2.259]
024:0051-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C3      964.68      32.692 No_date      10:40      73.75 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.024
remark:Routing Hydrograph for C3
024:0052-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M4      1698.95      25.790 No_date      12:51      58.69 477
[CN= 68.5: N= 3.00]
[TP= 3.84:DT= 1.00]
024:0053-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M4      1698.95      25.790 No_date      12:51      58.69 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.024
remark:Runoff Hydrograph for M4
024:0054-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C3      964.68      32.692 No_date      10:40      73.75 n/a
+ 03:M4      1698.95      25.790 No_date      12:51      58.69 n/a
[DT= 1.00] SUM= 06:D3      2663.63      53.796 No_date      11:17      64.15 n/a
024:0055-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      06:D3      2663.63      53.796 No_date      11:17      64.15 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.024
remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
024:0056-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      04:D13      1092.01      22.921 No_date      11:23      67.38 n/a
+ 06:D3      2663.63      53.796 No_date      11:17      64.15 n/a
[DT= 1.00] SUM= 01:J4      3755.64      76.702 No_date      11:17      65.09 n/a
024:0057-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J4      3755.64      76.702 No_date      11:17      65.09 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.024
remark:Hydrograph for J4
024:0058-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J4      3755.64      76.702 No_date      11:17      65.09 n/a
[RDT= 1.00] out<- 02:C4
[L/S/n= 2020./ .090/.035]
[Vmax= .475:Dmax= 2.701]
024:0059-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C4      3755.64      66.938 No_date      12:29      65.09 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.024
remark:Routing Hydrograph for C4
024:0060-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M5      112.92      5.471 No_date      9:08      66.96 544
[CN= 73.6: N= 3.00]
[TP= .97:DT= 1.00]
024:0061-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M5      112.92      5.471 No_date      9:08      66.96 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.024
remark:Runoff Hydrograph for M5
024:0062-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C4      3755.64      66.938 No_date      12:29      65.09 n/a
+ 03:M5      112.92      5.471 No_date      9:08      66.96 n/a
[DT= 1.00] SUM= 01:J5      3868.56      68.097 No_date      12:28      65.14 n/a
024:0063-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J5      3868.56      68.097 No_date      12:28      65.14 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.024
remark:Hydrograph for J5
024:0064-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J5      3868.56      68.097 No_date      12:28      65.14 n/a
[RDT= 1.00] out<- 02:C5
[L/S/n= 1450./ .050/.035]
[Vmax= .468:Dmax= 2.571]
024:0065-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C5      3868.56      63.425 No_date      13:25      65.14 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.024
remark:Routing Hydrograph for C5
024:0066-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M6      273.75      9.335 No_date      10:01      69.68 566
[CN= 75.2: N= 3.00]
[TP= 1.68:DT= 1.00]
024:0067-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M6      273.75      9.335 No_date      10:01      69.68 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.024
remark:Runoff Hydrograph for M6
024:0068-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C5      3868.56      63.425 No_date      13:25      65.14 n/a
+ 03:M6      273.75      9.335 No_date      10:01      69.68 n/a
[DT= 1.00] SUM= 04:J6      4142.31      67.134 No_date      13:04      65.44 n/a
024:0069-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      04:J6      4142.31      67.134 No_date      13:04      65.44 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.024
remark:Hydrograph for J6
024:0070-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M7      21.88      1.990 No_date      8:25      67.31 547
[CN= 73.8: N= 3.00]
[TP= .39:DT= 1.00]
024:0071-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M7      21.88      1.990 No_date      8:25      67.31 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.024
remark:Runoff Hydrograph for M7
024:0072-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      03:M7      21.88      1.990 No_date      8:25      67.31 n/a
+ 04:J6      4142.31      67.134 No_date      13:04      65.44 n/a
[DT= 1.00] SUM= 06:D6      4164.19      67.285 No_date      13:04      65.45 n/a
024:0073-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      06:D6      4164.19      67.285 No_date      13:04      65.45 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.024
remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
024:0074-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      05:D14      402.87      12.368 No_date      9:46      62.18 n/a
+ 06:D6      4164.19      67.285 No_date      13:04      65.45 n/a
[DT= 1.00] SUM= 01:J7      4567.06      72.313 No_date      12:50      65.16 n/a
024:0075-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J7      4567.06      72.313 No_date      12:50      65.16 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.024
remark:Hydrograph for J7
024:0076-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J7      4567.06      72.313 No_date      12:50      65.16 n/a
[RDT= 1.00] out<- 02:C7
[L/S/n= 520./ .130/.035]
[Vmax= 1.234:Dmax= 2.560]
024:0077-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C7      4567.06      72.251 No_date      13:04      65.16 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.024
remark:Routing Hydrograph for C7
024:0078-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M8      502.47      5.351 No_date      12:45      41.13 334
[CN= 56.2: N= 3.00]
[TP= 3.62:DT= 1.00]
024:0079-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M8      502.47      5.351 No_date      12:45      41.13 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.024
remark:Runoff Hydrograph for M8
024:0080-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C7      4567.06      72.251 No_date      13:04      65.16 n/a
+ 03:M8      502.47      5.351 No_date      12:45      41.13 n/a
[DT= 1.00] SUM= 01:J8      5069.53      77.582 No_date      13:04      62.78 n/a
024:0081-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J8      5069.53      77.582 No_date      13:04      62.78 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.024
remark:Hydrograph for J8
024:0082-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J8      5069.53      77.582 No_date      13:04      62.78 n/a
[RDT= 1.00] out<- 02:C8
[L/S/n= 1010./ .150/.035]
[Vmax= 1.421:Dmax= 2.744]
024:0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C8      5069.53      77.359 No_date      13:05      62.78 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.024
remark:Routing Hydrograph for C8
024:0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M9      159.64      .889 No_date      12:45      22.01 179
[CN= 39.7: N= 3.00]
[TP= 3.37:DT= 1.00]
024:0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M9      159.64      .889 No_date      12:45      22.01 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.024
remark:Runoff Hydrograph for M9
024:0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C8      5069.53      77.359 No_date      13:05      62.78 n/a
+ 03:M9      159.64      .889 No_date      12:45      22.01 n/a
[DT= 1.00] SUM= 01:J9      5229.17      78.243 No_date      13:04      61.54 n/a
024:0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J9      5229.17      78.243 No_date      13:04      61.54 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.024
remark:Hydrograph for J9
024:0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J9      5229.17      78.243 No_date      13:04      61.54 n/a
[RDT= 1.00] out<- 02:C9
[L/S/n= 1810./ .990/.035]
[Vmax= 2.275:Dmax= 1.105]
024:0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C9      5229.17      78.037 No_date      13:17      61.54 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.024
remark:Routing Hydrograph for C9
024:0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M10      190.19      1.588 No_date      10:29      21.72 177
[CN= 39.5: N= 3.00]
[TP= 1.79:DT= 1.00]
024:0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M10      190.19      1.588 No_date      10:29      21.72 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.024
remark:Runoff Hydrograph for M10
024:0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C9      5229.17      78.037 No_date      13:17      61.54 n/a
+ 03:M10      190.19      1.588 No_date      10:29      21.72 n/a
[DT= 1.00] SUM= 01:J10      5419.36      78.975 No_date      13:15      60.14 n/a
024:0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J10      5419.36      78.975 No_date      13:15      60.14 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.024
remark:Hydrograph for J10
024:0094-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J10      5419.36      78.975 No_date      13:15      60.14 n/a
[RDT= 1.00] out<- 02:C10
[L/S/n= 590./ .180/.035]
[Vmax= 1.669:Dmax= 2.515]
024:0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C10      5419.36      78.957 No_date      13:17      60.14 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.024
remark:Routing Hydrograph for C10
024:0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M11      26.92      1.980 No_date      8:37      68.17 554
[CN= 74.3: N= 3.00]
[TP= .55:DT= 1.00]
024:0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M11      26.92      1.980 No_date      8:37      68.17 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.024
remark:Runoff Hydrograph for M11
024:0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C10      5419.36      78.957 No_date      13:17      60.14 n/a
+ 03:M11      26.92      1.980 No_date      8:37      68.17 n/a
[DT= 1.00] SUM= 01:O1      5446.28      79.145 No_date      13:17      60.18 n/a
024:0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:O1      5446.28      79.145 No_date      13:17      60.18 n/a
fname:N:\BECKETT-1\HYDROL-1\BEA161-1\H-O1.024
remark:Hydrograph for O1
*** END OF RUN : 24

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RUN:COMMAND#
025:0001-----
START
[TZERO= .00 hrs on 0]
[METOUT= 2 (1=imperial, 2=metric output)]
[INSTORM= 1]
[NRUN= 25]
# Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
# Date : 29-11-2017
# Modeller : [AA, TB, SN]
# Company : Rideau Valley Conservation Authority
# License # : 5329846
025:0002-----
READ STORM

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Filename = storm.001
Comment =
[SDT=30.00:SDUR= 24.00:PTOT= 123.01]
025:0003-----
DEFAULT VALUES
Filename = N:\BECKETT-1\HYDROL-1\BEA161-1\BeckVal.val
ICASEdv = 1 (read and print data)
FileTitle= File comment: [RVCA Becketts Creek FPM]
THE FOLLOWING PARAMETERS ARE USED IN THE DESIGN STANDHYD COM
Horton's infiltration equation parameters:
[Fo= 76.20 mm/hr] [Fc=13.20 mm/hr] [DCAY= 4.14 /hr] [F= .00 mm]
Parameters for PERVIOUS surfaces in STANDHYD:
[IAper= 4.67 mm] [LGP=40.00 m] [MNP= .250]
Parameters for IMPVIOUS surfaces in STANDHYD:
[IAimp= 1.57 mm] [CLI= 1.50] [MNT= .013]
Parameters used in NASHYD:
[la = 1.50 mm] [N= 3.00]
# Upstream Tributary
025:0004-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT1 338.44 8.021 No_date 15:17 68.44 .556
[CN= 74.5: N= 3.00]
[Tp= 3.04:DT= 1.00]
025:0005-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT1 338.44 8.021 No_date 15:17 68.44 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.025
remark:Runoff Hydrograph for UT1
025:0006-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT1 338.44 8.021 No_date 15:17 68.44 n/a
[RD7= 1.00] out<- 02:C11 338.44 7.875 No_date 15:46 68.44 n/a
[L/S/n= 1960./ .510/.035]
[Vmax= 1.089:Dmax= .457]
025:0007-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C11 338.44 7.875 No_date 15:46 68.44 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C11.025
remark:Routing Hydrograph for C11
025:0008-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT2 89.11 7.095 No_date 12:31 72.21 .587
[CN= 76.6: N= 3.00]
[Tp= .64:DT= 1.00]
025:0009-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT2 89.11 7.095 No_date 12:31 72.21 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.025
remark:Runoff Hydrograph for UT2
025:0010-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C11 338.44 7.875 No_date 15:46 68.44 n/a
+ 03:UT2 89.11 7.095 No_date 12:31 72.21 n/a
[DT= 1.00] SUM= 04:D11 427.55 8.654 No_date 15:40 69.23 n/a
025:0011-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D11 427.55 8.654 No_date 15:40 69.23 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.025
remark:Downstream Hydrograph for C11
025:0012-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT3 459.85 13.564 No_date 14:10 63.39 .515
[CN= 71.4: N= 3.00]
[Tp= 2.06:DT= 1.00]
025:0013-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT3 459.85 13.564 No_date 14:10 63.39 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.025
remark:Runoff Hydrograph for UT3
025:0014-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT3 459.85 13.564 No_date 14:10 63.39 n/a
[RD7= 1.00] out<- 02:C12 459.85 12.878 No_date 14:37 63.39 n/a
[L/S/n= 2300./ .410/.035]
[Vmax= 1.030:Dmax= .872]
025:0015-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C12 459.85 12.878 No_date 14:37 63.39 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.025
remark:Routing Hydrograph for C12
025:0016-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT4 137.12 8.607 No_date 12:50 73.89 .601
[CN= 77.6: N= 3.00]
[Tp= .93:DT= 1.00]
025:0017-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT4 137.12 8.607 No_date 12:50 73.89 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.025
remark:Runoff Hydrograph for UT4
025:0018-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C12 459.85 12.878 No_date 14:37 63.39 n/a
+ 03:UT4 137.12 8.607 No_date 12:50 73.89 n/a
[DT= 1.00] SUM= 05:D12 596.97 16.681 No_date 14:03 65.80 n/a
025:0019-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D12 596.97 16.681 No_date 14:03 65.80 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.025
remark:Downstream Hydrograph for C12
025:0020-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D11 427.55 8.654 No_date 15:40 69.23 n/a
+ 05:D12 596.97 16.681 No_date 14:03 65.80 n/a
[DT= 1.00] SUM= 01:J13 1024.52 24.390 No_date 14:19 67.23 n/a
025:0021-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J13 1024.52 24.390 No_date 14:19 67.23 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.025
remark:Hydrograph for J13
025:0022-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J13 1024.52 24.390 No_date 14:19 67.23 n/a
[RD7= 1.00] out<- 02:C13 1024.52 23.810 No_date 14:46 67.23 n/a
[L/S/n= 1540./ .250/.035]
[Vmax= .823:Dmax= 1.742]
025:0023-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C13 1024.52 23.810 No_date 14:46 67.23 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.025
remark:Routing Hydrograph for C13
025:0024-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT5 67.49 1.736 No_date 14:59 69.61 .566
[CN= 75.2: N= 3.00]
[Tp= 2.80:DT= 1.00]
025:0025-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT5 67.49 1.736 No_date 14:59 69.61 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.025
remark:Runoff Hydrograph for UT5
025:0026-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C13 1024.52 23.810 No_date 14:46 67.23 n/a
+ 03:UT5 67.49 1.736 No_date 14:59 69.61 n/a
[DT= 1.00] SUM= 04:D13 1092.01 25.539 No_date 14:47 67.38 n/a
025:0027-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D13 1092.01 25.539 No_date 14:47 67.38 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.025
remark:Downstream Hydrograph for C13
# Downstream Tributary
025:0028-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:DT1 268.29 8.978 No_date 13:39 59.93 .487
[CN= 69.3: N= 3.00]
[Tp= 1.61:DT= 1.00]
025:0029-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-

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SAVE HYD 01:DT1 268.29 8.978 No_date 13:39 59.93 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.025
remark:Runoff Hydrograph for DT1
025:0030-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1 268.29 8.978 No_date 13:39 59.93 n/a
[RD7= 1.00] out<- 02:C14 268.29 8.662 No_date 14:01 59.93 n/a
[L/S/n= 2210./ .780/.035]
[Vmax= 1.631:Dmax= .803]
025:0031-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C14 268.29 8.662 No_date 14:01 59.93 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.025
remark:Routing Hydrograph for C14
025:0032-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:DT2 134.58 7.397 No_date 12:53 66.65 .542
[CN= 73.4: N= 3.00]
[Tp= .96:DT= 1.00]
025:0033-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:DT2 134.58 7.397 No_date 12:53 66.65 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.025
remark:Runoff Hydrograph for DT2
025:0034-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C14 268.29 8.662 No_date 14:01 59.93 n/a
+ 03:DT2 134.58 7.397 No_date 12:53 66.65 n/a
[DT= 1.00] SUM= 05:D14 402.87 14.104 No_date 13:27 62.18 n/a
025:0035-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D14 402.87 14.104 No_date 13:27 62.18 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.025
remark:Downstream Hydrograph for C14
# Main Channel
025:0036-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:M1 457.96 19.040 No_date 13:41 75.72 .616
[CN= 78.6: N= 3.00]
[Tp= 1.68:DT= 1.00]
025:0037-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:M1 457.96 19.040 No_date 13:41 75.72 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.025
remark:Runoff Hydrograph for M1
025:0038-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:M1 457.96 19.040 No_date 13:41 75.72 n/a
[RD7= 1.00] out<- 02:C1 457.96 18.656 No_date 13:56 75.72 n/a
[L/S/n= 1720./ .400/.035]
[Vmax= 1.509:Dmax= 1.080]
025:0039-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C1 457.96 18.656 No_date 13:56 75.72 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.025
remark:Routing Hydrograph for C1
025:0040-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M2 341.59 21.758 No_date 12:45 70.49 .573
[CN= 75.7: N= 3.00]
[Tp= .85:DT= 1.00]
025:0041-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M2 341.59 21.758 No_date 12:45 70.49 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.025
remark:Runoff Hydrograph for M2
025:0042-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C1 457.96 18.656 No_date 13:56 75.72 n/a
+ 03:M2 341.59 21.758 No_date 12:45 70.49 n/a
[DT= 1.00] SUM= 01:J2 799.55 34.607 No_date 13:09 73.49 n/a
025:0043-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J2 799.55 34.607 No_date 13:09 73.49 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.025
remark:Hydrograph for J2
025:0044-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J2 799.55 34.607 No_date 13:09 73.49 n/a
[RD7= 1.00] out<- 02:C2 799.55 31.395 No_date 13:41 73.49 n/a
[L/S/n= 1940./ .210/.035]
[Vmax= 1.037:Dmax= .827]
025:0045-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C2 799.55 31.395 No_date 13:41 73.49 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.025
remark:Routing Hydrograph for C2
025:0046-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M3 165.13 7.020 No_date 13:36 75.03 .610
[CN= 78.2: N= 3.00]
[Tp= 1.61:DT= 1.00]
025:0047-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M3 165.13 7.020 No_date 13:36 75.03 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.025
remark:Runoff Hydrograph for M3
025:0048-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C2 799.55 31.395 No_date 13:41 73.49 n/a
+ 03:M3 165.13 7.020 No_date 13:36 75.03 n/a
[DT= 1.00] SUM= 01:J3 964.68 38.408 No_date 13:40 73.75 n/a
025:0049-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J3 964.68 38.408 No_date 13:40 73.75 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.025
remark:Hydrograph for J3
025:0050-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J3 964.68 38.408 No_date 13:40 73.75 n/a
[RD7= 1.00] out<- 02:C3 964.68 36.044 No_date 14:14 73.75 n/a
[L/S/n= 1090./ .180/.035]
[Vmax= .815:Dmax= 2.333]
025:0051-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C3 964.68 36.044 No_date 14:14 73.75 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.025
remark:Routing Hydrograph for C3
025:0052-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M4 1698.95 28.578 No_date 16:20 58.69 .477
[CN= 68.5: N= 3.00]
[Tp= 3.84:DT= 1.00]
025:0053-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M4 1698.95 28.578 No_date 16:20 58.69 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.025
remark:Runoff Hydrograph for M4
025:0054-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C3 964.68 36.044 No_date 14:14 73.75 n/a
+ 03:M4 1698.95 28.578 No_date 16:20 58.69 n/a
[DT= 1.00] SUM= 06:D3 2663.63 60.126 No_date 14:53 64.15 n/a
025:0055-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D3 2663.63 60.126 No_date 14:53 64.15 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.025
remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
025:0056-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D13 1092.01 25.539 No_date 14:47 67.38 n/a
+ 06:D3 2663.63 60.126 No_date 14:53 64.15 n/a
[DT= 1.00] SUM= 01:J4 3755.64 85.659 No_date 14:48 65.09 n/a
025:0057-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J4 3755.64 85.659 No_date 14:48 65.09 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.025
remark:Hydrograph for J4
025:0058-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J4 3755.64 85.659 No_date 14:48 65.09 n/a

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[RD= 1.00] out<- 02:C4          3755.64  73.794 No_date  15:54  65.09 n/a
[L/S/n= 2020./ .090/.035]
[Vmax= .468;Dmax= 2.779]
025/0059-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C4          3755.64  73.794 No_date  15:54  65.09 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.025
remark:Routing Hydrograph for C4
025/0060-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M5          112.92  6.189 No_date  12:54  66.95 .544
[CN= 73.6; N= 3.00]
[TP= .97;DT= 1.00]
025/0061-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M5          112.92  6.189 No_date  12:54  66.95 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.025
remark:Runoff Hydrograph for M5
025/0062-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C4          3755.64  73.794 No_date  15:54  65.09 n/a
+ 03:M5          112.92  6.189 No_date  12:54  66.95 n/a
[DT= 1.00] SUM= 01:J5          3868.56  74.989 No_date  15:54  65.14 n/a
025/0063-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J5          3868.56  74.989 No_date  15:54  65.14 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.025
remark:Hydrograph for J5
025/0064-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:J5          3868.56  74.989 No_date  15:54  65.14 n/a
[RD= 1.00] out<- 02:C5          3868.56  69.456 No_date  17:00  65.14 n/a
[L/S/n= 1450./ .050/.035]
[Vmax= .464;Dmax= 2.652]
025/0065-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C5          3868.56  69.456 No_date  17:00  65.14 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.025
remark:Routing Hydrograph for C5
025/0066-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M6          273.75  10.421 No_date  13:42  69.68 .566
[CN= 75.2; N= 3.00]
[TP= 1.68;DT= 1.00]
025/0067-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M6          273.75  10.421 No_date  13:42  69.68 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.025
remark:Runoff Hydrograph for M6
025/0068-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C5          3868.56  69.456 No_date  17:00  65.14 n/a
+ 03:M6          273.75  10.421 No_date  13:42  69.68 n/a
[DT= 1.00] SUM= 04:J6          4142.31  73.434 No_date  16:33  65.44 n/a
025/0069-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          04:J6          4142.31  73.434 No_date  16:33  65.44 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.025
remark:Hydrograph for J6
025/0070-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M7          21.88  2.250 No_date  12:14  67.31 .547
[CN= 73.8; N= 3.00]
[TP= .39;DT= 1.00]
025/0071-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M7          21.88  2.250 No_date  12:14  67.31 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.025
remark:Runoff Hydrograph for M7
025/0072-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          03:M7          21.88  2.250 No_date  12:14  67.31 n/a
+ 04:J6          4142.31  73.434 No_date  16:33  65.44 n/a
[DT= 1.00] SUM= 06:D6          4164.19  73.571 No_date  16:33  65.45 n/a
025/0073-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          06:D6          4164.19  73.571 No_date  16:33  65.45 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.025
remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
025/0074-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          05:D14          402.87  14.104 No_date  13:27  62.18 n/a
+ 06:D6          4164.19  73.571 No_date  16:33  65.45 n/a
[DT= 1.00] SUM= 01:J7          4567.06  79.044 No_date  16:20  65.16 n/a
025/0075-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J7          4567.06  79.044 No_date  16:20  65.16 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.025
remark:Hydrograph for J7
025/0076-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:J7          4567.06  79.044 No_date  16:20  65.16 n/a
* [RD= 1.00] out<- 02:C7          4567.06  78.930 No_date  16:33  65.16 n/a
[L/S/n= 520./ .130/.035]
[Vmax= 1.234;Dmax= 2.650]
025/0077-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C7          4567.06  78.930 No_date  16:33  65.16 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.025
remark:Routing Hydrograph for C7
025/0078-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M8          502.47  6.065 No_date  16:13  41.13 .334
[CN= 56.2; N= 3.00]
[TP= 3.62;DT= 1.00]
025/0079-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M8          502.47  6.065 No_date  16:13  41.13 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.025
remark:Runoff Hydrograph for M8
025/0080-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C7          4567.06  78.930 No_date  16:33  65.16 n/a
+ 03:M8          502.47  6.065 No_date  16:13  41.13 n/a
[DT= 1.00] SUM= 01:J8          5069.53  84.966 No_date  16:32  62.78 n/a
025/0081-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J8          5069.53  84.966 No_date  16:32  62.78 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.025
remark:Hydrograph for J8
025/0082-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:J8          5069.53  84.966 No_date  16:32  62.78 n/a
* [RD= 1.00] out<- 02:C8          5069.53  84.697 No_date  16:33  62.78 n/a
[L/S/n= 1010./ .150/.035]
[Vmax= 1.444;Dmax= 2.847]
025/0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C8          5069.53  84.697 No_date  16:33  62.78 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.025
remark:Routing Hydrograph for C8
025/0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M9          159.64  1.042 No_date  16:08  22.01 .179
[CN= 39.7; N= 3.00]
[TP= 3.37;DT= 1.00]
025/0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M9          159.64  1.042 No_date  16:08  22.01 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.025
remark:Runoff Hydrograph for M9
025/0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C8          5069.53  84.697 No_date  16:33  62.78 n/a
+ 03:M9          159.64  1.042 No_date  16:08  22.01 n/a
[DT= 1.00] SUM= 01:J9          5229.17  85.731 No_date  16:33  61.53 n/a
025/0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J9          5229.17  85.731 No_date  16:33  61.53 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.025
remark:Hydrograph for J9
025/0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:J9          5229.17  85.731 No_date  16:33  61.53 n/a
* [RD= 1.00] out<- 02:C9          5229.17  85.511 No_date  16:44  61.53 n/a
[L/S/n= 1810./ .990/.035]
[Vmax= 2.363;Dmax= 1.152]
025/0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C9          5229.17  85.511 No_date  16:44  61.53 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.025
remark:Routing Hydrograph for C9
025/0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M10         190.19  1.960 No_date  14:04  21.72 .177
[CN= 39.5; N= 3.00]
[TP= 1.79;DT= 1.00]
025/0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M10         190.19  1.960 No_date  14:04  21.72 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.025
remark:Runoff Hydrograph for M10
025/0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C9          5229.17  85.511 No_date  16:44  61.53 n/a
+ 03:M10         190.19  1.960 No_date  14:04  21.72 n/a
[DT= 1.00] SUM= 01:J10        5419.36  86.593 No_date  16:35  60.14 n/a
025/0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J10        5419.36  86.593 No_date  16:35  60.14 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.025
remark:Hydrograph for J10
025/0094-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:J10        5419.36  86.593 No_date  16:35  60.14 n/a
* [RD= 1.00] out<- 02:C10       5419.36  86.562 No_date  16:44  60.14 n/a
[L/S/n= 590./ .180/.035]
[Vmax= 1.704;Dmax= 2.602]
025/0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C10        5419.36  86.562 No_date  16:44  60.14 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.025
remark:Routing Hydrograph for C10
025/0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:M11         26.92  2.234 No_date  12:24  68.16 .554
[CN= 74.3; N= 3.00]
[TP= .55;DT= 1.00]
025/0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M11         26.92  2.234 No_date  12:24  68.16 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.025
remark:Runoff Hydrograph for M11
025/0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C10        5419.36  86.562 No_date  16:44  60.14 n/a
+ 03:M11         26.92  2.234 No_date  12:24  68.16 n/a
[DT= 1.00] SUM= 01:O1        5446.28  86.736 No_date  16:43  60.18 n/a
025/0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:O1        5446.28  86.736 No_date  16:43  60.18 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-O1.025
remark:Hydrograph for O1
** END OF RUN : 240
*****
RUN:COMMAND#
241/0001-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
START
[TZERO = .00 hrs on 0]
[METOUT= 2 (1=imperial, 2=metric output)]
[INSTOUR= 1]
[INRUN = 241]
*****
# Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
# Date : 29-11-2017
# Modeller : [AA, TB, SN]
# Company : Rideau Valley Conservation Authority
# License # : 5329846
*****
241/0002-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
READ STORM
Filename = storm.001
Comment =
[SDT=30.00;SDUR= 24.00;PTOT= 50.07]
241/0003-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
DEFAULT VALUES
Filename = N:\BECKETT-1\HYDROL-1\BEA161-1\BeckVal.val
ICASEdv = 1 (read and print data)
FileTitle= File comment: [RVCA Becketts Creek FPM]
THE FOLLOWING PARAMETERS ARE USED IN THE DESIGN STANDHYD COM
Horton's infiltration equation parameters:
[Fo= 76.20 mm/hr] [Fc=13.20 mm/hr] [DCAV= 4.14 /hr] [F= .00 mm]
Parameters for PERVIOUS surfaces in STANDHYD:
[IAper= 4.67 mm] [LGP=40.00 m] [MNP= .250]
Parameters for IMPERVIOUS surfaces in STANDHYD:
[IAimp= 1.57 mm] [CLC= 1.50] [MNI= .013]
Parameters used in NASHYD:
[IA= 1.50 mm] [N= 3.00]
# Upstream Tributary
241/0004-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     01:UT1          338.44  1.779 No_date  15:28  15.74 .314
[CN= 74.5; N= 3.00]
[TP= 3.04;DT= 1.00]
241/0005-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:UT1          338.44  1.779 No_date  15:28  15.74 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.241
remark:Runoff Hydrograph for UT1
241/0006-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL   -> 01:UT1          338.44  1.779 No_date  15:28  15.74 n/a
[RD= 1.00] out<- 02:C11        338.44  1.742 No_date  16:05  15.74 n/a
[L/S/n= 1960./ .510/.035]
[Vmax= 1.034;Dmax= .119]
241/0007-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C11          338.44  1.742 No_date  16:05  15.74 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C11.241
remark:Routing Hydrograph for C11
241/0008-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD     03:UT2          89.11  1.630 No_date  12:33  17.27 .345
[CN= 76.6; N= 3.00]
[TP= .64;DT= 1.00]
241/0009-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:UT2          89.11  1.630 No_date  12:33  17.27 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.241
remark:Runoff Hydrograph for UT2
241/0010-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C11          338.44  1.742 No_date  16:05  15.74 n/a
+ 03:UT2          89.11  1.630 No_date  12:33  17.27 n/a
[DT= 1.00] SUM= 04:D11        427.55  1.953 No_date  16:02  16.06 n/a
241/0011-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          04:D11        427.55  1.953 No_date  16:02  16.06 n/a

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fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.241
remark:Downstream Hydrograph for C11
241|0012|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT3 459.85 2.831 No_date 14:18 13.83 276
[CN = 71.4; N= 3.00]
[TP = 2.06;DT= 1.00]
241|0013|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT3 459.85 2.831 No_date 14:18 13.83 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.241
remark:Runoff Hydrograph for UT3
241|0014|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT3 459.85 2.831 No_date 14:18 13.83 n/a
[RDT= 1.00] out<- 02:C12 459.85 2.514 No_date 15:17 13.83 n/a
[L/S/n= 2300./ .410/.035]
[Vmax= .690;Dmax= .474]
241|0015|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C12 459.85 2.514 No_date 15:17 13.83 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.241
remark:Routing Hydrograph for C12
241|0016|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT4 137.12 2.016 No_date 12:53 17.97 359
[CN = 77.6; N= 3.00]
[TP = .93;DT= 1.00]
241|0017|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT4 137.12 2.016 No_date 12:53 17.97 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.241
remark:Runoff Hydrograph for UT4
241|0018|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C12 459.85 2.514 No_date 15:17 13.83 n/a
+ 03:UT4 137.12 2.016 No_date 12:53 17.97 n/a
[DT= 1.00] SUM= 05:D12 596.97 3.201 No_date 14:13 14.78 n/a
241|0019|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D12 596.97 3.201 No_date 14:13 14.78 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.241
remark:Downstream Hydrograph for C12
241|0020|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D11 427.55 1.953 No_date 16:02 16.06 n/a
+ 05:D12 596.97 3.201 No_date 14:13 14.78 n/a
[DT= 1.00] SUM= 01:J13 1024.52 4.974 No_date 14:51 15.31 n/a
241|0021|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J13 1024.52 4.974 No_date 14:51 15.31 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.241
remark:Hydrograph for J13
241|0022|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J13 1024.52 4.974 No_date 14:51 15.31 n/a
[RDT= 1.00] out<- 02:C13 1024.52 4.950 No_date 15:10 15.31 n/a
[L/S/n= 1540./ .250/.035]
[Vmax= 1.045;Dmax= 1.028]
241|0023|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C13 1024.52 4.950 No_date 15:10 15.31 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.241
remark:Routing Hydrograph for C13
241|0024|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT5 67.49 .390 No_date 15:10 16.21 324
[CN = 75.2; N= 3.00]
[TP = 2.80;DT= 1.00]
241|0025|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT5 67.49 .390 No_date 15:10 16.21 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.241
remark:Runoff Hydrograph for UT5
241|0026|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C13 1024.52 4.950 No_date 15:10 15.31 n/a
+ 03:UT5 67.49 .390 No_date 15:10 16.21 n/a
[DT= 1.00] SUM= 04:D13 1092.01 5.340 No_date 15:10 15.37 n/a
241|0027|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D13 1092.01 5.340 No_date 15:10 15.37 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.241
remark:Downstream Hydrograph for C13
# Downstream Tributary
241|0028|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:DT1 268.29 1.793 No_date 13:46 12.58 251
[CN = 69.3; N= 3.00]
[TP = 1.61;DT= 1.00]
241|0029|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:DT1 268.29 1.793 No_date 13:46 12.58 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.241
remark:Runoff Hydrograph for DT1
241|0030|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1 268.29 1.793 No_date 13:46 12.58 n/a
[RDT= 1.00] out<- 02:C14 268.29 1.718 No_date 14:14 12.58 n/a
[L/S/n= 2210./ .780/.035]
[Vmax= 1.505;Dmax= .221]
241|0031|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C14 268.29 1.718 No_date 14:14 12.58 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.241
remark:Routing Hydrograph for C14
241|0032|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:DT2 134.58 1.595 No_date 12:56 15.05 301
[CN = 73.4; N= 3.00]
[TP = .96;DT= 1.00]
241|0033|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:DT2 134.58 1.595 No_date 12:56 15.05 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.241
remark:Runoff Hydrograph for DT2
241|0034|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C14 268.29 1.718 No_date 14:14 12.58 n/a
+ 03:DT2 134.58 1.595 No_date 12:56 15.05 n/a
[DT= 1.00] SUM= 05:D14 402.87 2.865 No_date 13:31 13.41 n/a
241|0035|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D14 402.87 2.865 No_date 13:31 13.41 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.241
remark:Downstream Hydrograph for C14
# Main Channel
241|0036|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:M1 457.96 4.563 No_date 13:47 18.76 375
[CN = 78.6; N= 3.00]
[TP = 1.68;DT= 1.00]
241|0037|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:M1 457.96 4.563 No_date 13:47 18.76 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.241
remark:Runoff Hydrograph for M1
241|0038|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:M1 457.96 4.563 No_date 13:47 18.76 n/a
[RDT= 1.00] out<- 02:C5 457.96 4.280 No_date 14:18 18.76 n/a
[L/S/n= 1720./ .400/.035]
[Vmax= .895;Dmax= .491]
241|0039|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C1 457.96 4.280 No_date 14:18 18.76 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.241
remark:Routing Hydrograph for C1
241|0040|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M2 341.59 4.902 No_date 12:48 16.56 331
[CN = 75.7; N= 3.00]
[TP = .85;DT= 1.00]
241|0041|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M2 341.59 4.902 No_date 12:48 16.56 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.241
remark:Runoff Hydrograph for M2
241|0042|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C1 457.96 4.280 No_date 14:18 18.76 n/a
+ 03:M2 341.59 4.902 No_date 12:48 16.56 n/a
[DT= 1.00] SUM= 01:J2 799.55 7.345 No_date 13:20 17.82 n/a
241|0043|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J2 799.55 7.345 No_date 13:20 17.82 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.241
remark:Hydrograph for J2
241|0044|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J2 799.55 7.345 No_date 13:20 17.82 n/a
[RDT= 1.00] out<- 02:C2 799.55 6.721 No_date 14:03 17.82 n/a
[L/S/n= 1940./ .210/.035]
[Vmax= .907;Dmax= .233]
241|0045|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C2 799.55 6.721 No_date 14:03 17.82 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.241
remark:Routing Hydrograph for C2
241|0046|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M3 165.13 1.669 No_date 13:42 18.46 369
[CN = 78.2; N= 3.00]
[TP = 1.61;DT= 1.00]
241|0047|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M3 165.13 1.669 No_date 13:42 18.46 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.241
remark:Runoff Hydrograph for M3
241|0048|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C2 799.55 6.721 No_date 14:03 17.82 n/a
+ 03:M3 165.13 1.669 No_date 13:42 18.46 n/a
[DT= 1.00] SUM= 01:J3 964.68 8.354 No_date 13:59 17.93 n/a
241|0049|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J3 964.68 8.354 No_date 13:59 17.93 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.241
remark:Hydrograph for J3
241|0050|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J3 964.68 8.354 No_date 13:59 17.93 n/a
[RDT= 1.00] out<- 02:C3 964.68 8.223 No_date 14:13 17.93 n/a
[L/S/n= 1090./ .180/.035]
[Vmax= 1.078;Dmax= 1.137]
241|0051|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C3 964.68 8.223 No_date 14:13 17.93 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.241
remark:Routing Hydrograph for C3
241|0052|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M4 1698.95 5.691 No_date 16:37 12.16 243
[CN = 68.5; N= 3.00]
[TP = 3.84;DT= 1.00]
241|0053|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M4 1698.95 5.691 No_date 16:37 12.16 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.241
remark:Runoff Hydrograph for M4
241|0054|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C3 964.68 8.223 No_date 14:13 17.93 n/a
+ 03:M4 1698.95 5.691 No_date 16:37 12.16 n/a
[DT= 1.00] SUM= 06:D3 2663.63 12.562 No_date 14:45 14.25 n/a
241|0055|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D3 2663.63 12.562 No_date 14:45 14.25 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.241
remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
241|0056|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 06:D3 2663.63 12.562 No_date 14:45 14.25 n/a
+ 06:D3 2663.63 12.562 No_date 14:45 14.25 n/a
[DT= 1.00] SUM= 01:J4 3755.64 17.873 No_date 14:49 14.57 n/a
241|0057|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J4 3755.64 17.873 No_date 14:49 14.57 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.241
remark:Hydrograph for J4
241|0058|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J4 3755.64 17.873 No_date 14:49 14.57 n/a
[RDT= 1.00] out<- 02:C4 3755.64 17.021 No_date 15:35 14.57 n/a
[L/S/n= 2020./ .090/.035]
[Vmax= .826;Dmax= 1.769]
241|0059|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C4 3755.64 17.021 No_date 15:35 14.57 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.241
remark:Routing Hydrograph for C4
241|0060|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M5 112.92 1.340 No_date 12:57 15.16 303
[CN = 73.6; N= 3.00]
[TP = .97;DT= 1.00]
241|0061|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M5 112.92 1.340 No_date 12:57 15.16 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.241
remark:Runoff Hydrograph for M5
241|0062|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C4 3755.64 17.021 No_date 15:35 14.57 n/a
+ 03:M5 112.92 1.340 No_date 12:57 15.16 n/a
[DT= 1.00] SUM= 01:J5 3868.56 17.366 No_date 15:35 14.59 n/a
241|0063|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J5 3868.56 17.366 No_date 15:35 14.59 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.241
remark:Hydrograph for J5
241|0064|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J5 3868.56 17.366 No_date 15:35 14.59 n/a
[RDT= 1.00] out<- 02:C5 3868.56 16.628 No_date 16:29 14.59 n/a
[L/S/n= 1450./ .050/.035]
[Vmax= .599;Dmax= 1.536]
241|0065|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C5 3868.56 16.628 No_date 16:29 14.59 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.241
remark:Routing Hydrograph for C5
241|0066|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M6 273.75 2.334 No_date 13:48 16.23 324
[CN = 75.2; N= 3.00]
[TP = 1.68;DT= 1.00]
241|0067|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M6 273.75 2.334 No_date 13:48 16.23 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.241
remark:Runoff Hydrograph for M6
241|0068|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C5 3868.56 16.628 No_date 16:29 14.59 n/a
+ 03:M6 273.75 2.334 No_date 13:48 16.23 n/a
[DT= 1.00] SUM= 04:J6 4142.31 17.839 No_date 16:10 14.70 n/a
241|0069|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:J6 4142.31 17.839 No_date 16:10 14.70 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.241
remark:Hydrograph for J6
241|0070|-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-

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CALIB NASHYD      03:M7      21.88      .488 No_date  12:15  15.30  3.06      remark:Hydrograph for 01
[CN= 73.8; N= 3.00]
[TP= .39;DT= 1.00]
241:0071-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M7      21.88      .488 No_date  12:15  15.30  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.241
remark:Runoff Hydrograph for M7
241:0072-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          03:M7      21.88      .488 No_date  12:15  15.30  n/a
+ 04:J6          4142.31  17.839 No_date  16:10  14.70  n/a
[DT= 1.00] SUM= 06:D6          4164.19  17.885 No_date  16:10  14.70  n/a
241:0073-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          06:D6          4164.19  17.885 No_date  16:10  14.70  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.241
remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
241:0074-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          05:D14          402.87      2.865 No_date  13:31  13.41  n/a
+ 06:D6          4164.19  17.885 No_date  16:10  14.70  n/a
[DT= 1.00] SUM= 01:J7          4567.06  19.392 No_date  15:53  14.59  n/a
241:0075-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J7          4567.06  19.392 No_date  15:53  14.59  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.241
remark:Hydrograph for J7
241:0076-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J7          4567.06  19.392 No_date  15:53  14.59  n/a
* [RDT= 1.00] out<- 02:C7          4567.06  19.367 No_date  15:53  14.59  n/a
[L/S/n= 520./ .130/.035]
[Vmax= .973;Dmax= 1.507]
241:0077-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C7          4567.06  19.367 No_date  15:53  14.59  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.241
remark:Routing Hydrograph for C7
241:0078-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      03:M8      502.47      .939 No_date  16:36  6.78  .135
[CN= 56.2; N= 3.00]
[TP= 3.62;DT= 1.00]
241:0079-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M8      502.47      .939 No_date  16:36  6.78  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.241
remark:Runoff Hydrograph for M8
241:0080-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C7          4567.06  19.367 No_date  15:53  14.59  n/a
+ 03:M8          502.47      .939 No_date  16:36  6.78  n/a
[DT= 1.00] SUM= 01:J8          5069.53  20.284 No_date  15:53  13.81  n/a
241:0081-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J8          5069.53  20.284 No_date  15:53  13.81  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.241
remark:Hydrograph for J8
241:0082-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J8          5069.53  20.284 No_date  15:53  13.81  n/a
* [RDT= 1.00] out<- 02:C8          5069.53  20.219 No_date  16:09  13.81  n/a
[L/S/n= 1010./ .150/.035]
[Vmax= 1.095;Dmax= 1.352]
241:0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C8          5069.53  20.219 No_date  16:09  13.81  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.241
remark:Routing Hydrograph for C8
241:0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      03:M9      159.64      .093 No_date  16:58  2.28  .046
[CN= 39.7; N= 3.00]
[TP= 3.37;DT= 1.00]
241:0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M9      159.64      .093 No_date  16:58  2.28  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.241
remark:Runoff Hydrograph for M9
241:0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C8          5069.53  20.219 No_date  16:09  13.81  n/a
+ 03:M9          159.64      .093 No_date  16:58  2.28  n/a
[DT= 1.00] SUM= 01:J9          5229.17  20.309 No_date  16:09  13.46  n/a
241:0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J9          5229.17  20.309 No_date  16:09  13.46  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.241
remark:Hydrograph for J9
241:0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J9          5229.17  20.309 No_date  16:09  13.46  n/a
* [RDT= 1.00] out<- 02:C9          5229.17  20.173 No_date  16:25  13.46  n/a
[L/S/n= 1810./ .990/.035]
[Vmax= 1.252;Dmax= .607]
241:0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C9          5229.17  20.173 No_date  16:25  13.46  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.241
remark:Routing Hydrograph for C9
241:0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      03:M10     190.19      .160 No_date  14:31  2.22  .044
[CN= 39.5; N= 3.00]
[TP= 1.79;DT= 1.00]
241:0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M10     190.19      .160 No_date  14:31  2.22  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.241
remark:Runoff Hydrograph for M10
241:0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C9          5229.17  20.173 No_date  16:25  13.46  n/a
+ 03:M10         190.19      .160 No_date  14:31  2.22  n/a
[DT= 1.00] SUM= 01:J10         5419.36  20.297 No_date  16:24  13.07  n/a
241:0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J10         5419.36  20.297 No_date  16:24  13.07  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.241
remark:Hydrograph for J10
241:0094-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J10         5419.36  20.297 No_date  16:24  13.07  n/a
* [RDT= 1.00] out<- 02:C10         5419.36  20.273 No_date  16:35  13.07  n/a
[L/S/n= 590./ .180/.035]
[Vmax= 1.104;Dmax= 1.425]
241:0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C10         5419.36  20.273 No_date  16:35  13.07  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.241
remark:Routing Hydrograph for C10
241:0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      03:M11     26.92      .489 No_date  12:27  15.63  .312
[CN= 74.3; N= 3.00]
[TP= .55;DT= 1.00]
241:0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M11     26.92      .489 No_date  12:27  15.63  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.241
remark:Runoff Hydrograph for M11
241:0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C10         5419.36  20.273 No_date  16:35  13.07  n/a
+ 03:M11         26.92      .489 No_date  12:27  15.63  n/a
[DT= 1.00] SUM= 01:01         5446.28  20.324 No_date  16:35  13.08  n/a
241:0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:01         5446.28  20.324 No_date  16:35  13.08  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-O1.241

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SAVE HYD 02:C13 1024.52 9.114 No_date 15:16 27.56 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.242
 remark:Routing Hydrograph for C13

242:0024-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 CALIB NASHYD 03:UT5 67.49 7.06 No_date 15:05 28.91 413
 [CN= 75.2: N= 3.00]
 [Tp= 2.80:DT= 1.00]

242:0025-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 03:UT5 67.49 7.06 No_date 15:05 28.91 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.242
 remark:Runoff Hydrograph for UT5

242:0026-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ADD HYD 02:C13 1024.52 9.114 No_date 15:16 27.56 n/a
 + 03:UT5 67.49 7.06 No_date 15:05 28.91 n/a
 [DT= 1.00] SUM= 04:D13 1092.01 9.819 No_date 15:15 27.64 n/a

242:0027-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 04:D13 1092.01 9.819 No_date 15:15 27.64 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.242
 remark:Downstream Hydrograph for C13

Downstream Tributary

242:0028-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 CALIB NASHYD 01:DT1 268.29 3.414 No_date 13:43 23.43 335
 [CN= 69.3: N= 3.00]
 [Tp= 1.61:DT= 1.00]

242:0029-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 01:DT1 268.29 3.414 No_date 13:43 23.43 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.242
 remark:Runoff Hydrograph for DT1

242:0030-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ROUTE CHANNEL -> 01:DT1 268.29 3.414 No_date 13:43 23.43 n/a
 [RDT= 1.00] out<- 02:C14 268.29 3.266 No_date 14:11 23.43 n/a
 [L/S/n= 2210./ .780/.035]
 [Vmax= 1.505:Dmax= .421]

242:0031-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 02:C14 268.29 3.266 No_date 14:11 23.43 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.242
 remark:Routing Hydrograph for C14

242:0032-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 CALIB NASHYD 03:DT2 134.58 2.941 No_date 12:55 27.19 388
 [CN= 73.4: N= 3.00]
 [Tp= .96:DT= 1.00]

242:0033-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 03:DT2 134.58 2.941 No_date 12:55 27.19 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.242
 remark:Runoff Hydrograph for DT2

242:0034-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ADD HYD 02:C14 268.29 3.266 No_date 14:11 23.43 n/a
 + 03:DT2 134.58 2.941 No_date 12:55 27.19 n/a
 [DT= 1.00] SUM= 05:D14 402.87 5.380 No_date 13:29 24.68 n/a

242:0035-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 05:D14 402.87 5.380 No_date 13:29 24.68 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.242
 remark:Downstream Hydrograph for C14

Main Channel

242:0036-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 CALIB NASHYD 01:M1 457.96 8.054 No_date 13:45 32.62 466
 [CN= 78.6: N= 3.00]
 [Tp= 1.68:DT= 1.00]

242:0037-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 01:M1 457.96 8.054 No_date 13:45 32.62 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.242
 remark:Runoff Hydrograph for M1

242:0038-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ROUTE CHANNEL -> 01:M1 457.96 8.054 No_date 13:45 32.62 n/a
 [RDT= 1.00] out<- 02:C1 457.96 7.760 No_date 14:04 32.62 n/a
 [L/S/n= 1720./ .400/.035]
 [Vmax= 1.111:Dmax= .680]

242:0039-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 02:C1 457.96 7.760 No_date 14:04 32.62 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.242
 remark:Routing Hydrograph for C1

242:0040-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 CALIB NASHYD 03:M2 341.59 8.879 No_date 12:47 29.43 420
 [CN= 75.7: N= 3.00]
 [Tp= .85:DT= 1.00]

242:0041-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 03:M2 341.59 8.879 No_date 12:47 29.43 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.242
 remark:Runoff Hydrograph for M2

242:0042-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ADD HYD 02:C1 457.96 7.760 No_date 14:04 32.62 n/a
 + 03:M2 341.59 8.879 No_date 12:47 29.43 n/a
 [DT= 1.00] SUM= 01:J2 799.55 13.740 No_date 13:18 31.26 n/a

242:0043-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 01:J2 799.55 13.740 No_date 13:18 31.26 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.242
 remark:Hydrograph for J2

242:0044-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ROUTE CHANNEL -> 01:J2 799.55 13.740 No_date 13:18 31.26 n/a
 [RDT= 1.00] out<- 02:C2 799.55 12.399 No_date 13:58 31.26 n/a
 [L/S/n= 1940./ .210/.035]
 [Vmax= .907:Dmax= .435]

242:0045-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 02:C2 799.55 12.399 No_date 13:58 31.26 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.242
 remark:Routing Hydrograph for C2

242:0046-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 CALIB NASHYD 03:M3 165.13 2.956 No_date 13:40 32.19 460
 [CN= 78.2: N= 3.00]
 [Tp= 1.61:DT= 1.00]

242:0047-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 03:M3 165.13 2.956 No_date 13:40 32.19 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.242
 remark:Runoff Hydrograph for M3

242:0048-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ADD HYD 02:C2 799.55 12.399 No_date 13:58 31.26 n/a
 + 03:M3 165.13 2.956 No_date 13:40 32.19 n/a
 [DT= 1.00] SUM= 01:J3 964.68 15.304 No_date 13:55 31.42 n/a

242:0049-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 01:J3 964.68 15.304 No_date 13:55 31.42 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.242
 remark:Hydrograph for J3

242:0050-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ROUTE CHANNEL -> 01:J3 964.68 15.304 No_date 13:55 31.42 n/a
 [RDT= 1.00] out<- 02:C3 964.68 15.089 No_date 14:06 31.42 n/a
 [L/S/n= 1090./ .180/.035]
 [Vmax= 1.285:Dmax= 1.584]

242:0051-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 02:C3 964.68 15.089 No_date 14:06 31.42 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.242
 remark:Routing Hydrograph for C3

242:0052-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 CALIB NASHYD 03:M4 1698.95 10.838 No_date 16:30 22.76 325

[CN= 68.5: N= 3.00]
 [Tp= 3.84:DT= 1.00]

242:0053-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 03:M4 1698.95 10.838 No_date 16:30 22.76 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.242
 remark:Runoff Hydrograph for M4

242:0054-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ADD HYD 02:C3 964.68 15.089 No_date 14:06 31.42 n/a
 + 03:M4 1698.95 10.838 No_date 16:30 22.76 n/a
 [DT= 1.00] SUM= 06:D3 2663.63 23.258 No_date 14:34 25.89 n/a

242:0055-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 06:D3 2663.63 23.258 No_date 14:34 25.89 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.242
 remark:Downstream Hydrograph for C3

Stream Junction of Main Channel and Upstream Tributary

242:0056-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ADD HYD 04:D13 1092.01 9.819 No_date 15:15 27.64 n/a
 + 06:D3 2663.63 23.258 No_date 14:34 25.89 n/a
 [DT= 1.00] SUM= 01:J4 3755.64 32.909 No_date 14:40 26.40 n/a

242:0057-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 01:J4 3755.64 32.909 No_date 14:40 26.40 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.242
 remark:Hydrograph for J4

242:0058-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ROUTE CHANNEL -> 01:J4 3755.64 32.909 No_date 14:40 26.40 n/a
 [RDT= 1.00] out<- 02:C4 3755.64 30.202 No_date 16:08 26.40 n/a
 [L/S/n= 2020./ .090/.035]
 [Vmax= .616:Dmax= 2.173]

242:0059-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 02:C4 3755.64 30.202 No_date 16:08 26.40 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.242
 remark:Routing Hydrograph for C4

242:0060-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 CALIB NASHYD 03:M5 112.92 2.466 No_date 12:56 27.36 391
 [CN= 73.6: N= 3.00]
 [Tp= .97:DT= 1.00]

242:0061-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 03:M5 112.92 2.466 No_date 12:56 27.36 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.242
 remark:Runoff Hydrograph for M5

242:0062-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ADD HYD 02:C4 3755.64 30.202 No_date 16:08 26.40 n/a
 + 03:M5 112.92 2.466 No_date 12:56 27.36 n/a
 [DT= 1.00] SUM= 01:J5 3868.56 30.704 No_date 15:50 26.43 n/a

242:0063-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 01:J5 3868.56 30.704 No_date 15:50 26.43 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.242
 remark:Hydrograph for J5

242:0064-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ROUTE CHANNEL -> 01:J5 3868.56 30.704 No_date 15:50 26.43 n/a
 [RDT= 1.00] out<- 02:C5 3868.56 29.187 No_date 17:02 26.43 n/a
 [L/S/n= 1450./ .050/.035]
 [Vmax= .540:Dmax= 1.942]

242:0065-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 02:C5 3868.56 29.187 No_date 17:02 26.43 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.242
 remark:Routing Hydrograph for C5

242:0066-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 CALIB NASHYD 03:M6 273.75 4.236 No_date 13:46 28.95 414
 [CN= 75.2: N= 3.00]
 [Tp= 1.68:DT= 1.00]

242:0067-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 03:M6 273.75 4.236 No_date 13:46 28.95 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.242
 remark:Runoff Hydrograph for M6

242:0068-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ADD HYD 02:C5 3868.56 29.187 No_date 17:02 26.43 n/a
 + 03:M6 273.75 4.236 No_date 13:46 28.95 n/a
 [DT= 1.00] SUM= 04:J6 4142.31 31.031 No_date 16:36 26.60 n/a

242:0069-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 04:J6 4142.31 31.031 No_date 16:36 26.60 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.242
 remark:Hydrograph for J6

242:0070-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 CALIB NASHYD 03:M7 21.88 .898 No_date 12:15 27.56 394
 [CN= 73.8: N= 3.00]
 [Tp= .39:DT= 1.00]

242:0071-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 03:M7 21.88 .898 No_date 12:15 27.56 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.242
 remark:Runoff Hydrograph for M7

242:0072-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ADD HYD 03:M7 21.88 .898 No_date 12:15 27.56 n/a
 + 04:J6 4142.31 31.031 No_date 16:36 26.60 n/a
 [DT= 1.00] SUM= 06:D6 4164.19 31.091 No_date 16:36 26.60 n/a

242:0073-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 06:D6 4164.19 31.091 No_date 16:36 26.60 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.242
 remark:Downstream Hydrograph for C6

Stream Junction of Main Channel and Downstream Tributary

242:0074-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ADD HYD 05:D14 402.87 5.380 No_date 13:29 24.68 n/a
 + 06:D6 4164.19 31.091 No_date 16:36 26.60 n/a
 [DT= 1.00] SUM= 01:J7 4567.06 33.424 No_date 16:08 26.43 n/a

242:0075-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 01:J7 4567.06 33.424 No_date 16:08 26.43 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.242
 remark:Hydrograph for J7

242:0076-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ROUTE CHANNEL -> 01:J7 4567.06 33.424 No_date 16:08 26.43 n/a
 [RDT= 1.00] out<- 02:C7 4567.06 33.362 No_date 16:19 26.43 n/a
 [L/S/n= 520./ .130/.035]
 [Vmax= 1.123:Dmax= 1.906]

242:0077-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 02:C7 4567.06 33.362 No_date 16:19 26.43 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.242
 remark:Routing Hydrograph for C7

242:0078-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 CALIB NASHYD 03:M8 502.47 1.997 No_date 16:25 14.00 200
 [CN= 56.2: N= 3.00]
 [Tp= 3.62:DT= 1.00]

242:0079-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 03:M8 502.47 1.997 No_date 16:25 14.00 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.242
 remark:Runoff Hydrograph for M8

242:0080-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 ADD HYD 02:C7 4567.06 33.362 No_date 16:19 26.43 n/a
 + 03:M8 502.47 1.997 No_date 16:25 14.00 n/a
 [DT= 1.00] SUM= 01:J8 5069.53 35.358 No_date 16:19 25.20 n/a

242:0081-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
 SAVE HYD 01:J8 5069.53 35.358 No_date 16:19 25.20 n/a
 fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.242
 remark:Hydrograph for J8

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242:0082-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J8 5069.53 35.358 No_date 16:19 25.20 n/a
* [RDT= 1.00] out<- 02:C8 5069.53 35.245 No_date 16:36 25.20 n/a
  [L/S/n= 1010./ .150/.035]
  [Vmax= 1.269:Dmax= 1.817]
242:0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C8 5069.53 35.245 No_date 16:36 25.20 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.242
remark:Routing Hydrograph for C8
242:0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M9 159.64 .260 No_date 16:31 5.90 .084
[CN= 39.7: N= 3.00]
[Tp= 3.37:DT= 1.00]
242:0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M9 159.64 .260 No_date 16:31 5.90 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.242
remark:Runoff Hydrograph for M9
242:0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C8 5069.53 35.245 No_date 16:36 25.20 n/a
+ 03:M9 159.64 .260 No_date 16:31 5.90 n/a
[DT= 1.00] SUM= 01:J9 5229.17 35.505 No_date 16:36 24.61 n/a
242:0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J9 5229.17 35.505 No_date 16:36 24.61 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.242
remark:Hydrograph for J9
242:0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J9 5229.17 35.505 No_date 16:36 24.61 n/a
* [RDT= 1.00] out<- 02:C9 5229.17 35.444 No_date 16:37 24.61 n/a
  [L/S/n= 1810./ .990/.035]
  [Vmax= 1.604:Dmax= .784]
242:0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C9 5229.17 35.444 No_date 16:37 24.61 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.242
remark:Routing Hydrograph for C9
242:0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M10 190.19 .471 No_date 14:16 5.79 .083
[CN= 39.5: N= 3.00]
[Tp= 1.79:DT= 1.00]
242:0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M10 190.19 .471 No_date 14:16 5.79 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.242
remark:Runoff Hydrograph for M10
242:0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C9 5229.17 35.444 No_date 16:37 24.61 n/a
+ 03:M10 190.19 .471 No_date 14:16 5.79 n/a
[DT= 1.00] SUM= 01:J10 5419.36 35.748 No_date 16:37 23.95 n/a
242:0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J10 5419.36 35.748 No_date 16:37 23.95 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.242
remark:Hydrograph for J10
242:0094-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J10 5419.36 35.748 No_date 16:37 23.95 n/a
* [RDT= 1.00] out<- 02:C10 5419.36 35.733 No_date 16:38 23.95 n/a
  [L/S/n= 890./ .180/.035]
  [Vmax= 1.272:Dmax= 1.834]
242:0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C10 5419.36 35.733 No_date 16:38 23.95 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.242
remark:Routing Hydrograph for C10
242:0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M11 26.92 .896 No_date 12:26 28.06 .401
[CN= 74.3: N= 3.00]
[Tp= .55:DT= 1.00]
242:0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M11 26.92 .896 No_date 12:26 28.06 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.242
remark:Runoff Hydrograph for M11
242:0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C10 5419.36 35.733 No_date 16:38 23.95 n/a
+ 03:M11 26.92 .896 No_date 12:26 28.06 n/a
[DT= 1.00] SUM= 01:O1 5446.28 35.816 No_date 16:38 23.97 n/a
242:0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:O1 5446.28 35.816 No_date 16:38 23.97 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-O1.242
remark:Hydrograph for O1
** END OF RUN : 242
*****
RUN:COMMAND#
243:0001-----
START
[TEZRO= .00 hrs on 0]
[MEFOUT= 2 (1=imperial, 2=metric output)]
[INSTORM= 1 ]
[NRUN = 243 ]
# Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
# Date : 29-11-2017
# Modeller : [AA, TB, SN]
# Company : Rideau Valley Conservation Authority
# License # : 5329846
*****
243:0002-----
READ STORM
Filename = storm.001
Comment
[SDT=30.00:SDUR= 24.00:PPOF= 82.59]
243:0003-----
DEFAULT VALUES
Filename = N:\BECKETT-1\HYDROL-1\BEA161-1\BckVal.val
ICASEdy = 1 (read and print data)
FileTitle= File comment: [RVCA Becketts Creek FPM]
THE FOLLOWING PARAMETERS ARE USED IN THE DESIGN STANDHYD COM
Horton's infiltration equation parameters:
[Fo= 76.20 mm/hr] [Fc=13.20 mm/hr] [DCAV= 4.14 /hr] [F= .00 mm]
Parameters for PERVIOUS surfaces in STANDHYD:
[IAper= 4.67 mm] [LGP=40.00 mm] [MNP= .250]
Parameters for IMPVIOUS surfaces in STANDHYD:
[IAImp= 1.57 mm] [CLi= 1.50] [MNI= .013]
Parameters used in NASHYD:
[ia= 1.50 mm] [N= 3.00]
# Upstream Tributary
243:0004-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT1 338.44 4.279 No_date 15:21 37.03 .448
[CN= 74.5: N= 3.00]
[Tp= 3.04:DT= 1.00]
243:0005-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT1 338.44 4.279 No_date 15:21 37.03 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.243
remark:Runoff Hydrograph for UT1
243:0006-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT1 338.44 4.279 No_date 15:21 37.03 n/a
[RDT= 1.00] out<- 02:C11 338.44 4.184 No_date 15:58 37.03 n/a
[L/S/n= 1960./ .510/.035]
[Vmax= 1.034:Dmax= .286]
243:0007-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C11 338.44 4.184 No_date 15:58 37.03 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C11.243
remark:Routing Hydrograph for C11
243:0008-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT2 89.11 3.843 No_date 12:32 39.69 .481
[CN= 76.6: N= 3.00]
[Tp= .64:DT= 1.00]
243:0009-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT2 89.11 3.843 No_date 12:32 39.69 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.243
remark:Runoff Hydrograph for UT2
243:0010-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C11 338.44 4.184 No_date 15:58 37.03 n/a
+ 03:UT2 89.11 3.843 No_date 12:32 39.69 n/a
[DT= 1.00] SUM= 04:D11 427.55 4.633 No_date 15:54 37.58 n/a
243:0011-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D11 427.55 4.633 No_date 15:54 37.58 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.243
remark:Downstream Hydrograph for C11
243:0012-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT3 459.85 7.063 No_date 14:13 33.57 .406
[CN= 71.4: N= 3.00]
[Tp= 2.06:DT= 1.00]
243:0013-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT3 459.85 7.063 No_date 14:13 33.57 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.243
remark:Runoff Hydrograph for UT3
243:0014-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT3 459.85 7.063 No_date 14:13 33.57 n/a
[RDT= 1.00] out<- 02:C12 459.85 6.426 No_date 15:00 33.57 n/a
[L/S/n= 2300./ .410/.035]
[Vmax= .793:Dmax= .631]
243:0015-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C12 459.85 6.426 No_date 15:00 33.57 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.243
remark:Routing Hydrograph for C12
243:0016-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT4 137.12 4.698 No_date 12:51 40.89 .495
[CN= 77.6: N= 3.00]
[Tp= .93:DT= 1.00]
243:0017-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT4 137.12 4.698 No_date 12:51 40.89 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.243
remark:Runoff Hydrograph for UT4
243:0018-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C12 459.85 6.426 No_date 15:00 33.57 n/a
+ 03:UT4 137.12 4.698 No_date 12:51 40.89 n/a
[DT= 1.00] SUM= 05:D12 596.97 8.173 No_date 14:13 35.25 n/a
243:0019-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D12 596.97 8.173 No_date 14:13 35.25 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.243
remark:Downstream Hydrograph for C12
243:0020-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D11 427.55 4.633 No_date 15:54 37.58 n/a
+ 05:D12 596.97 8.173 No_date 14:13 35.25 n/a
[DT= 1.00] SUM= 01:J13 1024.52 12.354 No_date 14:33 36.22 n/a
243:0021-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J13 1024.52 12.354 No_date 14:33 36.22 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.243
remark:Hydrograph for J13
243:0022-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J13 1024.52 12.354 No_date 14:33 36.22 n/a
[RDT= 1.00] out<- 02:C13 1024.52 12.149 No_date 15:12 36.22 n/a
[L/S/n= 1540./ .250/.035]
[Vmax= .844:Dmax= 1.418]
243:0023-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C13 1024.52 12.149 No_date 15:12 36.22 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.243
remark:Routing Hydrograph for C13
243:0024-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT5 67.49 .931 No_date 15:04 37.84 .458
[CN= 75.2: N= 3.00]
[Tp= 2.80:DT= 1.00]
243:0025-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT5 67.49 .931 No_date 15:04 37.84 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.243
remark:Runoff Hydrograph for UT5
243:0026-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C13 1024.52 12.149 No_date 15:12 36.22 n/a
+ 03:UT5 67.49 .931 No_date 15:04 37.84 n/a
[DT= 1.00] SUM= 04:D13 1092.01 13.079 No_date 15:11 36.32 n/a
243:0027-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D13 1092.01 13.079 No_date 15:11 36.32 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.243
remark:Downstream Hydrograph for C13
# Downstream Tributary
243:0028-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:DT1 268.29 4.595 No_date 13:42 31.26 .378
[CN= 69.3: N= 3.00]
[Tp= 1.61:DT= 1.00]
243:0029-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:DT1 268.29 4.595 No_date 13:42 31.26 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.243
remark:Runoff Hydrograph for DT1
243:0030-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1 268.29 4.595 No_date 13:42 31.26 n/a
[RDT= 1.00] out<- 02:C14 268.29 4.394 No_date 14:09 31.26 n/a
[L/S/n= 2210./ .780/.035]
[Vmax= 1.505:Dmax= .567]
243:0031-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C14 268.29 4.394 No_date 14:09 31.26 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.243
remark:Routing Hydrograph for C14
243:0032-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:DT2 134.58 3.904 No_date 12:54 35.79 .433
[CN= 73.4: N= 3.00]
[Tp= .96:DT= 1.00]
243:0033-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:DT2 134.58 3.904 No_date 12:54 35.79 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.243
remark:Runoff Hydrograph for DT2
243:0034-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C14 268.29 4.394 No_date 14:09 31.26 n/a
+ 03:DT2 134.58 3.904 No_date 12:54 35.79 n/a
[DT= 1.00] SUM= 05:D14 402.87 7.199 No_date 13:28 32.77 n/a

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243:0035-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      05:D14      402.87  7.199 No_date  13:28  32.77 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-D14.243
  remark:Downstream Hydrograph for C14
# Main Channel
243:0036-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  01:M1      457.96  10.486 No_date  13:44  42.22 .511
  [CN= 78.6; N= 3.00]
  [Tp= 1.68;DT= 1.00]
243:0037-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:M1      457.96  10.486 No_date  13:44  42.22 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-M1.243
  remark:Runoff Hydrograph for M1
243:0038-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:M1      457.96  10.486 No_date  13:44  42.22 n/a
  [L/S/n= 1720./ .400/.035]
  [Vmax= 1.287;Dmax= .793]
243:0039-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C1      457.96  10.223 No_date  14:02  42.22 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-C1.243
  remark:Routing Hydrograph for C1
243:0040-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M2      341.59  11.691 No_date  12:46  38.46 .466
  [CN= 75.7; N= 3.00]
  [Tp= .85;DT= 1.00]
243:0041-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M2      341.59  11.691 No_date  12:46  38.46 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-M2.243
  remark:Runoff Hydrograph for M2
243:0042-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C1      457.96  10.223 No_date  14:02  42.22 n/a
  + 03:M2      341.59  11.691 No_date  12:46  38.46 n/a
  [DT= 1.00] SUM= 01:J2  799.55  18.578 No_date  13:14  40.61 n/a
243:0043-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J2      799.55  18.578 No_date  13:14  40.61 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-J2.243
  remark:Hydrograph for J2
243:0044-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J2      799.55  18.578 No_date  13:14  40.61 n/a
  [RDT= 1.00] out<- 02:C2  799.55  16.503 No_date  13:54  40.61 n/a
  [L/S/n= 1940./ .210/.035]
  [Vmax= .907;Dmax= .588]
243:0045-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C2      799.55  16.503 No_date  13:54  40.61 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-C2.243
  remark:Routing Hydrograph for C2
243:0046-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M3      165.13  3.854 No_date  13:39  41.71 .505
  [CN= 78.2; N= 3.00]
  [Tp= 1.61;DT= 1.00]
243:0047-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M3      165.13  3.854 No_date  13:39  41.71 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-M3.243
  remark:Runoff Hydrograph for M3
243:0048-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C2      799.55  16.503 No_date  13:54  40.61 n/a
  + 03:M3      165.13  3.854 No_date  13:39  41.71 n/a
  [DT= 1.00] SUM= 01:J3  964.68  20.310 No_date  13:51  40.80 n/a
243:0049-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J3      964.68  20.310 No_date  13:51  40.80 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-J3.243
  remark:Hydrograph for J3
243:0050-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J3      964.68  20.310 No_date  13:51  40.80 n/a
  [RDT= 1.00] out<- 02:C3  964.68  20.035 No_date  14:02  40.80 n/a
  [L/S/n= 1090./ .180/.035]
  [Vmax= 1.392;Dmax= 1.845]
243:0051-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C3      964.68  20.035 No_date  14:02  40.80 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-C3.243
  remark:Routing Hydrograph for C3
243:0052-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M4      1698.95  14.600 No_date  16:27  30.44 .369
  [CN= 68.5; N= 3.00]
  [Tp= 3.84;DT= 1.00]
243:0053-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M4      1698.95  14.600 No_date  16:27  30.44 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-M4.243
  remark:Runoff Hydrograph for M4
243:0054-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C3      964.68  20.035 No_date  14:02  40.80 n/a
  + 03:M4      1698.95  14.600 No_date  16:27  30.44 n/a
  [DT= 1.00] SUM= 06:D3  2663.63  30.955 No_date  14:33  34.19 n/a
243:0055-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      06:D3      2663.63  30.955 No_date  14:33  34.19 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-D3.243
  remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
243:0056-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      04:D13      1092.01  13.079 No_date  15:11  36.32 n/a
  + 06:D3      2663.63  30.955 No_date  14:33  34.19 n/a
  [DT= 1.00] SUM= 01:J4  3755.64  43.811 No_date  14:41  34.81 n/a
243:0057-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J4      3755.64  43.811 No_date  14:41  34.81 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-J4.243
  remark:Hydrograph for J4
243:0058-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J4      3755.64  43.811 No_date  14:41  34.81 n/a
  [RDT= 1.00] out<- 02:C4  3755.64  39.168 No_date  16:15  34.81 n/a
  [L/S/n= 2020./ .090/.035]
  [Vmax= .521;Dmax= 2.372]
243:0059-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C4      3755.64  39.168 No_date  16:15  34.81 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-C4.243
  remark:Routing Hydrograph for C4
243:0060-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M5      112.92  3.272 No_date  12:55  36.00 .436
  [CN= 73.6; N= 3.00]
  [Tp= .97;DT= 1.00]
243:0061-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M5      112.92  3.272 No_date  12:55  36.00 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-M5.243
  remark:Runoff Hydrograph for M5
243:0062-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C4      3755.64  39.168 No_date  16:15  34.81 n/a
  + 03:M5      112.92  3.272 No_date  12:55  36.00 n/a
  [DT= 1.00] SUM= 01:J5  3868.56  39.780 No_date  16:13  34.85 n/a
243:0063-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J5      3868.56  39.780 No_date  16:13  34.85 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-J5.243
  remark:Hydrograph for J5
243:0064-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J5      3868.56  39.780 No_date  16:13  34.85 n/a
  [RDT= 1.00] out<- 02:C5  3868.56  37.840 No_date  17:13  34.85 n/a
  [L/S/n= 1450./ .050/.035]
  [Vmax= .512;Dmax= 2.135]
243:0065-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C5      3868.56  37.840 No_date  17:13  34.85 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-C5.243
  remark:Routing Hydrograph for C5
243:0066-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M6      273.75  5.584 No_date  13:45  37.89 .459
  [CN= 75.2; N= 3.00]
  [Tp= 1.68;DT= 1.00]
243:0067-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M6      273.75  5.584 No_date  13:45  37.89 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-M6.243
  remark:Runoff Hydrograph for M6
243:0068-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C5      3868.56  37.840 No_date  17:13  34.85 n/a
  + 03:M6      273.75  5.584 No_date  13:45  37.89 n/a
  [DT= 1.00] SUM= 04:J6  4142.31  39.891 No_date  17:02  35.05 n/a
243:0069-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      04:J6      4142.31  39.891 No_date  17:02  35.05 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-J6.243
  remark:Hydrograph for J6
243:0070-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M7      21.88  1.191 No_date  12:14  36.24 .439
  [CN= 73.8; N= 3.00]
  [Tp= .39;DT= 1.00]
243:0071-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M7      21.88  1.191 No_date  12:14  36.24 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-M7.243
  remark:Runoff Hydrograph for M7
243:0072-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      03:M7      21.88  1.191 No_date  12:14  36.24 n/a
  + 04:J6      4142.31  39.891 No_date  17:02  35.05 n/a
  [DT= 1.00] SUM= 06:D6  4164.19  39.962 No_date  16:40  35.06 n/a
243:0073-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      06:D6      4164.19  39.962 No_date  16:40  35.06 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-D6.243
  remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
243:0074-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      05:D14      402.87  7.199 No_date  13:28  32.77 n/a
  + 06:D6      4164.19  39.962 No_date  16:40  35.06 n/a
  [DT= 1.00] SUM= 01:J7  4567.06  42.865 No_date  16:25  34.85 n/a
243:0075-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J7      4567.06  42.865 No_date  16:25  34.85 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-J7.243
  remark:Hydrograph for J7
243:0076-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J7      4567.06  42.865 No_date  16:25  34.85 n/a
  [RDT= 1.00] out<- 02:C7  4567.06  42.770 No_date  16:25  34.85 n/a
  [L/S/n= 520./ .130/.035]
  [Vmax= 1.185;Dmax= 2.096]
243:0077-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C7      4567.06  42.770 No_date  16:25  34.85 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-C7.243
  remark:Routing Hydrograph for C7
243:0078-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M8      502.47  2.816 No_date  16:21  19.52 .236
  [CN= 56.2; N= 3.00]
  [Tp= 3.62;DT= 1.00]
243:0079-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M8      502.47  2.816 No_date  16:21  19.52 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-M8.243
  remark:Runoff Hydrograph for M8
243:0080-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C7      4567.06  42.770 No_date  16:25  34.85 n/a
  + 03:M8      502.47  2.816 No_date  16:21  19.52 n/a
  [DT= 1.00] SUM= 01:J8  5069.53  45.586 No_date  16:25  33.33 n/a
243:0081-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J8      5069.53  45.586 No_date  16:25  33.33 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-J8.243
  remark:Hydrograph for J8
243:0082-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J8      5069.53  45.586 No_date  16:25  33.33 n/a
  [RDT= 1.00] out<- 02:C8  5069.53  45.497 No_date  16:40  33.33 n/a
  [L/S/n= 1010./ .150/.035]
  [Vmax= 1.310;Dmax= 2.110]
243:0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C8      5069.53  45.497 No_date  16:40  33.33 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-C8.243
  remark:Routing Hydrograph for C8
243:0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M9      159.64  .404 No_date  16:23  8.94 .108
  [CN= 39.7; N= 3.00]
  [Tp= 3.37;DT= 1.00]
243:0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M9      159.64  .404 No_date  16:23  8.94 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-M9.243
  remark:Runoff Hydrograph for M9
243:0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C8      5069.53  45.497 No_date  16:40  33.33 n/a
  + 03:M9      159.64  .404 No_date  16:23  8.94 n/a
  [DT= 1.00] SUM= 01:J9  5229.17  45.900 No_date  16:40  32.59 n/a
243:0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J9      5229.17  45.900 No_date  16:40  32.59 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-J9.243
  remark:Hydrograph for J9
243:0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J9      5229.17  45.900 No_date  16:40  32.59 n/a
  [RDT= 1.00] out<- 02:C9  5229.17  45.799 No_date  16:50  32.59 n/a
  [L/S/n= 1810./ .990/.035]
  [Vmax= 1.961;Dmax= .901]
243:0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C9      5229.17  45.799 No_date  16:50  32.59 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-C9.243
  remark:Routing Hydrograph for C9
243:0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M10     190.19  .743 No_date  14:11  8.79 .106
  [CN= 39.5; N= 3.00]
  [Tp= 1.79;DT= 1.00]
243:0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M10     190.19  .743 No_date  14:11  8.79 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-M10.243
  remark:Runoff Hydrograph for M10
243:0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C9      5229.17  45.799 No_date  16:50  32.59 n/a
  + 03:M10     190.19  .743 No_date  14:11  8.79 n/a
  [DT= 1.00] SUM= 01:J10  5419.36  46.236 No_date  16:42  31.75 n/a
243:0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J10     5419.36  46.236 No_date  16:42  31.75 n/a
  filename:\N\BECKETT-1\HYDROL-1\BEA161-1\H-J10.243

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remark:Hydrograph for J10
243:0094-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J10 5419.36 46.236 No_date 16:42 31.75 n/a
* [RDT= 1.00] out<- 02:C10 5419.36 46.212 No_date 16:45 31.75 n/a
  [L/S/n= 590./ .180/.035]
  [Vmax= 1.262;Dmax= 2.019]
243:0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C10 5419.36 46.212 No_date 16:45 31.75 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.243
  remark:Routing Hydrograph for C10
243:0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M11 26.92 1.187 No_date 12:25 36.84 446
  [CN= 74.3; N= 3.00]
  [Tp= .55;DT= 1.00]
243:0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M11 26.92 1.187 No_date 12:25 36.84 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.243
  remark:Runoff Hydrograph for M11
243:0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C10 5419.36 46.212 No_date 16:45 31.75 n/a
  + 03:M11 26.92 1.187 No_date 12:25 36.84 n/a
  [DT= 1.00] SUM= 01:01 5446.28 46.312 No_date 16:45 31.78 n/a
243:0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:01 5446.28 46.312 No_date 16:45 31.78 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-01.243
  remark:Hydrograph for O1
** END OF RUN : 243
*****
RUN:COMMAND#
244:0001-----
START
[TZERO = .00 hrs on 0]
[MFTOUT= 2 (1=imperial, 2=metric output)]
[NSTORM= 1]
[NRNUN = 244]
#*****
# Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
# Date : 29-11-2017
# Modeller : [AA, TB, SN]
# Company : Rideau Valley Conservation Authority
# License # : 5329846
#*****
244:0002-----
READ STORM
Filename = storm.001
Comment =
[SPT=30.00;SDUR= 24.00;PTOT= 95.06]
244:0003-----
DEFAULT VALUES
Filename = N:\BECKETT-1\HYDROL-1\BEA161-1\BecKVal.val
ICASEdv = 1 (read and print data)
FileTitle= File comment: [RVCA Becketts Creek FPM]
THE FOLLOWING PARAMETERS ARE USED IN THE DESIGN STANDHYD COM
Horton's infiltration equation parameters:
[Fo= 76.20 mm/hr] [Fc=13.20 mm/hr] [STANDY= 4.14 /hr] [F= .00 mm]
Parameters for PERVIOUS SURFACES IN STANDHYD:
[IAPER= 4.67 mm] [LGP=40.00 m] [MNP= .250]
Parameters for IMPERVIOUS SURFACES IN STANDHYD:
[LAIMP= 1.57 mm] [CLI= 1.50] [MNI= .013]
Parameters used in NASHYD:
[la= 1.50 mm] [N= 3.00]
# Upstream Tributary
244:0004-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT1 338.44 5.380 No_date 15:20 46.28 487
  [CN= 74.5; N= 3.00]
  [Tp= 3.04;DT= 1.00]
244:0005-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT1 338.44 5.380 No_date 15:20 46.28 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.244
  remark:Runoff Hydrograph for UT1
244:0006-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT1 338.44 5.380 No_date 15:20 46.28 n/a
  [RDT= 1.00] out<- 02:C11 338.44 5.258 No_date 15:56 46.28 n/a
  [L/S/n= 1960./ .510/.035]
  [Vmax= 1.034;Dmax= .359]
244:0007-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C11 338.44 5.258 No_date 15:56 46.28 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C11.244
  remark:Routing Hydrograph for C11
244:0008-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT2 89.11 4.806 No_date 12:31 49.32 519
  [CN= 76.6; N= 3.00]
  [Tp= .64;DT= 1.00]
244:0009-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT2 89.11 4.806 No_date 12:31 49.32 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.244
  remark:Runoff Hydrograph for UT2
244:0010-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C11 338.44 5.258 No_date 15:56 46.28 n/a
  + 03:UT2 89.11 4.806 No_date 12:31 49.32 n/a
  [DT= 1.00] SUM= 04:D11 427.55 5.803 No_date 15:52 46.91 n/a
244:0011-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D11 427.55 5.803 No_date 15:52 46.91 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.244
  remark:Downstream Hydrograph for C11
244:0012-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT3 459.85 8.961 No_date 14:12 42.29 445
  [CN= 71.4; N= 3.00]
  [Tp= 2.06;DT= 1.00]
244:0013-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT3 459.85 8.961 No_date 14:12 42.29 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.244
  remark:Runoff Hydrograph for UT3
244:0014-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT3 459.85 8.961 No_date 14:12 42.29 n/a
  [RDT= 1.00] out<- 02:C12 459.85 8.239 No_date 14:54 42.29 n/a
  [L/S/n= 2300./ .410/.035]
  [Vmax= .850;Dmax= .701]
244:0015-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C12 459.85 8.239 No_date 14:54 42.29 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.244
  remark:Routing Hydrograph for C12
244:0016-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT4 137.12 5.859 No_date 12:51 50.68 533
  [CN= 77.6; N= 3.00]
  [Tp= .93;DT= 1.00]
244:0017-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT4 137.12 5.859 No_date 12:51 50.68 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.244
  remark:Runoff Hydrograph for UT4
244:0018-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C12 459.85 8.239 No_date 14:54 42.29 n/a
  + 03:UT4 137.12 5.859 No_date 12:51 50.68 n/a
  [DT= 1.00] SUM= 05:D12 596.97 10.525 No_date 14:10 44.22 n/a
244:0019-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D12 596.97 10.525 No_date 14:10 44.22 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.244
  remark:Downstream Hydrograph for C12
244:0020-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D11 427.55 5.803 No_date 15:52 46.91 n/a
  + 05:D12 596.97 10.525 No_date 14:10 44.22 n/a
  [DT= 1.00] SUM= 01:J13 1024.52 15.740 No_date 14:30 45.34 n/a
244:0021-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J13 1024.52 15.740 No_date 14:30 45.34 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.244
  remark:Hydrograph for J13
244:0022-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J13 1024.52 15.740 No_date 14:30 45.34 n/a
  [RDT= 1.00] out<- 02:C13 1024.52 15.418 No_date 15:03 45.34 n/a
  [L/S/n= 1540./ .250/.035]
  [Vmax= .805;Dmax= 1.527]
244:0023-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C13 1024.52 15.418 No_date 15:03 45.34 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.244
  remark:Routing Hydrograph for C13
244:0024-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT5 67.49 1.168 No_date 15:02 47.21 497
  [CN= 75.2; N= 3.00]
  [Tp= 2.80;DT= 1.00]
244:0025-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT5 67.49 1.168 No_date 15:02 47.21 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.244
  remark:Runoff Hydrograph for UT5
244:0026-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C13 1024.52 15.418 No_date 15:03 45.34 n/a
  + 03:UT5 67.49 1.168 No_date 15:02 47.21 n/a
  [DT= 1.00] SUM= 04:D13 1092.01 16.585 No_date 15:03 45.46 n/a
244:0027-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D13 1092.01 16.585 No_date 15:03 45.46 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.244
  remark:Downstream Tributary
244:0028-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:DT1 268.29 5.867 No_date 13:41 39.60 417
  [CN= 69.3; N= 3.00]
  [Tp= 1.61;DT= 1.00]
244:0029-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:DT1 268.29 5.867 No_date 13:41 39.60 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.244
  remark:Runoff Hydrograph for DT1
244:0030-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1 268.29 5.867 No_date 13:41 39.60 n/a
  [RDT= 1.00] out<- 02:C14 268.29 5.615 No_date 14:07 39.60 n/a
  [L/S/n= 2210./ .780/.035]
  [Vmax= 1.524;Dmax= .675]
244:0031-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C14 268.29 5.615 No_date 14:07 39.60 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.244
  remark:Routing Hydrograph for C14
244:0032-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:DT2 134.58 4.929 No_date 12:54 44.86 472
  [CN= 73.4; N= 3.00]
  [Tp= .96;DT= 1.00]
244:0033-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:DT2 134.58 4.929 No_date 12:54 44.86 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.244
  remark:Runoff Hydrograph for DT2
244:0034-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C14 268.29 5.615 No_date 14:07 39.60 n/a
  + 03:DT2 134.58 4.929 No_date 12:54 44.86 n/a
  [DT= 1.00] SUM= 05:D14 402.87 9.160 No_date 13:28 41.36 n/a
244:0035-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D14 402.87 9.160 No_date 13:28 41.36 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.244
  remark:Downstream Hydrograph for C14
# Main Channel
244:0036-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:M1 457.96 13.032 No_date 13:43 52.18 549
  [CN= 78.6; N= 3.00]
  [Tp= 1.68;DT= 1.00]
244:0037-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:M1 457.96 13.032 No_date 13:43 52.18 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.244
  remark:Runoff Hydrograph for M1
244:0038-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:M1 457.96 13.032 No_date 13:43 52.18 n/a
  [RDT= 1.00] out<- 02:C1 457.96 12.679 No_date 14:01 52.18 n/a
  [L/S/n= 1720./ .400/.035]
  [Vmax= 1.331;Dmax= .879]
244:0039-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C1 457.96 12.679 No_date 14:01 52.18 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.244
  remark:Routing Hydrograph for C1
244:0040-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M2 341.59 14.664 No_date 12:46 47.92 504
  [CN= 75.7; N= 3.00]
  [Tp= .85;DT= 1.00]
244:0041-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M2 341.59 14.664 No_date 12:46 47.92 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.244
  remark:Runoff Hydrograph for M2
244:0042-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C1 457.96 12.679 No_date 14:01 52.18 n/a
  + 03:M2 341.59 14.664 No_date 12:46 47.92 n/a
  [DT= 1.00] SUM= 01:J2 799.55 23.356 No_date 13:07 50.36 n/a
244:0043-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J2 799.55 23.356 No_date 13:07 50.36 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.244
  remark:Hydrograph for J2
244:0044-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J2 799.55 23.356 No_date 13:07 50.36 n/a
  [RDT= 1.00] out<- 02:C2 799.55 20.669 No_date 13:50 50.36 n/a
  [L/S/n= 1940./ .210/.035]
  [Vmax= .938;Dmax= .668]
244:0045-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C2 799.55 20.669 No_date 13:50 50.36 n/a
  filename:N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.244
  remark:Routing Hydrograph for C2
244:0046-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M3 165.13 4.795 No_date 13:38 51.61 543

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[CN= 78.2; N= 3.00]
[TP= 1.61;DT= 1.00]
244:0047-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M3 165.13 4.795 No_date 13:38 51.61 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.244
remark:Runoff Hydrograph for M3
244:0048-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C2 799.55 20.669 No_date 13:50 50.36 n/a
+ 03:M3 165.13 4.795 No_date 13:38 51.61 n/a
[DT= 1.00] SUM= 01:J3 964.68 25.428 No_date 13:48 50.58 n/a
244:0049-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J3 964.68 25.428 No_date 13:48 50.58 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.244
remark:Hydrograph for J3
244:0050-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J3 964.68 25.428 No_date 13:48 50.58 n/a
[RDT= 1.00] out<- 02:C3 964.68 24.814 No_date 14:10 50.58 n/a
[L/S/n= 1090./ .180/.035]
[Vmax= 1.271;Dmax= 2.047]
244:0051-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C3 964.68 24.814 No_date 14:10 50.58 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.244
remark:Routing Hydrograph for C3
244:0052-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M4 1698.95 18.648 No_date 16:24 38.65 407
[CN= 68.5; N= 3.00]
[TP= 3.84;DT= 1.00]
244:0053-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M4 1698.95 18.648 No_date 16:24 38.65 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.244
remark:Runoff Hydrograph for M4
244:0054-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C3 964.68 24.814 No_date 14:10 50.58 n/a
+ 03:M4 1698.95 18.648 No_date 16:24 38.65 n/a
[DT= 1.00] SUM= 06:D3 2663.63 39.580 No_date 14:40 42.97 n/a
244:0055-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D3 2663.63 39.580 No_date 14:40 42.97 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.244
remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
244:0056-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D3 1092.01 16.585 No_date 15:03 49.46 n/a
+ 06:D3 2663.63 39.580 No_date 14:40 42.97 n/a
[DT= 1.00] SUM= 01:J4 3755.64 56.071 No_date 14:45 43.69 n/a
244:0057-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J4 3755.64 56.071 No_date 14:45 43.69 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.244
remark:Hydrograph for J4
244:0058-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J4 3755.64 56.071 No_date 14:45 43.69 n/a
[RDT= 1.00] out<- 02:C4 3755.64 48.682 No_date 16:08 43.69 n/a
[L/S/n= 2020./ .090/.035]
[Vmax= .499;Dmax= 2.500]
244:0059-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C4 3755.64 48.682 No_date 16:08 43.69 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.244
remark:Routing Hydrograph for C4
244:0060-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M5 112.92 4.128 No_date 12:54 45.10 474
[CN= 73.6; N= 3.00]
[TP= .97;DT= 1.00]
244:0061-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M5 112.92 4.128 No_date 12:54 45.10 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.244
remark:Runoff Hydrograph for M5
244:0062-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C4 3755.64 48.682 No_date 16:08 43.69 n/a
+ 03:M5 112.92 4.128 No_date 12:54 45.10 n/a
[DT= 1.00] SUM= 01:J5 3868.56 49.459 No_date 16:06 43.73 n/a
244:0063-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J5 3868.56 49.459 No_date 16:06 43.73 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.244
remark:Hydrograph for J5
244:0064-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J5 3868.56 49.459 No_date 16:06 43.73 n/a
[RDT= 1.00] out<- 02:C5 3868.56 46.506 No_date 16:53 43.73 n/a
[L/S/n= 1450./ .050/.035]
[Vmax= .490;Dmax= 2.305]
244:0065-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C5 3868.56 46.506 No_date 16:53 43.73 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.244
remark:Routing Hydrograph for C5
244:0066-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M6 273.75 7.010 No_date 13:44 47.27 497
[CN= 75.2; N= 3.00]
[TP= 1.68;DT= 1.00]
244:0067-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M6 273.75 7.010 No_date 13:44 47.27 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.244
remark:Runoff Hydrograph for M6
244:0068-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C5 3868.56 46.506 No_date 16:53 43.73 n/a
+ 03:M6 273.75 7.010 No_date 13:44 47.27 n/a
[DT= 1.00] SUM= 04:J6 4142.31 49.190 No_date 16:53 43.97 n/a
244:0069-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:J6 4142.31 49.190 No_date 16:53 43.97 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.244
remark:Hydrograph for J6
244:0070-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M7 21.88 1.502 No_date 12:14 45.38 477
[CN= 73.8; N= 3.00]
[TP= .39;DT= 1.00]
244:0071-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M7 21.88 1.502 No_date 12:14 45.38 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.244
remark:Runoff Hydrograph for M7
244:0072-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 03:M7 21.88 1.502 No_date 12:14 45.38 n/a
+ 04:J6 4142.31 49.190 No_date 16:53 43.97 n/a
[DT= 1.00] SUM= 06:D6 4164.19 49.272 No_date 16:53 43.97 n/a
244:0073-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D6 4164.19 49.272 No_date 16:53 43.97 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.244
remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
244:0074-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 05:D14 402.87 9.160 No_date 13:28 41.36 n/a
+ 06:D6 4164.19 49.272 No_date 16:53 43.97 n/a
[DT= 1.00] SUM= 01:J7 4567.06 52.990 No_date 16:18 43.74 n/a
244:0075-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J7 4567.06 52.990 No_date 16:18 43.74 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.244
remark:Hydrograph for J7
244:0076-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J7 4567.06 52.990 No_date 16:18 43.74 n/a
[RDT= 1.00] out<- 02:C7 4567.06 52.921 No_date 16:30 43.74 n/a
[L/S/n= 520./ .130/.035]
[Vmax= 1.218;Dmax= 2.272]
244:0077-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C7 4567.06 52.921 No_date 16:30 43.74 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.244
remark:Routing Hydrograph for C7
244:0078-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M8 502.47 3.728 No_date 16:18 25.62 269
[CN= 56.2; N= 3.00]
[TP= 3.62;DT= 1.00]
244:0079-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M8 502.47 3.728 No_date 16:18 25.62 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.244
remark:Runoff Hydrograph for M8
244:0080-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C7 4567.06 52.921 No_date 16:30 43.74 n/a
+ 03:M8 502.47 3.728 No_date 16:18 25.62 n/a
[DT= 1.00] SUM= 01:J8 5069.53 56.642 No_date 16:30 41.95 n/a
244:0081-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J8 5069.53 56.642 No_date 16:30 41.95 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.244
remark:Hydrograph for J8
244:0082-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J8 5069.53 56.642 No_date 16:30 41.95 n/a
[RDT= 1.00] out<- 02:C8 5069.53 56.430 No_date 16:31 41.95 n/a
[L/S/n= 1010./ .150/.035]
[Vmax= 1.348;Dmax= 2.368]
244:0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C8 5069.53 56.430 No_date 16:31 41.95 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.244
remark:Routing Hydrograph for C8
244:0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M9 159.64 .575 No_date 16:17 12.46 131
[CN= 39.7; N= 3.00]
[TP= 3.37;DT= 1.00]
244:0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M9 159.64 .575 No_date 16:17 12.46 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.244
remark:Runoff Hydrograph for M9
244:0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C8 5069.53 56.430 No_date 16:31 41.95 n/a
+ 03:M9 159.64 .575 No_date 16:17 12.46 n/a
[DT= 1.00] SUM= 01:J9 5229.17 57.003 No_date 16:31 41.05 n/a
244:0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J9 5229.17 57.003 No_date 16:31 41.05 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.244
remark:Hydrograph for J9
244:0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J9 5229.17 57.003 No_date 16:31 41.05 n/a
[RDT= 1.00] out<- 02:C9 5229.17 56.859 No_date 16:50 41.05 n/a
[L/S/n= 1810./ .990/.035]
[Vmax= 2.059;Dmax= .971]
244:0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C9 5229.17 56.859 No_date 16:50 41.05 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.244
remark:Routing Hydrograph for C9
244:0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M10 190.19 1.067 No_date 14:08 12.27 129
[CN= 39.5; N= 3.00]
[TP= 1.79;DT= 1.00]
244:0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M10 190.19 1.067 No_date 14:08 12.27 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.244
remark:Runoff Hydrograph for M10
244:0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C9 5229.17 56.859 No_date 16:50 41.05 n/a
+ 03:M10 190.19 1.067 No_date 14:08 12.27 n/a
[DT= 1.00] SUM= 01:J10 5419.36 57.457 No_date 16:47 40.04 n/a
244:0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J10 5419.36 57.457 No_date 16:47 40.04 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.244
remark:Hydrograph for J10
244:0094-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J10 5419.36 57.457 No_date 16:47 40.04 n/a
[RDT= 1.00] out<- 02:C10 5419.36 57.444 No_date 16:50 40.04 n/a
[L/S/n= 590./ .180/.035]
[Vmax= 1.457;Dmax= 2.191]
244:0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C10 5419.36 57.444 No_date 16:50 40.04 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.244
remark:Routing Hydrograph for C10
244:0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M11 26.92 1.495 No_date 12:25 46.06 485
[CN= 74.3; N= 3.00]
[TP= .55;DT= 1.00]
244:0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M11 26.92 1.495 No_date 12:25 46.06 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.244
remark:Runoff Hydrograph for M11
244:0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C10 5419.36 57.444 No_date 16:50 40.04 n/a
+ 03:M11 26.92 1.495 No_date 12:25 46.06 n/a
[DT= 1.00] SUM= 01:O1 5446.28 57.562 No_date 16:49 40.07 n/a
244:0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:O1 5446.28 57.562 No_date 16:49 40.07 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-O1.244
remark:Hydrograph for O1
** END OF RUN : 244
*****
RUN:COMMAND#
245:0001-----
START
[TZERO = .00 hrs on 0]
[METOUT= 2 (1=imperial, 2=metric output)]
[INSTFORM = 1]
[NRUN = 245]
# Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
# Date : 29-11-2017
# Modeller : [AA, TB, SN]
# Company : Rideau Valley Conservation Authority
# License # : 5329846
*****
245:0002-----

```

```

READ STORM
  Filename = storm.001
  Comment =
  [SDT=30.00:SDUR= 24.00:PTOT= 110.93]
-----
245:0003-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT1 338.44 6.851 No_date 15:18 58.65 529
  [CN= 74.5: N= 3.00]
  [Tp= 3.04:DT= 1.00]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.245
  remark:Runoff Hydrograph for UT1
-----
245:0004-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT1 338.44 6.851 No_date 15:18 58.65 529
  [CN= 74.5: N= 3.00]
  [Tp= 3.04:DT= 1.00]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.245
  remark:Runoff Hydrograph for UT1
-----
245:0005-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT1 338.44 6.851 No_date 15:18 58.65 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.245
  remark:Runoff Hydrograph for UT1
-----
245:0006-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT1 338.44 6.713 No_date 15:49 58.65 n/a
  [RDT= 1.00] out<- 02:C11 338.44 6.713 No_date 15:49 58.65 n/a
  [L/S/n= 1960./ .510/.035]
  [Vmax= 1.057:Dmax= .423]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.245
  remark:Runoff Hydrograph for UT2
-----
245:0007-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C11 338.44 6.713 No_date 15:49 58.65 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-C11.245
  remark:Routing Hydrograph for C11
-----
245:0008-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT2 89.11 6.084 No_date 12:31 62.13 560
  [CN= 76.6: N= 3.00]
  [Tp= .64:DT= 1.00]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.245
  remark:Runoff Hydrograph for UT2
-----
245:0009-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT2 89.11 6.084 No_date 12:31 62.13 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.245
  remark:Runoff Hydrograph for UT2
-----
245:0010-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C11 338.44 6.713 No_date 15:49 58.65 n/a
  + 03:UT2 89.11 6.084 No_date 12:31 62.13 n/a
  [DT= 1.00] SUM= 04:D11 427.55 7.390 No_date 15:44 59.38 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.245
  remark:Downstream Hydrograph for C11
-----
245:0012-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT3 459.85 11.517 No_date 14:11 54.04 487
  [CN= 71.4: N= 3.00]
  [Tp= 2.06:DT= 1.00]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.245
  remark:Runoff Hydrograph for UT3
-----
245:0013-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT3 459.85 11.517 No_date 14:11 54.04 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.245
  remark:Runoff Hydrograph for UT3
-----
245:0014-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT3 459.85 11.517 No_date 14:11 54.04 n/a
  [RDT= 1.00] out<- 02:C12 459.85 10.767 No_date 14:45 54.04 n/a
  [L/S/n= 2300./ .410/.035]
  [Vmax= .942:Dmax= .796]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.245
  remark:Routing Hydrograph for C12
-----
245:0015-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C12 459.85 10.767 No_date 14:45 54.04 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.245
  remark:Routing Hydrograph for C12
-----
245:0016-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT4 137.12 7.395 No_date 12:50 63.68 574
  [CN= 77.6: N= 3.00]
  [Tp= .93:DT= 1.00]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.245
  remark:Runoff Hydrograph for UT4
-----
245:0017-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT4 137.12 7.395 No_date 12:50 63.68 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.245
  remark:Runoff Hydrograph for UT4
-----
245:0018-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C12 459.85 10.767 No_date 14:45 54.04 n/a
  + 03:UT4 137.12 7.395 No_date 12:50 63.68 n/a
  [DT= 1.00] SUM= 05:D12 596.97 13.855 No_date 14:07 56.25 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.245
  remark:Downstream Hydrograph for C12
-----
245:0019-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D12 596.97 13.855 No_date 14:07 56.25 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.245
  remark:Downstream Hydrograph for C12
-----
245:0020-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D11 427.55 7.390 No_date 15:44 59.38 n/a
  + 05:D12 596.97 13.855 No_date 14:07 56.25 n/a
  [DT= 1.00] SUM= 01:J13 1024.52 20.448 No_date 14:23 57.56 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.245
  remark:Hydrograph for J13
-----
245:0021-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J13 1024.52 20.448 No_date 14:23 57.56 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.245
  remark:Hydrograph for J13
-----
245:0022-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J13 1024.52 20.448 No_date 14:23 57.56 n/a
  [RDT= 1.00] out<- 02:C13 1024.52 19.995 No_date 14:54 57.56 n/a
  [L/S/n= 1540./ .250/.035]
  [Vmax= .811:Dmax= 1.651]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.245
  remark:Routing Hydrograph for C13
-----
245:0023-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C13 1024.52 19.995 No_date 14:54 57.56 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.245
  remark:Routing Hydrograph for C13
-----
245:0024-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT5 67.49 1.485 No_date 15:00 59.72 538
  [CN= 75.2: N= 3.00]
  [Tp= 2.80:DT= 1.00]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.245
  remark:Runoff Hydrograph for UT5
-----
245:0025-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT5 67.49 1.485 No_date 15:00 59.72 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.245
  remark:Runoff Hydrograph for UT5
-----
245:0026-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C13 1024.52 19.995 No_date 14:54 57.56 n/a
  + 03:UT5 67.49 1.485 No_date 15:00 59.72 n/a
  [DT= 1.00] SUM= 04:D13 1092.01 21.478 No_date 14:54 57.69 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.245
  remark:Downstream Hydrograph for C13
-----
245:0027-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D13 1092.01 21.478 No_date 14:54 57.69 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.245
  remark:Downstream Hydrograph for C13
-----
# Downstream Tributary
245:0028-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:DT1 268.29 7.591 No_date 13:40 50.90 459
  [CN= 69.3: N= 3.00]
  [Tp= 1.61:DT= 1.00]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.245
  remark:Runoff Hydrograph for DT1
-----
245:0029-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:DT1 268.29 7.591 No_date 13:40 50.90 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.245
  remark:Runoff Hydrograph for DT1
-----
245:0030-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1 268.29 7.591 No_date 13:40 50.90 n/a
  [RDT= 1.00] out<- 02:C14 268.29 7.299 No_date 14:04 50.90 n/a
  [L/S/n= 2210./ .780/.035]
  [Vmax= 1.581:Dmax= .746]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.245
  remark:Routing Hydrograph for C14
-----
245:0031-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C14 268.29 7.299 No_date 14:04 50.90 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.245
  remark:Routing Hydrograph for C14
-----
245:0032-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:DT2 134.58 6.302 No_date 12:53 57.01 514
  [CN= 73.4: N= 3.00]
  [Tp= .96:DT= 1.00]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.245
  remark:Runoff Hydrograph for DT2
-----
245:0033-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:DT2 134.58 6.302 No_date 12:53 57.01 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.245
  remark:Runoff Hydrograph for DT2
-----
245:0034-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C14 268.29 7.299 No_date 14:04 50.90 n/a
  + 03:DT2 134.58 6.302 No_date 12:53 57.01 n/a
  [DT= 1.00] SUM= 05:D14 402.87 11.892 No_date 13:28 52.94 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.245
  remark:Downstream Hydrograph for C14
-----
# Main Channel
245:0035-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D14 402.87 11.892 No_date 13:28 52.94 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.245
  remark:Downstream Hydrograph for C14
-----
245:0036-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:M1 457.96 16.394 No_date 13:42 65.37 589
  [CN= 78.6: N= 3.00]
  [Tp= 1.68:DT= 1.00]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.245
  remark:Runoff Hydrograph for M1
-----
245:0037-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:M1 457.96 16.394 No_date 13:42 65.37 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.245
  remark:Runoff Hydrograph for M1
-----
245:0038-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:M1 457.96 16.394 No_date 13:42 65.37 n/a
  [RDT= 1.00] out<- 02:C1 457.96 16.001 No_date 13:58 65.37 n/a
  [L/S/n= 1720./ .400/.035]
  [Vmax= 1.425:Dmax= .991]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.245
  remark:Routing Hydrograph for C1
-----
245:0039-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C1 457.96 16.001 No_date 13:58 65.37 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.245
  remark:Routing Hydrograph for C1
-----
245:0040-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M2 341.59 18.621 No_date 12:45 60.53 546
  [CN= 75.7: N= 3.00]
  [Tp= .85:DT= 1.00]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.245
  remark:Hydrograph for J2
-----
245:0041-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M2 341.59 18.621 No_date 12:45 60.53 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.245
  remark:Runoff Hydrograph for M2
-----
245:0042-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C1 457.96 16.001 No_date 13:58 65.37 n/a
  + 03:M2 341.59 18.621 No_date 12:45 60.53 n/a
  [DT= 1.00] SUM= 01:J2 799.55 29.528 No_date 13:09 63.30 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.245
  remark:Hydrograph for J2
-----
245:0043-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J2 799.55 29.528 No_date 13:09 63.30 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.245
  remark:Hydrograph for J2
-----
245:0044-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J2 799.55 29.528 No_date 13:09 63.30 n/a
  [RDT= 1.00] out<- 02:C2 799.55 26.581 No_date 13:45 63.30 n/a
  [L/S/n= 1940./ .210/.035]
  [Vmax= .990:Dmax= .755]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.245
  remark:Routing Hydrograph for C2
-----
245:0045-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C2 799.55 26.581 No_date 13:45 63.30 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.245
  remark:Routing Hydrograph for C2
-----
245:0046-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M3 165.13 6.040 No_date 13:37 64.73 584
  [CN= 78.2: N= 3.00]
  [Tp= 1.61:DT= 1.00]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.245
  remark:Runoff Hydrograph for M3
-----
245:0047-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M3 165.13 6.040 No_date 13:37 64.73 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.245
  remark:Runoff Hydrograph for M3
-----
245:0048-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C2 799.55 26.581 No_date 13:45 63.30 n/a
  + 03:M3 165.13 6.040 No_date 13:37 64.73 n/a
  [DT= 1.00] SUM= 01:J3 964.68 32.602 No_date 13:43 63.55 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.245
  remark:Hydrograph for J3
-----
245:0049-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J3 964.68 32.602 No_date 13:43 63.55 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.245
  remark:Hydrograph for J3
-----
245:0050-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J3 964.68 32.602 No_date 13:43 63.55 n/a
  [RDT= 1.00] out<- 02:C3 964.68 31.256 No_date 14:18 63.55 n/a
  [L/S/n= 1090./ .180/.035]
  [Vmax= .968:Dmax= 2.225]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.245
  remark:Routing Hydrograph for C3
-----
245:0051-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C3 964.68 31.256 No_date 14:18 63.55 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.245
  remark:Routing Hydrograph for C3
-----
245:0052-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M4 1698.95 24.149 No_date 16:22 49.78 449
  [CN= 68.5: N= 3.00]
  [Tp= 3.84:DT= 1.00]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.245
  remark:Runoff Hydrograph for M4
-----
245:0053-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M4 1698.95 24.149 No_date 16:22 49.78 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.245
  remark:Runoff Hydrograph for M4
-----
245:0054-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C3 964.68 31.256 No_date 14:18 63.55 n/a
  + 03:M4 1698.95 24.149 No_date 16:22 49.78 n/a
  [DT= 1.00] SUM= 06:D3 2663.63 51.193 No_date 14:47 54.77 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.245
  remark:Downstream Hydrograph for C3
-----
# Stream Junction of Main Channel and Upstream Tributary
245:0055-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D13 1092.01 21.478 No_date 14:54 57.69 n/a
  + 06:D3 2663.63 51.193 No_date 14:47 54.77 n/a
  [DT= 1.00] SUM= 01:J4 3755.64 72.649 No_date 14:47 55.62 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.245
  remark:Hydrograph for J4
-----
245:0056-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J4 3755.64 72.649 No_date 14:47 55.62 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.245
  remark:Hydrograph for J4
-----
245:0057-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:DT1 268.29 7.591 No_date 13:40 50.90 459
  [CN= 69.3: N= 3.00]
  [Tp= 1.61:DT= 1.00]
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.245
  remark:Runoff Hydrograph for DT1
-----
245:0058-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:DT1 268.29 7.591 No_date 13:40 50.90 n/a
  filename: N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.245
  remark:Runoff Hydrograph for DT1
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ROUTE CHANNEL -> 01:J4 3755.64 72.649 No_date 14:47 55.62 n/a
[RD=1.00] out<- 02:C4 3755.64 62.781 No_date 16:02 55.62 n/a
[L/S/n= 2020./ .090/.035]
[Vmax= .479;Dmax= 2.661]
245:0059-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C4 3755.64 62.781 No_date 16:02 55.62 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-C4.245
remark:Routing Hydrograph for C4
245:0060-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M5 112.92 5.275 No_date 12:54 57.29 .516
[CN= 73.6: N= 3.00]
[Tp= .97:DT= 1.00]
245:0061-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M5 112.92 5.275 No_date 12:54 57.29 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-M5.245
remark:Runoff Hydrograph for M5
245:0062-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C4 3755.64 62.781 No_date 16:02 55.62 n/a
[DT= 1.00] SUM= 01:J5 3868.56 63.780 No_date 16:00 55.66 n/a
245:0063-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J5 3868.56 63.780 No_date 16:00 55.66 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-J5.245
remark:Hydrograph for J5
245:0064-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J5 3868.56 63.780 No_date 16:00 55.66 n/a
[RD=1.00] out<- 02:C5 3868.56 59.141 No_date 16:58 55.66 n/a
[L/S/n= 1450./ .050/.035]
[Vmax= .470;Dmax= 2.520]
245:0065-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C5 3868.56 59.141 No_date 16:58 55.66 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-C5.245
remark:Routing Hydrograph for C5
245:0066-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M6 273.75 8.911 No_date 13:43 59.79 .539
[CN= 75.2: N= 3.00]
[Tp= 1.68:DT= 1.00]
245:0067-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M6 273.75 8.911 No_date 13:43 59.79 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-M6.245
remark:Runoff Hydrograph for M6
245:0068-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C5 3868.56 59.141 No_date 16:58 55.66 n/a
[DT= 1.00] SUM= 04:J6 4142.31 62.428 No_date 16:35 55.94 n/a
245:0069-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:J6 4142.31 62.428 No_date 16:35 55.94 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-J6.245
remark:Hydrograph for J6
245:0070-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M7 21.88 1.919 No_date 12:14 57.62 .519
[CN= 73.8: N= 3.00]
[Tp= .39:DT= 1.00]
245:0071-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M7 21.88 1.919 No_date 12:14 57.62 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-M7.245
remark:Runoff Hydrograph for M7
245:0072-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 03:M7 21.88 1.919 No_date 12:14 57.62 n/a
[DT= 1.00] SUM= 04:J6 4142.31 62.428 No_date 16:35 55.94 n/a
245:0073-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D6 4164.19 62.545 No_date 16:35 55.95 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-D6.245
remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
245:0074-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 05:D14 402.87 11.892 No_date 13:28 52.94 n/a
[DT= 1.00] SUM= 06:D6 4164.19 62.545 No_date 16:35 55.95 n/a
245:0075-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J7 4567.06 67.140 No_date 16:23 55.68 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-J7.245
remark:Hydrograph for J7
245:0076-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J7 4567.06 67.140 No_date 16:23 55.68 n/a
[RD=1.00] out<- 02:C7 4567.06 67.098 No_date 16:35 55.68 n/a
[L/S/n= 520./ .130/.035]
[Vmax= 1.233;Dmax= 2.488]
245:0077-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C7 4567.06 67.098 No_date 16:35 55.68 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-C7.245
remark:Routing Hydrograph for C7
245:0078-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M8 502.47 5.008 No_date 16:15 34.14 .308
[CN= 56.2: N= 3.00]
[Tp= 3.62:DT= 1.00]
245:0079-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M8 502.47 5.008 No_date 16:15 34.14 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-M8.245
remark:Runoff Hydrograph for M8
245:0080-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C7 4567.06 67.098 No_date 16:35 55.68 n/a
[DT= 1.00] SUM= 01:J8 5069.53 72.081 No_date 16:35 53.55 n/a
245:0081-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J8 5069.53 72.081 No_date 16:35 53.55 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-J8.245
remark:Hydrograph for J8
245:0082-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J8 5069.53 72.081 No_date 16:35 53.55 n/a
[RD=1.00] out<- 02:C8 5069.53 71.927 No_date 16:35 53.55 n/a
[L/S/n= 1010./ .150/.035]
[Vmax= 1.401;Dmax= 2.648]
245:0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C8 5069.53 71.927 No_date 16:35 53.55 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-C8.245
remark:Routing Hydrograph for C8
245:0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M9 159.64 .826 No_date 16:12 17.61 .159
[CN= 39.7: N= 3.00]
[Tp= 3.37:DT= 1.00]
245:0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M9 159.64 .826 No_date 16:12 17.61 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-M9.245
remark:Runoff Hydrograph for M9
245:0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C8 5069.53 71.927 No_date 16:35 53.55 n/a
[DT= 1.00] SUM= 01:J9 5229.17 72.748 No_date 16:35 52.45 n/a
245:0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J9 5229.17 72.748 No_date 16:35 52.45 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-J9.245
remark:Hydrograph for J9
245:0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J9 5229.17 72.748 No_date 16:35 52.45 n/a
[RD=1.00] out<- 02:C9 5229.17 72.603 No_date 16:37 52.45 n/a
[L/S/n= 1810./ .990/.035]
[Vmax= 2.215;Dmax= 1.070]
245:0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C9 5229.17 72.603 No_date 16:37 52.45 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-C9.245
remark:Routing Hydrograph for C9
245:0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M10 190.19 1.546 No_date 14:05 17.37 .157
[CN= 39.5: N= 3.00]
[Tp= 1.79:DT= 1.00]
245:0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M10 190.19 1.546 No_date 14:05 17.37 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-M10.245
remark:Runoff Hydrograph for M10
245:0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C9 5229.17 72.603 No_date 16:37 52.45 n/a
[DT= 1.00] SUM= 01:J10 5419.36 73.488 No_date 16:37 51.22 n/a
245:0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J10 5419.36 73.488 No_date 16:37 51.22 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-J10.245
remark:Hydrograph for J10
245:0094-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J10 5419.36 73.488 No_date 16:37 51.22 n/a
[RD=1.00] out<- 02:C10 5419.36 73.433 No_date 16:43 51.22 n/a
[L/S/n= 590./ .180/.035]
[Vmax= 1.618;Dmax= 2.438]
245:0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C10 5419.36 73.433 No_date 16:43 51.22 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-C10.245
remark:Routing Hydrograph for C10
245:0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M11 26.92 1.906 No_date 12:25 58.40 .526
[CN= 74.3: N= 3.00]
[Tp= .55:DT= 1.00]
245:0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M11 26.92 1.906 No_date 12:25 58.40 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-M11.245
remark:Runoff Hydrograph for M11
245:0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C10 5419.36 73.433 No_date 16:43 51.22 n/a
[DT= 1.00] SUM= 01:O1 5446.28 73.585 No_date 16:42 51.25 n/a
245:0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:O1 5446.28 73.585 No_date 16:42 51.25 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-O1.245
remark:Hydrograph for O1
*** END OF RUN : 245

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RUN:COMMAND#
246:0001-----
START
[TZERO = .00 hrs on 0]
[METOUT= 2 (1=imperial, 2=metric output)]
[INSTORM= 1]
[NRUN = 246 ]
# Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
# Date : 29-11-2017
# Modeller : [AA, TB, SN]
# Company : Rideau Valley Conservation Authority
# License # : 5329846
246:0002-----
READ STORM
Filename = storm.001
Comment
[SDT=30.00;SDUR= 24.00;PTOT= 134.54]
246:0003-----
DEFAULT VALUES
Filename = N:\BECKET-1\HYDROL-1\BEA161-1\BeckVal.val
ICASEdv = 1 (read and print data)
FileTitle = File comment: [RVCA Becketts Creek FPM]
THE FOLLOWING PARAMETERS ARE USED IN THE DESIGN STANDHYD COM
Horton's infiltration equation parameters:
[Fo= 76.20 mm/hr] [Fc=13.20 mm/hr] [DCAY= 4.14 /hr] [F= .00 mm]
Parameters for PERVIOUS surfaces in STANDHYD:
[IAper= 4.67 mm] [LGP=40.00 ml] [MNP=.250]
Parameters for IMPERVIOUS surfaces in STANDHYD:
[IAimp= 1.57 mm] [CL= 1.50] [MNI=.013]
Parameters used in NASHYD:
[IA= 1.50 mm] [N= 3.00]
# Upstream Tributary
246:0004-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:UT1 338.44 9.169 No_date 15:16 78.01 .580
[CN= 74.5: N= 3.00]
[Tp= 3.04:DT= 1.00]
246:0005-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT1 338.44 9.169 No_date 15:16 78.01 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-UT1.246
remark:Runoff Hydrograph for UT1
246:0006-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT1 338.44 9.169 No_date 15:16 78.01 n/a
[RD=1.00] out<- 02:C11 338.44 9.016 No_date 15:43 78.01 n/a
[L/S/n= 1960./ .510/.035]
[Vmax= 1.122;Dmax= .490]
246:0007-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C11 338.44 9.016 No_date 15:43 78.01 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-C11.246
remark:Routing Hydrograph for C11
246:0008-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:UT2 89.11 8.080 No_date 12:31 82.05 .610
[CN= 76.6: N= 3.00]
[Tp= .64:DT= 1.00]
246:0009-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT2 89.11 8.080 No_date 12:31 82.05 n/a
fname :N:\BECKET-1\HYDROL-1\BEA161-1\H-UT2.246
remark:Runoff Hydrograph for UT2
246:0010-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C11 338.44 9.016 No_date 15:43 78.01 n/a
[DT= 1.00] SUM= 04:D11 427.55 9.895 No_date 15:36 78.85 n/a
246:0011-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-

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SAVE HYD          04:D11          427.55    9.895 No_date    15:36    78.85 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.246
remark:Downstream Hydrograph for C11
246:0012-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      01:UT3          459.85    15.581 No_date    14:09    72.57 539
[CN= 71.4: N= 3.00]
[TP= 2.06:DT= 1.00]
246:0013-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:UT3          459.85    15.581 No_date    14:09    72.57 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.246
remark:Runoff Hydrograph for UT3
246:0014-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL    -> 01:UT3          459.85    15.581 No_date    14:09    72.57 n/a
[RD= 1.00] out<- 02:C12          459.85    14.954 No_date    14:39    72.57 n/a
[L/S/n= 2300./ .410/.035]
[Vmax= 1.088:Dmax= .923]
246:0015-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C12          459.85    14.954 No_date    14:39    72.57 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.246
remark:Routing Hydrograph for C12
246:0016-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      03:UT4          137.12    9.788 No_date    12:50    83.84 623
[CN= 77.6: N= 3.00]
[TP= .93:DT= 1.00]
246:0017-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:UT4          137.12    9.788 No_date    12:50    83.84 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.246
remark:Runoff Hydrograph for UT4
246:0018-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C12          459.85    14.954 No_date    14:39    72.57 n/a
+ 03:UT4          137.12    9.788 No_date    12:50    83.84 n/a
[DT= 1.00] SUM= 05:D12          596.97    19.407 No_date    14:01    75.16 n/a
246:0019-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          05:D12          596.97    19.407 No_date    14:01    75.16 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.246
remark:Downstream Hydrograph for C12
246:0020-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          04:D11          427.55    9.895 No_date    15:36    78.85 n/a
+ 05:D12          596.97    19.407 No_date    14:01    75.16 n/a
[DT= 1.00] SUM= 01:J13          1024.52    28.282 No_date    14:13    76.70 n/a
246:0021-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J13          1024.52    28.282 No_date    14:13    76.70 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.246
remark:Hydrograph for J13
246:0022-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL    -> 01:J13          1024.52    28.282 No_date    14:13    76.70 n/a
[RD= 1.00] out<- 02:C13          1024.52    27.588 No_date    14:43    76.70 n/a
[L/S/n= 1540./ .250/.035]
[Vmax= .839:Dmax= 1.824]
246:0023-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C13          1024.52    27.588 No_date    14:43    76.70 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.246
remark:Routing Hydrograph for C13
246:0024-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      03:UT5          67.49     1.982 No_date    14:59    79.26 589
[CN= 75.2: N= 3.00]
[TP= 2.80:DT= 1.00]
246:0025-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:UT5          67.49     1.982 No_date    14:59    79.26 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.246
remark:Runoff Hydrograph for UT5
246:0026-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C13          1024.52    27.588 No_date    14:43    76.70 n/a
+ 03:UT5          67.49     1.982 No_date    14:59    79.26 n/a
[DT= 1.00] SUM= 01:D13          1092.01    29.559 No_date    14:44    76.86 n/a
246:0027-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          04:D13          1092.01    29.559 No_date    14:44    76.86 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.246
remark:Downstream Hydrograph for C13
# Downstream Tributary
246:0028-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      01:DT1          268.29    10.349 No_date    13:39    68.83 512
[CN= 69.3: N= 3.00]
[TP= 1.61:DT= 1.00]
246:0029-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:DT1          268.29    10.349 No_date    13:39    68.83 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.246
remark:Runoff Hydrograph for DT1
246:0030-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL    -> 01:DT1          268.29    10.349 No_date    13:39    68.83 n/a
[RD= 1.00] out<- 02:C14          268.29    10.006 No_date    14:00    68.83 n/a
[L/S/n= 2210./ .780/.035]
[Vmax= 1.683:Dmax= .859]
246:0031-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C14          268.29    10.006 No_date    14:00    68.83 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.246
remark:Routing Hydrograph for C14
246:0032-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      03:DT2          134.58    8.471 No_date    12:53    76.09 566
[CN= 73.4: N= 3.00]
[TP= .96:DT= 1.00]
246:0033-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:DT2          134.58    8.471 No_date    12:53    76.09 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.246
remark:Runoff Hydrograph for DT2
246:0034-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C14          268.29    10.006 No_date    14:00    68.83 n/a
+ 03:DT2          134.58    8.471 No_date    12:53    76.09 n/a
[DT= 1.00] SUM= 05:D14          402.87    16.304 No_date    13:26    71.26 n/a
246:0035-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          05:D14          402.87    16.304 No_date    13:26    71.26 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.246
remark:Downstream Hydrograph for C14
# Main Channel
246:0036-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      01:M1          457.96    21.617 No_date    13:41    85.79 638
[CN= 78.6: N= 3.00]
[TP= 1.68:DT= 1.00]
246:0037-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:M1          457.96    21.617 No_date    13:41    85.79 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.246
remark:Runoff Hydrograph for M1
246:0038-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL    -> 01:M1          457.96    21.617 No_date    13:41    85.79 n/a
[RD= 1.00] out<- 02:C1          457.96    21.262 No_date    13:55    85.79 n/a
[L/S/n= 1720./ .400/.035]
[Vmax= 1.589:Dmax= 1.161]
246:0039-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C1          457.96    21.262 No_date    13:55    85.79 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.246
remark:Routing Hydrograph for C1
246:0040-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      03:M2          341.59    24.824 No_date    12:45    80.21 596
[CN= 75.7: N= 3.00]
[TP= .85:DT= 1.00]
246:0041-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M2          341.59    24.824 No_date    12:45    80.21 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.246
remark:Runoff Hydrograph for M2
246:0042-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C1          457.96    21.262 No_date    13:55    85.79 n/a
+ 03:M2          341.59    24.824 No_date    12:45    80.21 n/a
[DT= 1.00] SUM= 01:J2          799.55    39.680 No_date    13:09    83.40 n/a
246:0043-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J2          799.55    39.680 No_date    13:09    83.40 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.246
remark:Hydrograph for J2
246:0044-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL    -> 01:J2          799.55    39.680 No_date    13:09    83.40 n/a
[RD= 1.00] out<- 02:C2          799.55    36.234 No_date    13:37    83.40 n/a
[L/S/n= 1940./ .210/.035]
[Vmax= 1.088:Dmax= .899]
246:0045-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C2          799.55    36.234 No_date    13:37    83.40 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.246
remark:Routing Hydrograph for C2
246:0046-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      03:M3          165.13    7.976 No_date    13:36    85.05 632
[CN= 78.2: N= 3.00]
[TP= 1.61:DT= 1.00]
246:0047-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M3          165.13    7.976 No_date    13:36    85.05 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.246
remark:Runoff Hydrograph for M3
246:0048-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C2          799.55    36.234 No_date    13:37    83.40 n/a
+ 03:M3          165.13    7.976 No_date    13:36    85.05 n/a
[DT= 1.00] SUM= 01:J3          964.68    44.209 No_date    13:37    83.69 n/a
246:0049-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J3          964.68    44.209 No_date    13:37    83.69 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.246
remark:Hydrograph for J3
246:0050-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL    -> 01:J3          964.68    44.209 No_date    13:37    83.69 n/a
[RD= 1.00] out<- 02:C3          964.68    41.207 No_date    14:17    83.69 n/a
[L/S/n= 1090./ .180/.035]
[Vmax= .742:Dmax= 2.404]
246:0051-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C3          964.68    41.207 No_date    14:17    83.69 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.246
remark:Routing Hydrograph for C3
246:0052-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      03:M4          1698.95    32.963 No_date    16:19    67.48 502
[CN= 68.5: N= 3.00]
[TP= 3.84:DT= 1.00]
246:0053-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M4          1698.95    32.963 No_date    16:19    67.48 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.246
remark:Runoff Hydrograph for M4
246:0054-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C3          964.68    41.207 No_date    14:17    83.69 n/a
+ 03:M4          1698.95    32.963 No_date    16:19    67.48 n/a
[DT= 1.00] SUM= 06:D3          2663.63    68.437 No_date    14:50    73.35 n/a
246:0055-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          06:D3          2663.63    68.437 No_date    14:50    73.35 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.246
remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
246:0056-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          04:D13          1092.01    29.559 No_date    14:44    76.86 n/a
+ 06:D3          2663.63    68.437 No_date    14:50    73.35 n/a
[DT= 1.00] SUM= 01:J4          3755.64    97.978 No_date    14:50    74.37 n/a
246:0057-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J4          3755.64    97.978 No_date    14:50    74.37 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.246
remark:Hydrograph for J4
246:0058-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL    -> 01:J4          3755.64    97.978 No_date    14:50    74.37 n/a
[RD= 1.00] out<- 02:C4          3755.64    84.316 No_date    15:58    74.37 n/a
[L/S/n= 2020./ .090/.035]
[Vmax= .470:Dmax= 2.858]
246:0059-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C4          3755.64    84.316 No_date    15:58    74.37 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.246
remark:Routing Hydrograph for C4
246:0060-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      03:M5          112.92    7.086 No_date    12:53    76.41 568
[CN= 73.6: N= 3.00]
[TP= .97:DT= 1.00]
246:0061-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M5          112.92    7.086 No_date    12:53    76.41 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.246
remark:Runoff Hydrograph for M5
246:0062-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C4          3755.64    84.316 No_date    15:58    74.37 n/a
+ 03:M5          112.92    7.086 No_date    12:53    76.41 n/a
[DT= 1.00] SUM= 01:J5          3868.56    85.633 No_date    15:58    74.43 n/a
246:0063-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          01:J5          3868.56    85.633 No_date    15:58    74.43 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.246
remark:Hydrograph for J5
246:0064-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL    -> 01:J5          3868.56    85.633 No_date    15:58    74.43 n/a
[RD= 1.00] out<- 02:C5          3868.56    79.157 No_date    16:44    74.43 n/a
[L/S/n= 1450./ .050/.035]
[Vmax= .459:Dmax= 2.777]
246:0065-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          02:C5          3868.56    79.157 No_date    16:44    74.43 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.246
remark:Routing Hydrograph for C5
246:0066-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD      03:M6          273.75    11.899 No_date    13:42    79.34 590
[CN= 75.2: N= 3.00]
[TP= 1.68:DT= 1.00]
246:0067-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          03:M6          273.75    11.899 No_date    13:42    79.34 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.246
remark:Runoff Hydrograph for M6
246:0068-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD          02:C5          3868.56    79.157 No_date    16:44    74.43 n/a
+ 03:M6          273.75    11.899 No_date    13:42    79.34 n/a
[DT= 1.00] SUM= 04:J6          4142.31    83.819 No_date    16:41    74.75 n/a
246:0069-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD          04:J6          4142.31    83.819 No_date    16:41    74.75 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.246
remark:Hydrograph for J6

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246 0070-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 03:M7 21.88 2.574 No_date 12:14 76.80 .571
[CN= 73.8; N= 3.00]
[TP= .39;DT= 1.00]
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.246
remark:Runoff Hydrograph for M7
246 0071-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M7 21.88 2.574 No_date 12:14 76.80 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.246
remark:Runoff Hydrograph for M7
246 0072-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 03:M7 21.88 2.574 No_date 12:14 76.80 n/a
+ 04:J6 4142.31 83.819 No_date 16:41 74.75 n/a
[DT= 1.00] SUM= 06:D6 4164.19 83.962 No_date 16:41 74.77 n/a
246 0073-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D6 4164.19 83.962 No_date 16:41 74.77 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.246
remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
246 0074-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 05:D14 402.87 16.304 No_date 13:26 71.26 n/a
+ 06:D6 4164.19 83.962 No_date 16:41 74.77 n/a
[DT= 1.00] SUM= 01:J7 4567.06 90.209 No_date 16:13 74.46 n/a
246 0075-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J7 4567.06 90.209 No_date 16:13 74.46 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.246
remark:Hydrograph for J7
246 0076-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J7 4567.06 90.209 No_date 16:13 74.46 n/a
[RDT= 1.00] out<- 02:C7 4567.06 90.131 No_date 16:24 74.46 n/a
[L/S/n= 520./ .130/.035]
[Vmax= 1.232;Dmax= 2.787]
246 0077-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C7 4567.06 90.131 No_date 16:24 74.46 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.246
remark:Routing Hydrograph for C7
246 0078-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 03:M8 502.47 7.133 No_date 16:11 48.16 .358
[CN= 56.2; N= 3.00]
[TP= 3.62;DT= 1.00]
246 0079-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M8 502.47 7.133 No_date 16:11 48.16 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.246
remark:Runoff Hydrograph for M8
246 0080-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C7 4567.06 90.131 No_date 16:24 74.46 n/a
+ 03:M8 502.47 7.133 No_date 16:11 48.16 n/a
[DT= 1.00] SUM= 01:J8 5069.53 97.249 No_date 16:24 71.85 n/a
246 0081-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J8 5069.53 97.249 No_date 16:24 71.85 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.246
remark:Hydrograph for J8
246 0082-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J8 5069.53 97.249 No_date 16:24 71.85 n/a
+ 02:C8 5069.53 96.805 No_date 16:36 71.85 n/a
[L/S/n= 1010./ .150/.035]
[Vmax= 1.483;Dmax= 3.019]
246 0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C8 5069.53 96.805 No_date 16:36 71.85 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.246
remark:Routing Hydrograph for C8
246 0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 03:M9 159.64 1.267 No_date 16:06 26.54 .197
[CN= 39.7; N= 3.00]
[TP= 3.37;DT= 1.00]
246 0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M9 159.64 1.267 No_date 16:06 26.54 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.246
remark:Runoff Hydrograph for M9
246 0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C8 5069.53 96.805 No_date 16:36 71.85 n/a
+ 03:M9 159.64 1.267 No_date 16:06 26.54 n/a
[DT= 1.00] SUM= 01:J9 5229.17 98.059 No_date 16:35 70.47 n/a
246 0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J9 5229.17 98.059 No_date 16:35 70.47 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.246
remark:Hydrograph for J9
246 0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J9 5229.17 98.059 No_date 16:35 70.47 n/a
+ 02:C9 5229.17 98.011 No_date 16:42 70.47 n/a
[L/S/n= 1810./ .990/.035]
[Vmax= 2.523;Dmax= 1.230]
246 0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C9 5229.17 98.011 No_date 16:42 70.47 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.246
remark:Routing Hydrograph for C9
246 0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 03:M10 190.19 2.391 No_date 14:02 26.22 .195
[CN= 39.5; N= 3.00]
[TP= 1.79;DT= 1.00]
246 0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M10 190.19 2.391 No_date 14:02 26.22 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.246
remark:Runoff Hydrograph for M10
246 0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C9 5229.17 98.011 No_date 16:42 70.47 n/a
+ 03:M10 190.19 2.391 No_date 14:02 26.22 n/a
[DT= 1.00] SUM= 01:J10 5419.36 99.341 No_date 16:26 68.91 n/a
246 0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J10 5419.36 99.341 No_date 16:26 68.91 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.246
remark:Hydrograph for J10
246 0094-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J10 5419.36 99.341 No_date 16:26 68.91 n/a
+ 02:C10 5419.36 99.289 No_date 16:39 68.91 n/a
[L/S/n= 590./ .180/.035]
[Vmax= 1.767;Dmax= 2.747]
246 0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C10 5419.36 99.289 No_date 16:39 68.91 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.246
remark:Routing Hydrograph for C10
246 0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 03:M11 26.92 2.555 No_date 12:24 77.71 .578
[CN= 74.3; N= 3.00]
[TP= .55;DT= 1.00]
246 0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M11 26.92 2.555 No_date 12:24 77.71 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.246
remark:Runoff Hydrograph for M11
246 0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C10 5419.36 99.289 No_date 16:39 68.91 n/a
+ 03:M11 26.92 2.555 No_date 12:24 77.71 n/a
[DT= 1.00] SUM= 01:O1 5446.28 99.492 No_date 16:38 68.96 n/a
246 0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:O1 5446.28 99.492 No_date 16:38 68.96 n/a

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247|0023-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C13      1024.52  30.602 No_date  14:40  84.82 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.247
remark:Routing Hydrograph for C13
247|0024-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:UT5      67.49   2.191 No_date  14:58  87.53 .607
[CN= 75.2: N= 3.00]
[TP= 2.80:DT= 1.00]
247|0025-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:UT5      67.49   2.191 No_date  14:58  87.53 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.247
remark:Runoff Hydrograph for UT5
247|0026-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C13      1024.52  30.602 No_date  14:40  84.82 n/a
+ 03:UT5      67.49   2.191 No_date  14:58  87.53 n/a
[DT= 1.00] SUM= 04:D13  1092.01  32.777 No_date  14:42  84.99 n/a
247|0027-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      04:D13      1092.01  32.777 No_date  14:42  84.99 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.247
remark:Downstream Hydrograph for C13
# Downstream Tributary
247|0028-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  01:DT1      268.29  11.523 No_date  13:38  76.49 .530
[CN= 69.3: N= 3.00]
[TP= 1.61:DT= 1.00]
247|0029-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:DT1      268.29  11.523 No_date  13:38  76.49 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.247
remark:Runoff Hydrograph for DT1
247|0030-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1      268.29  11.523 No_date  13:38  76.49 n/a
[RD= 1.00] out<- 02:C14  268.29  11.172 No_date  13:58  76.49 n/a
[L/S/= 2210./ .780/.035]
[Vmax= 1.730:Dmax= .907]
247|0031-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C14      268.29  11.172 No_date  13:58  76.49 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.247
remark:Routing Hydrograph for C14
247|0032-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:DT2      134.58   9.385 No_date  12:52  84.18 .584
[CN= 73.4: N= 3.00]
[TP= .96:DT= 1.00]
247|0033-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:DT2      134.58   9.385 No_date  12:52  84.18 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.247
remark:Runoff Hydrograph for DT2
247|0034-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C14      268.29  11.172 No_date  13:58  76.49 n/a
+ 03:DT2      134.58   9.385 No_date  12:52  84.18 n/a
[DT= 1.00] SUM= 05:D14  402.87  18.200 No_date  13:25  79.06 n/a
247|0035-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      05:D14      402.87  18.200 No_date  13:25  79.06 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.247
remark:Downstream Hydrograph for C14
# Main Channel
247|0036-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  01:M1      457.96  23.796 No_date  13:40  94.37 .654
[CN= 78.6: N= 3.00]
[TP= 1.68:DT= 1.00]
247|0037-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:M1      457.96  23.796 No_date  13:40  94.37 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.247
remark:Runoff Hydrograph for M1
247|0038-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:M1      457.96  23.796 No_date  13:40  94.37 n/a
[RD= 1.00] out<- 02:C1  457.96  23.352 No_date  13:56  94.37 n/a
[L/S/= 1720./ .400/.035]
[Vmax= 1.622:Dmax= 1.213]
247|0039-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C1      457.96  23.352 No_date  13:56  94.37 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.247
remark:Routing Hydrograph for C1
247|0040-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M2      341.59  27.425 No_date  12:45  88.52 .614
[CN= 75.7: N= 3.00]
[TP= .85:DT= 1.00]
247|0041-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M2      341.59  27.425 No_date  12:45  88.52 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.247
remark:Runoff Hydrograph for M2
247|0042-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C1      457.96  23.352 No_date  13:56  94.37 n/a
+ 03:M2      341.59  27.425 No_date  12:45  88.52 n/a
[DT= 1.00] SUM= 01:J2  799.55  43.954 No_date  13:07  91.87 n/a
247|0043-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J2      799.55  43.954 No_date  13:07  91.87 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.247
remark:Hydrograph for J2
247|0044-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J2      799.55  43.954 No_date  13:07  91.87 n/a
[RD= 1.00] out<- 02:C2  799.55  40.225 No_date  13:34  91.87 n/a
[L/S/= 1940./ .210/.035]
[Vmax= 1.136:Dmax= .960]
247|0045-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C2      799.55  40.225 No_date  13:34  91.87 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.247
remark:Routing Hydrograph for C2
247|0046-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M3      165.13   8.783 No_date  13:36  93.60 .649
[CN= 78.2: N= 3.00]
[TP= 1.61:DT= 1.00]
247|0047-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M3      165.13   8.783 No_date  13:36  93.60 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.247
remark:Runoff Hydrograph for M3
247|0048-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C2      799.55  40.225 No_date  13:34  91.87 n/a
+ 03:M3      165.13   8.783 No_date  13:36  93.60 n/a
[DT= 1.00] SUM= 01:J3  964.68  49.007 No_date  13:34  92.17 n/a
247|0049-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J3      964.68  49.007 No_date  13:34  92.17 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.247
remark:Hydrograph for J3
247|0050-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J3      964.68  49.007 No_date  13:34  92.17 n/a
[RD= 1.00] out<- 02:C3  964.68  45.263 No_date  14:16  92.17 n/a
[L/S/= 1090./ .180/.035]
[Vmax= .690:Dmax= 2.464]
247|0051-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C3      964.68  45.263 No_date  14:16  92.17 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.247
remark:Routing Hydrograph for C3
247|0052-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M4      1698.95  36.721 No_date  16:18  75.06 .520
[CN= 68.5: N= 3.00]
[TP= 3.84:DT= 1.00]
247|0053-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M4      1698.95  36.721 No_date  16:18  75.06 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.247
remark:Runoff Hydrograph for M4
247|0054-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C3      964.68  45.263 No_date  14:16  92.17 n/a
+ 03:M4      1698.95  36.721 No_date  16:18  75.06 n/a
[DT= 1.00] SUM= 06:D3  2663.63  75.613 No_date  14:46  81.26 n/a
247|0055-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      06:D3      2663.63  75.613 No_date  14:46  81.26 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.247
remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
247|0056-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      04:D13      1092.01  32.777 No_date  14:42  84.99 n/a
+ 06:D3      2663.63  75.613 No_date  14:46  81.26 n/a
[DT= 1.00] SUM= 01:J4  3755.64  108.381 No_date  14:46  82.34 n/a
247|0057-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J4      3755.64  108.381 No_date  14:46  82.34 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.247
remark:Hydrograph for J4
247|0058-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J4      3755.64  108.381 No_date  14:46  82.34 n/a
[RD= 1.00] out<- 02:C4  3755.64  93.928 No_date  16:02  82.34 n/a
[L/S/= 2020./ .090/.035]
[Vmax= .472:Dmax= 2.924]
247|0059-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C4      3755.64  93.928 No_date  16:02  82.34 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.247
remark:Routing Hydrograph for C4
247|0060-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M5      112.92   7.849 No_date  12:53  84.53 .586
[CN= 73.6: N= 3.00]
[TP= .97:DT= 1.00]
247|0061-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M5      112.92   7.849 No_date  12:53  84.53 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.247
remark:Runoff Hydrograph for M5
247|0062-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C4      3755.64  93.928 No_date  16:02  82.34 n/a
+ 03:M5      112.92   7.849 No_date  12:53  84.53 n/a
[DT= 1.00] SUM= 01:J5  3868.56  95.345 No_date  15:52  82.41 n/a
247|0063-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J5      3868.56  95.345 No_date  15:52  82.41 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.247
remark:Hydrograph for J5
247|0064-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J5      3868.56  95.345 No_date  15:52  82.41 n/a
* [RD= 1.00] out<- 02:C5  3868.56  87.684 No_date  16:37  82.41 n/a
[L/S/= 1450./ .050/.033]
[Vmax= .455:Dmax= 2.982]
247|0065-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C5      3868.56  87.684 No_date  16:37  82.41 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.247
remark:Routing Hydrograph for C5
247|0066-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M6      273.75  13.154 No_date  13:41  87.61 .607
[CN= 75.2: N= 3.00]
[TP= 1.68:DT= 1.00]
247|0067-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M6      273.75  13.154 No_date  13:41  87.61 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.247
remark:Runoff Hydrograph for M6
247|0068-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C5      3868.56  87.684 No_date  16:37  82.41 n/a
+ 03:M6      273.75  13.154 No_date  13:41  87.61 n/a
[DT= 1.00] SUM= 04:J6  4142.31  93.010 No_date  16:37  82.75 n/a
247|0069-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      04:J6      4142.31  93.010 No_date  16:37  82.75 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.247
remark:Hydrograph for J6
247|0070-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M7      21.88   2.851 No_date  12:13  84.93 .589
[CN= 73.8: N= 3.00]
[TP= .39:DT= 1.00]
247|0071-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M7      21.88   2.851 No_date  12:13  84.93 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.247
remark:Runoff Hydrograph for M7
247|0072-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      03:M7      21.88   2.851 No_date  12:13  84.93 n/a
+ 04:J6      4142.31  93.010 No_date  16:37  82.75 n/a
[DT= 1.00] SUM= 06:D6  4164.19  93.172 No_date  16:37  82.76 n/a
247|0073-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      06:D6      4164.19  93.172 No_date  16:37  82.76 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.247
remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
247|0074-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      05:D14      402.87  18.200 No_date  13:25  79.06 n/a
+ 06:D6      4164.19  93.172 No_date  16:37  82.76 n/a
[DT= 1.00] SUM= 01:J7  4567.06  100.066 No_date  16:21  82.43 n/a
247|0075-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J7      4567.06  100.066 No_date  16:21  82.43 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.247
remark:Hydrograph for J7
247|0076-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J7      4567.06  100.066 No_date  16:21  82.43 n/a
[RD= 1.00] out<- 02:C7  4567.06  99.837 No_date  16:21  82.43 n/a
[L/S/= 520./ .130/.035]
[Vmax= 1.230:Dmax= 2.899]
247|0077-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      02:C7      4567.06  99.837 No_date  16:21  82.43 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.247
remark:Routing Hydrograph for C7
247|0078-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD  03:M8      502.47   8.063 No_date  16:10  54.30 .377
[CN= 56.2: N= 3.00]
[TP= 3.62:DT= 1.00]
247|0079-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      03:M8      502.47   8.063 No_date  16:10  54.30 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.247
remark:Runoff Hydrograph for M8
247|0080-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD      02:C7      4567.06  99.837 No_date  16:21  82.43 n/a
+ 03:M8      502.47   8.063 No_date  16:10  54.30 n/a
[DT= 1.00] SUM= 01:J8  5069.53  107.888 No_date  16:21  79.65 n/a
247|0081-----ID:NHYD-----AREA-----QPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD      01:J8      5069.53  107.888 No_date  16:21  79.65 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.247

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remark:Hydrograph for J8
247:0082-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:U8 5069.53 107.888 No_date 16:21 79.65 n/a
* [RDT= 1.00] out<- 02:C8 5069.53 107.601 No_date 16:36 79.65 n/a
  [L/S/= 1010./ .150/.035]
  [Vmax= 1.514:Dmax= 3.152]
247:0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C8 5069.53 107.601 No_date 16:36 79.65 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.247
remark:Routing Hydrograph for C8
247:0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 03:M9 159.64 1.467 No_date 16:04 30.60 .212
[CN= 39.7: N= 3.00]
[Tp= 3.37:DT= 1.00]
247:0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M9 159.64 1.467 No_date 16:04 30.60 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.247
remark:Runoff Hydrograph for M9
247:0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C8 5069.53 107.601 No_date 16:36 79.65 n/a
+ 03:M9 159.64 1.467 No_date 16:04 30.60 n/a
[DT= 1.00] SUM= 01:J9 5229.17 109.050 No_date 16:36 78.15 n/a
247:0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J9 5229.17 109.050 No_date 16:36 78.15 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.247
remark:Hydrograph for J9
247:0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J9 5229.17 109.050 No_date 16:36 78.15 n/a
* [RDT= 1.00] out<- 02:C9 5229.17 108.966 No_date 16:37 78.15 n/a
  [L/S/= 1910./ .990/.035]
  [Vmax= 2.684:Dmax= 1.299]
247:0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C9 5229.17 108.966 No_date 16:37 78.15 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.247
remark:Routing Hydrograph for C9
247:0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 03:M10 190.19 2.775 No_date 14:01 30.24 .210
[CN= 39.5: N= 3.00]
[Tp= 1.79:DT= 1.00]
247:0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M10 190.19 2.775 No_date 14:01 30.24 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.247
remark:Runoff Hydrograph for M10
247:0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C9 5229.17 108.966 No_date 16:37 78.15 n/a
+ 03:M10 190.19 2.775 No_date 14:01 30.24 n/a
[DT= 1.00] SUM= 01:J10 5419.36 110.483 No_date 16:36 76.47 n/a
247:0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J10 5419.36 110.483 No_date 16:36 76.47 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.247
remark:Hydrograph for J10
247:0094-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J10 5419.36 110.483 No_date 16:36 76.47 n/a
* [RDT= 1.00] out<- 02:C10 5419.36 110.465 No_date 16:37 76.47 n/a
  [L/S/= 590./ .180/.035]
  [Vmax= 1.826:Dmax= 2.874]
247:0095-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C10 5419.36 110.465 No_date 16:37 76.47 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.247
remark:Routing Hydrograph for C10
247:0096-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 03:M11 26.92 2.828 No_date 12:24 85.90 .596
[CN= 74.3: N= 3.00]
[Tp= .55:DT= 1.00]
247:0097-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M11 26.92 2.828 No_date 12:24 85.90 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.247
remark:Runoff Hydrograph for M11
247:0098-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C10 5419.36 110.465 No_date 16:37 76.47 n/a
+ 03:M11 26.92 2.828 No_date 12:24 85.90 n/a
[DT= 1.00] SUM= 01:01 5446.28 110.689 No_date 16:37 76.51 n/a
247:0099-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:01 5446.28 110.689 No_date 16:37 76.51 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-01.247
remark:Hydrograph for 01
** END OF RUN : 247
*****
RUN: COMMAND#
248:0001-----
START
[ TZERO = .00 hrs on 0 ]
[ METOUT= 2 (1=imperial, 2=metric output) ]
[ INSTORM= 1 ]
[ NRUN = 248 ]
#*****
# Project Name: [Becketts Creek FPM] Project Number: [M800-200030-207]
# Date : 29-11-2017
# Modeller : [AA, TB, SN]
# Company : Rideau Valley Conservation Authority
# License # : 5329846
#*****
248:0002-----
READ STORM
Filename = storm.001
Comment
[SDT=30.00:SDUR= 24.00:PTOT= 150.87]
248:0003-----
DEFAULT VALUES
Filename = N:\BECKETT-1\HYDROL-1\BEA161-1\BckVal.val
ICASEdv = 1 (read and print data)
FileTitle= File comment: [RVCA Becketts Creek FPM]
THE FOLLOWING PARAMETERS ARE USED IN THE DESIGN STANDHYD COM
Horton's infiltration equation parameters:
[Fo= 76.20 mm/hr] [Fc=13.20 mm/hr] [DCAY= 4.14 /hr] [F= .00 mm]
Parameters for PERVIOUS surfaces in STANDHYD:
[LAPER= 4.67 mm] [LGP=40.00 mm] [MNP= .250]
Parameters for IMPERVIOUS surfaces in STANDHYD:
[IAimp= 1.57 mm] [CL= 1.50] [MNT= .013]
Parameters used in NASHVD:
[ia= 1.50 mm] [N= 3.00]
# Upstream Tributary
248:0004-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 01:UT1 338.44 10.826 No_date 15:15 91.90 .609
[CN= 74.5: N= 3.00]
[Tp= 3.04:DT= 1.00]
248:0005-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT1 338.44 10.826 No_date 15:15 91.90 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT1.248
remark:Runoff Hydrograph for UT1
248:0006-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT1 338.44 10.826 No_date 15:15 91.90 n/a
[RDT= 1.00] out<- 02:C11 338.44 10.674 No_date 15:38 91.90 n/a
[L/S/= 1960./ .510/.035]
[Vmax= 1.174:Dmax= .538]
248:0007-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C11 338.44 10.674 No_date 15:38 91.90 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C11.248
remark:Routing Hydrograph for C11
248:0008-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 03:UT2 89.11 9.499 No_date 12:30 96.29 .638
[CN= 76.6: N= 3.00]
[Tp= .64:DT= 1.00]
248:0009-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT2 89.11 9.499 No_date 12:30 96.29 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT2.248
remark:Runoff Hydrograph for UT2
248:0010-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C11 338.44 10.674 No_date 15:38 91.90 n/a
+ 03:UT2 89.11 9.499 No_date 12:30 96.29 n/a
[DT= 1.00] SUM= 04:D11 427.55 11.702 No_date 15:29 92.82 n/a
248:0011-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D11 427.55 11.702 No_date 15:29 92.82 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D11.248
remark:Downstream Hydrograph for C11
248:0012-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 01:UT3 459.85 18.508 No_date 14:09 85.96 .570
[CN= 71.4: N= 3.00]
[Tp= 2.06:DT= 1.00]
248:0013-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:UT3 459.85 18.508 No_date 14:09 85.96 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT3.248
remark:Runoff Hydrograph for UT3
248:0014-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:UT3 459.85 18.508 No_date 14:09 85.96 n/a
[RDT= 1.00] out<- 02:C12 459.85 17.666 No_date 14:40 85.96 n/a
[Vmax= 1.121:Dmax= .957]
248:0015-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C12 459.85 17.666 No_date 14:40 85.96 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C12.248
remark:Routing Hydrograph for C12
248:0016-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 03:UT4 137.12 11.483 No_date 12:49 98.22 .651
[CN= 77.6: N= 3.00]
[Tp= .93:DT= 1.00]
248:0017-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT4 137.12 11.483 No_date 12:49 98.22 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT4.248
remark:Runoff Hydrograph for UT4
248:0018-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C12 459.85 17.666 No_date 14:40 85.96 n/a
+ 03:UT4 137.12 11.483 No_date 12:49 98.22 n/a
[DT= 1.00] SUM= 05:D12 596.97 22.977 No_date 13:46 88.78 n/a
248:0019-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D12 596.97 22.977 No_date 13:46 88.78 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D12.248
remark:Downstream Hydrograph for C12
248:0020-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D11 427.55 11.702 No_date 15:29 92.82 n/a
+ 05:D12 596.97 22.977 No_date 13:46 88.78 n/a
[DT= 1.00] SUM= 01:J13 1024.52 33.368 No_date 14:11 90.46 n/a
248:0021-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J13 1024.52 33.368 No_date 14:11 90.46 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J13.248
remark:Hydrograph for J13
248:0022-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J13 1024.52 33.368 No_date 14:11 90.46 n/a
[RDT= 1.00] out<- 02:C13 1024.52 32.745 No_date 14:39 90.46 n/a
[L/S/= 1540./ .250/.035]
[Vmax= .862:Dmax= 1.925]
248:0023-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C13 1024.52 32.745 No_date 14:39 90.46 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C13.248
remark:Routing Hydrograph for C13
248:0024-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 03:UT5 67.49 2.338 No_date 14:57 93.26 .618
[CN= 75.2: N= 3.00]
[Tp= 2.80:DT= 1.00]
248:0025-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:UT5 67.49 2.338 No_date 14:57 93.26 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-UT5.248
remark:Runoff Hydrograph for UT5
248:0026-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C13 1024.52 32.745 No_date 14:39 90.46 n/a
+ 03:UT5 67.49 2.338 No_date 14:57 93.26 n/a
[DT= 1.00] SUM= 04:D13 1092.01 35.064 No_date 14:41 90.64 n/a
248:0027-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:D13 1092.01 35.064 No_date 14:41 90.64 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D13.248
remark:Downstream Tributary
248:0028-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 01:DT1 268.29 12.347 No_date 13:38 81.84 .542
[CN= 69.3: N= 3.00]
[Tp= 1.61:DT= 1.00]
248:0029-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:DT1 268.29 12.347 No_date 13:38 81.84 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT1.248
remark:Runoff Hydrograph for DT1
248:0030-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:DT1 268.29 12.347 No_date 13:38 81.84 n/a
[RDT= 1.00] out<- 02:C14 268.29 11.991 No_date 13:57 81.84 n/a
[L/S/= 2210./ .780/.035]
[Vmax= 1.765:Dmax= .941]
248:0031-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C14 268.29 11.991 No_date 13:57 81.84 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C14.248
remark:Routing Hydrograph for C14
248:0032-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHVD 03:DT2 134.58 10.025 No_date 12:52 89.81 .595
[CN= 73.4: N= 3.00]
[Tp= .96:DT= 1.00]
248:0033-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:DT2 134.58 10.025 No_date 12:52 89.81 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-DT2.248
remark:Runoff Hydrograph for DT2
248:0034-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C14 268.29 11.991 No_date 13:57 81.84 n/a
+ 03:DT2 134.58 10.025 No_date 12:52 89.81 n/a

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[DT= 1.00] SUM= 05:D14 402.87 19.540 No_date 13:25 84.50 n/a
248:0035-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 05:D14 402.87 19.540 No_date 13:25 84.50 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D14.248
remark:Downstream Hydrograph for C4
# Main Channel)
248:0036-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 01:M1 457.96 25.312 No_date 13:40 100.32 .665
[CN= 78.6: N= 3.00]
[TP= 1.68:DT= 1.00]
248:0037-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:M1 457.96 25.312 No_date 13:40 100.32 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M1.248
remark:Runoff Hydrograph for M1
248:0038-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:M1 457.96 25.312 No_date 13:40 100.32 n/a
[RD7= 1.00] out<- 02:C1 457.96 24.854 No_date 13:55 100.32 n/a
[L/S/n= 1720./ .400/.035]
[Vmax= 1.646:Dmax= 1.249]
248:0039-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C1 457.96 24.854 No_date 13:55 100.32 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C1.248
remark:Routing Hydrograph for C1
248:0040-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M2 341.59 29.240 No_date 12:44 94.29 .625
[CN= 75.7: N= 3.00]
[TP= .85:DT= 1.00]
248:0041-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M2 341.59 29.240 No_date 12:44 94.29 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M2.248
remark:Runoff Hydrograph for M2
248:0042-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C1 457.96 24.854 No_date 13:55 100.32 n/a
+ 03:M2 341.59 29.240 No_date 12:44 94.29 n/a
[DT= 1.00] SUM= 01:J2 799.55 46.876 No_date 13:07 97.74 n/a
248:0043-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J2 799.55 46.876 No_date 13:07 97.74 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J2.248
remark:Hydrograph for J2
248:0044-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J2 799.55 46.876 No_date 13:07 97.74 n/a
[RD7= 1.00] out<- 02:C2 799.55 43.083 No_date 13:32 97.74 n/a
[L/S/n= 1940./ .210/.035]
[Vmax= 1.171:Dmax= 1.001]
248:0045-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C2 799.55 43.083 No_date 13:32 97.74 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C2.248
remark:Routing Hydrograph for C2
248:0046-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M3 165.13 9.346 No_date 13:35 99.53 .660
[CN= 78.2: N= 3.00]
[TP= 1.61:DT= 1.00]
248:0047-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M3 165.13 9.346 No_date 13:35 99.53 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M3.248
remark:Runoff Hydrograph for M3
248:0048-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C2 799.55 43.083 No_date 13:32 97.74 n/a
+ 03:M3 165.13 9.346 No_date 13:35 99.53 n/a
[DT= 1.00] SUM= 01:J3 964.68 52.421 No_date 13:32 98.05 n/a
248:0049-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J3 964.68 52.421 No_date 13:32 98.05 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J3.248
remark:Hydrograph for J3
248:0050-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J3 964.68 52.421 No_date 13:32 98.05 n/a
[RD7= 1.00] out<- 02:C3 964.68 48.073 No_date 14:16 98.05 n/a
[L/S/n= 1090./ .180/.035]
[Vmax= .658:Dmax= 2.506]
248:0051-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C3 964.68 48.073 No_date 14:16 98.05 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C3.248
remark:Routing Hydrograph for C3
248:0052-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M4 1698.95 39.360 No_date 16:17 80.35 .533
[CN= 68.5: N= 3.00]
[TP= 3.84:DT= 1.00]
248:0053-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M4 1698.95 39.360 No_date 16:17 80.35 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M4.248
remark:Runoff Hydrograph for M4
248:0054-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C3 964.68 48.073 No_date 14:16 98.05 n/a
+ 03:M4 1698.95 39.360 No_date 16:17 80.35 n/a
[DT= 1.00] SUM= 06:D3 2663.63 80.768 No_date 14:45 86.76 n/a
248:0055-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D3 2663.63 80.768 No_date 14:45 86.76 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D3.248
remark:Downstream Hydrograph for C3
# Stream Junction of Main Channel and Upstream Tributary
248:0056-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 04:D13 1092.01 35.064 No_date 14:41 90.64 n/a
+ 06:D3 2663.63 80.768 No_date 14:45 86.76 n/a
[DT= 1.00] SUM= 01:J4 3755.64 115.822 No_date 14:45 87.89 n/a
248:0057-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J4 3755.64 115.822 No_date 14:45 87.89 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J4.248
remark:Hydrograph for J4
248:0058-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J4 3755.64 115.822 No_date 14:45 87.89 n/a
[RD7= 1.00] out<- 02:C4 3755.64 100.519 No_date 16:03 87.89 n/a
[L/S/n= 2020./ .090/.035]
[Vmax= .473:Dmax= 2.972]
248:0059-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C4 3755.64 100.519 No_date 16:03 87.89 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C4.248
remark:Routing Hydrograph for C4
248:0060-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M5 112.92 8.383 No_date 12:53 90.17 .598
[CN= 73.6: N= 3.00]
[TP= .97:DT= 1.00]
248:0061-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M5 112.92 8.383 No_date 12:53 90.17 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M5.248
remark:Runoff Hydrograph for M5
248:0062-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C4 3755.64 100.519 No_date 16:03 87.89 n/a
+ 03:M5 112.92 8.383 No_date 12:53 90.17 n/a
[DT= 1.00] SUM= 01:J5 3868.56 102.031 No_date 16:00 87.95 n/a
248:0063-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J5 3868.56 102.031 No_date 16:00 87.95 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J5.248
remark:Hydrograph for J5
248:0064-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J5 3868.56 102.031 No_date 16:00 87.95 n/a
[RD7= 1.00] out<- 02:C5 3868.56 93.737 No_date 16:40 87.95 n/a
[L/S/n= 1450./ .050/.035]
[Vmax= .456:Dmax= 2.939]
248:0065-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C5 3868.56 93.737 No_date 16:40 87.95 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C5.248
remark:Routing Hydrograph for C5
248:0066-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M6 273.75 14.030 No_date 13:41 93.35 .619
[CN= 75.2: N= 3.00]
[TP= 1.68:DT= 1.00]
248:0067-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M6 273.75 14.030 No_date 13:41 93.35 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M6.248
remark:Runoff Hydrograph for M6
248:0068-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C5 3868.56 93.737 No_date 16:40 87.95 n/a
+ 03:M6 273.75 14.030 No_date 13:41 93.35 n/a
[DT= 1.00] SUM= 04:J6 4142.31 99.215 No_date 16:41 88.31 n/a
248:0069-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 04:J6 4142.31 99.215 No_date 16:41 88.31 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J6.248
remark:Hydrograph for J6
248:0070-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M7 21.88 3.044 No_date 12:13 90.58 .600
[CN= 73.8: N= 3.00]
[TP= .39:DT= 1.00]
248:0071-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M7 21.88 3.044 No_date 12:13 90.58 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M7.248
remark:Runoff Hydrograph for M7
248:0072-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 03:M7 21.88 3.044 No_date 12:13 90.58 n/a
+ 04:J6 4142.31 99.215 No_date 16:41 88.31 n/a
[DT= 1.00] SUM= 06:D6 4164.19 99.382 No_date 16:40 88.32 n/a
248:0073-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 06:D6 4164.19 99.382 No_date 16:40 88.32 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-D6.248
remark:Downstream Hydrograph for C6
# Stream Junction of Main Channel and Downstream Tributary
248:0074-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 05:D14 402.87 19.540 No_date 13:25 84.50 n/a
+ 06:D6 4164.19 99.382 No_date 16:40 88.32 n/a
[DT= 1.00] SUM= 01:J7 4567.06 106.647 No_date 16:23 87.99 n/a
248:0075-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J7 4567.06 106.647 No_date 16:23 87.99 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J7.248
remark:Hydrograph for J7
248:0076-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J7 4567.06 106.647 No_date 16:23 87.99 n/a
[RD7= 1.00] out<- 02:C7 4567.06 106.578 No_date 16:23 87.99 n/a
[L/S/n= 520./ .130/.035]
[Vmax= 1.228:Dmax= 2.969]
248:0077-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C7 4567.06 106.578 No_date 16:23 87.99 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C7.248
remark:Routing Hydrograph for C7
248:0078-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M8 502.47 8.722 No_date 16:09 58.63 .389
[CN= 56.2: N= 3.00]
[TP= 3.62:DT= 1.00]
248:0079-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M8 502.47 8.722 No_date 16:09 58.63 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M8.248
remark:Runoff Hydrograph for M8
248:0080-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C7 4567.06 106.578 No_date 16:23 87.99 n/a
+ 03:M8 502.47 8.722 No_date 16:09 58.63 n/a
[DT= 1.00] SUM= 01:J8 5069.53 115.279 No_date 16:23 85.08 n/a
248:0081-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J8 5069.53 115.279 No_date 16:23 85.08 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J8.248
remark:Hydrograph for J8
248:0082-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J8 5069.53 115.279 No_date 16:23 85.08 n/a
* [RD7= 1.00] out<- 02:C8 5069.53 114.746 No_date 16:36 85.08 n/a
[L/S/n= 1010./ .150/.035]
[Vmax= 1.534:Dmax= 3.237]
248:0083-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C8 5069.53 114.746 No_date 16:36 85.08 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C8.248
remark:Routing Hydrograph for C8
248:0084-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M9 159.64 1.612 No_date 16:03 33.50 .222
[CN= 39.7: N= 3.00]
[TP= 3.37:DT= 1.00]
248:0085-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M9 159.64 1.612 No_date 16:03 33.50 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M9.248
remark:Runoff Hydrograph for M9
248:0086-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C8 5069.53 114.746 No_date 16:36 85.08 n/a
+ 03:M9 159.64 1.612 No_date 16:03 33.50 n/a
[DT= 1.00] SUM= 01:J9 5229.17 116.342 No_date 16:20 83.50 n/a
248:0087-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J9 5229.17 116.342 No_date 16:20 83.50 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J9.248
remark:Hydrograph for J9
248:0088-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ROUTE CHANNEL -> 01:J9 5229.17 116.342 No_date 16:20 83.50 n/a
* [RD7= 1.00] out<- 02:C9 5229.17 116.271 No_date 16:42 83.50 n/a
[L/S/n= 1810./ .990/.035]
[Vmax= 2.803:Dmax= 1.345]
248:0089-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 02:C9 5229.17 116.271 No_date 16:42 83.50 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C9.248
remark:Routing Hydrograph for C9
248:0090-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
CALIB NASHYD 03:M10 190.19 3.052 No_date 14:01 33.12 .219
[CN= 39.5: N= 3.00]
[TP= 1.79:DT= 1.00]
248:0091-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 03:M10 190.19 3.052 No_date 14:01 33.12 n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M10.248
remark:Runoff Hydrograph for M10
248:0092-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
ADD HYD 02:C9 5229.17 116.271 No_date 16:42 83.50 n/a
+ 03:M10 190.19 3.052 No_date 14:01 33.12 n/a
[DT= 1.00] SUM= 01:J10 5419.36 117.903 No_date 16:36 81.73 n/a
248:0093-----ID:NHYD-----AREA-----OPEAK-TpeakDate_hh:mm-----R.V.-R.C.-
SAVE HYD 01:J10 5419.36 117.903 No_date 16:36 81.73 n/a

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fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-J10.248
remark:Hydrograph for J10
248:0094-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ROUTE CHANNEL  -> 01:J10      5419.36  117.903 No_date  16:36  81.73  n/a
* [RDT= 1.00] out<- 02:C10      5419.36  117.898 No_date  16:38  81.73  n/a
  [L/S/n=  990./ .180/.035]
  {Vmax= 1.867:Dmax= 2.959}
248:0095-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
SAVE HYD        02:C10      5419.36  117.898 No_date  16:38  81.73  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-C10.248
remark:Routing Hydrograph for C10
248:0096-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
CALIB NASHYD    03:M11      26.92    3.018 No_date  12:24  91.58  .607
[CN= 74.3: N= 3.00]
[Tp= .55:DT= 1.00]
248:0097-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
SAVE HYD        03:M11      26.92    3.018 No_date  12:24  91.58  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-M11.248
remark:Runoff Hydrograph for M11
248:0098-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
ADD HYD         02:C10      5419.36  117.898 No_date  16:38  81.73  n/a
+ 03:M11        26.92    3.018 No_date  12:24  91.58  n/a
[DT= 1.00] SUM= 01:O1      5446.28  118.135 No_date  16:36  81.78  n/a
248:0099-----ID:NHYD-----AREA---QPEAK-TpeakDate_hh:mm---R.V.-R.C.-
SAVE HYD        01:O1      5446.28  118.135 No_date  16:36  81.78  n/a
fname :N:\BECKETT-1\HYDROL-1\BEA161-1\H-O1.248
remark:Hydrograph for O1
248:0002-----
FINISH
*****
WARNINGS / ERRORS / NOTES
-----
Simulation ended on 2017-11-29 at 15:25:58
*****

```

Appendix E

Road Crossings - Photographs



Sarsfield Road near Colonial (Upstream)



Sarsfield Road near Colonial (Downstream)



Lafleur Road (Upstream)



Lafleur Road (Downstream)



Birchgrove Road south of Étienne (Upstream)



Birchgrove Road south of Étienne (Downstream)

Note: Birchgrove Road south of Étienne has been rebuilt since the site visit.



Étienne Road (Upstream)



Étienne Road (Downstream)



Birchgrove Road north of Étienne (Upstream)



Birchgrove Road north of Étienne (Downstream)



French Hill Road (Upstream)



French Hill Road (Downstream)



Wilhaven Drive (Upstream)



Wilhaven Drive (Downstream)



Old Montreal Road (Upstream)



Old Montreal Road (Downstream)



RR174 (Upstream)



RR174 (Downstream)



Sarsfield Road near Regimbald (Upstream)



Sarsfield Road near Regimbald (Downstream)



Sarsfield Road near French Hill (Upstream)



Sarsfield Road near French Hill (Downstream)



Birchgrove Road near Étienne (Upstream)



Birchgrove Road near Étienne (Downstream)



Sarsfield Road near Beaton (Upstream)



Sarsfield Road near Beaton (Downstream)



Emmett Road (Upstream)



Emmett Road (Downstream)

Appendix F

Full-Size Drawings

(Drawings BK-1 and BK-2)

Projection note: U.T.M. Zone 18 - NAD 83 Datum

File name: Drawing BK-1

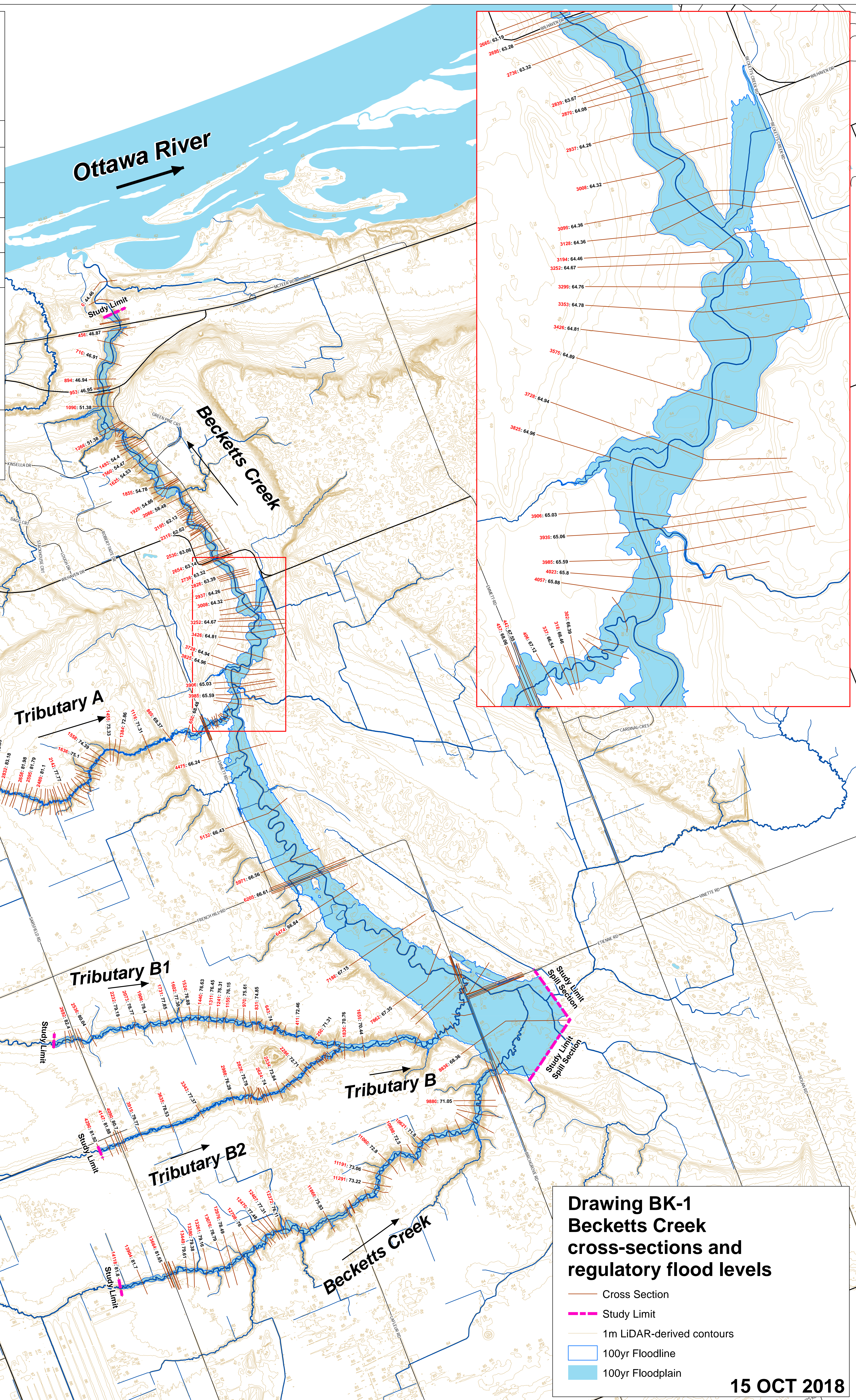
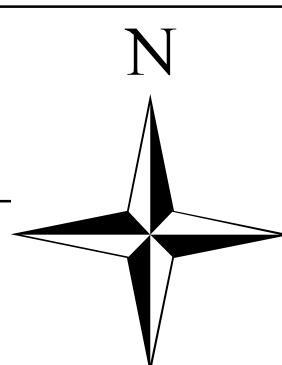
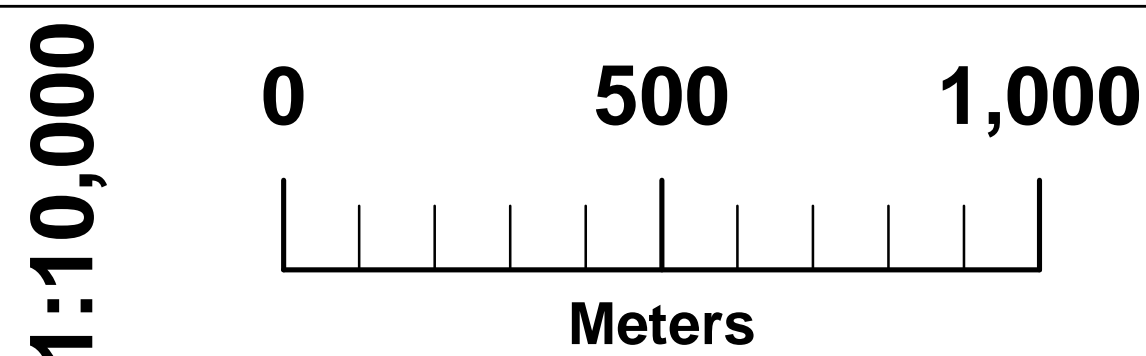
Date Modified: 10/15/2018

Modified by: TB






Location:
Z:\GIS_Data\CA_Data\FPMRVCA\Becketts_Creek\Drawing_BK-1.mxd

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**Drawing BK-1
Becketts Creek
cross-sections and
regulatory flood levels**

-  Cross Section
-  Study Limit
-  1m LiDAR-derived contours
-  100yr Floodline
-  100yr Floodplain

15 OCT 2018

LiDAR captured by Geodigital International between April 20 - 22, 2007 and by Airborne Imaging between November 15 - 22, 2012, November 11 - December 7, 2014, and April 25 - 29, 2015.

The information in this drawing is for information purposes only. Authoritative information on flood hazard is maintained in RVCA's GIS system and is updated from time to time based on new data.

Projection note: U.T.M. Zone 18 - NAD 83 Datum

File name: Drawing BK-2

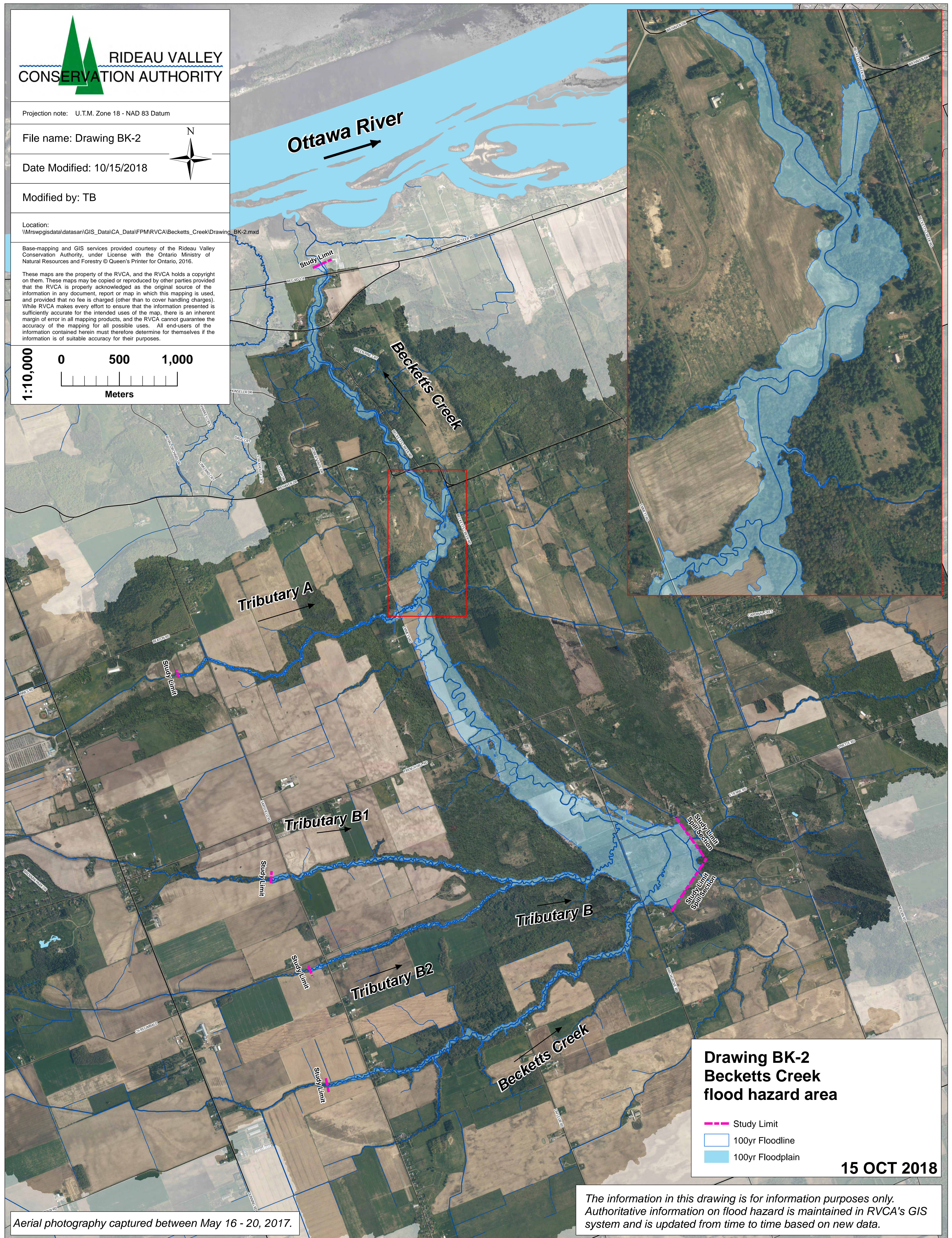
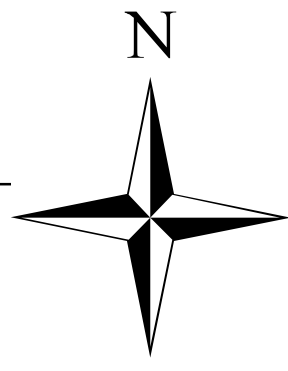
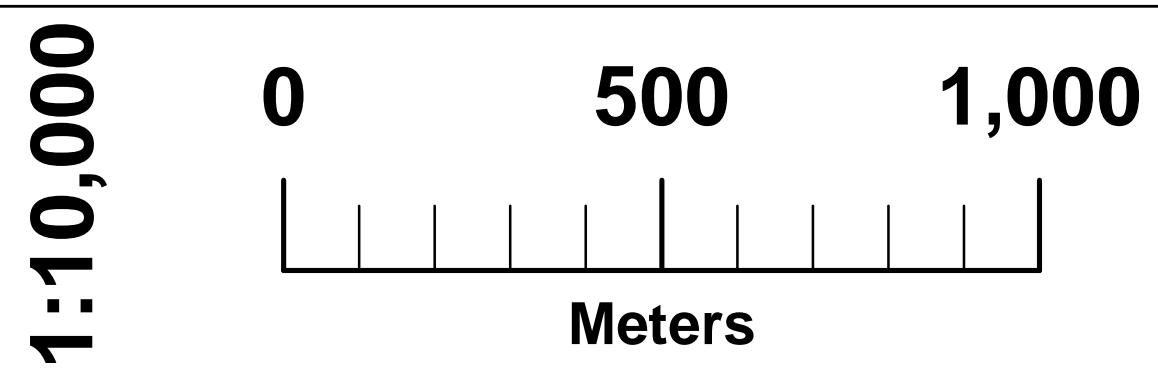
Date Modified: 10/15/2018

Modified by: TB

Location:
\\Msrwpgis\data\datan\GIS_Data\CA_Data\FPM\RVCA\Becketts_Creek\Drawing_BK-2.mxd

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**Drawing BK-2
Becketts Creek
flood hazard area**

- - - Study Limit
- 100yr Floodline
- 100yr Floodplain

15 OCT 2018

Aerial photography captured between May 16 - 20, 2017.

The information in this drawing is for information purposes only. Authoritative information on flood hazard is maintained in RVCA's GIS system and is updated from time to time based on new data.