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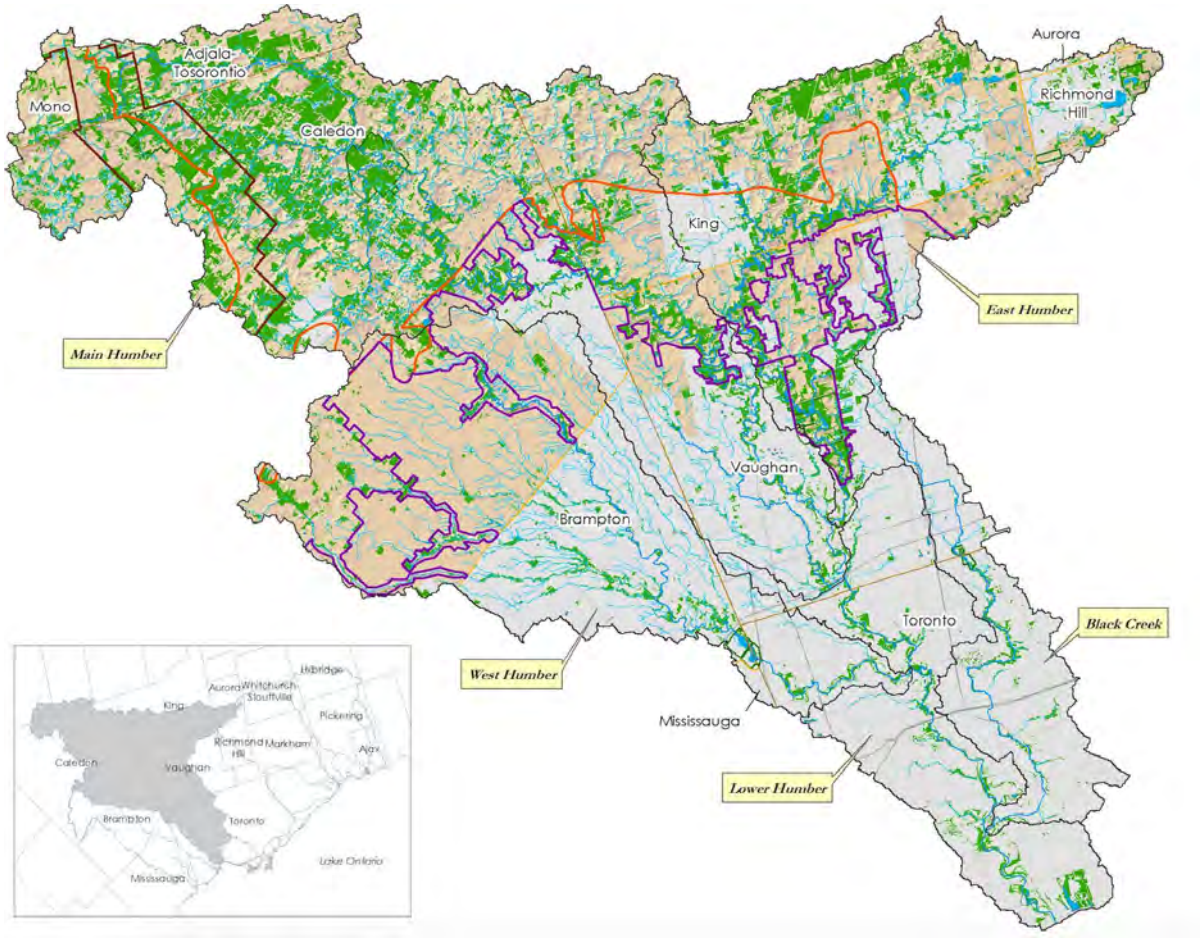
Waste Management Solutions

Prepared for: Toronto and Region Conservation Authority (TRCA)

Final Report:
Humber River Hydrology Update



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1.0 INTRODUCTION

Civica Infrastructure Inc. (Civica) was retained by the Toronto and Region Conservation Authority (TRCA) to update the hydrologic model for the Humber River Watershed in order to assess the impact of the development planned in local official plans. The study area is shown in **Figure 1.1,** provided by TRCA. The Humber River Watershed covers 903 km^2 reaching from the headwaters at the Niagara Escarpment and Oak Ridges Moraine down through flat clay and till plains to the marshes and river mouth at Lake Ontario.

Currently, TRCA uses the hydrologic model for the Humber River Watershed that was updated and calibrated by Civica Infrastructure in June 2015. The 2015 model development included a 3rd party peer-review process and was approved by TRCA. Through use of the model developed in 2015 TRCA discovered a number of inconsistencies related to the future conditions land use scenario. In order to ensure the future conditions land use scenario is current and reflective of the proposed land use plans for various Local and Regional municipalities TRCA retained the Civica to develop a revised watershed scale future conditions land use plan, and subsequent future conditions model scenarios. The purpose of the modeling exercise is to assess impacts of proposed future development on storm flows associated with large events including the 350yr, 500yr and Regional regulatory storms. The regional flow generated by this updated model will be used by others to update the floodlines for the Humber in compliance with the MNR requirements that Regional floodlines be generated runoff from future conditions land use plans.

In order to provide a complete set of models for the Humber River we have included a summary of the calibration and validation completed in 2015 along with the models and results for the 2 through 100-year design storms. Only the existing conditions models are provided for these design storms as the future conditions modeling is being completed as part of a separate project to review and update the stormwater management unit flow rates for the Humber River.

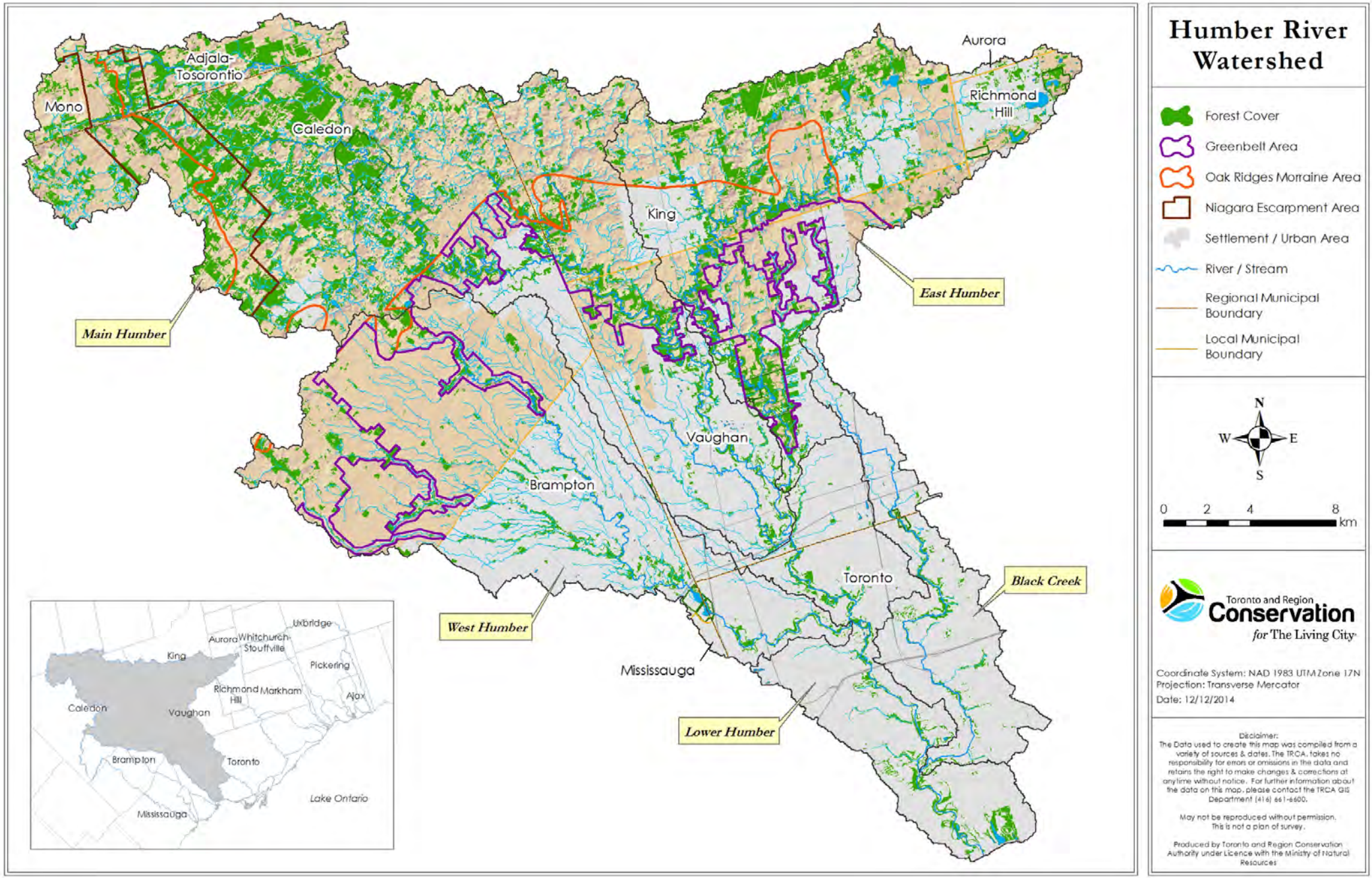

Figure 1.1: Study Area

2.0 EXISTING CONDITIONS

The existing conditions model used as the initial starting point for this project was developed and finalized for the TRCA by Civica infrastructure in 2015. The details of this model build and calibration can be found in the *Humber Hydrology Update Report*, Civica Infrastructure Inc., June 2015. This calibrated model represents 2014 land use conditions and has been peer reviewed and approved by TRCA. For the existing conditions model, the watershed is divided into 714 catchments, of which 410 are modeled as rural areas using the NASHYD command in Visual OTTHYMO (VO), which uses the Nash instantaneous hydrograph to calculate runoff over the catchment. This methodology is appropriate for catchments with less then 20% impervious area spread throughout the catchment and is generally used to model natural areas and rural developments. and the remaining 304 catchments are modeled as urban areas using the STANDHYD command, which uses two parallel standard instantaneous unit hydrographs to convolute the effective rainfall intensity over the pervious and impervious surfaces. This command is appropriate for areas with over 20% impervious area and is generally used for suburban and urban developments. Runoff generated by these catchments was routed through a total of 768 river segments, which are modelled using the RouteChannel command. For smaller events (2 - 100-year events) this model included 81 RouteReservoirs to model stormwater management ponds, reservoirs, and lakes. Catchments and existing conditions land use are shown on **Figures 2.1 and 2.2** respectively.

The following paragraphs provide a general overview of the process used to assign key parameters to each catchment in existing conditions model as part of the 2015 model update. The details of the model parameters for the existing conditions model can be found in the *Humber Hydrology Update Report* (Civica 2015). Model parameterization was based on the existing (2014) land use and on soils maps produced by the Ontario Ministry of Agriculture, as part of the 1989 Food and Rural Affairs Study. Land use was categorised based on cover, and then assigned a TRCA land use code. Parameters were assigned to each catchment based on physical characteristics, such as, area, slope, land use and soils. CN values are assigned based on the soils and land use in a catchment, Total Percent Impervious (TIMP), and directly connected percent impervious (XIMP) values are assigned based on land use. Standard values are assigned using tables 2.1 and 2.2.

Legend

- Flow Node
- General River
- Subcatchment

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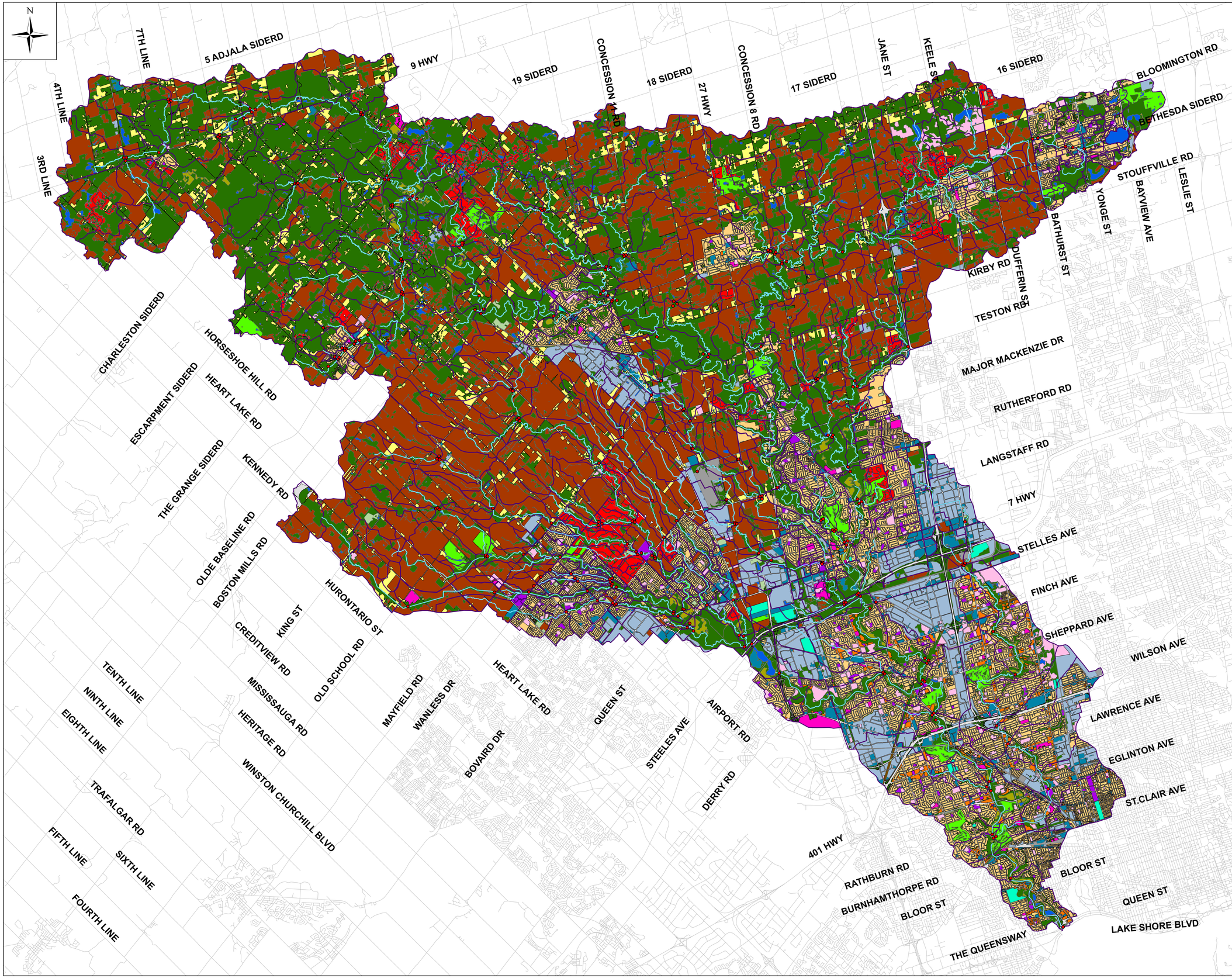
Humber River Hydrology

Figure 2.1 Catchments for Existing Scenario

Drawn By: M.Y. Date: Dec. 20, 2017

0 1.25 2.5 5 Kilometers



Legend

- Flow Node
- General River
- Subcatchment
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
- Natural
- Open Space
- Park
- Recreational
- Residential High
- Residential LowMed
- Road (ROW)
- Rural Residential
- Transportation
- Water

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Figure 2.2 Existing Land Use Scenario

Drawn By: M.Y. Date: Dec. 20, 2017

0 1.25 2.5 5 Kilometers

Table 2-1 – CN Values

Land use (TRCACode)	TIMP	Cover Type	Hydrologic Soil Group			
			A	B	C	D
Cemetery	35	35% Impervious + 65% Lawns	71	81	88	90
Commercial	95	95% Impervious + 5% Lawns	98	99	99	99
Conservation Lands	0	80% Woods + 20% Meadows	38	61	74	80
Estate Residential	40	40% Impervious + 60% Lawns	74	83	89	91
Farm	0	Cultivated	66	74	82	86
Golf Course	0	Lawns	56	71	81	85
Hydro Corridor	10	10% Impervious + 90% Meadows	51	69	79	84
Industrial	95	95% Impervious + 5% Lawns	98	99	99	99
Institutional	80	80% Impervious + 20% Lawns	91	94	96	97
Open Space	0	50% Woods + 50% Meadows	41	63	75	81
Park	10	10% Impervious + 45% Woods + 45% Meadows	47	67	78	82
Recreational	20	20% Impervious + 80% Lawns	65	77	85	88
Residential High	80	80% Impervious + 20% Lawns	91	94	96	97
Residential LowMed	60	60% Impervious + 40% Lawns	82	88	92	94
Road (ROW)	90	90% Impervious + 10% Lawns	96	97	98	99
Rural Residential	20	20% Impervious + 80% Lawns	65	77	85	88
Transportation	60	60% Impervious + 40% Lawns	82	88	92	94
Water	100	Impervious	100	100	100	100
Natural	0	50% Woods + 50% Meadows	41	63	75	81

Table 2-2 – Total Impervious and Directly Connected Impervious Values

Land Use Classification	Total Impervious Area (%)	Directly Connected Impervious Area (%)
Airport	45	45
Cemetery	35	30
Commercial	95	95
Conservation Lands	0	0
Estate Residential	40	25
Farm	0	0
Federal park	0	0
Golf Course	0	0
Hydro Corridor	10	10
Industrial	95	95
Institutional	80	75
Open Space	0	0
Park	10	10
Recreational	20	15
Residential High	80	80
Residential Low-Med	60	50
Road	90	90
Rural Residential	20	15
Transportation	60	60
Wetland	100	100
Water	100	100
Natural Cover	0	0

As part of the 2015 study, additional parameter development was required for areas within the Humber River's headwaters to account for hummocky terrain and internally draining sub-catchments found within this area. Originating in the Niagara Escarpment and Oak Ridges Moraine the hummocky terrain of the headwaters of the Main Humber sub-watershed is characterized as having considerable depression storage and permeable soils, resulting in significant infiltration of stormwater that would otherwise runoff directly into streams (TRCA, 2008). In order to reproduce the hydrologic response of this area, it is necessary to account for the extent of depression storage. The 2015 study took an approach called sink analysis. In this approach, sink or depression areas, which are normally dry, were identified from the digital elevation model provided by the TRCA. Next, the initial abstraction (IA) storage in a catchment area was calculated based on the 'sink' volume. This volume was divided by the respective catchment area. The value of the available storage depth was entered into the model as the initial abstraction for rural sub-catchments with hummocky terrain, resulting in IA of up to 45 mm. This initial abstraction was adjusted in the calibration process.

It was also found that in certain areas, the grades generate internally-drained areas that do not contribute runoff to the receiving reaches downstream. The 2015 study identified thirteen (13) internally-drained sub-catchments within the East Humber River sub-watershed. These thirteen (13) internally drained sub-catchments were modeled without connecting to the main watercourses.

3.0 MODEL CALIBRATION AND VALIDATION

The Humber Hydrology model was calibrated and validated as part of the 2015 update. In order to provide a complete record of the modeling work completed to date we have included a brief summary of the calibration and validation process. For more details, please refer to the final report for the 2015 *Humber Hydrology Update* (Civica, 2015).

Ten (10) storm events were selected for model calibration and validation, events were selected based on the consistency of the rainfall distribution throughout the watershed and the observed rainfall-runoff responses measured at the various flow gauges. Although an attempt was made to select events representing a variety of rainfall volumes and distributions it should be noted that the selected calibration events were significantly smaller than the regulatory storm event. The regulatory event in this zone is Hurricane Hazel with produced a main storm rainfall volume of 217 mm over 12 hours, with 72 mm occurring in the 36 hours prior the main storm. **Tables 3-1** and **3-2** provide volumes and intensities for the selected calibration and validation events.

Table 3-1 – Calibration Rainfall events

Rain Gauge Location and ID	Aug 19, 2005		July 9-11, 2006		May 28-30, 2013		July 7-9, 2013		July 31 - Aug 2, 2013	
	Volume (mm)	Intensity (mm/hr)	Volume (mm)	Intensity (mm/hr)	Volume (mm)	Intensity (mm/hr)	Volume (mm)	Intensity (mm/hr)	Volume (mm)	Intensity (mm/hr)
Glenn Haffey (HY030)	62.2	82	47.4	26	32.2	28.8	35.6	55.2	49.6	33.6
Albion Hills (HY002)	56.2	79	45.8	24	37.3	34.8	55.4	57.6	53.6	44.4
Caledon Pumping Station (HY012)	74.2	110	67.6	46	45.6	55.2	56.8	96	No Data	No Data
York Pumping Station (HY069)	29.4	38	53	70	No Data	No Data	No Data	No Data	No Data	No Data
Laidlaw Bus Depot (HY041)	107.4	158	95.4	60	59.8	67.2	66.2	76.8	48	45.6
Boyd Field Centre (HY007)	99.2	158	90.8	77	No Data	No Data	No Data	No Data	No Data	No Data
Claireville Dam (HY014)	81	161	73.8	48	63.2	72	No Data	No Data	No Data	No Data
Missisauga Works Yard (HY046)	No Data	No Data	No Data	No Data	38	28.8	138.2	98.4	43.2	33.6
TRCA Head Office (HY064)	24.7	82	77.4	58	59.4	79.2	90	110.4	42	16.8
HY003	No Data	No Data	No Data	No Data	53.4	72	130	112.8	41.4	43.2
HY016	No Data	No Data	No Data	No Data	58.8	57.6	83.2	115.2	41.8	40.8
HY021	No Data	No Data	No Data	No Data	38.3	37.2	48.9	70.8	46	31.2
HY027	No Data	No Data	No Data	No Data	59	72	78.6	110.4	45.2	26.4
HY037	No Data	No Data	No Data	No Data	36.4	40.8	65.6	81.6	48.8	24
HY038	No Data	No Data	No Data	No Data	29.8	31.2	78.2	86.4	50.8	43.2
HY055	No Data	No Data	No Data	No Data	43.6	33.6	87.6	105.6	45.4	43.2
HY061	No Data	No Data	No Data	No Data	70.8	153.6	53.6	62.4	56.2	50.4

Table 3-2 – Validation Rainfall Events

Rain Gauge Location and ID	Nov 29, 2005		May 15, 2007		Sep 14, 2008		July 27, 2014		Sep 05, 2014	
	Volume (mm)	Intensity (mm/hr)	Volume (mm)	Intensity (mm/hr)	Volume (mm)	Intensity (mm/hr)	Volume (mm)	Intensity (mm/hr)	Volume (mm)	Intensity (mm/hr)
Glenn Haffey (HY030)	44.4	12	31.6	22	56.8	34	35.0	36.0	36.8	43.2
Albion Hills (HY002)	29.8	12	42.8	46	60.8	26	29.1	18.0	51.7	63.6
Caledon Pumping Station (HY012)	36.2	12	44.6	86	53.6	26	28.4	9.6	63.6	64.8
York Pumping Station (HY069)	31.8	12	49.8	82	31.0	26	56.6	69.6	58.0	45.6
Laidlaw Bus Depot (HY041)	32.0	14	54	89	41.2	26	65.0	115.2	32.8	19.2
Boyd Field Centre (HY007)	28.6	10	46.8	62	42.6	22	No Data	No Data	No Data	No Data
Claireville Dam (HY014)	25.8	10	41.4	48	28.2	24	35.2	31.2	25.2	9.6
Missisauga Works Yard (HY046)	No Data	No Data	54.8	70	27.8	19	No Data	No Data	No Data	No Data
TRCA Head Office (HY064)	37.0	12	42.6	36	32.8	29	67.2	127.2	24.4	12.0
King and Albion-Vaughan (HY037)	No Data	No Data	No Data	No Data	No Data	No Data	32.8	24.0	68.4	76.8
East Humber at Mill Road (HY038)	No Data	No Data	No Data	No Data	No Data	No Data	50.4	84.0	67.0	60.0
Restoration Services (HY055)	No Data	No Data	No Data	No Data	No Data	No Data	50.4	50.4	33.0	14.4

Prior to calibration and validation, the baseflow was removed from each storm event using either the fixed base length method (for gauges with significant groundwater contributions) or the straight-line method. **Table 3-3** summarizes the baseflow separation method used for the stream hydrographs upstream of each station.

Table 3-3 – baseflow separation method for each station

Flow Gauge location and ID	Baseflow Separation Method
Humber River at Palgrave (02HC047)	Fixed base length method
Cold Creek near Bolton (02HC023)	Fixed base length method
East Humber River at Pine Grove (02HC009)	Fixed base length method
West Humber River at Highway 7 (02HC031)	Straight line method
Humber River at Weston Rd. (02HC003)	Straight line method
Plunkett Creek (HY053)	Straight line method
Plunkett Creek (HY053)	Straight line method
Elder Mills (02HC025)	Fixed base length method

Given the large size of the watershed there was significant special variability for rainfall events across the watershed. In order to reduce the effect of rainfall spatial variability on the predicted runoff for a watershed, a Distributed Rainfall Modelling Technique (DRMT) was applied prior to modelling. This technique generates a surface from the rainfall measured at all the available rain gauges and generates simulated rain gauges for each sub-catchment using the average rainfall across each sub-catchment. Thus, in the calibration and validation models there are 714 rain gauges for each rainfall event.

For each calibration and validation event the Antecedent Moisture Conditions (AMC) in the watershed was established for the start of the rainfall event based on the total rainfall over the 5 days preceding the event. **Table 3-3** provides a summary of the rainfall volumes used to establish antecedent moisture conditions in each sub-catchment.

Table 3-4 – Seasonal precipitation limits for AMC values

AMC Group	Total five-day antecedent rainfall (mm)	
	Growing Season	Dormant Season
I	< 35.56	< 12.7
II	35.56 to 53.34	12.7 to 27.94
III	> 53.34	>27.94

3.1 Calibration

In order to quantify the correlation between modeled and calibrated data a simple percentage error for peak flow, runoff volume and time-to-peak comparison. The calibration / validation was

deemed acceptable when the simulated volume was within +20% to - 10% of the measured volume and the simulated peak flow was within +25% to -15% of the measured value and observed and modeled hydrographs met the criteria for two out of three events. Due to the large size of the watershed the calibration was carried out by modifying parameters on a sub-watershed basis. Storm events used form model calibration are listed in **Table 3-5.**

Table 3-5 – Models Calibration Events

Event	Avg. Precipitation (mm)	Calibration factors	AMC I	AMC II
August 19, 2005	66	Major	Y	
July 9, 2006	69	Major	Y	
May 28, 2013	48	Minor	Y	Y
July 7-8, 2013	78	Major	Y	
July 31, 2013	47	Minor	Y	

During the calibration process it became evident that different calibration parameters were required for small and large storm events. Small storm events were defined as events with rainfall amounts less than 53 mm. while large events had rainfall amounts of greater than 53 mm. Calibration parameters for large storm events are provided in **Table 3-5,** these parameters were adjusted for minor storm events. The readjusted parameters shown in **Table 3-6** resulted in an excellent match for the minor events. The initial and calibrated model parameters are provided in **Appendix 1** and **Appendix 2** respectively.

3.2 Model Validation

After the calibration process was completed, five storm events were randomly selected to validate the model. As with the calibration events, the CN values for each sub-catchment were adjusted to represent the soil moisture conditions as the beginning of each event. Model calibration factors were changed based on the volume of each calibration event, with calibration factors for large events applied for events with over 53mm of rain and calibration factors for small events being applied for events with less then 53 mm of rain. Events used for model validation are listed in **Table 3-8**.

Table 3-6 – Calibration Parameters for Large (> 53mm) storm events

Calibration Locations	Calibration Type	NHYD ID	Nash CN Change Factor	Nash Tp Change Factor	Nash N Value (Default 3)	Stand TIMP/XIMP Factor	Stand SLPP/SLPI Factor	Stand Pervious CN Changed Factor	Channel Roughness	Channel Length Changed Factor	Hummocky Factor
Humber River at Palgrave (02HC047)	Simple	3698	1.15	1.25	1.5	0.9	0.75	1.15	0.08	-	1.5
Cold Creek near Bolton (02HC023)	Simple	1850	1.1	1	1.75	1	1	1.1	0.08	1.2	1.5
Elgin Mills (02HC025)	Compound	2396	1.15	1	3	1	1	1.15	0.04	-	1.5
East Humber River at Pine Grove (02HC009)	Simple	2517	0.8	2	1.5	0.8	1	0.8	0.045	-	1.5
Plunkett Creek (HY053)	Simple	7256	1	1	1.5	1	1	1	0.06	-	-
West Humber at Highway 7 (02HC031)	Simple	720	1.1	0.9	2.5	1.1	1	1.1	0.045	-	-
Humber River at Weston Rd. (02HC003)	Compound	1631	1.15	1	3	1	1.5	1.15	0.035	-	-
Black Creek at Scarlett Rd. (02HC027)	Simple	719	1	1	3	0.9	1	1	0.045	-	-

It should be noted that the calibration factors highlighted above in grey were reported as slightly different values in the 2015 Humber Hydrology update. The model was recalibrated after the initial report was completed however the report was never fully updated with the new model calibration. The calibration factors provided in Table 3.5 are those used in the final model calibration and were applied to the existing conditions model used in this update.

Table 3-7 – Calibration Parameters for Small (< 53mm) storm events

Calibration Locations	Calibration Type	NHYD ID	Nash CN Change Factor	Nash Tp Change Factor	Nash N Value (Default 3)	Stand TIMP/XIMP Factor	Stand SLPP/SLPI Factor	Stand Pervious CN Changed Factor	Channel Roughness	Channel Length Changed Factor	Hummocky Factor
Humber River at Palgrave (02HC047)	Simple	3698	1.1 (0.957*)	1.25	1.5	0.90	0.75	1.1 (0.957*)	0.08		1.50
Cold Creek near Bolton (02HC023)	Simple	1850	0.88 (0.8*)	2 (2*)	1.5 (0.857*)	1.00	1.00	0.88 (0.8*)	0.096 (1.2*)	1.20	1.8 (1.2*)
Elgin Mills (02HC025)	Compound	2396	0.88 (0.765*)	1.5 (1.5*)	1.5 (0.5*)	1.00	1.00	0.88 (0.765*)	0.04		1.50
East Humber River at Pine Grove (02HC009)	Simple	2517	0.80	2.0	1.5	0.80	1.00	0.80	0.045		1.50
Plunkett Creek (HY053)	Simple	7256	1.00	1.0	1.5	1.00	1.00	1.00	0.06		
West Humber at Highway 7 (02HC031)	Simple	720	0.88 (0.8*)	2 (2.22*)	1.5 (0.6*)	0.9 (0.818*)	1.00	0.88 (0.8*)	0.08 (1.778*)	1.2 (1.2*)	
Humber River at Weston Rd. (02HC003)	Compound	1631	1 (0.870*)	1.0	3.0	0.8 (0.8*)	1.50	1 (0.870*)	0.05		
Black Creek at Scarlett Rd. (02HC027)	Simple	719	0.8 (0.8*)	1.0	3.0	0.8 (0.889*)	1.00	0.8 (0.8*)	0.06 (1.333*)		

* The number in brackets shows the factor applied to the major event parameter used to calculate the minor event parameters.

Table 3-8 – Model Validation Events

Event	Avg. Precipitation (mm)	Calibration/Validation	Calibration factors	AMC I	AMC II
November 29, 2005	33	Validation	Minor	Y	Y
May 15, 2007	45	Validation	Minor	Y	Y
September 14, 2008	42	Validation	Minor	Y	
July 27, 2014	45	Validation	Minor	Y	Y
September 5, 2014	46	Validation	Minor	Y	

3.3 Calibration / Validation Results

As demonstrated through the calibration and validation process, the results show that the simulated hydrographs closely match the observed hydrographs. In general, the simulated hydrograph characteristics (i.e. volume, peak flow, shape and time-to-peaks) were found to be reasonable given the variability and uncertainty associated with rainfall data and streamflow measurements. Summary tables and graphs demonstrating the comparisons of modeled and observed volume, peak flow and time-to-peak along with the percentage difference for all calibration and validation events are included in **Appendix 3**. The results show that the calibrated and validated hydrologic model can be considered representative of the watershed.

4.0 DESIGN STORMS

As part of the 2015 Humber River update, the calibrated model was run using the 6, 12 and 24-hour AES design storms. Results from this modeling were then used to evaluate the current (2015) requirements for quantity control in the Humber River. The 2015 report concluded that the 6 and 12-hour AES storms were the critical storms in terms of flooding in the Humber River Watershed. For completeness, we have included the existing conditions model for the design storms listed in **Table 4-1** on the CD attached to this report.

Table 4-1 – Design Storms Scenarios

Event	Calibration factors	Existing	Ponds	AMC II
2 year	Minor	Y	Y	Y
5 year	Minor	Y	Y	Y
10 year	Major	Y	Y	Y
25 year	Major	Y	Y	Y
50 year	Major	Y	Y	Y
100 year	Major	Y	Y	Y
350 year	Major	Y	Y	Y
500 year	Major	Y	Y	Y

Model results for these design storm scenarios are provided in **Appendix 4**.

5.0 FUTURE CONDITIONS MODEL

The future conditions model builds upon the existing conditions model by modifying catchments which have been identified for development in the future. For this update, it was assumed that the future conditions would include all future development identified in the official plans for Brampton, Caledon, King, Mississauga, Richmond Hill, and Vaughan. The dates for the official plans used to develop our future land use condition are included in Table 3.1, below, all these plans have the same development horizon of 2031. As the southern portion of the Humber River Watershed is in a fully developed part of Toronto, it was assumed that the development densities in this area were not likely to change significantly. In addition to the data from the Municipal Official Plans the Region of Peel provided Shapefiles for the Bolton Bypass, which were included in the future conditions land use.

Table 5-1 – Official Plan Documents

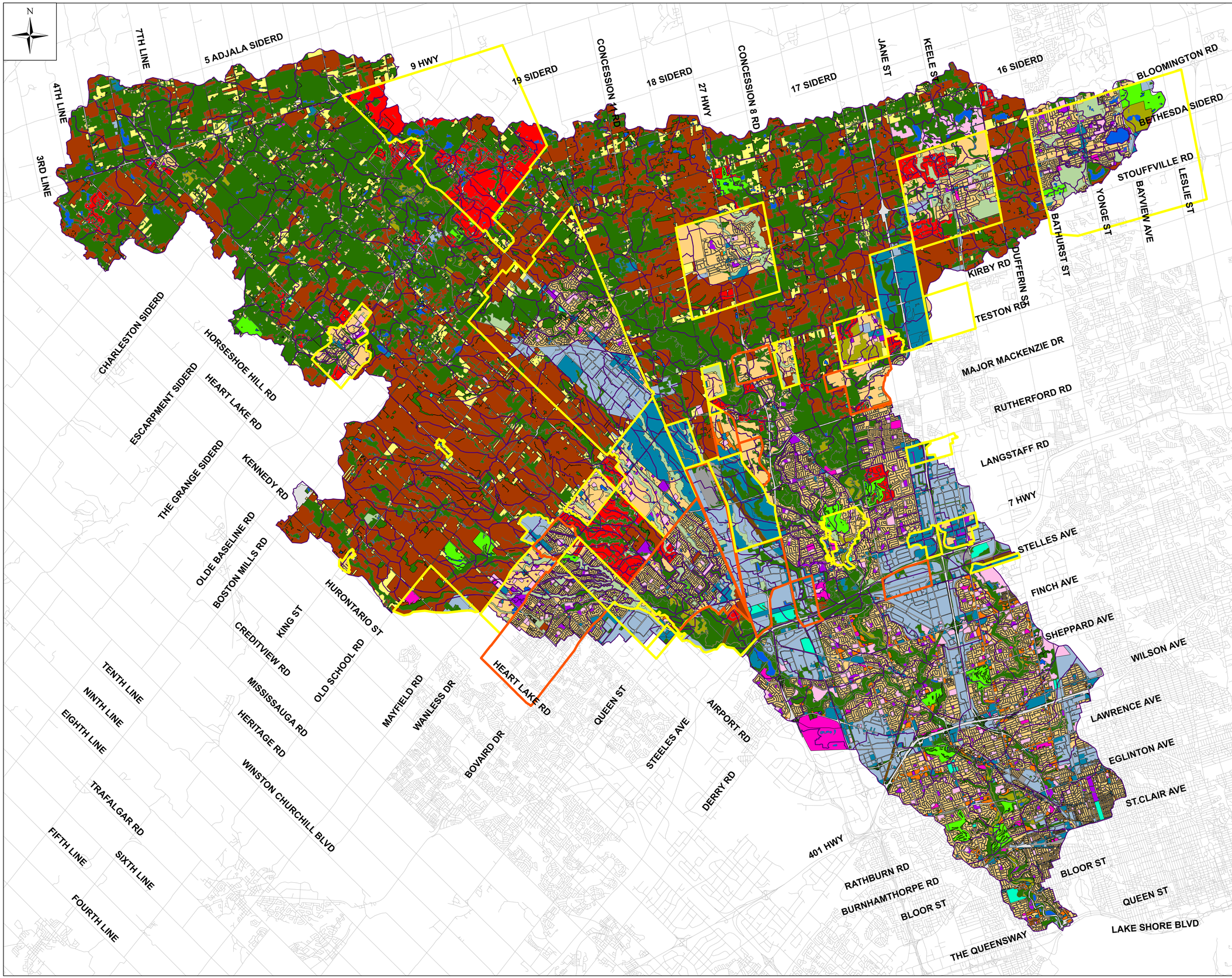
Municipality	Date of current OP	OP Planning Horizon
Brampton	(Consolidated) September 2015	2031
Caledon	(Consolidated) November 2016	2031
King	(Draft) November 2017	2031
Mississauga	(Consolidated) August 2017	2031
Richmond Hill	(Consolidated) April 2017	2031
Vaughan	(Consolidated) October 2017	2031

5.1 Land Use Update

As the future conditions model represents a change in the land use within the study area, the first step in this update was to develop a future conditions land use map. The existing conditions map used in the 2015 Humber River Hydrology Update was used as a base for the future land use conditions. The existing conditions model was not modified as part of this update.

The future conditions land use map was developed by overlaying the Official Plans from six (6) municipalities (Brampton, Caledon, King, Mississauga, Richmond Hill, and Vaughan) on the existing land use and updating areas which are planned for development. The following steps were used to digitize the future land use.

1. The official plan schedules were collected from the six (6) municipalities, through data requests and web searches. A list of the official plan schedules and Secondary plans used to update the land use mapping is included in **Appendix 5**;
2. The official plan maps were georeferenced using roads, and buildings, as reference points;
3. The existing land use in these areas was deleted and replaced with new land use polygons, which were digitized by following the Official Plan designations. The areas updated per Municipal official plans are shown in yellow on **Figure 5.1**.



Legend

- Boundary OP
- Boundary Outside of OP
- Subcatchment
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
- Natural
- Open Space
- Park
- Recreational
- Residential High
- Residential LowMed
- Road (ROW)
- Rural Residential
- Transportation
- Water

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Humber River Hydrology

Figure 5.1 Land Use Update

Drawn By: M.Y. Date: Dec. 20, 2017

0 1.25 2.5 5 Kilometers

4. The land use outside of the areas identified for development in the official plans was compared to a 2016 air photo and updated to account for new development which has occurred outside of the official plans. These updates are outlined in orange on **Figure 5.1**;
5. All new land use polygons were then assigned a standard TRCA land use code as shown in **Tables 2.1 and 2.2**; and,
6. The map was then reviewed to find any gaps, or overlays which were fixed as they were identified.
7. Only catchments which are identified as having a change in land use (catchments which include land within the orange and yellow boundaries) were updated in the Future conditions model. These catchments are identified in red on **Figure 5.2.** The future conditions land use is shown on **Figure 5.3**.

It should be noted that areas which are not included in the orange and yellow boundaries were not updated as part of this study. These areas are not included in any official plan and have not been recently developed. As the purpose of this update is to quantify the increases in flow due to proposed development no changes were made to areas outside of the development boundaries which may impact the model results.

Legend

- Unchanged Catchments
- Modified Catchments

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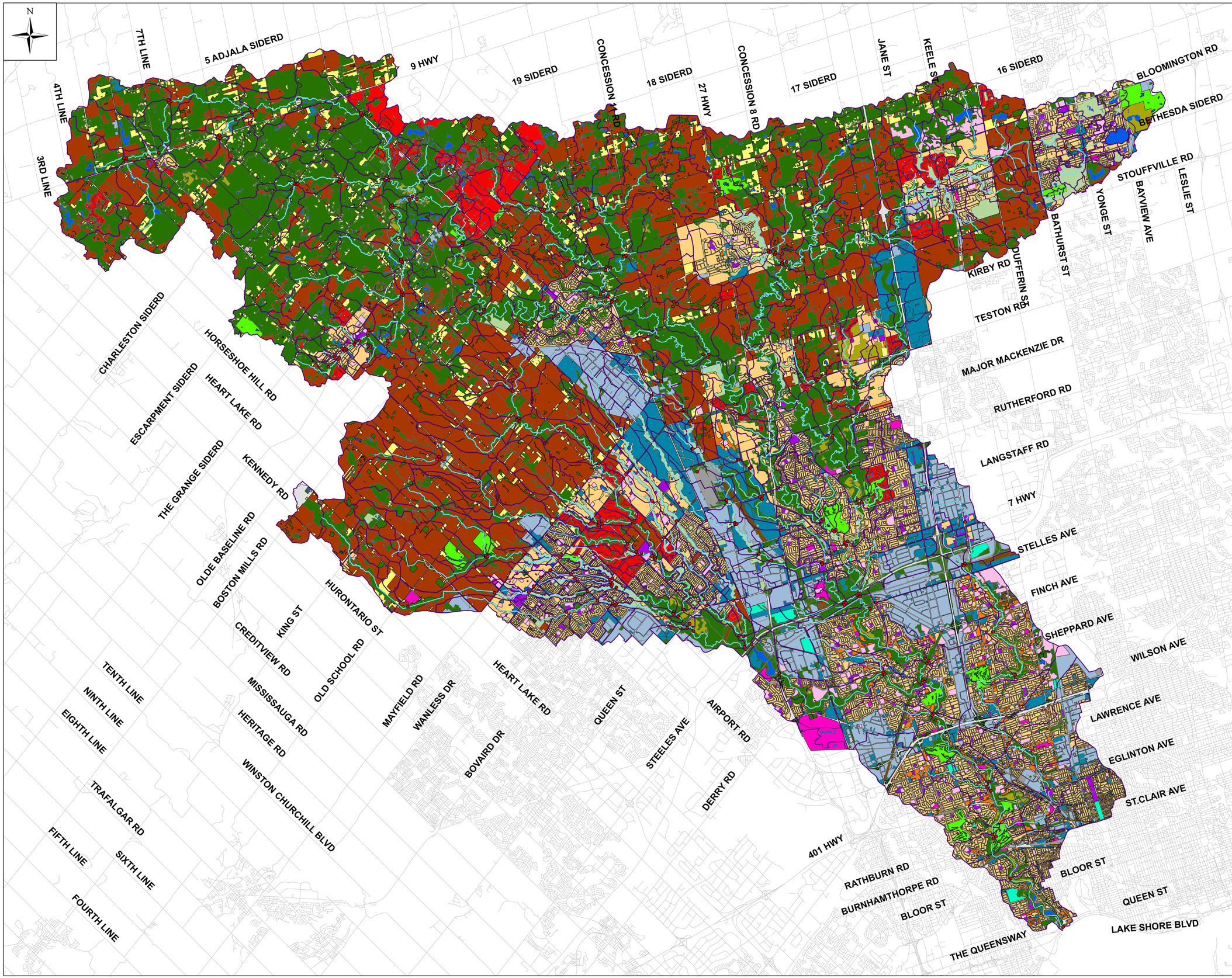
Figure 5.2 Modified Catchments

Drawn By: M.Y. Date: Dec. 20, 2017

0 1.25 2.5 5 Kilometers



Legend

- Flow Node
- General River
- Subcatchment
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
- Natural
- Open Space
- Park
- Recreational
- Residential High
- Residential LowMed
- Road (ROW)
- Rural Residential
- Transportation
- Water

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Figure 5.3 Future Land Use Scenario

Drawn By: M.Y. Date: Dec. 20, 2017

0 1.25 2.5 5 Kilometers

5.2 Catchment Adjustments

A total of 479 catchments were affected by the land use changes for the future conditions. As with the existing conditions model, each land use type was assigned a TIMP and XIMP value using the values in **Table 2.2**. The TIMP and XIMP value of each catchments was then calculated using the area-weighted approach. The TIMP and XIMP values for each catchment are provided in Appendix 5.

The methodology used to model these catchments were updated as follows:

- A catchment which is modeled as a NASHYD in the existing model with a higher impervious value under future conditions may remain a NASHYD if the future development results in an impervious value less than 20%;
- A catchment which is modeled as a NASHYD in the existing model with a higher impervious value under future conditions may be converted to a STANDHYD if the future development results in an impervious value greater than 20%;
- A catchment which is modeled as a NASHYD in the existing model with a higher impervious value under future conditions may be split into a NASHYD and STANDHYD if the future development is concentrated in one area of the catchment.
- A catchment which is modeled as a STANDHYD in the existing model with a higher impervious value under future conditions will continue to be modeled as a STANDHYD.

For each of these conditions certain model parameters will require adjusting, which other parameters may remain the same. In general when the size and shape of the catchments remains the same, parameters related to a catchments geometry, such as area, flow path length, slope, time to peak, do not change. In cases where there are only minor changes to the development intensity in a catchment, parameters related to land use and cover, such as CN values and percent impervious values were updated to reflect the change in development. In cases where catchments experience significant increases in development density the result may be a change in the command used to model a catchment or even dividing the catchment into 2 or more catchments, these cases result in updates to most of the catchment parameters as both land use and catchment geometry are changing. Table 3.1 summarises the process used to determine which situations applied to each catchment with a change in land use and which parameters were updated in each situation.

Table 5-2 – Catchment Updates for Future Condition

Category	Command Type in Existing Model	Future Imperviousness > 25%?	Development concentrated in one area?	Updates	Number of Catchments
1	NASHYD	No	No	Update CN*	164
2	NASHYD	Yes	No	Convert to STANDHYD and Update CN*, TIMP, XIMP, SLPP and SLPI	74
3	NASHYD	Yes	Yes	Split to NASHYD (Update CN* and Tp) and STANDHY (Update CN*, TIMP, XIMP, SLPP and SLPI)	22
4	STANDHYD	Yes	No	Update TIMP and XIMP	219
Total					479

5.2.1 Category 1 – Maintain NASHYD and Update CN*

Catchments in this category were modelled as NASHYD in existing condition and have future imperviousness close to 20%. Some of the catchments have an imperviousness larger than 20%, but the changes are deemed to be minimal, and development is not concentrated in one area of the catchment. These are areas which may have an increase in lower density developments, such as parks, estate-residential or recreational. In other instances these catchments include a small piece of an adjacent development, such as a few lots of a residential development or a small portion of a commercial or industrial lot. The main criteria for this category of catchment is that development in these areas does not change significantly from the existing conditions, so changing the methodology used to model these catchments from that used in the calibrated existing conditions model will result in an overly conservative estimate of future flows. The imperviousness of these catchments under existing and future condition is compared in **Appendix 6**.

The CN* values were updated for catchments in this category. The curve number for the average antecedent moisture condition (CNII) was first calculated using the future land use, soil, and the CN lookup table given in **Table 2.1**. The area-weighted approach was used. And then CNII was converted to CN*.

5.2.2 Category 2 – Convert to STANDHYD

Catchments in this category were modelled as NASHYD under existing condition, have a future imperviousness larger than 20% and are more urban in their development layout. These catchments were converted to STANDHYD.

For consistency with the 2015 model, CN* for pervious areas are assigned assuming that pervious surfaces are modeled as lawns, as shown in **Table 2.1**.

The TIMP and XIMP values are calculated using the future land use and the values given in **Table 2.2**. Theses parameters are calculated as an area-weighted value for the whole catchment.

The slope for pervious and impervious areas (SLPP and SLPI) are assigned using the values from the original PCSWMM model created for the *Hydrologic Impacts of Future Development on Flood Flows and Mitigation Requirements study* (AMEC, 2012).

5.2.3 Category 3 – Split to NASHYDs and STANDHYDs

Catchments in this category were modelled as NASHYD in existing condition and have future imperviousness larger than 20%. These areas have development which is concentrated in one area of the catchment, while the rest of the catchment remains undeveloped, or with low density in the rural development. As modeling these catchments using the STANDHYD command results in overly conservative peak flows, these catchments were divided into rural/undeveloped areas (modeled as NASHYDs) and more densely developed areas (modeled and STANDHYDs). The details of these catchment splits are included in **Appendix 7**.

For the new NASHYDs, IA and N from previous NASHYD were used. CN* was calculated using the same approach as Category 1 catchments (**Section 3.2.1**). The time-to-peak (TP) was calculated using Upland Method. The longest flow path length was measured based on the water course layer shown on **Figure 5.4**. In order to remain consistent with the methodology used in the existing conditions model, groundcover was assumed to be equivalent to that of minimum tillage cultivation, contour or strip-cropped, and woodlands (Manning's n = 0.101, Velocity equation ft/s = $5.032(\text{slope})^{0.5}$). Once the velocity was determined, the time-of-concentration (TC) was calculated by dividing the longest flow path length, by the average flow velocity. Next, the time-of-concentration was multiplied by two-thirds, to determine time-to-peak for each rural catchment, as per the VO model documentation. The detailed Tp calculations for each of these catchments are provided in **Appendix 8**.

The model parameters for the new STANDHYDs were calculated using the same approach as for Category 2 catchments (**Section 3.2.2**).

5.2.4 Category 4 – Maintain STANDHYD and update TIMP and XIMP

Catchments in this category were modelled as STANDHYDs under existing conditions and are more densely developed under future conditions. The same area-weighted approach was used for calculating TIMP and XIMP values based on future land use, as was used for Category 2 catchments (**Section 3.2.2**). The CN* values were left unchanged as the CN* values for all STANDHYDs, under both existing and future land use scenarios, are calculated assuming that all pervious surfaces are modeled as lawns.

Legend

- Flow Node
- General River
- Subcatchment

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Figure 5.4 Catchments for Future Scenario

Drawn By: M.Y. Date: Dec. 20, 2017

0 1.25 2.5 5 Kilometers

5.3 Catchment 45.03 updates

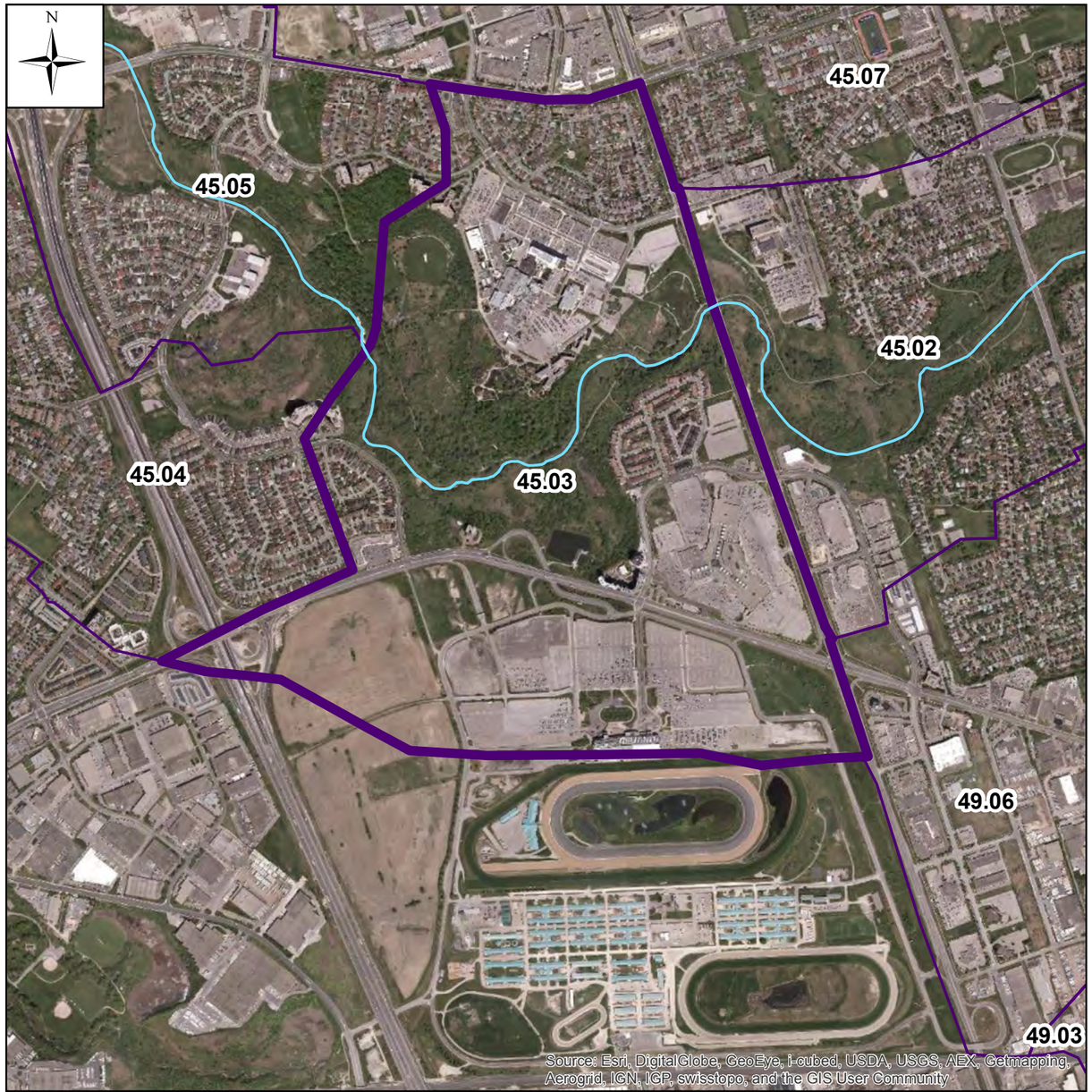
Through the development of the Woodbine Race Track (Burnside, May 2011) discrepancies have been identified between the Humber River Watershed boundary, and the Mimico Creek Watershed boundary. As the drainage areas defined by Burnside in their analysis were based on a more detailed analysis than the Humber River Hydrology Update, TRCA staff requested that the Humber boundary be updated to be consistent with Burnsides drainage areas. TRCA staff provided a copy of Figure 13 - Existing Drainage Conditions, Woodbine Development Group, (Burnside, May 17, 2011); which was georeferenced and digitised to update the Humber boundary. The Humber boundary was extended to the south to include part of the Woodbine Race Track and only impacts catchment 45.03 which increases in size by 98ha, from 275ha to 373ha. A copy of Figure 13 and a figure showing the change in Catchment 45.03 are provided in **Appendix 9**. The new catchment layout for future conditions is shown on **Figures 5.4 and 5.5**.

5.4 Future Model Parameters

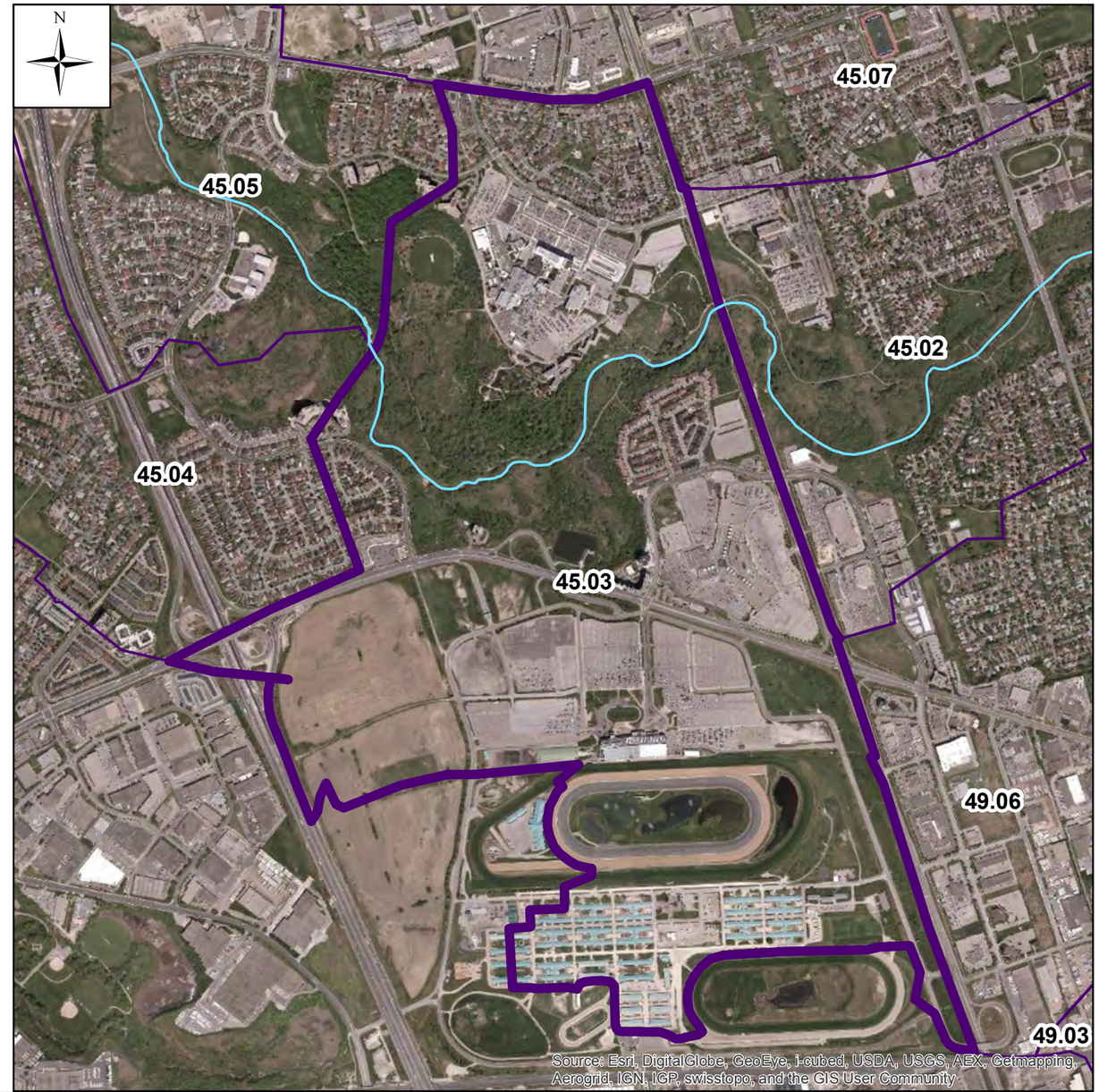
For the future conditions model the catchments which do not have any new development were modeled with calibration parameters, as established through the existing conditions model developed through the 2015 update.

For the 479 catchments with new development calibration factors were applied to CN values, Slopes, channels (length and roughness), Time to Peak, N values and hummocky factors. The calibration factors for TIMP and XIMP were not applied as the intensity of future development is not known at this time, so the assumptions for these values may already be conservative. Calibration factors applied to the future conditions model can be found in **Table 3-2**.

Catchment before update



Catchment after update



Legend

- General River
- Catchments

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Drawn By: M.Y. Date: Dec. 20, 2017

Fig 5.5 Boundary Update Catchment 45.03

0 225 450 900 Meters

Table 5-3 – Calibration Parameters

Calibration Locations	Calibration Type	NHYD ID	Nash CN Change Factor	Nash Tp Change Factor	Nash N Value (Default 3)
Humber River at Palgrave (02HC047)	Simple	3698	1.15	1.25	1.5
Cold Creek near Bolton (02HC023)	Simple	1850	1.1	1	1.75
Elgin Mills (02HC025)	Compound	2396	1.15	1	3
East Humber River at Pine Grove (02HC009)	Simple	2517	0.8	2	1.5
Plunkett Creek (HY053)	Simple	7256	1	1	1.5
West Humber at Highway 7 (02HC031)	Simple	720	1.1	0.9	2.5
Humber River at Weston Rd. (02HC003)	Compound	1631	1.15	1	3
Humber River at Palgrave (02HC047)	Simple	719	1	1	3

Calibration Locations	Stand TIMP/XIMP Factor	Stand SLPP/SLPI Factor	Stand Pervious CN Changed Factor	Channel Roughness	Channel Length Changed Factor	Hummocky Factor
Humber River at Palgrave (02HC047)	-	0.75	1.15	0.08	-	1.5
Cold Creek near Bolton (02HC023)	-	1	1.1	0.08	1.2	1.5
Elgin Mills (02HC025)	-	1	1.15	0.04	-	1.5
East Humber River at Pine Grove (02HC009)	-	1	0.8	0.045	-	1.5
Plunkett Creek (HY053)	-	1	1	0.06	-	-
West Humber at Highway 7 (02HC031)	-	1	1.1	0.045	-	-
Humber River at Weston Rd. (02HC003)	-	1.5	1.15	0.035	-	-
Black Creek at Scarlett Rd. (02HC027)	-	1	1	0.045	-	-

Careful consideration was given in making this decision, and alternative methods for modeling future conditions were considered. Initial model results indicated that applying all the calibration factors to the future conditions model produced overly conservative results. Given that the development density identified in the Official Plans represents potential development areas and generalized land use concepts they do not necessarily reflect the ultimate development condition of the area, as such application of the calibration factors at this time was deemed not necessary.

Conversely, not applying any of the calibration factors that were used for the existing conditions model results in the reduction of peak flows generated by many catchments with only minor changes to their impervious cover.

In order to produce a reasonable estimate of Regional Storm flows it was decided to apply all model calibration factors except those relating to TIMP/XIMP. This provides a future conditions model with isolates the impact of the increase in pervious area and the change in impervious cover from more natural cover to lawns, while maintaining consistency with the methodology for the existing conditions model. The result is that for individual catchments with an increase in development density the peak flows increase. However, when routing these hydrographs and adding them to upstream/downstream channels changes to the hydrographs (increase in peak flows, shorter time to peak) can result in a decrease in runoff at certain points in the watershed.

The final set of model parameters for the future conditions scenario are provided in **Appendix 8**, with the updated catchments being highlighted in the tables.

6.0 DESIGN STORM (350 – 500 AND REGIONAL STORM SIMULATION

The Future Conditions Humber hydrology model was used to generate peak flows for the 350-year and 500-year design storms and the Regional storm under existing and future land use scenarios at about 272 locations in the watershed. These flows will be used by others to delineate flood lines and gage the potential impact of development on the watershed. As only large (> 100 years) storm events were included in this update, no SWM facilities have been included in this model.

The 350-year and 500-year design storms were modeled assuming an antecedent moisture condition of 2 (AMC II). For regional storm (Hurricane Hazel), the saturated antecedent moisture condition (AMCIII) was used. The CN* values of all catchments were converted to CNIII value before the regional storm simulation.

The calculated peak flows at the 272 locations are compared in **Appendix 9** for 350-year and 500-year design storm and in **Appendix 10** for regional storm.

It should be noted that in some areas the Peak flows for the future conditions model are smaller than those generated by the existing conditions model. This is due, for the most part, to changes in the timing of peak flows from catchments, which were converted to STANDHYDs under future conditions. This routing effect is often seen when runoff from a developed area enters a watercourse, before the runoff from less developed upstream areas, resulting in a smaller cumulative peak flow than when all areas were undeveloped.

Comments have been in the results tables for all areas, where there is a reduction in peak flow.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The Humber River Hydrology Update provides insight into the impacts of future development on the Humber River Watershed. This modeling update identified the potential impacts of the full development of the Official Plans for plans for Brampton, Caledon, King, Mississauga, Richmond Hill and Vaughan on peak flows within the watershed. The peak flows generated by this update will be used by others to update the hydraulic models within the watershed and generate updated flood lines.

This model provides a high-level analysis of the impacts of future development and should be updated with more detailed development plans as they become available. We recommend that either TRCA staff, or it's agent, maintain control of the model and integrate updates completed as part of their development approvals. This practice ensures that TRCA staff will have a record of all the updates made to the model and reduce the chances of external agents inadvertently modifying parts of the model not included in the proposed study area. We recommend that this upkeep should be completed as various stages of development are approved, such as Secondary Plans, Block Plans and MESPs. These small updates completed as development is approved will help keep the model current and provide insight into the impact of each development on the overall watershed. As larger development areas are fully built out we recommend that the existing conditions model be updated and recalibrated in order improve the accuracy of the model. This need not be a re-calibration of the full model, as Humber Watershed has many branches only the portion of the watershed impacted by a development would need to be re-calibrated. As these re-calibrations are occurring we recommend that the existing land use in each branch be reviewed and updated in order to capture any new development or intensification which may occur outside of the official plan boundaries. At a minimum, we recommend that the model be validated every 5 years, if the model validation shows the model is no longer matching monitored results the existing land use should be updated and the model re-calibrated.

As this model update was completed to provide regional flows there are not SWM controls included in the model. We recommend that the model be further updated to include SWM controls currently required in the Humber River in order to analyze the impact of development on smaller storm events, such as the 2 through 100-year events.

Appendix I

Initial Model Parameters
(Existing Conditions)

Initial Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *
1	01.01	5	99.93	0	3	1.95	10	51
3	01.03	5	73.58	0	3	1.06	22.7	52
4	01.04	5	275.7	0	3	2.23	10	66
5	01.05	5	423.49	0	3	2.89	10	51
6	01.06	5	700.54	0	3	4.44	10	69
7	01.07	5	464.5	0	3	3.30	10	67
8	01.08	5	285.26	0	3	2.44	10	68
9	02.01	5	481.2	0	3	2.92	10	51
10	02.02	5	141.81	0	3	1.57	10	51
11	02.03	5	416.72	0	3	2.81	10	51
12	02.04	5	186.97	0	3	1.38	10	51
13	02.05	5	75.62	0	3	1.46	10	51
14	02.06	5	396.73	0	3	2.43	10	51
15	03.01	5	15.38	0	3	0.39	10	51
16	03.02	5	105.58	0	3	1.14	15.2	51
17	03.03	5	173.38	0	3	1.54	23.8	48
18	03.04	5	296.86	0	3	1.58	10	51
19	03.05	5	439.6	0	3	3.40	28.9	51
20	04.01	5	478.77	0	3	2.35	28.9	62
21	04.02	5	398.59	0	3	2.13	28.9	52
22	04.03	5	186.08	0	3	1.90	18.4	60
23	04.04	5	588.67	0	3	3.18	28.9	51
24	04.05	5	291.29	0	3	1.83	28.9	51
25	04.06	5	480.45	0	3	2.89	28.9	58
26	04.07	5	302.36	0	3	2.06	18.2	51
27	04.08	5	283.63	0	3	2.37	28.9	51
28	05.01	5	254.27	0	3	1.82	14.8	57
29	05.02	5	136.15	0	3	1.97	28.9	52
30	05.03	5	438.15	0	3	3.29	28.9	57
31	05.04	5	285.81	0	3	2.07	24.5	57
32	05.05	5	50.2	0	3	0.88	17.5	53
33	05.06	5	581.39	0	3	2.90	28.4	54
34	05.07	5	270.38	0	3	2.12	10	51
35	05.08	5	208.58	0	3	1.48	20.6	56
36	05.09	5	487.07	0	3	3.34	28.9	57
37	06.01	5	28.945	0	3	0.65	28.9	66
38	06.02	5	81.21	0	3	1.36	10	58
39	06.03	5	130.518	0	3	1.09	10	85
40	06.04	5	71.779	0	3	0.74	10	82
41	06.05	5	13.32	0	3	0.50	10	86
45	06.09	5	130.79	0	3	1.43	8.9	61
46	06.10	5	157.89	0	3	1.88	8.6	57
51	06.15	5	9.24	0	3	0.39	9.9	66
52	06.16	5	74.7	0	3	0.87	5	56
53	06.17	5	87.63	0	3	1.24	10	64
55	06.19	5	125.55	0	3	1.24	10	60
56	06.20	5	14.368	0	3	0.53	10	73
57	06.21	5	337.07	0	3	2.45	28.9	56
58	07.01	5	72.54	0	3	1.17	28.9	53
59	07.02	5	395.37	0	3	3.05	28.9	56
60	07.03	5	35.34	0	3	0.90	10	52
62	07.05	5	192.25	0	3	1.72	28.9	62
63	07.06	5	356.24	0	3	2.28	28.9	57
64	07.07	5	225	0	3	2.28	28.9	59
65	07.08	5	84.23	0	3	1.26	10	75
66	07.09	5	472.25	0	3	3.00	28.9	59
67	07.10	5	327.27	0	3	1.61	20.4	62
68	07.11	5	398.57	0	3	2.05	28.9	56
69	07.12	5	171.05	0	3	1.80	10	68
70	07.13	5	133.18	0	3	1.55	28.9	68
71	07.14	5	97.34	0	3	1.30	10	63
72	07.15	5	202.662	0	3	1.71	15.4	68
73	08.01	5	346.79	0	3	2.87	28.9	76
74	08.02	5	253.74	0	3	1.61	10	75
75	08.03	5	345.35	0	3	2.21	28.9	64
76	08.04	5	87.33	0	3	1.12	28.9	60
77	08.05	5	160.87	0	3	1.39	28.9	64
78	08.06	5	239.8	0	3	2.10	28.9	78
81	08.09	5	259.2	0	3	1.53	21.8	71
82	08.10	5	172.02	0	3	1.97	28.9	54
83	08.11	5	80.9	0	3	1.48	13.1	78
84	08.12	5	137.06	0	3	0.96	26.7	72
85	08.13	5	360.48	0	3	2.01	28.9	62
93	09.08	5	283.46	0	3	2.69	10	80

Initial Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *
94	09.09	5	161.42	0	3	2.38	10	76
95	09.10	5	327.28	0	3	2.46	10	78
96	09.11	5	146.76	0	3	1.75	10	77
97	09.12	5	162.52	0	3	1.28	10	72
98	09.13	5	398.53	0	3	2.00	28.9	72
99	10.01	5	17.9	0	3	0.69	10	80
100	10.02	5	51.68	0	3	0.97	10	72
102	10.04	5	150.31	0	3	2.10	10	81
103	10.05	5	119.72	0	3	1.51	10	77
105	10.07	5	124.35	0	3	1.43	10	80
106	10.08	5	169.08	0	3	1.85	10	78
107	10.09	5	83.84	0	3	1.79	10	72
108	10.10	5	57.05	0	3	0.89	10	80
109	10.11	5	85.27	0	3	1.31	10	80
110	10.12	5	89.1	0	3	1.20	10	80
111	10.13	5	116.21	0	3	1.26	10	81
112	10.14	5	175.6	0	3	1.59	10	76
113	10.15	5	267.62	0	3	2.08	28.9	75
114	10.16	5	239.55	0	3	1.40	28.9	81
115	10.17	5	200.9	0	3	1.77	24.9	75
116	10.18	5	66.56	0	3	1.53	28.9	77
117	10.19	5	127.5	0	3	1.41	28.9	76
118	10.20	5	145.99	0	3	1.23	28.9	68
119	10.21	5	414.29	0	3	1.73	28.9	75
120	10.22	5	285.95	0	3	2.21	28.9	67
121	10.23	5	422.02	0	3	2.60	28.9	73
122	10.24	5	250.47	0	3	2.78	10	81
123	10.25	5	324.82	0	3	2.25	10	80
124	10.26	5	189.66	0	3	1.93	10	77
125	10.27	5	194.01	0	3	1.74	10	76
126	10.28	5	78.78	0	3	1.12	20.1	80
127	10.29	5	51.52	0	3	0.98	12.6	78
128	10.30	5	344.73	0	3	2.80	27.6	80
129	10.31	5	268.47	0	3	2.31	28.9	78
130	10.32	5	303.38	0	3	3.03	28.9	81
131	10.33	5	409.92	0	3	3.55	28.9	80
132	10.34	5	375.83	0	3	2.15	28.9	80
133	11.01	5	283.72	0	3	4.19	10	64
134	11.02	5	81.39	0	3	1.29	10	82
136	11.04	5	153.02	0	3	1.83	10	71
137	11.05	5	214.33	0	3	1.89	10	78
138	12.01	5	352.43	0	3	3.32	10	78
139	12.02	5	191.69	0	3	1.73	10	81
140	12.03	5	317.88	0	3	1.84	10	81
142	13.02	5	81.1	0	3	1.02	10	66
145	13.05	5	18.63	0	3	0.61	10	64
153	13.13	5	175.92	0	3	2.76	10	72
155	13.15	5	33.66	0	3	0.99	10	87
156	13.16	5	51.02	0	3	1.00	10	71
160	13.20	5	30.56	0	3	0.60	10	78
161	13.21	5	24.34	0	3	0.64	10	68
166	13.26	5	91.38	0	3	1.73	10	76
169	13.29	5	177.99	0	3	3.23	10	66
170	13.30	5	217.41	0	3	2.05	10	78
171	13.31	5	145.21	0	3	2.84	10	61
173	14.02	5	76.07	0	3	1.06	10	78
174	14.03	5	8.89	0	3	0.34	10	73
175	14.04	5	90.32	0	3	1.52	10	82
176	14.05	5	238.01	0	3	1.52	10	81
177	14.06	5	134.83	0	3	1.84	10	77
181	14.10	5	60.95	0	3	0.82	10	72
182	14.11	5	30.56	0	3	0.90	10	72
183	14.12	5	43.77	0	3	0.81	10	67
184	14.13	5	47.6	0	3	1.17	10	69
185	14.14	5	30.8	0	3	0.78	10	73
186	14.15	5	13.67	0	3	0.61	14.5	81
187	14.16	5	30.51	0	3	0.81	10	72
189	14.18	5	10.73	0	3	0.36	28.9	78
198	14.27	5	11.88	0	3	0.44	6.6	77
199	14.28	5	4.35	0	3	0.44	28.9	64
204	14.33	5	90	0	3	1.28	17.7	60
207	14.36	5	23.76	0	3	1.07	28.9	67
208	14.37	5	20.56	0	3	1.26	28.9	71
214	14.43	5	25.97	0	3	0.99	28.9	67

Initial Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *
218	14.47	5	17.99	0	3	0.51	10	61
226	14.55	5	290.21	0	3	2.05	10	67
227	15.01	5	67.77	0	3	0.99	10	80
228	15.02	5	64.49	0	3	0.95	10	78
229	15.03	5	42.37	0	3	0.78	26.1	75
230	15.04	5	154.91	0	3	1.86	10	80
231	15.05	5	149	0	3	1.14	14.2	83
232	15.06	5	70.33	0	3	1.01	21.8	57
236	15.10	5	98.48	0	3	0.88	14.9	63
237	15.11	5	160.46	0	3	1.26	25.7	58
239	15.13	5	311.06	0	3	2.72	28.9	75
240	15.14	5	151.76	0	3	1.35	28.9	58
242	15.16	5	91.28	0	3	1.80	10	77
247	15.21	5	407.16	0	3	3.13	28.9	63
248	15.22	5	89.27	0	3	1.22	10	62
249	15.23	5	84.39	0	3	1.26	28.9	77
250	15.24	5	31.57	0	3	0.61	5.5	73
251	15.25	5	21.18	0	3	0.84	28.9	48
252	15.26	5	151.894	0	3	2.74	10	80
254	15.28	5	119.04	0	3	1.39	28.9	73
255	15.29	5	57.13	0	3	0.90	28.9	62
256	15.30	5	114.69	0	3	1.22	28.9	73
257	15.31	5	146.51	0	3	1.17	28.9	62
258	15.32	5	46	0	3	1.58	28.9	64
259	16.01	5	137.69	0	3	1.99	10	77
260	16.02	5	173.6	0	3	1.62	10	76
261	16.03	5	139.51	0	3	1.39	10	80
262	16.04	5	87.27	0	3	1.39	10	75
263	16.05	5	134.05	0	3	1.36	10	77
264	16.06	5	167.3	0	3	2.03	10	78
265	16.07	5	58.62	0	3	0.93	10	78
266	16.08	5	303.85	0	3	2.71	10	78
267	16.09	5	137.77	0	3	1.36	14.4	78
268	16.10	5	311.05	0	3	2.30	28.9	75
269	16.11	5	173.61	0	3	1.37	22.1	80
270	16.12	5	128.59	0	3	1.46	17.9	71
271	16.13	5	126.91	0	3	1.10	28.9	66
272	16.14	5	91.34	0	3	1.04	10	78
273	16.15	5	59.08	0	3	0.78	10	80
274	16.16	5	100.66	0	3	1.41	10	80
275	16.17	5	21.53	0	3	0.45	10	77
277	16.19	5	128.71	0	3	1.45	10	76
278	16.20	5	252.13	0	3	2.57	10	63
282	16.24	5	43	0	3	0.93	28.9	64
283	17.01	5	34.58	0	3	0.62	10	75
284	17.02	5	45.97	0	3	1.03	10	80
288	17.06	5	480.44	0	3	3.20	28.9	80
289	17.07	5	365.24	0	3	2.98	28.9	80
290	17.08	5	111.48	0	3	1.17	10	76
291	17.09	5	138	0	3	1.51	28.9	78
292	17.10	5	262.27	0	3	0.76	10.2	78
293	17.11	5	298.45	0	3	2.05	28.9	78
294	17.12	5	410.21	0	3	2.76	15.1	67
295	17.13	5	320.24	0	3	4.33	28.9	63
296	18.01	5	95.92	0	3	1.15	10	73
298	18.03	5	178.76	0	3	2.56	10	78
299	18.04	5	136.19	0	3	2.31	10	76
301	18.06	5	74.77	0	3	1.11	10	72
302	18.07	5	153.74	0	3	2.24	10	80
303	18.08	5	244	0	3	2.54	10	82
304	18.09	5	112.25	0	3	2.15	10	73
305	18.10	5	112.36	0	3	1.77	10	80
306	18.11	5	226.56	0	3	2.19	10	77
307	18.12	5	228.18	0	3	2.24	10	78
308	19.01	5	200.88	0	3	2.22	10	71
309	19.02	5	134.95	0	3	1.86	10	71
310	19.03	5	125.54	0	3	1.89	10	80
312	19.05	5	37.68	0	3	0.94	10	80
313	19.06	5	98.19	0	3	2.35	10	80
314	19.07	5	133.93	0	3	2.04	10	82
315	19.08	5	167.71	0	3	3.00	10	81
316	19.09	5	211.25	0	3	2.95	10	81
317	19.10	5	115.17	0	3	1.44	10	83
321	19.14	5	132.1	0	3	1.35	10	80

Initial Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *
322	19.15	5	125.61	0	3	1.54	10	80
323	19.16	5	122.71	0	3	1.65	10	81
324	19.17	5	98.58	0	3	1.44	10	80
325	19.18	5	246.11	0	3	2.41	10	80
326	19.19	5	72.43	0	3	0.92	10	80
327	19.20	5	258	0	3	2.11	10	78
328	20.01	5	139.12	0	3	1.98	10	75
329	20.02	5	219.14	0	3	3.05	10	81
330	20.03	5	23.23	0	3	0.82	10	62
331	20.04	5	159.69	0	3	1.85	10	73
332	20.05	5	191.39	0	3	2.30	10	80
333	20.06	5	198.86	0	3	2.09	10	80
334	20.07	5	217.96	0	3	2.36	10	80
339	21.05	5	153.35	0	3	1.72	10	62
342	21.08	5	185.48	0	3	2.97	10	73
343	21.09	5	84.95	0	3	1.37	10	69
346	21.12	5	61.82	0	3	1.16	10	76
7278	22.01	5	88.17	0	3	1.71	10	83
7351	22.02	5	56.36	0	3	1.37	10	80
7356	22.03	5	37.99	0	3	0.84	10	87
7365	22.04	5	72.49	0	3	1.62	10	89
7361	22.05	5	148.89	0	3	3.12	10	72
7364	22.06	5	125.59	0	3	2.45	10	76
7283	22.07	5	78.78	0	3	1.98	10	87
7287	22.08	5	38.86	0	3	0.95	10	83
7292	22.09	5	9.03	0	3	0.41	10	77
7348	22.10	5	36.39	0	3	1.44	10	78
7296	22.11	5	32.26	0	3	1.01	10	87
7300	22.12	5	53.98	0	3	1.45	10	87
7303	22.13	5	87.75	0	3	2.16	10	87
7307	22.14	5	46.46	0	3	1.55	10	80
7308	22.15	5	45.11	0	3	1.60	10	87
7311	22.16	5	70.73	0	3	1.75	10	73
7313	22.17	5	22.43	0	3	0.70	10	81
7347	22.18	5	127.24	0	3	2.59	10	71
7318	22.19	5	55.21	0	3	1.51	10	89
7346	22.21	5	95.48	0	3	1.37	10	66
7337	22.26	5	68.13	0	3	1.69	10	80
7345	22.29	5	111.62	0	3	2.59	10	75
7371	23.06	5	22.37	0	3	0.48	10	82
7367	23.07	5	22.7	0	3	0.81	10	81
7368	23.09	5	56.19	0	3	2.24	10	86
7366	23.10	5	135.28	0	3	2.01	10	82
7427	24.04	5	68.57	0	3	1.04	10	86
7404	24.06	5	187.77	0	3	2.98	10	86
7409	24.08	5	143.85	0	3	2.48	10	86
7414	24.09	5	44.87	0	3	0.79	10	86
7417	24.10	5	90.03	0	3	1.52	10	89
7446	25.05	5	31.37	0	3	0.84	10	82
7438	25.11	5	25.11	0	3	0.65	10	78
7439	25.13	5	117.95	0	3	2.51	10	90
7437	25.14	5	31.24	0	3	0.82	10	85
7436	25.15	5	119.96	0	3	2.04	10	86
7482	26.01	5	13.79	0	3	0.50	10	82
7461	26.02	5	65.48	0	3	1.61	10	80
7457	26.05	5	6.84	0	3	0.33	10	69
7464	26.09	5	39.84	0	3	1.22	10	82
438	27.05	5	43.54	0	3	1.38	10	78
449	28.01	5	223.28	0	3	3.22	10	78
450	28.02	5	342.48	0	3	2.02	10	73
451	28.03	5	323.01	0	3	2.30	10	75
452	29.01	5	19.25	0	3	1.10	10	72
454	29.03	5	26.03	0	3	1.44	10	71
457	29.06	5	15.54	0	3	0.78	10	77
460	29.09	5	15.74	0	3	0.61	10	73
461	29.10	5	25.28	0	3	0.94	10	76
462	29.11	5	19.14	0	3	0.84	10	80
463	29.12	5	16.93	0	3	0.80	10	80
464	29.13	5	41.1	0	3	1.58	10	86
466	29.15	5	114.47	0	3	1.84	10	80
467	29.16	5	244.92	0	3	3.42	10	75
468	30.01	5	20.42	0	3	0.76	10	71
469	30.02	5	341.04	0	3	2.74	10	81
470	30.03	5	55.31	0	3	1.58	10	71

Initial Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *
471	30.04	5	352.36	0	3	3.39	10	81
472	30.05	5	112.75	0	3	1.76	10	80
473	30.06	5	146.61	0	3	2.68	10	78
474	30.07	5	76.84	0	3	2.18	10	78
475	30.08	5	28.62	0	3	0.54	10	80
476	30.09	5	168.42	0	3	2.59	10	76
477	30.10	5	123.27	0	3	1.81	10	82
478	31.01	5	280.69	0	3	2.94	10	78
479	31.02	5	258.77	0	3	4.42	10	75
480	31.03	5	316.89	0	3	2.26	10	78
481	31.04	5	138.58	0	3	2.18	10	76
482	32.01	5	11.92	0	3	1.04	10	75
485	32.04	5	12.12	0	3	1.23	10	76
487	32.06	5	27.22	0	3	1.43	10	73
491	32.10	5	32.42	0	3	1.18	10	68
494	32.13	5	7.11	0	3	0.56	10	69
496	32.15	5	16.91	0	3	1.16	10	76
499	32.18	5	52.08	0	3	1.33	10	82
500	32.19	5	42.74	0	3	1.36	10	83
501	32.20	5	25.17	0	3	0.71	10	80
502	32.21	5	17.61	0	3	0.58	10	73
503	32.22	5	54.85	0	3	1.42	10	83
504	32.23	5	19.72	0	3	0.76	10	73
505	32.24	5	48.82	0	3	1.28	10	80
506	32.25	5	18.03	0	3	0.67	10	72
507	32.26	5	110.45	0	3	2.00	10	81
508	32.27	5	104.03	0	3	2.00	10	78
509	32.28	5	141.15	0	3	1.69	10	83
511	33.01	5	77.7	0	3	2.96	10	75
512	33.02	5	107.01	0	3	3.18	10	75
518	33.08	5	16.84	0	3	0.54	10	73
520	33.10	5	23.15	0	3	0.98	10	80
524	33.14	5	99.55	0	3	1.49	10	87
525	33.15	5	58.49	0	3	1.49	10	86
526	33.16	5	84.72	0	3	1.41	10	86
527	34.01	5	69.88	0	3	2.09	10	81
528	34.02	5	243	0	3	4.40	10	80
529	34.03	5	101.81	0	3	1.66	10	85
530	34.04	5	99.56	0	3	2.59	10	82
531	34.05	5	221.44	0	3	3.29	10	83
532	34.06	5	109.68	0	3	2.64	10	80
533	34.07	5	148.96	0	3	2.60	10	78
534	34.08	5	362.89	0	3	4.06	10	77
535	34.09	5	368.77	0	3	3.66	10	73
536	35.01	5	87.09	0	3	1.91	10	83
542	35.07	5	7.14	0	3	0.92	10	78
544	35.09	5	28.06	0	3	0.76	10	75
546	35.11	5	47.52	0	3	0.91	10	83
548	35.13	5	214.45	0	3	4.17	10	81
549	35.14	5	32.02	0	3	0.86	10	82
554	36.04	5	33.85	0	3	1.16	10	75
555	36.05	5	80.53	0	3	1.32	10	80
557	36.07	5	228.9	0	3	3.00	10	82
558	36.08	5	79.28	0	3	1.20	10	83
559	36.09	5	87.86	0	3	1.67	10	81
560	36.10	5	339.61	0	3	2.64	10	82
561	36.11	5	146.57	0	3	2.32	10	81
562	37.01	5	306.23	0	3	2.51	10	81
563	37.02	5	26.85	0	3	0.86	10	82
564	37.03	5	145.14	0	3	2.42	10	77
565	37.04	5	141.48	0	3	2.22	10	78
566	37.05	5	365.26	0	3	3.32	10	73
567	37.06	5	105.51	0	3	1.62	10	80
568	37.07	5	235.25	0	3	4.16	10	80
569	37.08	5	284.55	0	3	4.86	10	81
570	37.09	5	299.42	0	3	3.46	10	78
571	37.10	5	125.88	0	3	1.81	10	85
572	37.11	5	188.91	0	3	2.12	10	86
573	37.12	5	192.77	0	3	4.08	10	85
575	38.02	5	135.85	0	3	2.14	10	85
577	38.04	5	142.38	0	3	2.21	10	83
578	38.05	5	47.43	0	3	0.91	10	83
579	38.06	5	173.74	0	3	2.34	10	82
580	38.07	5	293.26	0	3	5.06	10	78

Initial Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *
581	39.01	5	12.89	0	3	0.68	10	78
582	39.02	5	26.29	0	3	0.80	10	77
584	39.04	5	38.49	0	3	1.96	10	80
589	39.09	5	35.59	0	3	1.59	10	80
590	39.10	5	25.19	0	3	0.94	10	85
591	39.11	5	21.4	0	3	0.72	10	87
593	39.13	5	108.88	0	3	2.96	10	81
594	40.01	5	265.88	0	3	3.20	10	67
595	40.02	5	14.17	0	3	0.46	10	76
597	40.04	5	5.39	0	3	0.41	10	72
598	40.05	5	13.19	0	3	0.72	10	69
600	40.07	5	21.83	0	3	0.79	10	73
601	40.08	5	10.02	0	3	0.74	10	73
602	40.09	5	20.88	0	3	0.68	10	87
607	41.01	5	163.14	0	3	2.89	10	83
608	41.02	5	47.19	0	3	1.68	10	78
609	41.03	5	73.72	0	3	1.90	10	81
611	41.05	5	62.92	0	3	1.71	10	83
612	41.06	5	127.87	0	3	1.90	10	81
613	41.07	5	101.08	0	3	2.53	10	80
614	41.08	5	362.27	0	3	3.09	10	82
615	42.01	5	47.19	0	3	1.58	10	85
616	42.02	5	23.03	0	3	1.01	10	81
624	42.10	5	15.77	0	3	0.87	10	77
626	42.12	5	6.62	0	3	0.41	10	71
631	42.17	5	25.55	0	3	1.11	10	86
632	43.01	5	226.69	0	3	3.45	10	83
633	43.02	5	129.13	0	3	2.15	10	85
634	43.03	5	63.04	0	3	2.76	10	82
635	43.04	5	24.96	0	3	1.00	10	83
636	43.05	5	39.74	0	3	1.63	10	86
637	43.06	5	35.79	0	3	1.17	10	80
638	43.07	5	35.71	0	3	0.93	10	87
643	44.01	5	63.55	0	3	1.88	10	80
647	44.05	5	7.7	0	3	0.51	10	97
649	44.07	5	8.59	0	3	0.49	10	73
667	45.10	5	211.65	0	3	2.37	10	92
670	45.13	5	26.2	0	3	0.66	10	76
671	45.14	5	12.18	0	3	0.52	10	87
693	47.05	5	15.74	0	3	0.74	10	73

Initial Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA [mm]	CN AMC II *
2	01.02	5	52.70	0.451	0.393	3.61	40	0.25	0	2	3.61	592.73	0.013	0	5	53
42	06.06	5	34.47	0.588	0.517	2.45	40	0.25	0	2	2.45	479.37	0.013	0	5	82
43	06.07	5	6.60	0.779	0.776	2.33	40	0.25	0	2	2.33	209.75	0.013	0	5	60
44	06.08	5	40.39	0.373	0.321	3.50	40	0.25	0	2	3.50	518.91	0.013	0	5	63
47	06.11	5	32.86	0.439	0.394	4.31	40	0.25	0	2	4.31	468.03	0.013	0	5	71
48	06.12	5	89.40	0.380	0.343	3.67	40	0.25	0	2	3.67	772.01	0.013	0	5	60
49	06.13	5	36.07	0.527	0.466	4.40	40	0.25	0	2	4.40	490.37	0.013	0	5	71
50	06.14	5	8.60	0.352	0.313	3.14	40	0.25	0	2	3.14	239.44	0.013	0	5	62
54	06.18	5	6.61	0.658	0.592	2.07	40	0.25	0	2	2.07	209.92	0.013	0	5	63
61	07.04	5	94.71	0.204	0.179	4.39	40	0.25	0	2	4.39	794.61	0.013	0	5	62
79	08.07	5	31.82	0.385	0.282	4.79	40	0.25	0	2	4.79	460.58	0.013	0	5	63
80	08.08	5	25.20	0.542	0.440	4.66	40	0.25	0	2	4.66	409.88	0.013	0	5	86
86	09.01	5	144.60	0.499	0.454	3.38	40	0.25	0	2	3.38	981.84	0.013	0	5	77
87	09.02	5	59.73	0.518	0.463	4.00	40	0.25	0	2	4.00	631.03	0.013	0	5	77
88	09.03	5	154.34	0.551	0.502	2.81	40	0.25	0	2	2.81	1014.36	0.013	0	5	77
89	09.04	5	118.20	0.481	0.471	3.71	40	0.25	0	2	3.71	887.69	0.013	0	5	80
90	09.05	5	173.44	0.599	0.560	2.46	40	0.25	0	2	2.46	1075.30	0.013	0	5	80
91	09.06	5	11.41	0.665	0.594	3.25	40	0.25	0	2	3.25	275.80	0.013	0	5	80
92	09.07	5	85.84	0.841	0.764	3.88	40	0.25	0	2	3.88	756.48	0.013	0	5	78
101	10.03	5	113.28	0.597	0.538	3.48	40	0.25	0	2	3.48	869.02	0.013	0	5	80
104	10.06	5	24.32	0.608	0.541	3.33	40	0.25	0	2	3.33	402.66	0.013	0	5	82
135	11.03	5	88.21	0.660	0.605	2.52	40	0.25	0	2	2.52	766.86	0.013	0	5	81
141	13.01	5	54.06	0.384	0.346	2.74	40	0.25	0	2	2.74	600.33	0.013	0	5	73
143	13.03	5	95.71	0.342	0.304	3.65	40	0.25	0	2	3.65	798.79	0.013	0	5	60
144	13.04	5	29.33	0.662	0.602	4.01	40	0.25	0	2	4.01	442.19	0.013	0	5	85
146	13.06	5	43.68	0.428	0.379	4.57	40	0.25	0	2	4.57	539.63	0.013	0	5	67
147	13.07	5	191.12	0.633	0.574	3.25	40	0.25	0	2	3.25	1128.78	0.013	0	5	80
148	13.08	5	14.08	0.376	0.342	5.40	40	0.25	0	2	5.40	306.38	0.013	0	5	86
149	13.09	5	97.27	0.525	0.473	3.58	40	0.25	0	2	3.58	805.27	0.013	0	5	81
150	13.10	5	61.92	0.701	0.645	2.01	40	0.25	0	2	2.01	642.50	0.013	0	5	85
151	13.11	5	44.65	0.642	0.572	4.13	40	0.25	0	2	4.13	545.59	0.013	0	5	66
152	13.12	5	137.29	0.201	0.183	3.53	40	0.25	0	2	3.53	956.70	0.013	0	5	76
154	13.14	5	47.27	0.622	0.557	2.65	40	0.25	0	2	2.65	561.37	0.013	0	5	80
157	13.17	5	32.11	0.629	0.556	2.70	40	0.25	0	2	2.70	462.67	0.013	0	5	86
158	13.18	5	23.75	0.640	0.568	2.58	40	0.25	0	2	2.58	397.91	0.013	0	5	85
159	13.19	5	116.34	0.322	0.267	3.96	40	0.25	0	2	3.96	880.68	0.013	0	5	80
162	13.22	5	7.96	0.549	0.490	2.29	40	0.25	0	2	2.29	230.36	0.013	0	5	62
163	13.23	5	86.71	0.333	0.299	4.15	40	0.25	0	2	4.15	760.31	0.013	0	5	82
164	13.24	5	32.42	0.623	0.550	2.94	40	0.25	0	2	2.94	464.90	0.013	0	5	81
165	13.25	5	24.38	0.400	0.383	4.12	40	0.25	0	2	4.12	403.15	0.013	0	5	81
167	13.27	5	21.74	0.460	0.345	4.92	40	0.25	0	2	4.92	380.70	0.013	0	5	81
168	13.28	5	31.52	0.398	0.308	2.60	40	0.25	0	2	2.60	458.40	0.013	0	5	60
172	14.01	5	35.05	0.486	0.459	3.20	40	0.25	0	2	3.20	483.39	0.013	0	5	78
178	14.07	5	197.41	0.566	0.514	3.38	40	0.25	0	2	3.38	1147.20	0.013	0	5	78
179	14.08	5	14.77	0.604	0.542	1.65	40	0.25	0	2	1.65	313.79	0.013	0	5	60
180	14.09	5	110.33	0.614	0.553	2.92	40	0.25	0	2	2.92	857.63	0.013	0	5	66
188	14.17	5	141.26	0.513	0.471	3.28	40	0.25	0	2	3.28	970.43	0.013	0	5	78
190	14.19	5	139.63	0.208	0.193	4.85	40	0.25	0	2	4.85	964.81	0.013	0	5	80
191	14.20	5	26.33	0.544	0.480	2.45	40	0.25	0	2	2.45	418.97	0.013	0	5	77
192	14.21	5	12.11	0.555	0.486	3.42	40	0.25	0	2	3.42	284.14	0.013	0	5	76
193	14.22	5	20.20	0.597	0.525	2.47	40	0.25	0	2	2.47	366.97	0.013	0	5	75
194	14.23	5	14.88	0.615	0.573	3.00	40	0.25	0	2	3.00	314.96	0.013	0	5	75
195	14.24	5	36.17	0.662	0.604	2.27	40	0.25	0	2	2.27	491.05	0.013	0	5	75
196	14.25	5	6.37	0.651	0.581	3.65	40	0.25	0	2	3.65	206.07	0.013	0	5	69
197	14.26	5	31.86	0.235	0.213	3.07	40	0.25	0	2	3.07	460.87	0.013	0	5	75
200	14.29	5	53.21	0.672	0.614	4.03	40	0.25	0	2	4.03	595.59	0.013	0	5	71
201	14.30	5	34.26	0.642	0.578	2.88	40	0.25	0	2	2.88	477.91	0.013	0	5	73
202	14.31	5	20.02	0.615	0.569	2.88	40	0.25	0	2	2.88	365.33	0.013	0	5	69
203	14.32	5	39.04	0.592	0.535	3.82	40	0.25	0	2	3.82	510.16	0.013	0	5	69
205	14.34	5	89.47	0.257	0.254	3.09	40	0.25	0	2	3.09	772.31	0.013	0	5	69
206	14.35	5	25.81	0.263	0.235	3.98	40	0.25	0	2	3.98	414.81	0.013	0	5	69
209	14.38	5	31.82	0.262	0.231	3.55	40	0.25	0	2	3.55	460.58	0.013	0	5	75
210	14.39	5	49.96	0.459	0.418	2.22	40	0.25	0	2	2.22	577.12	0.013	0	5	66
211	14.40	5	13.38	0.653	0.574	2.55	40	0.25	0	2	2.55	298.66	0.013	0	5	66
212	14.41	5	15.18	0.659	0.599	3.89	40	0.25	0	2	3.89	318.12	0.013	0	5	69
213	14.42	5	23.82	0.603	0.528	3.30	40	0.25	0	2	3.30	398.53	0.013	0	5	68
215	14.44	5	53.45	0.550	0.517	4.45	40	0.25	0	2	4.45	596.94	0.013	0	5	69
216	14.45	5	27.30	0.619	0.562	2.82	40	0.25	0	2	2.82	426.61	0.013	0	5	71
217	14.46	5	15.75	0.635	0.570	2.29	40	0.25	0	2	2.29	324.04	0.013	0	5	61
219	14.48	5	15.59	0.662	0.596	3.12	40	0.25	0	2	3.12	322.39	0.013	0	5	69
220	14.49	5	6.32	0.623	0.562	3.62	40	0.25	0	2	3.62	205.26	0.013	0	5	60
221	14.50	5	59.43	0.438	0.399	3.35	40	0.25	0	2	3.35	629.44	0.013	0	5	68

Initial Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA [mm]	CN AMC II *
222	14.51	5	87.12	0.436	0.403	4.74	40	0.25	0	2	4.74	762.10	0.013	0	5	71
223	14.52	5	24.92	0.573	0.513	2.36	40	0.25	0	2	2.36	407.59	0.013	0	5	62
224	14.53	5	53.99	0.997	0.996	0.04	40	0.25	0	2	0.04	599.94	0.013	0	5	61
225	14.54	5	27.01	0.248	0.248	3.06	40	0.25	0	2	3.06	424.32	0.013	0	5	63
233	15.07	5	97.24	0.318	0.266	4.00	40	0.25	0	2	4.00	805.15	0.013	0	5	57
234	15.08	5	118.68	0.515	0.464	3.69	40	0.25	0	2	3.69	889.49	0.013	0	5	54
235	15.09	5	152.97	0.229	0.205	3.14	40	0.25	0	2	3.14	1009.85	0.013	0	5	61
238	15.12	5	110.50	0.222	0.163	4.35	40	0.25	0	2	4.35	858.29	0.013	0	5	80
241	15.15	5	61.54	0.456	0.367	3.64	40	0.25	0	2	3.64	640.52	0.013	0	5	73
243	15.17	5	137.30	0.265	0.228	3.76	40	0.25	0	2	3.76	956.72	0.013	0	5	80
244	15.18	5	38.33	0.468	0.412	3.83	40	0.25	0	2	3.83	505.50	0.013	0	5	69
245	15.19	5	74.32	0.607	0.565	3.62	40	0.25	0	2	3.62	703.89	0.013	0	5	76
246	15.20	5	49.17	0.592	0.544	3.37	40	0.25	0	2	3.37	572.54	0.013	0	5	80
253	15.27	5	189.83	0.463	0.443	3.09	40	0.25	0	2	3.09	1124.96	0.013	0	5	75
276	16.18	5	77.01	0.282	0.282	3.95	40	0.25	0	2	3.95	716.52	0.013	0	5	77
279	16.21	5	19.20	0.257	0.257	4.57	40	0.25	0	2	4.57	357.77	0.013	0	5	76
280	16.22	5	98.50	0.274	0.218	4.70	40	0.25	0	2	4.70	810.35	0.013	0	5	67
281	16.23	5	39.99	0.251	0.251	3.95	40	0.25	0	2	3.95	516.33	0.013	0	5	78
285	17.03	5	446.38	0.381	0.343	3.10	40	0.25	0	2	3.10	1725.07	0.013	0	5	80
286	17.04	5	267.02	0.298	0.267	2.95	40	0.25	0	2	2.95	1334.22	0.013	0	5	80
287	17.05	5	223.97	0.208	0.186	4.60	40	0.25	0	2	4.60	1221.94	0.013	0	5	80
297	18.02	5	70.58	0.545	0.503	2.64	40	0.25	0	2	2.64	685.95	0.013	0	5	85
300	18.05	5	27.10	0.588	0.514	3.67	40	0.25	0	2	3.67	425.05	0.013	0	5	81
311	19.04	5	69.65	0.220	0.192	3.68	40	0.25	0	2	3.68	681.42	0.013	0	5	80
318	19.11	5	45.97	0.262	0.246	4.54	40	0.25	0	2	4.54	553.59	0.013	0	5	80
319	19.12	5	19.51	0.603	0.546	1.83	40	0.25	0	2	1.83	360.65	0.013	0	5	81
320	19.13	5	51.32	0.234	0.202	4.46	40	0.25	0	2	4.46	584.92	0.013	0	5	77
335	21.01	5	158.18	0.465	0.423	4.04	40	0.25	0	2	4.04	1026.90	0.013	0	5	63
336	21.02	5	150.65	0.637	0.574	2.70	40	0.25	0	2	2.70	1002.16	0.013	0	5	86
337	21.03	5	170.07	0.317	0.248	3.88	40	0.25	0	2	3.88	1064.80	0.013	0	5	77
338	21.04	5	222.37	0.642	0.572	2.57	40	0.25	0	2	2.57	1217.57	0.013	0	5	85
340	21.06	5	12.00	0.501	0.451	2.28	40	0.25	0	2	2.28	282.84	0.013	0	5	82
341	21.07	5	22.14	0.610	0.540	2.65	40	0.25	0	2	2.65	384.19	0.013	0	5	81
344	21.10	5	60.69	0.662	0.599	2.81	40	0.25	0	2	2.81	636.08	0.013	0	5	81
345	21.11	5	100.73	0.538	0.485	3.07	40	0.25	0	2	3.07	819.47	0.013	0	5	82
347	21.13	5	26.84	0.213	0.190	4.60	40	0.25	0	2	4.60	423.01	0.013	0	5	81
348	21.14	5	57.65	0.683	0.613	2.95	40	0.25	0	2	2.95	619.95	0.013	0	5	77
349	21.15	5	24.90	0.414	0.336	4.73	40	0.25	0	2	4.73	407.43	0.013	0	5	69
350	21.16	5	101.05	0.523	0.444	2.78	40	0.25	0	2	2.78	820.77	0.013	0	5	81
7332	22.20	5	152.44	0.245	0.242	2.49	40	0.25	0	2	2.49	1008.10	0.013	0	5	73
7321	22.22	5	134.85	0.859	0.858	1.71	40	0.25	0	2	1.71	948.16	0.013	0	5	86
7324	22.23	5	64.27	0.728	0.720	2.62	40	0.25	0	2	2.62	654.57	0.013	0	5	86
7327	22.24	5	48.66	0.855	0.854	1.65	40	0.25	0	2	1.65	569.56	0.013	0	5	86
7328	22.25	5	11.60	0.585	0.585	2.16	40	0.25	0	2	2.16	278.09	0.013	0	5	86
7338	22.27	5	21.05	0.878	0.875	2.14	40	0.25	0	2	2.14	374.61	0.013	0	5	86
7342	22.28	5	25.06	0.785	0.785	1.35	40	0.25	0	2	1.35	408.74	0.013	0	5	86
7329	22.30	5	21.04	0.786	0.786	2.40	40	0.25	0	2	2.40	374.52	0.013	0	5	86
7344	22.31	5	94.32	0.497	0.453	2.31	40	0.25	0	2	2.31	792.97	0.013	0	5	86
7378	23.01	5	23.22	0.522	0.478	3.16	40	0.25	0	2	3.16	393.45	0.013	0	5	83
7375	23.02	5	30.05	0.423	0.417	3.20	40	0.25	0	2	3.20	447.59	0.013	0	5	80
7377	23.03	5	47.09	0.611	0.542	2.74	40	0.25	0	2	2.74	560.30	0.013	0	5	86
7374	23.04	5	38.55	0.524	0.474	3.54	40	0.25	0	2	3.54	506.95	0.013	0	5	83
7373	23.05	5	25.64	0.655	0.613	2.77	40	0.25	0	2	2.77	413.44	0.013	0	5	85
7370	23.08	5	45.99	0.607	0.549	2.68	40	0.25	0	2	2.68	553.71	0.013	0	5	86
7399	24.01	5	77.10	0.827	0.818	2.73	40	0.25	0	2	2.73	716.94	0.013	0	5	85
7422	24.02	5	104.61	0.455	0.454	2.16	40	0.25	0	2	2.16	835.10	0.013	0	5	86
7435	24.03	5	100.66	0.661	0.661	2.43	40	0.25	0	2	2.43	819.19	0.013	0	5	86
7433	24.05	5	114.49	0.554	0.554	2.21	40	0.25	0	2	2.21	873.65	0.013	0	5	86
7431	24.07	5	168.53	0.229	0.226	1.71	40	0.25	0	2	1.71	1059.97	0.013	0	5	86
7419	24.11	5	51.22	0.759	0.757	1.31	40	0.25	0	2	1.31	584.35	0.013	0	5	86
7451	25.01	5	19.56	0.606	0.553	2.94	40	0.25	0	2	2.94	361.11	0.013	0	5	82
7452	25.02	5	26.88	0.593	0.531	2.55	40	0.25	0	2	2.55	423.32	0.013	0	5	86
7454	25.03	5	28.66	0.579	0.520	2.59	40	0.25	0	2	2.59	437.11	0.013	0	5	86
7450	25.04	5	25.37	0.593	0.560	2.74	40	0.25	0	2	2.74	411.26	0.013	0	5	82
7447	25.06	5	91.56	0.669	0.609	2.41	40	0.25	0	2	2.41	781.28	0.013	0	5	86
7449	25.07	5	18.50	0.904	0.904	1.93	40	0.25	0	2	1.93	351.19	0.013	0	5	83
7445	25.08	5	92.44	0.924	0.924	2.20	40	0.25	0	2	2.20	785.03	0.013	0	5	85
7441	25.09	5	27.76	0.344	0.343	2.69	40	0.25	0	2	2.69	430.19	0.013	0	5	85
7443	25.10	5	113.91	0.345	0.342	1.54	40	0.25	0	2	1.54	871.44	0.013	0	5	86
7440	25.12	5	70.62	0.605	0.604	2.22	40	0.25	0	2	2.22	686.15	0.013	0	5	86
7460	26.03	5	16.97	0.473	0.431	1.84	40	0.25	0	2	1.84	336.35	0.013	0	5	86
7458	26.04	5	41.70	0.873	0.870	1.98	40	0.25	0	2	1.98	527.26	0.013	0	5	86

Initial Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA [mm]	CN AMC II *
7459	26.06	5	18.01	0.698	0.632	2.57	40	0.25	0	2	2.57	346.51	0.013	0	5	86
7455	26.07	5	10.42	0.322	0.305	4.17	40	0.25	0	2	4.17	263.57	0.013	0	5	80
7456	26.08	5	10.46	0.718	0.660	2.40	40	0.25	0	2	2.40	264.07	0.013	0	5	86
7475	26.10	5	88.28	0.257	0.248	2.93	40	0.25	0	2	2.93	767.16	0.013	0	5	83
7478	26.11	5	37.97	0.506	0.503	2.21	40	0.25	0	2	2.21	503.12	0.013	0	5	85
7480	26.12	5	4.85	0.888	0.888	2.39	40	0.25	0	2	2.39	179.81	0.013	0	5	86
7481	26.13	5	28.15	0.804	0.804	1.97	40	0.25	0	2	1.97	433.21	0.013	0	5	85
7473	26.14	5	92.43	0.477	0.466	2.42	40	0.25	0	2	2.42	784.98	0.013	0	5	86
7472	26.15	5	90.34	0.925	0.925	1.55	40	0.25	0	2	1.55	776.06	0.013	0	5	86
7471	26.16	5	81.76	0.754	0.754	2.15	40	0.25	0	2	2.15	738.29	0.013	0	5	86
434	27.01	5	80.38	0.427	0.386	3.12	40	0.25	0	2	3.12	732.03	0.013	0	5	66
435	27.02	5	862.17	0.815	0.803	2.65	40	0.25	0	2	2.65	2397.46	0.013	0	5	78
436	27.03	5	311.64	0.524	0.485	3.07	40	0.25	0	2	3.07	1441.39	0.013	0	5	66
437	27.04	5	489.64	0.470	0.434	3.07	40	0.25	0	2	3.07	1806.73	0.013	0	5	76
439	27.06	5	38.20	0.519	0.519	2.72	40	0.25	0	2	2.72	504.65	0.013	0	5	83
440	27.07	5	319.94	0.537	0.536	2.61	40	0.25	0	2	2.61	1460.46	0.013	0	5	76
441	27.08	5	251.12	0.813	0.813	2.33	40	0.25	0	2	2.33	1293.88	0.013	0	5	85
442	27.09	5	145.61	0.286	0.276	3.44	40	0.25	0	2	3.44	985.26	0.013	0	5	80
443	27.10	5	211.89	0.600	0.566	3.00	40	0.25	0	2	3.00	1188.53	0.013	0	5	76
444	27.11	5	15.71	0.584	0.517	2.58	40	0.25	0	2	2.58	323.63	0.013	0	5	86
445	27.12	5	93.72	0.513	0.476	3.35	40	0.25	0	2	3.35	790.44	0.013	0	5	72
446	27.13	5	205.31	0.656	0.594	2.63	40	0.25	0	2	2.63	1169.93	0.013	0	5	83
447	27.14	5	69.06	0.780	0.744	2.22	40	0.25	0	2	2.22	678.53	0.013	0	5	85
448	27.15	5	43.75	0.624	0.569	1.95	40	0.25	0	2	1.95	540.06	0.013	0	5	83
453	29.02	5	17.87	0.556	0.513	2.78	40	0.25	0	2	2.78	345.16	0.013	0	5	77
455	29.04	5	46.10	0.695	0.635	2.32	40	0.25	0	2	2.32	554.38	0.013	0	5	80
456	29.05	5	93.68	0.619	0.568	2.84	40	0.25	0	2	2.84	790.27	0.013	0	5	80
458	29.07	5	16.94	0.680	0.632	2.11	40	0.25	0	2	2.11	336.06	0.013	0	5	80
459	29.08	5	44.48	0.575	0.526	2.57	40	0.25	0	2	2.57	544.55	0.013	0	5	80
465	29.14	5	5.64	0.816	0.775	2.81	40	0.25	0	2	2.81	193.91	0.013	0	5	81
483	32.02	5	24.28	0.652	0.594	2.71	40	0.25	0	2	2.71	402.33	0.013	0	5	78
484	32.03	5	26.39	0.668	0.599	2.71	40	0.25	0	2	2.71	419.44	0.013	0	5	76
486	32.05	5	33.96	0.644	0.581	2.58	40	0.25	0	2	2.58	475.82	0.013	0	5	80
488	32.07	5	5.77	0.686	0.627	3.79	40	0.25	0	2	3.79	196.13	0.013	0	5	86
489	32.08	5	23.30	0.638	0.581	2.15	40	0.25	0	2	2.15	394.12	0.013	0	5	86
490	32.09	5	28.07	0.664	0.603	2.05	40	0.25	0	2	2.05	432.59	0.013	0	5	86
492	32.11	5	34.89	0.652	0.592	2.92	40	0.25	0	2	2.92	482.29	0.013	0	5	73
493	32.12	5	25.23	0.701	0.637	2.19	40	0.25	0	2	2.19	410.12	0.013	0	5	80
495	32.14	5	17.27	0.583	0.517	2.84	40	0.25	0	2	2.84	339.31	0.013	0	5	76
497	32.16	5	53.68	0.669	0.615	1.89	40	0.25	0	2	1.89	598.22	0.013	0	5	80
498	32.17	5	15.19	0.700	0.634	2.33	40	0.25	0	2	2.33	318.22	0.013	0	5	81
510	32.29	5	36.01	0.445	0.445	2.26	40	0.25	0	2	2.26	489.97	0.013	0	5	82
513	33.03	5	69.23	0.588	0.499	2.16	40	0.25	0	2	2.16	679.36	0.013	0	5	86
514	33.04	5	24.00	0.595	0.538	2.21	40	0.25	0	2	2.21	400.00	0.013	0	5	80
515	33.05	5	55.84	0.765	0.728	1.97	40	0.25	0	2	1.97	610.14	0.013	0	5	82
516	33.06	5	59.78	0.702	0.653	2.86	40	0.25	0	2	2.86	631.29	0.013	0	5	77
517	33.07	5	15.44	0.590	0.537	2.63	40	0.25	0	2	2.63	320.83	0.013	0	5	85
519	33.09	5	26.93	0.570	0.523	1.75	40	0.25	0	2	1.75	423.71	0.013	0	5	80
521	33.11	5	126.12	0.554	0.504	3.37	40	0.25	0	2	3.37	916.95	0.013	0	5	75
522	33.12	5	142.25	0.643	0.584	2.85	40	0.25	0	2	2.85	973.82	0.013	0	5	80
523	33.13	5	177.15	0.591	0.539	2.64	40	0.25	0	2	2.64	1086.74	0.013	0	5	80
537	35.02	5	44.68	0.452	0.320	2.96	40	0.25	0	2	2.96	545.77	0.013	0	5	85
538	35.03	5	105.10	0.359	0.256	2.75	40	0.25	0	2	2.75	837.06	0.013	0	5	85
539	35.04	5	68.79	0.296	0.223	3.35	40	0.25	0	2	3.35	677.20	0.013	0	5	81
540	35.05	5	151.40	0.288	0.205	2.75	40	0.25	0	2	2.75	1004.66	0.013	0	5	82
541	35.06	5	44.48	0.665	0.604	2.08	40	0.25	0	2	2.08	544.55	0.013	0	5	82
543	35.08	5	33.87	0.634	0.570	2.11	40	0.25	0	2	2.11	475.18	0.013	0	5	82
545	35.10	5	30.53	0.429	0.311	2.63	40	0.25	0	2	2.63	451.15	0.013	0	5	86
547	35.12	5	74.34	0.451	0.447	1.98	40	0.25	0	2	1.98	703.99	0.013	0	5	83
550	35.15	5	69.88	0.557	0.512	2.42	40	0.25	0	2	2.42	682.54	0.013	0	5	82
551	36.01	5	81.52	0.325	0.230	2.94	40	0.25	0	2	2.94	737.20	0.013	0	5	83
552	36.02	5	13.96	0.238	0.165	3.84	40	0.25	0	2	3.84	305.07	0.013	0	5	77
553	36.03	5	13.23	0.262	0.205	3.19	40	0.25	0	2	3.19	296.98	0.013	0	5	80
556	36.06	5	9.05	0.449	0.314	2.32	40	0.25	0	2	2.32	245.63	0.013	0	5	83
574	38.01	5	98.50	0.256	0.185	2.64	40	0.25	0	2	2.64	810.35	0.013	0	5	82
576	38.03	5	69.53	0.250	0.191	3.00	40	0.25	0	2	3.00	680.83	0.013	0	5	80
583	39.03	5	169.27	0.646	0.579	1.74	40	0.25	0	2	1.74	1062.29	0.013	0	5	83
585	39.05	5	9.62	0.681	0.626	2.49	40	0.25	0	2	2.49	253.25	0.013	0	5	85
586	39.06	5	15.84	0.600	0.536	2.29	40	0.25	0	2	2.29	324.96	0.013	0	5	81
587	39.07	5	23.55	0.682	0.619	1.72	40	0.25	0	2	1.72	396.23	0.013	0	5	85
588	39.08	5	8.81	0.607	0.546	1.88	40	0.25	0	2	1.88	242.35	0.013	0	5	81
592	39.12	5	35.08	0.582	0.499	1.95	40	0.25	0	2	1.95	483.60	0.013	0	5	85

Initial Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA [mm]	CN AMC II *
596	40.03	5	84.65	0.640	0.638	2.18	40	0.25	0	2	2.18	751.22	0.013	0	5	81
599	40.06	5	23.75	0.493	0.467	2.20	40	0.25	0	2	2.20	397.91	0.013	0	5	80
603	40.10	5	151.10	0.905	0.905	2.06	40	0.25	0	2	2.06	1003.66	0.013	0	5	83
604	40.11	5	50.69	0.877	0.877	2.53	40	0.25	0	2	2.53	581.32	0.013	0	5	85
605	40.12	5	55.35	0.850	0.850	2.33	40	0.25	0	2	2.33	607.45	0.013	0	5	83
606	40.13	5	48.23	0.556	0.513	3.67	40	0.25	0	2	3.67	567.04	0.013	0	5	62
610	41.04	5	45.53	0.258	0.187	1.65	40	0.25	0	2	1.65	550.94	0.013	0	5	81
617	42.03	5	24.70	0.375	0.322	3.19	40	0.25	0	2	3.19	405.79	0.013	0	5	86
618	42.04	5	19.91	0.929	0.929	2.18	40	0.25	0	2	2.18	364.33	0.013	0	5	86
619	42.05	5	13.67	0.250	0.245	2.85	40	0.25	0	2	2.85	301.88	0.013	0	5	83
620	42.06	5	22.70	0.551	0.507	1.77	40	0.25	0	2	1.77	389.02	0.013	0	5	85
621	42.07	5	5.64	0.677	0.677	1.89	40	0.25	0	2	1.89	193.91	0.013	0	5	85
622	42.08	5	19.03	0.594	0.583	1.83	40	0.25	0	2	1.83	356.18	0.013	0	5	86
623	42.09	5	38.80	0.665	0.619	2.18	40	0.25	0	2	2.18	508.59	0.013	0	5	86
625	42.11	5	65.00	0.675	0.613	2.48	40	0.25	0	2	2.48	658.28	0.013	0	5	83
627	42.13	5	7.39	0.718	0.668	3.63	40	0.25	0	2	3.63	221.96	0.013	0	5	82
628	42.14	5	61.63	0.596	0.549	2.33	40	0.25	0	2	2.33	640.99	0.013	0	5	82
629	42.15	5	38.42	0.413	0.324	2.24	40	0.25	0	2	2.24	506.10	0.013	0	5	82
630	42.16	5	32.01	0.657	0.601	1.70	40	0.25	0	2	1.70	461.95	0.013	0	5	86
639	43.08	5	34.03	0.761	0.748	1.58	40	0.25	0	2	1.58	476.31	0.013	0	5	86
640	43.09	5	64.79	0.431	0.427	2.49	40	0.25	0	2	2.49	657.22	0.013	0	5	80
641	43.10	5	202.72	0.219	0.217	2.05	40	0.25	0	2	2.05	1162.53	0.013	0	5	81
642	43.11	5	145.26	0.849	0.845	1.98	40	0.25	0	2	1.98	984.07	0.013	0	5	85
644	44.02	5	42.53	0.234	0.227	2.72	40	0.25	0	2	2.72	532.48	0.013	0	5	85
645	44.03	5	36.24	0.389	0.389	3.00	40	0.25	0	2	3.00	491.53	0.013	0	5	82
646	44.04	5	33.59	0.587	0.585	2.81	40	0.25	0	2	2.81	473.22	0.013	0	5	86
648	44.06	5	45.16	0.774	0.743	2.24	40	0.25	0	2	2.24	548.70	0.013	0	5	86
650	44.08	5	67.75	0.615	0.579	2.62	40	0.25	0	2	2.62	672.06	0.013	0	5	82
651	44.09	5	21.65	0.230	0.215	3.56	40	0.25	0	2	3.56	379.91	0.013	0	5	80
652	44.10	5	16.50	0.667	0.603	2.47	40	0.25	0	2	2.47	331.66	0.013	0	5	81
653	44.11	5	44.62	0.560	0.510	1.66	40	0.25	0	2	1.66	545.41	0.013	0	5	86
654	44.12	5	9.65	0.615	0.559	1.36	40	0.25	0	2	1.36	253.64	0.013	0	5	86
655	44.13	5	4.40	0.707	0.642	2.70	40	0.25	0	2	2.70	171.27	0.013	0	5	85
656	44.14	5	131.84	0.495	0.452	2.36	40	0.25	0	2	2.36	937.51	0.013	0	5	83
657	44.15	5	43.26	0.636	0.581	1.74	40	0.25	0	2	1.74	537.03	0.013	0	5	85
658	45.01	5	248.60	0.515	0.471	3.09	40	0.25	0	2	3.09	1287.37	0.013	0	5	81
659	45.02	5	230.86	0.449	0.416	2.84	40	0.25	0	2	2.84	1240.59	0.013	0	5	82
660	45.03	5	275.06	0.416	0.388	2.31	40	0.25	0	2	2.31	1354.15	0.013	0	5	83
661	45.04	5	194.58	0.570	0.516	2.06	40	0.25	0	2	2.06	1138.95	0.013	0	5	83
662	45.05	5	163.58	0.475	0.453	2.70	40	0.25	0	2	2.70	1044.29	0.013	0	5	82
663	45.06	5	195.31	0.511	0.509	2.45	40	0.25	0	2	2.45	1141.08	0.013	0	5	80
664	45.07	5	358.60	0.764	0.743	2.00	40	0.25	0	2	2.00	1546.18	0.013	0	5	83
665	45.08	5	284.92	0.708	0.671	2.19	40	0.25	0	2	2.19	1378.21	0.013	0	5	82
666	45.09	5	172.49	0.692	0.684	2.15	40	0.25	0	2	2.15	1072.35	0.013	0	5	85
668	45.11	5	24.15	0.353	0.353	3.11	40	0.25	0	2	3.11	401.25	0.013	0	5	85
669	45.12	5	24.80	0.319	0.315	3.37	40	0.25	0	2	3.37	406.61	0.013	0	5	86
672	46.01	5	52.67	0.228	0.228	3.15	40	0.25	0	2	3.15	592.57	0.013	0	5	80
673	46.02	5	149.29	0.466	0.457	3.01	40	0.25	0	2	3.01	997.63	0.013	0	5	80
674	46.03	5	32.83	0.922	0.922	1.29	40	0.25	0	2	1.29	467.83	0.013	0	5	82
675	46.04	5	61.32	0.432	0.432	3.96	40	0.25	0	2	3.96	639.37	0.013	0	5	81
676	46.05	5	60.96	0.693	0.693	2.13	40	0.25	0	2	2.13	637.50	0.013	0	5	81
677	46.06	5	12.51	0.944	0.944	1.57	40	0.25	0	2	1.57	288.79	0.013	0	5	80
678	46.07	5	93.63	0.874	0.874	2.34	40	0.25	0	2	2.34	790.06	0.013	0	5	80
679	46.08	5	21.06	0.937	0.937	1.98	40	0.25	0	2	1.98	374.70	0.013	0	5	82
680	46.09	5	47.71	0.614	0.614	2.07	40	0.25	0	2	2.07	563.97	0.013	0	5	83
681	46.10	5	343.15	0.883	0.882	1.63	40	0.25	0	2	1.63	1512.50	0.013	0	5	81
682	46.11	5	120.33	0.923	0.922	1.83	40	0.25	0	2	1.83	895.66	0.013	0	5	85
683	46.12	5	36.92	0.646	0.646	3.42	40	0.25	0	2	3.42	496.12	0.013	0	5	81
684	46.13	5	71.88	0.930	0.930	2.22	40	0.25	0	2	2.22	692.24	0.013	0	5	81
685	46.14	5	42.17	0.800	0.800	2.04	40	0.25	0	2	2.04	530.22	0.013	0	5	82
686	46.15	5	88.14	0.321	0.313	2.28	40	0.25	0	2	2.28	766.55	0.013	0	5	81
687	46.16	5	19.40	0.725	0.664	2.42	40	0.25	0	2	2.42	359.63	0.013	0	5	85
688	46.17	5	181.61	0.649	0.601	2.50	40	0.25	0	2	2.50	1100.33	0.013	0	5	82
689	47.01	5	595.69	0.550	0.509	3.37	40	0.25	0	2	3.37	1992.80	0.013	0	5	81
690	47.02	5	231.55	0.679	0.637	2.53	40	0.25	0	2	2.53	1242.44	0.013	0	5	81
691	47.03	5	321.21	0.571	0.537	3.28	40	0.25	0	2	3.28	1463.35	0.013	0	5	81
692	47.04	5	25.74	0.892	0.892	1.47	40	0.25	0	2	1.47	414.25	0.013	0	5	80
694	47.06	5	74.95	0.584	0.584	2.78	40	0.25	0	2	2.78	706.87	0.013	0	5	81
695	48.01	5	102.63	0.338	0.307	2.89	40	0.25	0	2	2.89	827.16	0.013	0	5	62
696	48.02	5	176.75	0.606	0.571	2.79	40	0.25	0	2	2.79	1085.51	0.013	0	5	69
697	48.03	5	576.13	0.682	0.633	3.56	40	0.25	0	2	3.56	1959.81	0.013	0	5	69
698	48.04	5	606.03	0.740	0.712	2.85	40	0.25	0	2	2.85	2010.02	0.013	0	5	68

Initial Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA [mm]	CN AMC II *
699	48.05	5	835.60	0.707	0.672	2.87	40	0.25	0	2	2.87	2360.23	0.013	0	5	71
700	48.06	5	595.91	0.713	0.672	2.63	40	0.25	0	2	2.63	1993.17	0.013	0	5	73
701	48.07	5	582.53	0.660	0.619	3.39	40	0.25	0	2	3.39	1970.67	0.013	0	5	80
702	48.08	5	333.42	0.526	0.492	3.68	40	0.25	0	2	3.68	1490.91	0.013	0	5	80
703	49.01	5	222.32	0.585	0.543	3.44	40	0.25	0	2	3.44	1217.43	0.013	0	5	71
704	49.02	5	168.03	0.561	0.511	4.02	40	0.25	0	2	4.02	1058.40	0.013	0	5	77
705	49.03	5	648.73	0.761	0.736	2.16	40	0.25	0	2	2.16	2079.63	0.013	0	5	80
706	49.04	5	426.33	0.526	0.506	3.25	40	0.25	0	2	3.25	1685.88	0.013	0	5	80
707	49.05	5	130.67	0.584	0.554	3.51	40	0.25	0	2	3.51	933.35	0.013	0	5	81
708	49.06	5	428.54	0.774	0.742	2.27	40	0.25	0	2	2.27	1690.25	0.013	0	5	81
709	49.07	5	489.75	0.637	0.609	2.61	40	0.25	0	2	2.61	1806.93	0.013	0	5	77
710	50.01	5	520.87	0.558	0.520	3.30	40	0.25	0	2	3.30	1863.46	0.013	0	5	66
711	50.02	5	554.11	0.630	0.585	2.02	40	0.25	0	2	2.02	1922.00	0.013	0	5	66
712	50.03	5	184.80	0.515	0.469	3.32	40	0.25	0	2	3.32	1109.95	0.013	0	5	69
713	50.04	5	525.54	0.545	0.493	3.25	40	0.25	0	2	3.25	1871.79	0.013	0	5	80
714	50.05	5	390.40	0.457	0.428	3.03	40	0.25	0	2	3.03	1613.28	0.013	0	5	64

Appendix II

Calibrated Model Parameters (Existing Conditions)

Calibrated Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *	CN AMC III*
1	01.01	5	99.93	0	1.5	2.44	10	59	77
3	01.03	5	73.58	0	1.5	1.33	34.1	60	77
4	01.04	5	275.7	0	1.5	2.79	10	76	88
5	01.05	5	423.49	0	1.5	3.61	10	59	77
6	01.06	5	700.54	0	1.5	5.55	10	79	90
7	01.07	5	464.5	0	1.5	4.13	10	77	89
8	01.08	5	285.26	0	1.5	3.05	10	78	89
9	02.01	5	481.2	0	1.5	3.65	10	59	77
10	02.02	5	141.81	0	1.5	1.96	10	59	77
11	02.03	5	416.72	0	1.5	3.51	10	59	77
12	02.04	5	186.97	0	1.5	1.73	10	59	77
13	02.05	5	75.62	0	1.5	1.83	10	59	77
14	02.06	5	396.73	0	1.5	3.04	10	59	77
15	03.01	5	15.38	0	1.5	0.49	10	59	77
16	03.02	5	105.58	0	1.5	1.43	22.8	59	77
17	03.03	5	173.38	0	1.5	1.93	35.7	55	74
18	03.04	5	296.86	0	1.5	1.98	10	59	77
19	03.05	5	439.6	0	1.5	4.25	43.4	59	77
20	04.01	5	478.77	0	1.5	2.94	43.4	71	85
21	04.02	5	398.59	0	1.5	2.66	43.4	60	77
22	04.03	5	186.08	0	1.5	2.38	27.6	69	84
23	04.04	5	588.67	0	1.5	3.98	43.4	59	77
24	04.05	5	291.29	0	1.5	2.29	43.4	59	77
25	04.06	5	480.45	0	1.5	3.61	43.4	67	82
26	04.07	5	302.36	0	1.5	2.58	27.3	59	77
27	04.08	5	283.63	0	1.5	2.96	43.4	59	77
28	05.01	5	254.27	0	1.5	2.28	22.2	66	81
29	05.02	5	136.15	0	1.5	2.46	43.4	60	77
30	05.03	5	438.15	0	1.5	4.11	43.4	66	81
31	05.04	5	285.81	0	1.5	2.59	36.8	66	81
32	05.05	5	50.2	0	1.5	1.1	26.3	61	78
33	05.06	5	581.39	0	1.5	3.63	42.6	62	79
34	05.07	5	270.38	0	1.5	2.65	10	59	77
35	05.08	5	208.58	0	1.5	1.85	30.9	64	81
36	05.09	5	487.07	0	1.5	4.18	43.4	66	81
37	06.01	5	28.945	0	1.5	0.81	43.4	76	88
38	06.02	5	81.21	0	1.5	1.7	10	67	82
39	06.03	5	130.518	0	1.5	1.36	10	98	99
40	06.04	5	71.779	0	1.5	0.93	10	94	97
41	06.05	5	13.32	0	1.5	0.63	10	99	99
45	06.09	5	130.79	0	1.5	1.79	13.4	70	84
46	06.10	5	157.89	0	1.5	2.35	12.9	66	81
51	06.15	5	9.24	0	1.5	0.49	14.9	76	88
52	06.16	5	74.7	0	1.5	1.09	7.5	64	81
53	06.17	5	87.63	0	1.5	1.55	10	74	87
55	06.19	5	125.55	0	1.5	1.55	10	69	84
56	06.20	5	14.368	0	1.5	0.66	10	84	92
57	06.21	5	337.07	0	1.5	3.06	43.4	64	81
58	07.01	5	72.54	0	1.5	1.46	43.4	61	78
59	07.02	5	395.37	0	1.5	3.81	43.4	64	81
60	07.03	5	35.34	0	1.5	1.13	10	60	77
62	07.05	5	192.25	0	1.5	2.15	43.4	71	85
63	07.06	5	356.24	0	1.5	2.85	43.4	66	81
64	07.07	5	225	0	1.5	2.85	43.4	68	83
65	07.08	5	84.23	0	1.5	1.58	10	86	94
66	07.09	5	472.25	0	1.5	3.75	43.4	68	83
67	07.10	5	327.27	0	1.5	2.01	30.6	71	85
68	07.11	5	398.57	0	1.5	2.56	43.4	64	81
69	07.12	5	171.05	0	1.5	2.25	10	78	89
70	07.13	5	133.18	0	1.5	1.94	43.4	78	89
71	07.14	5	97.34	0	1.5	1.63	10	72	86
72	07.15	5	202.662	0	1.5	2.14	23.1	78	89
73	08.01	5	346.79	0	3	2.87	43.4	87	94
74	08.02	5	253.74	0	3	1.61	10	86	94
75	08.03	5	345.35	0	3	2.21	43.4	74	87
76	08.04	5	87.33	0	3	1.12	43.4	69	84
77	08.05	5	160.87	0	3	1.39	43.4	74	87
78	08.06	5	239.8	0	3	2.1	43.4	90	95
81	08.09	5	259.2	0	3	1.53	32.7	82	91
82	08.10	5	172.02	0	1.5	2.46	43.4	62	79
83	08.11	5	80.9	0	1.5	1.85	19.7	90	95
84	08.12	5	137.06	0	1.5	1.2	40.1	83	92
85	08.13	5	360.48	0	1.5	2.51	43.4	71	85

Calibrated Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *	CN AMC III*
93	09.08	5	283.46	0	3	2.69	10	92	96
94	09.09	5	161.42	0	3	2.38	10	87	94
95	09.10	5	327.28	0	3	2.46	10	90	95
96	09.11	5	146.76	0	3	1.75	10	89	95
97	09.12	5	162.52	0	3	1.28	10	83	92
98	09.13	5	398.53	0	3	2	43.4	83	92
99	10.01	5	17.9	0	3	0.69	10	92	96
100	10.02	5	51.68	0	1.75	0.97	10	79	90
102	10.04	5	150.31	0	1.75	2.1	10	89	95
103	10.05	5	119.72	0	1.75	1.51	10	85	93
105	10.07	5	124.35	0	1.75	1.43	10	88	94
106	10.08	5	169.08	0	1.75	1.85	10	86	93
107	10.09	5	83.84	0	1.75	1.79	10	79	90
108	10.10	5	57.05	0	1.75	0.89	10	88	94
109	10.11	5	85.27	0	1.75	1.31	10	88	94
110	10.12	5	89.1	0	1.75	1.2	10	88	94
111	10.13	5	116.21	0	1.75	1.26	10	89	95
112	10.14	5	175.6	0	1.75	1.59	10	84	92
113	10.15	5	267.62	0	1.75	2.08	43.4	83	92
114	10.16	5	239.55	0	1.75	1.4	43.4	89	95
115	10.17	5	200.9	0	1.75	1.77	37.4	83	92
116	10.18	5	66.56	0	1.75	1.53	43.4	85	93
117	10.19	5	127.5	0	1.75	1.41	43.4	84	92
118	10.20	5	145.99	0	1.75	1.23	43.4	75	87
119	10.21	5	414.29	0	1.75	1.73	43.4	83	92
120	10.22	5	285.95	0	1.75	2.21	43.4	74	87
121	10.23	5	422.02	0	1.75	2.6	43.4	80	90
122	10.24	5	250.47	0	1.75	2.78	10	89	95
123	10.25	5	324.82	0	1.75	2.25	10	88	94
124	10.26	5	189.66	0	1.75	1.93	10	85	93
125	10.27	5	194.01	0	1.75	1.74	10	84	92
126	10.28	5	78.78	0	1.75	1.12	30.2	88	94
127	10.29	5	51.52	0	1.75	0.98	18.9	86	93
128	10.30	5	344.73	0	1.75	2.8	41.4	88	94
129	10.31	5	268.47	0	1.75	2.31	43.4	86	93
130	10.32	5	303.38	0	1.75	3.03	43.4	89	95
131	10.33	5	409.92	0	1.75	3.55	43.4	88	94
132	10.34	5	375.83	0	1.75	2.15	43.4	88	94
133	11.01	5	283.72	0	3	4.19	10	74	87
134	11.02	5	81.39	0	3	1.29	10	94	97
136	11.04	5	153.02	0	3	1.83	10	82	91
137	11.05	5	214.33	0	3	1.89	10	90	95
138	12.01	5	352.43	0	3	3.32	10	90	95
139	12.02	5	191.69	0	3	1.73	10	93	97
140	12.03	5	317.88	0	3	1.84	10	93	97
142	13.02	5	81.1	0	3	1.02	10	76	88
145	13.05	5	18.63	0	3	0.61	10	74	87
153	13.13	5	175.92	0	3	2.76	10	83	92
155	13.15	5	33.66	0	3	0.99	10	99	99
156	13.16	5	51.02	0	3	1	10	82	91
160	13.20	5	30.56	0	3	0.6	10	90	95
161	13.21	5	24.34	0	3	0.64	10	78	89
166	13.26	5	91.38	0	3	1.73	10	87	94
169	13.29	5	177.99	0	3	3.23	10	76	88
170	13.30	5	217.41	0	3	2.05	10	90	95
171	13.31	5	145.21	0	3	2.84	10	70	84
173	14.02	5	76.07	0	1.5	2.12	12	62	79
174	14.03	5	8.89	0	1.5	0.68	12	58	76
175	14.04	5	90.32	0	1.5	3.04	12	66	81
176	14.05	5	238.01	0	1.5	3.04	12	65	81
177	14.06	5	134.83	0	1.5	3.68	12	62	79
181	14.10	5	60.95	0	1.5	1.64	12	58	76
182	14.11	5	30.56	0	1.5	1.8	12	58	76
183	14.12	5	43.77	0	1.5	1.62	12	54	73
184	14.13	5	47.6	0	1.5	2.34	12	55	74
185	14.14	5	30.8	0	1.5	1.56	12	58	76
186	14.15	5	13.67	0	1.5	1.22	21.8	65	81
187	14.16	5	30.51	0	1.5	1.62	12	58	76
189	14.18	5	10.73	0	3	0.36	28.9	78	89
198	14.27	5	11.88	0	1.5	0.88	9.9	62	79
199	14.28	5	4.35	0	3	0.44	28.9	64	80
204	14.33	5	90	0	1.5	2.56	26.6	48	68
207	14.36	5	23.76	0	3	1.07	28.9	67	82

Calibrated Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *	CN AMC III*
208	14.37	5	20.56	0	3	1.26	28.9	71	85
214	14.43	5	25.97	0	3	0.99	28.9	67	82
218	14.47	5	17.99	0	1.5	1.02	12	49	69
226	14.55	5	290.21	0	1.5	4.1	12	54	73
227	15.01	5	67.77	0	1.5	1.98	12	64	80
228	15.02	5	64.49	0	1.5	1.9	12	62	79
229	15.03	5	42.37	0	1.5	1.56	39.2	60	78
230	15.04	5	154.91	0	1.5	3.72	12	64	80
231	15.05	5	149	0	1.5	2.28	21.3	66	82
232	15.06	5	70.33	0	1.5	2.02	32.7	46	66
236	15.10	5	98.48	0	1.5	1.76	22.4	50	70
237	15.11	5	160.46	0	1.5	2.52	38.6	46	67
239	15.13	5	311.06	0	1.5	5.44	43.4	60	78
240	15.14	5	151.76	0	1.5	2.7	43.4	46	67
242	15.16	5	91.28	0	1.5	3.6	12	62	79
247	15.21	5	407.16	0	1.5	6.26	43.4	50	70
248	15.22	5	89.27	0	1.5	2.44	12	50	69
249	15.23	5	84.39	0	1.5	2.52	43.4	62	79
250	15.24	5	31.57	0	1.5	1.22	8.3	58	76
251	15.25	5	21.18	0	3	0.84	28.9	48	68
252	15.26	5	151.894	0	1.5	5.48	12	64	80
254	15.28	5	119.04	0	1.5	2.78	43.4	58	76
255	15.29	5	57.13	0	1.5	1.8	43.4	50	69
256	15.30	5	114.69	0	1.5	2.44	43.4	58	76
257	15.31	5	146.51	0	1.5	2.34	43.4	50	69
258	15.32	5	46	0	3	1.58	28.9	64	80
259	16.01	5	137.69	0	1.5	3.98	12	62	79
260	16.02	5	173.6	0	1.5	3.24	12	61	78
261	16.03	5	139.51	0	1.5	2.78	12	64	80
262	16.04	5	87.27	0	1.5	2.78	12	60	78
263	16.05	5	134.05	0	1.5	2.72	12	62	79
264	16.06	5	167.3	0	1.5	4.06	12	62	79
265	16.07	5	58.62	0	1.5	1.86	12	62	79
266	16.08	5	303.85	0	1.5	5.42	12	62	79
267	16.09	5	137.77	0	1.5	2.72	21.6	62	79
268	16.10	5	311.05	0	1.5	4.6	43.4	60	78
269	16.11	5	173.61	0	1.5	2.74	33.2	64	80
270	16.12	5	128.59	0	1.5	2.92	26.9	57	75
271	16.13	5	126.91	0	1.5	2.2	43.4	53	72
272	16.14	5	91.34	0	1.5	2.08	12	62	79
273	16.15	5	59.08	0	1.5	1.56	12	64	80
274	16.16	5	100.66	0	1.5	2.82	12	64	80
275	16.17	5	21.53	0	1.5	0.9	12	62	79
277	16.19	5	128.71	0	1.5	2.9	12	61	78
278	16.20	5	252.13	0	1.5	5.14	12	50	70
282	16.24	5	43	0	1.5	1.86	43.4	51	71
283	17.01	5	34.58	0	1.5	1.24	12	60	78
284	17.02	5	45.97	0	1.5	2.06	12	64	80
288	17.06	5	480.44	0	1.5	6.4	43.4	64	80
289	17.07	5	365.24	0	1.5	5.96	43.4	64	80
290	17.08	5	111.48	0	1.5	2.34	12	61	78
291	17.09	5	138	0	1.5	3.02	43.4	62	79
292	17.10	5	262.27	0	1.5	1.52	15.3	62	79
293	17.11	5	298.45	0	1.5	4.1	43.4	62	79
294	17.12	5	410.21	0	1.5	5.52	22.7	54	73
295	17.13	5	320.24	0	3	4.33	28.9	63	80
296	18.01	5	95.92	0	1.5	2.3	12	58	76
298	18.03	5	178.76	0	1.5	5.12	12	62	79
299	18.04	5	136.19	0	1.5	4.62	12	61	78
301	18.06	5	74.77	0	1.5	2.22	12	58	76
302	18.07	5	153.74	0	1.5	4.48	12	64	80
303	18.08	5	244	0	1.5	5.08	12	66	81
304	18.09	5	112.25	0	1.5	4.3	12	58	76
305	18.10	5	112.36	0	1.5	3.54	12	64	80
306	18.11	5	226.56	0	1.5	4.38	12	62	79
307	18.12	5	228.18	0	1.5	4.48	12	62	79
308	19.01	5	200.88	0	1.5	4.44	12	57	75
309	19.02	5	134.95	0	1.5	3.72	12	57	75
310	19.03	5	125.54	0	1.5	3.78	12	64	80
312	19.05	5	37.68	0	1.5	1.88	12	64	80
313	19.06	5	98.19	0	1.5	4.7	12	64	80
314	19.07	5	133.93	0	1.5	4.08	12	66	81
315	19.08	5	167.71	0	1.5	6	12	65	81

Calibrated Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *	CN AMC III*
316	19.09	5	211.25	0	1.5	5.9	12	65	81
317	19.10	5	115.17	0	1.5	2.88	12	66	82
321	19.14	5	132.1	0	1.5	2.7	12	64	80
322	19.15	5	125.61	0	1.5	3.08	12	64	80
323	19.16	5	122.71	0	1.5	3.3	12	65	81
324	19.17	5	98.58	0	1.5	2.88	12	64	80
325	19.18	5	246.11	0	1.5	4.82	12	64	80
326	19.19	5	72.43	0	1.5	1.84	12	64	80
327	19.20	5	258	0	1.5	4.22	12	62	79
328	20.01	5	139.12	0	1.5	3.96	12	60	78
329	20.02	5	219.14	0	1.5	6.1	12	65	81
330	20.03	5	23.23	0	1.5	1.64	12	50	69
331	20.04	5	159.69	0	1.5	3.7	12	58	76
332	20.05	5	191.39	0	1.5	4.6	12	64	80
333	20.06	5	198.86	0	1.5	4.18	12	64	80
334	20.07	5	217.96	0	1.5	4.72	12	64	80
339	21.05	5	153.35	0	1.5	3.44	12	50	69
342	21.08	5	185.48	0	1.5	5.94	12	58	76
343	21.09	5	84.95	0	1.5	2.74	12	55	74
346	21.12	5	61.82	0	1.5	2.32	12	61	78
7278	22.01	5	88.17	0	1.5	1.71	10	83	92
7351	22.02	5	56.36	0	1.5	1.37	10	80	90
7356	22.03	5	37.99	0	1.5	0.84	10	87	94
7365	22.04	5	72.49	0	1.5	1.62	10	89	95
7361	22.05	5	148.89	0	1.5	3.12	10	72	86
7364	22.06	5	125.59	0	1.5	2.45	10	76	88
7283	22.07	5	78.78	0	1.5	1.98	10	87	94
7287	22.08	5	38.86	0	1.5	0.95	10	83	92
7292	22.09	5	9.03	0	1.5	0.41	10	77	89
7348	22.10	5	36.39	0	1.5	1.44	10	78	89
7296	22.11	5	32.26	0	1.5	1.01	10	87	94
7300	22.12	5	53.98	0	1.5	1.45	10	87	94
7303	22.13	5	87.75	0	1.5	2.16	10	87	94
7307	22.14	5	46.46	0	1.5	1.55	10	80	90
7308	22.15	5	45.11	0	1.5	1.6	10	87	94
7311	22.16	5	70.73	0	1.5	1.75	10	73	86
7313	22.17	5	22.43	0	1.5	0.7	10	81	91
7347	22.18	5	127.24	0	1.5	2.59	10	71	85
7318	22.19	5	55.21	0	1.5	1.51	10	89	95
7346	22.21	5	95.48	0	1.5	1.37	10	66	82
7337	22.26	5	68.13	0	1.5	1.69	10	80	90
7345	22.29	5	111.62	0	1.5	2.59	10	75	87
7371	23.06	5	22.37	0	1.5	0.48	10	82	91
7367	23.07	5	22.7	0	1.5	0.81	10	81	91
7368	23.09	5	56.19	0	1.5	2.24	10	86	93
7366	23.10	5	135.28	0	1.5	2.01	10	82	91
7427	24.04	5	68.57	0	1.5	1.04	10	86	93
7404	24.06	5	187.77	0	1.5	2.98	10	86	93
7409	24.08	5	143.85	0	1.5	2.48	10	86	93
7414	24.09	5	44.87	0	1.5	0.79	10	86	93
7417	24.10	5	90.03	0	1.5	1.52	10	89	95
7446	25.05	5	31.37	0	1.5	0.84	10	82	91
7438	25.11	5	25.11	0	1.5	0.65	10	78	89
7439	25.13	5	117.95	0	1.5	2.51	10	90	95
7437	25.14	5	31.24	0	1.5	0.82	10	85	93
7436	25.15	5	119.96	0	1.5	2.04	10	86	93
7482	26.01	5	13.79	0	3	0.5	10	94	97
7461	26.02	5	65.48	0	3	1.61	10	92	96
7457	26.05	5	6.84	0	3	0.33	10	79	90
7464	26.09	5	39.84	0	3	1.22	10	94	97
438	27.05	5	43.54	0	3	1.38	10	90	95
449	28.01	5	223.28	0	2.5	2.9	10	86	93
450	28.02	5	342.48	0	2.5	1.82	10	80	90
451	28.03	5	323.01	0	2.5	2.07	10	83	92
452	29.01	5	19.25	0	2.5	0.99	10	79	90
454	29.03	5	26.03	0	2.5	1.3	10	78	89
457	29.06	5	15.54	0	2.5	0.7	10	85	93
460	29.09	5	15.74	0	2.5	0.55	10	80	90
461	29.10	5	25.28	0	2.5	0.85	10	84	92
462	29.11	5	19.14	0	2.5	0.76	10	88	94
463	29.12	5	16.93	0	2.5	0.72	10	88	94
464	29.13	5	41.1	0	2.5	1.42	10	95	98
466	29.15	5	114.47	0	2.5	1.66	10	88	94

Calibrated Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *	CN AMC III*
467	29.16	5	244.92	0	2.5	3.08	10	83	92
468	30.01	5	20.42	0	2.5	0.68	10	78	89
469	30.02	5	341.04	0	2.5	2.47	10	89	95
470	30.03	5	55.31	0	2.5	1.42	10	78	89
471	30.04	5	352.36	0	2.5	3.05	10	89	95
472	30.05	5	112.75	0	2.5	1.58	10	88	94
473	30.06	5	146.61	0	2.5	2.41	10	86	93
474	30.07	5	76.84	0	2.5	1.96	10	86	93
475	30.08	5	28.62	0	2.5	0.49	10	88	94
476	30.09	5	168.42	0	2.5	2.33	10	84	92
477	30.10	5	123.27	0	2.5	1.63	10	90	95
478	31.01	5	280.69	0	2.5	2.65	10	86	93
479	31.02	5	258.77	0	2.5	3.98	10	83	92
480	31.03	5	316.89	0	2.5	2.03	10	86	93
481	31.04	5	138.58	0	2.5	1.96	10	84	92
482	32.01	5	11.92	0	2.5	0.94	10	83	92
485	32.04	5	12.12	0	2.5	1.11	10	84	92
487	32.06	5	27.22	0	2.5	1.29	10	80	90
491	32.10	5	32.42	0	2.5	1.06	10	75	87
494	32.13	5	7.11	0	2.5	0.5	10	76	88
496	32.15	5	16.91	0	2.5	1.04	10	84	92
499	32.18	5	52.08	0	2.5	1.2	10	90	95
500	32.19	5	42.74	0	2.5	1.22	10	91	96
501	32.20	5	25.17	0	2.5	0.64	10	88	94
502	32.21	5	17.61	0	2.5	0.52	10	80	90
503	32.22	5	54.85	0	2.5	1.28	10	91	96
504	32.23	5	19.72	0	2.5	0.68	10	80	90
505	32.24	5	48.82	0	2.5	1.15	10	88	94
506	32.25	5	18.03	0	2.5	0.6	10	79	90
507	32.26	5	110.45	0	2.5	1.8	10	89	95
508	32.27	5	104.03	0	2.5	1.8	10	86	93
509	32.28	5	141.15	0	2.5	1.52	10	91	96
511	33.01	5	77.7	0	2.5	2.66	10	83	92
512	33.02	5	107.01	0	2.5	2.86	10	83	92
518	33.08	5	16.84	0	2.5	0.49	10	80	90
520	33.10	5	23.15	0	2.5	0.88	10	88	94
524	33.14	5	99.55	0	2.5	1.34	10	96	98
525	33.15	5	58.49	0	2.5	1.34	10	95	98
526	33.16	5	84.72	0	2.5	1.27	10	95	98
527	34.01	5	69.88	0	2.5	1.88	10	89	95
528	34.02	5	243	0	2.5	3.96	10	88	94
529	34.03	5	101.81	0	2.5	1.49	10	94	97
530	34.04	5	99.56	0	2.5	2.33	10	90	95
531	34.05	5	221.44	0	2.5	2.96	10	91	96
532	34.06	5	109.68	0	2.5	2.38	10	88	94
533	34.07	5	148.96	0	2.5	2.34	10	86	93
534	34.08	5	362.89	0	2.5	3.65	10	85	93
535	34.09	5	368.77	0	2.5	3.29	10	80	90
536	35.01	5	87.09	0	2.5	1.72	10	91	96
542	35.07	5	7.14	0	2.5	0.83	10	86	93
544	35.09	5	28.06	0	2.5	0.68	10	83	92
546	35.11	5	47.52	0	2.5	0.82	10	91	96
548	35.13	5	214.45	0	2.5	3.75	10	89	95
549	35.14	5	32.02	0	2.5	0.77	10	90	95
554	36.04	5	33.85	0	2.5	1.04	10	83	92
555	36.05	5	80.53	0	2.5	1.19	10	88	94
557	36.07	5	228.9	0	2.5	2.7	10	90	95
558	36.08	5	79.28	0	2.5	1.08	10	91	96
559	36.09	5	87.86	0	2.5	1.5	10	89	95
560	36.10	5	339.61	0	2.5	2.38	10	90	95
561	36.11	5	146.57	0	2.5	2.09	10	89	95
562	37.01	5	306.23	0	2.5	2.26	10	89	95
563	37.02	5	26.85	0	2.5	0.77	10	90	95
564	37.03	5	145.14	0	2.5	2.18	10	85	93
565	37.04	5	141.48	0	2.5	2	10	86	93
566	37.05	5	365.26	0	2.5	2.99	10	80	90
567	37.06	5	105.51	0	2.5	1.46	10	88	94
568	37.07	5	235.25	0	2.5	3.74	10	88	94
569	37.08	5	284.55	0	2.5	4.37	10	89	95
570	37.09	5	299.42	0	2.5	3.11	10	86	93
571	37.10	5	125.88	0	2.5	1.63	10	94	97
572	37.11	5	188.91	0	2.5	1.91	10	95	98
573	37.12	5	192.77	0	2.5	3.67	10	94	97

Calibrated Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *	CN AMC III*
575	38.02	5	135.85	0	2.5	1.93	10	94	97
577	38.04	5	142.38	0	2.5	1.99	10	91	96
578	38.05	5	47.43	0	2.5	0.82	10	91	96
579	38.06	5	173.74	0	2.5	2.11	10	90	95
580	38.07	5	293.26	0	2.5	4.55	10	86	93
581	39.01	5	12.89	0	2.5	0.61	10	86	93
582	39.02	5	26.29	0	2.5	0.72	10	85	93
584	39.04	5	38.49	0	2.5	1.76	10	88	94
589	39.09	5	35.59	0	2.5	1.43	10	88	94
590	39.10	5	25.19	0	2.5	0.85	10	94	97
591	39.11	5	21.4	0	2.5	0.65	10	96	98
593	39.13	5	108.88	0	2.5	2.66	10	89	95
594	40.01	5	265.88	0	3	3.2	10	77	89
595	40.02	5	14.17	0	3	0.46	10	87	94
597	40.04	5	5.39	0	3	0.41	10	83	92
598	40.05	5	13.19	0	3	0.72	10	79	90
600	40.07	5	21.83	0	2.5	0.71	10	80	90
601	40.08	5	10.02	0	2.5	0.67	10	80	90
602	40.09	5	20.88	0	3	0.68	10	99	99
607	41.01	5	163.14	0	3	2.89	10	95	98
608	41.02	5	47.19	0	3	1.68	10	90	95
609	41.03	5	73.72	0	3	1.9	10	93	97
611	41.05	5	62.92	0	3	1.71	10	95	98
612	41.06	5	127.87	0	3	1.9	10	93	97
613	41.07	5	101.08	0	3	2.53	10	92	96
614	41.08	5	362.27	0	3	3.09	10	94	97
615	42.01	5	47.19	0	3	1.58	10	98	99
616	42.02	5	23.03	0	3	1.01	10	93	97
624	42.10	5	15.77	0	3	0.87	10	89	95
626	42.12	5	6.62	0	3	0.41	10	82	91
631	42.17	5	25.55	0	3	1.11	10	99	99
632	43.01	5	226.69	0	3	3.45	10	95	98
633	43.02	5	129.13	0	3	2.15	10	98	99
634	43.03	5	63.04	0	3	2.76	10	94	97
635	43.04	5	24.96	0	3	1	10	95	98
636	43.05	5	39.74	0	3	1.63	10	99	99
637	43.06	5	35.79	0	3	1.17	10	92	96
638	43.07	5	35.71	0	3	0.93	10	99	99
643	44.01	5	63.55	0	3	1.88	10	92	96
647	44.05	5	7.7	0	3	0.51	10	99	99
649	44.07	5	8.59	0	3	0.49	10	84	92
667	45.10	5	211.65	0	3	2.37	10	99	99
670	45.13	5	26.2	0	3	0.66	10	87	94
671	45.14	5	12.18	0	3	0.52	10	99	99
693	47.05	5	15.74	0	3	0.74	10	73	86

Calibrated Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA [mm]	CN AMC II *	CN AMC III *
2	01.02	5	52.7	0.406	0.354	2.71	40	0.25	0	2	2.7	592.7	0.013	0	5	61	78
42	06.06	5	34.47	0.529	0.465	1.84	40	0.25	0	2	1.8	479.4	0.013	0	5	94	98
43	06.07	5	6.599	0.701	0.698	1.75	40	0.25	0	2	1.8	209.8	0.013	0	5	69	84
44	06.08	5	40.39	0.336	0.289	2.63	40	0.25	0	2	2.6	518.9	0.013	0	5	72	86
47	06.11	5	32.86	0.395	0.355	3.23	40	0.25	0	2	3.2	468	0.013	0	5	81	91
48	06.12	5	89.4	0.342	0.309	2.75	40	0.25	0	2	2.8	772	0.013	0	5	69	84
49	06.13	5	36.07	0.474	0.419	3.3	40	0.25	0	2	3.3	490.4	0.013	0	5	81	91
50	06.14	5	8.6	0.317	0.282	2.36	40	0.25	0	2	2.4	239.4	0.013	0	5	71	85
54	06.18	5	6.61	0.592	0.533	1.55	40	0.25	0	2	1.6	209.9	0.013	0	5	72	86
61	07.04	5	94.71	0.184	0.161	3.29	40	0.25	0	2	3.3	794.6	0.013	0	5	71	85
79	08.07	5	31.82	0.385	0.282	4.79	40	0.25	0	2	4.8	460.6	0.013	0	5	72	86
80	08.08	5	25.2	0.488	0.396	3.5	40	0.25	0	2	3.5	409.9	0.013	0	5	99	100
86	09.01	5	144.6	0.499	0.454	3.38	40	0.25	0	2	3.4	981.8	0.013	0	5	89	95
87	09.02	5	59.73	0.518	0.463	4	40	0.25	0	2	4	631	0.013	0	5	89	95
88	09.03	5	154.3	0.551	0.502	2.81	40	0.25	0	2	2.8	1014	0.013	0	5	89	95
89	09.04	5	118.2	0.481	0.471	3.71	40	0.25	0	2	3.7	887.7	0.013	0	5	91	96
90	09.05	5	173.4	0.599	0.56	2.46	40	0.25	0	2	2.5	1075	0.013	0	5	91	96
91	09.06	5	11.41	0.665	0.594	3.25	40	0.25	0	2	3.3	275.8	0.013	0	5	91	96
92	09.07	5	85.84	0.841	0.764	3.88	40	0.25	0	2	3.9	756.5	0.013	0	5	90	95
101	10.03	5	113.3	0.597	0.538	3.48	40	0.25	0	2	3.5	869	0.013	0	5	87	94
104	10.06	5	24.32	0.608	0.541	3.33	40	0.25	0	2	3.3	402.7	0.013	0	5	90	96
135	11.03	5	88.21	0.66	0.605	2.52	40	0.25	0	2	2.5	766.9	0.013	0	5	93	97
141	13.01	5	54.06	0.384	0.346	4.11	40	0.25	0	2	4.1	600.3	0.013	0	5	84	92
143	13.03	5	95.71	0.342	0.304	5.48	40	0.25	0	2	5.5	798.8	0.013	0	5	69	84
144	13.04	5	29.33	0.662	0.602	6.02	40	0.25	0	2	6	442.2	0.013	0	5	97	99
146	13.06	5	43.68	0.428	0.379	6.86	40	0.25	0	2	6.9	539.6	0.013	0	5	77	88
147	13.07	5	191.1	0.633	0.574	4.88	40	0.25	0	2	4.9	1129	0.013	0	5	91	96
148	13.08	5	14.08	0.376	0.342	8.1	40	0.25	0	2	8.1	306.4	0.013	0	5	99	100
149	13.09	5	97.27	0.525	0.473	5.37	40	0.25	0	2	5.4	805.3	0.013	0	5	93	97
150	13.10	5	61.92	0.701	0.645	3.02	40	0.25	0	2	3	642.5	0.013	0	5	97	99
151	13.11	5	44.65	0.642	0.572	6.2	40	0.25	0	2	6.2	545.6	0.013	0	5	75	88
152	13.12	5	137.3	0.201	0.183	5.3	40	0.25	0	2	5.3	956.7	0.013	0	5	87	94
154	13.14	5	47.27	0.622	0.557	3.98	40	0.25	0	2	4	561.4	0.013	0	5	91	96
157	13.17	5	32.11	0.629	0.556	2.7	40	0.25	0	2	2.7	462.7	0.013	0	5	99	100
158	13.18	5	23.75	0.64	0.568	2.58	40	0.25	0	2	2.6	397.9	0.013	0	5	97	99
159	13.19	5	116.3	0.322	0.267	3.96	40	0.25	0	2	4	880.7	0.013	0	5	91	96
162	13.22	5	7.96	0.549	0.49	2.29	40	0.25	0	2	2.3	230.4	0.013	0	5	71	85
163	13.23	5	86.71	0.333	0.299	4.15	40	0.25	0	2	4.2	760.3	0.013	0	5	94	98
164	13.24	5	32.42	0.623	0.55	2.94	40	0.25	0	2	2.9	464.9	0.013	0	5	93	97
165	13.25	5	24.38	0.4	0.383	4.12	40	0.25	0	2	4.1	403.2	0.013	0	5	93	97
167	13.27	5	21.74	0.46	0.345	4.92	40	0.25	0	2	4.9	380.7	0.013	0	5	93	97
168	13.28	5	31.52	0.398	0.308	2.6	40	0.25	0	2	2.6	458.4	0.013	0	5	69	84
172	14.01	5	35.05	0.389	0.367	3.2	40	0.25	0	2	3.2	483.4	0.013	0	5	63	79
178	14.07	5	197.4	0.453	0.411	3.38	40	0.25	0	2	3.4	1147	0.013	0	5	63	79
179	14.08	5	14.77	0.483	0.434	1.65	40	0.25	0	2	1.7	313.8	0.013	0	5	48	68
180	14.09	5	110.3	0.491	0.442	2.92	40	0.25	0	2	2.9	857.6	0.013	0	5	52	72
188	14.17	5	141.3	0.41	0.377	3.28	40	0.25	0	2	3.3	970.4	0.013	0	5	63	79
190	14.19	5	139.6	0.208	0.193	4.85	40	0.25	0	2	4.9	964.8	0.013	0	5	80	90
191	14.20	5	26.33	0.435	0.384	2.45	40	0.25	0	2	2.5	419	0.013	0	5	62	79
192	14.21	5	12.11	0.444	0.389	3.42	40	0.25	0	2	3.4	284.1	0.013	0	5	61	78
193	14.22	5	20.2	0.478	0.42	2.47	40	0.25	0	2	2.5	367	0.013	0	5	60	77
194	14.23	5	14.88	0.492	0.458	3	40	0.25	0	2	3	315	0.013	0	5	60	77
195	14.24	5	36.17	0.53	0.483	2.27	40	0.25	0	2	2.3	491.1	0.013	0	5	60	77
196	14.25	5	6.37	0.521	0.465	3.65	40	0.25	0	2	3.7	206.1	0.013	0	5	56	74
197	14.26	5	31.86	0.188	0.17	3.07	40	0.25	0	2	3.1	460.9	0.013	0	5	60	77
200	14.29	5	53.21	0.538	0.491	4.03	40	0.25	0	2	4	595.6	0.013	0	5	57	75
201	14.30	5	34.26	0.514	0.462	2.88	40	0.25	0	2	2.9	477.9	0.013	0	5	59	77
202	14.31	5	20.02	0.492	0.455	2.88	40	0.25	0	2	2.9	365.3	0.013	0	5	56	74
203	14.32	5	39.04	0.474	0.428	3.82	40	0.25	0	2	3.8	510.2	0.013	0	5	56	74
205	14.34	5	89.47	0.257	0.254	3.09	40	0.25	0	2	3.1	772.3	0.013	0	5	69	84
206	14.35	5	25.81	0.263	0.235	3.98	40	0.25	0	2	4	414.8	0.013	0	5	69	84
209	14.38	5	31.82	0.262	0.231	3.55	40	0.25	0	2	3.6	460.6	0.013	0	5	75	87
210	14.39	5	49.96	0.367	0.334	2.22	40	0.25	0	2	2.2	577.1	0.013	0	5	52	72
211	14.40	5	13.38	0.522	0.459	2.55	40	0.25	0	2	2.6	298.7	0.013	0	5	52	72
212	14.41	5	15.18	0.527	0.479	3.89	40	0.25	0	2	3.9	318.1	0.013	0	5	56	74
213	14.42	5	23.82	0.482	0.422	3.3	40	0.25	0	2	3.3	398.5	0.013	0	5	55	73
215	14.44	5	53.45	0.44	0.414	4.45	40	0.25	0	2	4.5	596.9	0.013	0	5	56	74
216	14.45	5	27.3	0.495	0.45	2.82	40	0.25	0	2	2.8	426.6	0.013	0	5	57	75
217	14.46	5	15.75	0.508	0.456	2.29	40	0.25	0	2	2.3	324	0.013	0	5	48	68
219	14.48	5	15.59	0.53	0.477	3.12	40	0.25	0	2	3.1	322.4	0.013	0	5	56	74
220	14.49	5	6.32	0.498	0.45	3.62	40	0.25	0	2	3.6	205.3	0.013	0	5	48	68
221	14.50	5	59.43	0.35	0.319	3.35	40	0.25	0	2	3.4	629.4	0.013	0	5	55	73

Calibrated Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA [mm]	CN AMC II *	CN AMC III *
222	14.51	5	87.12	0.436	0.403	4.74	40	0.25	0	2	4.7	762.1	0.013	0	5	71	85
223	14.52	5	24.92	0.458	0.41	2.36	40	0.25	0	2	2.4	407.6	0.013	0	5	49	69
224	14.53	5	53.99	0.798	0.797	0.04	40	0.25	0	2	0	599.9	0.013	0	5	48	68
225	14.54	5	27.01	0.198	0.198	3.06	40	0.25	0	2	3.1	424.3	0.013	0	5	50	70
233	15.07	5	97.24	0.254	0.213	4	40	0.25	0	2	4	805.2	0.013	0	5	45	66
234	15.08	5	118.7	0.412	0.371	3.69	40	0.25	0	2	3.7	889.5	0.013	0	5	43	64
235	15.09	5	153	0.183	0.164	3.14	40	0.25	0	2	3.1	1010	0.013	0	5	48	68
238	15.12	5	110.5	0.178	0.13	4.35	40	0.25	0	2	4.4	858.3	0.013	0	5	64	80
241	15.15	5	61.54	0.365	0.294	3.64	40	0.25	0	2	3.6	640.5	0.013	0	5	59	77
243	15.17	5	137.3	0.212	0.182	3.76	40	0.25	0	2	3.8	956.7	0.013	0	5	64	80
244	15.18	5	38.33	0.374	0.33	3.83	40	0.25	0	2	3.8	505.5	0.013	0	5	56	74
245	15.19	5	74.32	0.486	0.452	3.62	40	0.25	0	2	3.6	703.9	0.013	0	5	61	78
246	15.20	5	49.17	0.474	0.435	3.37	40	0.25	0	2	3.4	572.5	0.013	0	5	64	80
253	15.27	5	189.8	0.37	0.354	3.09	40	0.25	0	2	3.1	1125	0.013	0	5	60	77
276	16.18	5	77.01	0.226	0.226	3.95	40	0.25	0	2	4	716.5	0.013	0	5	62	79
279	16.21	5	19.2	0.206	0.206	4.57	40	0.25	0	2	4.6	357.8	0.013	0	5	61	78
280	16.22	5	98.5	0.219	0.174	4.7	40	0.25	0	2	4.7	810.4	0.013	0	5	54	73
281	16.23	5	39.99	0.201	0.201	3.95	40	0.25	0	2	4	516.3	0.013	0	5	63	79
285	17.03	5	446.4	0.305	0.274	3.1	40	0.25	0	2	3.1	1725	0.013	0	5	64	80
286	17.04	5	267	0.238	0.214	2.95	40	0.25	0	2	3	1334	0.013	0	5	64	80
287	17.05	5	224	0.166	0.149	4.6	40	0.25	0	2	4.6	1222	0.013	0	5	64	80
297	18.02	5	70.58	0.436	0.402	2.64	40	0.25	0	2	2.6	686	0.013	0	5	68	83
300	18.05	5	27.1	0.47	0.411	3.67	40	0.25	0	2	3.7	425.1	0.013	0	5	65	81
311	19.04	5	69.65	0.176	0.154	3.68	40	0.25	0	2	3.7	681.4	0.013	0	5	64	80
318	19.11	5	45.97	0.21	0.197	4.54	40	0.25	0	2	4.5	553.6	0.013	0	5	64	80
319	19.12	5	19.51	0.482	0.437	1.83	40	0.25	0	2	1.8	360.7	0.013	0	5	65	81
320	19.13	5	51.32	0.187	0.162	4.46	40	0.25	0	2	4.5	584.9	0.013	0	5	62	79
335	21.01	5	158.2	0.372	0.338	4.04	40	0.25	0	2	4	1027	0.013	0	5	50	70
336	21.02	5	150.7	0.51	0.459	2.7	40	0.25	0	2	2.7	1002	0.013	0	5	69	84
337	21.03	5	170.1	0.254	0.198	3.88	40	0.25	0	2	3.9	1065	0.013	0	5	62	79
338	21.04	5	222.4	0.514	0.458	2.57	40	0.25	0	2	2.6	1218	0.013	0	5	68	83
340	21.06	5	12	0.401	0.361	2.28	40	0.25	0	2	2.3	282.8	0.013	0	5	66	82
341	21.07	5	22.14	0.488	0.432	2.65	40	0.25	0	2	2.7	384.2	0.013	0	5	65	81
344	21.10	5	60.69	0.53	0.479	2.81	40	0.25	0	2	2.8	636.1	0.013	0	5	65	81
345	21.11	5	100.7	0.43	0.388	3.07	40	0.25	0	2	3.1	819.5	0.013	0	5	66	82
347	21.13	5	26.84	0.17	0.152	4.6	40	0.25	0	2	4.6	423	0.013	0	5	65	81
348	21.14	5	57.65	0.546	0.49	2.95	40	0.25	0	2	3	620	0.013	0	5	62	79
349	21.15	5	24.9	0.331	0.269	4.73	40	0.25	0	2	4.7	407.4	0.013	0	5	56	74
350	21.16	5	101.1	0.418	0.355	2.78	40	0.25	0	2	2.8	820.8	0.013	0	5	65	81
7332	22.20	5	152.4	0.245	0.242	2.49	40	0.25	0	2	2.5	1008	0.013	0	5	73	86
7321	22.22	5	134.9	0.859	0.858	1.71	40	0.25	0	2	1.7	948.2	0.013	0	5	86	93
7324	22.23	5	64.27	0.728	0.72	2.62	40	0.25	0	2	2.6	654.6	0.013	0	5	86	93
7327	22.24	5	48.66	0.855	0.854	1.65	40	0.25	0	2	1.7	569.6	0.013	0	5	86	93
7328	22.25	5	11.6	0.585	0.585	2.16	40	0.25	0	2	2.2	278.1	0.013	0	5	86	93
7338	22.27	5	21.05	0.878	0.875	2.14	40	0.25	0	2	2.1	374.6	0.013	0	5	86	93
7342	22.28	5	25.06	0.785	0.785	1.35	40	0.25	0	2	1.4	408.7	0.013	0	5	86	93
7329	22.30	5	21.04	0.786	0.786	2.4	40	0.25	0	2	2.4	374.5	0.013	0	5	86	93
7344	22.31	5	94.32	0.497	0.453	2.31	40	0.25	0	2	2.3	793	0.013	0	5	86	93
7378	23.01	5	23.22	0.522	0.478	3.16	40	0.25	0	2	3.2	393.5	0.013	0	5	83	92
7375	23.02	5	30.05	0.423	0.417	3.2	40	0.25	0	2	3.2	447.6	0.013	0	5	80	90
7377	23.03	5	47.09	0.611	0.542	2.74	40	0.25	0	2	2.7	560.3	0.013	0	5	86	93
7374	23.04	5	38.55	0.524	0.474	3.54	40	0.25	0	2	3.5	507	0.013	0	5	83	92
7373	23.05	5	25.64	0.655	0.613	2.77	40	0.25	0	2	2.8	413.4	0.013	0	5	85	93
7370	23.08	5	45.99	0.607	0.549	2.68	40	0.25	0	2	2.7	553.7	0.013	0	5	86	93
7399	24.01	5	77.1	0.827	0.818	2.73	40	0.25	0	2	2.7	716.9	0.013	0	5	85	93
7422	24.02	5	104.6	0.455	0.454	2.16	40	0.25	0	2	2.2	835.1	0.013	0	5	86	93
7435	24.03	5	100.7	0.661	0.661	2.43	40	0.25	0	2	2.4	819.2	0.013	0	5	86	93
7433	24.05	5	114.5	0.554	0.554	2.21	40	0.25	0	2	2.2	873.7	0.013	0	5	86	93
7431	24.07	5	168.5	0.229	0.226	1.71	40	0.25	0	2	1.7	1060	0.013	0	5	86	93
7419	24.11	5	51.22	0.759	0.757	1.31	40	0.25	0	2	1.3	584.4	0.013	0	5	86	93
7451	25.01	5	19.56	0.606	0.553	2.94	40	0.25	0	2	2.9	361.1	0.013	0	5	82	91
7452	25.02	5	26.88	0.593	0.531	2.55	40	0.25	0	2	2.6	423.3	0.013	0	5	86	93
7454	25.03	5	28.66	0.579	0.52	2.59	40	0.25	0	2	2.6	437.1	0.013	0	5	86	93
7450	25.04	5	25.37	0.593	0.56	2.74	40	0.25	0	2	2.7	411.3	0.013	0	5	82	91
7447	25.06	5	91.56	0.669	0.609	2.41	40	0.25	0	2	2.4	781.3	0.013	0	5	86	93
7449	25.07	5	18.5	0.904	0.904	1.93	40	0.25	0	2	1.9	351.2	0.013	0	5	83	92
7445	25.08	5	92.44	0.924	0.924	2.2	40	0.25	0	2	2.2	785	0.013	0	5	85	93
7441	25.09	5	27.76	0.344	0.343	2.69	40	0.25	0	2	2.7	430.2	0.013	0	5	85	93
7443	25.10	5	113.9	0.345	0.342	1.54	40	0.25	0	2	1.5	871.4	0.013	0	5	86	93
7440	25.12	5	70.62	0.605	0.604	2.22	40	0.25	0	2	2.2	686.2	0.013	0	5	86	93
7460	26.03	5	16.97	0.473	0.431	2.76	40	0.25	0	2	2.8	336.4	0.013	0	5	99	100
7458	26.04	5	41.7	0.873	0.87	2.97	40	0.25	0	2	3	527.3	0.013	0	5	99	100

Calibrated Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA [mm]	CN AMC II *	CN AMC III *
7459	26.06	5	18.01	0.698	0.632	3.86	40	0.25	0	2	3.9	346.5	0.013	0	5	99	100
7455	26.07	5	10.42	0.322	0.305	4.17	40	0.25	0	2	4.2	263.6	0.013	0	5	80	90
7456	26.08	5	10.46	0.718	0.66	2.4	40	0.25	0	2	2.4	264.1	0.013	0	5	86	93
7475	26.10	5	88.28	0.257	0.248	4.4	40	0.25	0	2	4.4	767.2	0.013	0	5	96	98
7478	26.11	5	37.97	0.506	0.503	3.32	40	0.25	0	2	3.3	503.1	0.013	0	5	97	99
7480	26.12	5	4.85	0.888	0.888	3.59	40	0.25	0	2	3.6	179.8	0.013	0	5	99	100
7481	26.13	5	28.15	0.804	0.804	2.96	40	0.25	0	2	3	433.2	0.013	0	5	97	99
7473	26.14	5	92.43	0.477	0.466	3.63	40	0.25	0	2	3.6	785	0.013	0	5	99	100
7472	26.15	5	90.34	0.925	0.925	2.33	40	0.25	0	2	2.3	776.1	0.013	0	5	99	100
7471	26.16	5	81.76	0.754	0.754	3.23	40	0.25	0	2	3.2	738.3	0.013	0	5	99	100
434	27.01	5	80.38	0.427	0.386	4.68	40	0.25	0	2	4.7	732	0.013	0	5	75	88
435	27.02	5	862.2	0.815	0.803	3.98	40	0.25	0	2	4	2397	0.013	0	5	90	95
436	27.03	5	311.6	0.524	0.485	4.61	40	0.25	0	2	4.6	1441	0.013	0	5	75	88
437	27.04	5	489.6	0.47	0.434	4.61	40	0.25	0	2	4.6	1807	0.013	0	5	87	94
439	27.06	5	38.2	0.519	0.519	4.08	40	0.25	0	2	4.1	504.7	0.013	0	5	96	98
440	27.07	5	319.9	0.537	0.536	3.92	40	0.25	0	2	3.9	1460	0.013	0	5	87	94
441	27.08	5	251.1	0.813	0.813	3.5	40	0.25	0	2	3.5	1294	0.013	0	5	97	99
442	27.09	5	145.6	0.286	0.276	5.16	40	0.25	0	2	5.2	985.3	0.013	0	5	91	96
443	27.10	5	211.9	0.6	0.566	4.5	40	0.25	0	2	4.5	1189	0.013	0	5	87	94
444	27.11	5	15.71	0.584	0.517	3.87	40	0.25	0	2	3.9	323.6	0.013	0	5	99	100
445	27.12	5	93.72	0.513	0.476	5.03	40	0.25	0	2	5	790.4	0.013	0	5	83	92
446	27.13	5	205.3	0.656	0.594	3.95	40	0.25	0	2	4	1170	0.013	0	5	96	98
447	27.14	5	69.06	0.78	0.744	3.33	40	0.25	0	2	3.3	678.5	0.013	0	5	97	99
448	27.15	5	43.75	0.624	0.569	2.93	40	0.25	0	2	2.9	540.1	0.013	0	5	96	98
453	29.02	5	17.87	0.612	0.564	2.78	40	0.25	0	2	2.8	345.2	0.013	0	5	85	93
455	29.04	5	46.1	0.765	0.699	2.32	40	0.25	0	2	2.3	554.4	0.013	0	5	87	94
456	29.05	5	93.68	0.681	0.625	2.84	40	0.25	0	2	2.8	790.3	0.013	0	5	87	94
458	29.07	5	16.94	0.748	0.695	2.11	40	0.25	0	2	2.1	336.1	0.013	0	5	87	94
459	29.08	5	44.48	0.633	0.579	2.57	40	0.25	0	2	2.6	544.6	0.013	0	5	87	94
465	29.14	5	5.64	0.898	0.853	2.81	40	0.25	0	2	2.8	193.9	0.013	0	5	89	95
483	32.02	5	24.28	0.717	0.653	2.71	40	0.25	0	2	2.7	402.3	0.013	0	5	86	93
484	32.03	5	26.39	0.735	0.659	2.71	40	0.25	0	2	2.7	419.4	0.013	0	5	83	92
486	32.05	5	33.96	0.708	0.639	2.58	40	0.25	0	2	2.6	475.8	0.013	0	5	87	94
488	32.07	5	5.77	0.755	0.69	3.79	40	0.25	0	2	3.8	196.1	0.013	0	5	95	98
489	32.08	5	23.3	0.702	0.639	2.15	40	0.25	0	2	2.2	394.1	0.013	0	5	95	98
490	32.09	5	28.07	0.73	0.663	2.05	40	0.25	0	2	2.1	432.6	0.013	0	5	95	98
492	32.11	5	34.89	0.717	0.651	2.92	40	0.25	0	2	2.9	482.3	0.013	0	5	81	91
493	32.12	5	25.23	0.771	0.701	2.19	40	0.25	0	2	2.2	410.1	0.013	0	5	87	94
495	32.14	5	17.27	0.641	0.569	2.84	40	0.25	0	2	2.8	339.3	0.013	0	5	83	92
497	32.16	5	53.68	0.736	0.677	1.89	40	0.25	0	2	1.9	598.2	0.013	0	5	87	94
498	32.17	5	15.19	0.77	0.697	2.33	40	0.25	0	2	2.3	318.2	0.013	0	5	89	95
510	32.29	5	36.01	0.49	0.49	2.26	40	0.25	0	2	2.3	490	0.013	0	5	90	96
513	33.03	5	69.23	0.647	0.549	2.16	40	0.25	0	2	2.2	679.4	0.013	0	5	95	98
514	33.04	5	24	0.655	0.592	2.21	40	0.25	0	2	2.2	400	0.013	0	5	87	94
515	33.05	5	55.84	0.842	0.801	1.97	40	0.25	0	2	2	610.1	0.013	0	5	90	96
516	33.06	5	59.78	0.772	0.718	2.86	40	0.25	0	2	2.9	631.3	0.013	0	5	85	93
517	33.07	5	15.44	0.649	0.591	2.63	40	0.25	0	2	2.6	320.8	0.013	0	5	93	97
519	33.09	5	26.93	0.627	0.575	1.75	40	0.25	0	2	1.8	423.7	0.013	0	5	87	94
521	33.11	5	126.1	0.609	0.554	3.37	40	0.25	0	2	3.4	917	0.013	0	5	82	91
522	33.12	5	142.3	0.707	0.642	2.85	40	0.25	0	2	2.9	973.8	0.013	0	5	87	94
523	33.13	5	177.2	0.65	0.593	2.64	40	0.25	0	2	2.6	1087	0.013	0	5	87	94
537	35.02	5	44.68	0.497	0.352	2.96	40	0.25	0	2	3	545.8	0.013	0	5	93	97
538	35.03	5	105.1	0.395	0.282	2.75	40	0.25	0	2	2.8	837.1	0.013	0	5	93	97
539	35.04	5	68.79	0.326	0.245	3.35	40	0.25	0	2	3.4	677.2	0.013	0	5	89	95
540	35.05	5	151.4	0.317	0.226	2.75	40	0.25	0	2	2.8	1005	0.013	0	5	90	96
541	35.06	5	44.48	0.732	0.664	2.08	40	0.25	0	2	2.1	544.6	0.013	0	5	90	96
543	35.08	5	33.87	0.697	0.627	2.11	40	0.25	0	2	2.1	475.2	0.013	0	5	90	96
545	35.10	5	30.53	0.472	0.342	2.63	40	0.25	0	2	2.6	451.2	0.013	0	5	95	98
547	35.12	5	74.34	0.496	0.492	1.98	40	0.25	0	2	2	704	0.013	0	5	92	96
550	35.15	5	69.88	0.613	0.563	2.42	40	0.25	0	2	2.4	682.5	0.013	0	5	90	96
551	36.01	5	81.52	0.358	0.253	2.94	40	0.25	0	2	2.9	737.2	0.013	0	5	92	96
552	36.02	5	13.96	0.262	0.182	3.84	40	0.25	0	2	3.8	305.1	0.013	0	5	85	93
553	36.03	5	13.23	0.288	0.226	3.19	40	0.25	0	2	3.2	297	0.013	0	5	87	94
556	36.06	5	9.05	0.494	0.345	2.32	40	0.25	0	2	2.3	245.6	0.013	0	5	92	96
574	38.01	5	98.5	0.282	0.204	2.64	40	0.25	0	2	2.6	810.4	0.013	0	5	90	96
576	38.03	5	69.53	0.275	0.21	3	40	0.25	0	2	3	680.8	0.013	0	5	87	94
583	39.03	5	169.3	0.711	0.637	1.74	40	0.25	0	2	1.7	1062	0.013	0	5	92	96
585	39.05	5	9.62	0.749	0.689	2.49	40	0.25	0	2	2.5	253.3	0.013	0	5	93	97
586	39.06	5	15.84	0.66	0.59	2.29	40	0.25	0	2	2.3	325	0.013	0	5	89	95
587	39.07	5	23.55	0.75	0.681	1.72	40	0.25	0	2	1.7	396.2	0.013	0	5	93	97
588	39.08	5	8.81	0.668	0.601	1.88	40	0.25	0	2	1.9	242.4	0.013	0	5	89	95
592	39.12	5	35.08	0.64	0.549	1.95	40	0.25	0	2	2	483.6	0.013	0	5	93	97

Calibrated Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA [mm]	CN AMC II *	CN AMC III *
596	40.03	5	84.65	0.64	0.638	3.27	40	0.25	0	2	3.3	751.2	0.013	0	5	93	97
599	40.06	5	23.75	0.493	0.467	3.3	40	0.25	0	2	3.3	397.9	0.013	0	5	91	96
603	40.10	5	151.1	0.905	0.905	3.09	40	0.25	0	2	3.1	1004	0.013	0	5	96	98
604	40.11	5	50.69	0.877	0.877	3.8	40	0.25	0	2	3.8	581.3	0.013	0	5	97	99
605	40.12	5	55.35	0.85	0.85	3.5	40	0.25	0	2	3.5	607.5	0.013	0	5	96	98
606	40.13	5	48.23	0.556	0.513	5.51	40	0.25	0	2	5.5	567	0.013	0	5	71	85
610	41.04	5	45.53	0.258	0.187	2.48	40	0.25	0	2	2.5	550.9	0.013	0	5	93	97
617	42.03	5	24.7	0.375	0.322	4.79	40	0.25	0	2	4.8	405.8	0.013	0	5	99	100
618	42.04	5	19.91	0.929	0.929	3.27	40	0.25	0	2	3.3	364.3	0.013	0	5	99	100
619	42.05	5	13.67	0.25	0.245	4.28	40	0.25	0	2	4.3	301.9	0.013	0	5	96	98
620	42.06	5	22.7	0.551	0.507	2.66	40	0.25	0	2	2.7	389	0.013	0	5	97	99
621	42.07	5	5.64	0.677	0.677	2.84	40	0.25	0	2	2.8	193.9	0.013	0	5	97	99
622	42.08	5	19.03	0.594	0.583	2.75	40	0.25	0	2	2.8	356.2	0.013	0	5	99	100
623	42.09	5	38.8	0.665	0.619	3.27	40	0.25	0	2	3.3	508.6	0.013	0	5	99	100
625	42.11	5	65	0.675	0.613	3.72	40	0.25	0	2	3.7	658.3	0.013	0	5	96	98
627	42.13	5	7.39	0.718	0.668	5.45	40	0.25	0	2	5.5	222	0.013	0	5	94	98
628	42.14	5	61.63	0.596	0.549	3.5	40	0.25	0	2	3.5	641	0.013	0	5	94	98
629	42.15	5	38.42	0.413	0.324	3.36	40	0.25	0	2	3.4	506.1	0.013	0	5	94	98
630	42.16	5	32.01	0.657	0.601	2.55	40	0.25	0	2	2.6	462	0.013	0	5	99	100
639	43.08	5	34.03	0.761	0.748	2.37	40	0.25	0	2	2.4	476.3	0.013	0	5	99	100
640	43.09	5	64.79	0.431	0.427	3.74	40	0.25	0	2	3.7	657.2	0.013	0	5	91	96
641	43.10	5	202.7	0.219	0.217	3.08	40	0.25	0	2	3.1	1163	0.013	0	5	93	97
642	43.11	5	145.3	0.849	0.845	2.97	40	0.25	0	2	3	984.1	0.013	0	5	97	99
644	44.02	5	42.53	0.234	0.227	4.08	40	0.25	0	2	4.1	532.5	0.013	0	5	97	99
645	44.03	5	36.24	0.389	0.389	4.5	40	0.25	0	2	4.5	491.5	0.013	0	5	94	98
646	44.04	5	33.59	0.587	0.585	4.22	40	0.25	0	2	4.2	473.2	0.013	0	5	99	100
648	44.06	5	45.16	0.774	0.743	3.36	40	0.25	0	2	3.4	548.7	0.013	0	5	99	100
650	44.08	5	67.75	0.615	0.579	3.93	40	0.25	0	2	3.9	672.1	0.013	0	5	94	98
651	44.09	5	21.65	0.23	0.215	5.34	40	0.25	0	2	5.3	379.9	0.013	0	5	91	96
652	44.10	5	16.5	0.667	0.603	3.71	40	0.25	0	2	3.7	331.7	0.013	0	5	93	97
653	44.11	5	44.62	0.56	0.51	2.49	40	0.25	0	2	2.5	545.4	0.013	0	5	99	100
654	44.12	5	9.65	0.615	0.559	2.04	40	0.25	0	2	2	253.6	0.013	0	5	99	100
655	44.13	5	4.4	0.707	0.642	4.05	40	0.25	0	2	4.1	171.3	0.013	0	5	97	99
656	44.14	5	131.8	0.495	0.452	3.54	40	0.25	0	2	3.5	937.5	0.013	0	5	96	98
657	44.15	5	43.26	0.636	0.581	2.61	40	0.25	0	2	2.6	537	0.013	0	5	97	99
658	45.01	5	248.6	0.515	0.471	4.64	40	0.25	0	2	4.6	1287	0.013	0	5	93	97
659	45.02	5	230.9	0.449	0.416	4.26	40	0.25	0	2	4.3	1241	0.013	0	5	94	98
660	45.03	5	275.1	0.416	0.388	3.47	40	0.25	0	2	3.5	1354	0.013	0	5	96	98
661	45.04	5	194.6	0.57	0.516	3.09	40	0.25	0	2	3.1	1139	0.013	0	5	96	98
662	45.05	5	163.6	0.475	0.453	4.05	40	0.25	0	2	4.1	1044	0.013	0	5	94	98
663	45.06	5	195.3	0.511	0.509	3.68	40	0.25	0	2	3.7	1141	0.013	0	5	91	96
664	45.07	5	358.6	0.764	0.743	3	40	0.25	0	2	3	1546	0.013	0	5	96	98
665	45.08	5	284.9	0.708	0.671	3.29	40	0.25	0	2	3.3	1378	0.013	0	5	94	98
666	45.09	5	172.5	0.692	0.684	3.23	40	0.25	0	2	3.2	1072	0.013	0	5	97	99
668	45.11	5	24.15	0.353	0.353	4.67	40	0.25	0	2	4.7	401.3	0.013	0	5	97	99
669	45.12	5	24.8	0.319	0.315	5.06	40	0.25	0	2	5.1	406.6	0.013	0	5	99	100
672	46.01	5	52.67	0.205	0.205	3.15	40	0.25	0	2	3.2	592.6	0.013	0	5	80	90
673	46.02	5	149.3	0.419	0.411	3.01	40	0.25	0	2	3	997.6	0.013	0	5	80	90
674	46.03	5	32.83	0.83	0.83	1.29	40	0.25	0	2	1.3	467.8	0.013	0	5	82	91
675	46.04	5	61.32	0.389	0.389	3.96	40	0.25	0	2	4	639.4	0.013	0	5	81	91
676	46.05	5	60.96	0.624	0.624	2.13	40	0.25	0	2	2.1	637.5	0.013	0	5	81	91
677	46.06	5	12.51	0.85	0.85	1.57	40	0.25	0	2	1.6	288.8	0.013	0	5	80	90
678	46.07	5	93.63	0.787	0.787	2.34	40	0.25	0	2	2.3	790.1	0.013	0	5	80	90
679	46.08	5	21.06	0.843	0.843	1.98	40	0.25	0	2	2	374.7	0.013	0	5	82	91
680	46.09	5	47.71	0.553	0.553	2.07	40	0.25	0	2	2.1	564	0.013	0	5	83	92
681	46.10	5	343.2	0.795	0.794	1.63	40	0.25	0	2	1.6	1513	0.013	0	5	81	91
682	46.11	5	120.3	0.831	0.83	1.83	40	0.25	0	2	1.8	895.7	0.013	0	5	85	93
683	46.12	5	36.92	0.581	0.581	3.42	40	0.25	0	2	3.4	496.1	0.013	0	5	81	91
684	46.13	5	71.88	0.837	0.837	2.22	40	0.25	0	2	2.2	692.2	0.013	0	5	81	91
685	46.14	5	42.17	0.72	0.72	2.04	40	0.25	0	2	2	530.2	0.013	0	5	82	91
686	46.15	5	88.14	0.289	0.282	2.28	40	0.25	0	2	2.3	766.6	0.013	0	5	81	91
687	46.16	5	19.4	0.653	0.598	2.42	40	0.25	0	2	2.4	359.6	0.013	0	5	85	93
688	46.17	5	181.6	0.584	0.541	2.5	40	0.25	0	2	2.5	1100	0.013	0	5	82	91
689	47.01	5	595.7	0.495	0.458	3.37	40	0.25	0	2	3.4	1993	0.013	0	5	81	91
690	47.02	5	231.6	0.611	0.573	2.53	40	0.25	0	2	2.5	1242	0.013	0	5	81	91
691	47.03	5	321.2	0.514	0.483	3.28	40	0.25	0	2	3.3	1463	0.013	0	5	81	91
692	47.04	5	25.74	0.803	0.803	1.47	40	0.25	0	2	1.5	414.3	0.013	0	5	80	90
694	47.06	5	74.95	0.526	0.526	2.78	40	0.25	0	2	2.8	706.9	0.013	0	5	81	91
695	48.01	5	102.6	0.304	0.276	2.89	40	0.25	0	2	2.9	827.2	0.013	0	5	62	79
696	48.02	5	176.8	0.545	0.514	2.79	40	0.25	0	2	2.8	1086	0.013	0	5	69	84
697	48.03	5	576.1	0.614	0.57	3.56	40	0.25	0	2	3.6	1960	0.013	0	5	69	84
698	48.04	5	606	0.666	0.641	2.85	40	0.25	0	2	2.9	2010	0.013	0	5	68	83

Calibrated Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA [mm]	CN AMC II *	CN AMC III *
699	48.05	5	835.6	0.636	0.605	2.87	40	0.25	0	2	2.9	2360	0.013	0	5	71	85
700	48.06	5	595.9	0.642	0.605	2.63	40	0.25	0	2	2.6	1993	0.013	0	5	73	86
701	48.07	5	582.5	0.594	0.557	3.39	40	0.25	0	2	3.4	1971	0.013	0	5	80	90
702	48.08	5	333.4	0.473	0.443	3.68	40	0.25	0	2	3.7	1491	0.013	0	5	80	90
703	49.01	5	222.3	0.585	0.543	5.16	40	0.25	0	2	5.2	1217	0.013	0	5	81	91
704	49.02	5	168	0.561	0.511	4.02	40	0.25	0	2	4	1058	0.013	0	5	77	89
705	49.03	5	648.7	0.761	0.736	2.16	40	0.25	0	2	2.2	2080	0.013	0	5	80	90
706	49.04	5	426.3	0.526	0.506	4.88	40	0.25	0	2	4.9	1686	0.013	0	5	91	96
707	49.05	5	130.7	0.584	0.554	5.27	40	0.25	0	2	5.3	933.4	0.013	0	5	93	97
708	49.06	5	428.5	0.774	0.742	3.41	40	0.25	0	2	3.4	1690	0.013	0	5	93	97
709	49.07	5	489.8	0.637	0.609	3.92	40	0.25	0	2	3.9	1807	0.013	0	5	89	95
710	50.01	5	520.9	0.558	0.52	3.3	40	0.25	0	2	3.3	1863	0.013	0	5	66	81
711	50.02	5	554.1	0.63	0.585	2.02	40	0.25	0	2	2	1922	0.013	0	5	66	81
712	50.03	5	184.8	0.515	0.469	3.32	40	0.25	0	2	3.3	1110	0.013	0	5	69	84
713	50.04	5	525.5	0.545	0.493	3.25	40	0.25	0	2	3.3	1872	0.013	0	5	80	90
714	50.05	5	390.4	0.457	0.428	3.03	40	0.25	0	2	3	1613	0.013	0	5	64	81

Appendix III

Model Calibration Results

Calibration Results - 02HC025 Elder Mills

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	07-Jul-13	44.42	51.97	17.0%	16.0%
	31-Jul-13	9.31	12.40	33.2%	
	28-May-13	11.35	11.10	-2.2%	
Runoff Volume	07-Jul-13	2987044.2	3095444.1	3.6%	4.6%
	31-Jul-13	965016.0	1175403.5	21.8%	
	28-May-13	1189029.6	1049868.6	-11.7%	

Validation Results - 02HC025 Elder Mills

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	27-Jul-13	4.41	6.59	49.4%	36.6%
	05-Sep-14	11.29	13.98	23.8%	
Runoff Volume	27-Jul-13	595147.2	1015701.3	70.7%	63.0%
	05-Sep-14	965016.0	1499461.8	55.4%	

Calibration Results - 02HC027 Black Creek at Scarlett Road

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	09-Jul-06	29.68	66.19	123.0%	
	19-Aug-05	85.70	484.40	465.2%	
	07-Jul-13	201.00	274.30	36.5%	8.3%
	28-May-13	122.10	90.40	-26.0%	
	31-Jul-13	29.20	33.40	14.4%	
Runoff Volume	09-Jul-06	1562771.70	3495918.60	123.7%	
	19-Aug-05	3040603.2	5737057.48	88.7%	
	07-Jul-13	5826609.0	4927898.5	-15.4%	0.6%
	28-May-13	2437409.70	2079470.40	-14.7%	
	31-Jul-13	1131115.5	1491319.4	31.8%	

Validation Results - 02HC027 Black Creek at Scarlett Road

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	29-Nov-05	24.50	25.50	4.1%	
	27-Jul-14	26.90	94.97	253.0%	
	15-May-07	51.30	35.40	-31.0%	-17.2%
	14-Sep-08	28.7	21.9	-23.7%	
	05-Sep-14	21.49	22.18	3.2%	
Runoff Volume	29-Nov-05	796743.90	1230779.50	54.5%	
	27-Jul-14	1096266.6	2591233.5	136.4%	
	15-May-07	1367184.6	1901663.1	39.1%	23.3%
	14-Sep-08	930590.10	1098358.40	18.0%	
	05-Sep-14	734831.1	828283.8	12.7%	

Calibration Results - 02HC031 West Humber at Highway 7

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	09-Jul-06	14.98	68.51	357.3%	
	19-Aug-05	87.20	186.30	113.6%	
	07-Jul-13	84.29	78.15	-7.3%	-23.6%
	31-Jul-13	14.28	13.86	-2.9%	
	28-May-13	62.05	24.38	-60.7%	
Runoff Volume	09-Jul-06	1695862.8	6031704.1	255.7%	
	19-Aug-05	265630.0	7601414.6	2761.7%	
	07-Jul-13	4599027.9	4111768.4	-10.6%	-16.7%
	31-Jul-13	1200835.8	1221940.40	1.8%	
	28-May-13	4470582.6	2631977.5	-41.1%	

Validation Results - 02HC031 West Humber at Highway 7

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	29-Nov-05	33.47	8.72	-73.9%	-11.0%
	27-Jul-14	17.80	14.80	-16.9%	
	15-May-07	13.65	11.07	-18.9%	
	14-Sep-08	4.32	6.58	52.3%	
	05-Sep-14	6.21	6.37	2.6%	
Runoff Volume	29-Nov-05	2847522.6	958509.8	-66.3%	5.6%
	27-Jul-14	1153783.8	1517471.4	31.5%	
	15-May-07	1597645.8	1582903.6	-0.9%	
	14-Sep-08	541326.60	866281.80	60.0%	
	05-Sep-14	952005.6	986179.9	3.6%	

Calibration Results - 02HC047 Humber River at Palgrave

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	09-Jul-06	2.63	5.99	127.8%	
	07-Jul-13	5.32	7.30	37.2%	13.0%
	31-Jul-13	6.07	6.16	1.5%	
	28-May-13	5.096	5.10	0.16%	
Runoff Volume	09-Jul-06	384647.4	649432.2	68.8%	
	07-Jul-13	557779.5	553084.2	-0.8%	-4.7%
	31-Jul-13	465899.4	505294.1	8.5%	
	28-May-13	540948.6	424044.80	-21.6%	

Validation Results - 02HC047 Humber River at Palgrave

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	27-Jul-06	3.70	3.97	7.3%	17.2%
	15-May-07	3.44	3.98	15.7%	
	14-Sep-08	5.580	7.18	28.7%	
	05-Sep-14	4.26	6.65	56.1%	
Runoff Volume	27-Jul-06	303134.4	331236.2	9.3%	6.1%
	15-May-07	502237.8	483640.9	-3.7%	
	14-Sep-08	578933.1	652189.50	12.7%	
	05-Sep-14	376771.8	436659	15.9%	

Calibration Results - 02HC003 Humber River at Weston Road

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	19-Aug-05	203.18	366.12	80.2%	
	09-Jul-13	70.04	10.11	-85.6%	
	07-Jul-13	261.76	271.13	3.6%	5.8%
	31-Jul-13	57.79	62.39	8.0%	
	28-May-13	102.85	108.86	5.8%	
Runoff Volume	19-Aug-05	13083799.5	25829665.3	97.4%	
	09-Jul-13	10739182.5	755669.4	-93.0%	
	07-Jul-13	23277245.4	23222318.5	-0.2%	2.7%
	31-Jul-13	5655169.8	6418476.60	13.5%	
	28-May-13	8221210.2	7789979.8	-5.2%	

Validation Results - 02HC003 Humber River at Weston Road

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	27-Jul-14	46.3	69.7	50.5%	16.4%
	15-May-07	50.56	55.64	10.0%	
	29-Nov-05	75.50	39.00	-48.3%	
	05-Sep-14	31.18	51.31	64.6%	
	14-Sep-08	39.89	41.96	5.2%	
Runoff Volume	27-Jul-14	4666390.2	7856557.8	68.4%	12.5%
	15-May-07	8906934.6	8644341.1	-2.9%	
	29-Nov-05	9799999.2	5077043.2	-48.2%	
	05-Sep-14	4151026.2	6288926.80	51.5%	
	14-Sep-08	6216756.3	5841210.3	-6.0%	

Calibration Results - 02HC009 East Humber River at Pine Grove

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	19-Aug-05	11.69	72.15	517.2%	
	07-Jul-13	68.40	30.87	-54.9%	13.6%
	09-Jul-06	11.18	20.94	87.3%	
	28-May-13	14.84	16.09	8.4%	
Runoff Volume	19-Aug-05	1254237.3	1998883.8	59.4%	
	07-Jul-13	4286599.2	2707984.6	-36.8%	33.5%
	09-Jul-06	1035057.6	2291565.86	121.4%	
	28-May-13	621851.4	721636.7	16.0%	

Validation Results - 02HC009 East Humber River at Pine Grove

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	14-Sep-08	6.11	7.77	27.2%	16.3%
	27-Jul-14	20.00	21.20	6.0%	
	29-Nov-05	6.94	8.03	15.7%	
	15-May-07	7.06	11.50	62.9%	
	05-Sep-14	11.85	20.38	72.0%	
Runoff Volume	14-Sep-08	687767.4	970069.6	41.0%	25.2%
	27-Jul-14	1351746.9	1751909.3	29.6%	
	29-Nov-05	795954.6	834531.90	4.8%	
	15-May-07	1088935.2	1592505.8	46.2%	
	05-Sep-14	1279402.2	1768531.1	38.2%	

Calibration Results - 02HC023 Cold Creek near Bolton

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	07-Jul-13	19.36	19.31	-0.26%	1.4%
	31-Jul-13	3.25	3.24	-0.31%	
	28-May-13	3.11	3.26	4.8%	
	19-Aug-05	3.73	21.18	467.8%	
	09-Jul-06	4.94	10.12	104.9%	
Runoff Volume	07-Jul-13	903659.4	821680.2	-9.07%	-8.3%
	31-Jul-13	148087.8	161632.9	9.15%	
	28-May-13	168361.2	126234.50	-25.0%	
	19-Aug-05	85366.8	683544.5	700.7%	
	09-Jul-06	143126.1	755669.4	428.0%	

Validation Results - 02HC023 Cold Creek near Bolton

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	14-Sep-08	1.98	2.43	22.7%	-7.2%
	15-May-07	1.46	1.88	28.8%	
	29-Nov-05	3.63	0.98	-73.0%	
	27-Jul-14	0.62	1.14	83.9%	
	05-Sep-14	4.65	5.12	10.1%	
Runoff Volume	14-Sep-08	117832.5	213134.0	80.9%	4.6%
	15-May-07	188284.5	200992.4	6.7%	
	29-Nov-05	224941.5	58674.40	-73.9%	
	27-Jul-14	35751.6	80801.8	126.0%	
	05-Sep-14	179407.8	362586.4	102.1%	

Calibration Results - 02HY053 Plunkett Creek

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	09-Jul-06	14.02	18.93	35.0%	19.0%
	19-Aug-05	66.68	68.60	2.9%	
Runoff Volume	09-Jul-06	1034352	1978444.8	91.3%	54.0%
	19-Aug-05	2007471.6	2342253.3	16.7%	

Validation Results - 02HY053 Plunkett Creek

Parameter	Event	Gauged	Predicted	% Difference	Average % Difference
Peak Flow	14-Sep-08	6.11	7.77	27.2%	32.0%
	27-Jul-14	20.01	21.17	5.8%	
	15-May-07	7.06	11.51	63.0%	
Runoff Volume	14-Sep-08	687767.40	970069.60	41.0%	39.0%
	27-Jul-14	1351746.9	1751909.3	29.6%	
	15-May-07	1088935.2	1592505.8	46.2%	

Appendix IV

Design Storm Model Results

Estimated Peak Flow - Existing Condition (with ponds)

Flow Node #	Hyd #	6hr						12hr						24hr						350yr	500yr
		2yr	5yr	10yr	25yr	50yr	100yr	2yr	5yr	10yr	25yr	50yr	100yr	2yr	5yr	10yr	25yr	50yr	100yr		
01.00	3933	1.61	3.10	4.77	6.57	8.03	9.59	2.26	3.98	5.87	7.85	9.45	11.13	2.66	4.47	6.42	8.44	10.05	11.75	17.23	18.78
01.10	735	1.61	3.11	4.78	6.58	8.05	9.61	2.27	3.99	5.89	7.86	9.47	11.15	2.67	4.47	6.43	8.46	10.07	11.77	17.28	18.83
01.20	7488	0.87	1.67	2.55	3.49	4.26	5.08	1.22	2.14	3.13	4.17	5.02	5.91	1.44	2.39	3.43	4.49	5.34	6.24	9.17	10.01
01.30	7487	0.75	1.45	2.22	3.06	3.75	4.45	1.04	1.84	2.71	3.62	4.34	5.10	1.22	2.05	2.94	3.86	4.58	5.34	7.78	8.45
02.00	7489	2.01	3.93	6.07	8.43	10.37	12.41	2.84	5.06	7.50	10.10	12.19	14.42	3.35	5.67	8.19	10.82	12.94	15.17	22.57	24.65
02.10	7490	2.47	4.86	7.55	10.54	13.01	15.61	3.50	6.27	9.34	12.65	15.31	18.14	4.13	7.05	10.23	13.60	16.29	19.15	28.68	31.39
02.20	1081	2.22	4.36	6.74	9.39	11.57	13.86	3.14	5.61	8.33	11.24	13.58	16.08	3.70	6.27	9.08	12.02	14.39	16.90	25.23	27.57
02.30	11	0.23	0.47	0.73	1.04	1.30	1.57	0.32	0.59	0.88	1.21	1.48	1.76	0.37	0.64	0.94	1.26	1.53	1.81	2.82	3.09
03.10	17	0.00	0.04	0.10	0.21	0.32	0.44	0.01	0.07	0.15	0.28	0.39	0.52	0.02	0.09	0.17	0.29	0.40	0.53	1.05	1.20
03.20	2555	0.27	0.55	0.91	1.36	1.76	2.21	0.35	0.68	1.08	1.57	2.00	2.46	0.38	0.70	1.09	1.57	1.98	2.43	4.30	4.78
03.30	1256	0.28	0.56	0.92	1.38	1.80	2.25	0.36	0.69	1.09	1.59	2.03	2.51	0.39	0.71	1.10	1.59	2.00	2.46	4.35	4.84
03.40	7491	0.30	0.69	1.19	1.87	2.48	3.15	0.42	0.89	1.48	2.22	2.86	3.57	0.48	0.96	1.54	2.26	2.87	3.55	6.39	7.15
03.50	18	0.28	0.56	0.88	1.25	1.55	1.88	0.36	0.67	1.01	1.39	1.70	2.02	0.39	0.68	0.99	1.34	1.62	1.92	3.24	3.55
03.60	19	0.00	0.01	0.06	0.17	0.29	0.44	0.00	0.04	0.13	0.28	0.43	0.60	0.00	0.07	0.18	0.35	0.51	0.69	1.31	1.51
04.10	7493	2.54	5.16	8.35	12.37	15.87	19.70	3.66	6.96	10.92	15.66	19.65	24.20	4.47	8.29	12.67	17.80	21.97	26.89	41.87	46.64
04.20	766	2.66	5.31	8.34	11.81	14.76	17.86	3.80	6.91	10.39	14.32	17.48	20.88	4.49	7.80	11.43	15.43	18.63	22.07	33.65	36.97
04.30	2009	2.60	5.28	8.48	12.43	15.85	19.55	3.75	7.06	10.96	15.57	19.40	23.67	4.53	8.25	12.48	17.33	21.31	25.79	40.08	44.51
04.40	23	0.00	0.01	0.08	0.24	0.42	0.63	0.00	0.05	0.18	0.40	0.61	0.85	0.01	0.10	0.25	0.50	0.72	0.97	1.86	2.14
04.50	7492	2.60	5.27	8.42	12.25	15.54	19.08	3.75	7.02	10.82	15.24	18.91	22.97	4.52	8.15	12.24	16.88	20.65	24.91	38.49	42.67
05.00	7494	0.28	0.83	1.72	3.17	4.53	6.09	0.46	1.26	2.44	4.14	5.66	7.37	0.58	1.54	2.82	4.56	6.09	7.80	14.14	15.95
05.10	1663	0.22	0.63	1.37	2.63	3.83	5.21	0.33	0.97	1.97	3.45	4.78	6.29	0.41	1.21	2.31	3.84	5.18	6.68	12.28	13.88
05.20	7497	0.22	0.62	1.27	2.31	3.29	4.41	0.33	0.91	1.75	2.96	4.03	5.24	0.41	1.10	2.00	3.23	4.30	5.49	10.01	11.28
05.30	30	0.00	0.01	0.08	0.23	0.39	0.58	0.00	0.05	0.17	0.37	0.56	0.78	0.01	0.09	0.24	0.46	0.66	0.88	1.65	1.89
05.40	740	0.22	0.57	1.11	1.97	2.78	3.70	0.32	0.80	1.49	2.48	3.37	4.36	0.39	0.94	1.68	2.69	3.56	4.54	8.27	9.31
05.50	7495	0.21	0.45	0.80	1.31	1.78	2.30	0.28	0.59	1.02	1.60	2.10	2.67	0.32	0.66	1.11	1.69	2.19	2.74	4.89	5.48
05.60	7496	0.01	0.12	0.31	0.67	1.01	1.40	0.04	0.21	0.47	0.89	1.26	1.69	0.07	0.28	0.57	1.00	1.37	1.80	3.38	3.84
06.00	803	4.17	7.05	10.53	13.84	16.34	18.92	4.61	7.29	10.49	13.59	15.88	18.25	4.38	6.71	9.41	12.11	14.11	16.16	26.65	28.63
06.01	2022	2.66	4.66	6.77	8.92	10.75	12.80	2.66	4.29	6.30	8.06	9.47	11.12	2.37	3.72	5.37	7.04	8.14	9.45	18.24	20.18
06.02	725	3.29	5.35	7.35	9.89	12.01	14.80	3.09	5.00	6.87	9.08	10.71	12.31	2.59	4.01	5.68	7.41	8.46	9.86	19.57	21.27
06.03	7502	1.27	1.94	2.63	3.34	3.92	4.72	0.93	1.37	1.82	2.29	2.71	3.09	0.63	0.95	1.33	1.80	2.17	2.54	5.13	5.52
06.04	1044	0.29	0.61	0.98	1.40	1.75	2.12	0.39	0.74	1.14	1.57	1.92	2.29	0.42	0.76	1.13	1.53	1.85	2.19	3.64	3.98
06.05	7503	2.23	4.07	5.94	7.62	9.12	10.81	2.21	3.70	5.35	6.85	8.01	9.28	1.97	3.09	4.45	5.84	6.60	7.51	14.51	15.74
06.06	842	4.70	7.09	9.15	11.95	13.95	16.01	3.35	4.94	6.52	8.15	9.44	10.78	2.30	3.42	4.44	5.61	6.52	7.48	15.80	17.00
06.08	48	2.78	4.16	5.29	6.95	8.12	9.34	1.95	2.84	3.70	4.61	5.32	6.05	1.26	1.79	2.27	2.82	3.22	3.64	8.76	9.40
06.10	7500	1.92	2.93	3.86	4.99	5.83	6.67	1.41	2.10	2.82	3.54	4.12	4.74	1.04	1.63	2.17	2.80	3.30	3.84	7.04	7.60
06.11	728	0.47	0.92	1.43	2.04	2.57	3.14	0.61	1.10	1.66	2.30	2.85	3.42	0.66	1.12	1.66	2.27	2.78	3.34	5.59	6.17
06.12	7498	0.28	0.44	0.63	0.88	1.07	1.27	0.26	0.45	0.67	0.90	1.07	1.27	0.26	0.43	0.61	0.81	0.97	1.14	1.98	2.16
06.13	7499	0.31	0.62	0.99	1.46	1.86	2.31	0.42	0.76	1.19	1.68	2.12	2.58	0.45	0.79	1.21	1.69	2.11	2.55	4.34	4.85
06.14	1789	0.22	0.42	0.67	1.02	1.32	1.66	0.28	0.50	0.79	1.17	1.50	1.86	0.29	0.51	0.80	1.17	1.49	1.84	3.31	3.69
07.10	7515	2.95	5.75	9.68	14.44	18.36	22.73	3.98	7.36	11.93	17.06	21.26	26.09	4.46	7.99	12.48	17.45	21.51	26.05	42.98	47.33
07.11	7508	3.43	6.46	9.95	13.47	16.44	19.48	4.34	7.46	11.10	14.58	17.53	20.54	4.51	7.42	10.72	13.88	16.46	19.30	31.00	33.68
07.20	909	2.98	5.85	9.92	14.84	19.05	23.84	4.03	7.48	12.16	17.42	21.89	26.68	4.50	8.07	12.59	17.62	21.74	26.36	43.27	47.57
07.30	59	0.00	0.01	0.07	0.21	0.35	0.52	0.00	0.05	0.15	0.33	0.50	0.70	0.01	0.08	0.21	0.41	0.59	0.79	1.50	1.71
07.40	7511	2.98	5.84	9.85	14.64	18.71	23.32	4.03	7.43	12.01	17.09	21.40	25.99	4.50	7.99	12.39	17.23	21.19	25.63	41.78	45.87
07.50	1738	3.29	6.49	10.75	15.25	19.04	23.23	4.37	8.02	12.46	17.09	21.02	25.34	4.69	8.22	12.37	16.74	20.31	24.37	40.53	44.41

Estimated Peak Flow - Existing Condition (with ponds)

Flow Node #	Hyd #	6hr						12hr						24hr						350yr	500yr
		2yr	5yr	10yr	25yr	50yr	100yr	2yr	5yr	10yr	25yr	50yr	100yr	2yr	5yr	10yr	25yr	50yr	100yr		
07.60	7510	0.00	0.02	0.14	0.43	0.72	1.07	0.00	0.09	0.30	0.66	1.00	1.39	0.01	0.17	0.42	0.80	1.15	1.54	2.98	3.41
07.70	7509	3.29	6.47	10.61	14.83	18.32	22.18	4.37	7.94	12.19	16.47	20.07	24.03	4.69	8.10	12.04	16.04	19.30	22.99	37.65	41.12
07.80	1729	3.45	6.64	10.43	14.54	18.00	21.68	4.40	7.78	11.85	15.96	19.48	23.22	4.58	7.80	11.52	15.39	18.52	22.04	36.33	39.64
07.90	7507	0.02	0.22	0.62	1.35	2.05	2.85	0.08	0.44	1.01	1.88	2.67	3.55	0.14	0.60	1.24	2.14	2.93	3.81	7.04	7.97
08.10	1754	4.57	8.80	14.35	22.26	29.49	37.21	6.34	12.27	19.60	29.43	37.75	46.74	7.82	15.31	24.05	35.05	44.10	53.60	84.81	94.42
08.20	1832	4.58	8.75	14.55	22.48	29.51	37.26	6.34	12.16	19.70	29.36	37.60	46.30	7.72	14.87	23.28	33.90	42.55	51.52	82.72	92.85
08.30	731	2.63	5.43	9.05	13.88	18.21	23.04	3.83	7.54	12.22	18.08	23.17	28.68	4.77	9.28	14.63	21.06	26.37	32.55	51.82	58.15
08.50	1782	4.54	8.70	14.38	22.23	29.39	37.05	6.29	12.10	19.57	29.25	37.39	46.22	7.72	14.97	23.47	34.16	43.00	52.14	82.70	92.76
08.60	77	0.00	0.00	0.19	0.57	0.96	1.41	0.00	0.03	0.32	0.71	1.07	1.50	0.00	0.04	0.33	0.66	0.97	1.33	3.23	3.70
08.70	1332	4.55	8.72	14.41	22.28	29.41	37.08	6.30	12.09	19.60	29.25	37.39	46.17	7.72	14.91	23.27	33.91	42.66	51.68	82.50	92.53
08.90	7514	2.62	5.42	9.14	14.16	18.68	23.69	3.82	7.61	12.47	18.61	23.93	29.71	4.81	9.53	15.16	21.96	27.65	34.11	54.05	60.92
09.10	7519	14.98	21.73	33.10	39.65	46.74	53.21	13.22	18.21	28.03	34.34	39.81	49.05	10.23	16.59	26.67	37.14	47.03	57.73	90.53	101.43
09.20	1471	4.77	9.31	19.37	27.24	34.43	42.52	6.68	13.02	21.18	29.59	38.28	48.28	8.33	16.35	24.90	36.49	45.82	55.97	89.80	100.60
09.30	915	4.61	8.91	14.33	22.25	29.50	37.25	6.41	12.44	19.61	29.49	37.90	47.06	7.93	15.61	24.48	35.69	44.82	54.55	86.53	96.44
09.50	7516	0.20	0.40	3.19	4.62	6.24	8.31	0.26	0.50	3.17	4.56	6.35	8.08	0.28	0.52	2.81	3.97	5.52	7.03	14.57	16.20
09.60	7517	4.60	8.87	14.33	22.24	29.48	37.21	6.38	12.36	19.59	29.42	37.75	46.75	7.88	15.43	24.15	35.20	44.24	53.80	85.03	94.67
10.00	7518	3.38	5.01	22.00	30.76	38.45	46.72	3.10	4.91	25.08	34.57	42.30	51.18	3.22	5.46	24.74	33.70	41.36	50.18	87.47	96.64
10.10	1850	3.38	4.98	22.01	30.80	38.49	46.75	3.08	4.88	25.02	34.35	42.27	51.15	3.20	5.42	24.65	33.57	41.26	50.09	87.45	96.65
10.11	7524	0.00	0.00	0.74	2.10	3.41	4.90	0.00	0.01	1.47	3.06	4.47	6.10	0.00	0.07	1.90	3.47	4.85	6.39	12.75	14.58
10.12	7525	0.00	0.00	1.06	2.68	4.24	5.95	0.00	0.03	1.82	3.67	5.30	7.06	0.00	0.10	2.24	3.98	5.48	7.12	13.78	15.52
10.13	1762	0.00	0.00	1.72	4.63	7.43	10.55	0.00	0.03	3.19	6.56	9.53	12.87	0.00	0.16	4.07	7.37	10.17	13.31	26.17	29.78
10.20	7520	3.13	4.49	7.94	10.10	11.91	13.59	2.75	3.85	6.76	8.56	9.88	11.24	2.11	2.90	5.32	6.65	7.59	8.56	16.01	17.09
10.30	7521	1.76	3.45	19.91	28.24	35.60	43.59	2.41	4.33	22.55	31.47	39.11	47.75	2.76	4.74	22.05	30.63	38.20	46.81	82.96	91.85
10.40	767	1.62	3.19	19.08	27.21	34.30	42.13	2.22	4.01	21.56	30.22	37.70	46.29	2.54	4.39	21.00	29.42	36.91	45.42	81.07	89.93
10.50	7523	0.84	1.69	10.78	15.38	19.34	23.59	1.17	2.14	12.27	17.21	21.35	25.81	1.36	2.38	12.12	16.94	20.97	25.27	42.37	46.65
10.60	1841	0.73	1.47	9.89	14.34	18.23	22.41	1.01	1.86	11.30	16.12	20.20	24.58	1.19	2.09	11.16	15.91	19.86	24.07	40.98	45.23
10.70	7527	0.55	1.06	6.76	8.94	10.63	12.34	0.76	1.34	7.44	9.57	11.20	12.87	0.88	1.48	7.19	9.13	10.60	12.11	18.53	19.89
10.80	7526	0.18	0.41	3.21	5.96	8.60	11.50	0.26	0.53	4.30	7.65	10.50	13.57	0.31	0.60	4.96	8.30	11.07	14.01	25.06	27.98
10.90	7522	0.77	1.50	8.30	11.83	14.98	18.56	1.05	1.86	9.29	13.01	16.37	20.49	1.18	2.01	8.94	12.48	16.00	20.27	38.72	43.34
11.10	7530	13.82	19.96	43.92	57.57	72.31	88.99	13.86	19.33	45.33	68.09	83.60	101.21	12.01	19.65	51.14	69.18	84.51	102.13	171.85	190.89
11.20	1794	17.57	25.53	43.54	56.15	71.04	88.04	15.77	21.83	43.20	64.93	80.73	98.72	12.40	19.34	47.55	65.07	80.39	97.62	168.48	186.84
11.30	1668	15.68	22.31	44.72	56.59	71.19	87.97	15.15	20.85	44.39	66.61	82.00	100.14	12.64	19.49	50.05	67.77	82.96	100.44	170.32	188.87
12.00	7531	0.86	1.66	15.13	19.60	23.02	26.43	1.14	2.02	15.63	19.76	22.86	26.00	1.28	2.15	14.36	17.89	20.52	23.18	36.47	39.01
12.10	1720	0.64	1.24	11.71	15.08	17.66	20.22	0.84	1.48	11.78	14.83	17.12	19.43	0.92	1.55	10.64	13.20	15.09	17.00	27.10	28.91
12.20	139	0.25	0.48	4.55	5.86	6.85	7.85	0.32	0.58	4.56	5.74	6.62	7.51	0.35	0.60	4.10	5.09	5.82	6.55	10.48	11.18
12.30	140	0.39	0.76	7.18	9.24	10.82	12.38	0.51	0.91	7.24	9.11	10.52	11.93	0.56	0.95	6.55	8.12	9.29	10.46	16.64	17.75
13.10	7532	12.00	18.14	54.57	70.62	83.59	97.60	13.80	20.59	58.93	78.87	93.23	109.88	14.70	21.17	63.62	81.44	96.71	113.97	181.16	200.68
13.11	1099	12.60	19.02	57.45	73.65	86.07	99.57	13.01	19.64	59.63	77.45	91.77	109.61	12.51	20.44	60.60	78.68	94.10	111.98	182.73	202.37
13.20	1625	14.57	21.44	58.81	74.53	86.61	98.56	14.78	20.99	59.00	75.20	90.03	108.55	12.97	20.36	58.01	76.55	92.20	110.28	182.50	202.02
13.30	1548	12.02	18.16	54.59	70.62	83.59	97.67	13.81	20.60	58.94	78.86	93.24	109.89	14.70	21.15	63.57	81.38	96.66	113.92	181.22	200.76
13.40	143	2.51	3.72	6.13	7.75	9.43	10.81	1.75	2.61	4.06	5.15	5.94	6.75	1.13	1.64	2.49	3.08	3.52	3.97	9.72	10.42
13.50	1972	12.20	18.41	54.86	70.93	83.90	97.83	13.94	20.76	59.16	79.00	93.40	110.01	14.72	21.16	63.57	81.38	96.62	113.89	181.57	201.17
13.70	7535	6.04	9.84	19.01	25.43	31.99	39.20	5.71	8.89	16.75	21.42	25.54	30.60	4.91	6.95	12.78	15.87	18.21	20.62	47.78	51.68
13.80	7534	11.82	17.93	54.37	70.42	83.37	97.32	13.32	19.99	58.30	78.29	92.70	109.48	13.70	20.37	62.40	80.28	95.52	112.81	181.01	200.58
13.90	822	12.20	18.69	56.01	72.29	84.89	98.52	13.55	20.55	59.85	78.99	92.97	110.07	13.72	20.41	62.68	80.35	95.63	113.37	182.24	201.93

Estimated Peak Flow - Existing Condition (with ponds)

Flow Node #	Hyd #	6hr						12hr						24hr						350yr	500yr
		2yr	5yr	10yr	25yr	50yr	100yr	2yr	5yr	10yr	25yr	50yr	100yr	2yr	5yr	10yr	25yr	50yr	100yr		
14.00	1769	6.04	10.30	13.68	18.12	21.78	25.50	6.52	10.33	13.29	17.20	20.20	23.53	6.03	9.05	11.54	14.90	17.37	19.90	40.43	44.53
14.10	1812	6.28	10.26	13.42	17.84	21.37	25.08	6.13	9.44	12.12	15.72	18.56	21.47	5.47	7.95	10.04	12.83	15.03	17.19	40.49	46.45
14.20	1818	6.07	10.06	13.21	17.59	21.17	24.76	5.81	9.17	11.96	15.51	18.39	21.22	5.16	7.56	9.56	12.22	14.31	16.38	33.98	36.22
14.30	919	3.54	5.06	6.16	7.77	8.89	10.06	2.77	3.86	4.71	5.92	6.82	7.73	2.11	2.90	3.54	4.45	5.19	5.90	11.44	12.36
14.40	1826	1.85	2.68	3.39	4.53	5.36	6.21	1.61	2.28	2.94	3.85	4.70	5.44	1.36	1.93	2.45	3.19	3.79	4.41	8.00	8.72
14.50	895	1.93	2.75	3.55	4.66	5.65	6.56	1.46	2.11	2.83	3.66	4.36	5.06	1.11	1.64	2.13	2.74	3.21	3.68	7.54	8.76
15.10	1620	10.42	16.40	21.02	28.17	34.27	40.65	11.10	17.67	22.76	29.96	35.67	41.82	10.89	16.56	21.05	27.26	32.26	37.38	69.02	76.32
15.20	1736	8.37	13.91	18.29	24.53	29.53	34.91	9.49	14.97	19.18	25.04	29.53	34.32	9.03	13.65	17.28	22.15	25.99	29.89	56.44	62.24
16.10	7548	10.67	18.14	24.09	32.64	39.87	47.49	12.71	20.64	26.84	35.65	42.78	50.49	12.98	20.29	25.99	33.97	40.49	47.27	82.61	91.28
16.20	1447	10.53	17.32	22.74	30.66	37.18	44.15	12.11	19.34	24.90	32.83	39.22	46.02	12.16	18.63	23.64	30.66	36.28	42.21	75.47	83.44
17.00	7549	16.69	26.24	33.95	45.45	55.10	66.02	14.07	21.49	26.87	35.07	41.38	48.46	10.30	15.49	19.23	24.25	28.37	32.66	73.77	79.44
17.10	1011	3.87	6.50	8.40	11.76	14.09	16.54	3.13	4.97	6.25	8.32	9.82	11.39	2.21	3.35	4.18	5.38	6.28	7.24	17.56	19.03
17.20	7550	14.05	21.83	28.10	37.31	44.95	54.22	11.50	17.20	21.63	27.96	32.79	38.26	8.12	11.90	14.68	18.35	21.33	24.34	56.90	60.96
17.30	1855	17.30	27.47	35.62	48.05	57.87	69.36	14.43	22.01	27.40	35.67	42.00	49.20	10.28	15.14	18.74	23.63	27.53	31.51	74.05	79.53
17.40	7551	0.38	0.87	1.33	2.06	2.71	3.42	0.53	1.09	1.61	2.40	3.08	3.82	0.58	1.14	1.65	2.42	3.06	3.78	6.69	7.45
17.50	942	17.35	27.58	35.81	48.35	58.24	69.88	14.53	22.25	27.77	36.16	42.64	50.00	10.48	15.56	19.34	24.53	28.70	32.98	75.57	81.24
18.00	2643	10.77	18.43	24.73	34.00	41.54	50.26	13.66	22.40	29.47	38.71	47.64	56.79	15.02	23.70	30.72	39.83	48.56	57.28	93.13	102.51
18.10	7541	10.82	18.51	24.84	34.19	41.71	50.58	13.78	22.65	29.76	39.06	47.96	57.53	15.35	24.28	31.41	40.56	49.52	58.74	94.47	103.77
18.20	1844	16.72	26.31	34.05	45.58	55.27	66.23	14.26	22.66	29.75	39.89	48.22	57.30	14.87	23.55	30.43	40.07	47.98	56.48	95.43	106.07
19.00	2018	1.06	1.77	2.28	3.08	3.84	4.61	1.09	1.95	2.63	3.59	4.36	5.19	1.26	2.15	2.83	3.78	4.53	5.34	8.16	8.92
19.10	7540	2.49	4.31	6.03	8.47	10.49	12.62	3.08	5.50	7.42	10.08	12.24	14.53	3.61	6.14	8.09	10.79	12.96	15.26	22.85	24.95
19.11	7544	0.46	0.92	1.29	1.82	2.26	2.72	0.64	1.16	1.57	2.14	2.60	3.10	0.75	1.28	1.70	2.28	2.74	3.23	4.90	5.36
19.20	7547	2.32	3.79	4.76	6.25	7.67	8.97	2.13	3.34	4.28	5.63	6.64	7.78	1.83	2.82	3.69	4.90	5.88	6.91	11.47	12.57
19.30	7546	0.41	0.80	1.12	1.57	1.94	2.34	0.57	1.02	1.38	1.87	2.27	2.69	0.67	1.14	1.50	2.01	2.41	2.83	4.22	4.61
19.40	1184	2.39	3.92	4.98	6.55	7.99	9.37	2.21	3.55	4.68	6.35	7.70	9.12	2.32	3.92	5.14	6.84	8.19	9.63	14.27	15.55
19.50	7543	2.36	3.88	4.94	6.52	7.90	9.24	2.22	3.67	4.94	6.70	8.12	9.63	2.44	4.12	5.41	7.20	8.63	10.14	15.08	16.45
19.60	7542	0.64	1.27	1.78	2.50	3.10	3.74	0.89	1.61	2.17	2.96	3.60	4.29	1.04	1.78	2.36	3.16	3.81	4.49	6.78	7.41
19.70	1205	2.49	4.17	5.77	8.10	10.03	12.07	2.95	5.26	7.09	9.64	11.70	13.88	3.46	5.88	7.74	10.32	12.39	14.58	21.81	23.81
19.80	807	0.56	1.11	1.56	2.20	2.73	3.28	0.78	1.41	1.91	2.60	3.16	3.76	0.92	1.57	2.07	2.78	3.34	3.94	5.93	6.49
19.90	329	0.10	0.20	0.27	0.39	0.48	0.57	0.14	0.26	0.34	0.47	0.57	0.67	0.17	0.29	0.38	0.51	0.61	0.72	1.06	1.15
20.00	7539	4.33	7.01	9.32	11.84	13.78	15.89	3.91	5.89	7.56	9.83	11.14	12.61	3.10	4.44	5.46	6.89	8.00	9.05	18.54	20.14
21.10	2343	12.43	21.72	29.40	40.68	49.96	60.66	16.29	27.12	35.89	47.48	58.08	70.04	19.10	30.48	39.57	51.20	62.46	74.51	115.65	127.79
21.20	1306	12.48	21.77	29.46	40.79	50.12	60.95	16.30	27.18	35.92	47.56	58.33	70.41	18.81	30.05	39.04	50.65	61.89	73.87	116.48	128.42
21.30	1856	12.35	21.58	29.22	40.48	49.62	60.44	16.12	26.83	35.50	46.89	57.68	69.59	18.38	29.45	38.29	49.63	60.76	72.36	115.25	126.94
21.40	7536	12.49	21.80	29.53	40.86	50.24	61.10	16.33	27.24	36.01	47.68	58.50	70.58	18.89	30.17	39.21	50.84	62.15	74.19	116.90	128.97
21.50	7537	5.32	8.19	10.82	14.09	17.01	19.75	5.16	7.36	9.25	11.87	14.24	16.80	4.40	6.23	7.51	9.47	11.18	13.01	25.41	27.55
21.60	1312	12.49	21.81	29.53	40.86	50.25	61.11	16.33	27.24	36.02	47.69	58.51	70.60	19.06	30.40	39.48	51.17	62.53	74.64	117.02	129.12
22.10	7583	0.94	1.75	2.40	3.28	3.99	4.73	1.19	2.04	2.70	3.57	4.26	4.99	1.25	2.04	2.64	3.42	4.05	4.70	7.52	8.15
22.20	7584	6.02	9.91	13.06	17.49	21.02	24.95	7.26	11.32	14.53	18.95	22.41	26.15	7.45	11.19	14.10	18.04	21.03	24.28	39.60	43.48
22.30	7585	6.06	10.22	13.29	17.34	20.65	24.96	6.91	10.80	13.63	17.37	20.32	23.91	6.67	9.95	12.29	15.50	17.96	20.52	40.28	43.26
22.40	7586	0.64	1.16	1.58	2.06	2.47	2.88	0.78	1.31	1.69	2.17	2.55	2.95	0.79	1.28	1.62	2.05	2.38	2.73	4.27	4.59
22.50	7310	6.54	10.54	13.63	17.69	20.92	25.40	6.94	10.63	13.43	17.13	19.94	23.43	6.60	9.74	12.00	15.27	17.81	20.42	39.82	43.70
22.55	7315	7.16	11.50	14.59	18.98	22.99	26.94	7.05	10.64	13.46	16.93	20.13	23.18	6.65	9.66	11.89	15.11	17.50	20.03	40.08	44.20
22.60	7588	4.09	6.63	8.46	10.99	13.62	15.88	3.54	5.60	7.18	9.28	11.19	13.01	3.32	5.09	6.44	8.32	9.73	11.28	19.84	21.83
22.61	7333	2.56	4.15	5.30	6.87	8.12	9.42	2.60	3.93	4.92	6.21	7.21	8.30	2.26	3.27	4.07	5.11	5.90	6.71	12.74	13.87

Estimated Peak Flow - Existing Condition (with ponds)

Flow Node #	Hyd #	6hr						12hr						24hr						350yr	500yr
		2yr	5yr	10yr	25yr	50yr	100yr	2yr	5yr	10yr	25yr	50yr	100yr	2yr	5yr	10yr	25yr	50yr	100yr		
22.62	7345	0.17	0.32	0.45	0.61	0.75	0.89	0.22	0.39	0.51	0.68	0.82	0.96	0.24	0.40	0.52	0.68	0.81	0.94	1.46	1.59
22.70	7587	3.68	5.46	6.87	8.52	10.00	12.02	3.61	5.10	6.29	7.82	9.10	10.37	3.32	4.59	5.45	6.79	7.77	8.76	21.22	23.72
22.71	7321	9.75	14.05	16.67	20.14	22.66	25.17	6.40	8.50	9.91	11.69	13.08	14.42	3.74	4.86	5.62	6.57	7.27	7.98	18.99	20.04
22.80	7617	0.55	1.03	1.41	1.93	2.35	2.79	0.68	1.18	1.56	2.07	2.48	2.91	0.71	1.17	1.51	1.98	2.35	2.74	4.35	4.71
22.81	7364	0.21	0.40	0.54	0.75	0.91	1.08	0.27	0.47	0.62	0.83	1.00	1.17	0.29	0.48	0.63	0.82	0.97	1.13	1.77	1.92
22.82	7361	0.17	0.33	0.45	0.63	0.77	0.91	0.22	0.40	0.53	0.71	0.86	1.01	0.25	0.42	0.55	0.73	0.86	1.01	1.55	1.69
22.90	7365	0.32	0.56	0.74	0.98	1.16	1.34	0.38	0.62	0.80	1.02	1.19	1.36	0.39	0.61	0.76	0.96	1.11	1.27	1.95	2.09
23.10	7580	6.38	10.76	14.24	19.10	23.10	27.37	8.01	12.83	16.55	21.71	25.81	30.27	8.74	13.48	17.05	21.99	25.77	29.87	46.34	50.60
23.20	7275	6.70	11.29	14.99	20.27	24.50	29.19	8.23	13.06	16.86	22.17	26.33	30.82	8.57	13.06	16.53	21.28	24.89	28.81	46.95	51.49
24.10	7582	6.22	10.14	13.48	17.78	21.34	25.24	6.49	9.83	12.69	16.59	19.37	22.43	5.78	8.31	10.17	12.99	15.13	17.14	36.08	39.63
24.11	7435	6.39	8.96	10.96	13.33	15.12	16.92	4.19	5.70	6.79	8.12	9.11	10.10	2.51	3.35	3.91	4.63	5.16	5.69	13.50	14.29
24.12	7618	5.48	8.90	11.72	15.65	18.80	21.90	5.32	8.09	10.47	13.51	15.95	18.53	4.56	6.64	8.14	10.46	12.06	13.74	27.49	29.75
24.13	7431	5.25	8.16	11.08	14.29	16.84	20.37	4.15	6.44	8.21	10.28	11.86	13.72	2.98	4.34	5.27	6.52	7.42	8.33	19.28	20.61
24.20	7581	5.83	8.22	9.74	11.67	13.19	14.63	3.65	4.86	5.67	6.70	7.50	8.35	2.52	3.82	4.75	5.89	6.76	7.66	11.38	12.22
24.21	7403	2.11	3.47	4.47	5.80	6.83	7.88	2.46	3.81	4.79	6.07	7.05	8.04	2.44	3.70	4.58	5.73	6.59	7.47	11.59	12.43
25.00	7388	7.14	11.49	14.97	19.97	23.86	27.91	8.14	12.37	15.55	20.15	23.85	27.50	7.91	11.57	14.23	18.03	20.95	24.07	41.25	44.79
25.01	7451	1.18	1.67	2.07	2.54	2.89	3.24	0.76	1.06	1.26	1.52	1.71	1.90	0.46	0.62	0.73	0.86	0.97	1.07	2.57	2.72
25.02	7619	6.68	10.76	14.02	18.66	22.14	25.81	7.43	11.23	14.11	18.19	21.40	24.54	7.11	10.34	12.66	15.85	18.38	21.18	37.44	40.74
25.10	7579	10.18	15.05	18.68	24.01	28.69	33.66	10.41	15.77	19.88	25.54	30.11	34.89	10.49	15.21	18.65	23.56	27.53	31.72	52.15	56.44
25.20	7396	10.83	15.82	19.12	23.86	27.30	30.73	7.87	11.32	14.48	18.83	21.93	25.23	7.00	10.33	12.47	15.59	18.23	21.12	39.71	43.47
26.10	7576	23.25	35.27	51.81	64.16	73.67	83.19	22.63	32.82	46.62	57.32	64.75	72.73	20.17	28.38	38.76	47.09	53.68	60.34	101.36	109.44
26.20	7249	23.59	35.65	52.05	64.51	74.33	84.37	22.74	32.94	47.15	57.38	65.27	73.84	20.35	28.56	38.90	47.21	53.83	60.59	102.64	110.52
26.21	7578	9.55	15.91	29.47	38.94	46.47	54.16	9.38	14.53	25.36	30.77	34.83	39.69	7.80	11.01	17.73	21.16	23.59	26.10	55.98	59.85
26.30	7577	14.86	22.14	28.62	35.94	41.67	47.78	14.64	21.38	27.71	36.27	43.03	50.32	15.29	23.65	29.99	38.38	44.94	51.96	76.16	82.98
26.40	7258	13.53	20.39	25.52	32.11	37.40	43.89	13.33	21.46	27.79	36.37	43.20	50.39	15.23	23.57	29.76	38.08	44.60	51.62	76.12	82.99
27.00	435	43.99	63.67	96.66	117.14	132.65	148.08	31.10	42.83	61.20	73.55	82.54	91.14	19.37	26.04	35.72	41.92	46.45	51.01	119.98	126.70
27.01	434	2.65	4.02	6.37	8.27	9.56	10.88	1.83	2.67	4.20	5.17	5.90	6.66	1.16	1.65	2.50	3.03	3.44	3.85	9.32	9.94
27.10	7570	44.77	70.88	107.97	140.53	165.56	188.66	53.39	78.43	118.86	146.30	174.22	206.62	54.19	77.21	123.33	159.07	189.50	224.19	332.86	367.75
27.20	1087	55.61	80.98	124.95	152.44	173.62	194.90	54.11	79.51	119.94	146.42	174.24	206.70	54.51	77.39	123.37	159.06	189.30	224.37	333.49	367.51
27.30	1109	25.00	38.05	77.68	103.62	126.76	154.14	27.74	42.09	87.05	121.63	146.98	177.83	30.57	48.22	99.10	129.64	157.28	188.58	294.79	326.09
27.31	7571	44.96	70.46	106.17	137.65	161.72	183.12	52.01	75.86	111.97	146.42	174.24	206.70	51.01	72.62	122.57	158.12	188.26	223.23	333.49	367.51
27.40	1073	22.56	35.98	78.53	103.81	127.08	154.55	27.05	42.31	87.35	122.00	147.66	178.37	30.38	48.10	98.85	129.33	156.96	187.77	296.73	327.51
27.50	1298	44.37	67.31	98.77	128.19	154.06	181.31	47.02	68.35	112.10	148.29	175.63	207.78	45.40	68.25	122.41	157.63	187.07	223.03	336.51	371.27
27.60	1258	50.88	77.16	116.90	147.70	172.29	206.81	53.68	77.44	113.47	147.95	176.02	208.31	50.31	71.67	123.49	159.00	188.22	223.80	336.85	372.60
28.00	1890	0.47	0.93	7.86	10.70	12.96	15.29	0.67	1.20	8.78	11.60	13.80	16.09	0.81	1.37	8.52	11.05	13.01	15.05	24.33	26.42
29.10	1067	4.73	6.83	16.60	20.79	23.94	27.42	4.39	6.04	13.52	16.72	19.15	21.91	3.54	4.90	12.54	16.41	19.35	22.22	33.73	36.64
29.20	1879	7.92	11.47	20.73	25.59	29.14	33.21	5.82	8.08	14.52	17.80	20.29	22.80	3.87	5.34	12.49	16.34	19.24	22.06	33.68	36.55
29.40	1337	0.61	1.20	9.74	13.61	16.64	19.53	0.88	1.58	11.44	15.42	18.36	21.28	1.10	1.88	11.63	15.29	18.03	20.70	32.82	35.61
29.50	1740	0.58	1.14	9.51	13.24	16.15	18.98	0.83	1.50	10.99	14.77	17.56	20.44	1.03	1.76	10.97	14.40	16.99	19.56	31.41	34.08
30.00	1124	0.78	1.56	15.80	21.24	25.43	29.78	1.13	2.05	17.36	22.59	26.58	30.75	1.37	2.36	16.57	21.22	24.70	28.31	44.99	48.48
31.00	7601	0.47	0.93	9.21	12.61	15.21	17.93	0.68	1.23	10.29	13.54	16.05	18.68	0.84	1.43	9.89	12.81	15.01	17.31	27.64	29.62
31.20	1342	0.38	0.74	7.25	9.68	11.63	13.63	0.54	0.96	7.79	10.15	11.99	13.87	0.64	1.08	7.36	9.43	11.04	12.70	20.32	21.88
31.40	479	0.08	0.17	1.66	2.23	2.69	3.16	0.12	0.22	1.88	2.47	2.93	3.40	0.15	0.26	1.88	2.43	2.85	3.29	5.02	5.42
32.10	1395	5.61	8.35	30.21	41.02	49.06	57.99	5.37	7.71	34.72	45.28	53.59	62.74	4.47	6.15	34.84	44.82	52.30	60.37	94.31	101.72
32.20	732	1.25	2.49	24.98	33.78	40.59	47.66	1.81	3.28	27.63	36.12	42.64	49.47	2.21	3.80	26.49	34.05	39.76	45.70	72.61	77.98

Estimated Peak Flow - Existing Condition (with ponds)

Flow Node #	Hyd #	6hr						12hr						24hr						350yr	500yr
		2yr	5yr	10yr	25yr	50yr	100yr	2yr	5yr	10yr	25yr	50yr	100yr	2yr	5yr	10yr	25yr	50yr	100yr		
32.21	455	2.51	3.54	5.56	6.80	7.67	8.65	1.63	2.21	3.34	3.99	4.45	4.91	0.97	1.30	1.90	2.23	2.47	2.72	6.44	6.80
32.22	826	3.04	4.34	7.63	9.41	10.78	12.37	2.11	2.95	5.36	6.67	7.63	8.55	1.37	1.89	4.40	5.28	6.00	6.77	11.86	12.69
32.24	499	0.07	0.13	1.25	1.64	1.94	2.25	0.09	0.16	1.23	1.58	1.84	2.11	0.10	0.17	1.10	1.39	1.60	1.82	3.00	3.22
32.30	7598	1.41	2.16	5.79	7.27	8.45	9.71	1.38	2.02	4.65	5.81	6.59	7.37	1.13	1.60	3.39	4.11	4.65	5.23	10.30	11.00
32.31	1198	2.24	3.16	5.23	6.45	7.35	8.31	1.44	2.00	3.54	4.32	4.91	5.53	0.89	1.22	2.39	2.90	3.28	3.67	7.60	8.10
32.32	501	0.05	0.10	0.85	1.14	1.35	1.58	0.06	0.12	0.81	1.04	1.23	1.41	0.07	0.11	0.67	0.84	0.97	1.10	2.03	2.18
32.33	500	0.06	0.11	1.06	1.38	1.63	1.87	0.08	0.13	1.04	1.33	1.55	1.76	0.08	0.14	0.93	1.17	1.34	1.52	2.49	2.67
32.40	7597	2.55	3.57	29.10	39.54	47.43	55.88	2.29	4.13	33.04	43.22	51.06	59.49	2.86	4.90	32.57	41.83	48.85	56.32	88.84	95.76
32.41	1895	1.52	3.02	28.80	39.08	47.09	55.49	2.19	3.99	32.38	42.49	50.27	58.47	2.72	4.68	31.59	40.66	47.49	54.62	87.03	93.68
32.42	1734	1.30	2.59	25.63	34.69	41.72	49.04	1.88	3.41	28.46	37.25	43.99	51.07	2.31	3.96	27.38	35.22	41.14	47.30	75.37	80.98
32.70	7596	1.96	3.02	7.73	9.69	11.31	13.20	1.87	2.71	6.19	7.63	8.76	9.95	1.57	2.12	5.00	6.24	7.05	7.88	14.14	15.12
33.10	1135	11.77	17.99	32.71	40.81	46.24	51.60	8.83	12.61	21.32	25.86	29.25	32.79	5.83	8.03	13.61	16.69	19.01	21.42	43.62	46.26
33.11	7594	2.16	3.03	12.48	18.55	23.81	29.15	2.30	3.11	13.39	18.55	22.84	27.68	2.38	3.08	12.68	17.10	20.62	24.60	43.98	47.73
33.12	7595	7.45	10.99	38.85	52.99	64.40	76.39	7.89	11.20	45.80	60.54	72.19	84.38	7.18	10.02	47.41	61.30	72.23	83.56	126.38	136.65
33.13	2006	11.41	18.77	40.99	50.66	57.87	65.55	10.22	15.32	28.50	33.96	38.71	43.62	7.35	10.45	17.78	21.69	24.74	27.85	58.35	61.89
33.14	524	0.14	0.27	2.93	3.70	4.27	4.85	0.19	0.33	2.88	3.56	4.06	4.57	0.21	0.35	2.57	3.12	3.53	3.93	6.22	6.61
33.15	1907	3.49	4.93	13.95	20.85	26.69	32.44	2.81	3.77	13.58	19.50	24.14	28.97	2.45	3.09	12.29	17.35	21.16	24.84	45.79	49.69
33.16	1318	4.39	6.18	12.42	19.12	25.10	29.94	3.46	4.72	13.09	18.29	23.35	28.25	2.95	3.86	12.22	16.67	20.54	24.82	43.77	47.66
33.30	1652	10.34	15.18	38.80	52.71	64.06	75.72	9.74	13.74	45.26	59.73	71.11	83.00	8.00	11.02	46.36	59.91	70.60	81.65	124.27	134.24
34.00	2066	0.77	1.49	14.22	19.23	23.31	27.14	1.10	1.94	15.99	20.99	24.90	28.63	1.34	2.25	15.69	20.17	23.67	27.03	40.81	43.85
34.20	902	0.34	0.67	6.34	8.50	10.20	11.93	0.49	0.87	7.14	9.31	10.99	12.71	0.60	1.02	7.05	9.05	10.59	12.18	18.66	20.10
34.30	534	0.14	0.27	2.81	3.76	4.49	5.24	0.20	0.36	3.16	4.10	4.83	5.58	0.24	0.41	3.11	3.98	4.65	5.33	8.13	8.74
34.40	533	0.09	0.18	1.77	2.36	2.82	3.29	0.13	0.23	1.90	2.46	2.89	3.33	0.15	0.26	1.78	2.28	2.66	3.05	4.85	5.21
35.10	1380	5.58	9.32	28.79	36.24	42.17	48.56	5.29	8.38	23.67	29.21	33.21	37.53	4.61	7.05	21.64	27.62	32.39	37.22	53.03	57.05
35.20	1424	8.30	13.27	32.17	40.72	46.97	53.94	7.02	10.87	24.43	29.98	34.07	38.51	5.34	8.07	21.12	26.96	31.54	36.14	53.58	57.39
35.30	7604	2.91	4.76	10.84	13.44	15.40	18.01	2.37	3.55	7.33	8.93	10.05	11.16	1.62	2.37	4.73	5.67	6.39	7.11	14.89	15.82
35.40	7605	3.86	6.49	17.25	21.68	26.10	30.62	3.54	5.74	18.93	24.71	29.30	33.85	3.03	4.64	19.55	25.09	29.41	33.74	48.11	51.62
35.50	1915	3.46	5.82	16.16	21.69	26.15	30.67	2.95	4.63	18.84	24.61	29.20	33.73	2.41	3.56	19.37	24.82	29.11	33.40	47.93	51.44
35.70	926	2.93	4.32	15.67	21.13	25.54	29.91	2.03	2.92	17.84	23.36	27.69	31.95	1.51	2.52	17.80	22.83	26.79	30.71	45.76	49.16
36.00	7606	2.20	3.46	13.59	17.88	21.20	24.63	1.76	2.73	14.77	18.92	22.12	25.49	1.29	2.09	14.12	17.85	20.59	23.50	36.58	39.44
36.10	724	0.74	1.44	13.50	17.77	21.13	24.55	1.03	1.84	14.49	18.55	21.69	24.94	1.22	2.05	13.64	17.21	19.95	22.77	36.00	38.75
36.20	7608	0.36	0.66	6.22	8.17	9.65	11.21	0.47	0.85	6.58	8.38	9.76	11.21	0.55	0.94	6.15	7.75	8.93	10.16	16.37	17.50
36.40	7609	0.41	0.79	7.54	9.95	11.85	13.80	0.57	1.00	8.11	10.43	12.24	14.08	0.67	1.12	7.69	9.72	11.27	12.86	20.36	21.90
37.00	729	1.32	2.57	24.95	32.80	39.02	45.39	1.87	3.31	27.01	34.68	40.66	46.83	2.22	3.74	25.77	32.62	37.95	43.41	67.77	72.59
37.10	7610	0.39	0.76	7.34	9.80	11.75	13.77	0.56	0.99	8.32	10.81	12.74	14.74	0.68	1.15	8.31	10.59	12.34	14.14	21.32	22.84
37.20	7611	0.94	1.84	18.43	24.20	28.64	33.17	1.33	2.36	19.57	25.04	29.21	33.50	1.56	2.63	18.38	23.19	26.82	30.56	48.14	51.50
37.30	1477	0.74	1.45	14.37	18.79	22.25	25.76	1.04	1.85	15.20	19.42	22.66	25.99	1.22	2.07	14.27	17.98	20.81	23.70	37.30	39.82
37.40	1025	0.34	0.66	6.23	8.40	10.12	11.89	0.48	0.85	6.75	8.86	10.49	12.18	0.56	0.96	6.40	8.26	9.71	11.19	18.04	19.35
37.50	7612	0.41	0.79	8.38	10.70	12.46	14.22	0.57	1.01	8.72	10.85	12.47	14.13	0.66	1.12	8.09	9.94	11.34	12.76	19.70	21.00
38.10	7607	2.22	3.79	28.08	37.59	45.23	53.06	2.27	4.03	31.93	41.61	48.97	56.73	2.78	4.69	31.89	40.66	47.40	54.40	83.95	90.27
38.30	1940	1.48	2.88	26.72	35.36	42.53	49.75	2.10	3.72	29.64	38.38	45.25	52.32	2.54	4.27	28.98	36.80	43.00	49.29	76.19	81.74
39.00	726	13.16	19.24	95.23	129.86	156.88	183.67	14.99	20.98	114.20	150.21	176.52	204.90	14.92	20.30	119.60	153.71	179.03	205.94	307.66	331.91
39.10	590	0.05	0.10	0.94	1.20	1.41	1.61	0.06	0.11	0.89	1.12	1.29	1.46	0.07	0.11	0.77	0.94	1.06	1.18	2.01	2.14
39.20	1796	9.13	13.20	53.70	72.32	87.15	102.56	6.83	9.55	63.41	82.99	98.00	113.92	6.25	9.66	65.61	84.05	98.43	113.56	168.12	180.74
39.30	1456	4.42	7.25	37.46	50.53	60.54	71.35	3.71	5.78	42.98	56.18	66.00	76.71	3.85	6.40	43.14	55.19	64.10	73.84	114.56	123.30

Estimated Peak Flow - Existing Condition (with ponds)

Flow Node #	Hyd #	6hr						12hr						24hr						350yr	500yr
		2yr	5yr	10yr	25yr	50yr	100yr	2yr	5yr	10yr	25yr	50yr	100yr	2yr	5yr	10yr	25yr	50yr	100yr		
39.50	1776	6.94	11.37	54.85	73.86	88.74	104.49	6.95	10.87	63.82	83.47	98.43	114.43	6.37	9.76	65.37	83.47	97.56	112.36	167.72	180.19
39.60	7603	2.20	4.30	37.79	51.04	61.33	72.12	3.15	5.53	43.52	56.90	66.93	77.94	3.92	6.49	43.85	56.04	65.31	75.16	116.47	125.47
40.10	7590	14.57	21.66	94.16	127.33	154.41	181.57	16.95	24.24	113.59	149.08	176.58	206.16	17.35	24.17	119.98	154.65	181.05	209.28	308.24	332.48
40.20	1469	13.21	19.38	95.23	129.85	156.84	183.67	15.10	21.21	114.26	150.17	176.64	205.02	15.08	20.56	119.79	153.94	179.29	206.24	307.90	332.10
40.25	7593	13.36	18.91	28.73	35.09	40.49	48.18	9.57	13.22	19.23	23.09	26.64	30.60	6.32	8.47	11.97	14.25	16.16	18.18	46.34	49.33
40.30	1373	17.31	25.47	95.67	130.20	157.29	184.23	16.82	23.83	115.17	151.43	178.18	206.67	17.17	23.61	121.41	156.12	181.81	209.15	309.76	334.03
41.00	1819	2.36	4.96	12.04	15.95	18.85	21.92	3.22	6.01	13.48	17.22	20.05	23.05	3.56	6.18	13.14	16.51	18.99	21.62	32.89	35.36
41.20	1393	1.75	3.72	8.70	11.46	13.44	15.53	2.40	4.34	9.55	12.15	14.08	16.11	2.58	4.35	9.18	11.53	13.19	14.94	22.94	24.60
41.30	846	1.92	3.71	8.60	11.11	13.07	15.08	2.50	4.28	9.24	11.66	13.52	15.43	2.58	4.20	8.78	10.91	12.53	14.18	21.57	23.06
42.10	7591	3.39	5.53	12.95	17.46	20.41	23.57	3.85	6.81	15.26	19.79	22.74	25.94	4.41	7.52	15.84	20.19	23.10	26.11	36.41	39.09
42.20	1690	3.21	5.41	13.06	17.47	20.27	23.33	3.78	6.83	15.08	19.36	22.22	25.40	4.32	7.37	15.31	19.39	22.15	25.04	35.65	38.25
43.00	1012	6.05	10.12	20.05	25.36	29.49	34.20	7.08	10.78	20.63	25.60	29.27	33.29	6.77	10.13	18.77	23.05	26.26	29.52	48.30	51.82
43.20	857	6.05	10.27	21.38	28.31	33.40	39.22	6.20	9.81	19.87	25.30	29.73	34.13	5.80	8.83	16.52	20.46	23.62	27.21	50.28	54.44
44.10	7592	5.34	9.53	19.65	24.76	28.96	33.58	6.98	11.39	21.76	27.01	31.28	35.74	7.62	11.82	21.59	26.35	30.21	34.04	51.34	55.39
44.20	1307	5.52	9.68	19.57	24.63	28.80	33.17	7.05	11.29	21.32	26.55	30.61	34.66	7.53	11.52	20.96	25.60	29.15	32.68	49.41	53.88
45.00	7569	39.00	58.30	117.94	157.55	189.90	221.80	35.39	50.73	141.38	184.37	217.38	251.60	29.38	43.00	151.70	194.79	227.10	260.98	367.04	395.61
45.10	1028	43.58	64.74	118.13	157.78	190.21	222.18	35.46	50.18	141.60	184.63	217.69	251.88	29.27	42.84	151.67	194.77	227.06	260.63	367.32	395.81
45.20	7572	34.21	50.32	78.26	96.57	109.79	123.98	26.20	36.23	53.87	64.49	72.34	80.60	17.65	24.25	33.85	40.07	44.79	49.59	107.88	114.38
45.30	7573	19.95	32.16	117.33	156.65	188.65	220.33	25.20	38.42	140.46	182.89	215.57	249.28	28.01	41.15	149.32	191.27	222.93	255.69	362.15	389.88
45.40	2074	20.14	32.76	119.08	158.43	190.45	222.99	25.49	38.99	142.33	184.59	217.61	251.31	27.75	40.86	149.91	191.14	223.31	255.79	363.79	391.12
46.00	1503	12.76	19.18	34.87	46.85	55.91	65.46	12.29	18.00	30.07	39.75	47.59	55.47	10.78	15.03	26.37	34.98	41.46	47.53	91.05	100.46
46.10	681	18.34	26.01	35.52	42.95	49.12	56.14	12.65	16.98	22.94	27.44	30.84	34.14	7.69	10.15	13.44	15.84	17.61	19.39	45.16	48.00
46.30	1532	19.26	27.62	39.67	48.65	55.90	64.31	14.37	19.69	28.74	34.52	39.30	44.06	10.00	13.46	19.50	23.43	26.39	29.34	60.66	65.02
47.10	968	27.68	42.36	74.16	96.25	113.93	127.48	25.36	36.15	62.65	77.56	89.98	103.66	20.99	29.45	49.42	61.55	71.67	83.42	155.99	168.24
47.20	1559	22.31	32.74	50.18	64.07	73.79	83.65	17.13	24.25	41.51	54.34	64.50	75.28	14.71	20.71	35.78	45.24	53.42	62.99	119.52	132.23
48.10	7561	53.79	81.08	144.98	179.37	208.32	240.80	54.00	77.17	133.96	162.05	183.74	209.18	48.59	65.48	113.02	135.65	151.76	169.26	302.04	327.53
48.20	1544	64.12	95.29	155.84	189.63	218.38	251.25	57.24	81.86	136.19	160.98	181.44	198.99	48.09	67.11	109.25	128.48	139.00	153.14	286.59	311.67
48.30	1593	39.90	57.37	90.09	112.19	128.28	149.38	34.38	49.10	80.95	99.32	116.61	134.39	30.72	42.34	71.38	83.15	95.10	110.48	206.16	223.33
48.40	1612	26.06	38.95	80.86	109.77	129.93	152.46	27.01	38.23	74.05	94.59	112.45	129.43	24.38	33.95	60.83	76.62	90.14	105.52	197.25	211.83
49.10	1957	64.07	97.35	200.20	260.65	305.75	362.39	75.91	113.07	235.71	300.71	357.75	416.67	83.75	121.91	261.03	326.52	385.10	443.37	605.18	666.90
49.20	1319	76.14	111.98	203.82	265.56	311.29	370.49	73.86	108.86	240.32	304.52	364.58	424.55	79.06	113.01	261.98	325.12	386.33	444.32	610.79	672.49
49.30	975	63.41	96.56	201.07	261.17	306.46	363.81	75.31	112.30	236.31	301.45	358.33	417.68	82.88	119.91	260.76	326.18	385.46	443.39	606.75	667.72
49.40	7565	27.25	42.86	52.57	65.18	77.05	90.31	22.63	33.25	40.25	49.27	55.56	62.27	16.48	22.60	27.39	33.40	37.43	41.89	88.72	95.09
49.50	1631	59.53	93.85	202.12	261.72	307.28	364.82	74.32	109.75	237.29	302.01	359.00	418.39	80.85	116.37	260.56	325.76	385.61	442.67	606.31	668.11
49.70	1005	60.33	94.43	202.97	263.23	308.68	366.23	74.09	109.51	238.34	303.01	361.10	419.79	80.36	115.15	260.69	325.45	385.27	442.80	607.79	669.39
49.80	7568	21.94	31.12	47.43	58.82	68.04	77.19	17.52	24.74	35.96	42.79	47.78	53.14	11.87	16.23	22.99	26.98	29.87	32.79	74.13	78.64
49.90	7616	59.22	93.52	202.97	263.23	308.68	366.23	73.42	108.14	238.34	303.00	361.09	419.77	79.01	113.07	260.15	324.82	384.56	441.99	607.76	669.36
50.00	1649	113.74	170.59	277.15	353.06	413.37	478.05	125.72	178.16	282.25	357.43	414.34	479.90	121.33	171.87	274.59	342.86	403.98	465.66	709.00	768.57
50.10	1000	109.30	160.98	265.49	340.58	397.61	464.10	122.38	174.40	280.04	354.20	410.87	475.72	121.19	172.40	273.50	342.55	403.63	464.13	701.85	763.04
50.20	770	113.06	169.14	273.55	348.44	407.50	472.33	123.06	174.06	277.01	353.21	408.77	473.05	118.40	169.13	274.20	342.23	403.71	465.00	697.37	755.54
51.10	1442	22.31	33.71	121.59	161.86	195.53	228.17	26.12	40.26	145.25	189.03	222.71	258.10	28.36	41.95	152.71	195.54	227.98	261.27	379.92	410.23

Appendix V

Updates for Future Conditions

Brampton Official Plan Schedules

Secondary Plan Area	SPA Number	Secondary Plan	Block Plan	Other
Toronto Gore Rural Estate	26	NO	NO	NO
Highway 427 Industrial	47	NO	NO	Provided by TRCA
Bram East	41	YES	YES	
Vales of Humber	50	YES	YES	
Countryside Villages	48	YES	YES	
Sandringham-Wellington	28	YES	NO	
Vales of Castlemore North	49	YES	NO	
Vales of Castlemore	42	YES	YES	
Bramalea North Industrial	13	YES	NO	
Airport Road/Highway 7 business center	37	YES	NO	
Gore Industrial North	14	YES	NO	
Goreway Drive corridor	39	YES	NO	
Parkway Belt Industrial Area (corner only)	32	YES	NO	
Gore Industrial South	23	YES	NO	

Caledon (Shapefiles provided by the Town of Caledon)

File	Description
town_landuse	Town wide land use in all areas without a secondary plan (Schedule A).
mw_landuse	Mayfield West Phase 1 land use plan (Schedule B)
sandhill_landuse	Sandhill land use plan (Schedule T)
tullamore_landuse	Tullamore land use plan (Schedule N)
bol_landuse	Bolton land use plan (Schedule C)
bolcore_landuse	Bolton Core land use plan (Schedule C-1)
bolsh_landuse	Bolton south hill land use plan (Schedule C-2)
westbol_landuse	West Bolton land use plan (Schedule C-3)
nebol_landuse	Northeast Bolton land use plan (Schedule C-4)
bolssi_landuse	Bolton South Simpson Industrial land use plan (Schedule C-5)
bolcsc_ca_prec_area	Bolton community shopping centre commercial area (Schedule C-6)
bolcwea_landuse	Bolton Coleraine West Employment Area land use plan (Schedule C-7)
caleast_landuse	Caledon East land use plan (Schedule D)

Campbells Cross – data provided by TRCA

Township of King Official Plan Schedules

Development Area Area	OPA Number
King Community Plan	540
Nobleton Community Plan	570
Laskay Hamlet Plan	230

Richmond Hill Official Plan Schedules

Development Area	Secondary Plan	Notes
West Gormley	Yes	
Oak Ridges local center	NO	Show as commercial

Vaughan Official Plan Schedules

Development Area	Secondary Plan	Block PLan
Block 27		YES
Block 41		YES
Weston Road and Highway 7	Yes	
Highway 400 North Employment Lands	YES	
North Kleinburg-Nashville	YES	
West Vaughan Employment Area	YES	
Kipling Avenue	YES	
Woodbridge Centre	YES	
Vaughan Metropolitan Centre	YES	
Steeles West	YES	
Vaughan Mills Centre	YES	

For Mississauga, the land use remains the same as existing with the exception of the campground south of water park and Clairville Reservoir which is now show as recreational land.

As the portion of the City of Toronto located within the Humber watershed is fully developed it was assumed to remain unchanged.

Catchment Imperviousness and Updates

Catchment ID	Existing Imperviousness	Future Imperviousness	Update
04.01	15.5%	22.6%	Split to NASHYD and STANDHYD
04.02	2.4%	8.8%	Update CN*
04.03	7.0%	8.4%	Update CN*
04.04	8.2%	12.5%	Update CN*
04.05	7.4%	9.2%	Update CN*
06.02	20.6%	22.7%	Update CN*
06.04	1.9%	30.5%	Split to NASHYD and STANDHYD
06.05	1.3%	1.6%	Update CN*
06.06	59.0%	64.4%	Update TIMP/XIMP
06.07	78.1%	57.6%	Update TIMP/XIMP
06.08	37.3%	45.8%	Update TIMP/XIMP
06.09	10.6%	12.3%	Update CN*
06.11	44.0%	53.5%	Update TIMP/XIMP
06.12	38.0%	47.5%	Update TIMP/XIMP
06.13	52.8%	55.0%	Update TIMP/XIMP
06.14	35.2%	40.7%	Update TIMP/XIMP
06.15	1.4%	48.0%	Converet to STANDHYD
06.16	8.7%	11.2%	Update CN*
06.17	15.6%	28.4%	Split to NASHYD and STANDHYD
06.18	65.8%	68.2%	Update TIMP/XIMP
06.19	3.5%	5.1%	Update CN*
06.20	10.9%	58.2%	Converet to STANDHYD
07.09	4.8%	5.9%	Update CN*
07.15	16.3%	28.2%	Split to NASHYD and STANDHYD
08.02	5.3%	6.0%	Update CN*
08.05	11.7%	20.4%	Split to NASHYD and STANDHYD
08.06	16.9%	23.0%	Split to NASHYD and STANDHYD
08.07	38.5%	44.6%	Update TIMP/XIMP
08.08	46.8%	46.9%	Update TIMP/XIMP
08.09	10.6%	12.2%	Update CN*
08.10	4.9%	6.1%	Update CN*
08.11	15.9%	16.6%	Update CN*
08.12	17.2%	18.2%	Update CN*
08.13	16.2%	19.6%	Update CN*
09.01	44.0%	49.0%	Update TIMP/XIMP
09.02	51.8%	52.5%	Update TIMP/XIMP
09.03	55.1%	57.3%	Update TIMP/XIMP
09.04	40.3%	43.2%	Update TIMP/XIMP
09.05	60.0%	67.1%	Update TIMP/XIMP
09.06	65.6%	66.0%	Update TIMP/XIMP
09.07	10.0%	15.0%	Update TIMP/XIMP
09.08	8.8%	10.0%	Update CN*
09.09	7.3%	10.5%	Update CN*
09.10	5.5%	7.7%	Update CN*
09.11	4.8%	6.6%	Update CN*

Catchment Imperviousness and Updates

Catchment ID	Existing Imperviousness	Future Imperviousness	Update
09.12	4.2%	4.9%	Update CN*
10.01	14.1%	17.2%	Update CN*
10.02	5.0%	8.9%	Update CN*
10.03	59.7%	60.2%	Update TIMP/XIMP
10.04	1.4%	1.9%	Update CN*
10.05	9.1%	9.8%	Update CN*
10.06	60.6%	63.4%	Update TIMP/XIMP
10.08	2.6%	3.6%	Update CN*
10.09	3.6%	4.1%	Update CN*
10.10	5.5%	5.5%	Update CN*
10.11	11.1%	11.5%	Update CN*
10.12	1.2%	1.3%	Update CN*
10.13	2.8%	3.1%	Update CN*
10.14	5.3%	5.4%	Update CN*
10.15	4.5%	8.5%	Update CN*
10.16	10.5%	10.8%	Update CN*
10.17	6.5%	20.3%	Split to NASHYD and STANDHYD
10.18	2.0%	15.3%	Update CN*
10.19	13.5%	39.7%	Converet to STANDHYD
10.20	6.5%	35.3%	Converet to STANDHYD
10.21	18.9%	20.5%	Update CN*
10.22	13.8%	23.0%	Split to NASHYD and STANDHYD
10.23	7.2%	16.2%	Update CN*
10.24	3.9%	15.1%	Update CN*
10.25	2.2%	7.5%	Update CN*
11.02	7.8%	9.9%	Update CN*
11.03	66.0%	68.9%	Update TIMP/XIMP
11.05	6.1%	9.7%	Update CN*
12.01	3.6%	4.9%	Update CN*
12.02	3.1%	3.6%	Update CN*
12.03	4.7%	9.0%	Update CN*
13.01	38.4%	41.3%	Update TIMP/XIMP
13.02	10.8%	12.7%	Update CN*
13.03	34.1%	35.3%	Update TIMP/XIMP
13.04	66.2%	66.2%	Update TIMP/XIMP
13.05	5.6%	6.2%	Update CN*
13.13	9.7%	33.0%	Split to NASHYD and STANDHYD
13.16	17.7%	37.3%	Converet to STANDHYD
13.19	32.3%	34.9%	Update TIMP/XIMP
13.21	13.9%	29.6%	Converet to STANDHYD
13.25	39.9%	40.7%	Update TIMP/XIMP
13.28	39.8%	42.7%	Update TIMP/XIMP
13.29	7.6%	19.9%	Update CN*
13.30	6.7%	12.8%	Update CN*
13.31	3.2%	10.9%	Update CN*

Catchment Imperviousness and Updates

Catchment ID	Existing Imperviousness	Future Imperviousness	Update
14.01	48.7%	50.1%	Update TIMP/XIMP
14.02	6.7%	7.5%	Update CN*
14.04	9.2%	9.2%	Update CN*
14.05	17.9%	18.0%	Update CN*
14.06	7.5%	7.9%	Update CN*
14.07	56.5%	58.8%	Update TIMP/XIMP
14.08	60.4%	63.8%	Update TIMP/XIMP
14.09	61.2%	62.1%	Update TIMP/XIMP
14.12	7.3%	7.7%	Update CN*
14.16	12.7%	13.0%	Update CN*
14.17	51.3%	58.0%	Update TIMP/XIMP
14.18	10.9%	22.7%	Update CN*
14.19	20.8%	25.8%	Update TIMP/XIMP
14.20	54.4%	55.8%	Update TIMP/XIMP
14.21	55.5%	56.5%	Update TIMP/XIMP
14.22	59.7%	68.3%	Update TIMP/XIMP
14.23	61.5%	69.6%	Update TIMP/XIMP
14.24	66.1%	67.8%	Update TIMP/XIMP
14.25	65.2%	65.6%	Update TIMP/XIMP
14.26	23.5%	38.1%	Update TIMP/XIMP
14.27	5.5%	5.7%	Update CN*
14.28	8.8%	8.8%	Update CN*
14.29	67.3%	67.4%	Update TIMP/XIMP
14.30	64.2%	65.7%	Update TIMP/XIMP
14.31	61.4%	65.4%	Update TIMP/XIMP
14.32	59.1%	61.4%	Update TIMP/XIMP
14.33	1.9%	2.9%	Update CN*
14.34	25.7%	27.5%	Update TIMP/XIMP
14.35	26.3%	29.5%	Update TIMP/XIMP
14.36	0.0%	0.0%	Update CN*
14.37	8.5%	8.5%	Update CN*
14.38	26.2%	26.5%	Update TIMP/XIMP
14.39	45.9%	68.7%	Update TIMP/XIMP
14.40	65.4%	66.2%	Update TIMP/XIMP
14.41	66.0%	67.0%	Update TIMP/XIMP
14.42	60.3%	62.1%	Update TIMP/XIMP
14.43	6.5%	6.7%	Update CN*
14.44	55.1%	71.3%	Update TIMP/XIMP
14.45	61.9%	64.6%	Update TIMP/XIMP
14.46	63.4%	68.3%	Update TIMP/XIMP
14.47	5.3%	78.0%	Converet to STANDHYD
14.48	66.1%	69.3%	Update TIMP/XIMP
14.49	62.5%	62.8%	Update TIMP/XIMP
14.50	43.9%	44.8%	Update TIMP/XIMP
14.51	46.4%	49.2%	Update TIMP/XIMP

Catchment Imperviousness and Updates

Catchment ID	Existing Imperviousness	Future Imperviousness	Update
14.52	57.2%	62.1%	Update TIMP/XIMP
14.53	99.7%	99.7%	Update TIMP/XIMP
14.54	24.6%	36.4%	Update TIMP/XIMP
14.55	15.4%	16.6%	Update CN*
15.01	17.3%	37.2%	Split to NASHYD and STANDHYD
15.02	5.1%	7.2%	Update CN*
15.03	10.3%	53.1%	Converet to STANDHYD
15.04	8.9%	25.0%	Split to NASHYD and STANDHYD
15.05	15.6%	20.6%	Split to NASHYD and STANDHYD
15.06	11.4%	32.4%	Split to NASHYD and STANDHYD
15.07	31.8%	44.0%	Update TIMP/XIMP
15.08	51.5%	54.0%	Update TIMP/XIMP
15.09	22.9%	25.2%	Update TIMP/XIMP
15.10	23.9%	24.7%	Split to NASHYD and STANDHYD
15.12	22.2%	33.7%	Update TIMP/XIMP
15.13	23.3%	23.6%	Update CN*
15.15	45.6%	47.0%	Update TIMP/XIMP
15.16	13.2%	28.7%	Converet to STANDHYD
15.17	26.5%	41.7%	Update TIMP/XIMP
15.18	46.8%	49.5%	Update TIMP/XIMP
15.19	60.7%	63.1%	Update TIMP/XIMP
15.20	59.2%	59.5%	Update TIMP/XIMP
15.21	10.9%	11.2%	Update CN*
15.22	2.4%	2.7%	Update CN*
15.24	24.5%	29.4%	Converet to STANDHYD
15.26	5.9%	45.8%	Converet to STANDHYD
15.27	46.3%	46.3%	Update TIMP/XIMP
15.28	25.8%	26.2%	Update CN*
16.14	7.7%	14.2%	Update CN*
16.19	9.4%	29.6%	Split to NASHYD and STANDHYD
16.20	7.0%	7.0%	Update CN*
16.22	27.4%	37.4%	Update TIMP/XIMP
16.24	11.1%	44.7%	Converet to STANDHYD
17.01	5.9%	11.6%	Update CN*
17.02	16.6%	26.4%	Converet to STANDHYD
17.03	38.1%	58.4%	Update TIMP/XIMP
17.04	29.8%	44.6%	Update TIMP/XIMP
17.05	20.8%	24.8%	Update TIMP/XIMP
17.06	4.9%	5.4%	Update CN*
17.07	11.6%	11.9%	Update CN*
17.08	8.2%	8.4%	Update CN*
17.09	9.0%	9.3%	Update CN*
18.04	9.3%	13.1%	Update CN*
18.05	58.8%	58.9%	Update TIMP/XIMP
18.06	8.4%	18.5%	Update CN*

Catchment Imperviousness and Updates

Catchment ID	Existing Imperviousness	Future Imperviousness	Update
18.07	15.4%	33.3%	Converet to STANDHYD
18.08	9.8%	11.6%	Update CN*
18.10	1.0%	1.2%	Update CN*
18.11	1.2%	7.5%	Update CN*
18.12	4.8%	6.3%	Update CN*
19.01	5.2%	6.3%	Update CN*
19.02	8.8%	17.2%	Update CN*
19.03	3.5%	39.3%	Converet to STANDHYD
19.04	22.0%	44.4%	Update TIMP/XIMP
19.05	5.6%	25.5%	Split to NASHYD and STANDHYD
19.06	13.9%	24.4%	Update CN*
19.07	9.5%	44.7%	Converet to STANDHYD
19.08	4.1%	4.6%	Update CN*
19.09	6.3%	6.4%	Update CN*
19.10	18.9%	45.0%	Converet to STANDHYD
19.11	26.2%	32.7%	Update TIMP/XIMP
19.13	23.4%	33.1%	Update TIMP/XIMP
19.14	9.2%	93.8%	Converet to STANDHYD
19.15	6.0%	48.7%	Converet to STANDHYD
19.16	5.0%	12.8%	Update CN*
19.17	11.1%	51.4%	Converet to STANDHYD
19.18	14.5%	73.2%	Converet to STANDHYD
19.19	16.5%	82.7%	Converet to STANDHYD
19.20	2.7%	56.3%	Converet to STANDHYD
20.01	3.1%	20.9%	Split to NASHYD and STANDHYD
20.02	10.3%	11.9%	Update CN*
20.03	10.3%	12.7%	Update CN*
20.04	8.0%	30.0%	Split to NASHYD and STANDHYD
20.06	3.2%	5.2%	Update CN*
20.07	2.2%	2.5%	Update CN*
21.01	46.5%	50.8%	Update TIMP/XIMP
21.13	21.3%	23.2%	Update TIMP/XIMP
21.15	41.4%	43.2%	Update TIMP/XIMP
21.16	52.2%	59.2%	Update TIMP/XIMP
22.01	7.5%	37.4%	Converet to STANDHYD
22.02	4.3%	44.3%	Converet to STANDHYD
22.03	7.3%	80.4%	Converet to STANDHYD
22.04	19.8%	55.8%	Converet to STANDHYD
22.05	7.7%	42.9%	Split to NASHYD and STANDHYD
22.06	3.2%	64.0%	Converet to STANDHYD
22.07	29.2%	51.4%	Converet to STANDHYD
22.08	6.9%	21.5%	Update CN*
22.09	0.0%	20.0%	Update CN*
22.10	1.2%	1.2%	Update CN*
22.11	0.0%	79.1%	Converet to STANDHYD

Catchment Imperviousness and Updates

Catchment ID	Existing Imperviousness	Future Imperviousness	Update
22.12	5.2%	87.3%	Converet to STANDHYD
22.13	8.5%	62.6%	Converet to STANDHYD
22.14	2.1%	31.0%	Converet to STANDHYD
22.15	2.4%	35.5%	Split to NASHYD and STANDHYD
22.16	19.5%	29.9%	Converet to STANDHYD
22.17	5.0%	22.6%	Update CN*
22.18	7.9%	19.9%	Update CN*
22.19	18.9%	24.0%	Update CN*
22.20	24.5%	25.8%	Update TIMP/XIMP
22.22	85.9%	94.6%	Update TIMP/XIMP
22.23	72.8%	87.1%	Update TIMP/XIMP
22.24	85.5%	94.2%	Update TIMP/XIMP
22.25	58.4%	92.5%	Update TIMP/XIMP
22.26	5.5%	5.6%	Update CN*
22.27	87.8%	91.5%	Update TIMP/XIMP
22.28	78.5%	94.2%	Update TIMP/XIMP
22.30	78.2%	93.7%	Update TIMP/XIMP
22.31	49.7%	57.3%	Update TIMP/XIMP
23.01	52.2%	52.2%	Update TIMP/XIMP
23.02	42.3%	42.3%	Update TIMP/XIMP
23.05	65.3%	65.3%	Update TIMP/XIMP
23.09	3.2%	68.2%	Converet to STANDHYD
23.10	6.7%	60.9%	Converet to STANDHYD
24.01	82.3%	84.5%	Update TIMP/XIMP
24.02	45.5%	76.7%	Update TIMP/XIMP
24.03	66.1%	66.4%	Update TIMP/XIMP
24.04	12.9%	41.9%	Converet to STANDHYD
24.05	55.4%	58.8%	Update TIMP/XIMP
24.06	14.8%	66.5%	Converet to STANDHYD
24.07	22.9%	90.1%	Update TIMP/XIMP
24.08	3.9%	69.4%	Converet to STANDHYD
24.09	3.5%	72.3%	Converet to STANDHYD
24.10	14.0%	80.1%	Converet to STANDHYD
24.11	75.8%	94.8%	Update TIMP/XIMP
25.05	19.5%	20.4%	Update CN*
25.06	66.9%	66.9%	Update TIMP/XIMP
25.07	90.4%	90.5%	Update TIMP/XIMP
25.08	92.4%	92.4%	Update TIMP/XIMP
25.09	34.4%	35.9%	Update TIMP/XIMP
25.10	34.4%	72.6%	Update TIMP/XIMP
25.11	13.8%	21.3%	Update CN*
25.12	60.5%	68.7%	Update TIMP/XIMP
25.13	27.9%	77.9%	Converet to STANDHYD
25.14	11.3%	65.6%	Converet to STANDHYD
25.15	10.0%	71.7%	Converet to STANDHYD

Catchment Imperviousness and Updates

Catchment ID	Existing Imperviousness	Future Imperviousness	Update
26.04	87.3%	87.5%	Update TIMP/XIMP
26.08	71.8%	71.8%	Update TIMP/XIMP
26.09	15.3%	17.3%	Update CN*
26.10	25.5%	25.6%	Update TIMP/XIMP
26.11	50.6%	50.7%	Update TIMP/XIMP
26.12	88.8%	88.8%	Update TIMP/XIMP
26.13	80.3%	91.8%	Update TIMP/XIMP
26.14	47.7%	48.4%	Update TIMP/XIMP
26.15	92.5%	92.6%	Update TIMP/XIMP
26.16	75.4%	83.5%	Update TIMP/XIMP
27.02	81.5%	81.5%	Update TIMP/XIMP
27.06	51.9%	63.8%	Update TIMP/XIMP
27.07	53.7%	70.8%	Update TIMP/XIMP
27.08	81.3%	81.8%	Update TIMP/XIMP
27.09	28.6%	29.5%	Update TIMP/XIMP
27.10	60.0%	60.1%	Update TIMP/XIMP
27.12	51.3%	56.8%	Update TIMP/XIMP
27.14	78.0%	78.1%	Update TIMP/XIMP
28.01	7.9%	9.7%	Update CN*
28.02	3.4%	3.9%	Update CN*
29.01	1.6%	1.7%	Update CN*
29.02	55.5%	59.9%	Update TIMP/XIMP
29.03	4.7%	5.8%	Update CN*
29.04	69.7%	69.8%	Update TIMP/XIMP
29.05	62.0%	62.0%	Update TIMP/XIMP
29.06	8.8%	9.7%	Update CN*
29.07	68.3%	68.3%	Update TIMP/XIMP
29.08	57.5%	57.5%	Update TIMP/XIMP
29.09	7.6%	15.8%	Update CN*
29.10	13.2%	34.0%	Converet to STANDHYD
29.11	11.2%	69.8%	Converet to STANDHYD
29.12	1.7%	39.5%	Split to NASHYD and STANDHYD
29.13	18.7%	18.8%	Update CN*
29.14	81.6%	81.6%	Update TIMP/XIMP
29.15	2.0%	2.1%	Update CN*
29.16	6.2%	8.0%	Update CN*
30.04	4.0%	4.1%	Update CN*
32.01	8.1%	10.1%	Update CN*
32.02	65.4%	65.2%	Update TIMP/XIMP
32.03	66.6%	66.7%	Update TIMP/XIMP
32.04	12.1%	15.0%	Update CN*
32.05	64.4%	64.5%	Update TIMP/XIMP
32.06	2.8%	3.7%	Update CN*
32.07	68.7%	68.5%	Update TIMP/XIMP
32.08	63.5%	63.9%	Update TIMP/XIMP

Catchment Imperviousness and Updates

Catchment ID	Existing Imperviousness	Future Imperviousness	Update
32.09	66.4%	66.4%	Update TIMP/XIMP
32.10	7.7%	12.9%	Update CN*
32.11	65.2%	65.4%	Update TIMP/XIMP
32.12	70.1%	70.3%	Update TIMP/XIMP
32.13	11.6%	12.4%	Update CN*
32.14	58.3%	59.9%	Update TIMP/XIMP
32.15	6.7%	7.3%	Update CN*
32.16	66.9%	66.9%	Update TIMP/XIMP
32.17	69.9%	70.0%	Update TIMP/XIMP
32.18	1.8%	65.0%	Converet to STANDHYD
32.19	7.3%	65.2%	Converet to STANDHYD
32.20	2.5%	60.7%	Converet to STANDHYD
32.21	7.7%	22.0%	Update CN*
32.22	23.6%	42.8%	Converet to STANDHYD
32.23	0.0%	12.7%	Update CN*
32.24	5.2%	45.1%	Converet to STANDHYD
32.25	2.0%	29.9%	Converet to STANDHYD
32.26	6.0%	6.1%	Update CN*
32.27	4.0%	4.8%	Update CN*
32.28	2.7%	2.8%	Update CN*
32.29	44.4%	57.8%	Update TIMP/XIMP
33.01	13.3%	20.8%	Update CN*
33.02	2.8%	4.7%	Update CN*
33.03	58.9%	59.0%	Update TIMP/XIMP
33.04	59.7%	59.8%	Update TIMP/XIMP
33.05	76.5%	76.6%	Update TIMP/XIMP
33.06	70.1%	70.1%	Update TIMP/XIMP
33.07	58.7%	60.2%	Update TIMP/XIMP
33.08	2.4%	3.2%	Update CN*
33.09	56.9%	62.2%	Update TIMP/XIMP
33.10	18.8%	47.8%	Converet to STANDHYD
33.11	55.4%	55.4%	Update TIMP/XIMP
33.12	64.3%	64.3%	Update TIMP/XIMP
33.13	59.2%	60.1%	Update TIMP/XIMP
33.14	22.6%	53.0%	Converet to STANDHYD
33.15	6.1%	6.1%	Update CN*
33.16	2.9%	54.9%	Converet to STANDHYD
34.05	7.3%	7.4%	Update CN*
34.08	2.4%	2.5%	Update CN*
35.01	8.5%	13.9%	Update CN*
35.03	35.9%	36.4%	Update TIMP/XIMP
35.05	28.9%	31.6%	Update TIMP/XIMP
35.06	66.5%	66.6%	Update TIMP/XIMP
35.07	14.8%	17.5%	Update CN*
35.08	63.5%	63.5%	Update TIMP/XIMP

Catchment Imperviousness and Updates

Catchment ID	Existing Imperviousness	Future Imperviousness	Update
35.09	11.9%	14.0%	Update CN*
35.11	14.4%	92.0%	Converet to STANDHYD
35.12	45.2%	65.8%	Update TIMP/XIMP
35.13	3.6%	5.0%	Update CN*
35.14	18.2%	53.9%	Converet to STANDHYD
35.15	55.7%	70.9%	Update TIMP/XIMP
36.01	32.6%	32.7%	Update TIMP/XIMP
36.02	23.8%	24.2%	Update TIMP/XIMP
36.03	26.3%	27.8%	Update TIMP/XIMP
36.04	1.8%	28.7%	Split to NASHYD and STANDHYD
36.05	4.7%	47.6%	Converet to STANDHYD
36.08	11.1%	11.7%	Update CN*
36.11	6.7%	8.5%	Update CN*
37.10	6.3%	6.8%	Update CN*
37.11	10.7%	11.4%	Update CN*
37.12	12.5%	16.4%	Update CN*
38.01	25.6%	30.0%	Update TIMP/XIMP
38.02	2.8%	54.6%	Converet to STANDHYD
38.03	24.9%	38.8%	Update TIMP/XIMP
38.04	9.3%	10.8%	Update CN*
38.07	2.4%	3.4%	Update CN*
39.01	3.9%	3.9%	Update CN*
39.02	1.8%	1.8%	Update CN*
39.03	64.6%	64.8%	Update TIMP/XIMP
39.04	4.5%	4.6%	Update CN*
39.05	68.3%	68.3%	Update TIMP/XIMP
39.06	60.0%	60.0%	Update TIMP/XIMP
39.07	68.3%	68.5%	Update TIMP/XIMP
39.08	61.2%	61.7%	Update TIMP/XIMP
39.09	4.4%	11.9%	Update CN*
39.10	8.0%	68.0%	Converet to STANDHYD
39.11	4.0%	52.0%	Converet to STANDHYD
39.12	58.4%	58.8%	Update TIMP/XIMP
39.13	9.0%	10.4%	Update CN*
40.01	5.2%	9.4%	Update CN*
40.02	8.3%	16.3%	Update CN*
40.03	64.1%	69.3%	Update TIMP/XIMP
40.04	8.3%	10.3%	Update CN*
40.05	5.9%	7.5%	Update CN*
40.06	49.1%	65.2%	Update TIMP/XIMP
40.07	5.4%	10.8%	Update CN*
40.08	0.0%	0.0%	Update CN*
40.09	26.0%	45.3%	Converet to STANDHYD
40.10	90.5%	93.5%	Update TIMP/XIMP
40.12	85.0%	85.7%	Update TIMP/XIMP

Catchment Imperviousness and Updates

Catchment ID	Existing Imperviousness	Future Imperviousness	Update
40.13	55.4%	55.4%	Update TIMP/XIMP
41.01	3.6%	51.0%	Converet to STANDHYD
41.02	0.7%	54.7%	Converet to STANDHYD
41.03	0.9%	40.6%	Converet to STANDHYD
41.04	25.1%	38.2%	Update TIMP/XIMP
41.05	3.4%	41.8%	Converet to STANDHYD
41.06	4.8%	4.8%	Update CN*
41.07	3.2%	4.4%	Update CN*
41.08	3.9%	3.9%	Update CN*
42.01	12.8%	14.2%	Update CN*
42.02	4.1%	7.8%	Update CN*
42.03	37.5%	37.6%	Update TIMP/XIMP
42.04	92.9%	93.0%	Update TIMP/XIMP
42.05	39.2%	59.9%	Update TIMP/XIMP
42.06	55.0%	55.0%	Update TIMP/XIMP
42.07	68.2%	86.6%	Update TIMP/XIMP
42.08	59.3%	66.7%	Update TIMP/XIMP
42.09	66.5%	67.3%	Update TIMP/XIMP
42.10	15.7%	15.7%	Update CN*
42.11	67.5%	67.5%	Update TIMP/XIMP
42.12	12.2%	12.2%	Update CN*
42.13	71.8%	71.8%	Update TIMP/XIMP
42.14	59.6%	65.2%	Update TIMP/XIMP
42.15	41.3%	44.7%	Update TIMP/XIMP
42.16	65.7%	66.4%	Update TIMP/XIMP
42.17	2.3%	67.1%	Converet to STANDHYD
43.01	3.5%	53.8%	Converet to STANDHYD
43.02	4.2%	64.7%	Converet to STANDHYD
43.03	1.7%	6.8%	Update CN*
43.04	2.2%	24.4%	Update CN*
43.05	3.1%	64.2%	Converet to STANDHYD
43.06	0.0%	9.8%	Update CN*
43.07	8.1%	81.8%	Converet to STANDHYD
43.08	76.3%	94.9%	Update TIMP/XIMP
43.09	43.1%	87.4%	Update TIMP/XIMP
43.10	22.0%	75.2%	Update TIMP/XIMP
43.11	84.8%	92.4%	Update TIMP/XIMP
44.01	14.1%	18.8%	Update CN*
44.02	23.4%	39.3%	Update TIMP/XIMP
44.03	38.8%	42.9%	Update TIMP/XIMP
44.04	58.7%	92.9%	Update TIMP/XIMP
44.05	64.4%	94.7%	Converet to STANDHYD
44.06	77.5%	78.3%	Update TIMP/XIMP
44.07	17.1%	24.1%	Update CN*
44.08	61.5%	74.2%	Update TIMP/XIMP

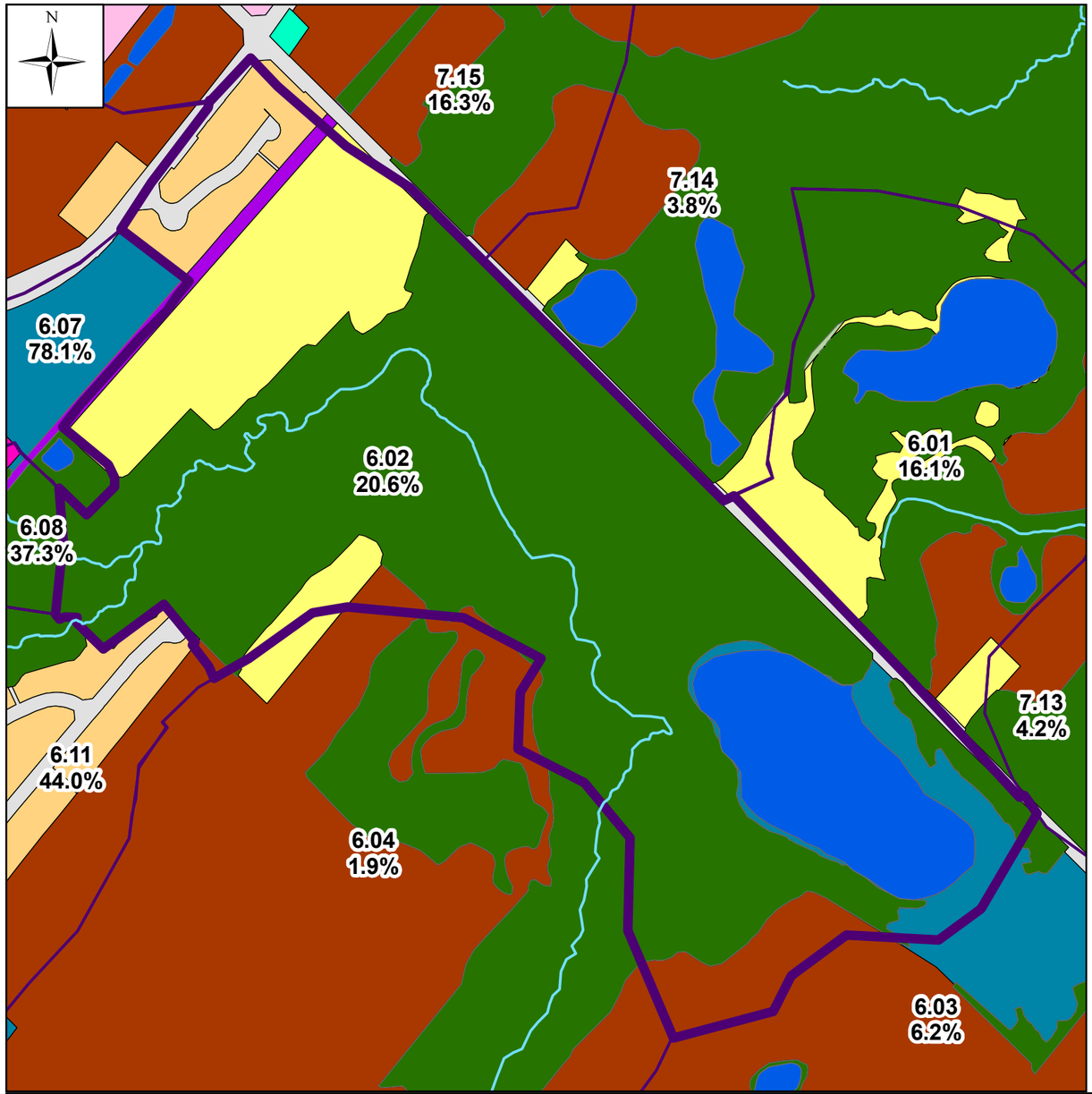
Catchment Imperviousness and Updates

Catchment ID	Existing Imperviousness	Future Imperviousness	Update
44.09	23.0%	41.4%	Update TIMP/XIMP
44.10	66.7%	66.9%	Update TIMP/XIMP
44.11	55.9%	56.2%	Update TIMP/XIMP
44.12	61.5%	62.0%	Update TIMP/XIMP
44.13	70.7%	70.7%	Update TIMP/XIMP
44.14	49.5%	51.3%	Update TIMP/XIMP
44.15	63.6%	64.1%	Update TIMP/XIMP
45.10	34.5%	71.3%	Converet to STANDHYD
45.11	35.2%	35.6%	Update TIMP/XIMP
45.12	32.0%	43.0%	Update TIMP/XIMP
45.13	5.7%	6.2%	Update CN*
45.14	10.7%	94.5%	Converet to STANDHYD
46.01	22.6%	54.1%	Update TIMP/XIMP
46.02	46.6%	49.0%	Update TIMP/XIMP

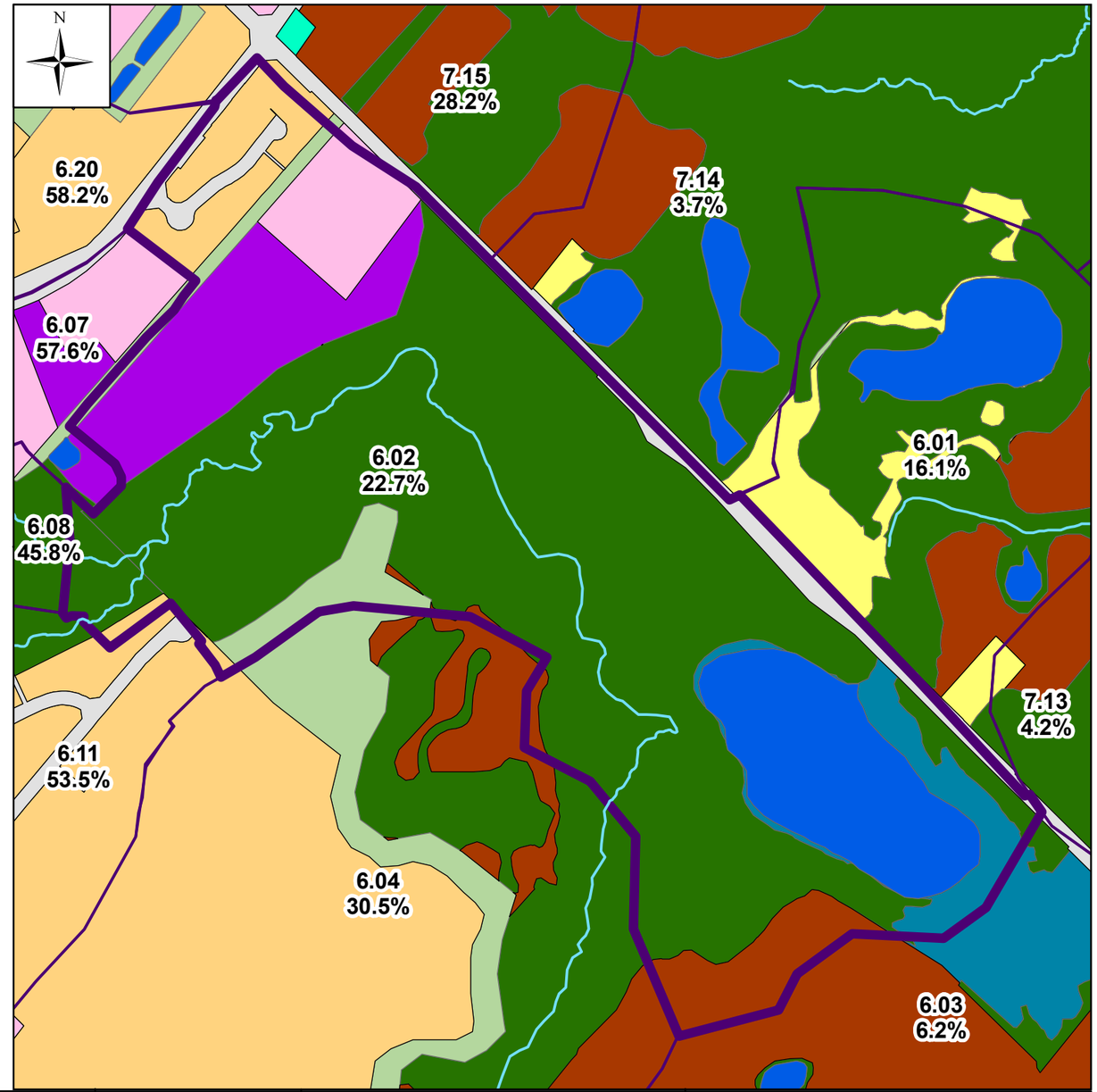
Appendix VI

Comparison of % Impervious

Existing Condition



Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
- Natural
- Open Space
- Park
- Recreational
- Residential High
- Residential LowMed
- Road (ROW)
- Rural Residential
- Transportation
- Water

Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

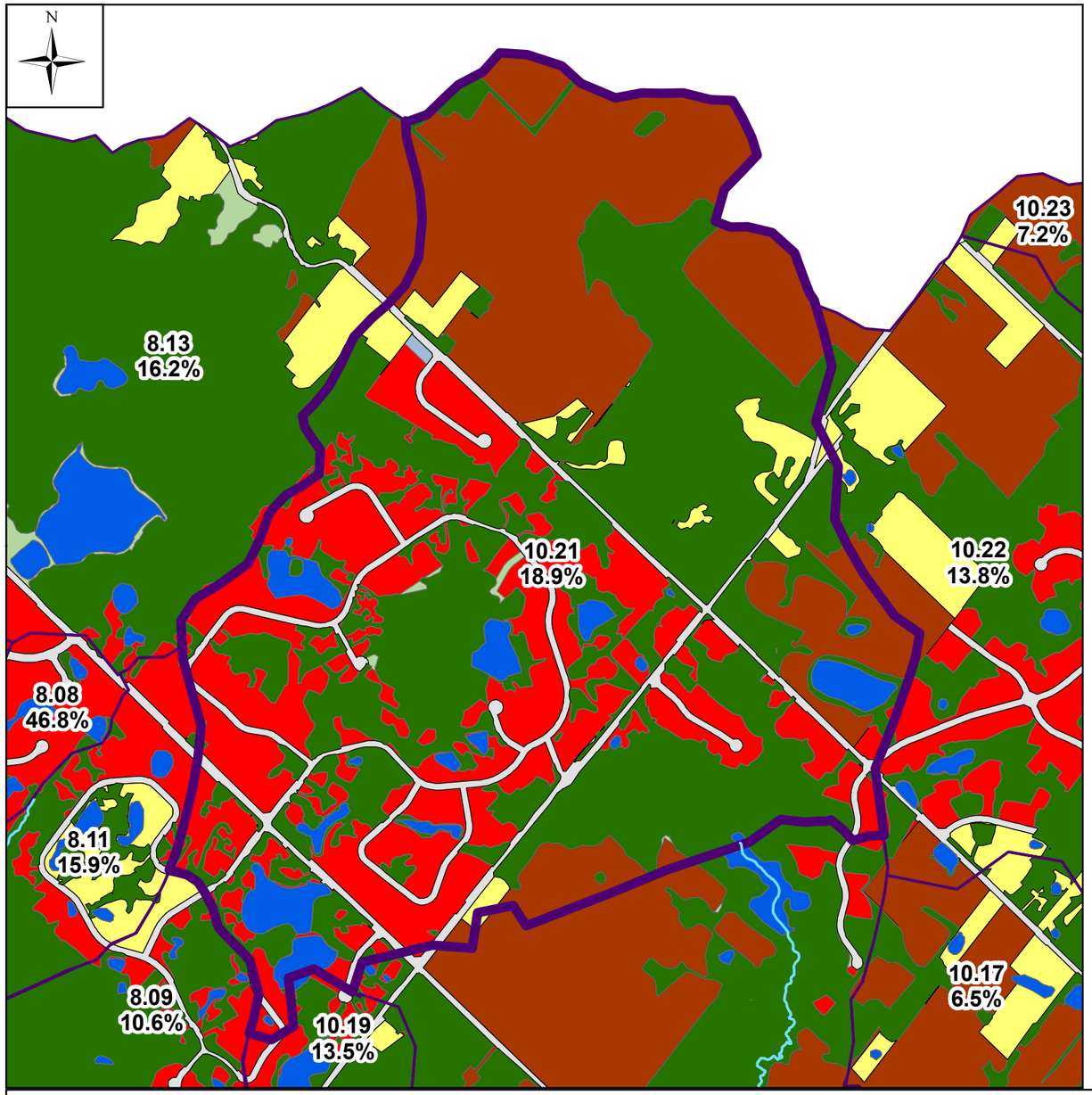
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Imperviousness

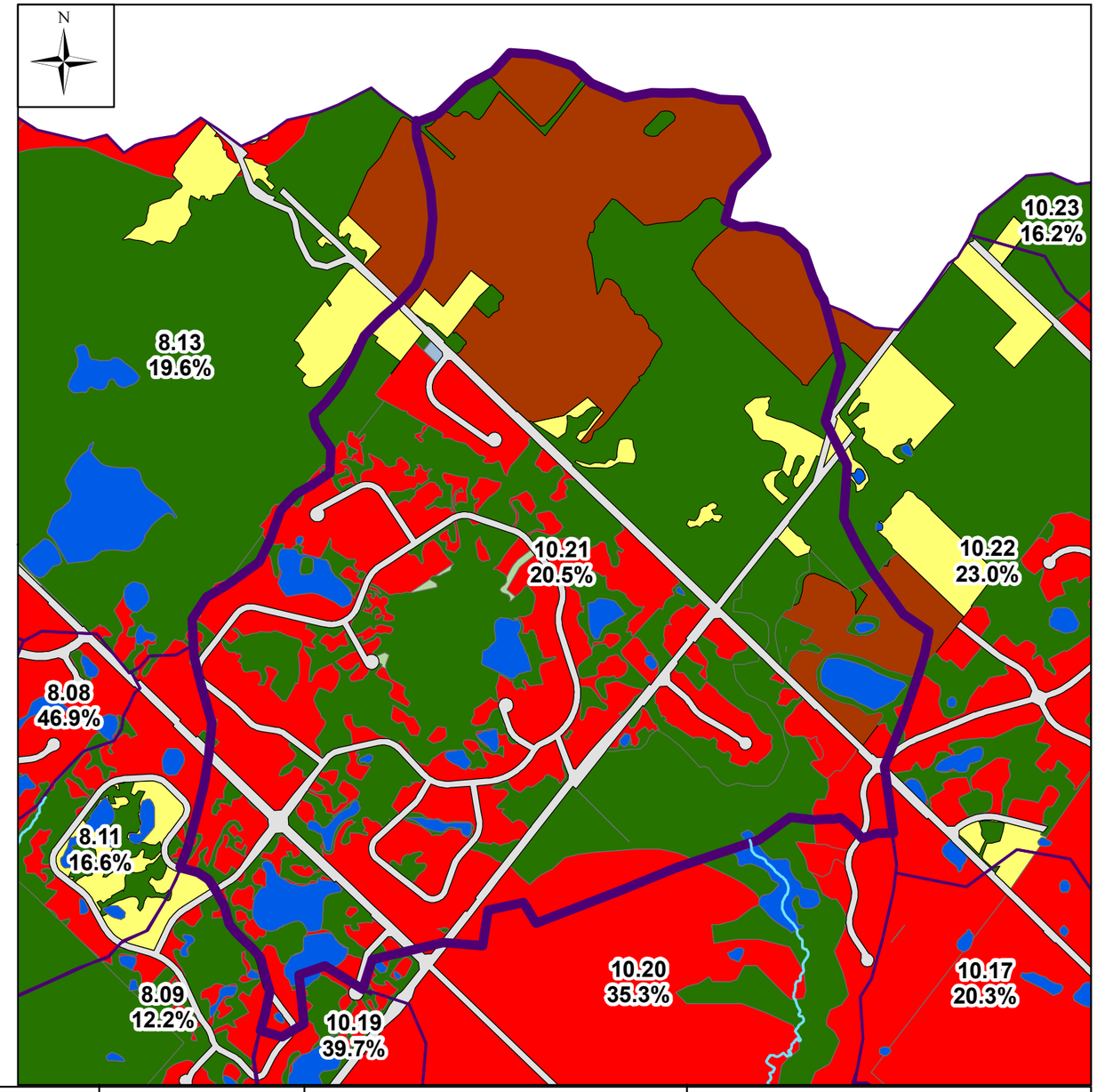
06.02

0 85 170 340 Meters

Existing Condition



Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
- Natural
- Open Space
- Park
- Recreational
- Residential High
- Residential LowMed
- Road (ROW)
- Rural Residential
- Transportation
- Water

Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

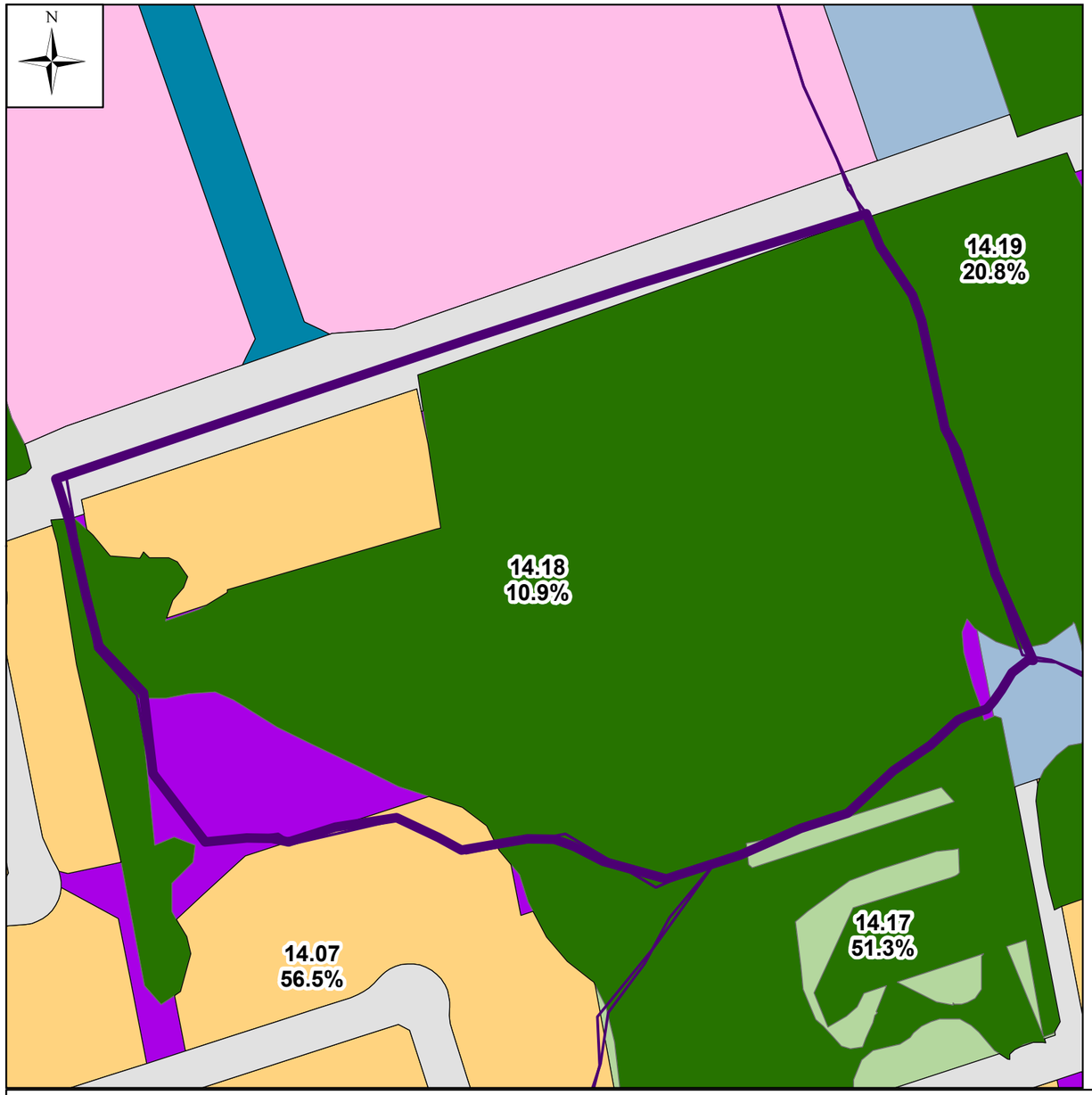
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Imperviousness

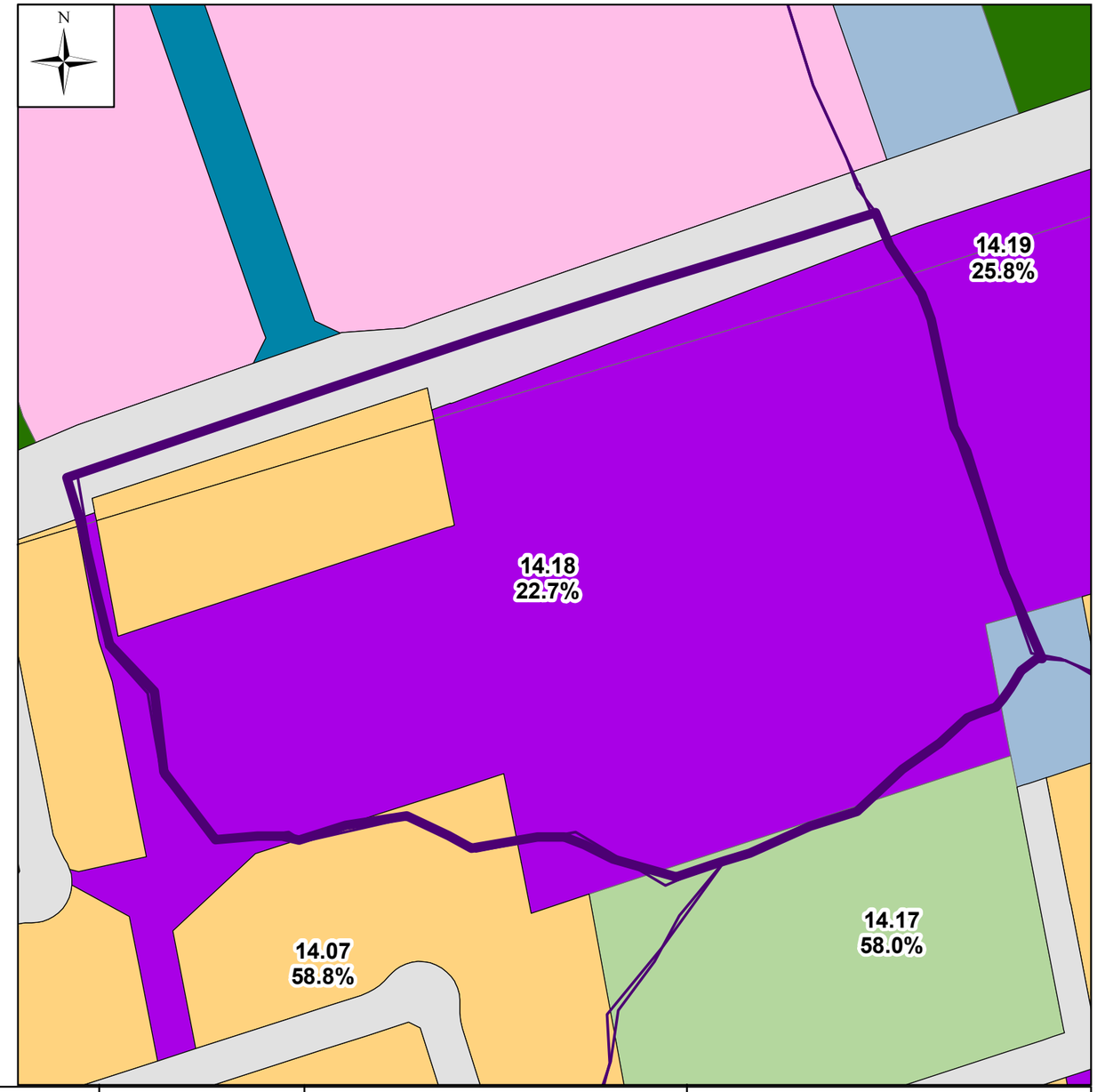
10.21

0 180 360 720 Meters

Existing Condition



Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
- Natural
- Open Space
- Park
- Recreational
- Residential High
- Residential LowMed
- Road (ROW)
- Rural Residential
- Transportation
- Water

Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

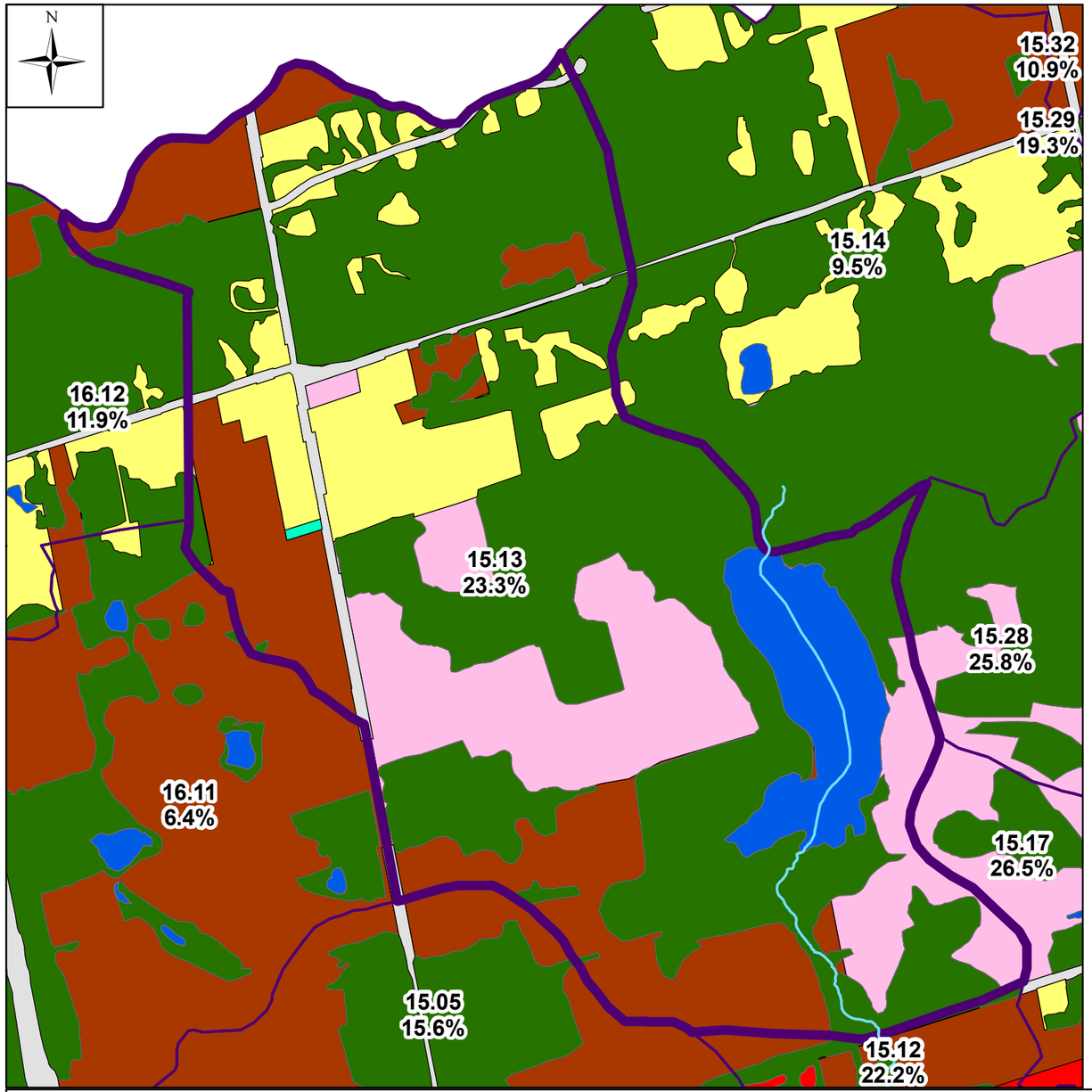
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Imperviousness

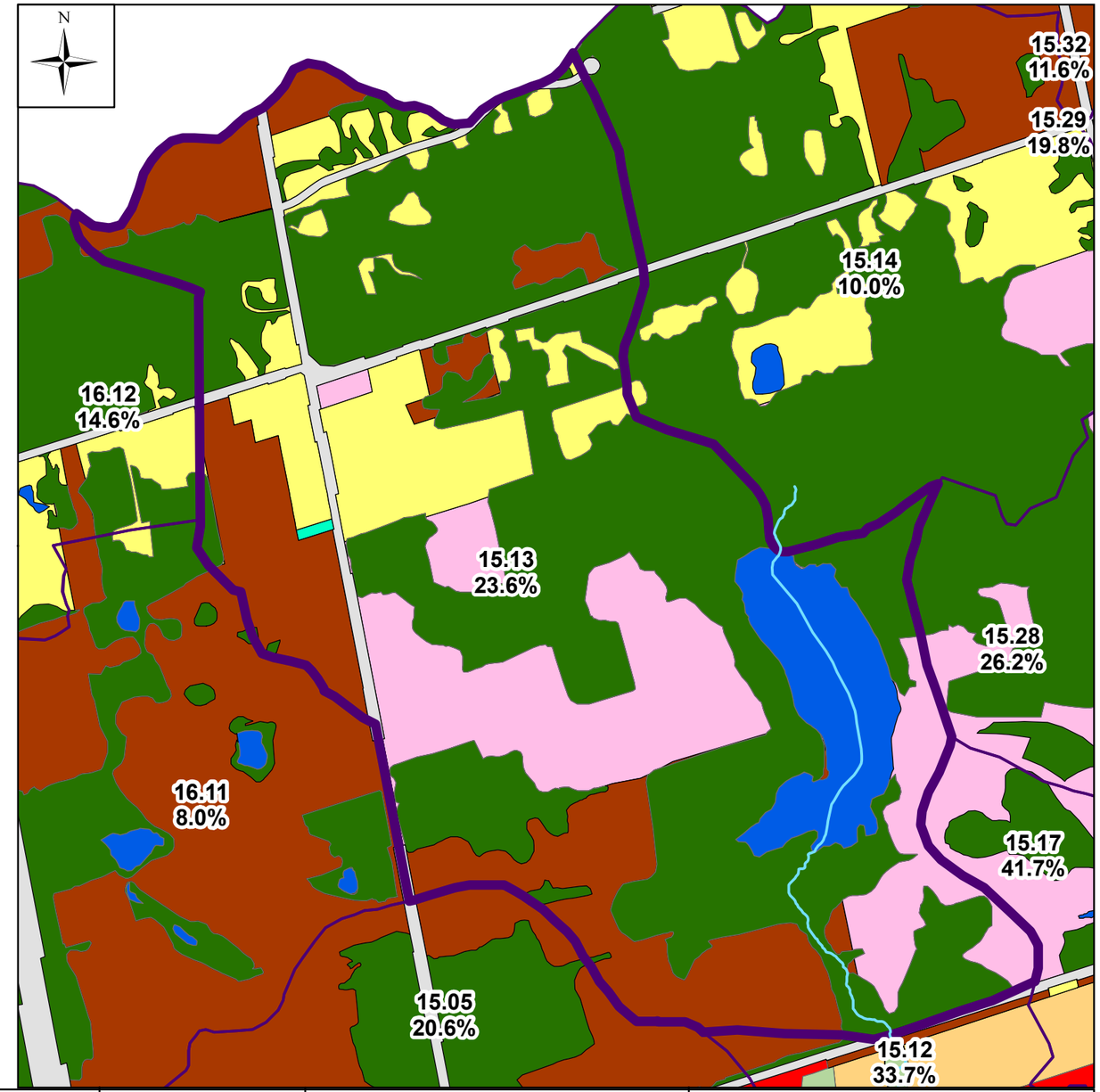
14.18

0 25 50 100 Meters

Existing Condition



Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
- Natural
- Open Space
- Park
- Recreational
- Residential High
- Residential LowMed
- Road (ROW)
- Rural Residential
- Transportation
- Water

Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

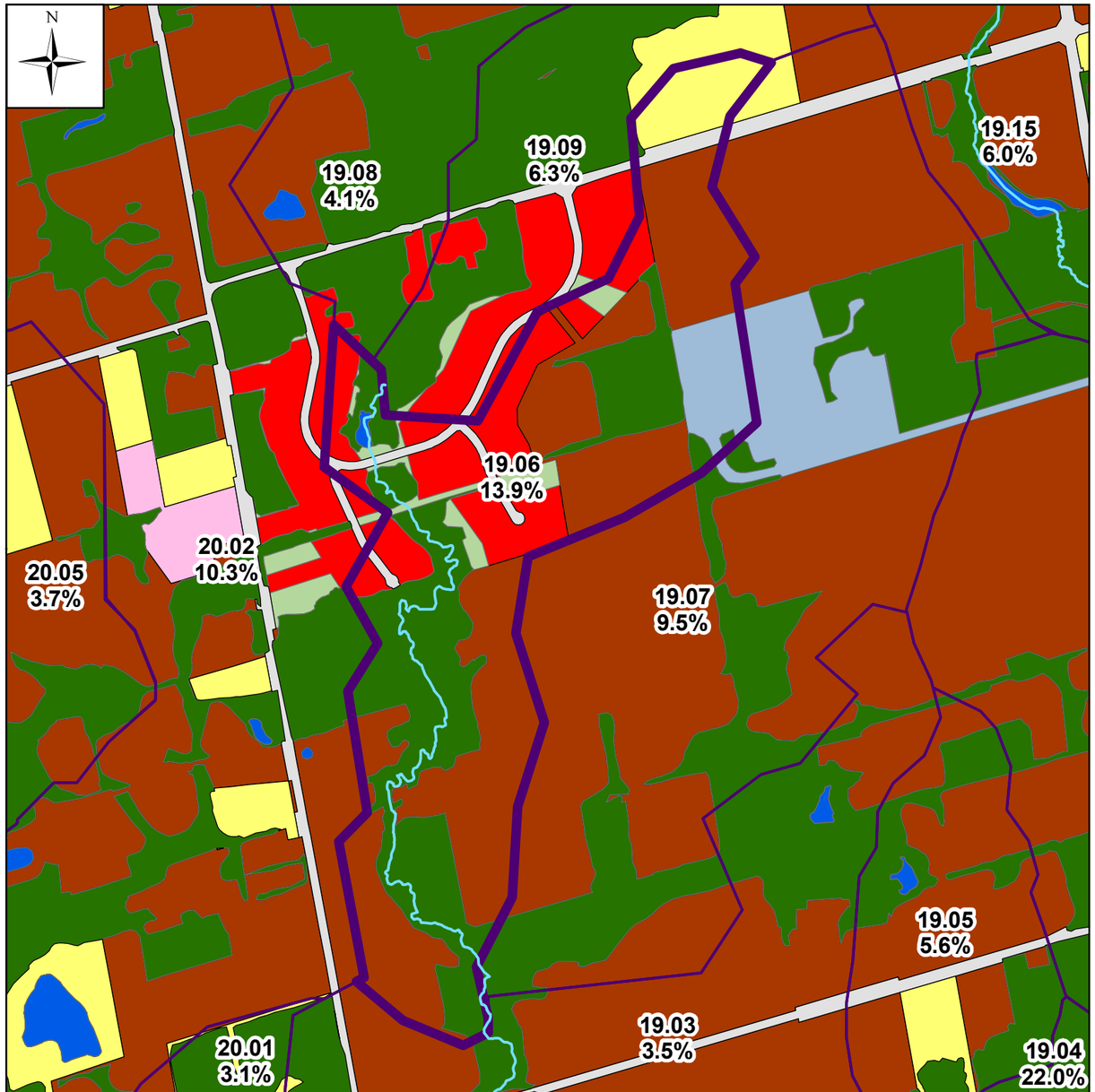
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Imperviousness

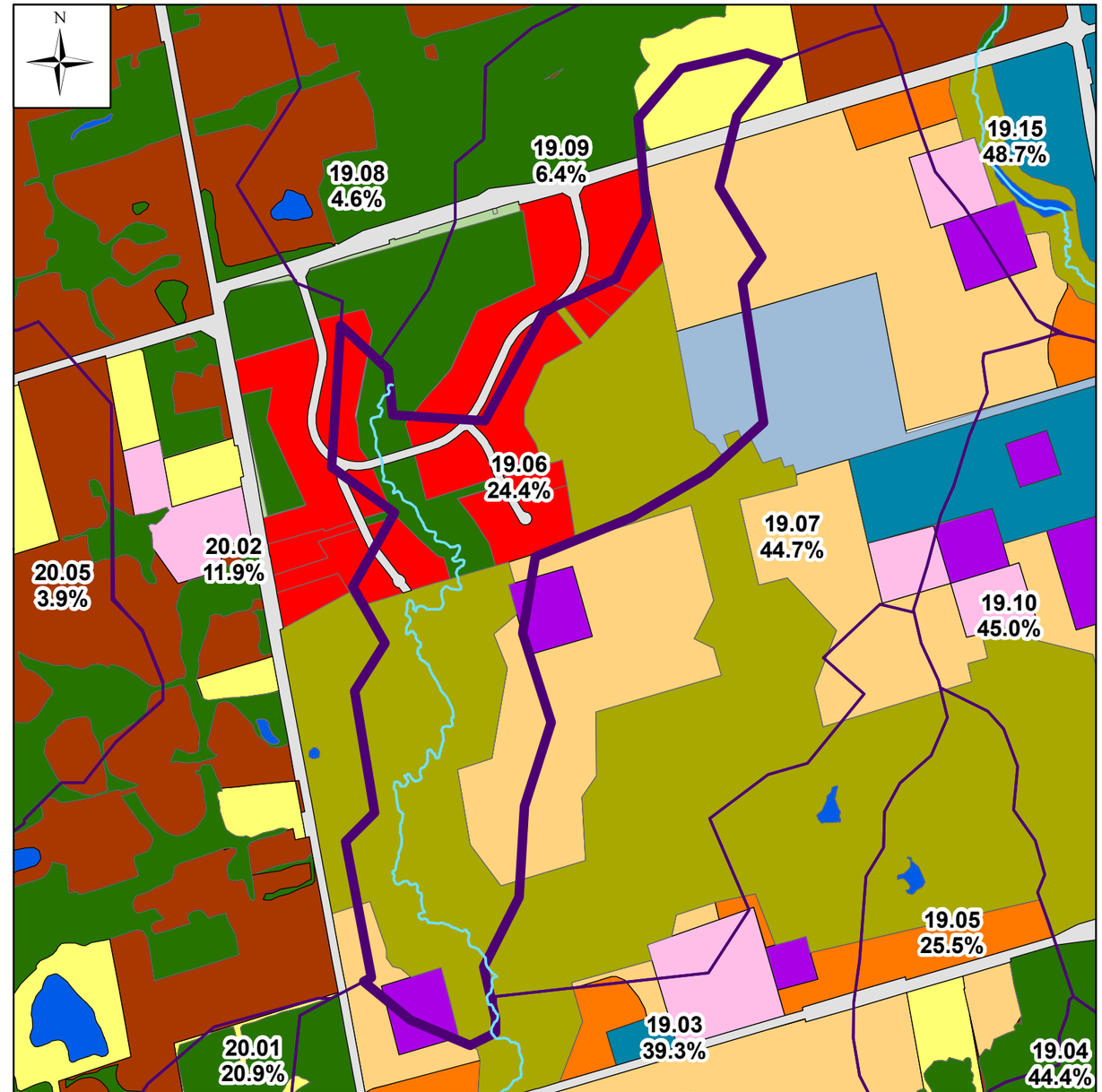
15.13

0 150 300 600 Meters

Existing Condition



Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
- Natural
- Open Space
- Park
- Recreational
- Residential High
- Residential LowMed
- Road (ROW)
- Rural Residential
- Transportation
- Water

Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

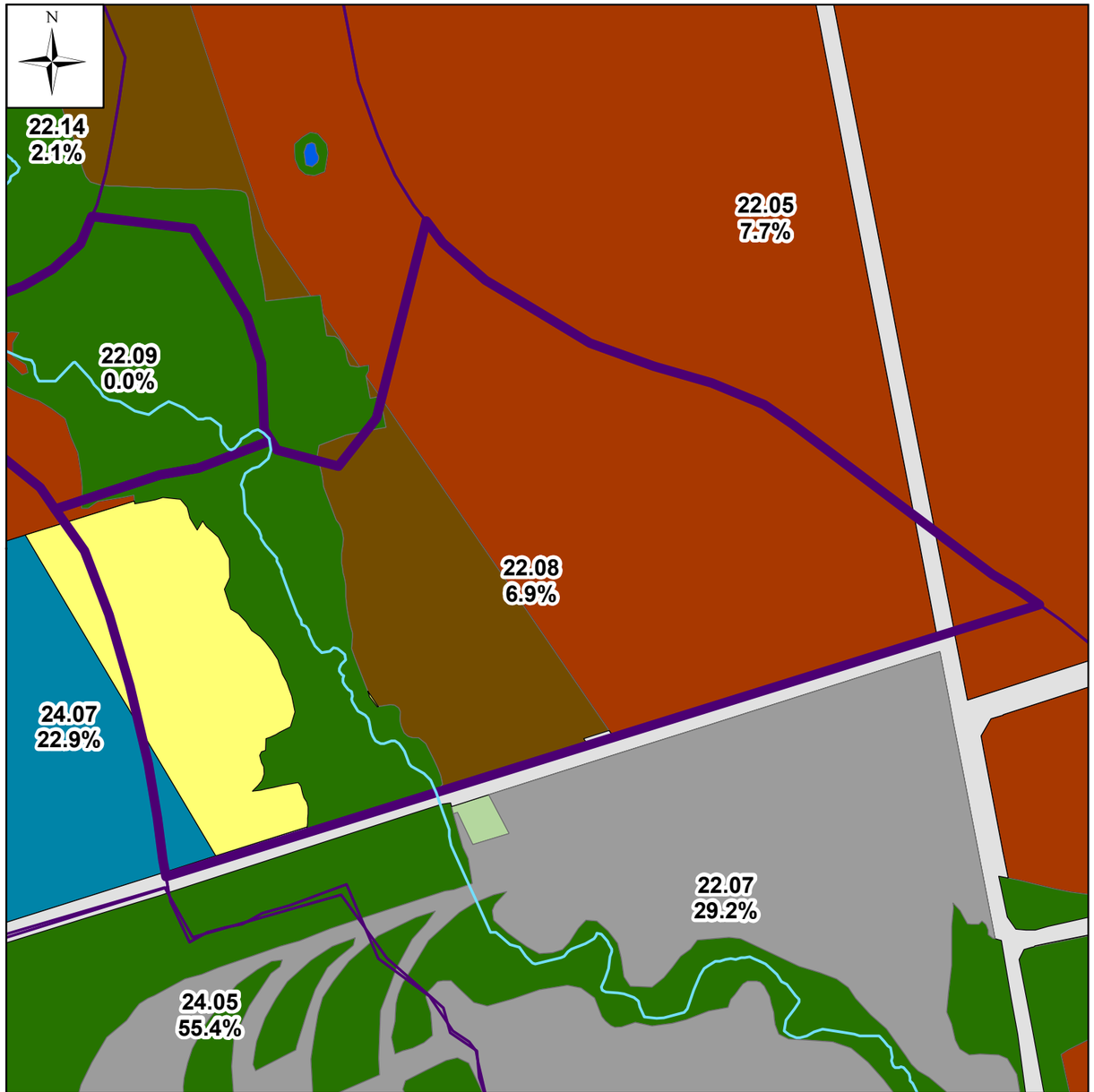
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Imperviousness

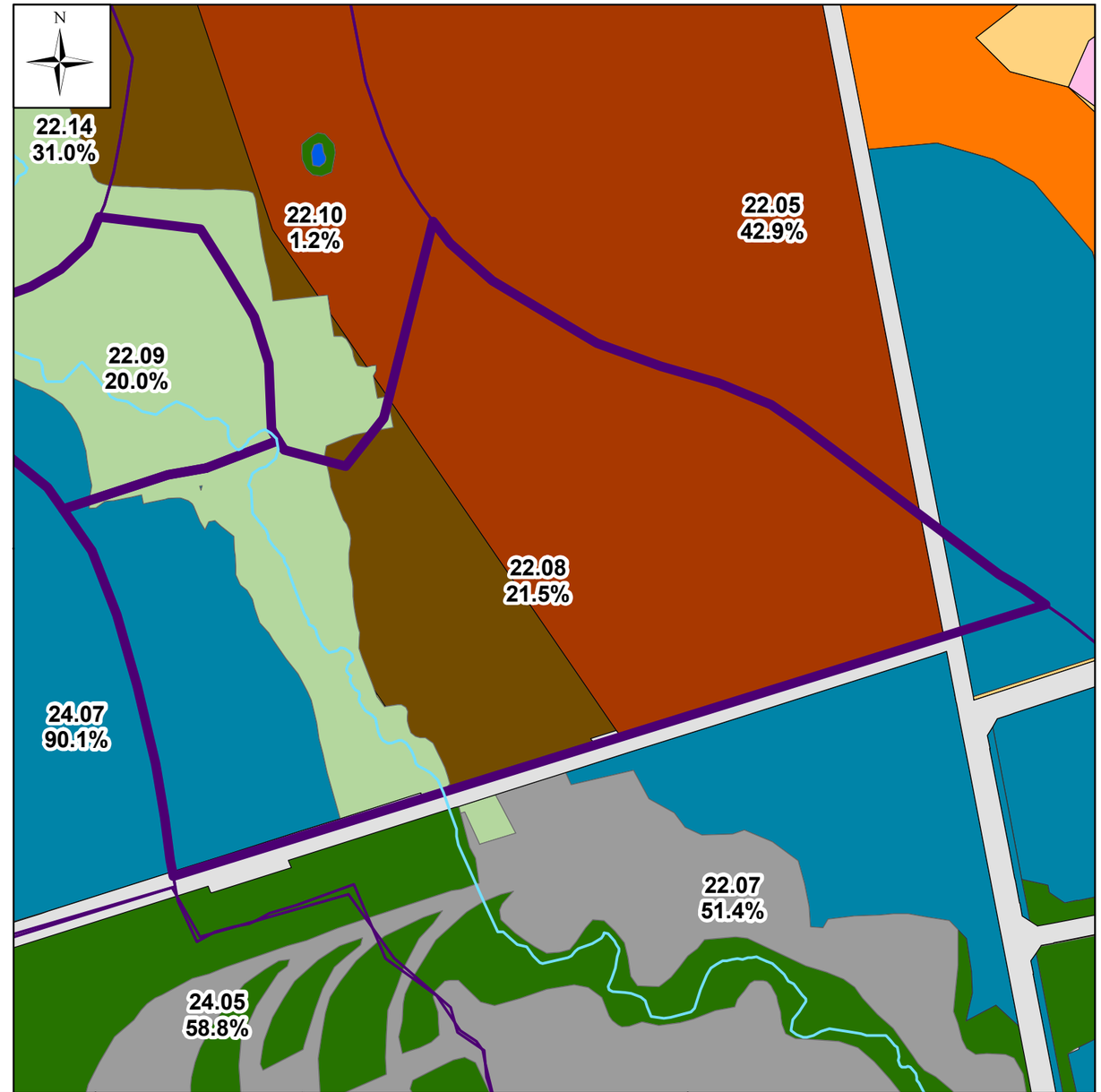
19.06

0 140 280 560 Meters

Existing Condition



Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
- Natural
- Open Space
- Park
- Recreational
- Residential High
- Residential LowMed
- Road (ROW)
- Rural Residential
- Transportation
- Water

Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

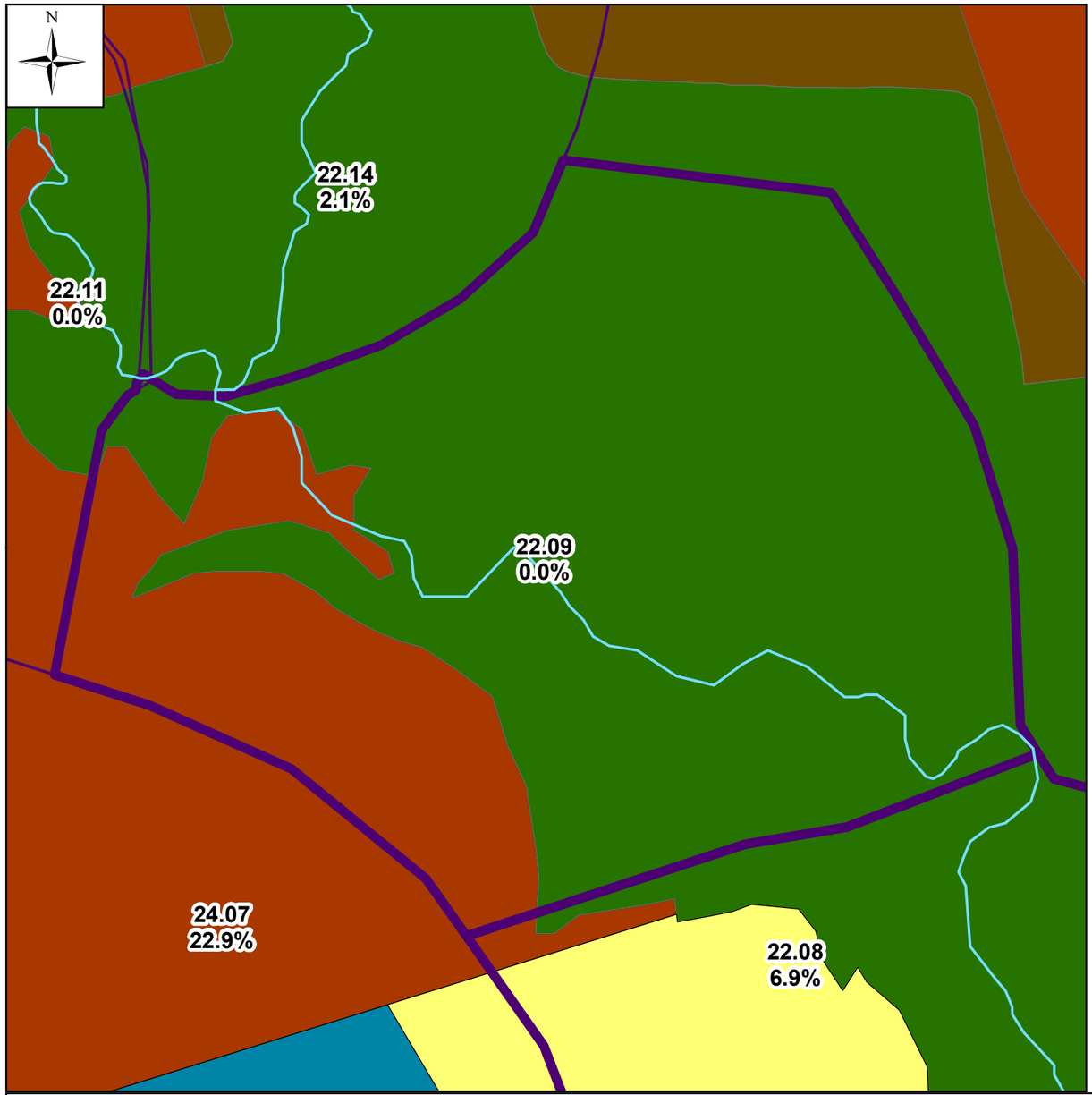
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Imperviousness

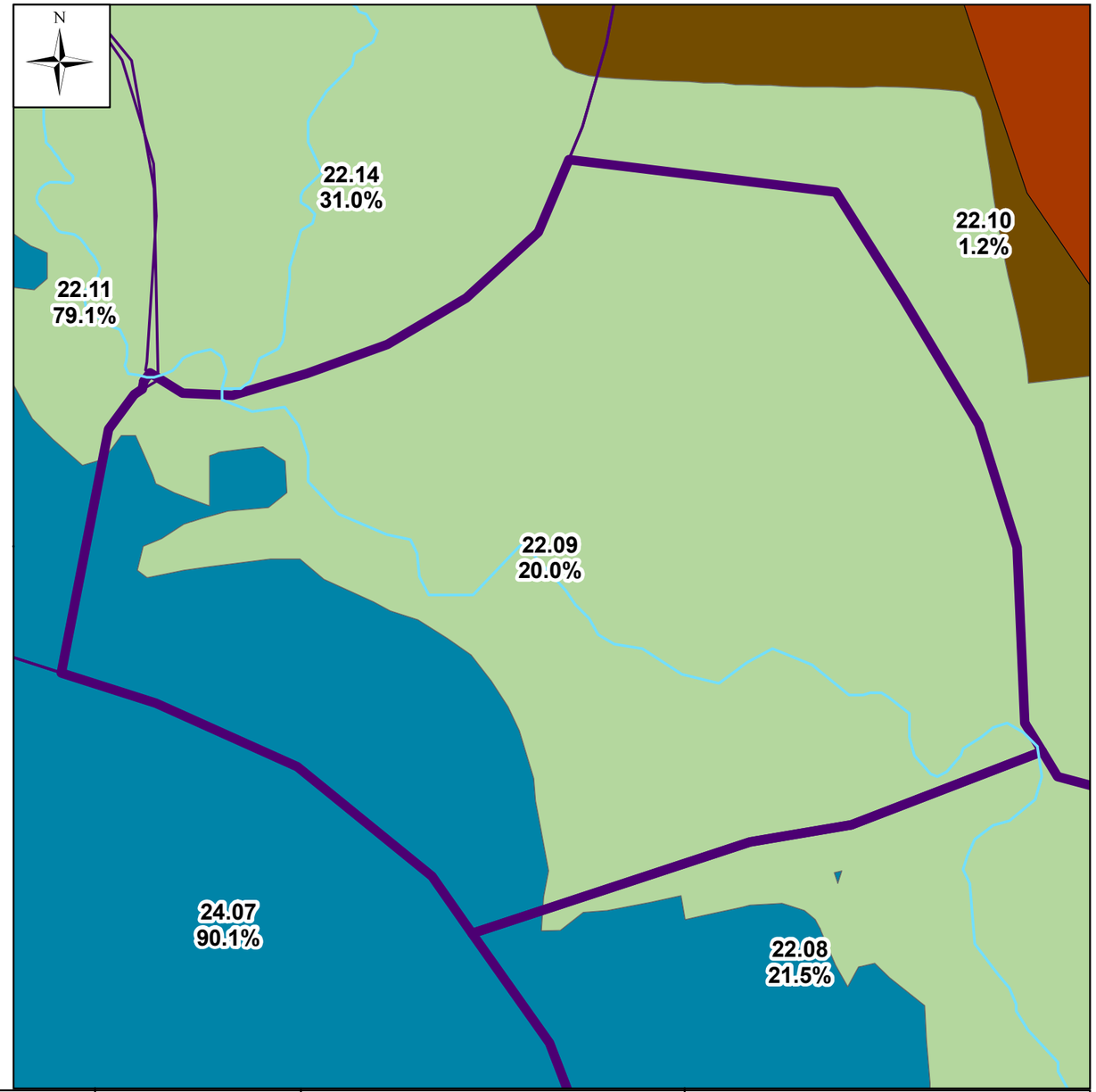
22.08

0 65 130 260 Meters

Existing Condition



Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
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Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

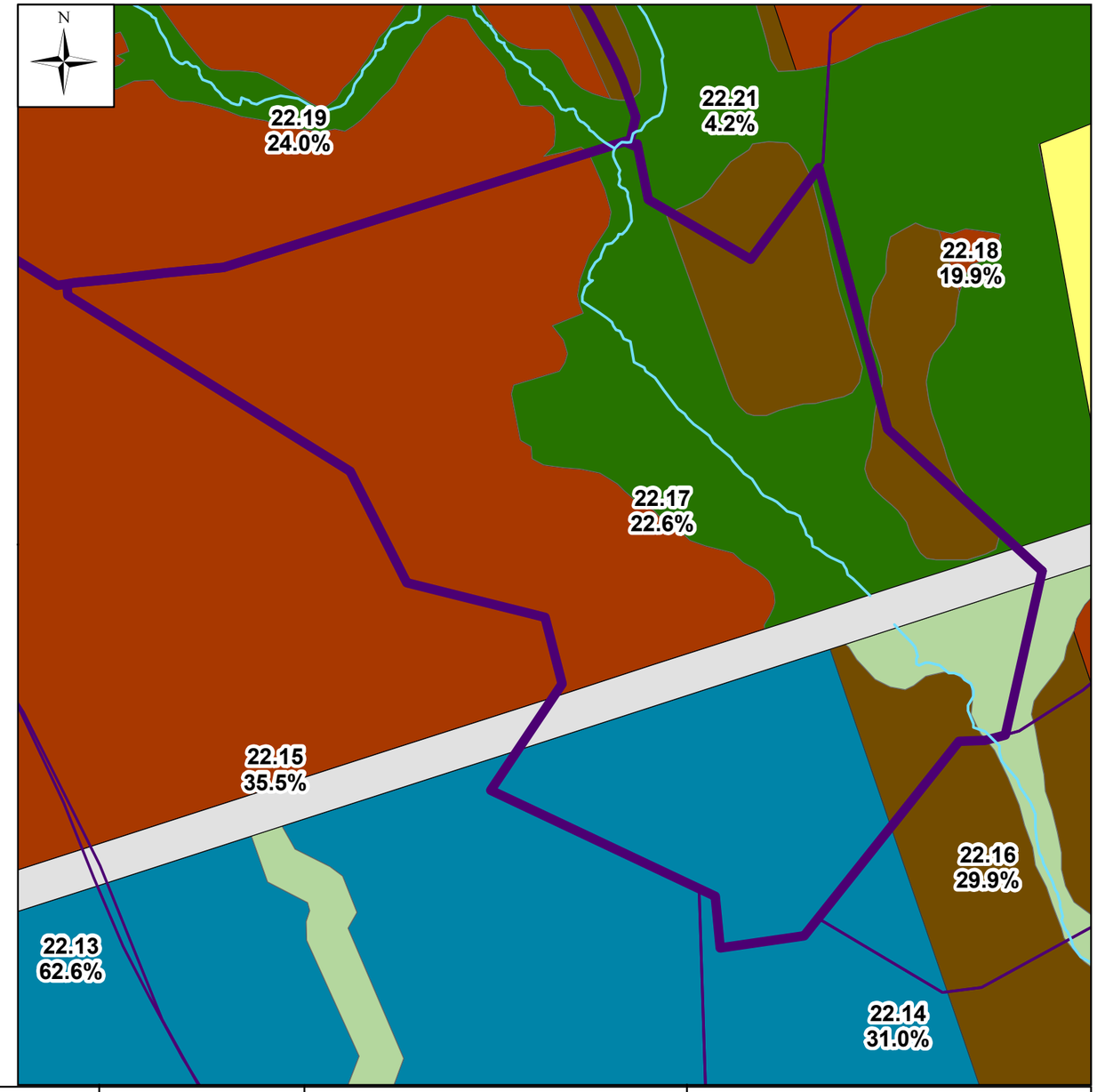
Catchment Imperviousness

22.09

0 25 50 100 Meters

Existing Condition

Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
- Natural
- Open Space
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- Residential High
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- Rural Residential
- Transportation
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Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

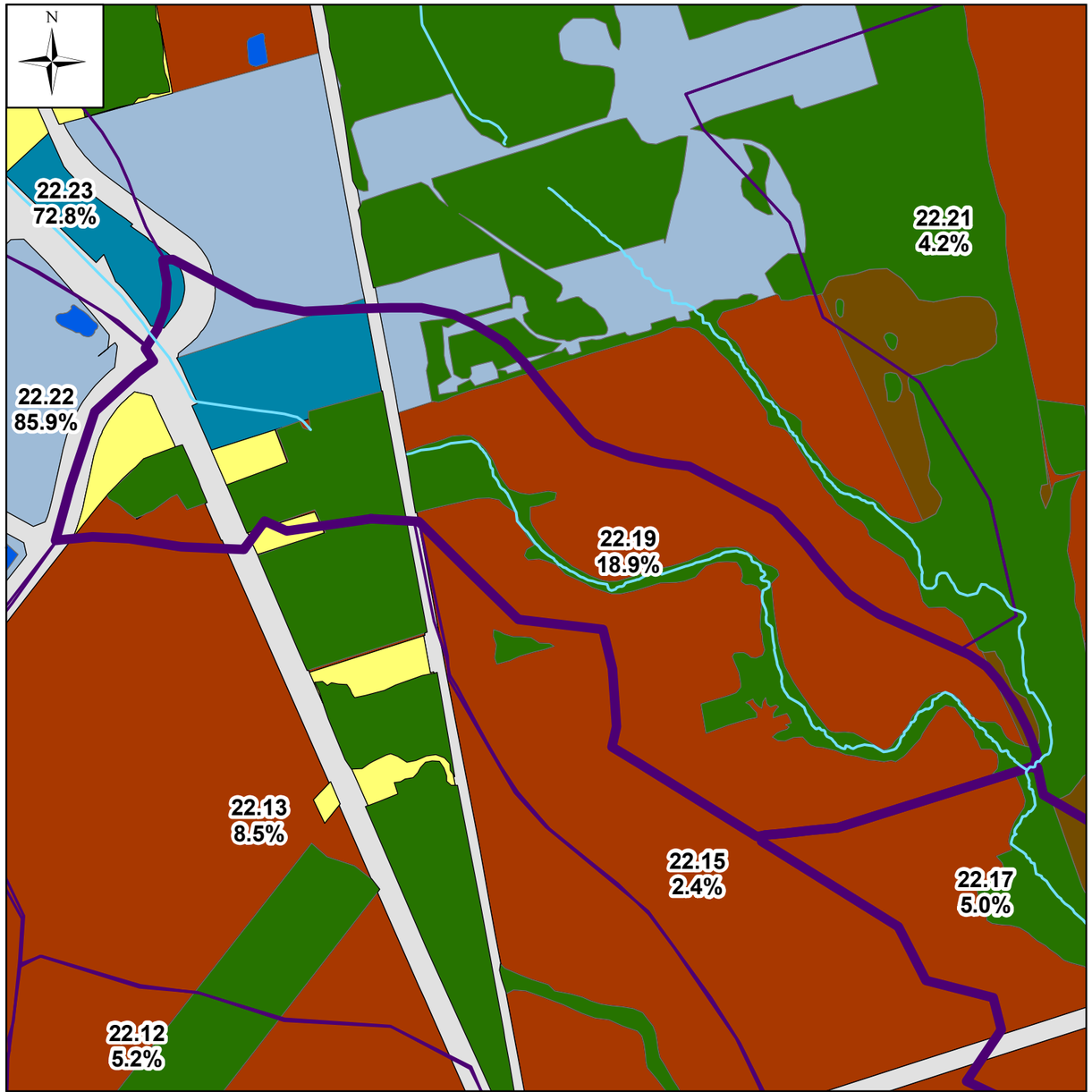
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Imperviousness

22.17

0 45 90 180 Meters

Existing Condition



Future Condition

Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
- Natural
- Open Space
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- Recreational
- Residential High
- Residential LowMed
- Road (ROW)
- Rural Residential
- Transportation
- Water

Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Imperviousness

22.19

0 90 180 360 Meters

Existing Condition

Future Condition

Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
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- Open Space
- Park
- Recreational
- Residential High
- Residential LowMed
- Road (ROW)
- Rural Residential
- Transportation
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Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

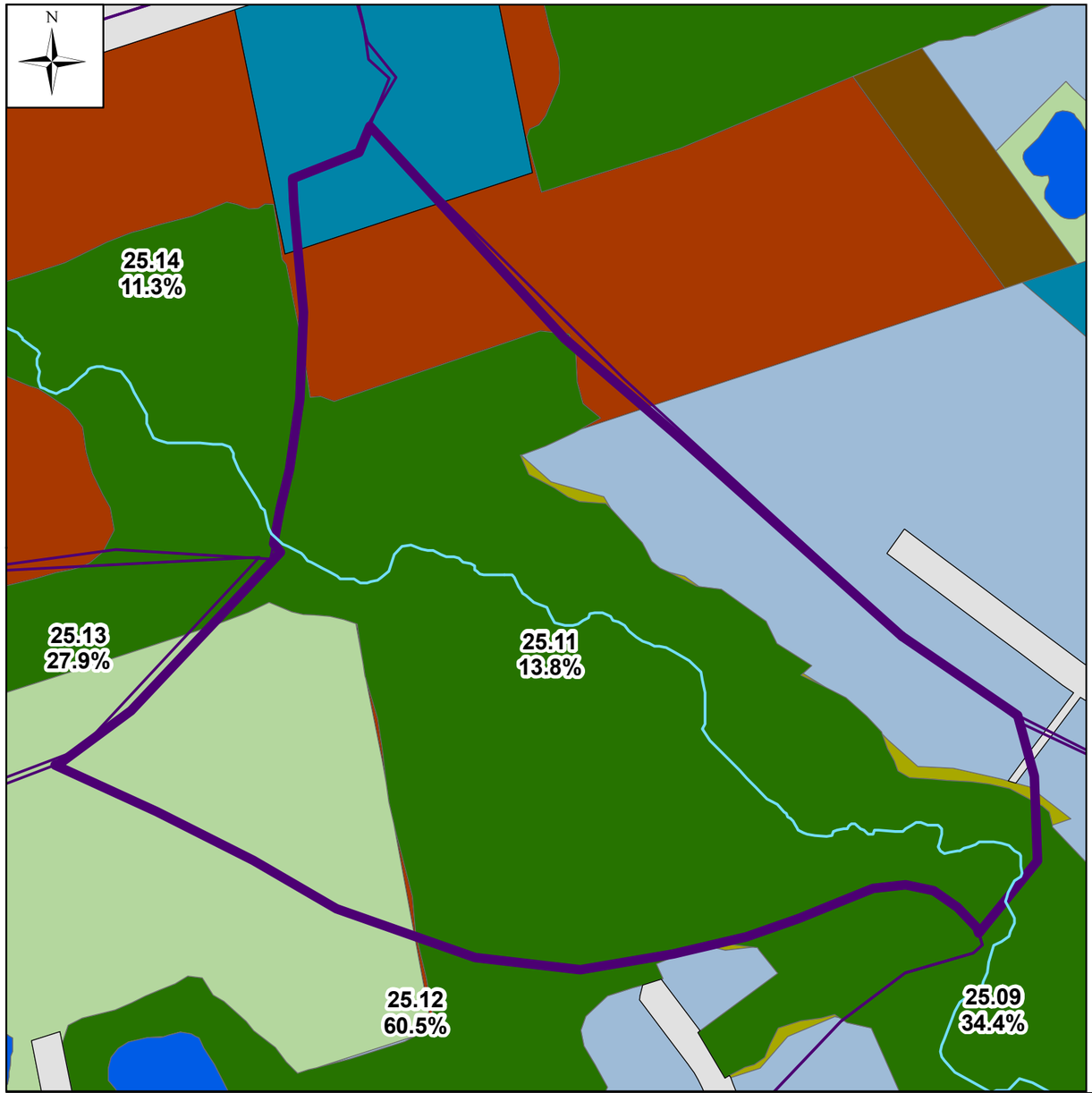
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Imperviousness

25.05

0 55 110 220 Meters

Existing Condition



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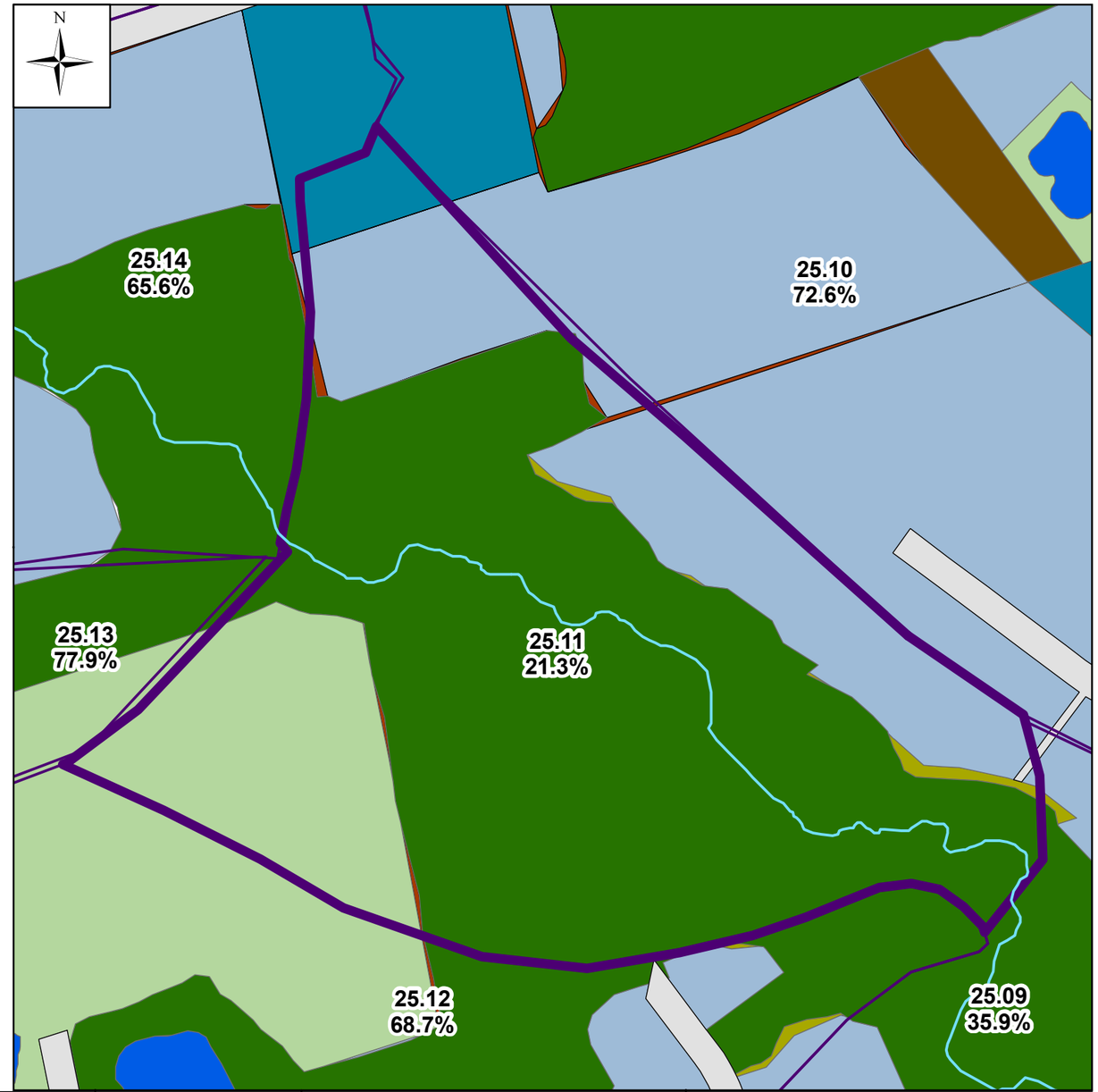

Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
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- Hydro Corridor
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- Institutional
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- Residential LowMed
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- Transportation
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Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

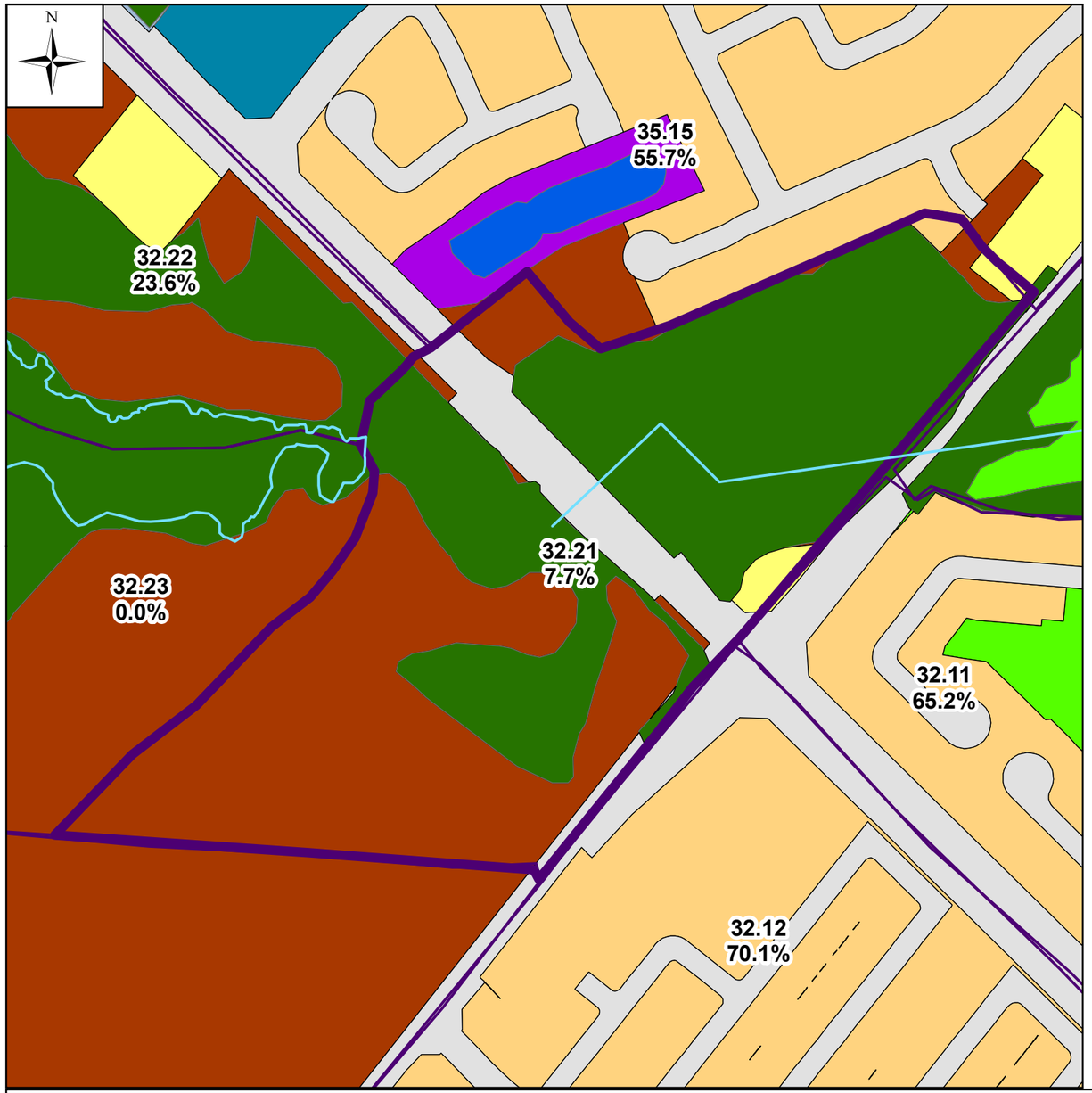
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Imperviousness

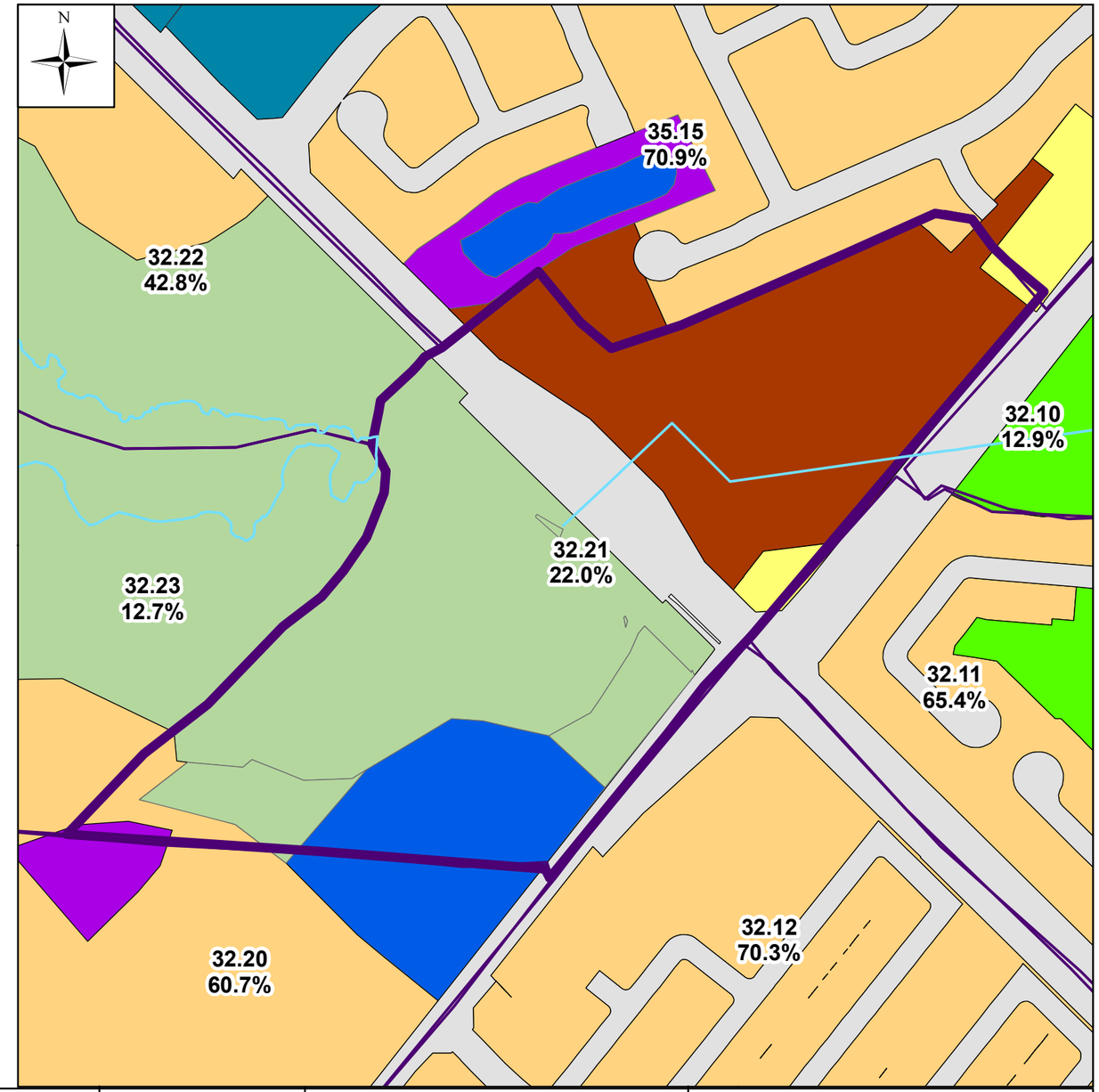
25.11

0 45 90 180 Meters

Existing Condition



Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
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Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

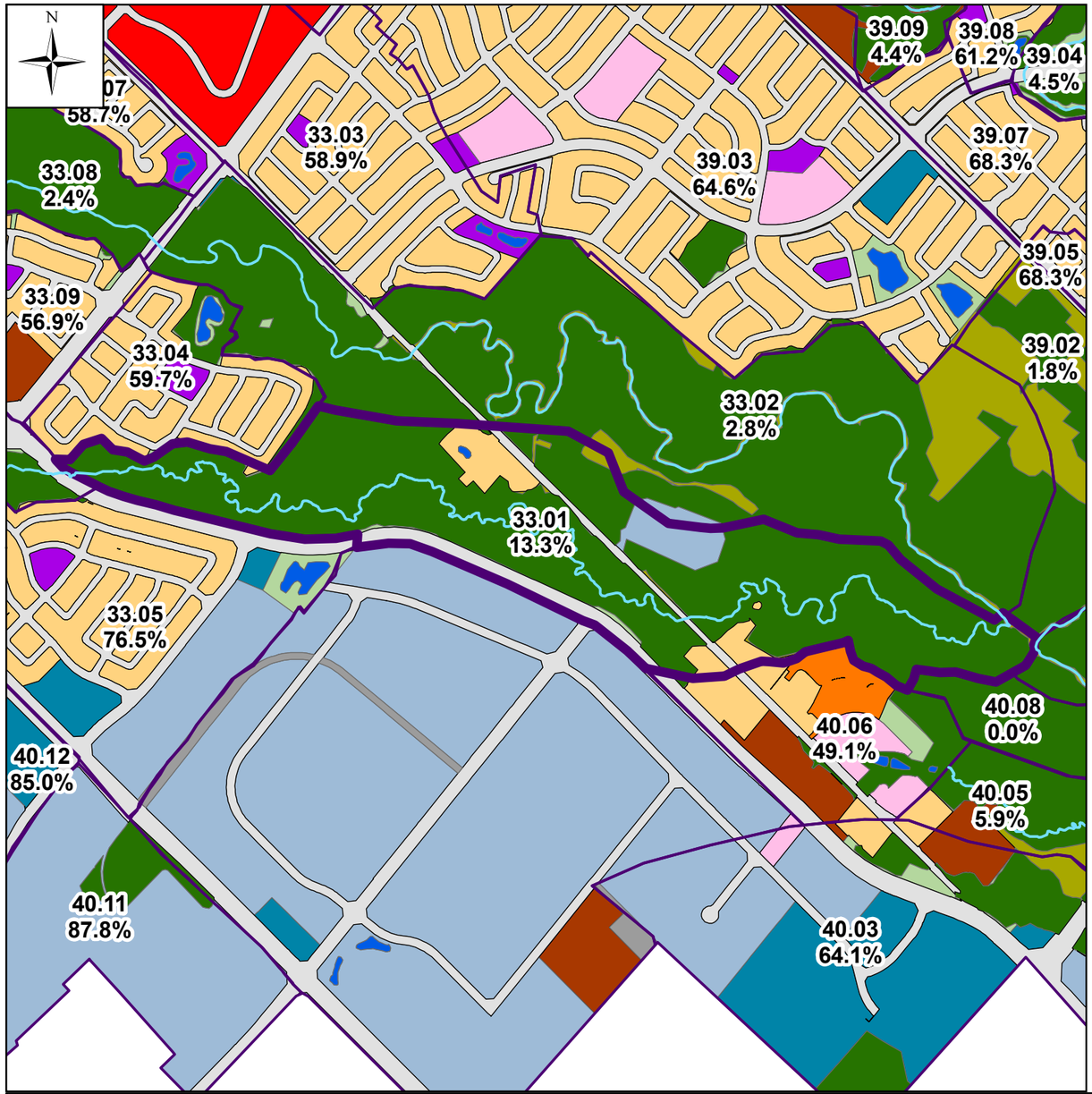
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Imperviousness

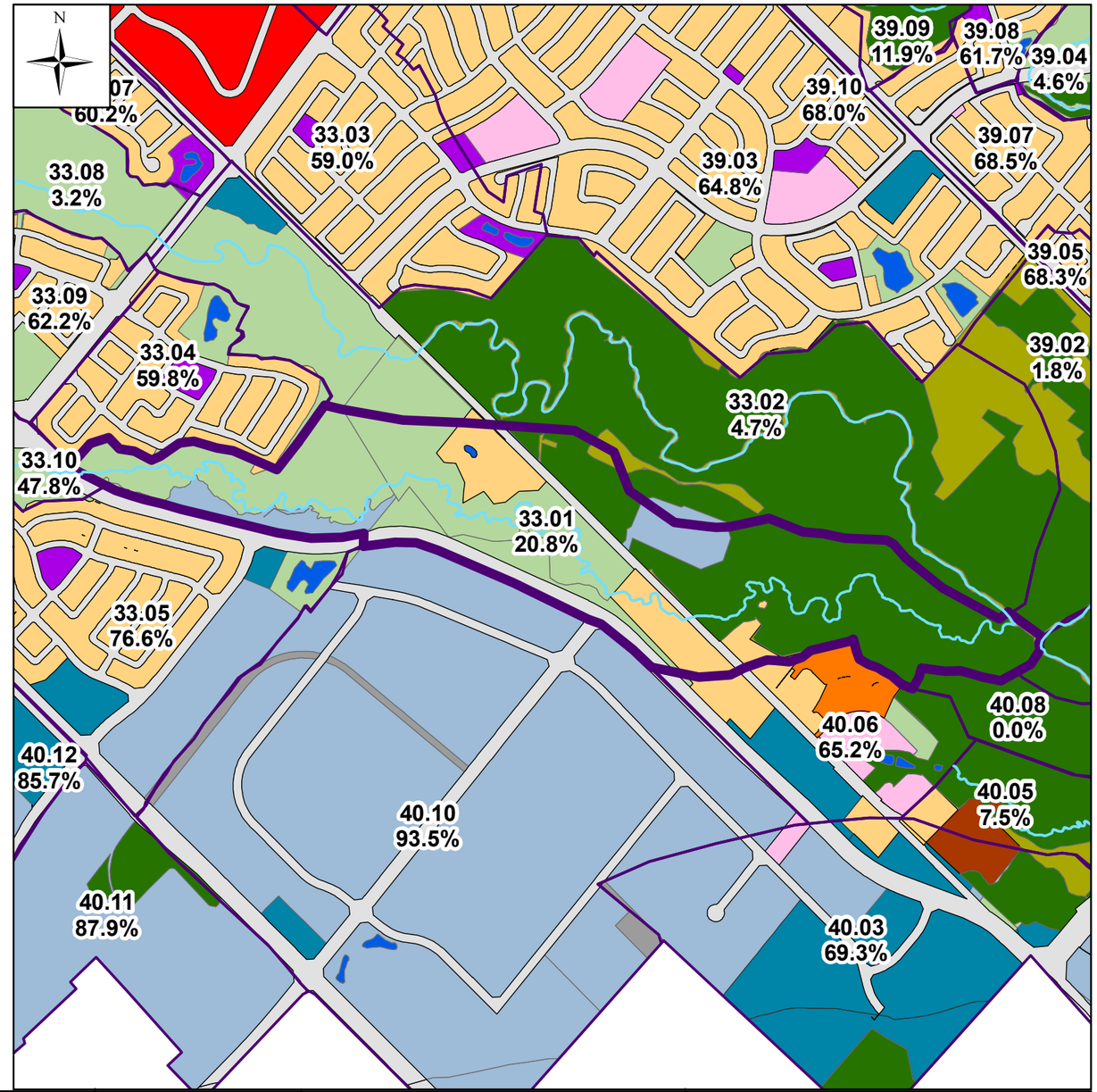
32.21

0 45 90 180 Meters

Existing Condition



Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
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- Industrial
- Institutional
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Toronto and Region Conservation for The Living City

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Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

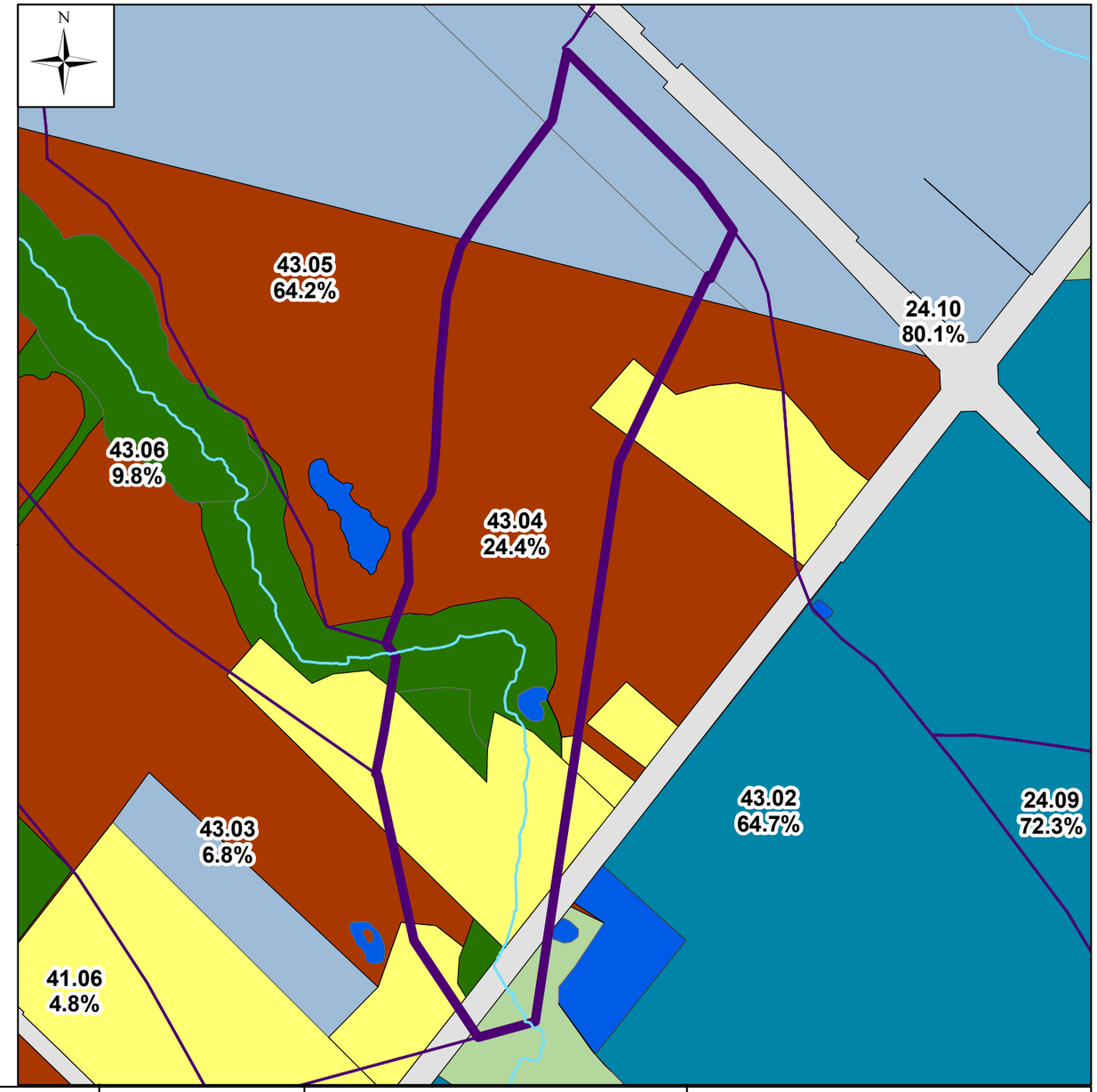
Catchment Imperviousness

33.01

0 155 310 620 Meters

Existing Condition

Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
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- Hydro Corridor
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Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

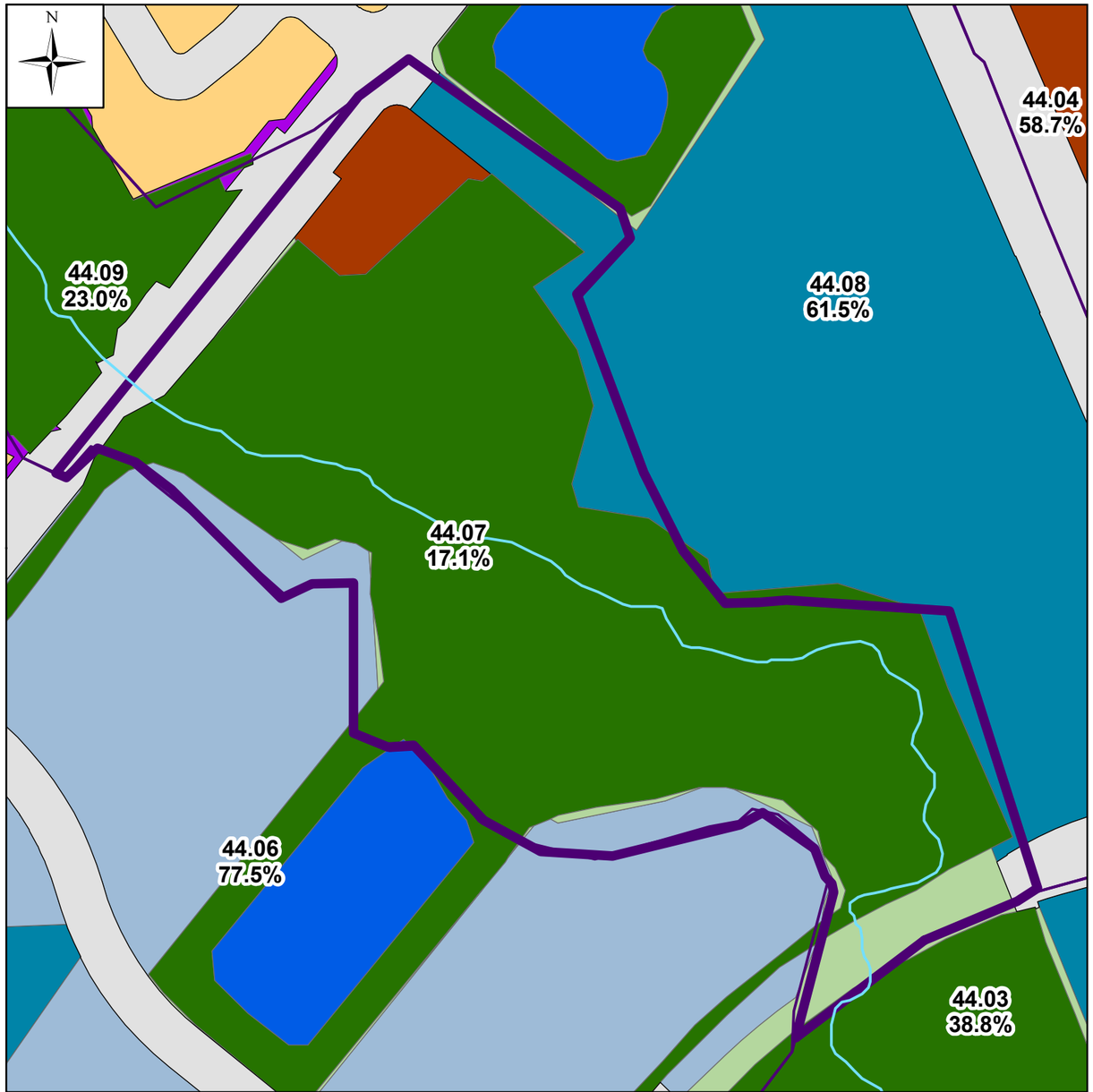
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Imperviousness

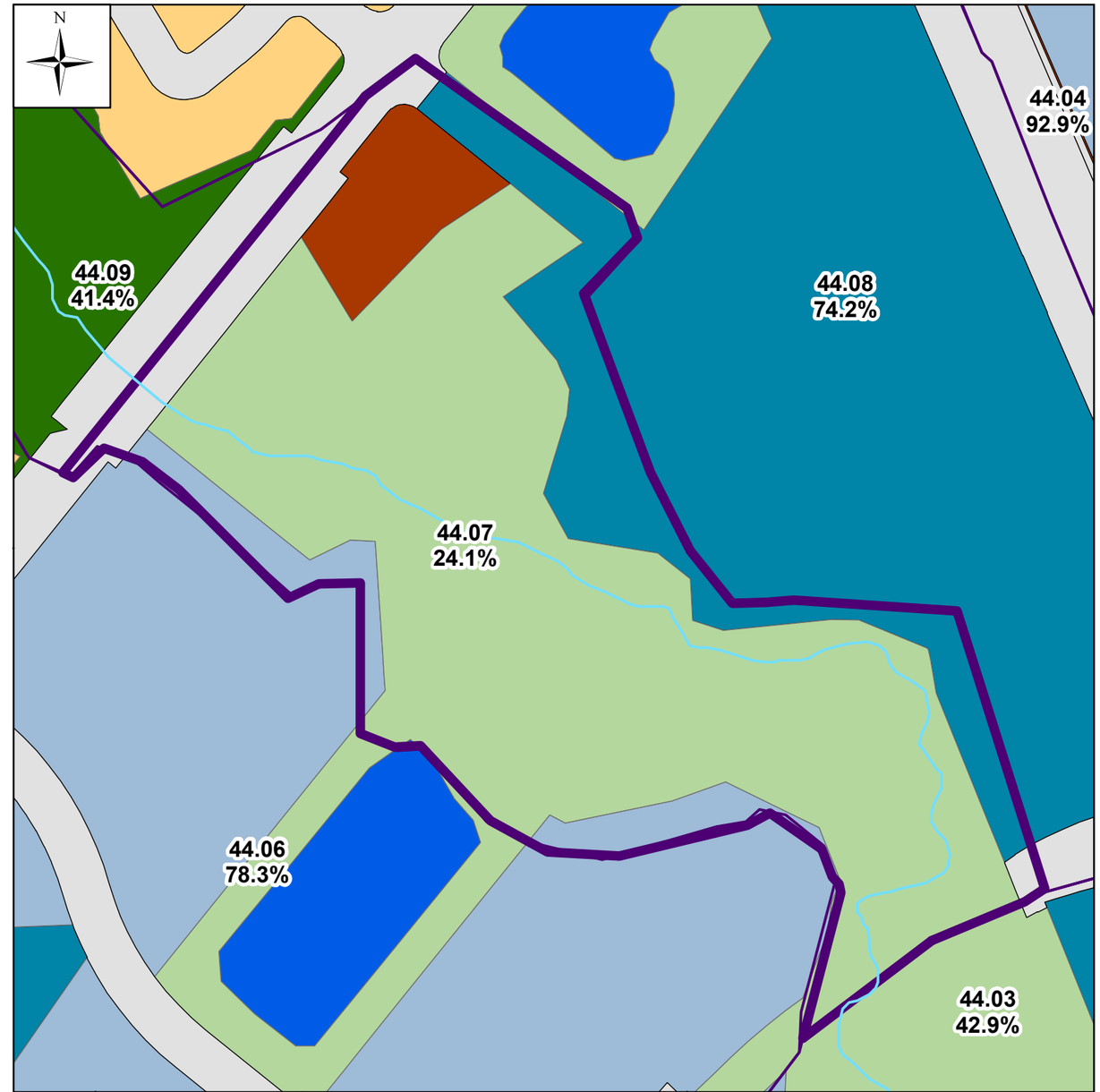
43.04

0 70 140 280 Meters

Existing Condition



Future Condition



Legend

- General River
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- Commercial
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Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Imperviousness

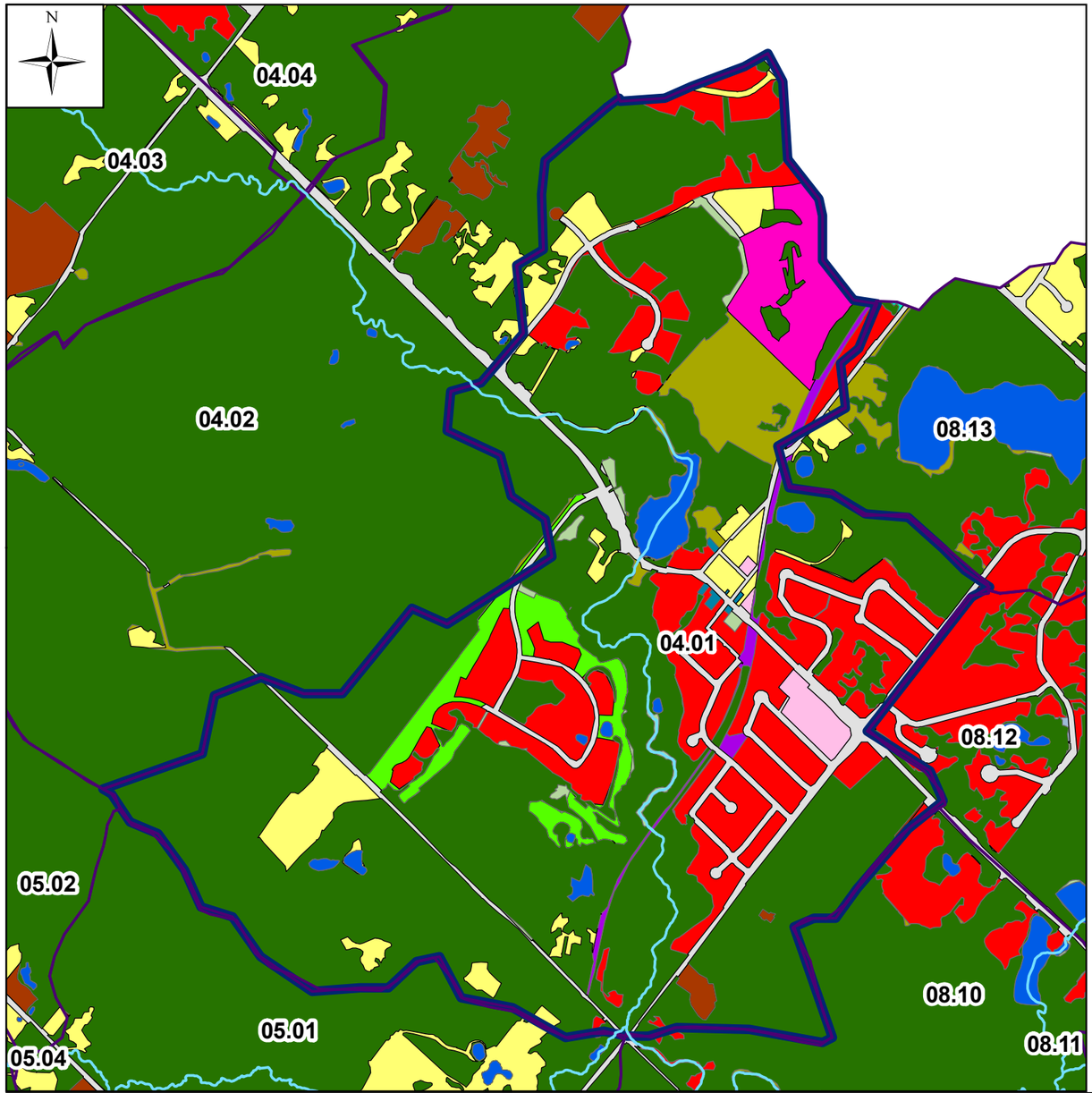
44.07

0 25 50 100 Meters

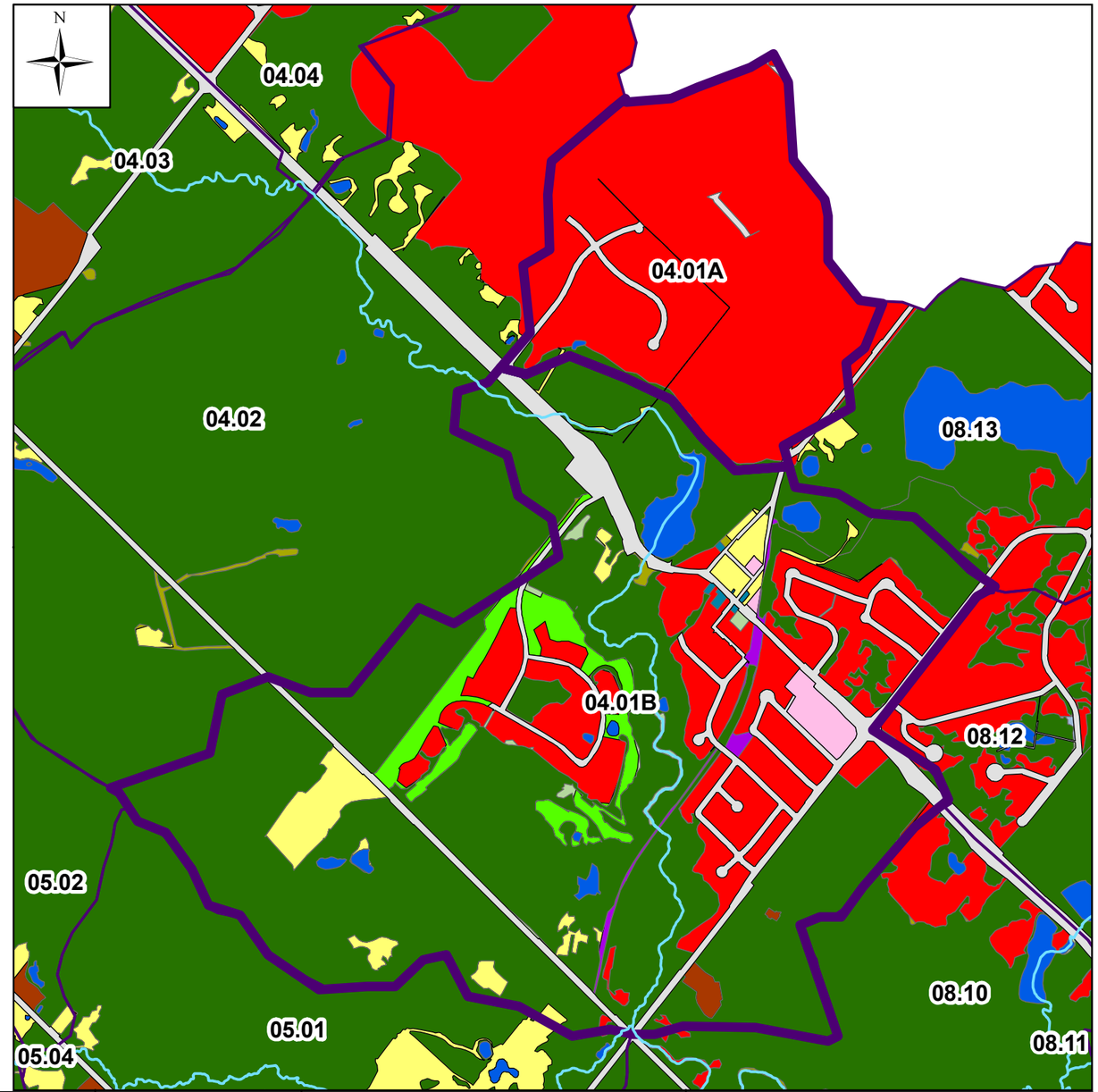
Appendix VII

Catchments Splits in Future Conditions

Catchment for Existing Condition



Catchment for Future Condition



Legend

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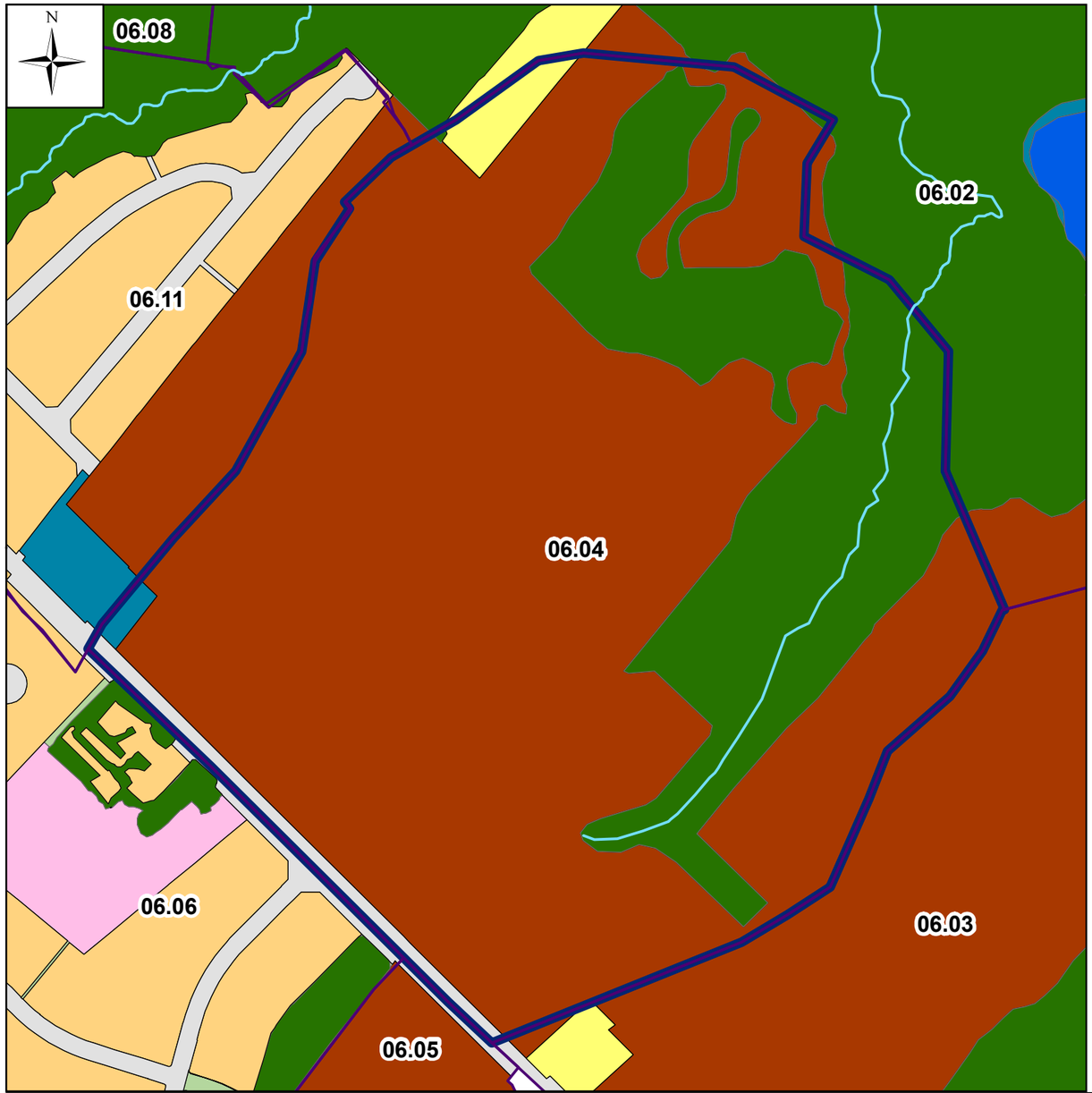
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

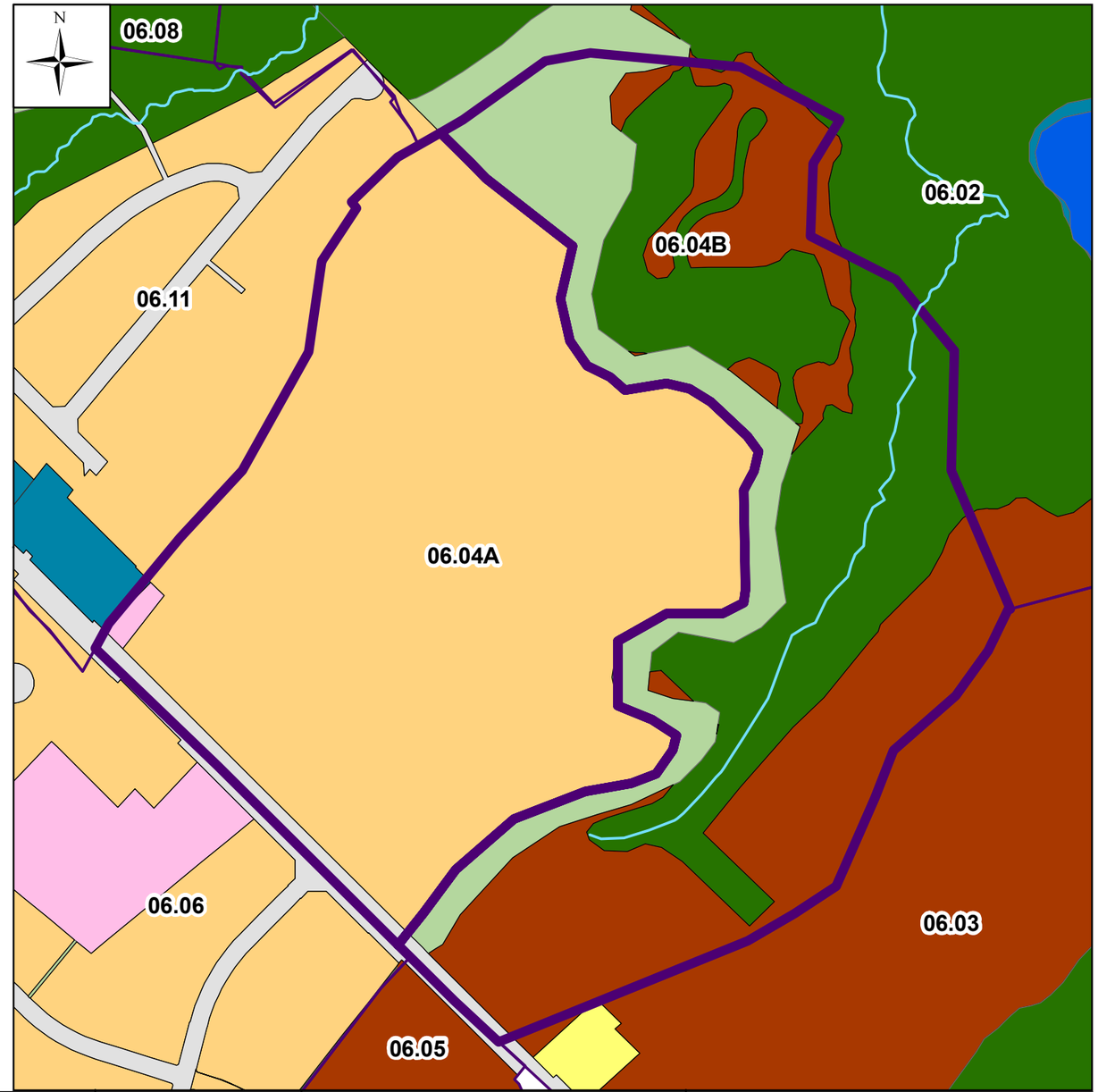
Catchment Split (04.01)

0 200 400 800 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
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Toronto and Region Conservation for The Living City

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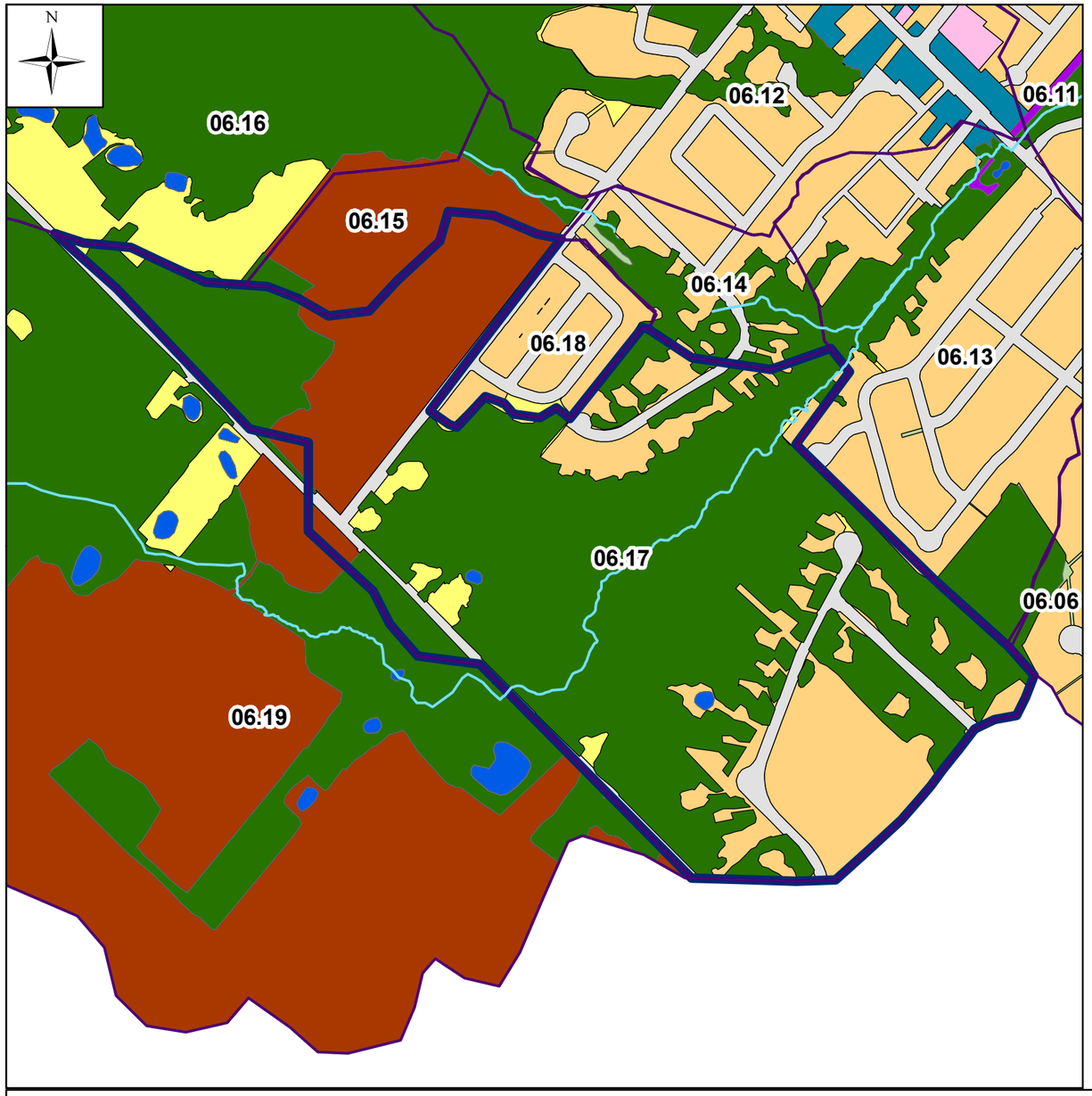
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

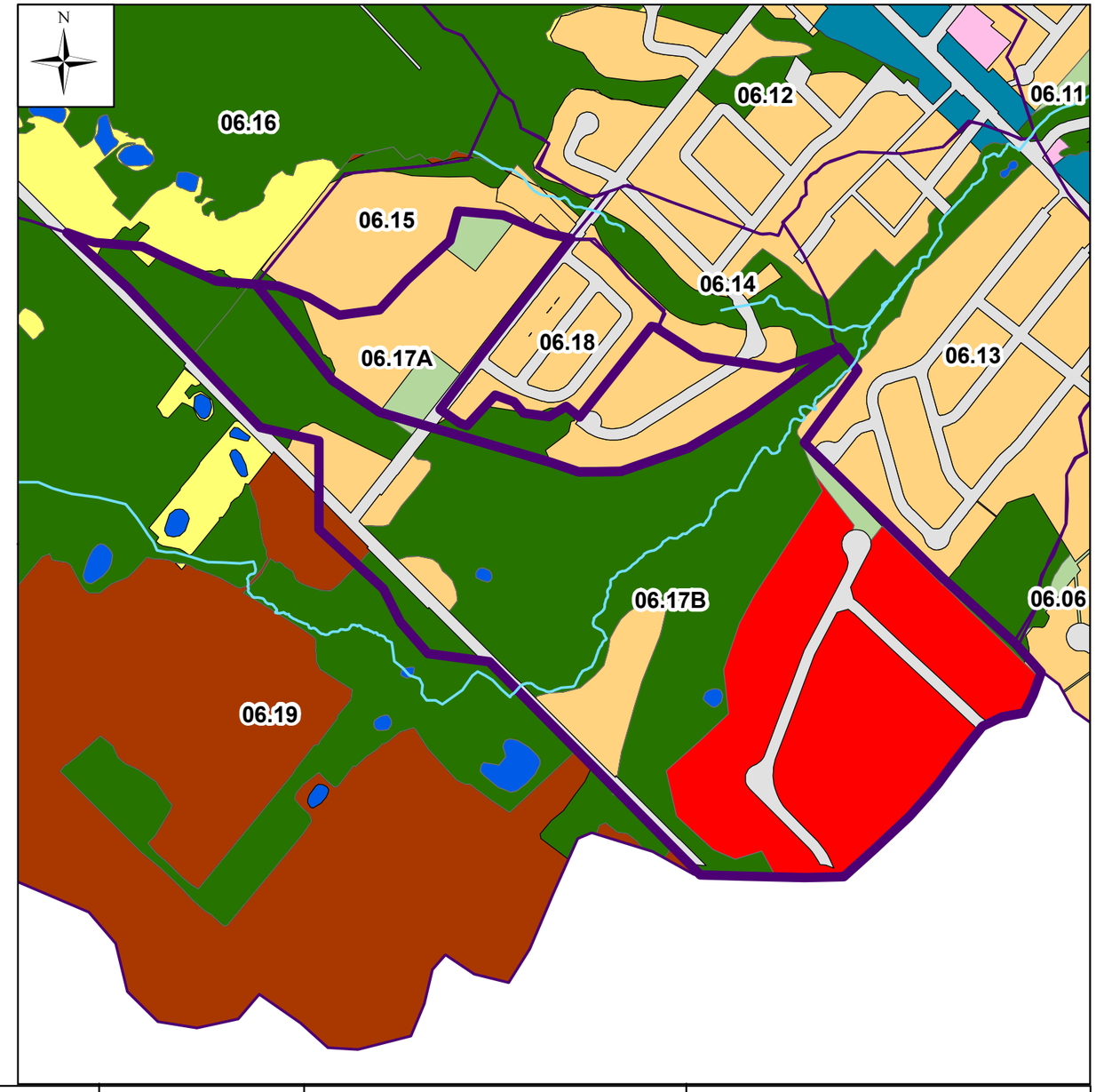
Catchment Split (06.04)

0 65 130 260 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

- General River
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- Cemetery
- Commercial
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Toronto and Region Conservation for The Living City

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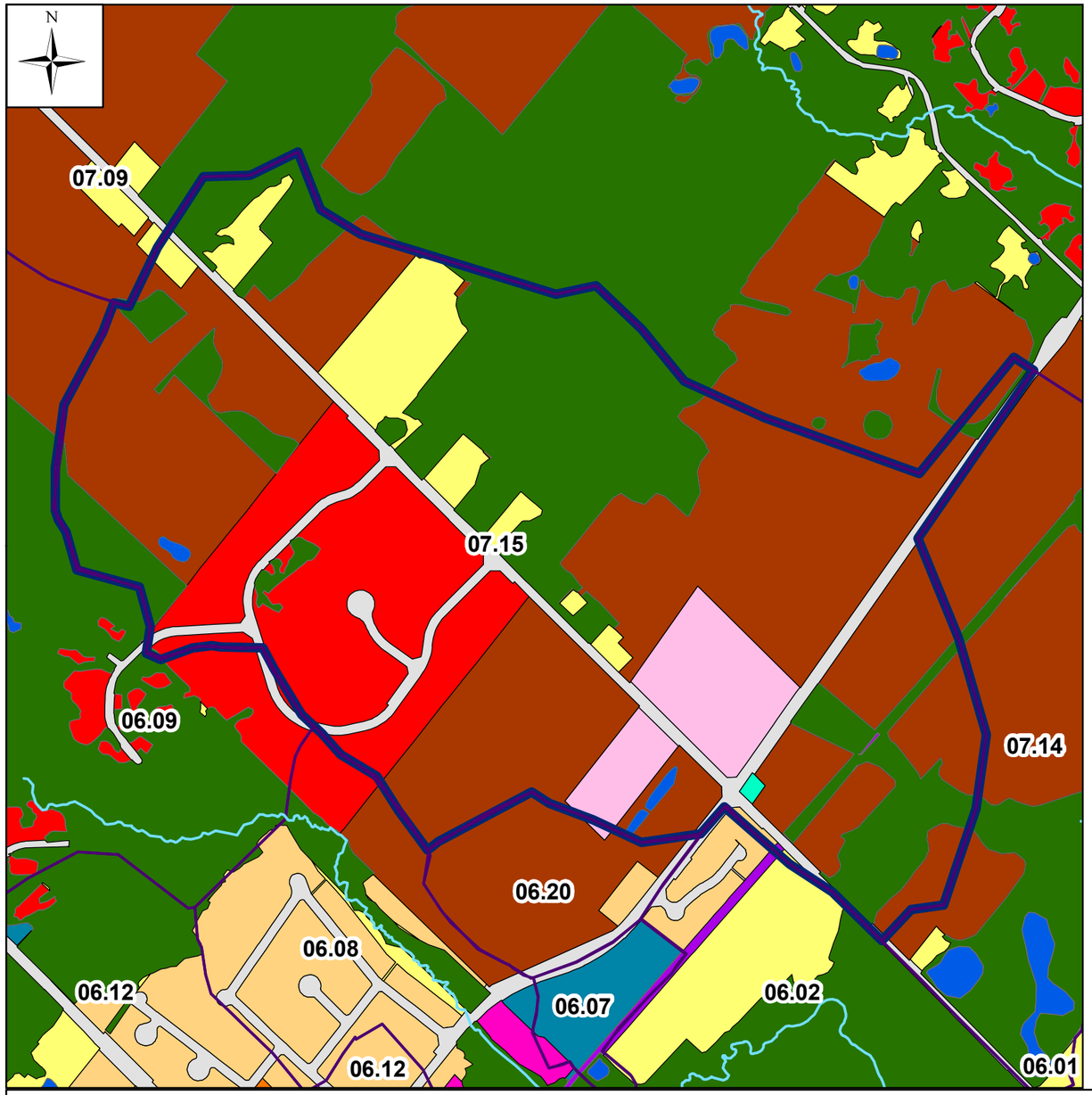
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

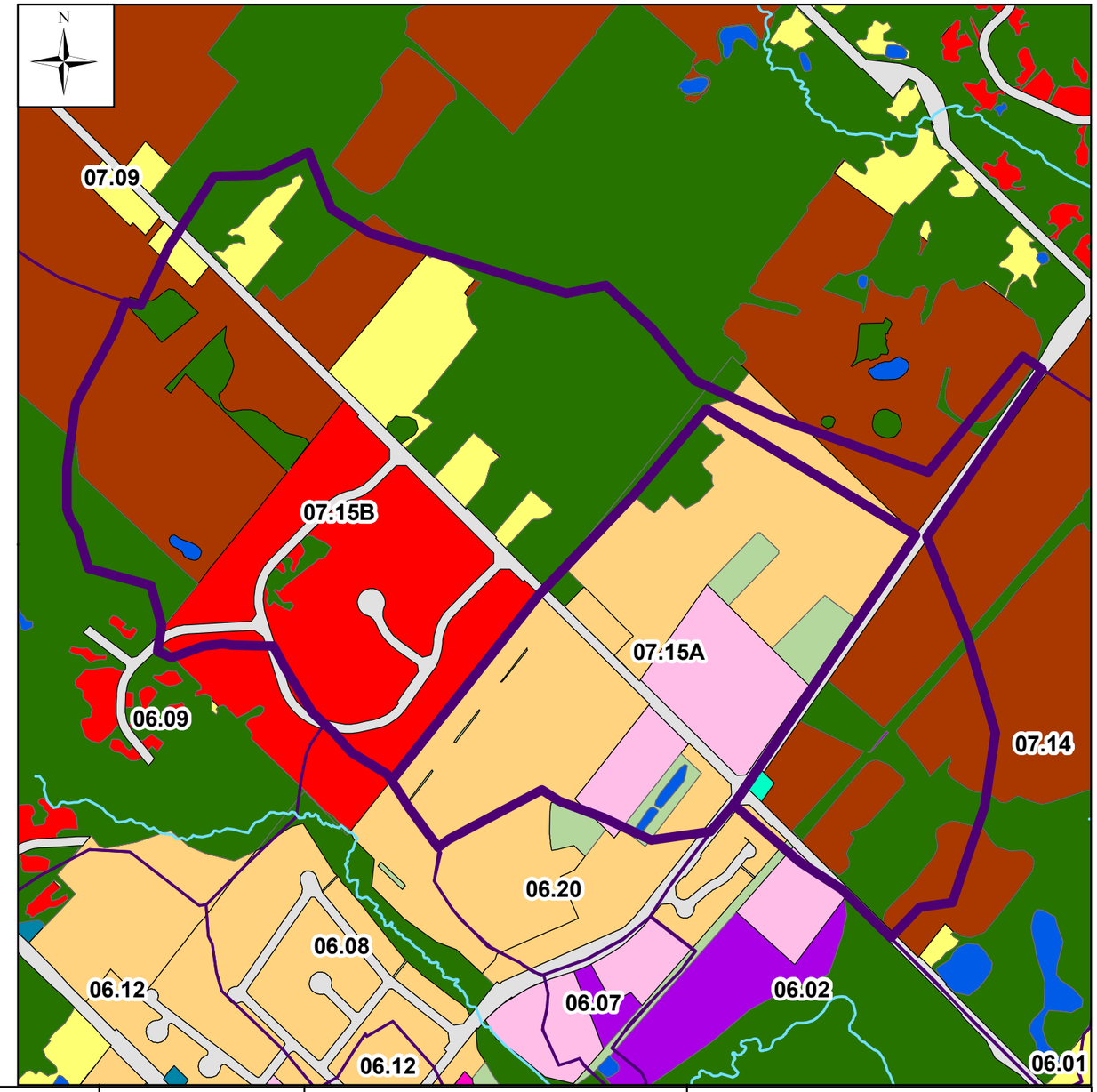
Catchment Split (06.17)

0 105 210 420 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

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- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
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- Institutional
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- Residential LowMed
- Road (ROW)
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- Transportation
- Water

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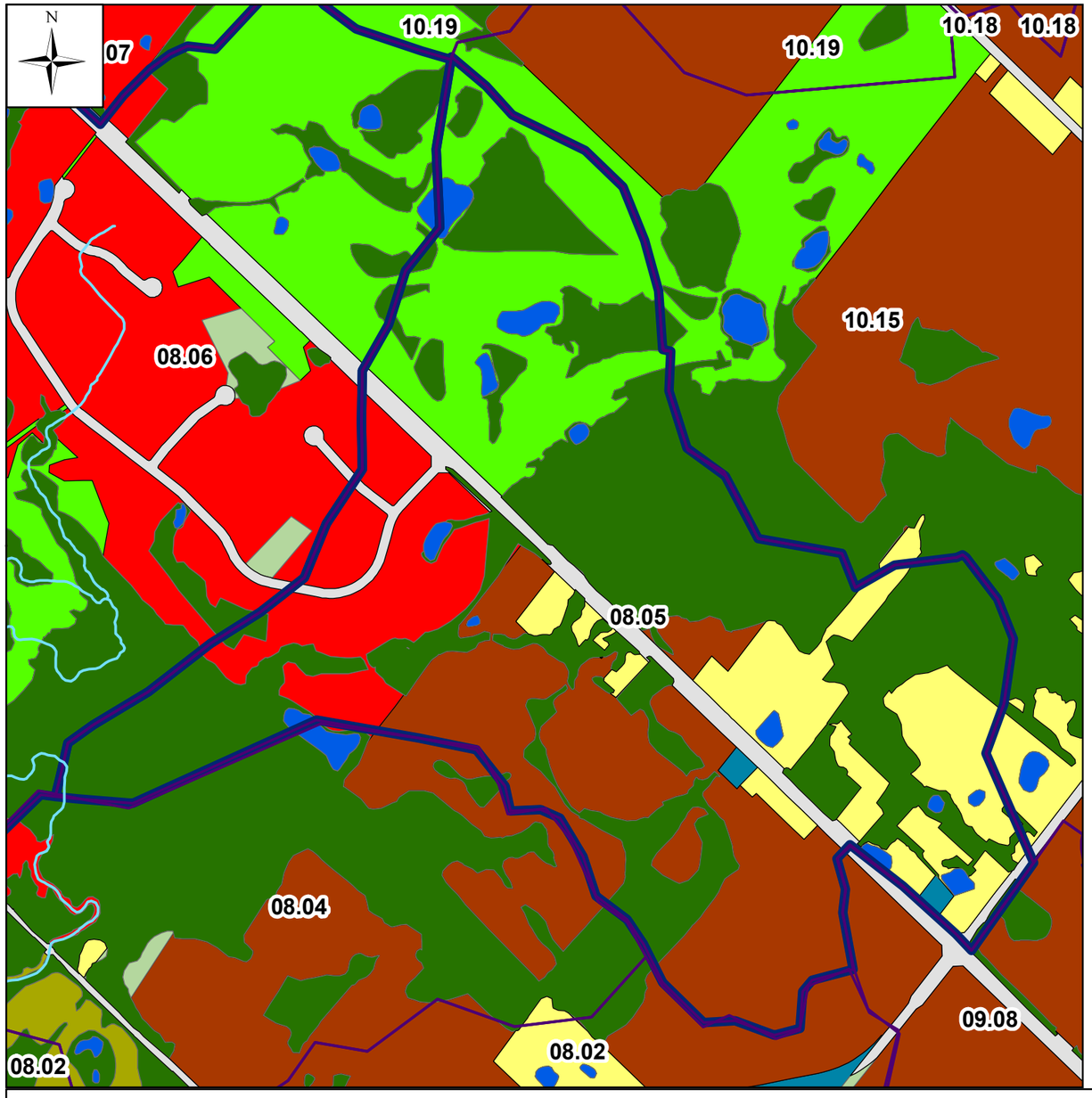
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

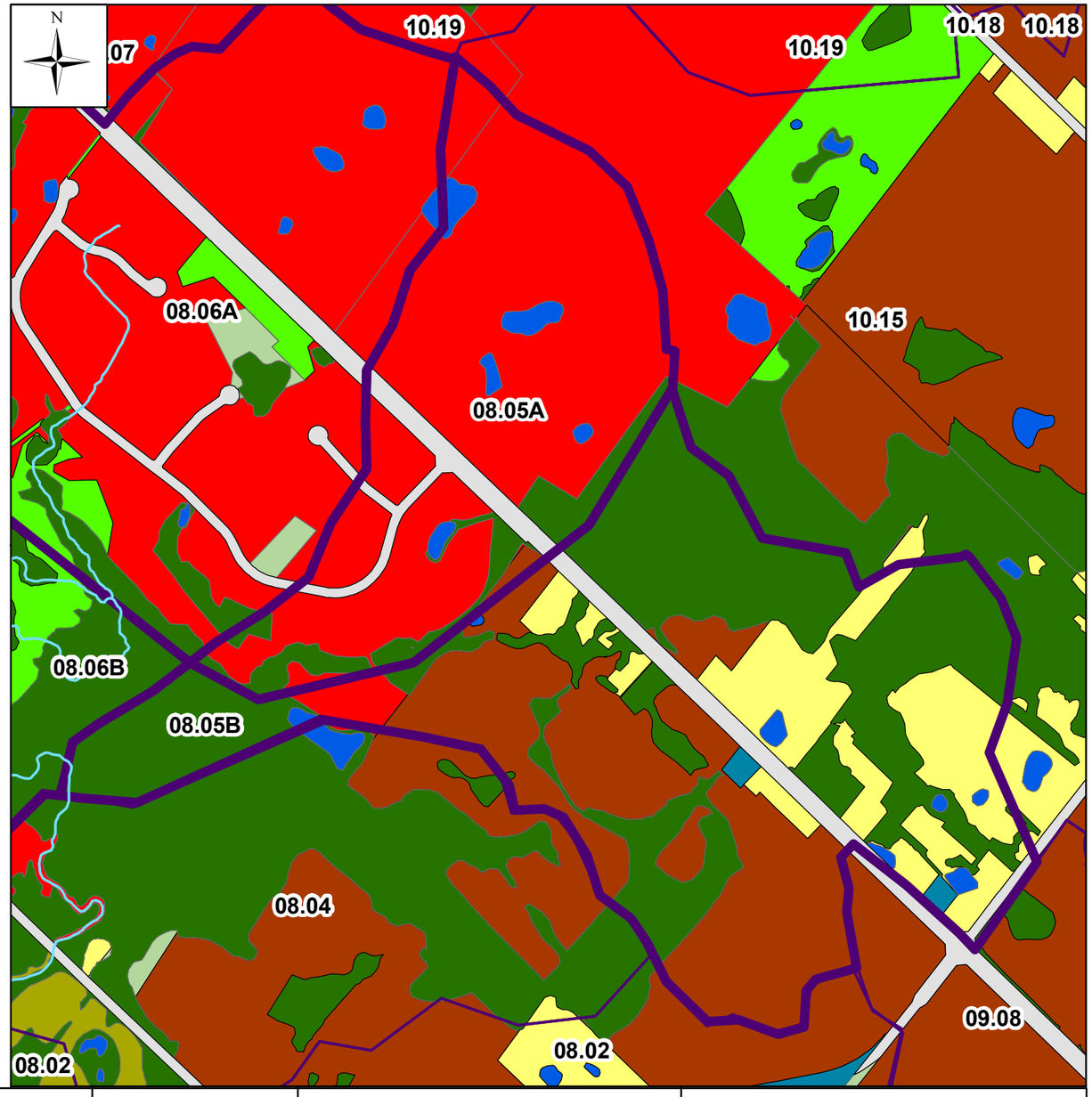
Catchment Split (07.15)

0 130 260 520 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
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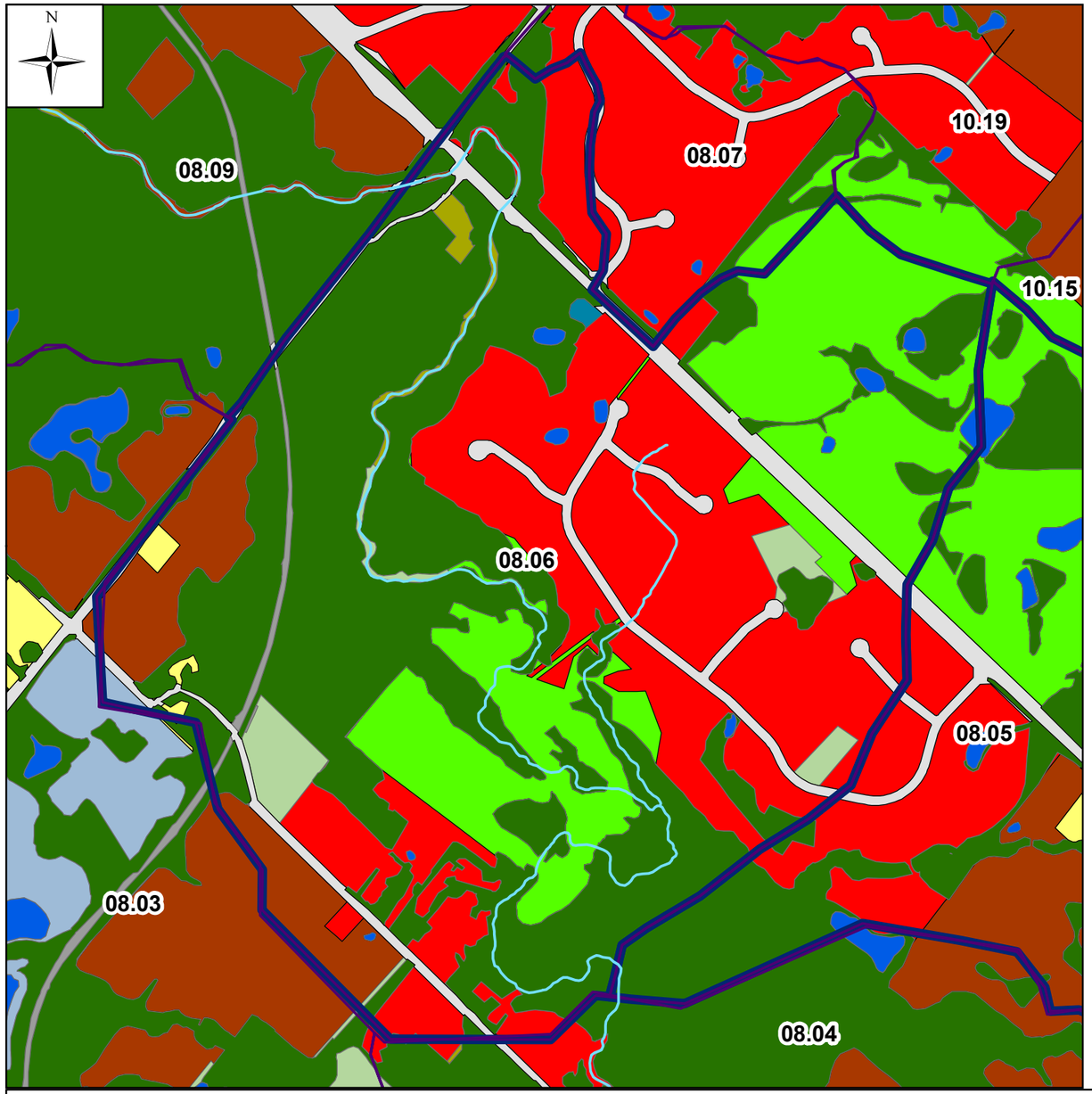
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

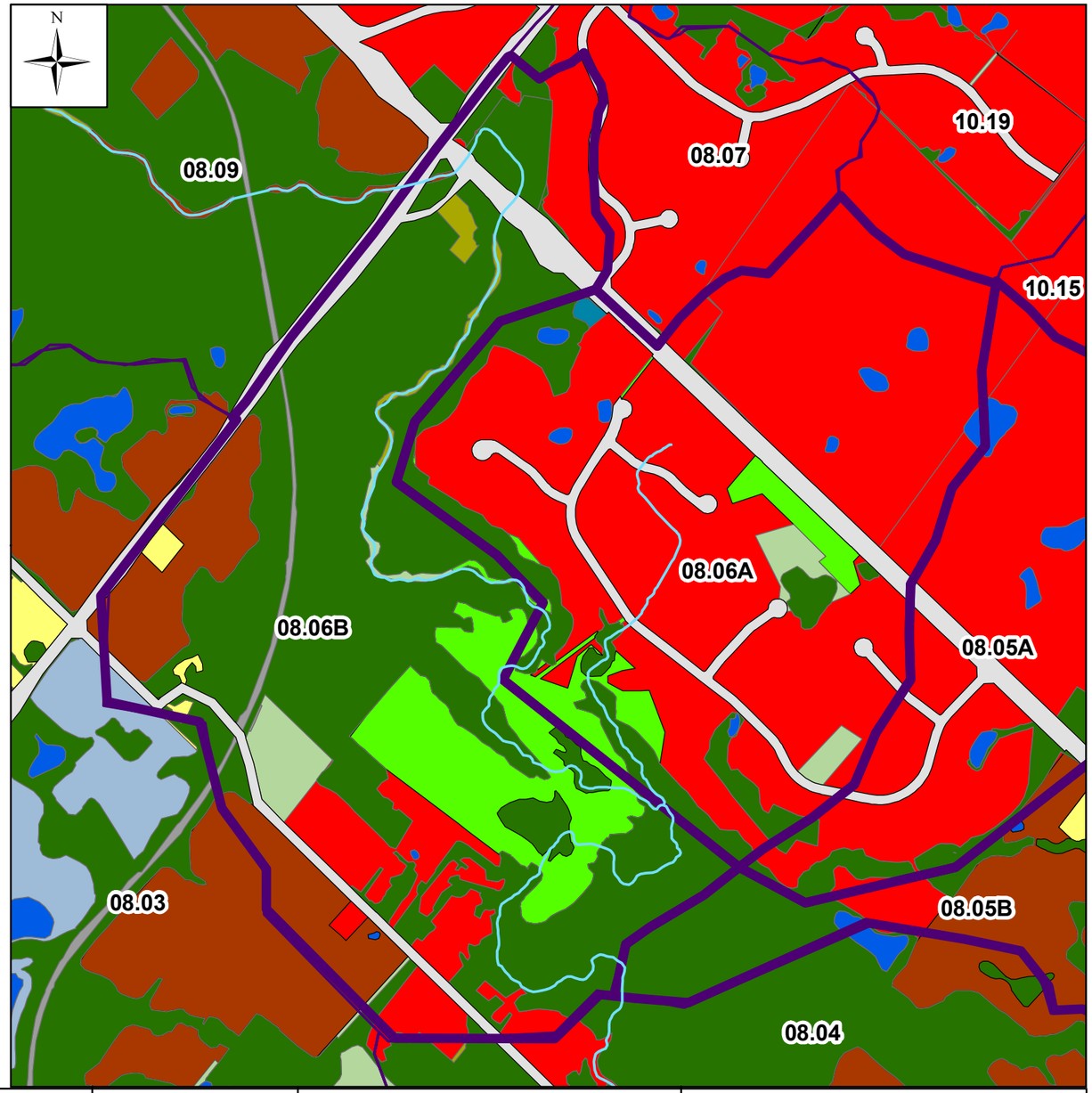
Catchment Split (08.05)

0 120 240 480 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

- General River
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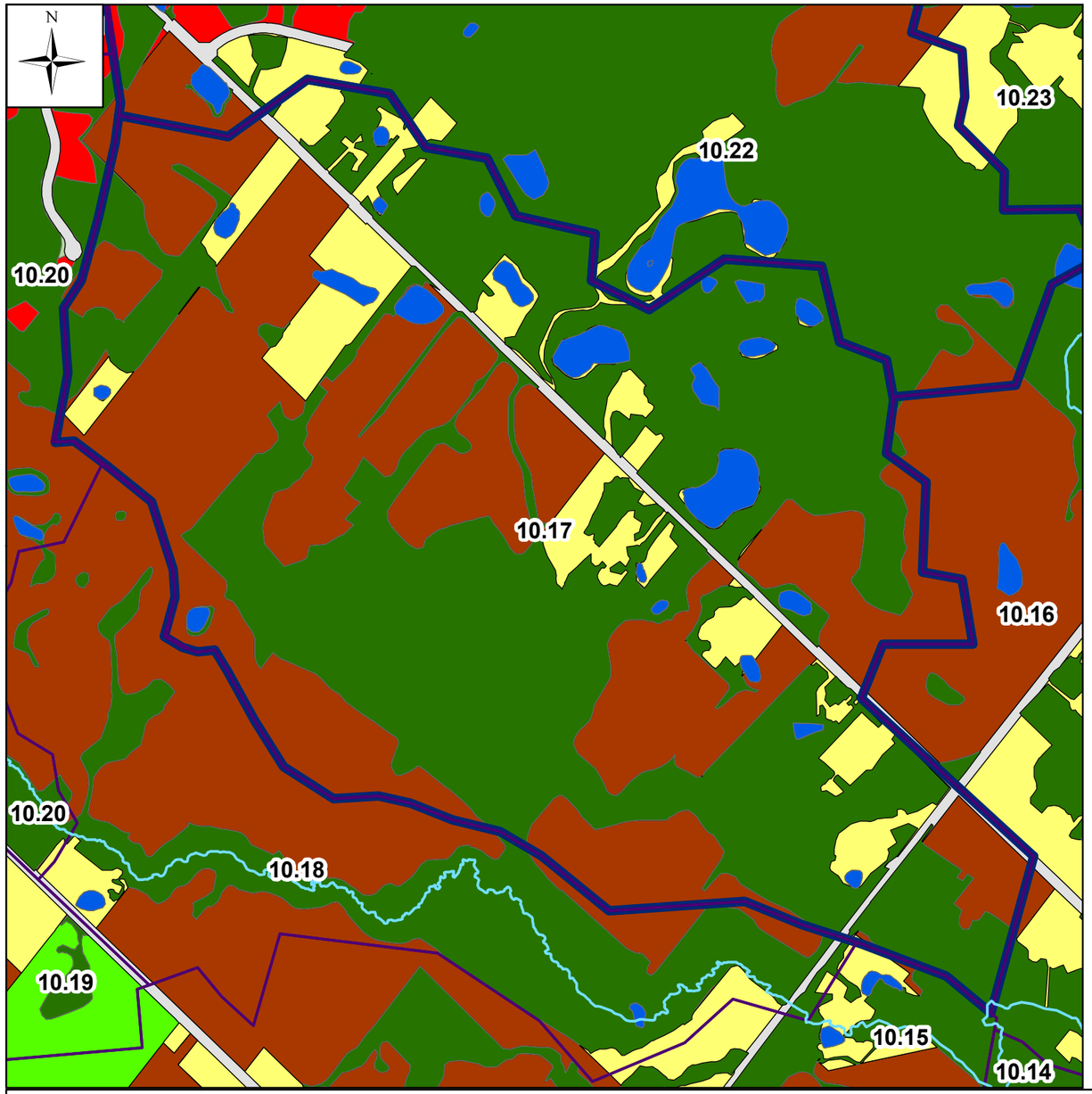
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

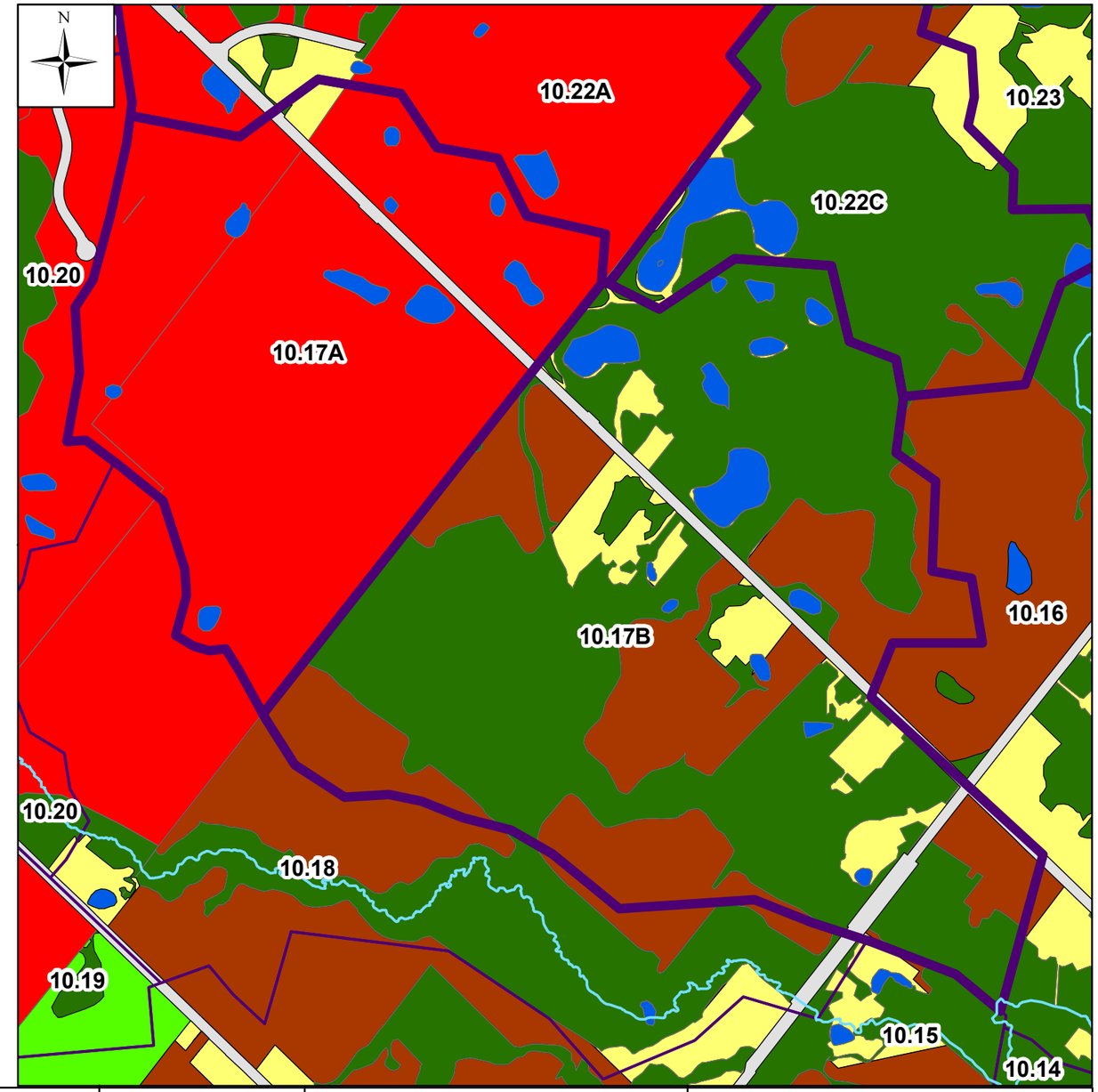
Catchment Split (08.06)

0 125 250 500 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
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- Residential High
- Residential LowMed
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- Rural Residential
- Transportation
- Water

Toronto and Region Conservation for The Living City

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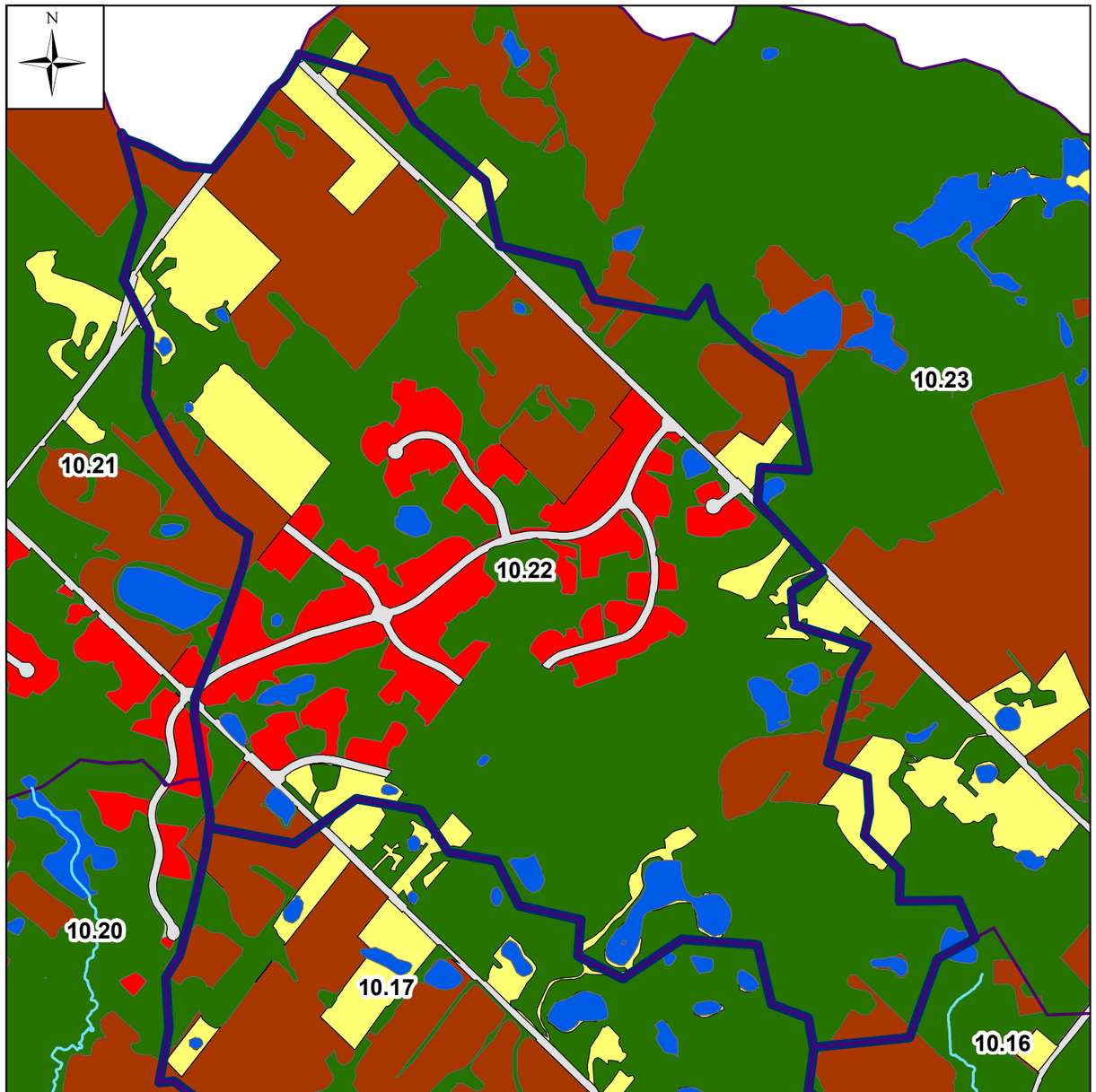
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

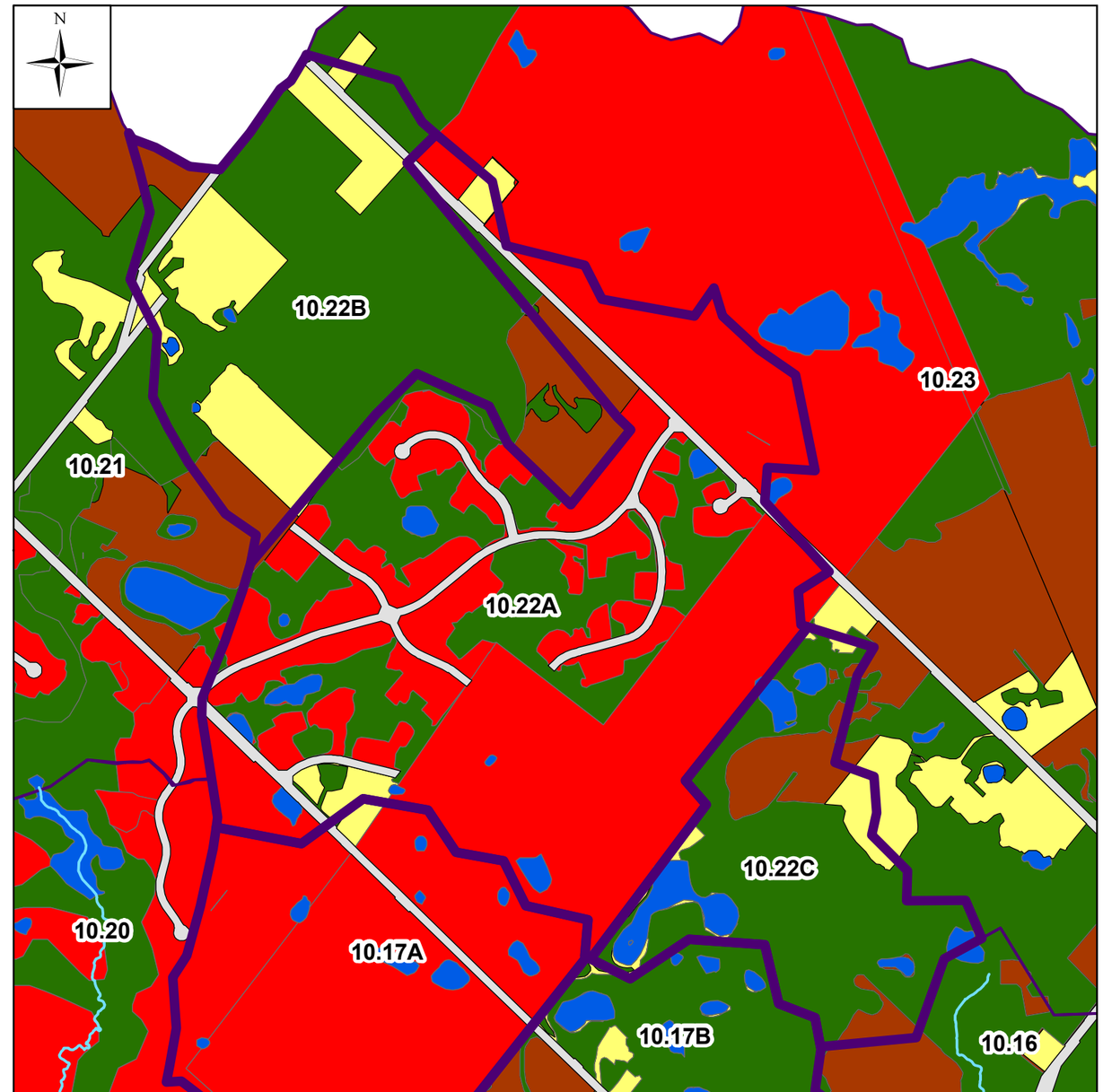
Catchment Split (10.17)

0 115 230 460 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
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- Transportation
- Water

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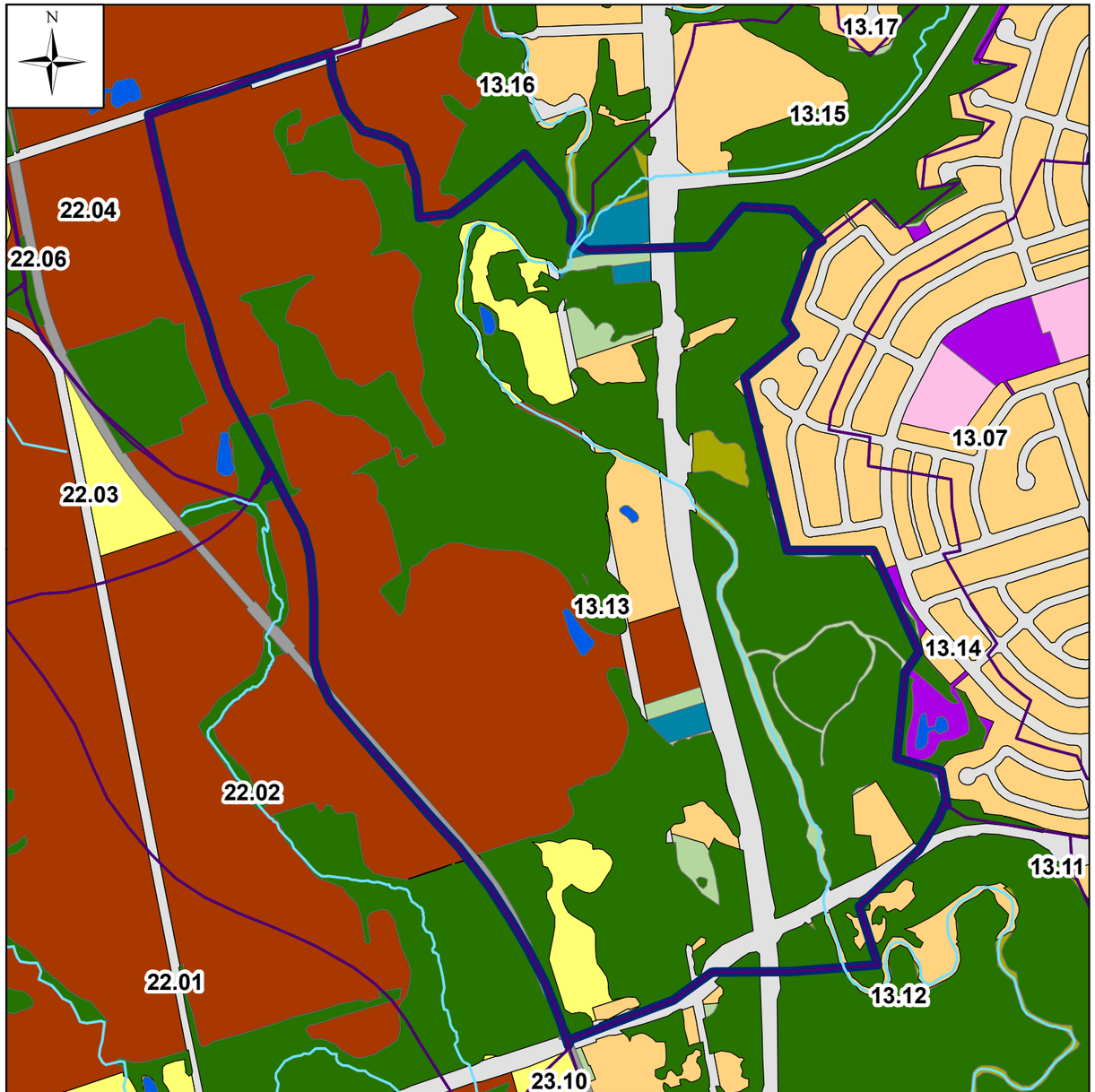
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

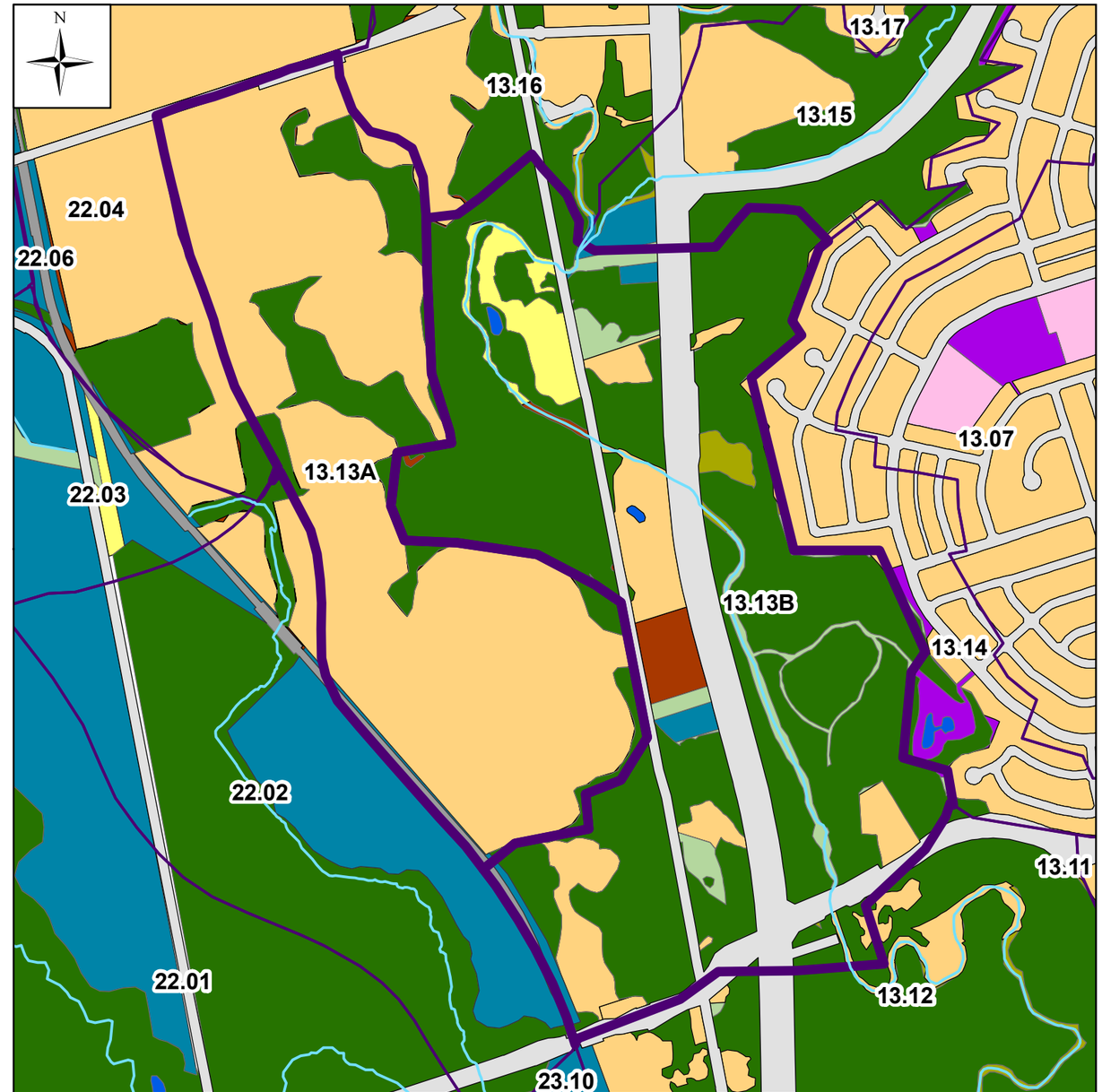
Catchment Split (10.22)

0 150 300 600 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

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- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
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CIVICA

Humber River Hydrology

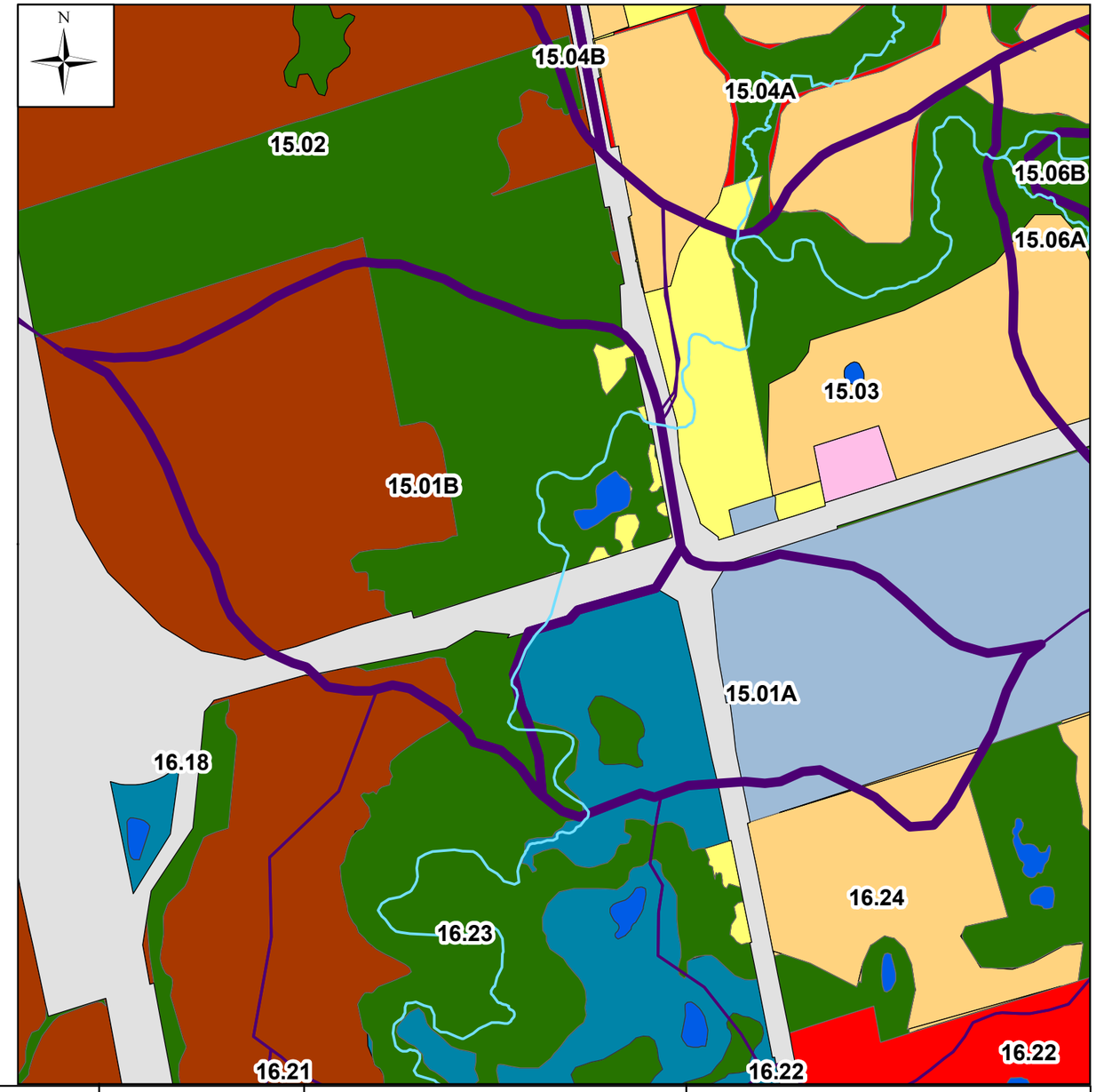
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Split (13.13)

0 120 240 480 Meters

Catchment for Existing Condition

Catchment for Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
- Farm
- Golf Course
- Hydro Corridor
- Industrial
- Institutional
- Natural
- Open Space
- Park
- Recreational
- Residential High
- Residential LowMed
- Road (ROW)
- Rural Residential
- Transportation
- Water

Toronto and Region Conservation for The Living City

CIVICA

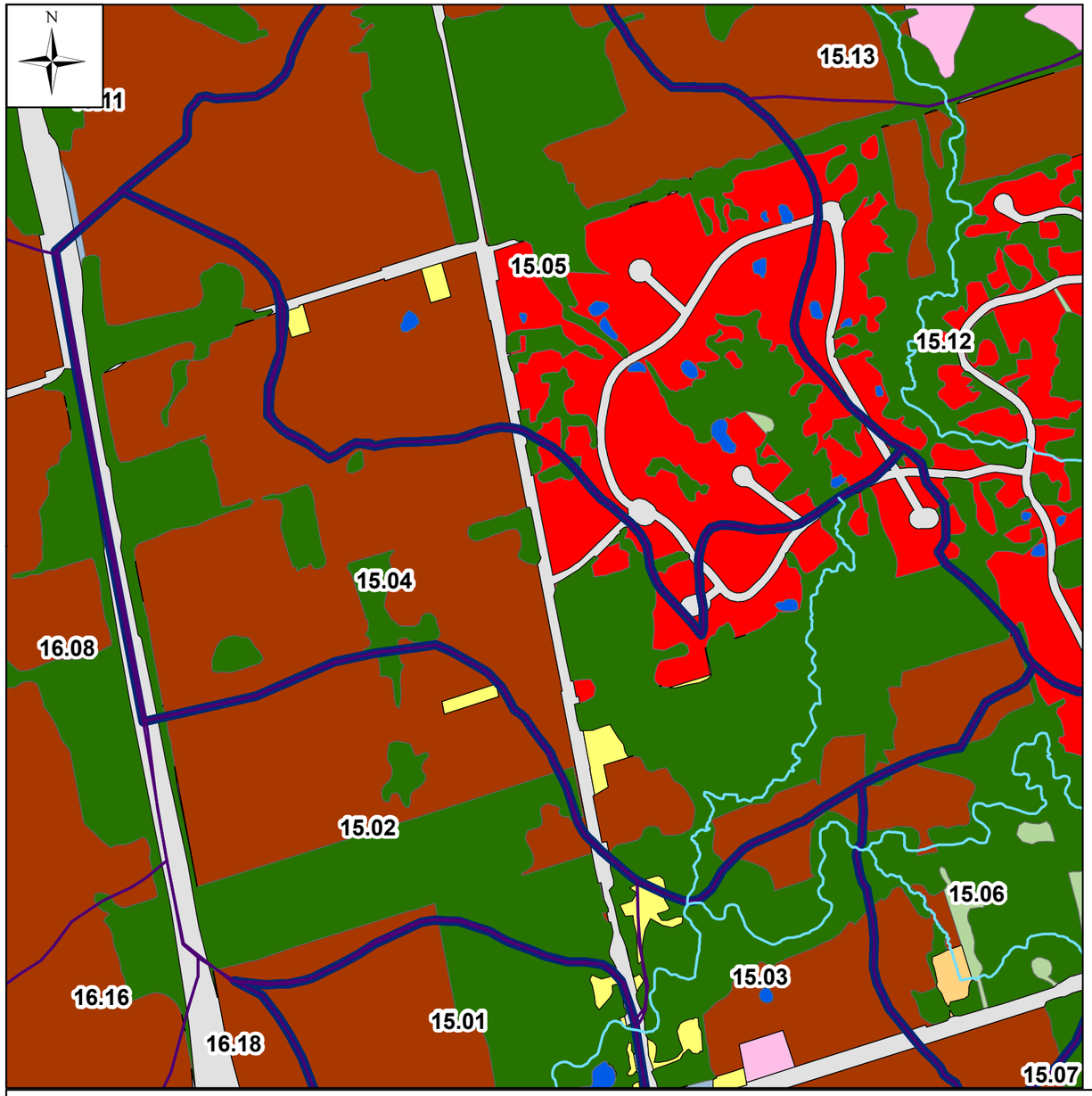
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

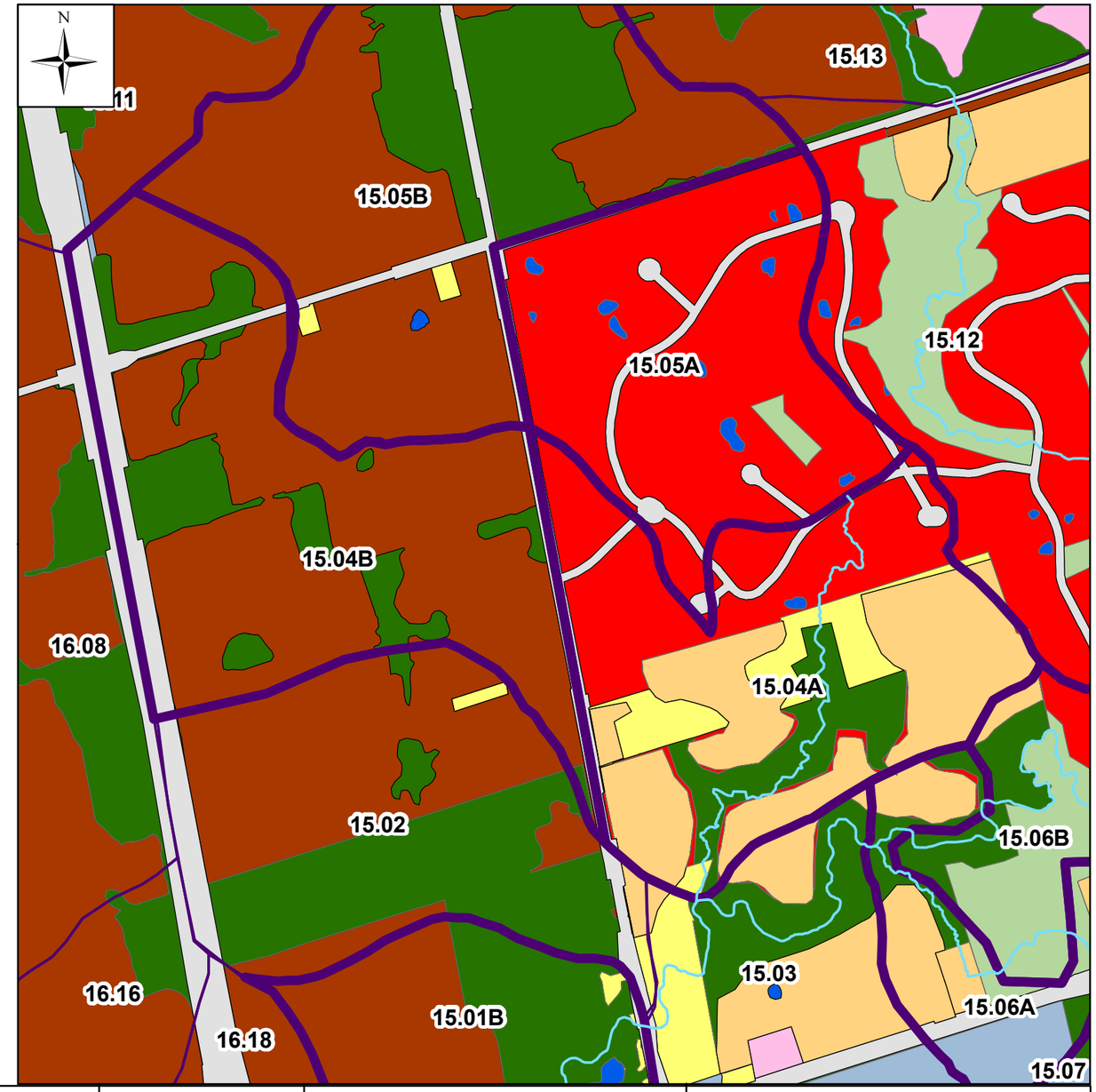
Catchment Split (15.01)

0 90 180 360 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

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Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

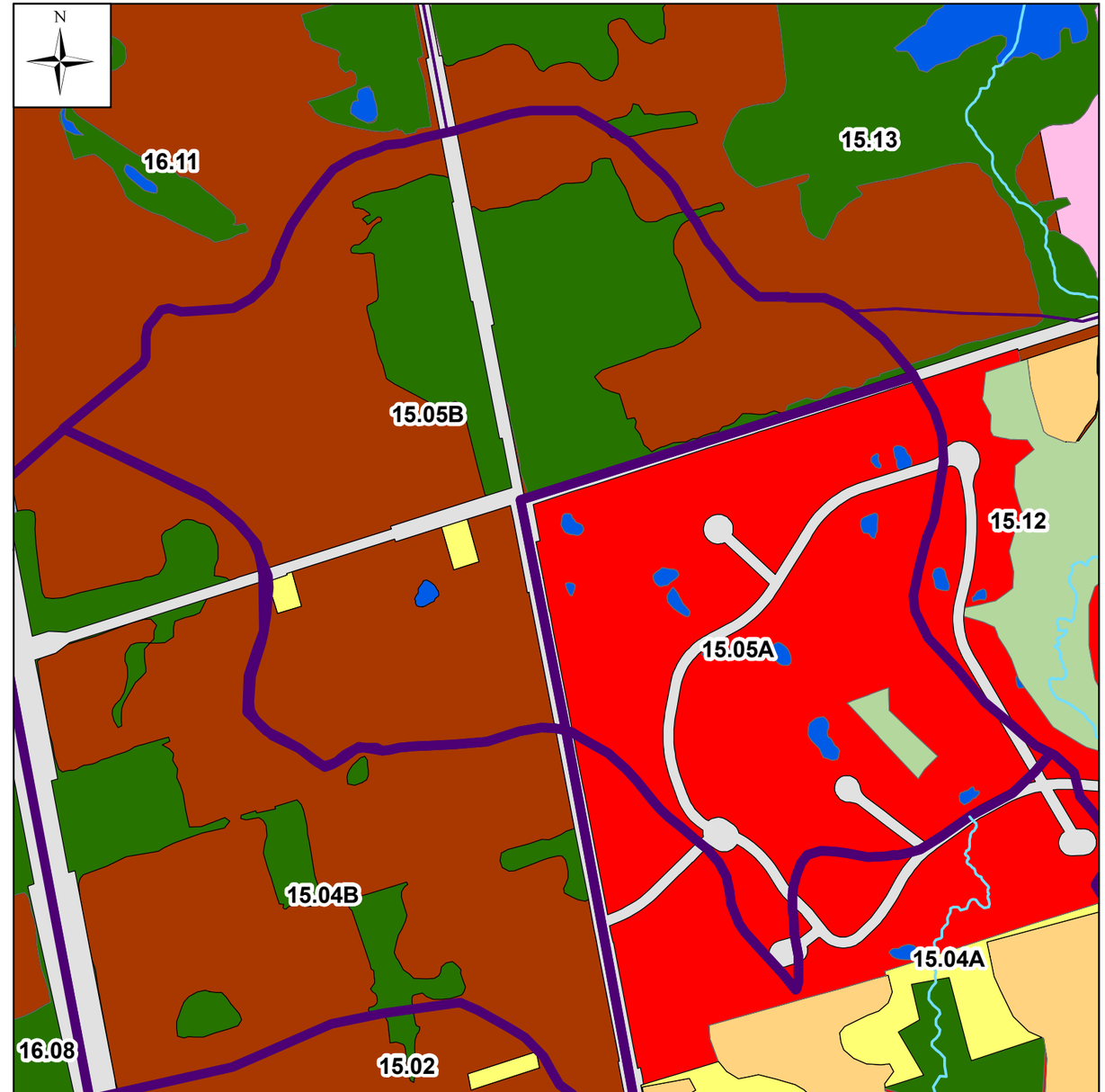
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Split (15.04)

0 137.5 275 550 Meters

Catchment for Existing Condition

Catchment for Future Condition



Legend

- General River
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- Cemetery
- Commercial
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Toronto and Region Conservation for The Living City

CIVICA

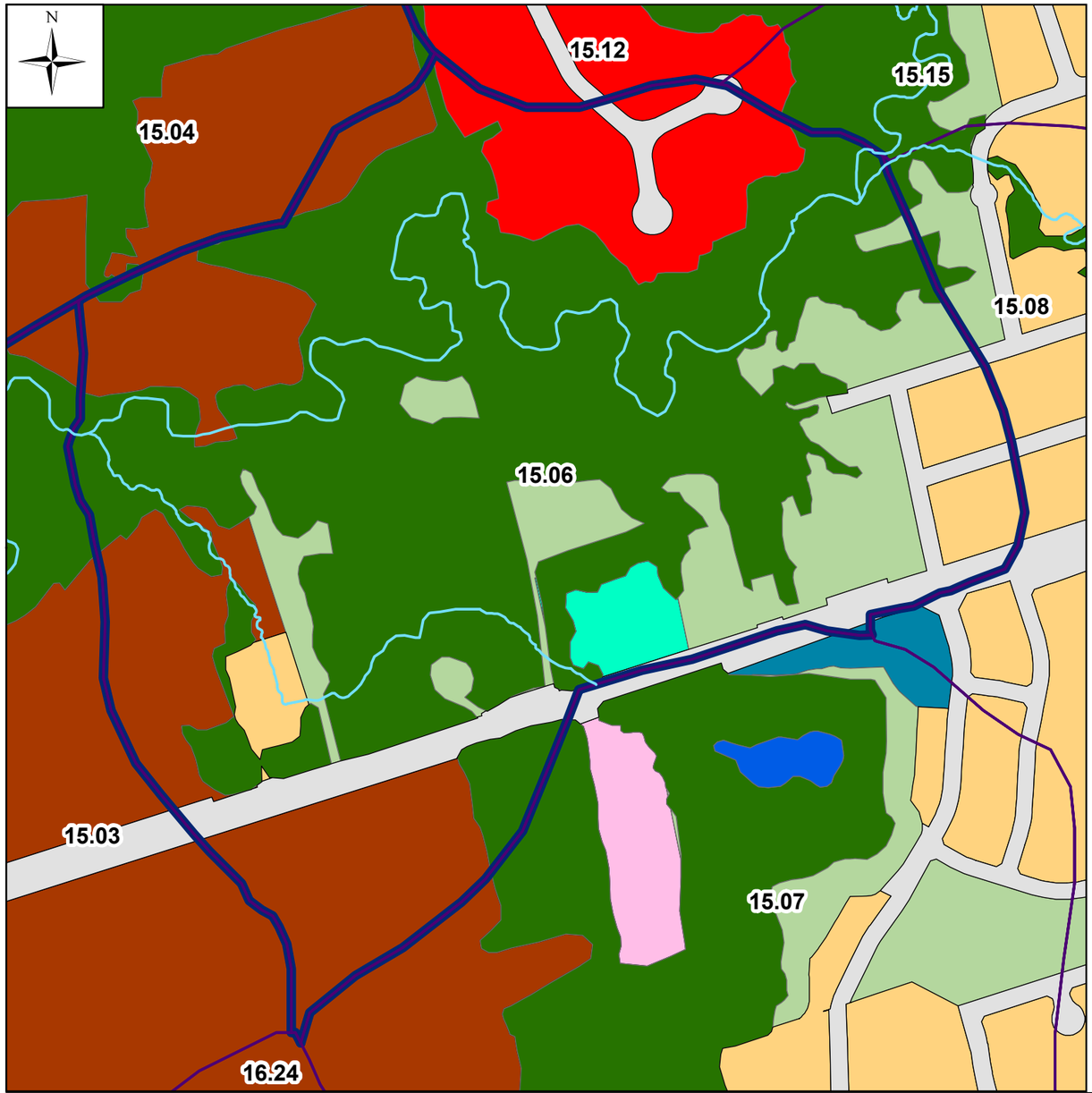
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

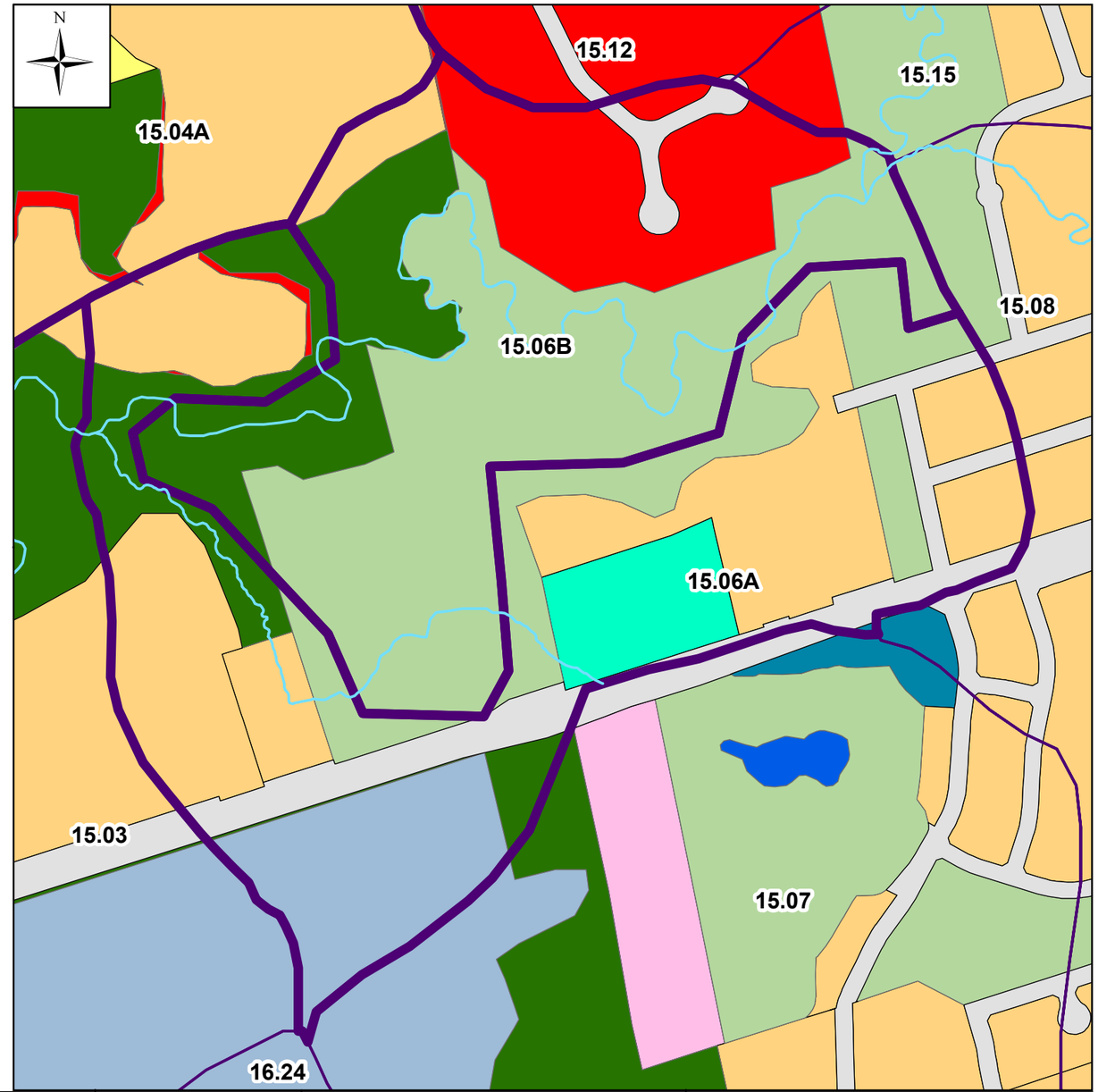
Catchment Split (15.05)

0 110 220 440 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

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Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Split (15.06)

0 65 130 260 Meters

Catchment for Existing Condition

Catchment for Future Condition

Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
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Toronto and Region Conservation for The Living City

CIVICA

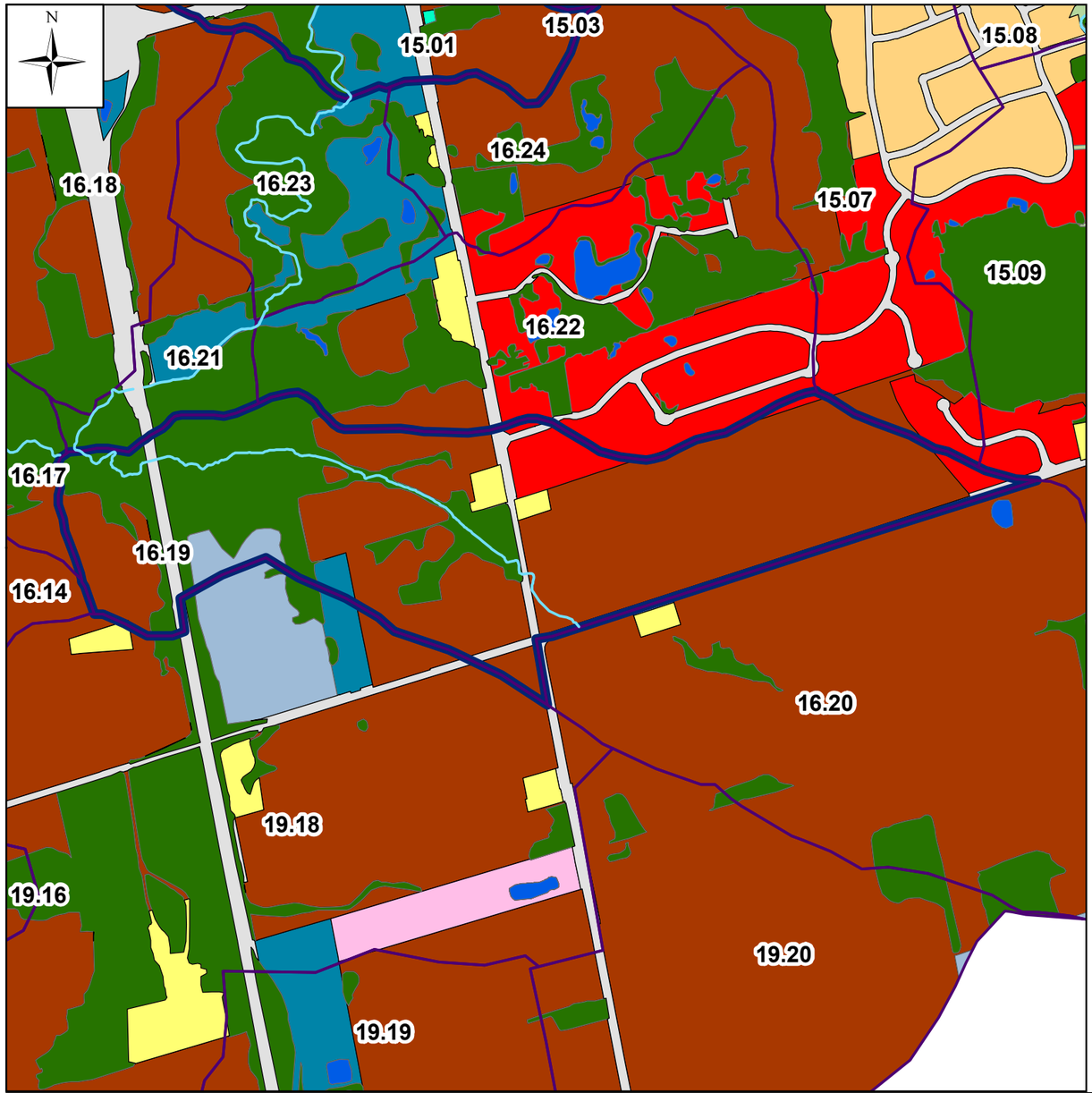
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

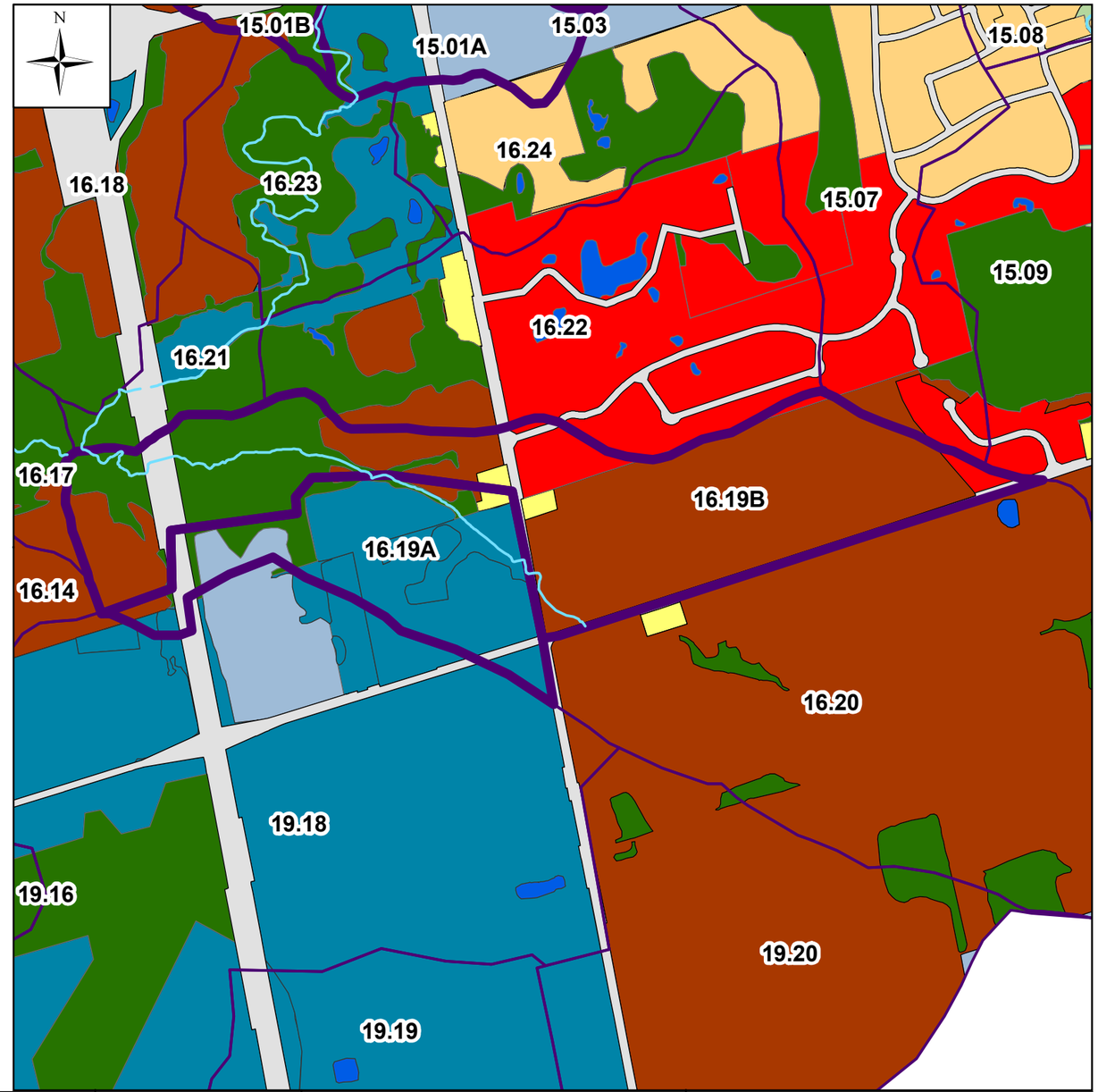
Catchment Split (15.10)

0 87.5 175 350 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

- General River
- Catchments
- Cemetery
- Commercial
- Conservation Lands
- Estate Residential
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Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

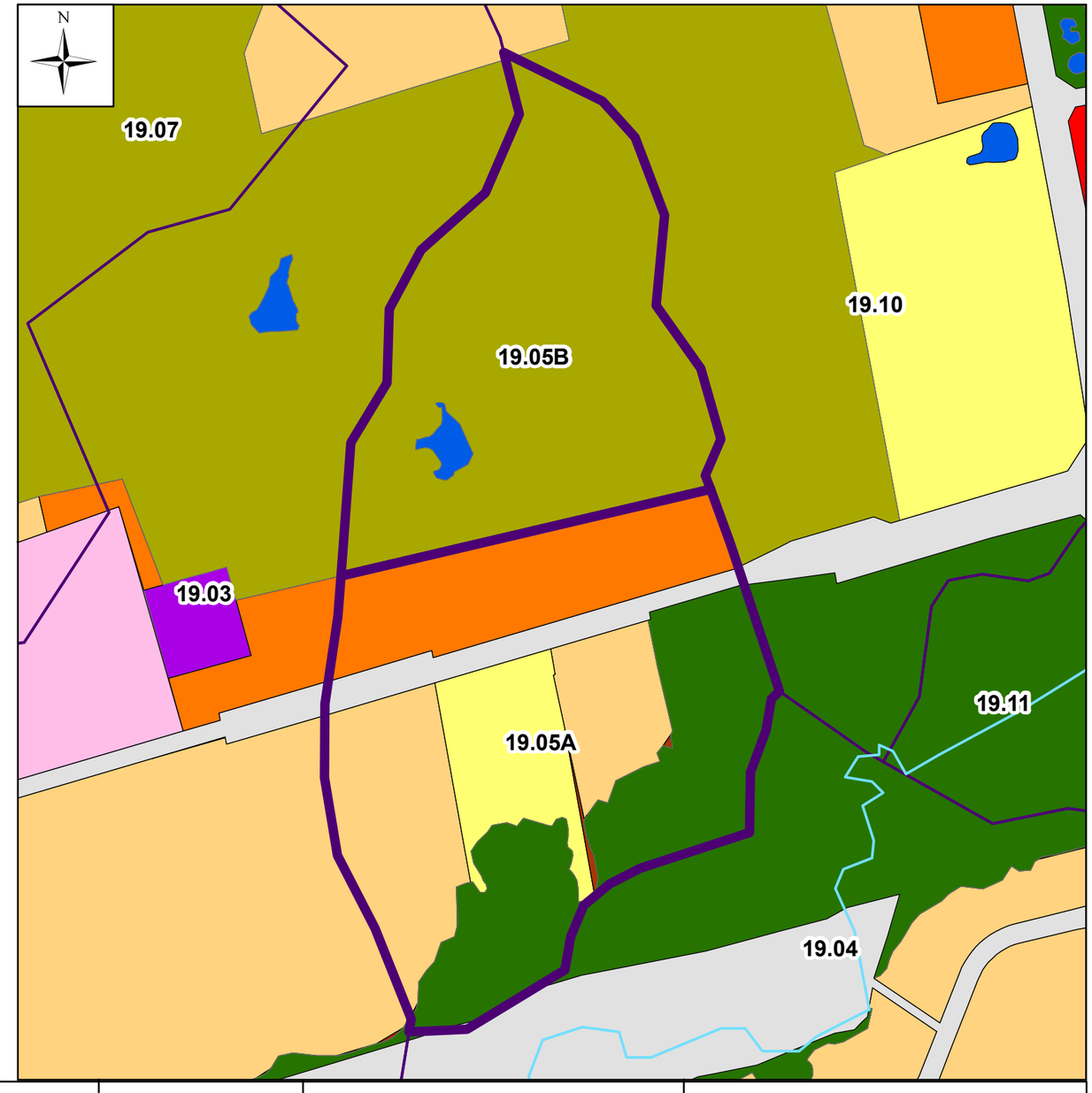
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Split (16.19)

0 170 340 680 Meters

Catchment for Existing Condition

Catchment for Future Condition



Legend

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- Cemetery
- Commercial
- Conservation Lands
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Toronto and Region Conservation for The Living City

CIVICA

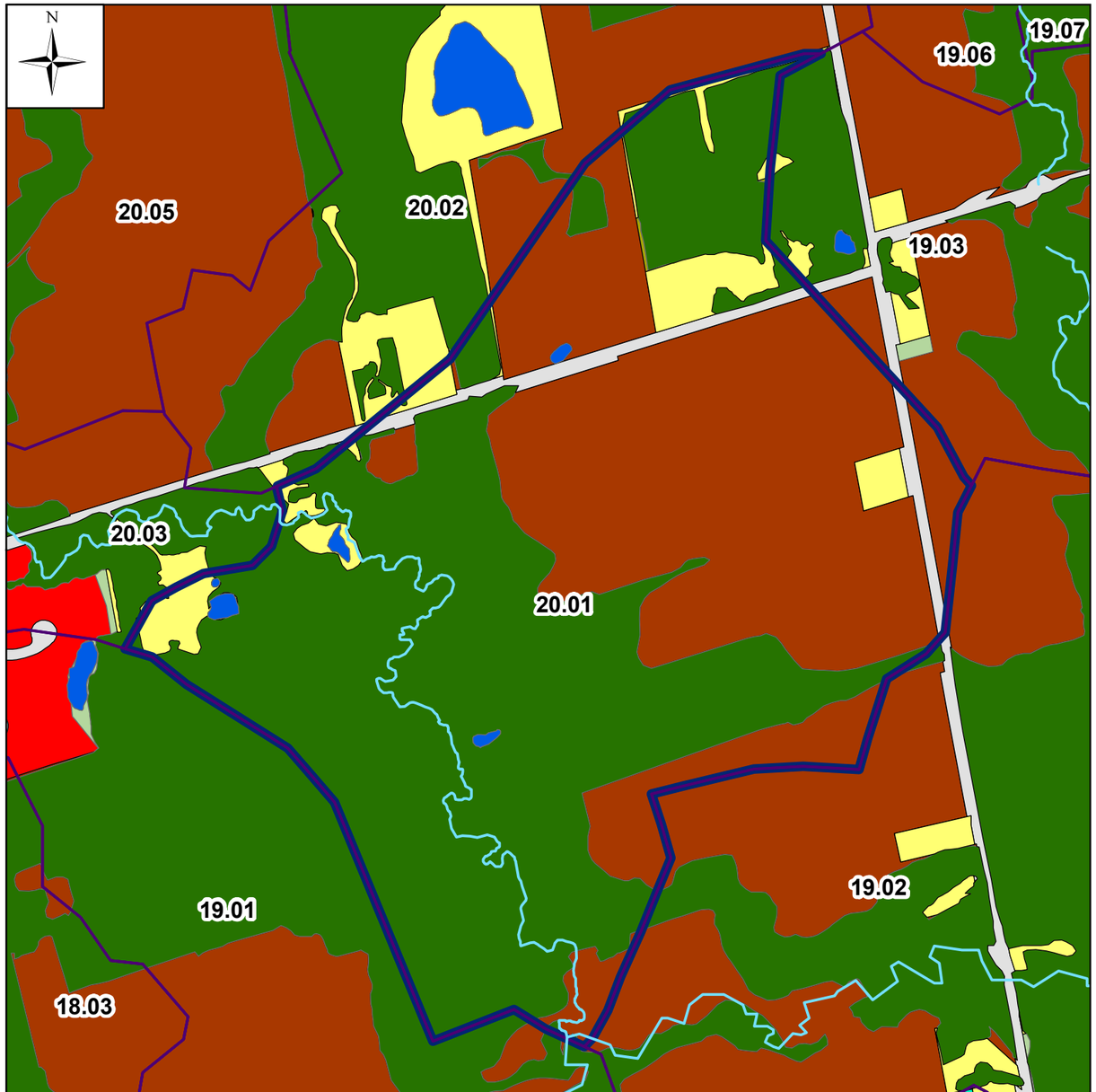
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Split (19.05)

0 65 130 260 Meters

Catchment for Existing Condition



Catchment for Future Condition

Legend

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Toronto and Region Conservation for The Living City

CIVICA

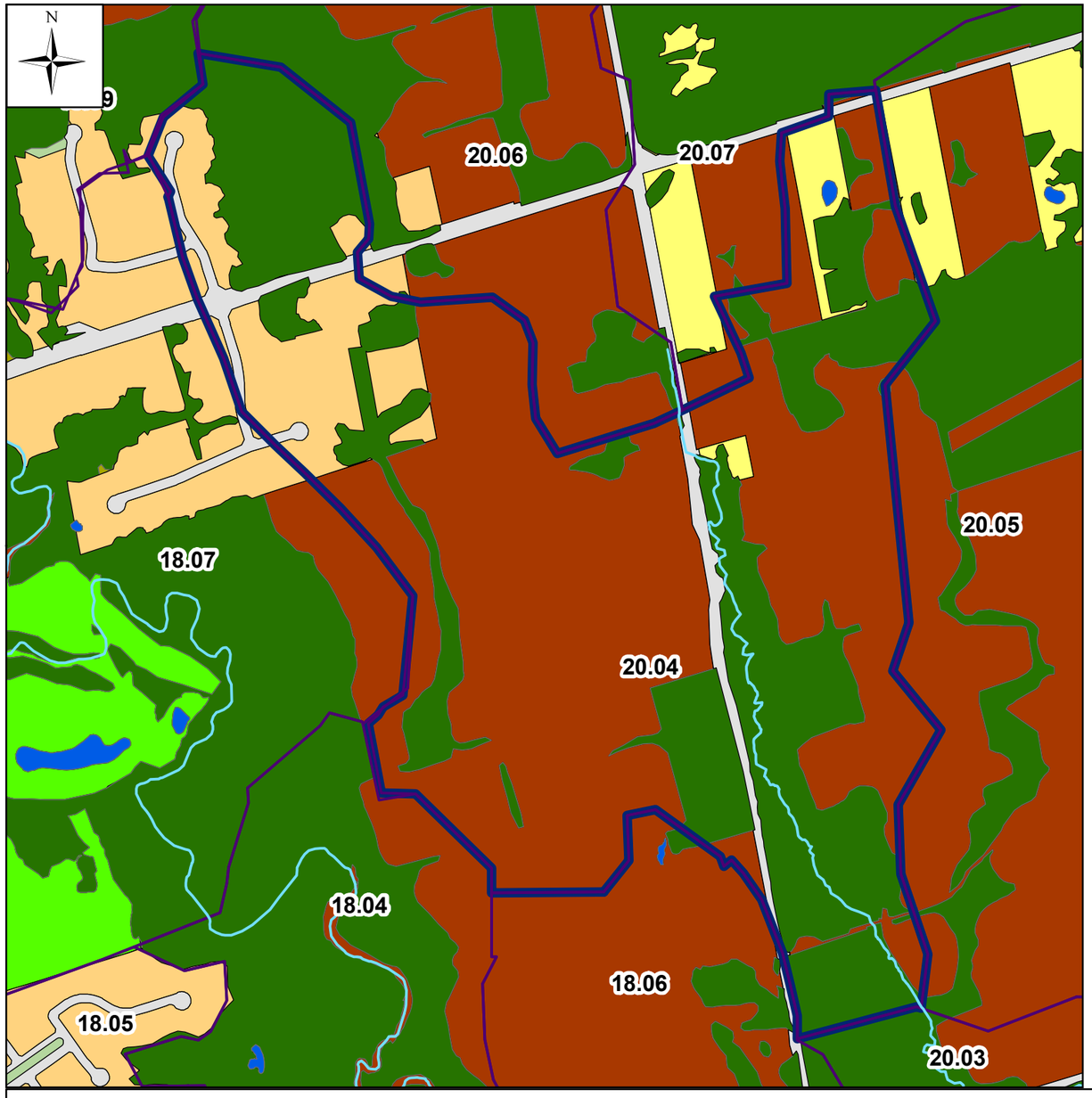
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

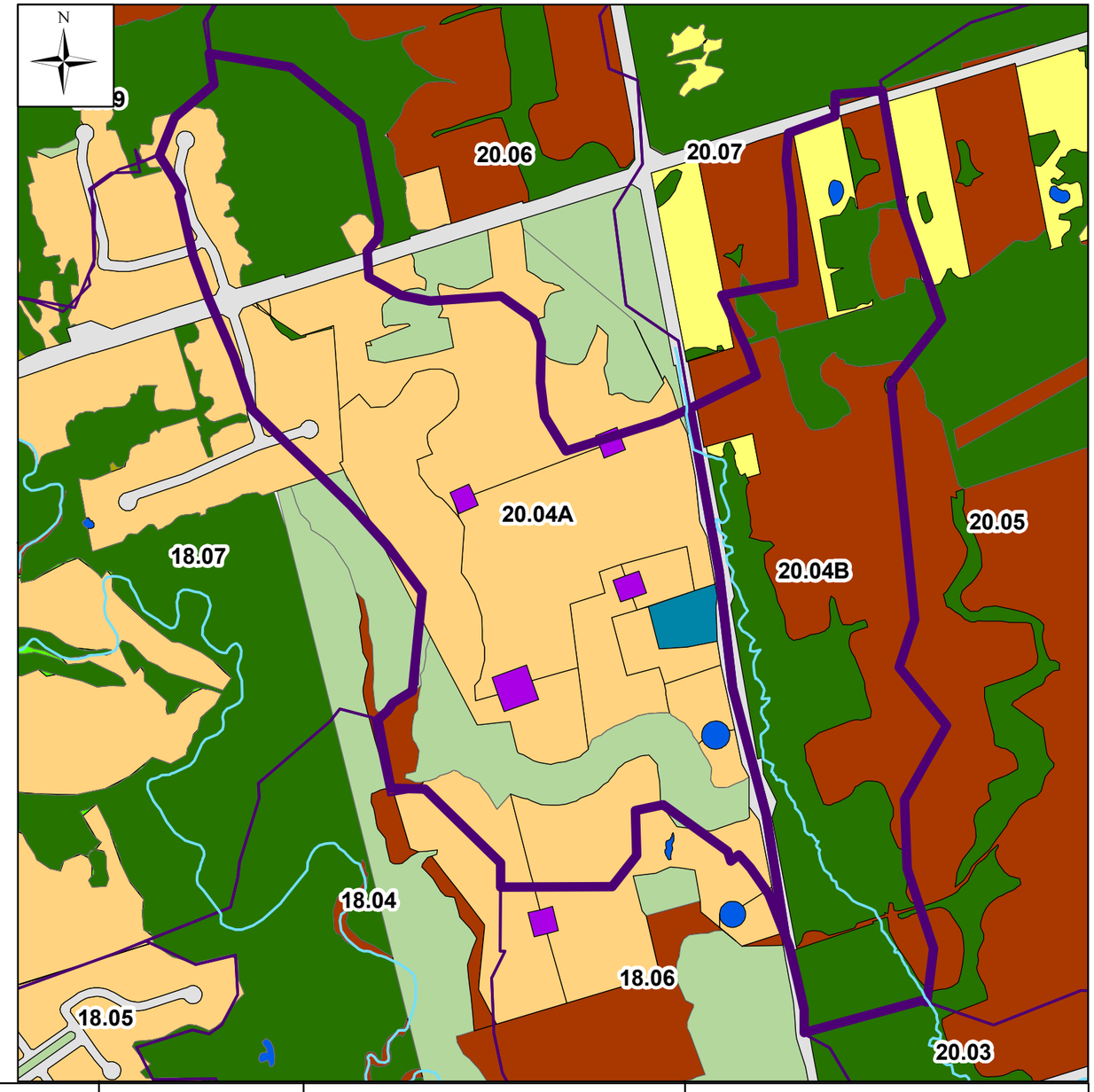
Catchment Split (20.01)

0 110 220 440 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

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Toronto and Region Conservation for The Living City

CIVICA

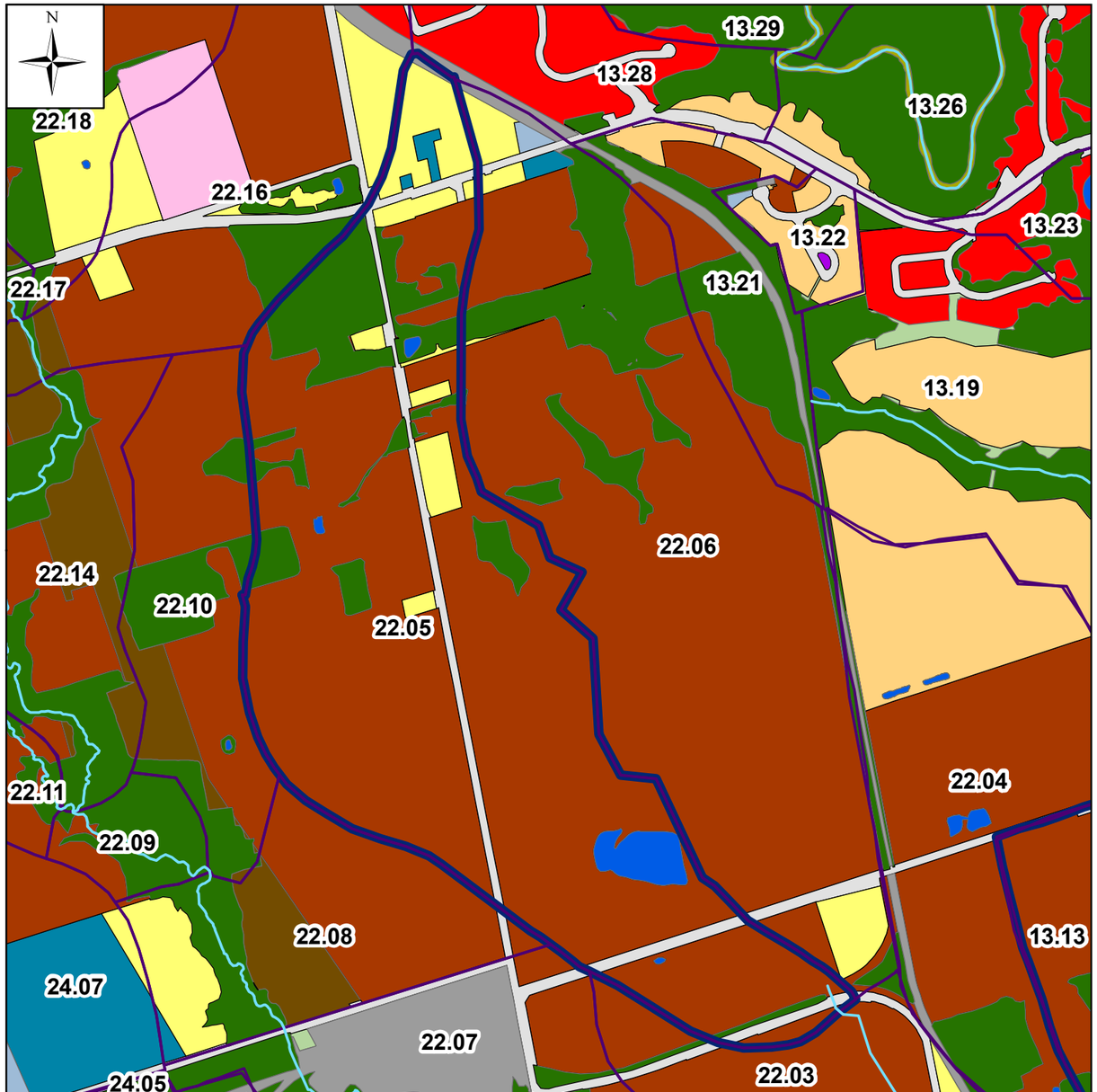
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

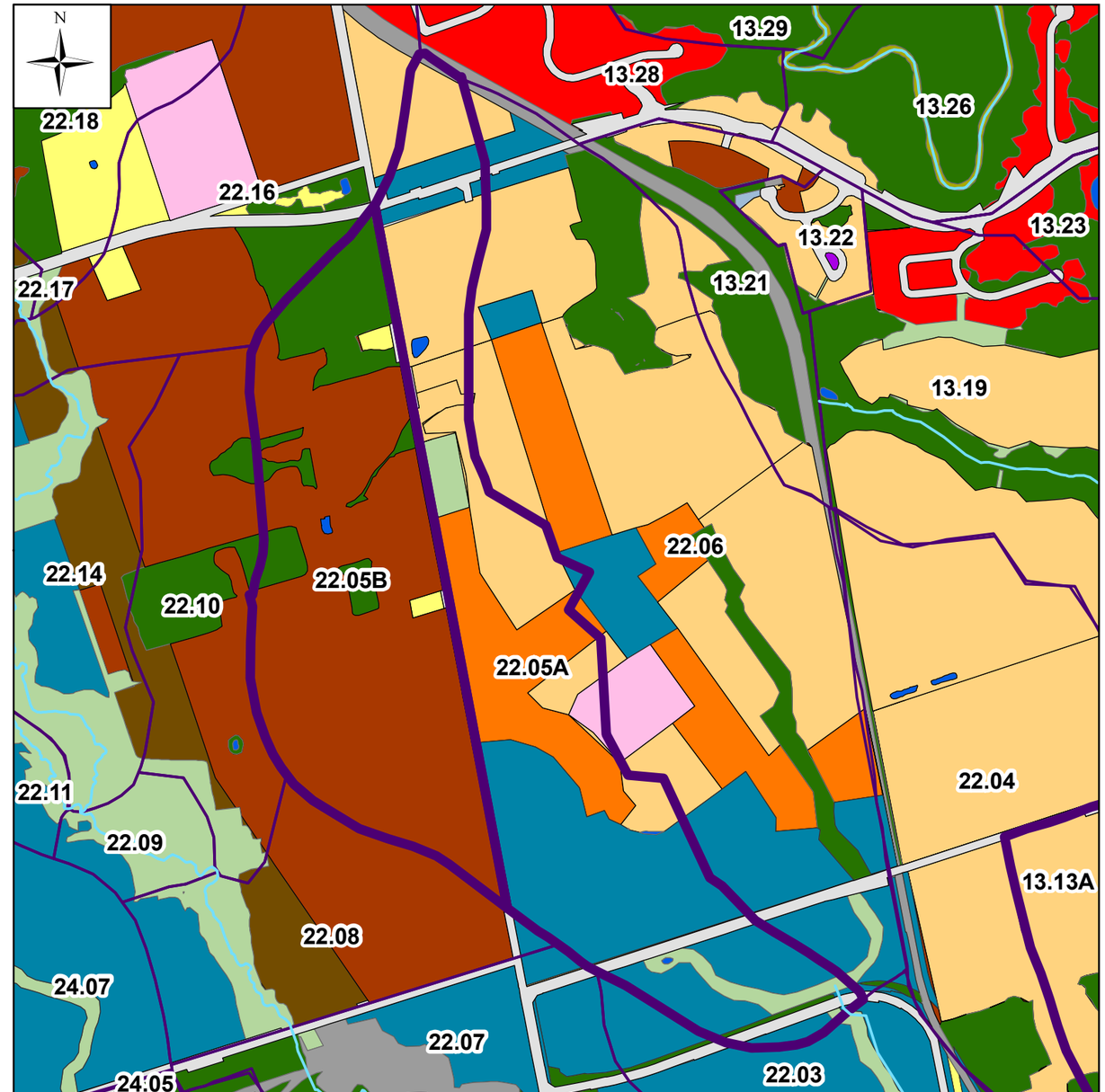
Catchment Split (20.04)

0 120 240 480 Meters

Catchment for Existing Condition



Catchment for Future Condition



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Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

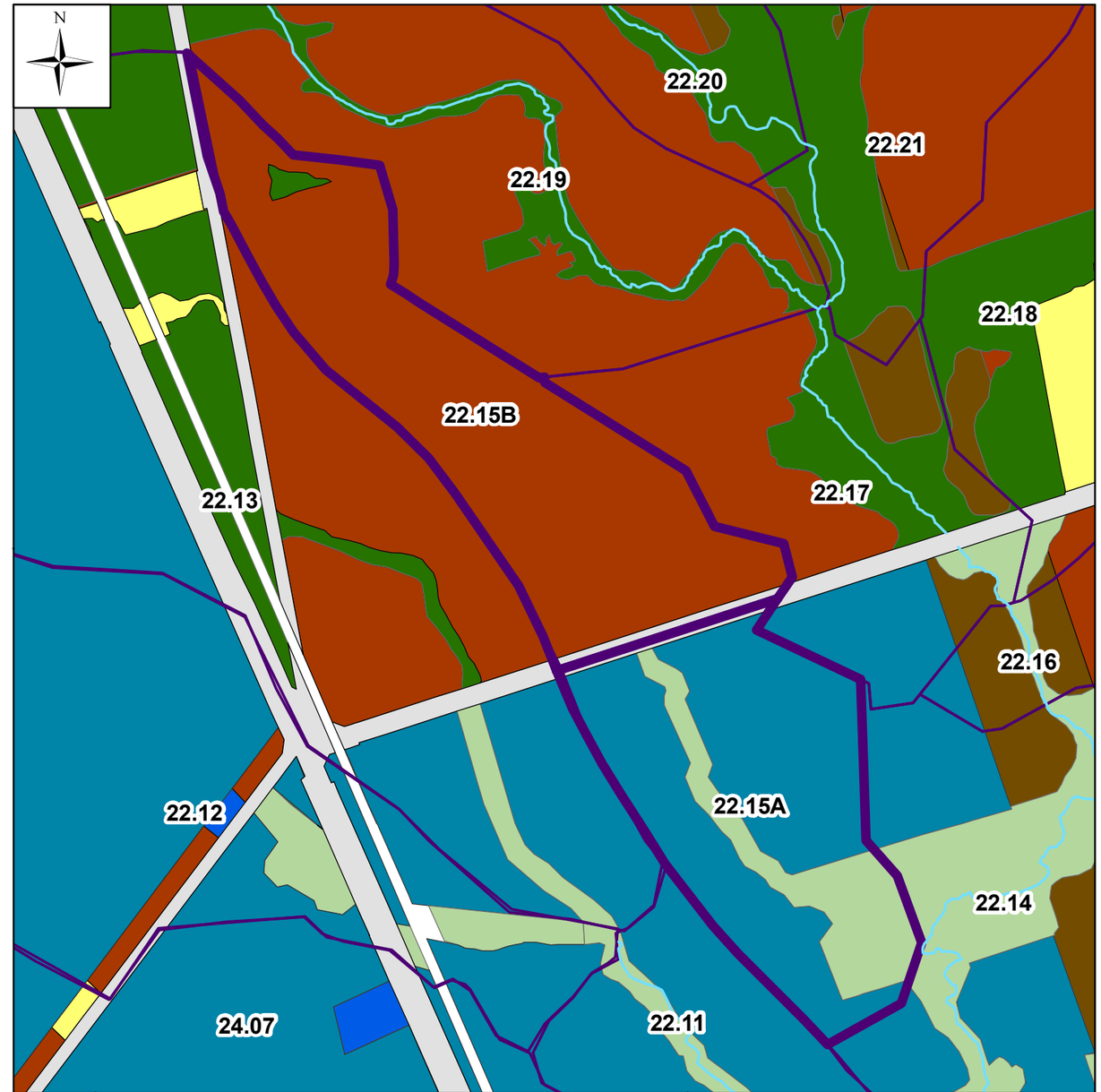
Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Split (22.05)

0 150 300 600 Meters

Catchment for Existing Condition

Catchment for Future Condition



Legend

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Toronto and Region Conservation for The Living City

CIVICA

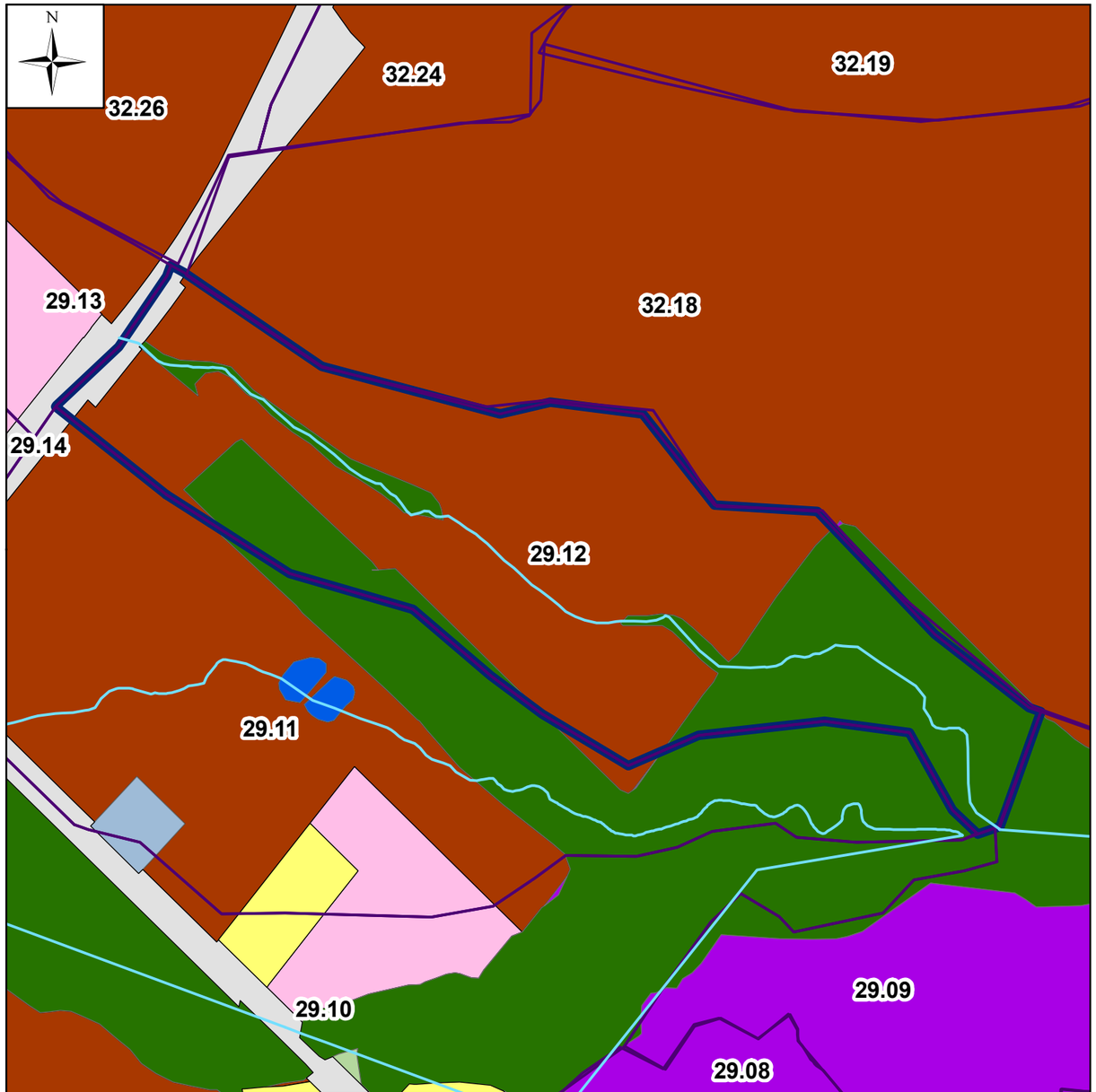
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

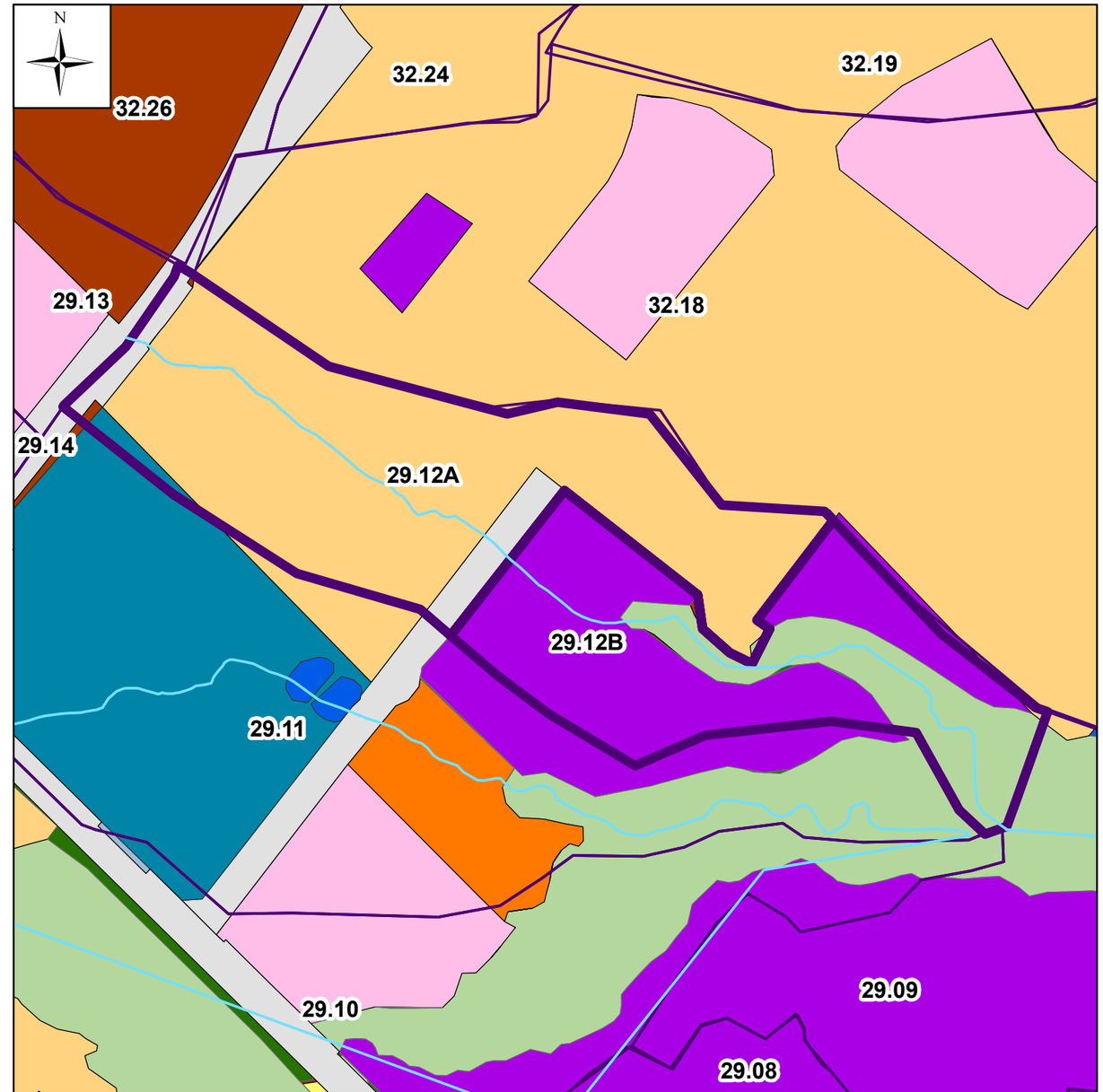
Catchment Split (22.15)

0 90 180 360 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

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Toronto and Region Conservation for The Living City

CIVICA

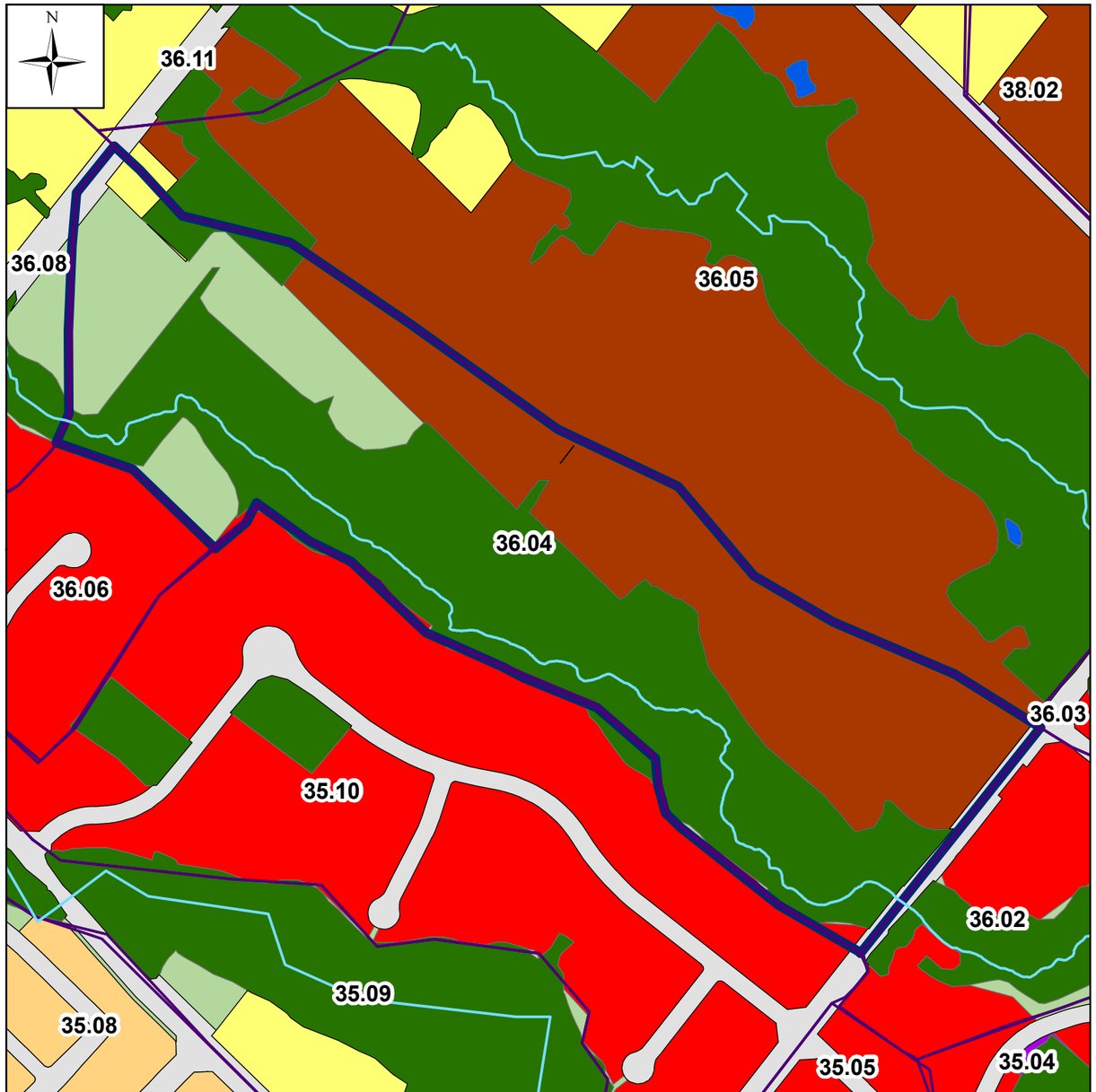
Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

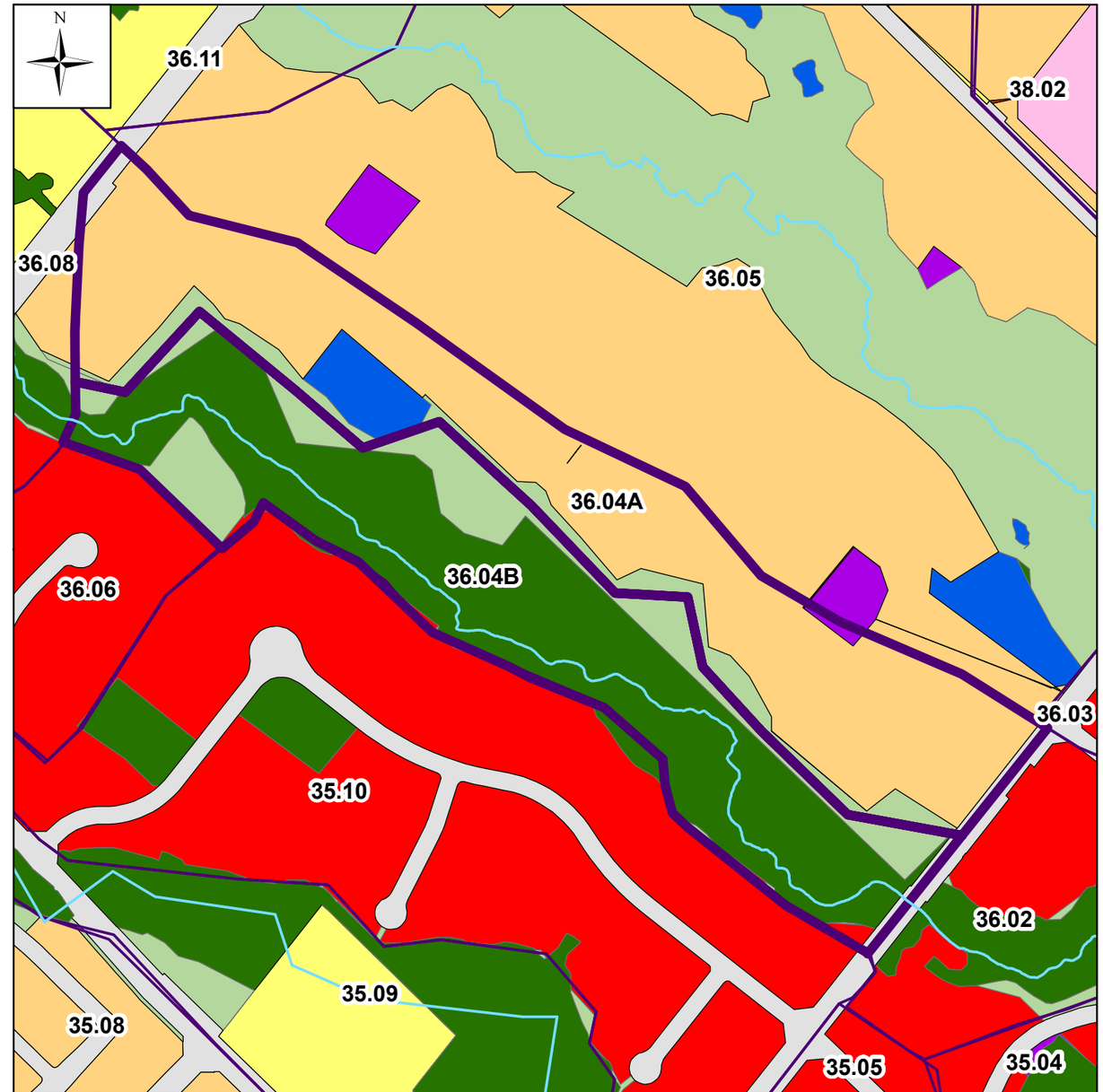
Catchment Split (29.12)

0 50 100 200 Meters

Catchment for Existing Condition



Catchment for Future Condition



Legend

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Toronto and Region Conservation for The Living City

CIVICA

Humber River Hydrology

Drawn By: M.Y. Date: Dec. 20, 2017

Catchment Split (36.04)

0 65 130 260 Meters

Appendix VIII

Model Parameters (Future Conditions)

Funture Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *	CN AMC III*
1	01.01	5	99.93	0	1.5	2.44	10	59	77
3	01.03	5	73.58	0	1.5	1.33	34.1	60	77
4	01.04	5	275.7	0	1.5	2.79	10	76	88
5	01.05	5	423.49	0	1.5	3.61	10	59	77
6	01.06	5	700.54	0	1.5	5.55	10	79	90
7	01.07	5	464.5	0	1.5	4.13	10	77	89
8	01.08	5	285.26	0	1.5	3.05	10	78	89
9	02.01	5	481.2	0	1.5	3.65	10	59	77
10	02.02	5	141.81	0	1.5	1.96	10	59	77
11	02.03	5	416.72	0	1.5	3.51	10	59	77
12	02.04	5	186.97	0	1.5	1.73	10	59	77
13	02.05	5	75.62	0	1.5	1.83	10	59	77
14	02.06	5	396.73	0	1.5	3.04	10	59	77
15	03.01	5	15.38	0	1.5	0.49	10	59	77
16	03.02	5	105.58	0	1.5	1.43	22.8	59	77
17	03.03	5	173.38	0	1.5	1.93	35.7	55	74
18	03.04	5	296.86	0	1.5	1.98	10	59	77
19	03.05	5	439.6	0	1.5	4.25	43.4	59	77
21	04.02	5	398.59	0	1.5	2.66	43.4	65	81
22	04.03	5	186.08	0	1.5	2.38	27.6	71	85
23	04.04	5	588.67	0	1.5	3.98	43.4	74	87
24	04.05	5	291.29	0	1.5	2.29	43.4	65	81
25	04.06	5	480.45	0	1.5	3.61	43.4	67	82
26	04.07	5	302.36	0	1.5	2.58	27.3	59	77
27	04.08	5	283.63	0	1.5	2.96	43.4	59	77
28	05.01	5	254.27	0	1.5	2.28	22.2	66	81
29	05.02	5	136.15	0	1.5	2.46	43.4	60	77
30	05.03	5	438.15	0	1.5	4.11	43.4	66	81
31	05.04	5	285.81	0	1.5	2.59	36.8	66	81
32	05.05	5	50.2	0	1.5	1.1	26.3	61	78
33	05.06	5	581.39	0	1.5	3.63	42.6	62	79
34	05.07	5	270.38	0	1.5	2.65	10	59	77
35	05.08	5	208.58	0	1.5	1.85	30.9	64	81
36	05.09	5	487.07	0	1.5	4.18	43.4	66	81
37	06.01	5	28.945	0	1.5	0.81	43.4	76	88
7649	06.02	5	81.21	0	1.5	1.7	10	71	85
39	06.03	5	130.518	0	1.5	1.36	10	98	99
41	06.05	5	13.32	0	1.5	0.63	10	99	99
45	06.09	5	130.79	0	1.5	1.79	13.4	71	85
46	06.10	5	157.89	0	1.5	2.35	12.9	66	81
52	06.16	5	74.7	0	1.5	1.09	7.5	65	81
55	06.19	5	125.55	0	1.5	1.55	10	71	85
57	06.21	5	337.07	0	1.5	3.06	43.4	64	81
58	07.01	5	72.54	0	1.5	1.46	43.4	61	78
59	07.02	5	395.37	0	1.5	3.81	43.4	64	81
60	07.03	5	35.34	0	1.5	1.13	10	60	77
62	07.05	5	192.25	0	1.5	2.15	43.4	71	85
63	07.06	5	356.24	0	1.5	2.85	43.4	66	81
64	07.07	5	225	0	1.5	2.85	43.4	68	83
65	07.08	5	84.23	0	1.5	1.58	10	86	94
66	07.09	5	472.25	0	1.5	3.75	43.4	70	84
67	07.10	5	327.27	0	1.5	2.01	30.6	71	85
68	07.11	5	398.57	0	1.5	2.56	43.4	64	81
69	07.12	5	171.05	0	1.5	2.25	10	78	89
70	07.13	5	133.18	0	1.5	1.94	43.4	78	89
71	07.14	5	97.34	0	1.5	1.63	10	72	86
73	08.01	5	346.79	0	3	2.87	43.4	87	94
74	08.02	5	253.74	0	3	1.61	10	86	93
75	08.03	5	345.35	0	3	2.21	43.4	74	87
76	08.04	5	87.33	0	3	1.12	43.4	69	84
81	08.09	5	259.2	0	3	1.53	32.7	81	91
82	08.10	5	172.02	0	1.5	2.46	43.4	64	80
83	08.11	5	80.9	0	1.5	1.85	19.7	91	96
84	08.12	5	137.06	0	1.5	1.2	40.1	83	92
85	08.13	5	360.48	0	1.5	2.51	43.4	77	89
93	09.08	5	283.46	0	3	2.69	10	91	96
94	09.09	5	161.42	0	3	2.38	10	89	95
95	09.10	5	327.28	0	3	2.46	10	91	96
96	09.11	5	146.76	0	3	1.75	10	89	95
97	09.12	5	162.52	0	3	1.28	10	83	92
98	09.13	5	398.53	0	3	2	43.4	83	92
99	10.01	5	17.9	0	3	0.69	10	92	96
100	10.02	5	51.68	0	1.75	0.97	10	81	91
102	10.04	5	150.31	0	1.75	2.1	10	89	95

Funture Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *	CN AMC III*
103	10.05	5	119.72	0	1.75	1.51	10	85	93
105	10.07	5	124.35	0	1.75	1.43	10	88	94
106	10.08	5	169.08	0	1.75	1.85	10	86	93
107	10.09	5	83.84	0	1.75	1.79	10	79	90
108	10.10	5	57.05	0	1.75	0.89	10	87	94
109	10.11	5	85.27	0	1.75	1.31	10	87	94
110	10.12	5	89.1	0	1.75	1.2	10	87	94
111	10.13	5	116.21	0	1.75	1.26	10	89	95
112	10.14	5	175.6	0	1.75	1.59	10	83	92
113	10.15	5	267.62	0	1.75	2.08	43.4	85	93
114	10.16	5	239.55	0	1.75	1.4	43.4	89	95
116	10.18	5	66.56	0	1.75	1.53	43.4	87	94
119	10.21	5	414.29	0	1.75	1.73	43.4	83	92
121	10.23	5	422.02	0	1.75	2.6	43.4	86	93
122	10.24	5	250.47	0	1.75	2.78	10	92	96
123	10.25	5	324.82	0	1.75	2.25	10	87	94
124	10.26	5	189.66	0	1.75	1.93	10	85	93
125	10.27	5	194.01	0	1.75	1.74	10	84	92
126	10.28	5	78.78	0	1.75	1.12	30.2	88	94
127	10.29	5	51.52	0	1.75	0.98	18.9	86	93
128	10.30	5	344.73	0	1.75	2.8	41.4	88	94
129	10.31	5	268.47	0	1.75	2.31	43.4	86	93
130	10.32	5	303.38	0	1.75	3.03	43.4	89	95
131	10.33	5	409.92	0	1.75	3.55	43.4	88	94
132	10.34	5	375.83	0	1.75	2.15	43.4	88	94
133	11.01	5	283.72	0	3	4.19	10	74	87
134	11.02	5	81.39	0	3	1.29	10	94	97
136	11.04	5	153.02	0	3	1.83	10	82	91
137	11.05	5	214.33	0	3	1.89	10	91	96
138	12.01	5	352.43	0	3	3.32	10	90	95
139	12.02	5	191.69	0	3	1.73	10	93	97
140	12.03	5	317.88	0	3	1.84	10	94	97
142	13.02	5	81.1	0	3	1.02	10	77	89
145	13.05	5	18.63	0	3	0.61	10	75	87
155	13.15	5	33.66	0	3	0.99	10	99	99
160	13.20	5	30.56	0	3	0.6	10	90	95
166	13.26	5	91.38	0	3	1.73	10	87	94
169	13.29	5	177.99	0	3	3.23	10	80	90
170	13.30	5	217.41	0	3	2.05	10	91	96
171	13.31	5	145.21	0	3	2.84	10	69	84
173	14.02	5	76.07	0	1.5	2.12	12	63	80
174	14.03	5	8.89	0	1.5	0.68	12	58	76
175	14.04	5	90.32	0	1.5	3.04	12	66	82
176	14.05	5	238.01	0	1.5	3.04	12	66	82
177	14.06	5	134.83	0	1.5	3.68	12	62	79
181	14.10	5	60.95	0	1.5	1.64	12	58	76
182	14.11	5	30.56	0	1.5	1.8	12	58	76
183	14.12	5	43.77	0	1.5	1.62	12	54	73
184	14.13	5	47.6	0	1.5	2.34	12	55	74
185	14.14	5	30.8	0	1.5	1.56	12	58	76
186	14.15	5	13.67	0	1.5	1.22	21.8	65	81
187	14.16	5	30.51	0	1.5	1.62	12	58	76
189	14.18	5	10.73	0	3	0.36	28.9	81	91
198	14.27	5	11.88	0	1.5	0.88	9.9	62	79
199	14.28	5	4.35	0	3	0.44	28.9	63	80
204	14.33	5	90	0	1.5	2.56	26.6	48	68
207	14.36	5	23.76	0	3	1.07	28.9	67	82
208	14.37	5	20.56	0	3	1.26	28.9	71	85
214	14.43	5	25.97	0	3	0.99	28.9	67	82
226	14.55	5	290.21	0	1.5	4.1	12	54	73
228	15.02	5	64.49	0	1.5	1.9	12	63	80
237	15.11	5	160.46	0	1.5	2.52	38.6	46	67
239	15.13	5	311.06	0	1.5	5.44	43.4	60	78
240	15.14	5	151.76	0	1.5	2.7	43.4	46	67
247	15.21	5	407.16	0	1.5	6.26	43.4	49	69
248	15.22	5	89.27	0	1.5	2.44	12	49	69
249	15.23	5	84.39	0	1.5	2.52	43.4	62	79
251	15.25	5	21.18	0	3	0.84	28.9	48	68
254	15.28	5	119.04	0	1.5	2.78	43.4	59	77
255	15.29	5	57.13	0	1.5	1.8	43.4	50	69
256	15.30	5	114.69	0	1.5	2.44	43.4	58	76
257	15.31	5	146.51	0	1.5	2.34	43.4	50	69
258	15.32	5	46	0	3	1.58	28.9	64	80
259	16.01	5	137.69	0	1.5	3.98	12	62	79

Funture Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *	CN AMC III*
260	16.02	5	173.6	0	1.5	3.24	12	61	78
261	16.03	5	139.51	0	1.5	2.78	12	64	80
262	16.04	5	87.27	0	1.5	2.78	12	60	78
263	16.05	5	134.05	0	1.5	2.72	12	62	79
264	16.06	5	167.3	0	1.5	4.06	12	62	79
265	16.07	5	58.62	0	1.5	1.86	12	62	79
266	16.08	5	303.85	0	1.5	5.42	12	62	79
267	16.09	5	137.77	0	1.5	2.72	21.6	62	79
268	16.10	5	311.05	0	1.5	4.6	43.4	60	78
269	16.11	5	173.61	0	1.5	2.74	33.2	64	80
270	16.12	5	128.59	0	1.5	2.92	26.9	57	75
271	16.13	5	126.91	0	1.5	2.2	43.4	53	72
272	16.14	5	91.34	0	1.5	2.08	12	64	80
273	16.15	5	59.08	0	1.5	1.56	12	64	80
274	16.16	5	100.66	0	1.5	2.82	12	64	80
275	16.17	5	21.53	0	1.5	0.9	12	62	79
278	16.20	5	252.13	0	1.5	5.14	12	51	71
283	17.01	5	34.58	0	1.5	1.24	12	61	78
288	17.06	5	480.44	0	1.5	6.4	43.4	65	81
289	17.07	5	365.24	0	1.5	5.96	43.4	64	80
290	17.08	5	111.48	0	1.5	2.34	12	61	78
291	17.09	5	138	0	1.5	3.02	43.4	64	80
292	17.10	5	262.27	0	1.5	1.52	15.3	62	79
293	17.11	5	298.45	0	1.5	4.1	43.4	62	79
294	17.12	5	410.21	0	1.5	5.52	22.7	54	73
295	17.13	5	320.24	0	3	4.33	28.9	63	80
296	18.01	5	95.92	0	1.5	2.3	12	58	76
298	18.03	5	178.76	0	1.5	5.12	12	62	79
299	18.04	5	136.19	0	1.5	4.62	12	62	79
301	18.06	5	74.77	0	1.5	2.22	12	58	76
303	18.08	5	244	0	1.5	5.08	12	67	82
304	18.09	5	112.25	0	1.5	4.3	12	58	76
305	18.10	5	112.36	0	1.5	3.54	12	64	80
306	18.11	5	226.56	0	1.5	4.38	12	63	80
307	18.12	5	228.18	0	1.5	4.48	12	64	80
308	19.01	5	200.88	0	1.5	4.44	12	58	76
309	19.02	5	134.95	0	1.5	3.72	12	59	77
313	19.06	5	98.19	0	1.5	4.7	12	64	80
315	19.08	5	167.71	0	1.5	6	12	65	81
316	19.09	5	211.25	0	1.5	5.9	12	65	81
323	19.16	5	122.71	0	1.5	3.3	12	66	82
329	20.02	5	219.14	0	1.5	6.1	12	65	81
330	20.03	5	23.23	0	1.5	1.64	12	50	70
332	20.05	5	191.39	0	1.5	4.6	12	64	80
333	20.06	5	198.86	0	1.5	4.18	12	64	80
334	20.07	5	217.96	0	1.5	4.72	12	64	80
339	21.05	5	153.35	0	1.5	3.44	12	50	69
342	21.08	5	185.48	0	1.5	5.94	12	58	76
343	21.09	5	84.95	0	1.5	2.74	12	55	74
346	21.12	5	61.82	0	1.5	2.32	12	61	78
7287	22.08	5	38.86	0	1.5	0.95	10	89	95
7292	22.09	5	9.03	0	1.5	0.41	10	82	91
7348	22.10	5	36.39	0	1.5	1.44	10	78	89
7313	22.17	5	22.43	0	1.5	0.7	10	85	93
7347	22.18	5	127.24	0	1.5	2.59	10	75	87
7318	22.19	5	55.21	0	1.5	1.51	10	89	95
7346	22.21	5	95.48	0	1.5	1.37	10	66	82
7337	22.26	5	68.13	0	1.5	1.69	10	80	90
7345	22.29	5	111.62	0	1.5	2.59	10	75	87
7371	23.06	5	22.37	0	1.5	0.48	10	82	91
7367	23.07	5	22.7	0	1.5	0.81	10	81	91
7446	25.05	5	31.37	0	1.5	0.84	10	82	91
7438	25.11	5	25.11	0	1.5	0.65	10	80	90
7482	26.01	5	13.79	0	3	0.5	10	94	97
7461	26.02	5	65.48	0	3	1.61	10	92	96
7457	26.05	5	6.84	0	3	0.33	10	79	90
7464	26.09	5	39.84	0	3	1.22	10	96	98
438	27.05	5	43.54	0	3	1.38	10	90	95
449	28.01	5	223.28	0	2.5	2.9	10	86	93
450	28.02	5	342.48	0	2.5	1.82	10	81	91
451	28.03	5	323.01	0	2.5	2.07	10	83	92
452	29.01	5	19.25	0	2.5	0.99	10	79	90
454	29.03	5	26.03	0	2.5	1.3	10	78	89
457	29.06	5	15.54	0	2.5	0.7	10	85	93

Funture Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *	CN AMC III*
460	29.09	5	15.74	0	2.5	0.55	10	83	92
464	29.13	5	41.1	0	2.5	1.42	10	95	98
466	29.15	5	114.47	0	2.5	1.66	10	89	95
467	29.16	5	244.92	0	2.5	3.08	10	83	92
468	30.01	5	20.42	0	2.5	0.68	10	78	89
469	30.02	5	341.04	0	2.5	2.47	10	89	95
470	30.03	5	55.31	0	2.5	1.42	10	78	89
471	30.04	5	352.36	0	2.5	3.05	10	89	95
472	30.05	5	112.75	0	2.5	1.58	10	88	94
473	30.06	5	146.61	0	2.5	2.41	10	86	93
474	30.07	5	76.84	0	2.5	1.96	10	86	93
475	30.08	5	28.62	0	2.5	0.49	10	88	94
476	30.09	5	168.42	0	2.5	2.33	10	84	92
477	30.10	5	123.27	0	2.5	1.63	10	90	95
478	31.01	5	280.69	0	2.5	2.65	10	86	93
479	31.02	5	258.77	0	2.5	3.98	10	83	92
480	31.03	5	316.89	0	2.5	2.03	10	86	93
481	31.04	5	138.58	0	2.5	1.96	10	84	92
482	32.01	5	11.92	0	2.5	0.94	10	82	91
485	32.04	5	12.12	0	2.5	1.11	10	85	93
487	32.06	5	27.22	0	2.5	1.29	10	81	91
491	32.10	5	32.42	0	2.5	1.06	10	79	90
494	32.13	5	7.11	0	2.5	0.5	10	76	88
496	32.15	5	16.91	0	2.5	1.04	10	83	92
502	32.21	5	17.61	0	2.5	0.52	10	87	94
504	32.23	5	19.72	0	2.5	0.68	10	82	91
507	32.26	5	110.45	0	2.5	1.8	10	89	95
508	32.27	5	104.03	0	2.5	1.8	10	86	93
509	32.28	5	141.15	0	2.5	1.52	10	92	96
511	33.01	5	77.7	0	2.5	2.66	10	86	93
512	33.02	5	107.01	0	2.5	2.86	10	82	91
518	33.08	5	16.84	0	2.5	0.49	10	82	91
525	33.15	5	58.49	0	2.5	1.34	10	95	98
527	34.01	5	69.88	0	2.5	1.88	10	89	95
528	34.02	5	243	0	2.5	3.96	10	88	94
529	34.03	5	101.81	0	2.5	1.49	10	94	97
530	34.04	5	99.56	0	2.5	2.33	10	90	95
531	34.05	5	221.44	0	2.5	2.96	10	92	96
532	34.06	5	109.68	0	2.5	2.38	10	88	94
533	34.07	5	148.96	0	2.5	2.34	10	86	93
534	34.08	5	362.89	0	2.5	3.65	10	85	93
535	34.09	5	368.77	0	2.5	3.29	10	80	90
536	35.01	5	87.09	0	2.5	1.72	10	95	98
542	35.07	5	7.14	0	2.5	0.83	10	87	94
544	35.09	5	28.06	0	2.5	0.68	10	83	92
548	35.13	5	214.45	0	2.5	3.75	10	89	95
557	36.07	5	228.9	0	2.5	2.7	10	90	95
558	36.08	5	79.28	0	2.5	1.08	10	92	96
559	36.09	5	87.86	0	2.5	1.5	10	89	95
560	36.10	5	339.61	0	2.5	2.38	10	90	95
561	36.11	5	146.57	0	2.5	2.09	10	89	95
562	37.01	5	306.23	0	2.5	2.26	10	89	95
563	37.02	5	26.85	0	2.5	0.77	10	90	95
564	37.03	5	145.14	0	2.5	2.18	10	85	93
565	37.04	5	141.48	0	2.5	2	10	86	93
566	37.05	5	365.26	0	2.5	2.99	10	80	90
567	37.06	5	105.51	0	2.5	1.46	10	88	94
568	37.07	5	235.25	0	2.5	3.74	10	88	94
569	37.08	5	284.55	0	2.5	4.37	10	89	95
570	37.09	5	299.42	0	2.5	3.11	10	86	93
571	37.10	5	125.88	0	2.5	1.63	10	94	97
572	37.11	5	188.91	0	2.5	1.91	10	95	98
573	37.12	5	192.77	0	2.5	3.67	10	95	98
577	38.04	5	142.38	0	2.5	1.99	10	93	97
578	38.05	5	47.43	0	2.5	0.82	10	91	96
579	38.06	5	173.74	0	2.5	2.11	10	90	95
580	38.07	5	293.26	0	2.5	4.55	10	86	93
581	39.01	5	12.89	0	2.5	0.61	10	86	93
582	39.02	5	26.29	0	2.5	0.72	10	86	93
584	39.04	5	38.49	0	2.5	1.76	10	88	94
589	39.09	5	35.59	0	2.5	1.43	10	87	94
593	39.13	5	108.88	0	2.5	2.66	10	90	95
594	40.01	5	265.88	0	3	3.2	10	78	89
595	40.02	5	14.17	0	3	0.46	10	90	95

Funture Model Parameters (NasHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	DWF [cms]	N	TP [hr]	IA [mm]	CN AMC II *	CN AMC III*
597	40.04	5	5.39	0	3	0.41	10	83	92
598	40.05	5	13.19	0	3	0.72	10	81	91
600	40.07	5	21.83	0	2.5	0.71	10	83	92
601	40.08	5	10.02	0	2.5	0.67	10	81	91
612	41.06	5	127.87	0	3	1.9	10	93	97
613	41.07	5	101.08	0	3	2.53	10	91	96
614	41.08	5	362.27	0	3	3.09	10	94	97
615	42.01	5	47.19	0	3	1.58	10	97	99
616	42.02	5	23.03	0	3	1.01	10	94	97
624	42.10	5	15.77	0	3	0.87	10	89	95
626	42.12	5	6.62	0	3	0.41	10	81	91
634	43.03	5	63.04	0	3	2.76	10	96	98
635	43.04	5	24.96	0	3	1	10	99	99
637	43.06	5	35.79	0	3	1.17	10	91	96
643	44.01	5	63.55	0	3	1.88	10	93	97
649	44.07	5	8.59	0	3	0.49	10	89	95
670	45.13	5	26.2	0	3	0.66	10	89	95
693	47.05	5	15.74	0	3	0.74	10	75	87
7663	04.01B	5	374.161	0	1.5	2.94	43.4	69	84
7620	06.04B	5	36.255	0	1.5	0.92	10	87	94
7614	06.17B	5	71.299	0	1.5	1.55	10	78	89
7602	07.15B	5	145.847	0	1.5	0.49	23.1	75	87
7657	08.05B	5	102.491	0	3	1.39	43.4	71	85
7658	08.06B	5	131.151	0	3	2.1	43.4	86	93
7654	10.17B	5	125.348	0	1.75	1.28	37.4	86	93
7650	10.22B	5	79.807	0	1.75	0.23	43.4	68	83
7651	10.22C	5	46.08	0	1.75	0.76	43.4	87	94
7640	13.13B	5	107.971	0	3	1.38	10	83	92
7628	15.01B	5	43.872	0	1.5	1.98	12	63	80
7623	15.04B	5	83.182	0	1.5	1.25	12	65	81
7661	15.05B	5	91.055	0	1.5	0.51	21.3	65	81
7626	15.06B	5	31.85	0	1.5	2.02	32.7	44	64
7632	15.10B	5	63.862	0	1.5	1.76	22.4	46	66
7630	16.19B	5	90.985	0	1.5	2.9	12	61	78
7633	19.05B	5	15.337	0	1.5	0.94	12	59	77
7636	20.01B	5	90.8	0	1.5	3.97	12	55	74
7638	20.04B	5	62.392	0	1.5	1.98	12	60	78
7642	22.05B	5	68.059	0	1.5	1.63	10	68	83
7643	22.15B	5	24.643	0	1.5	0.8	10	87	94
7647	29.12B	5	7.112	0	2.5	0.36	10	82	91
7646	36.04B	5	16.638	0	2.5	1.04	10	72	86

Future Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA[mm]	CN AMC II *	CN AMC III *
2	01.02	5	52.7	0.406	0.354	2.71	40	0.25	0	2	2.71	592.7	0.013	0	5	61	78
42	06.06	5	34.5	0.644	0.565	1.84	40	0.25	0	2	1.84	479.4	0.013	0	5	94	97
43	06.07	5	6.6	0.576	0.545	1.75	40	0.25	0	2	1.75	209.8	0.013	0	5	69	84
44	06.08	5	40.4	0.458	0.395	2.63	40	0.25	0	2	2.63	518.9	0.013	0	5	72	86
47	06.11	5	32.9	0.535	0.481	3.23	40	0.25	0	2	3.23	468	0.013	0	5	81	91
48	06.12	5	89.4	0.475	0.431	2.75	40	0.25	0	2	2.75	772	0.013	0	5	69	84
49	06.13	5	36.1	0.550	0.485	3.30	40	0.25	0	2	3.30	490.4	0.013	0	5	81	91
50	06.14	5	8.6	0.407	0.361	2.36	40	0.25	0	2	2.36	239.4	0.013	0	5	71	85
51	06.15	5	9.24	0.480	0.402	3.86	40	0.25	0	2	3.86	248.2	0.013	0	5	72	86
54	06.18	5	6.61	0.682	0.613	1.55	40	0.25	0	2	1.55	209.9	0.013	0	5	72	86
56	06.20	5	14.4	0.582	0.498	1.76	40	0.25	0	2	1.76	309.5	0.013	0	5	71	85
61	07.04	5	94.7	0.184	0.161	3.29	40	0.25	0	2	3.29	794.6	0.013	0	5	71	85
79	08.07	5	31.8	0.446	0.324	4.79	40	0.25	0	2	4.79	460.6	0.013	0	5	72	86
80	08.08	5	25.2	0.469	0.367	3.50	40	0.25	0	2	3.50	409.9	0.013	0	5	99	99
86	09.01	5	145	0.490	0.442	3.38	40	0.25	0	2	3.38	981.8	0.013	0	5	89	95
87	09.02	5	59.7	0.525	0.470	4.00	40	0.25	0	2	4.00	631	0.013	0	5	89	95
88	09.03	5	154	0.573	0.521	2.81	40	0.25	0	2	2.81	1014	0.013	0	5	89	95
89	09.04	5	118	0.432	0.389	3.71	40	0.25	0	2	3.71	887.7	0.013	0	5	91	96
90	09.05	5	173	0.671	0.632	2.46	40	0.25	0	2	2.46	1075	0.013	0	5	91	96
91	09.06	5	11.4	0.660	0.589	3.25	40	0.25	0	2	3.25	275.8	0.013	0	5	91	96
92	09.07	5	85.8	0.150	0.148	3.88	40	0.25	0	2	3.88	756.5	0.013	0	5	90	95
101	10.03	5	113	0.602	0.544	3.48	40	0.25	0	2	3.48	869	0.013	0	5	87	94
104	10.06	5	24.3	0.634	0.563	3.33	40	0.25	0	2	3.33	402.7	0.013	0	5	90	95
117	10.19	5	128	0.397	0.274	4.72	40	0.25	0	2	4.72	922	0.013	0	5	79	90
118	10.20	5	146	0.353	0.241	5.07	40	0.25	0	2	5.07	986.5	0.013	0	5	75	87
135	11.03	5	88.2	0.689	0.633	2.52	40	0.25	0	2	2.52	766.9	0.013	0	5	93	97
141	13.01	5	54.1	0.413	0.370	4.11	40	0.25	0	2	4.11	600.3	0.013	0	5	84	92
143	13.03	5	95.7	0.353	0.314	5.48	40	0.25	0	2	5.48	798.8	0.013	0	5	69	84
144	13.04	5	29.3	0.662	0.602	6.02	40	0.25	0	2	6.02	442.2	0.013	0	5	97	99
146	13.06	5	43.7	0.428	0.379	6.86	40	0.25	0	2	6.86	539.6	0.013	0	5	77	88
147	13.07	5	191	0.633	0.574	4.88	40	0.25	0	2	4.88	1129	0.013	0	5	91	96
148	13.08	5	14.1	0.376	0.342	8.10	40	0.25	0	2	8.10	306.4	0.013	0	5	99	100
149	13.09	5	97.3	0.525	0.473	5.37	40	0.25	0	2	5.37	805.3	0.013	0	5	93	97
150	13.10	5	61.9	0.701	0.645	3.02	40	0.25	0	2	3.02	642.5	0.013	0	5	97	99
151	13.11	5	44.7	0.642	0.572	6.20	40	0.25	0	2	6.20	545.6	0.013	0	5	75	88
152	13.12	5	137	0.201	0.183	5.30	40	0.25	0	2	5.30	956.7	0.013	0	5	87	94
154	13.14	5	47.3	0.622	0.557	3.98	40	0.25	0	2	3.98	561.4	0.013	0	5	91	96
156	13.16	5	51	0.373	0.333	4.45	40	0.25	0	2	4.45	583.2	0.013	0	5	80	90
157	13.17	5	32.1	0.629	0.556	2.70	40	0.25	0	2	2.70	462.7	0.013	0	5	99	100
158	13.18	5	23.8	0.640	0.568	2.58	40	0.25	0	2	2.58	397.9	0.013	0	5	97	99
159	13.19	5	116	0.349	0.292	3.96	40	0.25	0	2	3.96	880.7	0.013	0	5	91	96
161	13.21	5	24.3	0.296	0.267	3.40	40	0.25	0	2	3.40	402.8	0.013	0	5	77	89
162	13.22	5	7.96	0.549	0.490	2.29	40	0.25	0	2	2.29	230.4	0.013	0	5	71	85
163	13.23	5	86.7	0.333	0.299	4.15	40	0.25	0	2	4.15	760.3	0.013	0	5	94	98
164	13.24	5	32.4	0.623	0.550	2.94	40	0.25	0	2	2.94	464.9	0.013	0	5	93	97
165	13.25	5	24.4	0.407	0.390	4.12	40	0.25	0	2	4.12	403.2	0.013	0	5	93	97
167	13.27	5	21.7	0.460	0.345	4.92	40	0.25	0	2	4.92	380.7	0.013	0	5	93	97
168	13.28	5	31.5	0.427	0.334	2.60	40	0.25	0	2	2.60	458.4	0.013	0	5	69	84
172	14.01	5	35.1	0.501	0.472	3.20	40	0.25	0	2	3.20	483.4	0.013	0	5	63	80
178	14.07	5	197	0.588	0.534	3.38	40	0.25	0	2	3.38	1147	0.013	0	5	63	80
179	14.08	5	14.8	0.638	0.571	1.65	40	0.25	0	2	1.65	313.8	0.013	0	5	48	68
180	14.09	5	110	0.621	0.560	2.92	40	0.25	0	2	2.92	857.6	0.013	0	5	52	71
188	14.17	5	141	0.580	0.530	3.28	40	0.25	0	2	3.28	970.4	0.013	0	5	63	80
190	14.19	5	140	0.258	0.241	4.85	40	0.25	0	2	4.85	964.8	0.013	0	5	80	90
191	14.20	5	26.3	0.558	0.493	2.45	40	0.25	0	2	2.45	419	0.013	0	5	62	79
192	14.21	5	12.1	0.565	0.495	3.42	40	0.25	0	2	3.42	284.1	0.013	0	5	61	78
193	14.22	5	20.2	0.683	0.610	2.47	40	0.25	0	2	2.47	367	0.013	0	5	60	78
194	14.23	5	14.9	0.696	0.666	3.00	40	0.25	0	2	3.00	315	0.013	0	5	60	78
195	14.24	5	36.2	0.678	0.621	2.27	40	0.25	0	2	2.27	491.1	0.013	0	5	60	78
196	14.25	5	6.37	0.656	0.585	3.65	40	0.25	0	2	3.65	206.1	0.013	0	5	56	75
197	14.26	5	31.9	0.381	0.358	3.07	40	0.25	0	2	3.07	460.9	0.013	0	5	60	78
200	14.29	5	53.2	0.674	0.617	4.03	40	0.25	0	2	4.03	595.6	0.013	0	5	57	75
201	14.30	5	34.3	0.657	0.594	2.88	40	0.25	0	2	2.88	477.9	0.013	0	5	59	77
202	14.31	5	20	0.654	0.612	2.88	40	0.25	0	2	2.88	365.3	0.013	0	5	56	75
203	14.32	5	39	0.614	0.555	3.82	40	0.25	0	2	3.82	510.2	0.013	0	5	56	75
205	14.34	5	89.5	0.275	0.272	3.09	40	0.25	0	2	3.09	772.3	0.013	0	5	69	84
206	14.35	5	25.8	0.295	0.261	3.98	40	0.25	0	2	3.98	414.8	0.013	0	5	69	84
209	14.38	5	31.8	0.265	0.234	3.55	40	0.25	0	2	3.55	460.6	0.013	0	5	75	87
210	14.39	5	50	0.687	0.620	2.22	40	0.25	0	2	2.22	577.1	0.013	0	5	52	71
211	14.40	5	13.4	0.662	0.583	2.55	40	0.25	0	2	2.55	298.7	0.013	0	5	52	71
212	14.41	5	15.2	0.670	0.609	3.89	40	0.25	0	2	3.89	318.1	0.013	0	5	56	75
213	14.42	5	23.8	0.621	0.543	3.30	40	0.25	0	2	3.30	398.5	0.013	0	5	55	74
215	14.44	5	53.5	0.713	0.678	4.45	40	0.25	0	2	4.45	596.9	0.013	0	5	56	75

Future Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA[mm]	CN AMC II *	CN AMC III *
216	14.45	5	27.3	0.646	0.588	2.82	40	0.25	0	2	2.82	426.6	0.013	0	5	57	75
217	14.46	5	15.8	0.683	0.612	2.29	40	0.25	0	2	2.29	324	0.013	0	5	48	68
218	14.47	5	18	0.780	0.729	3.18	40	0.25	0	2	3.18	346.3	0.013	0	5	54	73
219	14.48	5	15.6	0.693	0.624	3.12	40	0.25	0	2	3.12	322.4	0.013	0	5	56	75
220	14.49	5	6.32	0.628	0.566	3.62	40	0.25	0	2	3.62	205.3	0.013	0	5	48	68
221	14.50	5	59.4	0.448	0.409	3.35	40	0.25	0	2	3.35	629.4	0.013	0	5	55	74
222	14.51	5	87.1	0.492	0.457	4.74	40	0.25	0	2	4.74	762.1	0.013	0	5	71	85
223	14.52	5	24.9	0.621	0.555	2.36	40	0.25	0	2	2.36	407.6	0.013	0	5	49	69
224	14.53	5	54	0.997	0.997	0.04	40	0.25	0	2	0.04	599.9	0.013	0	5	48	68
225	14.54	5	27	0.364	0.363	3.06	40	0.25	0	2	3.06	424.3	0.013	0	5	50	70
229	15.03	5	42.4	0.531	0.493	4.27	40	0.25	0	2	4.27	531.5	0.013	0	5	57	75
233	15.07	5	97.2	0.440	0.373	4.00	40	0.25	0	2	4.00	805.2	0.013	0	5	45	65
234	15.08	5	119	0.540	0.487	3.69	40	0.25	0	2	3.69	889.5	0.013	0	5	43	63
235	15.09	5	153	0.252	0.226	3.14	40	0.25	0	2	3.14	1010	0.013	0	5	48	68
238	15.12	5	111	0.337	0.250	4.35	40	0.25	0	2	4.35	858.3	0.013	0	5	64	80
241	15.15	5	61.5	0.470	0.376	3.64	40	0.25	0	2	3.64	640.5	0.013	0	5	59	77
242	15.16	5	91.3	0.287	0.239	3.65	40	0.25	0	2	3.65	780.1	0.013	0	5	63	80
243	15.17	5	137	0.417	0.356	3.76	40	0.25	0	2	3.76	956.7	0.013	0	5	64	80
244	15.18	5	38.3	0.495	0.435	3.83	40	0.25	0	2	3.83	505.5	0.013	0	5	56	75
245	15.19	5	74.3	0.631	0.589	3.62	40	0.25	0	2	3.62	703.9	0.013	0	5	61	78
246	15.20	5	49.2	0.595	0.547	3.37	40	0.25	0	2	3.37	572.5	0.013	0	5	64	80
250	15.24	5	31.6	0.294	0.254	3.62	40	0.25	0	2	3.62	458.8	0.013	0	5	56	75
252	15.26	5	152	0.458	0.390	2.86	40	0.25	0	2	2.86	1006	0.013	0	5	64	80
253	15.27	5	190	0.463	0.443	3.09	40	0.25	0	2	3.09	1125	0.013	0	5	60	78
276	16.18	5	77	0.226	0.226	3.95	40	0.25	0	2	3.95	716.5	0.013	0	5	62	79
279	16.21	5	19.2	0.206	0.206	4.57	40	0.25	0	2	4.57	357.8	0.013	0	5	61	78
280	16.22	5	98.5	0.374	0.287	4.70	40	0.25	0	2	4.70	810.4	0.013	0	5	54	73
281	16.23	5	40	0.201	0.201	3.95	40	0.25	0	2	3.95	516.3	0.013	0	5	63	79
282	16.24	5	43	0.447	0.400	4.72	40	0.25	0	2	4.72	535.4	0.013	0	5	49	69
284	17.02	5	46	0.264	0.224	4.71	40	0.25	0	2	4.71	553.6	0.013	0	5	64	80
285	17.03	5	446	0.584	0.517	3.10	40	0.25	0	2	3.10	1725	0.013	0	5	64	80
286	17.04	5	267	0.446	0.391	2.95	40	0.25	0	2	2.95	1334	0.013	0	5	64	80
287	17.05	5	224	0.248	0.218	4.60	40	0.25	0	2	4.60	1222	0.013	0	5	64	80
297	18.02	5	70.6	0.436	0.402	2.64	40	0.25	0	2	2.64	686	0.013	0	5	68	83
300	18.05	5	27.1	0.589	0.516	3.67	40	0.25	0	2	3.67	425.1	0.013	0	5	65	81
302	18.07	5	154	0.333	0.284	4.73	40	0.25	0	2	4.73	1012	0.013	0	5	63	80
310	19.03	5	126	0.393	0.348	3.35	40	0.25	0	2	3.35	914.8	0.013	0	5	64	80
311	19.04	5	69.7	0.444	0.411	3.68	40	0.25	0	2	3.68	681.4	0.013	0	5	64	80
314	19.07	5	134	0.447	0.402	3.21	40	0.25	0	2	3.21	944.9	0.013	0	5	65	81
317	19.10	5	115	0.450	0.397	3.29	40	0.25	0	2	3.29	876.2	0.013	0	5	64	80
318	19.11	5	46	0.327	0.311	4.54	40	0.25	0	2	4.54	553.6	0.013	0	5	64	80
319	19.12	5	19.5	0.482	0.437	1.83	40	0.25	0	2	1.83	360.7	0.013	0	5	65	81
320	19.13	5	51.3	0.331	0.293	4.46	40	0.25	0	2	4.46	584.9	0.013	0	5	62	79
321	19.14	5	132	0.938	0.936	3.81	40	0.25	0	2	3.81	938.4	0.013	0	5	62	79
322	19.15	5	126	0.487	0.483	3.04	40	0.25	0	2	3.04	915.1	0.013	0	5	64	80
324	19.17	5	98.6	0.514	0.514	4.20	40	0.25	0	2	4.20	810.7	0.013	0	5	64	80
325	19.18	5	246	0.732	0.732	3.04	40	0.25	0	2	3.04	1281	0.013	0	5	62	79
326	19.19	5	72.4	0.827	0.827	3.61	40	0.25	0	2	3.61	694.9	0.013	0	5	62	79
327	19.20	5	258	0.563	0.559	3.33	40	0.25	0	2	3.33	1311	0.013	0	5	62	79
335	21.01	5	158	0.508	0.457	4.04	40	0.25	0	2	4.04	1027	0.013	0	5	50	70
336	21.02	5	151	0.510	0.459	2.70	40	0.25	0	2	2.70	1002	0.013	0	5	69	84
337	21.03	5	170	0.254	0.198	3.88	40	0.25	0	2	3.88	1065	0.013	0	5	62	79
338	21.04	5	222	0.514	0.458	2.57	40	0.25	0	2	2.57	1218	0.013	0	5	68	83
340	21.06	5	12	0.401	0.361	2.28	40	0.25	0	2	2.28	282.8	0.013	0	5	66	82
341	21.07	5	22.1	0.488	0.432	2.65	40	0.25	0	2	2.65	384.2	0.013	0	5	65	81
344	21.10	5	60.7	0.530	0.479	2.81	40	0.25	0	2	2.81	636.1	0.013	0	5	65	81
345	21.11	5	101	0.430	0.388	3.07	40	0.25	0	2	3.07	819.5	0.013	0	5	66	82
347	21.13	5	26.8	0.232	0.209	4.60	40	0.25	0	2	4.60	423	0.013	0	5	65	81
348	21.14	5	57.7	0.546	0.490	2.95	40	0.25	0	2	2.95	620	0.013	0	5	62	79
349	21.15	5	24.9	0.432	0.354	4.73	40	0.25	0	2	4.73	407.4	0.013	0	5	56	75
350	21.16	5	101	0.592	0.513	2.78	40	0.25	0	2	2.78	820.8	0.013	0	5	65	81
7278	22.01	5	88.2	0.374	0.374	2.40	40	0.25	0	2	2.40	766.7	0.013	0	5	82	91
7351	22.02	5	56.4	0.443	0.438	3.05	40	0.25	0	2	3.05	613	0.013	0	5	80	90
7356	22.03	5	38	0.804	0.800	2.35	40	0.25	0	2	2.35	503.3	0.013	0	5	86	93
7365	22.04	5	72.5	0.558	0.474	1.99	40	0.25	0	2	1.99	695.2	0.013	0	5	86	93
7364	22.06	5	126	0.640	0.590	2.14	40	0.25	0	2	2.14	915	0.013	0	5	72	86
7283	22.07	5	78.8	0.514	0.514	2.59	40	0.25	0	2	2.59	724.7	0.013	0	5	82	91
7296	22.11	5	32.3	0.791	0.791	2.75	40	0.25	0	2	2.75	463.8	0.013	0	5	86	93
7300	22.12	5	54	0.873	0.873	1.82	40	0.25	0	2	1.82	599.9	0.013	0	5	86	93
7303	22.13	5	87.8	0.626	0.625	1.67	40	0.25	0	2	1.67	764.9	0.013	0	5	86	93
7307	22.14	5	46.5	0.310	0.310	2.56	40	0.25	0	2	2.56	556.5	0.013	0	5	81	91
7311	22.16	5	70.7	0.299	0.271	1.80	40	0.25	0	2	1.80	686.7	0.013	0	5	62	79
7332	22.20	5	152	0.258	0.254	2.49	40	0.25	0	2	2.49	1008	0.013	0	5	73	86

Future Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA[mm]	CN AMC II *	CN AMC III *
7321	22.22	5	135	0.946	0.946	1.71	40	0.25	0	2	1.71	948.2	0.013	0	5	86	93
7324	22.23	5	64.3	0.871	0.856	2.62	40	0.25	0	2	2.62	654.6	0.013	0	5	86	93
7327	22.24	5	48.7	0.942	0.942	1.65	40	0.25	0	2	1.65	569.6	0.013	0	5	86	93
7328	22.25	5	11.6	0.925	0.925	2.16	40	0.25	0	2	2.16	278.1	0.013	0	5	86	93
7338	22.27	5	21.1	0.915	0.908	2.14	40	0.25	0	2	2.14	374.6	0.013	0	5	86	93
7342	22.28	5	25.1	0.942	0.942	1.35	40	0.25	0	2	1.35	408.7	0.013	0	5	86	93
7329	22.30	5	21	0.937	0.937	2.40	40	0.25	0	2	2.40	374.5	0.013	0	5	86	93
7344	22.31	5	94.3	0.573	0.528	2.31	40	0.25	0	2	2.31	793	0.013	0	5	86	93
7378	23.01	5	23.2	0.522	0.478	3.16	40	0.25	0	2	3.16	393.5	0.013	0	5	83	92
7375	23.02	5	30.1	0.423	0.417	3.20	40	0.25	0	2	3.20	447.6	0.013	0	5	80	90
7377	23.03	5	47.1	0.611	0.542	2.74	40	0.25	0	2	2.74	560.3	0.013	0	5	86	93
7374	23.04	5	38.6	0.524	0.474	3.54	40	0.25	0	2	3.54	507	0.013	0	5	83	92
7373	23.05	5	25.6	0.653	0.611	2.77	40	0.25	0	2	2.77	413.4	0.013	0	5	85	93
7370	23.08	5	46	0.607	0.549	2.68	40	0.25	0	2	2.68	553.7	0.013	0	5	86	93
7368	23.09	5	56.2	0.682	0.682	1.49	40	0.25	0	2	1.49	612.1	0.013	0	5	86	93
7366	23.10	5	135	0.609	0.608	2.35	40	0.25	0	2	2.35	949.7	0.013	0	5	80	90
7399	24.01	5	77.1	0.845	0.835	2.73	40	0.25	0	2	2.73	716.9	0.013	0	5	85	93
7422	24.02	5	105	0.767	0.767	2.16	40	0.25	0	2	2.16	835.1	0.013	0	5	86	93
7435	24.03	5	101	0.664	0.664	2.43	40	0.25	0	2	2.43	819.2	0.013	0	5	86	93
7427	24.04	5	68.6	0.419	0.418	2.34	40	0.25	0	2	2.34	676.1	0.013	0	5	86	93
7433	24.05	5	114	0.588	0.588	2.21	40	0.25	0	2	2.21	873.7	0.013	0	5	86	93
7404	24.06	5	188	0.665	0.637	1.81	40	0.25	0	2	1.81	1119	0.013	0	5	85	93
7431	24.07	5	169	0.901	0.901	1.71	40	0.25	0	2	1.71	1060	0.013	0	5	86	93
7409	24.08	5	144	0.694	0.688	1.64	40	0.25	0	2	1.64	979.3	0.013	0	5	83	92
7414	24.09	5	44.9	0.723	0.722	1.73	40	0.25	0	2	1.73	546.9	0.013	0	5	85	93
7417	24.10	5	90	0.801	0.800	1.80	40	0.25	0	2	1.80	774.7	0.013	0	5	85	93
7419	24.11	5	51.2	0.948	0.948	1.31	40	0.25	0	2	1.31	584.4	0.013	0	5	86	93
7451	25.01	5	19.6	0.606	0.553	2.94	40	0.25	0	2	2.94	361.1	0.013	0	5	82	91
7452	25.02	5	26.9	0.593	0.531	2.55	40	0.25	0	2	2.55	423.3	0.013	0	5	86	93
7454	25.03	5	28.7	0.579	0.520	2.59	40	0.25	0	2	2.59	437.1	0.013	0	5	86	93
7450	25.04	5	25.4	0.593	0.560	2.74	40	0.25	0	2	2.74	411.3	0.013	0	5	82	91
7447	25.06	5	91.6	0.669	0.609	2.41	40	0.25	0	2	2.41	781.3	0.013	0	5	86	93
7449	25.07	5	18.5	0.905	0.905	1.93	40	0.25	0	2	1.93	351.2	0.013	0	5	83	92
7445	25.08	5	92.4	0.924	0.924	2.20	40	0.25	0	2	2.20	785	0.013	0	5	85	93
7441	25.09	5	27.8	0.359	0.359	2.69	40	0.25	0	2	2.69	430.2	0.013	0	5	85	93
7443	25.10	5	114	0.726	0.726	1.54	40	0.25	0	2	1.54	871.4	0.013	0	5	86	93
7440	25.12	5	70.6	0.687	0.686	2.22	40	0.25	0	2	2.22	686.2	0.013	0	5	86	93
7439	25.13	5	118	0.779	0.774	2.17	40	0.25	0	2	2.17	886.8	0.013	0	5	86	93
7437	25.14	5	31.2	0.656	0.656	2.83	40	0.25	0	2	2.83	456.4	0.013	0	5	83	92
7436	25.15	5	120	0.717	0.716	2.34	40	0.25	0	2	2.34	894.3	0.013	0	5	85	93
7460	26.03	5	17	0.473	0.431	2.76	40	0.25	0	2	2.76	336.4	0.013	0	5	99	100
7458	26.04	5	41.7	0.875	0.873	2.97	40	0.25	0	2	2.97	527.3	0.013	0	5	99	99
7459	26.06	5	18	0.698	0.632	3.86	40	0.25	0	2	3.86	346.5	0.013	0	5	99	100
7455	26.07	5	10.4	0.322	0.305	4.17	40	0.25	0	2	4.17	263.6	0.013	0	5	80	90
7456	26.08	5	10.5	0.718	0.661	2.40	40	0.25	0	2	2.40	264.1	0.013	0	5	86	93
7475	26.10	5	88.3	0.256	0.247	4.40	40	0.25	0	2	4.40	767.2	0.013	0	5	96	98
7478	26.11	5	38	0.507	0.504	3.32	40	0.25	0	2	3.32	503.1	0.013	0	5	97	99
7480	26.12	5	4.85	0.888	0.888	3.59	40	0.25	0	2	3.59	179.8	0.013	0	5	99	99
7481	26.13	5	28.2	0.918	0.918	2.96	40	0.25	0	2	2.96	433.2	0.013	0	5	97	99
7473	26.14	5	92.4	0.484	0.473	3.63	40	0.25	0	2	3.63	785	0.013	0	5	99	99
7472	26.15	5	90.3	0.926	0.926	2.33	40	0.25	0	2	2.33	776.1	0.013	0	5	99	99
7471	26.16	5	81.8	0.835	0.835	3.23	40	0.25	0	2	3.23	738.3	0.013	0	5	99	99
434	27.01	5	80.4	0.427	0.386	4.68	40	0.25	0	2	4.68	732	0.013	0	5	75	88
435	27.02	5	862	0.815	0.803	3.98	40	0.25	0	2	3.98	2397	0.013	0	5	90	95
436	27.03	5	312	0.524	0.485	4.61	40	0.25	0	2	4.61	1441	0.013	0	5	75	88
437	27.04	5	490	0.470	0.434	4.61	40	0.25	0	2	4.61	1807	0.013	0	5	87	94
439	27.06	5	38.2	0.638	0.638	4.08	40	0.25	0	2	4.08	504.7	0.013	0	5	96	98
440	27.07	5	320	0.708	0.708	3.92	40	0.25	0	2	3.92	1460	0.013	0	5	87	94
441	27.08	5	251	0.818	0.818	3.50	40	0.25	0	2	3.50	1294	0.013	0	5	97	99
442	27.09	5	146	0.295	0.284	5.16	40	0.25	0	2	5.16	985.3	0.013	0	5	91	96
443	27.10	5	212	0.601	0.567	4.50	40	0.25	0	2	4.50	1189	0.013	0	5	87	94
444	27.11	5	15.7	0.584	0.517	3.87	40	0.25	0	2	3.87	323.6	0.013	0	5	99	100
445	27.12	5	93.7	0.568	0.528	5.03	40	0.25	0	2	5.03	790.4	0.013	0	5	83	92
446	27.13	5	205	0.656	0.594	3.95	40	0.25	0	2	3.95	1170	0.013	0	5	96	98
447	27.14	5	69.1	0.781	0.745	3.33	40	0.25	0	2	3.33	678.5	0.013	0	5	97	99
448	27.15	5	43.8	0.624	0.569	2.93	40	0.25	0	2	2.93	540.1	0.013	0	5	96	98
453	29.02	5	17.9	0.599	0.554	2.78	40	0.25	0	2	2.78	345.2	0.013	0	5	85	93
455	29.04	5	46.1	0.698	0.638	2.32	40	0.25	0	2	2.32	554.4	0.013	0	5	87	94
456	29.05	5	93.7	0.620	0.569	2.84	40	0.25	0	2	2.84	790.3	0.013	0	5	87	94
458	29.07	5	16.9	0.683	0.635	2.11	40	0.25	0	2	2.11	336.1	0.013	0	5	87	94
459	29.08	5	44.5	0.575	0.526	2.57	40	0.25	0	2	2.57	544.6	0.013	0	5	87	94
461	29.10	5	25.3	0.340	0.311	3.74	40	0.25	0	2	3.74	410.5	0.013	0	5	85	93
462	29.11	5	19.1	0.698	0.690	3.31	40	0.25	0	2	3.31	357.2	0.013	0	5	86	93

Future Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA[mm]	CN AMC II *	CN AMC III *
465	29.14	5	5.64	0.816	0.775	2.81	40	0.25	0	2	2.81	193.9	0.013	0	5	89	95
483	32.02	5	24.3	0.652	0.594	2.71	40	0.25	0	2	2.71	402.3	0.013	0	5	86	93
484	32.03	5	26.4	0.667	0.597	2.71	40	0.25	0	2	2.71	419.4	0.013	0	5	83	92
486	32.05	5	34	0.645	0.582	2.58	40	0.25	0	2	2.58	475.8	0.013	0	5	87	94
488	32.07	5	5.77	0.685	0.626	3.79	40	0.25	0	2	3.79	196.1	0.013	0	5	95	98
489	32.08	5	23.3	0.639	0.581	2.15	40	0.25	0	2	2.15	394.1	0.013	0	5	95	98
490	32.09	5	28.1	0.664	0.603	2.05	40	0.25	0	2	2.05	432.6	0.013	0	5	95	98
492	32.11	5	34.9	0.654	0.594	2.92	40	0.25	0	2	2.92	482.3	0.013	0	5	81	91
493	32.12	5	25.2	0.703	0.640	2.19	40	0.25	0	2	2.19	410.1	0.013	0	5	87	94
495	32.14	5	17.3	0.599	0.530	2.84	40	0.25	0	2	2.84	339.3	0.013	0	5	83	92
497	32.16	5	53.7	0.669	0.615	1.89	40	0.25	0	2	1.89	598.2	0.013	0	5	87	94
498	32.17	5	15.2	0.700	0.634	2.33	40	0.25	0	2	2.33	318.2	0.013	0	5	89	95
499	32.18	5	52.1	0.650	0.574	2.13	40	0.25	0	2	2.13	589.2	0.013	0	5	89	95
500	32.19	5	42.7	0.652	0.579	1.71	40	0.25	0	2	1.71	533.8	0.013	0	5	89	95
501	32.20	5	25.2	0.607	0.533	3.27	40	0.25	0	2	3.27	409.6	0.013	0	5	87	94
503	32.22	5	54.9	0.428	0.387	2.78	40	0.25	0	2	2.78	604.7	0.013	0	5	87	94
505	32.24	5	48.8	0.451	0.394	2.83	40	0.25	0	2	2.83	570.5	0.013	0	5	87	94
506	32.25	5	18	0.299	0.274	3.39	40	0.25	0	2	3.39	346.7	0.013	0	5	85	93
510	32.29	5	36	0.578	0.578	2.26	40	0.25	0	2	2.26	490	0.013	0	5	90	95
513	33.03	5	69.2	0.590	0.501	2.16	40	0.25	0	2	2.16	679.4	0.013	0	5	95	98
514	33.04	5	24	0.6	0.541	2.21	40	0.25	0	2	2.2	400	0.013	0	5	87	94
515	33.05	5	55.8	0.766	0.729	1.97	40	0.25	0	2	1.97	610.1	0.013	0	5	90	96
516	33.06	5	59.8	0.701	0.652	2.86	40	0.25	0	2	2.86	631.3	0.013	0	5	85	93
517	33.07	5	15.4	0.602	0.545	2.63	40	0.25	0	2	2.63	320.8	0.013	0	5	93	97
519	33.09	5	26.9	0.62	0.57	1.75	40	0.25	0	2	1.8	423.7	0.013	0	5	87	94
520	33.10	5	23.2	0.478	0.450	3.10	40	0.25	0	2	3.10	392.9	0.013	0	5	86	93
521	33.11	5	126	0.554	0.504	3.37	40	0.25	0	2	3.37	917	0.013	0	5	82	91
522	33.12	5	142	0.643	0.584	2.85	40	0.25	0	2	2.85	973.8	0.013	0	5	87	94
523	33.13	5	177	0.601	0.548	2.64	40	0.25	0	2	2.64	1087	0.013	0	5	87	94
524	33.14	5	99.6	0.530	0.469	2.22	40	0.25	0	2	2.22	814.7	0.013	0	5	90	95
526	33.16	5	84.7	0.549	0.549	2.35	40	0.25	0	2	2.35	751.5	0.013	0	5	95	98
537	35.02	5	44.7	0.497	0.352	2.96	40	0.25	0	2	2.96	545.8	0.013	0	5	93	97
538	35.03	5	105	0.36	0.26	2.75	40	0.25	0	2	2.8	837.1	0.013	0	5	93	97
539	35.04	5	68.8	0.326	0.245	3.35	40	0.25	0	2	3.35	677.2	0.013	0	5	89	95
540	35.05	5	151	0.316	0.231	2.75	40	0.25	0	2	2.75	1005	0.013	0	5	90	95
541	35.06	5	44.5	0.666	0.605	2.08	40	0.25	0	2	2.08	544.6	0.013	0	5	90	95
543	35.08	5	33.9	0.635	0.571	2.11	40	0.25	0	2	2.11	475.2	0.013	0	5	90	95
545	35.10	5	30.5	0.472	0.342	2.63	40	0.25	0	2	2.63	451.2	0.013	0	5	95	98
546	35.11	5	47.5	0.920	0.920	2.14	40	0.25	0	2	2.14	562.9	0.013	0	5	89	95
547	35.12	5	74.3	0.658	0.657	1.98	40	0.25	0	2	1.98	704	0.013	0	5	92	96
549	35.14	5	32	0.539	0.443	3.00	40	0.25	0	2	3.00	462	0.013	0	5	86	93
550	35.15	5	69.9	0.709	0.664	2.42	40	0.25	0	2	2.42	682.5	0.013	0	5	90	95
551	36.01	5	81.5	0.327	0.231	2.94	40	0.25	0	2	2.94	737.2	0.013	0	5	92	96
552	36.02	5	14	0.242	0.168	3.84	40	0.25	0	2	3.84	305.1	0.013	0	5	85	93
553	36.03	5	13.2	0.278	0.221	3.19	40	0.25	0	2	3.19	297	0.013	0	5	87	94
555	36.05	5	80.5	0.476	0.421	2.73	40	0.25	0	2	2.73	732.7	0.013	0	5	87	94
556	36.06	5	9.05	0.494	0.345	2.32	40	0.25	0	2	2.32	245.6	0.013	0	5	92	96
574	38.01	5	98.5	0.300	0.224	2.64	40	0.25	0	2	2.64	810.4	0.013	0	5	90	95
575	38.02	5	136	0.546	0.467	2.05	40	0.25	0	2	2.05	951.7	0.013	0	5	92	96
576	38.03	5	69.5	0.388	0.311	3.00	40	0.25	0	2	3.00	680.8	0.013	0	5	87	94
583	39.03	5	169	0.648	0.581	1.74	40	0.25	0	2	1.74	1062	0.013	0	5	92	96
585	39.05	5	9.62	0.683	0.627	2.49	40	0.25	0	2	2.49	253.3	0.013	0	5	93	97
586	39.06	5	15.8	0.600	0.536	2.29	40	0.25	0	2	2.29	325	0.013	0	5	89	95
587	39.07	5	23.6	0.685	0.622	1.72	40	0.25	0	2	1.72	396.2	0.013	0	5	93	97
588	39.08	5	8.81	0.617	0.555	1.88	40	0.25	0	2	1.88	242.4	0.013	0	5	89	95
590	39.10	5	25.2	0.680	0.614	1.76	40	0.25	0	2	1.76	409.8	0.013	0	5	87	94
591	39.11	5	21.4	0.520	0.425	1.97	40	0.25	0	2	1.97	377.7	0.013	0	5	95	98
592	39.12	5	35.1	0.588	0.504	1.95	40	0.25	0	2	1.95	483.6	0.013	0	5	93	97
596	40.03	5	84.7	0.693	0.691	3.27	40	0.25	0	2	3.27	751.2	0.013	0	5	93	97
599	40.06	5	23.8	0.652	0.626	3.30	40	0.25	0	2	3.30	397.9	0.013	0	5	91	96
602	40.09	5	20.9	0.453	0.440	4.46	40	0.25	0	2	4.46	373.1	0.013	0	5	99	99
603	40.10	5	151	0.935	0.935	3.09	40	0.25	0	2	3.09	1004	0.013	0	5	96	98
604	40.11	5	50.7	0.877	0.877	3.80	40	0.25	0	2	3.80	581.3	0.013	0	5	97	99
605	40.12	5	55.4	0.857	0.857	3.50	40	0.25	0	2	3.50	607.5	0.013	0	5	96	98
606	40.13	5	48.2	0.554	0.511	5.51	40	0.25	0	2	5.51	567	0.013	0	5	71	85
607	41.01	5	163	0.510	0.452	3.06	40	0.25	0	2	3.06	1043	0.013	0	5	94	97
608	41.02	5	47.2	0.547	0.463	2.70	40	0.25	0	2	2.70	560.9	0.013	0	5	86	93
609	41.03	5	73.7	0.406	0.350	3.60	40	0.25	0	2	3.60	701.1	0.013	0	5	91	96
610	41.04	5	45.5	0.382	0.291	2.48	40	0.25	0	2	2.48	550.9	0.013	0	5	93	97
611	41.05	5	62.9	0.418	0.384	3.30	40	0.25	0	2	3.30	647.7	0.013	0	5	93	97
617	42.03	5	24.7	0.376	0.323	4.79	40	0.25	0	2	4.79	405.8	0.013	0	5	99	99
618	42.04	5	19.9	0.930	0.930	3.27	40	0.25	0	2	3.27	364.3	0.013	0	5	99	99
619	42.05	5	13.7	0.599	0.530	4.28	40	0.25	0	2	4.28	301.9	0.013	0	5	96	98

Future Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA[mm]	CN AMC II *	CN AMC III *
620	42.06	5	22.7	0.550	0.506	2.66	40	0.25	0	2	2.66	389	0.013	0	5	97	99
621	42.07	5	5.64	0.866	0.842	2.84	40	0.25	0	2	2.84	193.9	0.013	0	5	97	99
622	42.08	5	19	0.667	0.649	2.75	40	0.25	0	2	2.75	356.2	0.013	0	5	99	99
623	42.09	5	38.8	0.673	0.627	3.27	40	0.25	0	2	3.27	508.6	0.013	0	5	99	99
625	42.11	5	65	0.675	0.613	3.72	40	0.25	0	2	3.72	658.3	0.013	0	5	96	98
627	42.13	5	7.39	0.718	0.668	5.45	40	0.25	0	2	5.45	222	0.013	0	5	94	97
628	42.14	5	61.6	0.652	0.600	3.50	40	0.25	0	2	3.50	641	0.013	0	5	94	97
629	42.15	5	38.4	0.447	0.352	3.36	40	0.25	0	2	3.36	506.1	0.013	0	5	94	97
630	42.16	5	32	0.664	0.607	2.55	40	0.25	0	2	2.55	462	0.013	0	5	99	99
631	42.17	5	25.6	0.671	0.600	1.92	40	0.25	0	2	1.92	412.7	0.013	0	5	99	99
632	43.01	5	227	0.538	0.507	3.36	40	0.25	0	2	3.36	1229	0.013	0	5	96	98
633	43.02	5	129	0.647	0.639	2.97	40	0.25	0	2	2.97	927.8	0.013	0	5	96	98
636	43.05	5	39.7	0.642	0.642	2.82	40	0.25	0	2	2.82	514.7	0.013	0	5	97	99
638	43.07	5	35.7	0.818	0.818	3.18	40	0.25	0	2	3.18	487.9	0.013	0	5	97	99
639	43.08	5	34	0.949	0.949	2.37	40	0.25	0	2	2.37	476.3	0.013	0	5	99	99
640	43.09	5	64.8	0.874	0.874	3.74	40	0.25	0	2	3.74	657.2	0.013	0	5	91	96
641	43.10	5	203	0.752	0.752	3.08	40	0.25	0	2	3.08	1163	0.013	0	5	93	97
642	43.11	5	145	0.924	0.921	2.97	40	0.25	0	2	2.97	984.1	0.013	0	5	97	99
644	44.02	5	42.5	0.393	0.383	4.08	40	0.25	0	2	4.08	532.5	0.013	0	5	97	99
645	44.03	5	36.2	0.429	0.429	4.50	40	0.25	0	2	4.50	491.5	0.013	0	5	94	97
646	44.04	5	33.6	0.929	0.927	4.22	40	0.25	0	2	4.22	473.2	0.013	0	5	99	99
647	44.05	5	7.7	0.947	0.947	2.40	40	0.25	0	2	2.40	226.6	0.013	0	5	95	98
648	44.06	5	45.2	0.783	0.751	3.36	40	0.25	0	2	3.36	548.7	0.013	0	5	99	99
650	44.08	5	67.8	0.742	0.707	3.93	40	0.25	0	2	3.93	672.1	0.013	0	5	94	97
651	44.09	5	21.7	0.414	0.388	5.34	40	0.25	0	2	5.34	379.9	0.013	0	5	91	96
652	44.10	5	16.5	0.669	0.605	3.71	40	0.25	0	2	3.71	331.7	0.013	0	5	93	97
653	44.11	5	44.6	0.562	0.512	2.49	40	0.25	0	2	2.49	545.4	0.013	0	5	99	99
654	44.12	5	9.65	0.620	0.563	2.04	40	0.25	0	2	2.04	253.6	0.013	0	5	99	99
655	44.13	5	4.4	0.707	0.643	4.05	40	0.25	0	2	4.05	171.3	0.013	0	5	97	99
656	44.14	5	132	0.513	0.468	3.54	40	0.25	0	2	3.54	937.5	0.013	0	5	96	98
657	44.15	5	43.3	0.641	0.586	2.61	40	0.25	0	2	2.61	537	0.013	0	5	97	99
658	45.01	5	249	0.515	0.471	4.64	40	0.25	0	2	4.64	1287	0.013	0	5	93	97
659	45.02	5	231	0.449	0.416	4.26	40	0.25	0	2	4.26	1241	0.013	0	5	94	98
660	45.03	5	373	0.416	0.388	3.47	40	0.25	0	2	3.47	1576	0.013	0	5	96	98
661	45.04	5	195	0.570	0.516	3.09	40	0.25	0	2	3.09	1139	0.013	0	5	96	98
662	45.05	5	164	0.475	0.453	4.05	40	0.25	0	2	4.05	1044	0.013	0	5	94	98
663	45.06	5	195	0.511	0.509	3.68	40	0.25	0	2	3.68	1141	0.013	0	5	91	96
664	45.07	5	359	0.764	0.743	3.00	40	0.25	0	2	3.00	1546	0.013	0	5	96	98
665	45.08	5	285	0.708	0.671	3.29	40	0.25	0	2	3.29	1378	0.013	0	5	94	98
666	45.09	5	172	0.692	0.684	3.23	40	0.25	0	2	3.23	1072	0.013	0	5	97	99
667	45.10	5	212	0.713	0.703	3.71	40	0.25	0	2	3.71	1188	0.013	0	5	99	99
668	45.11	5	24.2	0.356	0.356	4.67	40	0.25	0	2	4.67	401.3	0.013	0	5	97	99
669	45.12	5	24.8	0.430	0.430	5.06	40	0.25	0	2	5.06	406.6	0.013	0	5	99	99
671	45.14	5	12.2	0.945	0.945	3.27	40	0.25	0	2	3.27	285	0.013	0	5	99	99
672	46.01	5	52.7	0.541	0.541	3.15	40	0.25	0	2	3.15	592.6	0.013	0	5	80	90
673	46.02	5	149	0.490	0.481	3.01	40	0.25	0	2	3.01	997.6	0.013	0	5	80	90
674	46.03	5	32.8	0.917	0.917	1.29	40	0.25	0	2	1.29	467.8	0.013	0	5	82	91
675	46.04	5	61.3	0.432	0.432	3.96	40	0.25	0	2	3.96	639.4	0.013	0	5	81	91
676	46.05	5	61	0.656	0.638	2.13	40	0.25	0	2	2.13	637.5	0.013	0	5	81	91
677	46.06	5	12.5	0.634	0.634	1.57	40	0.25	0	2	1.57	288.8	0.013	0	5	80	90
678	46.07	5	93.6	0.825	0.814	2.34	40	0.25	0	2	2.34	790.1	0.013	0	5	80	90
679	46.08	5	21.1	0.937	0.937	1.98	40	0.25	0	2	1.98	374.7	0.013	0	5	82	91
680	46.09	5	47.7	0.778	0.756	2.07	40	0.25	0	2	2.07	564	0.013	0	5	83	92
681	46.10	5	343	0.877	0.875	1.63	40	0.25	0	2	1.63	1513	0.013	0	5	81	91
682	46.11	5	120	0.923	0.923	1.83	40	0.25	0	2	1.83	895.7	0.013	0	5	85	93
683	46.12	5	36.9	0.649	0.649	3.42	40	0.25	0	2	3.42	496.1	0.013	0	5	81	91
684	46.13	5	71.9	0.930	0.930	2.22	40	0.25	0	2	2.22	692.2	0.013	0	5	81	91
685	46.14	5	42.2	0.720	0.720	2.04	40	0.25	0	2	2.04	530.2	0.013	0	5	82	91
686	46.15	5	88.1	0.760	0.760	2.28	40	0.25	0	2	2.28	766.6	0.013	0	5	81	91
687	46.16	5	19.4	0.725	0.665	2.42	40	0.25	0	2	2.42	359.6	0.013	0	5	85	93
688	46.17	5	182	0.584	0.541	2.50	40	0.25	0	2	2.50	1100	0.013	0	5	82	91
689	47.01	5	596	0.495	0.458	3.37	40	0.25	0	2	3.37	1993	0.013	0	5	81	91
690	47.02	5	232	0.611	0.573	2.53	40	0.25	0	2	2.53	1242	0.013	0	5	81	91
691	47.03	5	321	0.514	0.483	3.28	40	0.25	0	2	3.28	1463	0.013	0	5	81	91
692	47.04	5	25.7	0.803	0.803	1.47	40	0.25	0	2	1.47	414.3	0.013	0	5	80	90
694	47.06	5	75	0.675	0.675	2.78	40	0.25	0	2	2.78	706.9	0.013	0	5	81	91
695	48.01	5	103	0.304	0.276	2.89	40	0.25	0	2	2.89	827.2	0.013	0	5	62	79
696	48.02	5	177	0.545	0.514	2.79	40	0.25	0	2	2.79	1086	0.013	0	5	69	84
697	48.03	5	576	0.614	0.570	3.56	40	0.25	0	2	3.56	1960	0.013	0	5	69	84
698	48.04	5	606	0.666	0.641	2.85	40	0.25	0	2	2.85	2010	0.013	0	5	68	83
699	48.05	5	836	0.636	0.605	2.87	40	0.25	0	2	2.87	2360	0.013	0	5	71	85
700	48.06	5	596	0.642	0.605	2.63	40	0.25	0	2	2.63	1993	0.013	0	5	73	86
701	48.07	5	583	0.594	0.557	3.39	40	0.25	0	2	3.39	1971	0.013	0	5	80	90

Future Model Parameters (StandHyd)

NHYD	Catchment ID	DT [min]	AREA [ha]	TIMP	XIMP	SLPP [%]	LGP [m]	MNP	SCP [hr]	DPSI [mm]	SLPI [%]	LGI [m]	MNI	SCI [hr]	IA[mm]	CN AMC II *	CN AMC III *
702	48.08	5	333	0.473	0.443	3.68	40	0.25	0	2	3.68	1491	0.013	0	5	80	90
703	49.01	5	222	0.585	0.543	5.16	40	0.25	0	2	5.16	1217	0.013	0	5	81	91
704	49.02	5	168	0.561	0.511	4.02	40	0.25	0	2	4.02	1058	0.013	0	5	77	89
705	49.03	5	649	0.761	0.736	2.16	40	0.25	0	2	2.16	2080	0.013	0	5	80	90
706	49.04	5	426	0.526	0.506	4.88	40	0.25	0	2	4.88	1686	0.013	0	5	91	96
707	49.05	5	131	0.584	0.554	5.27	40	0.25	0	2	5.27	933.4	0.013	0	5	93	97
708	49.06	5	429	0.774	0.742	3.41	40	0.25	0	2	3.41	1690	0.013	0	5	93	97
709	49.07	5	490	0.637	0.609	3.92	40	0.25	0	2	3.92	1807	0.013	0	5	89	95
710	50.01	5	521	0.558	0.520	3.30	40	0.25	0	2	3.30	1863	0.013	0	5	66	81
711	50.02	5	554	0.630	0.585	2.02	40	0.25	0	2	2.02	1922	0.013	0	5	66	81
712	50.03	5	185	0.515	0.469	3.32	40	0.25	0	2	3.32	1110	0.013	0	5	69	84
713	50.04	5	526	0.545	0.493	3.25	40	0.25	0	2	3.25	1872	0.013	0	5	80	90
714	50.05	5	390	0.457	0.428	3.03	40	0.25	0	2	3.03	1613	0.013	0	5	64	81
7662	04.01A	5	104	0.406	0.266	3.69	40	0.25	0	2	3.69	833.4	0.013	0	5	71	85
7615	06.04A	5	35.7	0.607	0.510	3.03	40	0.25	0	2	3.03	488.2	0.013	0	5	99	99
7613	06.17A	5	16.3	0.485	0.415	2.63	40	0.25	0	2	2.63	329.5	0.013	0	5	72	86
7567	07.15A	5	56.8	0.587	0.512	3.47	40	0.25	0	2	3.47	615.6	0.013	0	5	69	84
7656	08.05A	5	57.9	0.402	0.282	4.93	40	0.25	0	2	4.93	621.2	0.013	0	5	78	89
7655	08.06A	5	108	0.371	0.262	5.10	40	0.25	0	2	5.10	848.7	0.013	0	5	91	96
7653	10.17A	5	75.5	0.423	0.281	4.73	40	0.25	0	2	4.73	709.5	0.013	0	5	76	88
7652	10.22A	5	160	0.345	0.247	5.15	40	0.25	0	2	5.15	1033	0.013	0	5	69	84
7639	13.13A	5	68.1	0.509	0.427	5.28	40	0.25	0	2	5.28	673.6	0.013	0	5	84	92
7627	15.01A	5	23.8	0.870	0.865	4.38	40	0.25	0	2	4.38	398.7	0.013	0	5	59	77
7624	15.04A	5	72.1	0.433	0.339	4.10	40	0.25	0	2	4.10	693.4	0.013	0	5	64	80
7660	15.05A	5	58	0.454	0.324	5.16	40	0.25	0	2	5.16	621.8	0.013	0	5	64	80
7625	15.06A	5	38.5	0.489	0.444	4.88	40	0.25	0	2	4.88	506.5	0.013	0	5	46	66
7631	15.10A	5	34.6	0.547	0.485	3.98	40	0.25	0	2	3.98	480.4	0.013	0	5	43	63
7629	16.19A	5	37.7	0.783	0.782	4.06	40	0.25	0	2	4.06	501.5	0.013	0	5	61	78
7634	19.05A	5	22.3	0.418	0.385	2.58	40	0.25	0	2	2.58	386	0.013	0	5	64	80
7635	20.01A	5	48.3	0.553	0.468	4.32	40	0.25	0	2	4.32	567.5	0.013	0	5	67	82
7637	20.04A	5	97.1	0.463	0.396	3.96	40	0.25	0	2	3.96	804.7	0.013	0	5	55	74
7641	22.05A	5	80.8	0.763	0.732	1.79	40	0.25	0	2	1.79	734.1	0.013	0	5	69	84
7644	22.15A	5	20.6	0.747	0.747	1.99	40	0.25	0	2	1.99	370.9	0.013	0	5	86	93
7648	29.12A	5	9.82	0.630	0.541	2.51	40	0.25	0	2	2.51	255.9	0.013	0	5	87	94
7645	36.04A	5	17.4	0.546	0.467	2.82	40	0.25	0	2	2.82	340.9	0.013	0	5	90	95

Appendix IX

Results (350 year and 500 year events)

Peak Flow at Flow Nodes (350-yr Design Storm - no ponds)

Flow Node #	Hyd #	Existing	Future	Difference	Difference	Comments
		(m^3/s)	(m^3/s)	(m^3/s)	(%)	
01.00	3933	17.23	17.23	0.00	0.00	
01.10	735	17.27	17.27	0.00	0.00	
01.20	7488	9.17	9.17	0.00	0.00	
01.30	7487	7.78	7.78	0.00	0.00	
02.00	7489	22.56	22.56	0.00	0.00	
02.10	7490	28.66	28.66	0.00	0.00	
02.20	1081	25.22	25.22	0.00	0.00	
02.30	11	2.82	2.82	0.00	0.00	
03.10	17	1.05	1.05	0.00	0.00	
03.20	2555	4.29	4.29	0.00	0.00	
03.30	1256	4.35	4.35	0.00	0.00	
03.40	7491	6.38	6.38	0.00	0.00	
03.50	18	3.23	3.23	0.00	0.00	
03.60	19	1.31	1.31	0.00	0.00	
04.10	7493	41.84	42.72	0.88	0.02	
04.20	766	33.63	33.63	0.00	0.00	
04.30	2009	40.06	41.15	1.09	0.03	
04.40	23	1.85	2.87	1.02	0.55	
04.50	7492	38.48	38.71	0.23	0.01	
05.00	7494	14.13	14.13	0.00	0.00	
05.10	1663	12.27	12.27	0.00	0.00	
05.20	7497	10.00	10.00	0.00	0.00	
05.30	30	1.65	1.65	0.00	0.00	
05.40	740	8.26	8.26	0.00	0.00	
05.50	7495	4.88	4.88	0.00	0.00	
05.60	7496	3.38	3.38	0.00	0.00	
06.00	803	26.49	29.82	3.32	0.13	
06.01	2022	18.41	23.04	4.63	0.25	
06.02	725	19.74	23.78	4.04	0.20	
06.03	7502	5.16	5.41	0.25	0.05	
06.04	1044	3.64	3.69	0.05	0.01	
06.05	7503	14.67	18.37	3.70	0.25	
06.06	842	16.04	19.74	3.70	0.23	
06.08	48	8.77	9.59	0.83	0.09	
06.10	7500	7.27	10.14	2.87	0.39	
06.11	728	5.57	5.78	0.21	0.04	
06.12	7498	1.97	2.56	0.59	0.30	
06.13	7499	4.30	4.31	0.01	0.00	
06.14	1789	3.25	3.35	0.10	0.03	
07.10	7515	42.92	45.68	2.76	0.06	
07.11	7508	30.92	35.88	4.96	0.16	
07.20	909	43.12	46.09	2.96	0.07	
07.30	59	1.50	1.50	0.00	0.00	
07.40	7511	41.63	44.64	3.01	0.07	
07.50	1738	40.42	43.37	2.95	0.07	
07.60	7510	2.97	2.97	0.00	0.00	
07.70	7509	37.55	40.80	3.25	0.09	
07.80	1729	36.17	39.52	3.35	0.09	
07.90	7507	7.04	7.16	0.12	0.02	
08.10	1754	84.56	86.09	1.53	0.02	
08.20	1832	82.39	82.49	0.10	0.00	
08.30	731	51.76	52.72	0.96	0.02	
08.50	1782	82.23	82.44	0.21	0.00	
08.60	77	3.22	7.11	3.88	1.21	
08.70	1332	82.02	82.38	0.37	0.00	
08.90	7514	53.99	55.31	1.33	0.02	
09.10	7519	88.86	93.65	4.79	0.05	
09.20	1471	89.56	94.72	5.16	0.06	
09.30	915	86.16	88.85	2.68	0.03	
09.50	7516	14.56	14.56	0.00	0.00	
09.60	7517	84.75	86.51	1.76	0.02	
10.00	7518	86.60	104.62	18.02	0.21	
10.10	1850	86.47	104.52	18.04	0.21	
10.11	7524	12.94	21.95	9.01	0.70	
10.12	7525	13.80	21.53	7.73	0.56	
10.13	1762	26.37	42.51	16.14	0.61	
10.20	7520	16.48	16.59	0.12	0.01	
10.30	7521	82.31	98.70	16.40	0.20	
10.40	767	80.65	96.50	15.85	0.20	
10.50	7523	42.06	42.27	0.21	0.00	
10.60	1841	40.75	40.95	0.21	0.01	
10.70	7527	18.53	18.75	0.22	0.01	
10.80	7526	24.90	24.90	0.00	0.00	

Peak Flow at Flow Nodes (350-yr Design Storm - no ponds)

Flow Node #	Hyd #	Existing	Future	Difference	Difference	Comments
		(m^3/s)	(m^3/s)	(m^3/s)	(%)	
10.90	7522	38.60	58.42	19.83	0.51	
11.10	7530	169.36	189.60	20.24	0.12	
11.20	1794	165.71	184.39	18.67	0.11	
11.30	1668	167.46	187.33	19.86	0.12	
12.00	7531	36.47	36.87	0.40	0.01	
12.10	1720	27.10	27.53	0.44	0.02	
12.20	139	10.48	10.48	0.00	0.00	
12.30	140	16.64	17.07	0.43	0.03	
13.10	7532	178.25	201.22	22.97	0.13	
13.11	1099	179.90	204.39	24.48	0.14	
13.20	1625	179.27	203.36	24.09	0.13	
13.30	1548	178.27	201.26	22.99	0.13	
13.40	143	9.72	9.79	0.07	0.01	
13.50	1972	178.51	201.65	23.13	0.13	
13.70	7535	53.37	53.37	0.00	0.00	
13.80	7534	178.51	201.65	23.13	0.13	
13.90	822	179.33	202.81	23.47	0.13	
14.00	1769	72.94	87.96	15.02	0.21	
14.10	1812	74.68	91.91	17.23	0.23	
14.20	1818	59.24	74.43	15.19	0.26	
14.30	919	35.05	46.55	11.51	0.33	
14.40	1826	33.85	44.89	11.05	0.33	
14.50	895	30.96	40.33	9.36	0.30	
15.10	1620	105.36	151.38	46.01	0.44	
15.20	1736	92.05	122.45	30.40	0.33	
16.10	7548	109.16	152.30	43.14	0.40	
16.20	1447	107.51	154.37	46.86	0.44	
17.00	7549	73.70	92.29	18.59	0.25	
17.10	1011	17.56	18.95	1.39	0.08	
17.20	7550	56.88	73.95	17.07	0.30	
17.30	1855	74.03	92.64	18.61	0.25	
17.40	7551	6.66	6.69	0.04	0.01	
17.50	942	75.52	93.92	18.40	0.24	
18.00	2643	111.33	150.39	39.06	0.35	
18.10	7541	110.68	146.21	35.53	0.32	
18.20	1844	124.14	171.87	47.74	0.38	
19.00	2018	7.91	106.72	98.81	12.49	
19.10	7540	22.03	132.72	110.69	5.02	
19.11	7544	4.75	9.88	5.13	1.08	
19.20	7547	13.03	113.75	100.72	7.73	
19.30	7546	4.10	24.94	20.84	5.09	
19.40	1184	13.92	132.20	118.28	8.50	
19.50	7543	14.50	128.19	113.69	7.84	
19.60	7542	6.57	12.39	5.83	0.89	
19.70	1205	21.03	138.01	116.98	5.56	
19.80	807	5.75	10.13	4.38	0.76	
19.90	329	1.03	1.02	0.00	0.00	
20.00	7539	32.19	34.17	1.98	0.06	
21.10	2343	130.90	159.84	28.93	0.22	
21.20	1306	131.63	162.13	30.50	0.23	
21.30	1856	131.54	162.20	30.66	0.23	
21.40	7536	131.93	162.18	30.25	0.23	
21.50	7537	33.47	33.47	0.00	0.00	
21.60	1312	131.93	162.43	30.50	0.23	
22.10	7583	7.52	40.30	32.78	4.36	
22.20	7584	46.94	62.71	15.77	0.34	
22.30	7585	50.90	57.99	7.09	0.14	
22.40	7586	4.27	22.81	18.54	4.34	
22.50	7310	57.04	59.48	2.44	0.04	
22.55	7315	58.57	60.89	2.32	0.04	
22.60	7588	25.26	26.03	0.77	0.03	
22.61	7333	15.78	16.27	0.49	0.03	
22.62	7345	1.46	1.46	0.00	0.00	
22.70	7587	33.31	34.86	1.56	0.05	
22.71	7321	18.99	19.37	0.38	0.02	
22.80	7617	4.35	30.74	26.39	6.06	
22.81	7364	1.77	15.12	13.35	7.55	
22.82	7361	1.55	10.85	9.30	6.00	
22.90	7365	1.95	9.50	7.55	3.87	
23.10	7580	50.54	72.78	22.24	0.44	
23.20	7275	54.45	72.87	18.42	0.34	
24.10	7582	44.38	60.94	16.56	0.37	
24.11	7435	13.50	13.51	0.01	0.00	

Peak Flow at Flow Nodes (350-yr Design Storm - no ponds)

Flow Node #	Hyd #	Existing (m^3/s)	Future (m^3/s)	Difference (m^3/s)	Difference (%)	Comments
24.12	7618	29.90	40.37	10.47	0.35	
24.13	7431	19.28	23.92	4.64	0.24	
24.20	7581	11.38	38.09	26.72	2.35	
24.21	7403	11.59	41.37	29.78	2.57	
25.00	7388	48.44	89.92	41.49	0.86	
25.01	7451	2.57	2.57	0.00	0.00	
25.02	7619	44.63	82.75	38.12	0.85	
25.10	7579	69.54	114.01	44.47	0.64	
25.20	7396	53.96	91.60	37.64	0.70	
26.10	7576	136.82	189.26	52.43	0.38	
26.20	7249	138.52	189.29	50.78	0.37	
26.21	7578	60.82	61.21	0.39	0.01	
26.30	7577	91.80	159.56	67.76	0.74	
26.40	7258	89.07	154.92	65.85	0.74	
27.00	435	119.99	119.98	-0.01	0.00	
27.01	434	9.22	9.22	0.00	0.00	
27.10	7570	393.94	454.88	60.94	0.15	
27.20	1087	396.97	455.89	58.93	0.15	
27.30	1109	306.10	351.49	45.39	0.15	
27.31	7571	361.80	428.78	66.98	0.19	
27.40	1073	307.13	352.15	45.03	0.15	
27.50	1298	346.93	388.21	41.28	0.12	
27.60	1258	356.66	422.84	66.18	0.19	
28.00	1890	24.57	24.85	0.28	0.01	
29.10	1067	34.10	34.81	0.72	0.02	
29.20	1879	34.05	36.15	2.10	0.06	
29.40	1337	33.19	33.28	0.09	0.00	
29.50	1740	31.77	32.09	0.32	0.01	
30.00	1124	45.00	45.00	0.00	0.00	
31.00	7601	27.75	27.75	0.00	0.00	
31.20	1342	20.45	20.45	0.00	0.00	
31.40	479	5.14	5.14	0.00	0.00	
32.10	1395	93.77	89.68	-4.09	**-0.04**	Timing of the Hydrographs Catchment 32.24 change from NasHyd to StandHyd
32.20	732	72.71	72.71	0.00	0.00	
32.21	455	6.42	6.32	-0.09	**-0.01**	Percent impervious is slightly reduced in proposed conditions
32.22	826	11.82	22.32	10.50	0.89	
32.24	499	3.00	7.15	4.15	1.39	
32.30	7598	10.24	12.49	2.25	0.22	
32.31	1198	7.57	9.59	2.02	0.27	
32.32	501	2.03	3.43	1.40	0.69	
32.33	500	2.50	5.86	3.36	1.34	
32.40	7597	88.35	86.45	-1.90	**-0.02**	Timing of the Hydrographs Catchment 32.24 change from NasHyd to StandHyd
32.41	1895	87.13	85.19	-1.95	**-0.02**	Timing of the Hydrographs Catchment 32.24 change from NasHyd to StandHyd
32.42	1734	75.47	75.47	0.00	0.00	
32.70	7596	14.11	24.28	10.16	0.72	
33.10	1135	43.34	56.07	12.73	0.29	
33.11	7594	61.74	72.45	10.71	0.17	
33.12	7595	126.23	122.27	-3.96	**-0.03**	Timing of the Hydrographs Catchments 32.24, 32.25 change from NasHyd to StandHyd
33.13	2006	58.06	68.88	10.82	0.19	
33.14	524	6.22	13.40	7.18	1.15	
33.15	1907	62.33	71.82	9.49	0.15	
33.16	1318	62.29	72.51	10.22	0.16	
33.30	1652	124.08	120.23	-3.85	**-0.03**	Timing of the Hydrographs Catchments 32.24, 32.25 change from NasHyd to StandHyd
34.00	2066	40.82	40.99	0.17	0.00	
34.20	902	18.67	18.67	0.00	0.00	
34.30	534	8.13	8.13	0.00	0.00	
34.40	533	4.85	4.85	0.00	0.00	
35.10	1380	64.13	70.19	6.06	0.09	
35.20	1424	64.51	70.29	5.77	0.09	
35.30	7604	19.69	22.29	2.60	0.13	
35.40	7605	47.22	47.01	-0.21	**0.00**	Timing of the Hydrographs Catchments 35.11 change from NasHyd to StandHyd
35.50	1915	47.03	46.83	-0.21	**0.00**	Timing of the Hydrographs Catchments 35.11 change from NasHyd to StandHyd
35.70	926	45.77	45.92	0.14	0.00	
36.00	7606	36.58	34.20	-2.37	**-0.06**	Timing of the Hydrographs Catchments 36.04 split into 36.04B (NasHyd) and 36.04A (StandHyd)

Peak Flow at Flow Nodes (350-yr Design Storm - no ponds)

Flow Node #	Hyd #	Existing (m^3/s)	Future (m^3/s)	Difference (m^3/s)	Difference (%)	Comments
36.10	724	35.99	33.50	-2.49	**-0.07**	Timing of the Hydrographs Catchments 36.04 split into 36.04B (NasHyd) and 36.04A (StandHyd)
36.20	7608	16.40	15.98	-0.42	**-0.03**	Timing of the Hydrographs Catchments 36.04 split into 36.04B (NasHyd) and 36.04A (StandHyd)
36.40	7609	20.34	18.52	-1.82	**-0.09**	Timing of the Hydrographs Catchments 36.05 change from NasHyd to StandHyd
37.00	729	67.78	67.91	0.14	0.00	
37.10	7610	21.35	21.35	0.00	0.00	
37.20	7611	48.12	48.24	0.12	0.00	
37.30	1477	37.28	37.40	0.12	0.00	
37.40	1025	18.03	18.03	0.00	0.00	
37.50	7612	19.69	19.81	0.12	0.01	
38.10	7607	83.97	80.90	-3.06	**-0.04**	Timing of the Hydrographs Catchments 38.02 change from NasHyd to StandHyd
38.30	1940	76.20	76.33	0.12	0.00	
39.00	726	304.08	291.71	-12.37	**-0.04**	Timing of the Hydrographs Catchments 38.02 change from NasHyd to StandHyd
39.10	590	2.01	3.44	1.44	0.72	
39.20	1796	166.76	161.56	-5.20	**-0.03**	Timing of the Hydrographs Catchments 35.14 change from NasHyd to StandHyd
39.30	1456	114.56	109.69	-4.88	**-0.04**	Timing of the Hydrographs Catchments 35.14 change from NasHyd to StandHyd
39.50	1776	166.40	161.30	-5.10	**-0.03**	Timing of the Hydrographs Catchments 35.14 change from NasHyd to StandHyd
39.60	7603	116.48	111.68	-4.80	**-0.04**	Timing of the Hydrographs Catchments 35.14 change from NasHyd to StandHyd
40.10	7590	306.02	294.32	-11.70	**-0.04**	Timing of Hydrographs, multiple upstream catchments changed from NasHyd to StandHyd
40.20	1469	304.31	291.96	-12.35	**-0.04**	Timing of Hydrographs, multiple upstream catchments changed from NasHyd to StandHyd
40.25	7593	47.30	47.43	0.13	0.00	
40.30	1373	305.52	293.04	-12.48	**-0.04**	Timing of Hydrographs, multiple upstream catchments changed from NasHyd to StandHyd
41.00	1819	34.93	46.27	11.35	0.32	
41.20	1393	23.89	21.86	-2.03	**-0.08**	Timing of the Hydrographs Catchments 41.05 change from NasHyd to StandHyd
41.30	846	22.10	22.00	-0.11	**0.00**	Slight change in land use under post development conditions results in lower CN
42.10	7591	42.88	68.63	25.75	0.60	
42.20	1690	37.20	62.40	25.21	0.68	
43.00	1012	56.69	94.41	37.72	0.67	
43.20	857	62.31	70.79	8.49	0.14	
44.10	7592	64.86	106.57	41.71	0.64	
44.20	1307	62.94	103.40	40.46	0.64	
45.00	7569	381.33	459.86	78.53	0.21	
45.10	1028	380.77	458.05	77.28	0.20	
45.20	7572	110.85	136.44	25.59	0.23	
45.30	7573	372.88	432.02	59.14	0.16	
45.40	2074	374.69	427.02	52.33	0.14	
46.00	1503	132.20	139.40	7.21	0.05	
46.10	681	45.17	47.29	2.13	0.05	Flows go down due to development of Vaughan Metropolitan Center
46.30	1532	74.13	79.23	5.10	0.07	
47.10	968	221.30	234.21	12.92	0.06	
47.20	1559	178.14	186.82	8.67	0.05	
48.10	7561	318.28	325.46	7.17	0.02	
48.20	1544	305.40	314.48	9.08	0.03	
48.30	1593	254.80	263.28	8.48	0.03	
48.40	1612	241.71	252.13	10.41	0.04	
49.10	1957	721.73	912.53	190.80	0.26	
49.20	1319	682.69	900.51	217.82	0.32	
49.30	975	714.42	907.05	192.64	0.27	
49.40	7565	88.72	88.72	0.00	0.00	
49.50	1631	697.80	893.82	196.03	0.28	
49.70	1005	692.04	891.76	199.72	0.29	
49.80	7568	74.92	74.92	0.00	0.00	
49.90	7616	679.94	882.56	202.62	0.30	
50.00	1649	1009.36	1162.59	153.23	0.15	
50.10	1000	995.71	1152.08	156.38	0.16	
50.20	770	999.34	1157.82	158.48	0.16	
51.10	1442	374.42	422.83	48.41	0.13	

Peak Flow at Flow Nodes (500-yr Design Storm - no ponds)

Flow Node #	Hyd #	Existing	Future	Difference	Difference	Comments
		(m^3/s)	(m^3/s)	(m^3/s)	(%)	
01.00	3933	18.77	18.77	0.00	0.00	
01.10	735	18.82	18.82	0.00	0.00	
01.20	7488	10.00	10.00	0.00	0.00	
01.30	7487	8.45	8.45	0.00	0.00	
02.00	7489	24.64	24.64	0.00	0.00	
02.10	7490	31.38	31.38	0.00	0.00	
02.20	1081	27.55	27.55	0.00	0.00	
02.30	11	3.09	3.09	0.00	0.00	
03.10	17	1.20	1.20	0.00	0.00	
03.20	2555	4.78	4.78	0.00	0.00	
03.30	1256	4.83	4.83	0.00	0.00	
03.40	7491	7.13	7.13	0.00	0.00	
03.50	18	3.54	3.54	0.00	0.00	
03.60	19	1.51	1.51	0.00	0.00	
04.10	7493	46.58	47.59	1.00	0.02	
04.20	766	36.95	36.94	0.00	0.00	
04.30	2009	44.47	45.71	1.25	0.03	
04.40	23	2.13	3.26	1.13	0.53	
04.50	7492	42.63	42.89	0.26	0.01	
05.00	7494	15.94	15.94	0.00	0.00	
05.10	1663	13.87	13.87	0.00	0.00	
05.20	7497	11.27	11.27	0.00	0.00	
05.30	30	1.89	1.89	0.00	0.00	
05.40	740	9.30	9.30	0.00	0.00	
05.50	7495	5.47	5.47	0.00	0.00	
05.60	7496	3.83	3.83	0.00	0.00	
06.00	803	28.52	32.19	3.68	0.13	
06.01	2022	20.27	24.58	4.31	0.21	
06.02	725	21.41	25.56	4.14	0.19	
06.03	7502	5.54	5.79	0.26	0.05	
06.04	1044	3.98	4.03	0.05	0.01	
06.05	7503	15.88	19.76	3.89	0.24	
06.06	842	17.25	21.10	3.85	0.22	
06.08	48	9.40	10.24	0.84	0.09	
06.10	7500	7.84	10.85	3.01	0.38	
06.11	728	6.15	6.24	0.08	0.01	
06.12	7498	2.16	2.77	0.61	0.28	
06.13	7499	4.81	4.81	0.00	0.00	
06.14	1789	3.63	3.74	0.10	0.03	
07.10	7515	47.13	50.08	2.96	0.06	
07.11	7508	33.55	39.01	5.46	0.16	
07.20	909	47.44	50.63	3.19	0.07	
07.30	59	1.71	1.71	0.00	0.00	
07.40	7511	45.73	48.97	3.24	0.07	
07.50	1738	44.26	47.36	3.11	0.07	
07.60	7510	3.40	3.40	0.00	0.00	
07.70	7509	40.98	44.44	3.46	0.08	
07.80	1729	39.46	43.14	3.68	0.09	
07.90	7507	7.97	8.10	0.13	0.02	
08.10	1754	94.07	95.78	1.71	0.02	
08.20	1832	92.69	92.98	0.29	0.00	
08.30	731	58.09	59.15	1.07	0.02	
08.50	1782	92.67	92.72	0.06	0.00	
08.60	77	3.69	7.64	3.95	1.07	
08.70	1332	92.55	92.74	0.20	0.00	
08.90	7514	60.79	62.14	1.35	0.02	
09.10	7519	99.50	105.19	5.68	0.06	
09.20	1471	100.50	106.13	5.63	0.06	
09.30	915	96.14	99.04	2.90	0.03	
09.50	7516	16.19	16.19	0.00	0.00	
09.60	7517	94.25	96.32	2.06	0.02	
10.00	7518	95.68	114.43	18.74	0.20	
10.10	1850	95.68	114.44	18.76	0.20	
10.11	7524	14.81	24.35	9.54	0.64	
10.12	7525	15.54	24.00	8.46	0.54	
10.13	1762	30.03	46.39	16.37	0.55	
10.20	7520	17.57	17.69	0.12	0.01	
10.30	7521	91.30	108.28	16.98	0.19	
10.40	767	89.59	105.75	16.17	0.18	
10.50	7523	46.32	46.53	0.21	0.00	
10.60	1841	44.98	45.19	0.21	0.00	
10.70	7527	19.89	20.11	0.23	0.01	
10.80	7526	27.82	27.82	0.00	0.00	

Peak Flow at Flow Nodes (500-yr Design Storm - no ponds)

Flow Node #	Hyd #	Existing	Future	Difference	Difference	Comments
		(m^3/s)	(m^3/s)	(m^3/s)	(%)	
10.90	7522	43.31	63.78	20.47	0.47	
11.10	7530	188.46	208.60	20.15	0.11	
11.20	1794	184.12	202.94	18.82	0.10	
11.30	1668	185.90	206.27	20.37	0.11	
12.00	7531	39.01	39.42	0.41	0.01	
12.10	1720	28.91	29.35	0.44	0.02	
12.20	139	11.18	11.18	0.00	0.00	
12.30	140	17.75	18.19	0.44	0.02	
13.10	7532	197.73	221.50	23.77	0.12	
13.11	1099	199.57	224.55	24.98	0.13	
13.20	1625	199.60	223.30	23.70	0.12	
13.30	1548	197.74	221.51	23.77	0.12	
13.40	143	10.42	10.49	0.07	0.01	
13.50	1972	197.92	221.79	23.87	0.12	
13.70	7535	56.62	56.62	0.00	0.00	
13.80	7534	197.92	221.79	23.87	0.12	
13.90	822	198.76	222.87	24.11	0.12	
14.00	1769	78.10	94.86	16.76	0.21	
14.10	1812	80.37	98.68	18.31	0.23	
14.20	1818	63.68	80.02	16.34	0.26	
14.30	919	37.72	50.08	12.36	0.33	
14.40	1826	36.45	48.22	11.78	0.32	
14.50	895	33.20	43.08	9.88	0.30	
15.10	1620	115.08	164.09	49.02	0.43	
15.20	1736	99.98	132.06	32.07	0.32	
16.10	7548	119.41	164.32	44.91	0.38	
16.20	1447	116.90	167.11	50.21	0.43	
17.00	7549	79.37	99.11	19.74	0.25	
17.10	1011	19.03	20.45	1.42	0.07	
17.20	7550	60.94	79.03	18.09	0.30	
17.30	1855	79.51	99.25	19.74	0.25	
17.40	7551	7.41	7.45	0.04	0.01	
17.50	942	81.19	100.69	19.50	0.24	
18.00	2643	121.75	163.71	41.96	0.34	
18.10	7541	121.63	159.57	37.93	0.31	
18.20	1844	136.60	186.10	49.51	0.36	
19.00	2018	8.66	114.05	105.39	12.17	
19.10	7540	24.12	143.61	119.49	4.95	
19.11	7544	5.20	10.62	5.41	1.04	
19.20	7547	14.23	122.66	108.43	7.62	
19.30	7546	4.48	26.71	22.23	4.96	
19.40	1184	15.21	143.45	128.24	8.43	
19.50	7543	15.86	139.23	123.37	7.78	
19.60	7542	7.20	13.39	6.19	0.86	
19.70	1205	23.01	149.89	126.88	5.51	
19.80	807	6.30	10.89	4.59	0.73	
19.90	329	1.12	1.12	0.00	0.00	
20.00	7539	34.42	36.63	2.21	0.06	
21.10	2343	143.90	175.04	31.14	0.22	
21.20	1306	144.69	177.51	32.82	0.23	
21.30	1856	144.86	177.08	32.23	0.22	
21.40	7536	145.10	177.55	32.45	0.22	
21.50	7537	35.90	35.90	0.00	0.00	
21.60	1312	145.11	178.03	32.92	0.23	
22.10	7583	8.15	42.99	34.84	4.28	
22.20	7584	51.59	67.41	15.82	0.31	
22.30	7585	54.44	62.37	7.93	0.15	
22.40	7586	4.59	24.19	19.60	4.27	
22.50	7310	61.01	63.47	2.46	0.04	
22.55	7315	62.60	64.86	2.25	0.04	
22.60	7588	27.39	28.17	0.79	0.03	
22.61	7333	16.86	17.36	0.50	0.03	
22.62	7345	1.59	1.59	0.00	0.00	
22.70	7587	35.21	36.68	1.47	0.04	
22.71	7321	20.04	20.41	0.37	0.02	
22.80	7617	4.71	32.61	27.90	5.92	
22.81	7364	1.92	16.06	14.14	7.38	
22.82	7361	1.69	11.51	9.83	5.83	
22.90	7365	2.09	10.07	7.98	3.82	
23.10	7580	55.06	79.45	24.39	0.44	
23.20	7275	59.73	78.59	18.86	0.32	
24.10	7582	47.79	64.88	17.08	0.36	
24.11	7435	14.29	14.30	0.01	0.00	

Peak Flow at Flow Nodes (500-yr Design Storm - no ponds)

Flow Node #	Hyd #	Existing (m^3/s)	Future (m^3/s)	Difference (m^3/s)	Difference (%)	Comments
24.12	7618	32.04	43.03	10.99	0.34	
24.13	7431	20.61	25.22	4.61	0.22	
24.20	7581	12.22	40.68	28.46	2.33	
24.21	7403	12.43	44.40	31.97	2.57	
25.00	7388	51.88	96.21	44.34	0.85	
25.01	7451	2.72	2.72	0.00	0.00	
25.02	7619	47.71	88.32	40.61	0.85	
25.10	7579	75.76	122.06	46.31	0.61	
25.20	7396	57.90	98.27	40.37	0.70	
26.10	7576	147.51	203.19	55.68	0.38	
26.20	7249	148.56	203.12	54.57	0.37	
26.21	7578	64.32	64.57	0.25	0.00	
26.30	7577	98.98	172.15	73.17	0.74	
26.40	7258	96.94	166.67	69.73	0.72	
27.00	435	126.70	126.69	-0.01	0.00	Difference in number of decimals used for TIMP / XIMP
27.01	434	9.83	9.83	0.00	0.00	
27.10	7570	420.83	487.37	66.55	0.16	
27.20	1087	424.35	489.16	64.81	0.15	
27.30	1109	336.56	382.66	46.10	0.14	
27.31	7571	385.74	460.98	75.25	0.20	
27.40	1073	337.51	384.39	46.88	0.14	
27.50	1298	380.40	420.23	39.83	0.10	
27.60	1258	380.49	449.40	68.91	0.18	
28.00	1890	26.68	26.97	0.29	0.01	
29.10	1067	37.03	37.31	0.28	0.01	
29.20	1879	36.94	38.44	1.51	0.04	
29.40	1337	36.00	36.09	0.09	0.00	
29.50	1740	34.48	34.83	0.35	0.01	
30.00	1124	48.50	48.49	0.00	0.00	
31.00	7601	29.77	29.77	0.00	0.00	
31.20	1342	22.01	22.01	0.00	0.00	
31.40	479	5.54	5.54	0.00	0.00	
32.10	1395	101.19	96.73	-4.46	**-0.04**	Timing of the Hydrographs Catchment 32.24 change from NasHyd to StandHyd
32.20	732	78.09	78.09	0.00	0.00	
32.21	455	6.78	6.68	-0.09	**-0.01**	Percent impervious is slightly reduced in proposed conditions
32.22	826	12.66	23.67	11.01	0.87	
32.24	499	3.21	7.56	4.35	1.36	
32.30	7598	10.95	13.28	2.33	0.21	
32.31	1198	8.07	10.13	2.06	0.26	
32.32	501	2.18	3.63	1.45	0.67	
32.33	500	2.67	6.20	3.52	1.32	
32.40	7597	95.26	93.12	-2.14	**-0.02**	Timing of the Hydrographs Catchment 32.24 change from NasHyd to StandHyd
32.41	1895	93.79	91.67	-2.12	**-0.02**	Timing of the Hydrographs Catchment 32.24 change from NasHyd to StandHyd
32.42	1734	81.08	81.08	0.00	0.00	
32.70	7596	15.10	25.89	10.80	0.71	
33.10	1135	45.98	60.17	14.20	0.31	
33.11	7594	66.07	78.22	12.15	0.18	
33.12	7595	136.52	132.23	-4.29	**-0.03**	Timing of the Hydrographs Catchments 32.24, 32.25 change from NasHyd to StandHyd
33.13	2006	61.59	74.01	12.42	0.20	
33.14	524	6.61	14.19	7.57	1.15	
33.15	1907	66.42	77.04	10.62	0.16	
33.16	1318	67.10	77.75	10.65	0.16	
33.30	1652	134.09	129.87	-4.22	**-0.03**	Timing of the Hydrographs Catchments 32.24, 32.25 change from NasHyd to StandHyd
34.00	2066	43.86	44.04	0.17	0.00	
34.20	902	20.12	20.11	0.00	0.00	
34.30	534	8.75	8.75	0.00	0.00	
34.40	533	5.21	5.21	0.00	0.00	
35.10	1380	68.29	74.96	6.66	0.10	
35.20	1424	68.93	75.17	6.24	0.09	
35.30	7604	21.00	23.76	2.75	0.13	
35.40	7605	50.71	50.49	-0.22	**0.00**	Timing of the Hydrographs Catchments 35.11 change from NasHyd to StandHyd
35.50	1915	50.52	50.30	-0.21	**0.00**	Timing of the Hydrographs Catchments 35.11 change from NasHyd to StandHyd
35.70	926	49.18	49.34	0.16	0.00	
36.00	7606	39.44	36.76	-2.68	**-0.07**	Timing of the Hydrographs Catchments 36.04 split into 36.04B (NasHyd) and 36.04A (StandHyd)

Peak Flow at Flow Nodes (500-yr Design Storm - no ponds)

Flow Node #	Hyd #	Existing (m^3/s)	Future (m^3/s)	Difference (m^3/s)	Difference (%)	Comments
36.10	724	38.72	36.05	-2.68	**-0.07**	Timing of the Hydrographs Catchments 36.04 split into 36.04B (NasHyd) and 36.04A (StandHyd)
36.20	7608	17.55	17.07	-0.48	**-0.03**	Timing of the Hydrographs Catchments 36.04 split into 36.04B (NasHyd) and 36.04A (StandHyd)
36.40	7609	21.88	19.85	-2.02	**-0.09**	Timing of the Hydrographs Catchments 36.05 change from NasHyd to StandHyd
37.00	729	72.61	72.75	0.14	0.00	
37.10	7610	22.87	22.87	0.00	0.00	
37.20	7611	51.48	51.60	0.12	0.00	
37.30	1477	39.80	39.93	0.13	0.00	
37.40	1025	19.34	19.34	0.00	0.00	
37.50	7612	20.99	21.11	0.11	0.01	
38.10	7607	90.34	86.97	-3.37	**-0.04**	Timing of the Hydrographs Catchments 38.02 change from NasHyd to StandHyd
38.30	1940	81.76	81.90	0.14	0.00	
39.00	726	328.46	314.77	-13.69	**-0.04**	Timing of the Hydrographs Catchments 38.02 change from NasHyd to StandHyd
39.10	590	2.14	3.64	1.50	0.70	
39.20	1796	179.45	173.90	-5.54	**-0.03**	Timing of the Hydrographs Catchments 35.14 change from NasHyd to StandHyd
39.30	1456	123.31	118.08	-5.23	**-0.04**	Timing of the Hydrographs Catchments 35.14 change from NasHyd to StandHyd
39.50	1776	178.84	173.39	-5.45	**-0.03**	Timing of the Hydrographs Catchments 35.14 change from NasHyd to StandHyd
39.60	7603	125.50	120.35	-5.14	**-0.04**	Timing of the Hydrographs Catchments 35.14 change from NasHyd to StandHyd
40.10	7590	330.12	317.48	-12.64	**-0.04**	Timing of Hydrographs, multiple upstream catchments changed from NasHyd to StandHyd
40.20	1469	328.53	315.00	-13.53	**-0.04**	Timing of Hydrographs, multiple upstream catchments changed from NasHyd to StandHyd
40.25	7593	49.86	49.99	0.13	0.00	
40.30	1373	329.62	316.27	-13.35	**-0.04**	Timing of Hydrographs, multiple upstream catchments changed from NasHyd to StandHyd
41.00	1819	37.32	49.69	12.38	0.33	
41.20	1393	25.60	23.42	-2.17	**-0.08**	Timing of the Hydrographs Catchments 41.05 change from NasHyd to StandHyd
41.30	846	23.64	23.53	-0.11	**0.00**	Slight change in land use under post development conditions results in lower CN
42.10	7591	46.06	73.85	27.79	0.60	
42.20	1690	39.81	67.19	27.38	0.69	
43.00	1012	60.71	101.28	40.56	0.67	
43.20	857	66.26	75.18	8.92	0.13	
44.10	7592	69.31	114.03	44.72	0.65	
44.20	1307	67.31	110.51	43.20	0.64	
45.00	7569	412.31	497.64	85.33	0.21	
45.10	1028	411.69	494.81	83.12	0.20	
45.20	7572	117.40	144.37	26.97	0.23	
45.30	7573	402.94	467.08	64.15	0.16	
45.40	2074	404.37	460.05	55.68	0.14	
46.00	1503	139.93	147.71	7.78	0.06	
46.10	681	48.01	49.94	1.94	0.04	
46.30	1532	79.19	84.35	5.16	0.07	
47.10	968	240.71	252.33	11.62	0.05	
47.20	1559	190.39	197.96	7.57	0.04	
48.10	7561	345.09	352.49	7.40	0.02	
48.20	1544	328.02	338.88	10.86	0.03	
48.30	1593	273.02	282.44	9.43	0.03	
48.40	1612	260.69	272.28	11.59	0.04	
49.10	1957	774.27	988.60	214.33	0.28	
49.20	1319	730.04	969.72	239.68	0.33	
49.30	975	766.29	982.67	216.38	0.28	
49.40	7565	95.09	95.09	0.00	0.00	
49.50	1631	747.62	969.87	222.25	0.30	
49.70	1005	742.10	965.83	223.73	0.30	
49.80	7568	79.67	79.67	0.00	0.00	
49.90	7616	729.30	956.09	226.79	0.31	
50.00	1649	1086.34	1259.26	172.93	0.16	
50.10	1000	1070.01	1252.43	182.43	0.17	
50.20	770	1073.35	1254.03	180.68	0.17	
51.10	1442	404.31	455.71	51.40	0.13	

Appendix X

Results (Regional Storm)

Peak Flow at Flow Nodes (Regional Storm)

Flow Node #	Hyd #	Areal Reduction Factor	Existing	Future	Difference	Difference	Comments
			(m^3/s)	(m^3/s)	(m^3/s)	(%)	
01.00	3933	99.2%	55.32	55.31	-0.01	0.00	
01.10	735	100.0%	56.01	56.00	-0.01	0.00	
01.20	7488	100.0%	28.97	28.96	-0.01	0.00	
01.30	7487	100.0%	24.86	24.86	0.00	0.00	
02.00	7489	98.2%	77.09	77.08	-0.01	0.00	
02.10	7490	97.1%	101.74	101.73	-0.01	0.00	
02.20	1081	98.2%	87.54	87.53	-0.01	0.00	
02.30	11	100.0%	10.97	10.97	0.00	0.00	
03.10	17	100.0%	6.28	6.28	0.00	0.00	
03.20	2555	100.0%	19.58	19.58	0.00	0.00	
03.30	1256	100.0%	19.84	19.84	0.00	0.00	
03.40	7491	100.0%	30.85	30.85	0.00	0.00	
03.50	18	100.0%	12.51	12.51	0.00	0.00	
03.60	19	100.0%	7.88	7.88	0.00	0.00	
04.10	7493	94.2%	180.49	180.97	0.48	0.00	
04.20	766	97.1%	128.43	128.42	-0.01	0.00	
04.30	2009	94.8%	167.27	169.65	2.38	0.01	
04.40	23	100.0%	11.23	13.24	2.01	0.18	
04.50	7492	94.8%	157.32	157.85	0.53	0.00	
05.00	7494	99.2%	69.49	69.48	0.00	0.00	
05.10	1663	99.2%	61.00	61.00	0.00	0.00	
05.20	7497	99.2%	48.60	48.60	0.00	0.00	
05.30	30	100.0%	8.67	8.67	0.00	0.00	
05.40	740	100.0%	40.77	40.77	0.00	0.00	
05.50	7495	100.0%	23.71	23.71	0.00	0.00	
05.60	7496	100.0%	17.08	17.08	0.00	0.00	
06.00	803	98.2%	68.14	69.99	1.85	0.03	
06.01	2022	99.2%	48.43	50.19	1.77	0.04	
06.02	725	99.2%	48.01	49.58	1.57	0.03	
06.03	7502	100.0%	14.42	14.50	0.08	0.01	
06.04	1044	100.0%	12.46	12.54	0.08	0.01	
06.05	7503	99.2%	33.73	35.22	1.49	0.04	
06.06	842	100.0%	32.47	33.63	1.16	0.04	
06.08	48	100.0%	12.26	12.44	0.18	0.02	
06.10	7500	100.0%	23.83	24.33	0.49	0.02	
06.11	728	100.0%	22.82	22.10	-0.72	**-0.03**	
06.12	7498	100.0%	6.28	6.36	0.08	0.01	
06.13	7499	100.0%	18.28	17.62	-0.65	**-0.04**	
06.14	1789	100.0%	14.57	14.65	0.07	0.00	
07.10	7515	97.1%	148.95	152.63	3.68	0.02	
07.11	7508	98.2%	89.15	97.07	7.92	0.09	
07.20	909	98.2%	151.15	154.90	3.75	0.02	
07.30	59	100.0%	8.41	8.41	0.00	0.00	
07.40	7511	98.2%	142.98	146.74	3.77	0.03	
07.50	1738	98.2%	136.74	140.10	3.36	0.02	
07.60	7510	99.2%	15.49	15.49	0.00	0.00	
07.70	7509	98.2%	121.64	125.51	3.87	0.03	
07.80	1729	98.2%	118.85	122.84	3.99	0.03	
07.90	7507	99.2%	34.19	34.36	0.17	0.00	
08.10	1754	89.4%	363.33	360.40	-2.93	**-0.01**	
08.20	1832	93.5%	378.80	376.60	-2.19	**-0.01**	
08.30	731	94.2%	236.34	236.89	0.55	0.00	
08.50	1782	92.0%	369.26	365.21	-4.05	**-0.01**	
08.60	77	100.0%	14.15	14.26	0.11	0.01	
08.70	1332	92.0%	366.80	364.97	-1.83	**0.00**	
08.90	7514	93.5%	250.50	252.35	1.85	0.01	
09.10	7519	86.7%	354.37	354.10	-0.26	0.00	
09.20	1471	89.4%	376.60	374.95	-1.66	**0.00**	
09.30	915	89.4%	367.97	365.51	-2.47	**-0.01**	
09.50	7516	100.0%	44.99	44.99	0.00	0.00	
09.60	7517	89.4%	363.96	361.04	-2.92	**-0.01**	
10.00	7518	97.1%	281.16	299.43	18.27	0.06	
10.10	1850	97.1%	281.16	298.89	17.73	0.06	
10.11	7524	100.0%	57.64	60.94	3.30	0.06	
10.12	7525	100.0%	56.72	74.43	17.71	0.31	
10.13	1762	100.0%	114.23	134.02	19.79	0.17	
10.20	7520	100.0%	24.69	24.72	0.03	0.00	
10.30	7521	97.1%	271.69	287.13	15.43	0.06	
10.40	767	97.1%	267.83	282.60	14.77	0.06	
10.50	7523	98.2%	124.98	125.08	0.10	0.00	
10.60	1841	99.2%	124.74	124.84	0.10	0.00	
10.70	7527	100.0%	42.07	42.19	0.12	0.00	

Peak Flow at Flow Nodes (Regional Storm)

Flow Node #	Hyd #	Areal Reduction Factor	Existing	Future	Difference	Difference	Comments
			(m^3/s)	(m^3/s)	(m^3/s)	(%)	
10.80	7526	99.2%	85.26	85.25	0.00	0.00	
10.90	7522	98.2%	147.32	170.71	23.40	0.16	
11.10	7530	82.4%	498.17	508.66	10.48	0.02	
11.20	1794	86.7%	536.58	542.87	6.28	0.01	
11.30	1668	84.0%	509.55	516.62	7.07	0.01	
12.00	7531	100.0%	65.22	65.22	0.00	0.00	
12.10	1720	100.0%	44.01	44.01	0.00	0.00	
12.20	139	100.0%	16.84	16.84	0.00	0.00	
12.30	140	100.0%	27.19	27.19	0.00	0.00	
13.10	7532	76.6%	449.13	465.36	16.23	0.04	
13.11	1099	82.4%	518.30	534.34	16.04	0.03	
13.20	1625	82.4%	515.17	531.15	15.98	0.03	
13.30	1548	79.3%	479.33	495.43	16.11	0.03	
13.40	143	100.0%	13.35	13.37	0.01	0.00	
13.50	1972	79.3%	479.85	496.01	16.16	0.03	
13.70	7535	100.0%	56.61	56.61	0.00	0.00	
13.80	7534	79.3%	479.85	496.01	16.16	0.03	
13.90	822	80.8%	498.53	514.03	15.50	0.03	
14.00	1769	98.2%	147.00	152.50	5.50	0.04	
14.10	1812	99.2%	118.53	125.25	6.72	0.06	
14.20	1818	99.2%	96.19	102.52	6.33	0.07	
14.30	919	100.0%	60.82	65.14	4.33	0.07	
14.40	1826	100.0%	56.56	61.39	4.84	0.09	
14.50	895	100.0%	48.66	53.56	4.91	0.10	
15.10	1620	95.4%	262.80	316.31	53.51	0.20	
15.20	1736	97.1%	206.31	237.61	31.30	0.15	
16.10	7548	92.0%	305.99	357.71	51.72	0.17	
16.20	1447	93.5%	282.33	338.66	56.33	0.20	
17.00	7549	99.2%	138.52	147.11	8.59	0.06	
17.10	1011	99.2%	31.89	32.32	0.42	0.01	
17.20	7550	100.0%	91.65	100.41	8.76	0.10	
17.30	1855	99.2%	122.22	131.66	9.44	0.08	
17.40	7551	99.2%	30.14	30.20	0.06	0.00	
17.50	942	99.2%	137.78	146.79	9.01	0.07	
18.00	2643	89.4%	342.25	396.22	53.96	0.16	
18.10	7541	89.4%	345.95	395.58	49.63	0.14	
18.20	1844	92.0%	364.18	425.67	61.49	0.17	
19.00	2018	100.0%	28.74	133.62	104.89	3.65	
19.10	7540	98.2%	78.40	216.67	138.27	1.76	
19.11	7544	100.0%	17.83	22.03	4.20	0.24	
19.20	7547	99.2%	39.53	159.64	120.11	3.04	
19.30	7546	99.2%	14.52	37.61	23.09	1.59	
19.40	1184	99.2%	49.38	193.98	144.60	2.93	
19.50	7543	98.2%	51.26	191.91	140.66	2.74	
19.60	7542	100.0%	24.62	29.73	5.12	0.21	
19.70	1205	98.2%	74.46	219.49	145.04	1.95	
19.80	807	100.0%	21.39	24.60	3.21	0.15	
19.90	329	100.0%	3.63	3.63	0.00	0.00	
20.00	7539	100.0%	50.21	50.87	0.66	0.01	
21.10	2343	86.7%	389.85	381.45	-8.40	**-0.02**	
21.20	1306	89.4%	416.17	444.45	28.28	0.07	
21.30	1856	89.4%	414.83	443.95	29.12	0.07	
21.40	7536	89.4%	418.27	445.77	27.50	0.07	
21.50	7537	100.0%	49.28	49.28	0.00	0.00	
21.60	1312	89.4%	418.27	445.77	27.51	0.07	
22.10	7583	100.0%	20.04	50.52	30.48	1.52	
22.20	7584	97.1%	101.94	116.46	14.51	0.14	
22.30	7585	99.2%	90.47	98.04	7.57	0.08	
22.40	7586	100.0%	9.78	24.36	14.58	1.49	
22.50	7310	100.0%	84.16	84.32	0.16	0.00	
22.55	7315	100.0%	78.63	79.22	0.59	0.01	
22.60	7588	100.0%	43.93	43.98	0.05	0.00	
22.61	7333	100.0%	23.41	23.41	0.00	0.00	
22.62	7345	100.0%	4.36	4.36	0.00	0.00	
22.70	7587	100.0%	37.27	37.65	0.38	0.01	
22.71	7321	100.0%	19.66	19.75	0.08	0.00	
22.80	7617	100.0%	12.68	36.87	24.18	1.91	
22.81	7364	100.0%	5.18	17.76	12.58	2.43	
22.82	7361	100.0%	4.92	13.98	9.06	1.84	
22.90	7365	100.0%	4.26	10.38	6.13	1.44	
23.10	7580	94.8%	121.23	150.84	29.61	0.24	
23.20	7275	97.1%	121.31	145.11	23.80	0.20	

Peak Flow at Flow Nodes (Regional Storm)

Flow Node #	Hyd #	Areal Reduction Factor	Existing (m^3/s)	Future (m^3/s)	Difference (m^3/s)	Difference (%)	Comments
24.10	7582	100.0%	61.33	67.69	6.36	0.10	
24.11	7435	100.0%	14.52	14.52	0.00	0.00	
24.12	7618	100.0%	39.48	44.74	5.26	0.13	
24.13	7431	100.0%	22.96	24.58	1.62	0.07	
24.20	7581	98.2%	25.15	57.78	32.63	1.30	
24.21	7403	99.2%	26.19	55.39	29.20	1.12	
25.00	7388	97.1%	91.45	140.70	49.25	0.54	
25.01	7451	100.0%	2.84	2.84	0.00	0.00	
25.02	7619	97.1%	82.47	122.66	40.19	0.49	
25.10	7579	96.3%	127.32	180.05	52.74	0.41	
25.20	7396	98.2%	81.39	119.82	38.43	0.47	
26.10	7576	93.5%	251.33	367.29	115.95	0.46	
26.20	7249	93.5%	250.81	366.93	116.12	0.46	
26.21	7578	100.0%	62.60	62.79	0.20	0.00	
26.30	7577	93.5%	209.92	325.69	115.77	0.55	
26.40	7258	94.8%	204.73	321.23	116.50	0.57	
27.00	435	100.0%	123.53	123.53	0.00	0.00	
27.01	434	100.0%	11.47	11.47	0.00	0.00	
27.10	7570	74.4%	771.26	788.77	17.51	0.02	
27.20	1087	74.4%	772.46	789.36	16.90	0.02	
27.30	1109	76.6%	746.81	777.70	30.90	0.04	
27.31	7571	74.4%	772.46	789.36	16.90	0.02	
27.40	1073	76.6%	747.28	776.66	29.38	0.04	
27.50	1298	76.6%	817.54	831.60	14.06	0.02	
27.60	1258	76.6%	817.99	832.83	14.84	0.02	
28.00	1890	99.2%	57.55	57.73	0.19	0.00	
29.10	1067	94.2%	79.22	79.81	0.59	0.01	
29.20	1879	94.8%	76.04	76.46	0.42	0.01	
29.40	1337	96.3%	76.34	75.59	-0.76	**-0.01**	Timing of the Hydrographs at AddHyd J72
29.50	1740	97.1%	73.94	74.18	0.25	0.00	
30.00	1124	99.2%	94.58	94.58	0.00	0.00	
31.00	7601	99.2%	61.63	61.63	0.00	0.00	
31.20	1342	100.0%	45.67	45.67	0.00	0.00	
31.40	479	100.0%	12.76	12.76	0.00	0.00	
32.10	1395	95.4%	196.23	186.92	-9.31	**-0.05**	Timing of the Hydrographs Catchment 32.24 change from NasHyd to StandHyd
32.20	732	99.2%	156.30	156.30	0.00	0.00	
32.21	455	100.0%	6.72	6.70	-0.02	0.00	
32.22	826	100.0%	17.20	24.34	7.14	0.41	
32.24	499	100.0%	4.95	7.54	2.60	0.53	
32.30	7598	100.0%	12.78	14.49	1.71	0.13	
32.31	1198	100.0%	9.09	10.59	1.49	0.16	
32.32	501	100.0%	2.87	3.67	0.80	0.28	
32.33	500	100.0%	4.05	6.18	2.13	0.53	
32.40	7597	95.4%	183.69	177.07	-6.62	**-0.04**	Timing of the Hydrographs Catchment 32.24 change from NasHyd to StandHyd
32.41	1895	97.1%	184.84	177.86	-6.99	**-0.04**	Timing of the Hydrographs Catchment 32.24 change from NasHyd to StandHyd
32.42	1734	98.2%	161.45	161.45	0.00	0.00	
32.70	7596	100.0%	20.34	27.72	7.38	0.36	
33.10	1135	99.2%	56.30	65.04	8.74	0.16	
33.11	7594	97.1%	85.33	92.73	7.40	0.09	
33.12	7595	92.0%	268.98	263.58	-5.40	**-0.02**	Timing of the Hydrographs Catchments 32.24, 32.25 change from NasHyd to StandHyd
33.13	2006	99.2%	73.27	80.79	7.53	0.10	
33.14	524	100.0%	9.12	14.27	5.15	0.56	
33.15	1907	98.2%	79.96	87.31	7.35	0.09	
33.16	1318	98.2%	83.54	90.81	7.27	0.09	
33.30	1652	94.2%	270.63	258.94	-11.69	**-0.04**	Timing of the Hydrographs Catchments 32.24, 32.25 change from NasHyd to StandHyd
34.00	2066	98.2%	91.47	91.46	0.00	0.00	
34.20	902	100.0%	45.44	45.44	0.00	0.00	
34.30	534	100.0%	19.21	19.21	0.00	0.00	
34.40	533	100.0%	10.34	10.34	0.00	0.00	
35.10	1380	94.2%	127.71	130.28	2.57	0.02	
35.20	1424	94.8%	123.20	125.81	2.61	0.02	
35.30	7604	100.0%	22.96	24.68	1.72	0.07	
35.40	7605	94.8%	99.20	99.60	0.40	0.00	Timing of the Hydrographs Catchments 35.11 change from NasHyd to StandHyd
35.50	1915	94.8%	99.21	98.14	-1.07	**-0.01**	Timing of the Hydrographs Catchments 35.11 change from NasHyd to StandHyd
35.70	926	97.1%	100.62	100.61	-0.01	0.00	

Peak Flow at Flow Nodes (Regional Storm)

Flow Node #	Hyd #	Areal Reduction Factor	Existing	Future	Difference	Difference	Comments
			(m^3/s)	(m^3/s)	(m^3/s)	(%)	
36.00	7606	99.2%	74.11	69.81	-4.29	**-0.06**	Timing of the Hydrographs Catchments 36.04 split into 36.04B (NasHyd) and 36.04A (StandHyd)
36.10	724	100.0%	72.83	68.11	-4.72	**-0.06**	Timing of the Hydrographs Catchments 36.04 split into 36.04B (NasHyd) and 36.04A (StandHyd)
36.20	7608	100.0%	32.36	31.47	-0.88	**-0.03**	Timing of the Hydrographs Catchments 36.04 split into 36.04B (NasHyd) and 36.04A (StandHyd)
36.40	7609	100.0%	40.59	36.69	-3.90	**-0.10**	Timing of the Hydrographs Catchments 36.05 change from NasHyd to StandHyd
37.00	729	99.2%	145.52	145.62	0.10	0.00	
37.10	7610	99.2%	48.22	48.22	0.00	0.00	
37.20	7611	99.2%	98.53	98.63	0.10	0.00	
37.30	1477	100.0%	77.67	77.78	0.10	0.00	
37.40	1025	100.0%	41.91	41.91	0.00	0.00	
37.50	7612	100.0%	36.20	36.31	0.11	0.00	
38.10	7607	95.4%	175.51	168.10	-7.41	**-0.04**	Timing of the Hydrographs Catchments 38.02 change from NasHyd to StandHyd
38.30	1940	97.1%	163.60	163.72	0.11	0.00	
39.00	726	92.0%	639.79	671.56	31.77	0.05	
39.10	590	100.0%	2.71	3.66	0.95	0.35	
39.20	1796	92.7%	341.47	331.61	-9.85	**-0.03**	Timing of the Hydrographs Catchments 35.14 change from NasHyd to StandHyd
39.30	1456	95.4%	237.83	224.74	-13.09	**-0.06**	Timing of the Hydrographs Catchments 35.14 change from NasHyd to StandHyd
39.50	1776	94.2%	344.80	329.16	-15.64	**-0.05**	Timing of the Hydrographs Catchments 35.14 change from NasHyd to StandHyd
39.60	7603	94.8%	241.59	228.44	-13.15	**-0.05**	Timing of the Hydrographs Catchments 35.14 change from NasHyd to StandHyd
40.10	7590	89.4%	647.44	675.78	28.34	0.04	
40.20	1469	92.0%	642.64	676.69	34.04	0.05	
40.25	7593	100.0%	49.93	49.96	0.03	0.00	
40.30	1373	89.4%	636.63	675.74	39.12	0.06	
41.00	1819	97.1%	64.03	68.92	4.90	0.08	
41.20	1393	99.2%	44.41	39.90	-4.50	**-0.10**	Timing of the Hydrographs Catchments 41.05 change from NasHyd to StandHyd
41.30	846	100.0%	40.85	40.85	0.00	0.00	
42.10	7591	94.2%	82.83	109.59	26.76	0.32	
42.20	1690	95.4%	73.21	99.29	26.08	0.36	
43.00	1012	97.1%	84.94	107.49	22.55	0.27	
43.20	857	100.0%	71.33	76.14	4.81	0.07	
44.10	7592	94.2%	111.87	149.67	37.80	0.34	
44.20	1307	94.8%	106.43	144.88	38.45	0.36	
45.00	7569	84.0%	799.79	890.93	91.15	0.11	
45.10	1028	84.0%	795.81	886.84	91.03	0.11	
45.20	7572	98.2%	120.32	135.03	14.71	0.12	
45.30	7573	84.0%	767.80	850.84	83.04	0.11	
45.40	2074	89.4%	829.09	955.23	126.14	0.15	
46.00	1503	98.2%	151.03	153.79	2.76	0.02	
46.10	681	100.0%	48.43	49.22	0.79	0.02	
46.30	1532	99.2%	87.48	88.78	1.30	0.01	
47.10	968	95.4%	276.69	279.30	2.61	0.01	
47.20	1559	96.3%	216.59	217.90	1.31	0.01	
48.10	7561	89.4%	532.74	534.95	2.21	0.00	
48.20	1544	92.0%	518.30	521.30	3.00	0.01	
48.30	1593	94.2%	407.10	409.92	2.82	0.01	
48.40	1612	94.2%	359.31	361.72	2.40	0.01	
49.10	1957	71.7%	1209.19	1432.17	222.99	0.18	
49.20	1319	74.4%	1232.81	1471.58	238.77	0.19	
49.30	975	71.7%	1203.68	1430.19	226.51	0.19	
49.40	7565	99.2%	103.49	103.49	0.00	0.00	
49.50	1631	71.7%	1184.83	1412.63	227.80	0.19	
49.70	1005	73.3%	1197.26	1449.68	252.43	0.21	
49.80	7568	100.0%	77.43	77.43	0.00	0.00	
49.90	7616	73.3%	1178.40	1434.42	256.02	0.22	
50.00	1649	70.2%	1553.63	1770.59	216.96	0.14	
50.10	1000	69.0%	1497.36	1702.08	204.72	0.14	
50.20	770	71.7%	1585.26	1808.21	222.95	0.14	
51.10	1442	89.4%	822.47	988.84	166.37	0.20	