



2018-04-03

Town of Pelham
20 Pelham Town Square
P.O. Box 400
Fonthill, ON L0S 1E0

c/o Adam Keane, P.Eng., Upper Canada Consultants

Subject: 2017 Hydrologic Monitoring Program

Dear Sir:

We are pleased to provide you the 2017 Hydrologic Monitoring Report for the East Fonthill Development.

The report provides background information on the physical setting, details of the work program completed, and a presentation of the monitoring data. Conclusions and recommendations for future monitoring programs are also included in the report. Relevant technical data is appended.

RECEIVED

BACKGROUND

Development activities are currently being undertaken at the proposed Village of East Fonthill Phase 1 Development. As part of the development, a storm water management pond was constructed at the northeast corner of the development area to manage storm water runoff. Pond construction occurred in 2015 and was fully constructed by October 2015. The pond has three inlets and one outlet, which discharges to the Twelve Mile Creek watershed. The storm water management pond is located on the southwest corner of Regional Road 20 and Rice Road, in the Town of Pelham, in the Regional Municipality of Niagara, as shown on Figure 1.

As part of the development, hydrologic monitoring of the storm water management pond is required. WSP Canada Limited (WSP) was retained to complete the hydrologic monitoring program, including the field investigation and reporting.

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OBJECTIVE AND SCOPE

The objective of the hydrologic monitoring program for the Village of East Fonthill Development is to evaluate if the storm water management pond is functioning as designed to ensure no significant adverse impacts upon the receiving watercourse.

The monitoring program included a data collection component, and an analysis and interpretation component. This report provides the results of the hydrologic monitoring program activities that occurred over the period of the 2017 calendar year.

PHYSICAL SETTING

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The site is located to the northeast of the Fonthill Kame Complex within the Haldimand Clay Plain physiographic region (Chapman and Putnam, 1984). The fine-grained glaciolacustrine overburden in the area, deposited by pro glacial Lake Warren, varies in thickness between 23 and 35 metres.

Local overburden thickness is mapped as approximately 21 m east of the site (near Highway 406) to 38 m west of the site (near Station Road) (Vos, 1969). The bedrock contact is located at approximately 160 mASL east of the site (near Highway 406) to 145 mASL west of the site (near Station Road) (Feenstra, 1981b). The underlying bedrock is a succession of Palaeozoic beds that dip slightly southward, toward Lake Erie.

Typical quaternary geology of the area (Fenco MacLaren, 1995) includes the following units:

Table 1 Quaternary Geology

GEOLOGIC UNIT	DESCRIPTION
QUATERNARY DEPOSITS	Upper Glaciolacustrine Unit The surficial overburden in the area is mapped as an upper glaciolacustrine unit that is composed of a brown, reddish, and grey silty clay to clayey silt that is massive to thinly-stratified. This unit may be present from ground surface to approximately 10 metres below ground surface.
	Halton Till Underlying the upper glaciolacustrine unit is the Halton Till, a brown to grey, massive to laminated clayey silt with a sand content of less than 20 percent. The till is approximately 10 metres thick.
	Lower Glaciolacustrine Unit Beneath the Halton Till is a lower glaciolacustrine unit of silty clay that is approximately 10 metres thick.
	Lower Till Unit The Lower Till unit consists of sandy silt with lenses of silt, sand, and gravel. The Lower Till unit is approximately 5 metres thick.
BEDROCK	Salina Formation The bedrock consists of inter-bedded dolostones and shales of the Salina Formation.

The upper glaciolacustrine unit, the Halton Till, and the lower glaciolacustrine unit are reportedly fairly uniform and predictable. The sand and gravel lenses within the lower till unit are considered non-uniform and unpredictable since they are laterally variable and discontinuous.

Generally, hydraulic conductivity in overburden soils is low due to the fine-grained nature of the material. Local topography (including existing ditches and swales) and seasonal precipitation strongly influence groundwater flow through fractures in the shallow, weathered overburden.

12.1.1.1 Rice Road Stormwater Management Pond

The pond is located on the Rice Road Tributary within the Twelve Mile Creek watershed. The pond has three inlet structures that collect runoff from roadside ditches along the east and west sides of Rice Road (south of Regional Road 20), and from manholes along the south side of Regional Road 20 (west of Rice Road). The pond discharges north through an existing 1.25 m diameter concrete culvert beneath Regional Road 20 into the Rice Road Tributary. On the north side of Regional Road 20, the Rice Road Tributary receives surface water runoff from Regional Road 20 storm drains and from the roadside ditch located on the north side of Regional Road 20. The collected runoff then flows north into the narrowly confined, densely wooded channel of the Rice Road Tributary. The Rice Road Tributary flows north to Twelve Mile Creek, ultimately to Lake Ontario.

12.1.1.2 Rice Road Stormwater Monitoring

The hydrologic monitoring program for the Village of East Fonthill Development includes surface water quality monitoring and surface water flow and temperature monitoring.

The monitoring program will consist of two phases:

- Construction Monitoring – monitoring for the duration of the Village of East Fonthill Development construction activities to determine the hydrologic conditions during construction; and,
- Post-Construction Monitoring – monitoring for two full years once the Village of East Fonthill Development construction activities are completed to determine if the proposed storm water management strategy is functioning as designed.

This report presents the results of the construction monitoring phase, completed during 2017.

Five surface water monitoring stations were established for the monitoring program, as shown on Figure 1 and described below. As noted above, the north storm water management pond was fully constructed by October 2015. The locations of the stations included below.

- SW1 – Inlet to pond, northwest corner of pond
- SW2 – Inlet to pond, northeast corner of pond
- SW3 – Inlet to pond, east side of pond
- SW4 – Outlet from pond to box culvert beneath Regional Road 20 to the Rice Road Tributary
- SW5 – Downstream in the Rice Road Tributary, approximately 40 metres north of Regional Road 20

The monitoring program is summarized in Table 2 and discussed in the following sections.

Table 2 2017 Monitoring Program

SURFACE WATER STATION ID	SURFACE WATER QUALITY MONITORING*	SURFACE WATER FLOW MONITORING (INCLUDING TEMPERATURE)	
		MANUAL**	ELECTRONIC***
SW1	✓	✓	Temperature
SW2	✓	✓	Temperature
SW3	✓	✓	Temperature
SW4	✓	✓	Water level, velocity, temperature
SW5	n/a	✓	Water level, velocity, temperature

Notes:

* Frequency – five times per year (weather-based): spring freshet, two dry events and two storm events (preferably >25 mm of precipitation)

Parameters – TSS (laboratory); pH/conductivity/temperature/DO (field)

** Frequency – five times per year with sampling events

*** Frequency – continuous electronic measurement at 10-minute intervals during non-freezing conditions (approximately March to November (weather permitting))

Electronic flow and temperature monitoring in the pond was initiated in spring 2015. Pond construction activities, however, were not completed until October 2015. Additionally, in 2016 the pond was not operating at full capacity due to the time required for the pond to fill. Therefore, it is interpreted that the monitoring data in 2015 and 2016 may not capture the pond operating as it is intended.

SURFACE WATER QUALITY

The surface water quality monitoring program includes five sampling events throughout the year at stations SW1, SW2, SW3 and SW4. The events are undertaken to correspond with specific weather conditions that include the spring freshet (i.e., snow melt runoff) (approximately March/April), twice during dry periods (April/May and September/October), and twice during storm events (preferably >25 mm of precipitation) (May/June and October/November). The surface water monitoring protocols are presented in Table 3.

The surface water samples are analysed for the following water quality parameters:

- Total Suspended Solids (laboratory)
- pH, conductivity, temperature and dissolved oxygen (field measurement only)

Table 3 Monitoring Protocols and Procedures

SURFACE WATER SAMPLING

Attempts are made to schedule surface water monitoring events to correspond with intended freshet, dry, or wet event monitoring.

Surface water samples at each location are collected prior to flow measurement.

Surface water samples are collected directly into the laboratory provided bottles that do not have preservatives. For bottles with preservatives added, standard grab sampling methods are used and then the water is decanted into laboratory provided bottles with the appropriate preservatives. The sample container is pointed upstream and care is taken to avoid particulate and organic matter in the water.

Sample bottles are marked, labelled, and sealed in the field.

Samples are stored in ice packed coolers, and delivered or couriered to the laboratory at the end of each day, under Chain of Custody procedures.

Field parameters (pH, conductivity, temperature and dissolved oxygen) are measured from a separate beaker of water using calibrated instruments.

When the flows are present, stream flow discharge is calculated based on the cross-sectional area of the stream, and the water velocity.

A cross-sectional profile of the stream is determined by measuring the cross sectional width and depth of the wetted stream at incremental sections. The velocity is measured using an electromagnetic velocity meter by measuring the average velocity of each section.

Field notes including date, weather, time, sampling data, staff, field parameters, visual observations, and number of bottles are marked on the Water Sampling Field Data sheets in the Project Field Book.

SURFACE WATER FLOW AND TEMPERATURE

Manual flow measurements are completed at each surface water station during each monitoring event. Manual flow measurements are done generally following the USGS area-velocity method.

Future monitoring events will include submerged electronic temperature loggers at stations SW1, SW2 and SW3 to record water temperature at 10 minute intervals on a seasonal basis (i.e., during non-freezing conditions), and submerged electronic flow monitoring equipment at stations SW4 and SW5 to measure water level, velocity and temperature at 10-minute intervals on a seasonal basis (i.e., during non-freezing conditions).

MONITORING RESULTS

Collection of surface water quality samples and flow measurements was attempted five times in 2017 to coincide with the following weather events:

- Spring Freshet/Spring Melt event
- Dry events (without precipitation)
- Wet events (with precipitation)

The table below indicates the dates of the monitoring events. It is noted that the outlet station (SW4) was not sampled in September 2017 as the pond was not discharging at the time the sampling event was conducted.

Table 4 Sampling Event Dates

YEAR	SPRING FRESHET	DRY EVENTS (WITHOUT PRECIPITATION)	WET EVENTS (WITH PRECIPITATION)
2017	28 March	6 June 12 December	3 May 22 September

SURFACE WATER QUALITY

Surface water samples were submitted to AGAT Laboratories of Mississauga for analysis TSS. Field parameters pH, conductivity, temperature, and DO were measured at the time of sample collection.

Water quality results are presented in Table B 1; Appendix B. Laboratory certificates of analysis for the current reporting period are included in Appendix B. The results were compared to the Provincial Water Quality Objectives (PWQO), where available.

The 2017 water quality results met the PWQOs.

Time-concentration graphs of parameter concentrations at the surface monitoring stations are presented in Figure B-1. During 2017, parameter concentrations generally were similar at the inlet stations (SW1, SW2 and SW3) and the outlet station (SW4).

In 2017, the TSS concentrations ranged from less than 10 mg/L to 78 mg/L. It is noted that the TSS concentration at the outlet (SW4) has decreased overall since completion of the pond construction activities.

SURFACE WATER FLOW AND TEMPERATURE

Manual flow measurements were obtained from each surface water station at the time of the sampling events listed in Section 3.1.

Manual flow measurements are presented in Table C-1. Electronic flow measurements at SW4 and SW5 are presented on Figure C-1 and Figure C-2 respectively. Flow rates typically were highest at the pond outlet (SW4) during each event. The flow rates typically corresponded to the type of event; that is, higher flows during the freshet and storm events, and lower flows during the dry period sampling events.

As previously mentioned, pond construction activities in 2015 and the pond not operating at full capacity in 2016 have impacted the monitoring data. For example, high flow rates observed early in 2015 are likely attributed to pumping of water directly to the outlet structure to accommodate construction activities. Additionally, low flow rates observed in 2016 are possibly attributed to the pond not operating at full capacity.

Electronic and manual temperature monitoring is presented on Figure C-3. The data indicates that, in the summer months, the outlet structures are effectively cooling the temperature of the pond water prior to reaching the downstream location (SW5).

It is noted that electronic monitoring of temperature within the pond was not initiated in 2015 due to the ongoing construction of the pond. In 2016, the electronic temperature devices were lost and/or stolen from SW1, SW2 and SW3 and, therefore, only manual temperature data is available at these locations.

CLIMATE DATA

Climate data is included in Appendix D. Table D-1 summarizes the 2017 climate data from the Environment Canada Welland-Pelham climatological station.

Normal annual precipitation for the area is approximately 997.4 mm, based on the 1981-2010 30-Year Normals calculated from Environment Canada climatological station data located in Welland (approximately six kilometres north of the study area).

A total of 823 mm of precipitation was received in 2017 in the area, based on the total precipitation measured at the Environment Canada Welland-Pelham climatological station, indicating that the volume of precipitation received in 2017 was below normal.

2018 MONITORING PROGRAM

The monitoring program should be continued in 2018. The monitoring program is discussed in detail in Section 2 of this report and summarized below in Table 5. The 2018 program will consist of the construction monitoring phase.

Table 5 2018 Monitoring Program

SURFACE WATER STATION ID	SURFACE WATER QUALITY MONITORING*	SURFACE WATER FLOW MONITORING (INCLUDING TEMPERATURE)	
		MANUAL**	ELECTRONIC***
SW1	✓	✓	Temperature
SW2	✓	✓	Temperature
SW3	✓	✓	Temperature
SW4	✓	✓	Water level, velocity, temperature
SW5	n/a	✓	Water level, velocity, temperature

Notes:

* Frequency – five times per year (weather-based): spring freshet, two dry events and two storm events (preferably >25 mm of precipitation)

Parameters – TSS (laboratory); pH/conductivity/temperature/DO (field)

** Frequency – five times per year with sampling events

*** Frequency – continuous electronic measurement at 10-minute intervals during non-freezing conditions (approximately March to November (weather permitting))

Cumulative Assessment Report

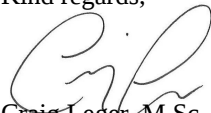
Based on the findings of the 2017 monitoring program results presented in this report, the following conclusions are provided:

- The 2017 water quality results met the PWQOs.
- TSS concentration at the outlet (SW4) has decreased overall since completion of the pond construction activities.
- Flow rates were typically highest at the pond outlet (SW4) during each event. The flow rates corresponded to the type of event; that is, higher flows during the freshet and storm events, and lower flows during the dry events.
- Electronic and manual temperature monitoring indicates that, in the summer months, the outlet structures are effectively cooling the temperature of the pond water prior to reaching the downstream location (SW5).

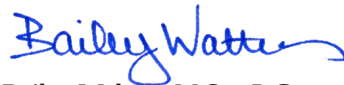
Based on the findings of the 2017 monitoring program, the following recommendations are provided for consideration:

- The monitoring program should be continued in 2018 as outlined in Section 4 of this report.

Kind regards,



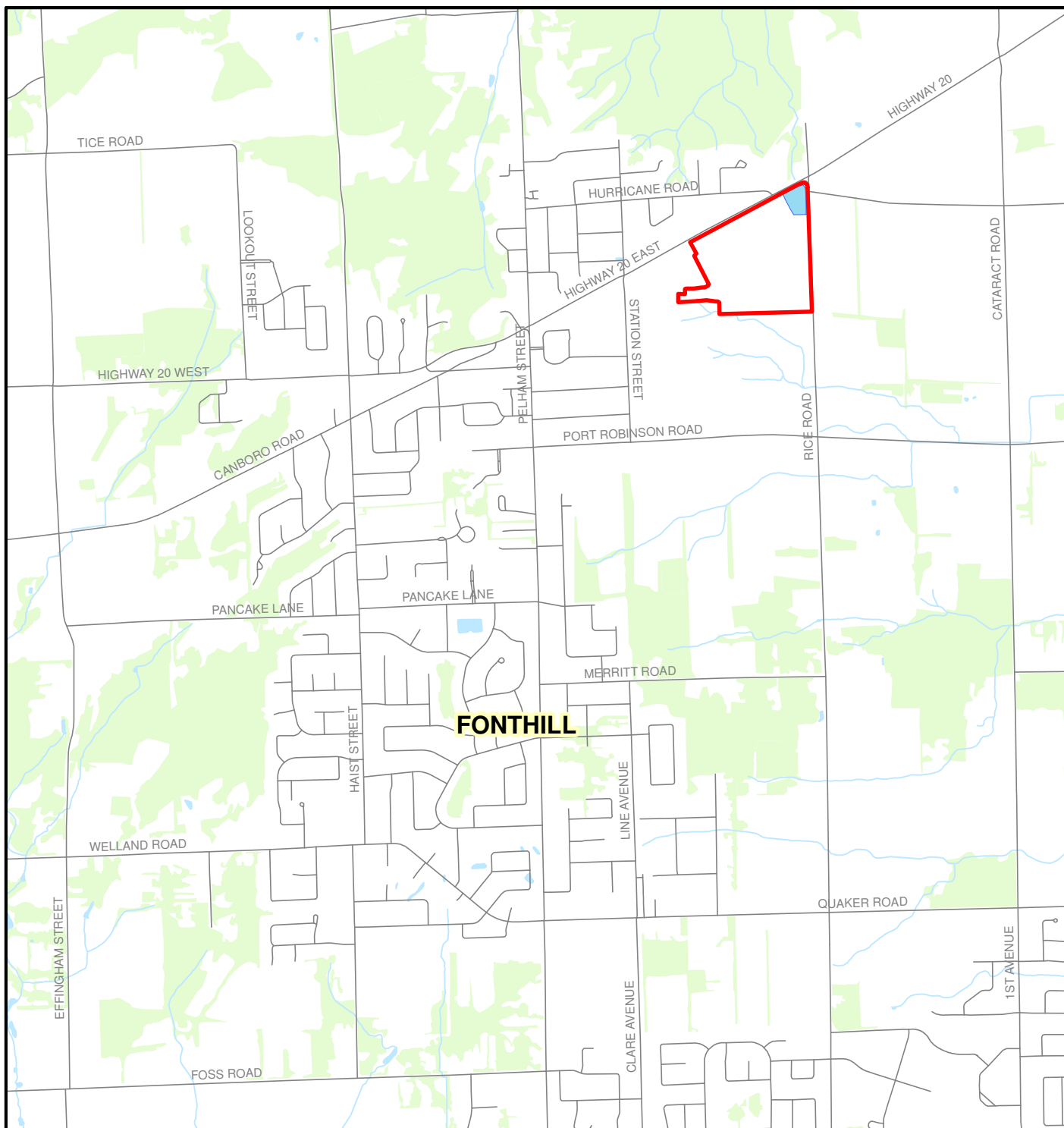
Craig Leger, M.Sc., C.E.T.
Project Technologist, Environment



Bailey Walters, M.Sc., P.Geo.
Project Geoscientist, Environment

Encl. Appendix A: Work Program, Appendix B: SW Chemistry, Appendix C: SW Flows & Temperatures, Appendix D: Climate

WSP ref.: 151-02261-00 200



LEGEND

- EAST FONTHILL DEVELOPMENT
- STORM WATER MANAGEMENT POND



Data Source: Ministry of Natural Resources,
Ontario Base Mapping, March 2014.

300 150 0 300 Metres

SITE LOCATION PLAN

HYDROLOGIC MONITORING -
2017 MONITORING REPORT
EAST FONTHILL DEVELOPMENT
For Upper Canada Consultants

□ A □ □ MARCH 2017

SCALE: 1:25000

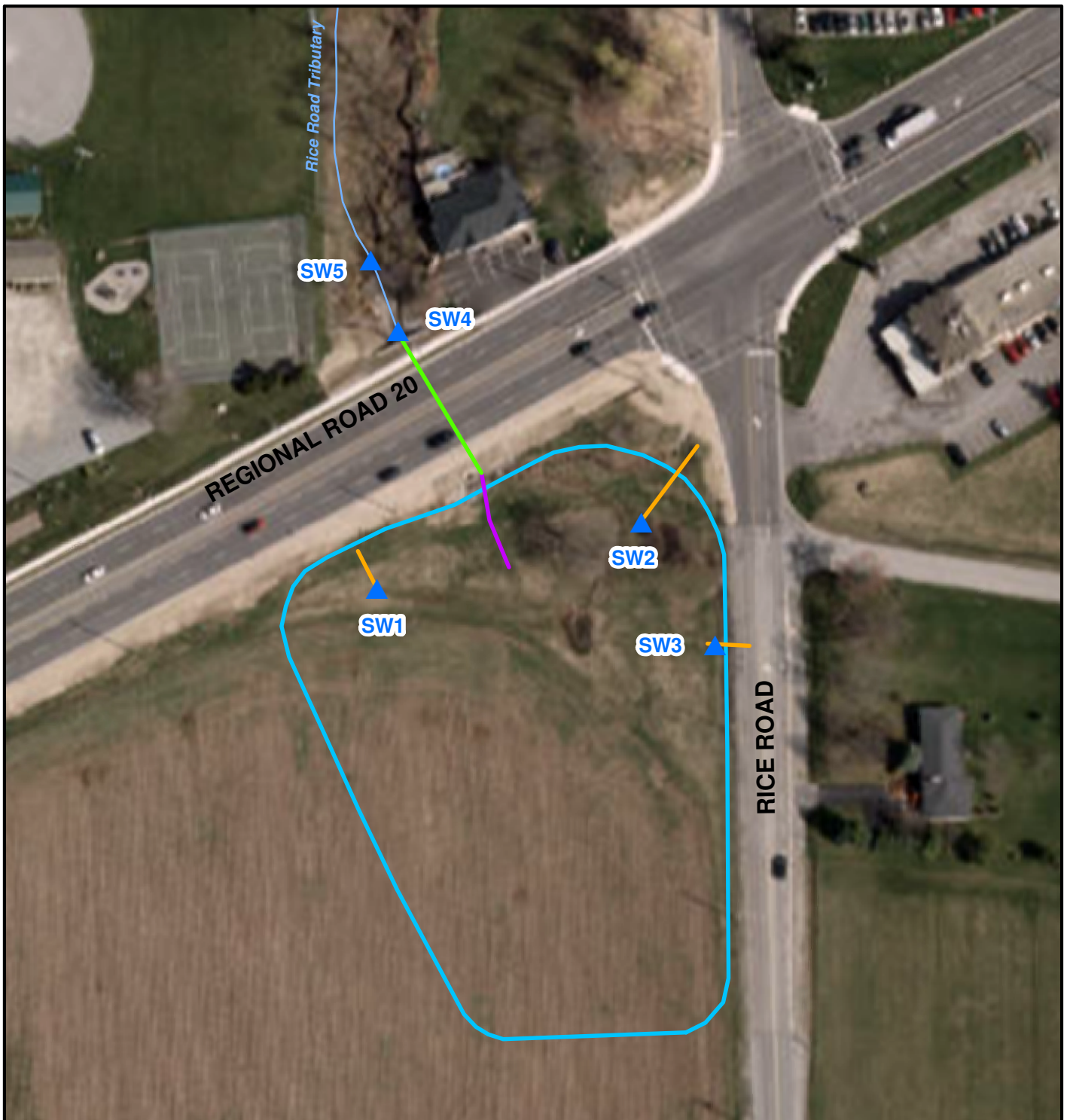
PROJECT: 151-02661-00

FILE. NO.: 151-02661-00 200 F1



FIGURE

1



LEGEND

-  STORMWATER MANAGEMENT POND OUTLINE
-  CULVERT
-  OUTLET PIPE
-  INLET CULVERT
-  WATERCOURSE
-  SURFACE WATER STATIONS



Data Source: Ministry of Natural Resources,
Ontario Base Mapping, March 2014.
Imagery, Region of Niagara, 2013.

10 5 0 10 Metres

SITE PLAN

HYDROLOGIC MONITORING -
2017 MONITORING REPORT
EAST FONTHILL DEVELOPMENT
For Upper Canada Consultants

DATE: MARCH 2017

SCALE: 1:1250

PROJECT: 151-02661-00

FILE. NO.: 151-02661-00 F2



FIGURE

2

APPENDIX

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June 26, 2017

Town of Pelham
20 Pelham Town Square
P.O. Box 400
Fonthill, ON L0S 1E0

c/o Adam Keane, P.Eng., Upper Canada Consultants

**Subject: 2017 Monitoring Program
Fonthill East**
Our file 151-02661-00

Dear Sir:

We are pleased to provide a work plan and cost estimate to conduct the 2017 monitoring program as part of the long term hydrologic monitoring of the development activities at the Village of Fonthill East Phase 1 development, located on the south side of Regional Road 20, west of Rice Road.

The monitoring program will continue to monitor the storm water management pond that was constructed at the north east corner of the Site to manage storm water runoff. The pond has three points of inlet and a single point of discharge (discharging north across Regional Road 20 through an existing culvert). Storm water discharging from this pond will ultimately drain into the Twelve Mile Creek watershed.

MONITORING PROGRAM

As discussed, the monitoring program is required to monitor surface water quality and surface water flow relating to the aforementioned storm water management facilities. The monitoring program will be broken down into the following two segments:

- Monitoring during construction: monitoring for the duration of the construction activities
- Post-construction monitoring: two (2) full years of monitoring to be conducted once construction activities are completed to determine if the proposed storm water management strategy is functioning as designed

Pre-construction data that was collected as part of the recent Regional Road 20 upgrades may be available from the Regional Municipality of Niagara.

SURFACE WATER QUALITY MONITORING

Surface water quality monitoring will be conducted as follows.

Suite 600
55 King Street
St. Catharines, ON, Canada L2R 3H5

Tel.: +1 905 687-1771
Fax: +1 905 687-1773
wsp.com

MONITORING STATIONS

- SW1 (Inlet)
- SW2 (Inlet)
- SW3 (Inlet)
- SW4 (Outlet (after treatment))

FREQUENCY OF SAMPLING

It is proposed that sampling be conducted at all monitoring stations during the following events:

- Spring freshet sample with melting snow.
- Two dry period samples – due to the potential for lack of base flow, at least one sample should be taken in early spring.
- Two storm event samples, preferably thunderstorms or after significant rain in a frontal storm (>25 mm precipitation).

SAMPLING PARAMETERS

Samples will be analyzed for the following water quality parameters:

- Total suspended solids
- Temperature, pH, conductivity, DO (field parameters)

SURFACE WATER FLOW MONITORING

Surface water flow monitoring will be conducted concurrent with quality monitoring activities.

MONITORING STATIONS

Manual flow measurements will be conducted at the following stations during the sampling events:

- SW1 (Inlet)
- SW2 (Inlet)
- SW3 (Inlet)
- SW4 (Outlet (after treatment))
- SW5 (Downstream of outlet (north of Regional Road 20))

FREQUENCY OF FLOW MONITORING

Manual flow measurements will be acquired during sampling events at all water quality sampling locations plus a location downstream of the outlet.

Additionally, we propose to install electronic flow monitoring equipment at the outlet station and the downstream of outlet station and temperature monitoring equipment at the three inlet stations. The flow monitoring equipment will measure water level, velocity,



and temperature on a 10-minute interval on a seasonal basis (to avoid freezing conditions).

REPORTING

The results of the surface water quality and flow monitoring will be summarized in an annual report to be submitted to the Niagara Peninsula Conservation Authority (NPCA).

MONITORING DURING CONSTRUCTION

Monitoring of surface water flows and surface water quality should begin as soon as the storm water management pond is in place to ensure the receiving watercourse is not negatively impacted during construction.

POST-DEVELOPMENT MONITORING

The post-construction data will be compared against the baseline (pre-construction data) in order to determine if the proposed storm water management strategy is functioning as designed (i.e., reducing TSS concentrations effluent to less than 80% of that in the influent, and ameliorating storm water temperature).

Annual monitoring reports will be compiled and circulated to the NPCA for review. A final post-construction monitoring report will be prepared after the completion of two full years of monitoring. This report will also be circulated to the NPCA.

A 'draft' report will be made available to the client for comment, prior to submission to the regulatory agencies.

PROJECT COSTS

Our quotation to complete the proposed monitoring program in 2017, including fieldwork, laboratory testing and reporting is approximately **\$5,300** (HST extra). The breakdown of costs is as follows:

Field technician, services and expenses	\$2,600.00
Laboratory fees	\$300.00
Report preparation	\$2,400.00
Total	\$5,300.00

WSP will require a 50% deposit upon project approval.

Kind regards,

Craig Leger, M.Sc., C.E.T.
Project Technologist, Environment

WSP ref.: 151-02661-00

APPENDIX

B

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CH□M□□□R□

Table B-1
Surface Water Quality Data
East Fonthill Development



SW1												
Parameter		PWQO	3/12/2015	5/13/2015	6/9/2015	9/30/2015	10/29/2015	3/22/2016	4/26/2016	6/29/2016	10/21/2016	11/11/2016
Event Type			Freshet	Dry	Wet	Dry	Wet	Freshet	Wet	Dry	Wet	Dry
Event Phase			C	C	C	C	C	C	C	C	C	C
Field Analyses												
H		7	7		7	7			2	2	7	
Cd		70	121	70	1	17		1	1		7	
r		0	11	10	1	11			22.7	1		
d		11	11		7			7	4.5		7	
r		7	2		7	2			0			
A		C	C		C			C				C
Laboratory Analyses												
d		2	1		10	2	10		2			
SW2												
Parameter		PWQO	3/12/2015	5/13/2015	6/9/2015	9/30/2015	10/29/2015	3/22/2016	4/26/2016	6/29/2016	10/21/2016	11/11/2016
Event Type			Freshet	Dry	Wet	Dry	Wet	Freshet	Wet	Dry	Wet	Dry
Event Phase			C	C	C	C	C	C	C	C	C	C
Field Analyses												
H		7	7		7	0			1		0	
Cd		0	17	71	10	707	1	1	21	1	0	
r			10	2	17	1	11		2	1	10	
d		2		7	7		11	12	3.2		7	
r		7				2			0			
A		C	C				C					C
Laboratory Analyses												
d		10	10	10	17		10	2	10			
SW3												
Parameter		PWQO	3/12/2015	5/13/2015	6/9/2015	9/30/2015	10/29/2015	3/22/2016	4/26/2016	6/29/2016	10/21/2016	11/11/2016
Event Type			Freshet	Dry	Wet	Dry	Wet	Freshet	Wet	Dry	Wet	Dry
Event Phase			C	C	C	C	C	C	C	C	C	C
Field Analyses												
H		7	Dry		Dry	0			0	0	7	
Cd		122		2			12	1	00	20	00	
r		0		1			10	7	10	2	1	
d				0			7	12	12	4.5	7	1
r		7								0		
A		C					C					C
Laboratory Analyses												
d		10		1		0	10	2	10	2		
SW4												
Parameter		PWQO	3/12/2015	5/13/2015	6/9/2015	9/30/2015	10/29/2015	3/22/2016	4/26/2016	6/29/2016	10/21/2016	11/11/2016
Event Type			Freshet	Dry	Wet	Dry	Wet	Freshet	Wet	Dry	Wet	Dry
Event Phase			C	C	C	C	C	C	C	C	C	C
Field Analyses												
H		7	7		7	7			2	2	7	
Cd		120	1	2	7		1	0	1	0	0	
r		0	11	17	1	11	7	0	2	1	7	
d		11	10	2	3.4	2	10	12	2	7		
r		7	2		7	2				7		
A		C	C	C	C		C					C
Laboratory Analyses												
d		20	10	22	10	10	10	2	10	10		

[illegible]

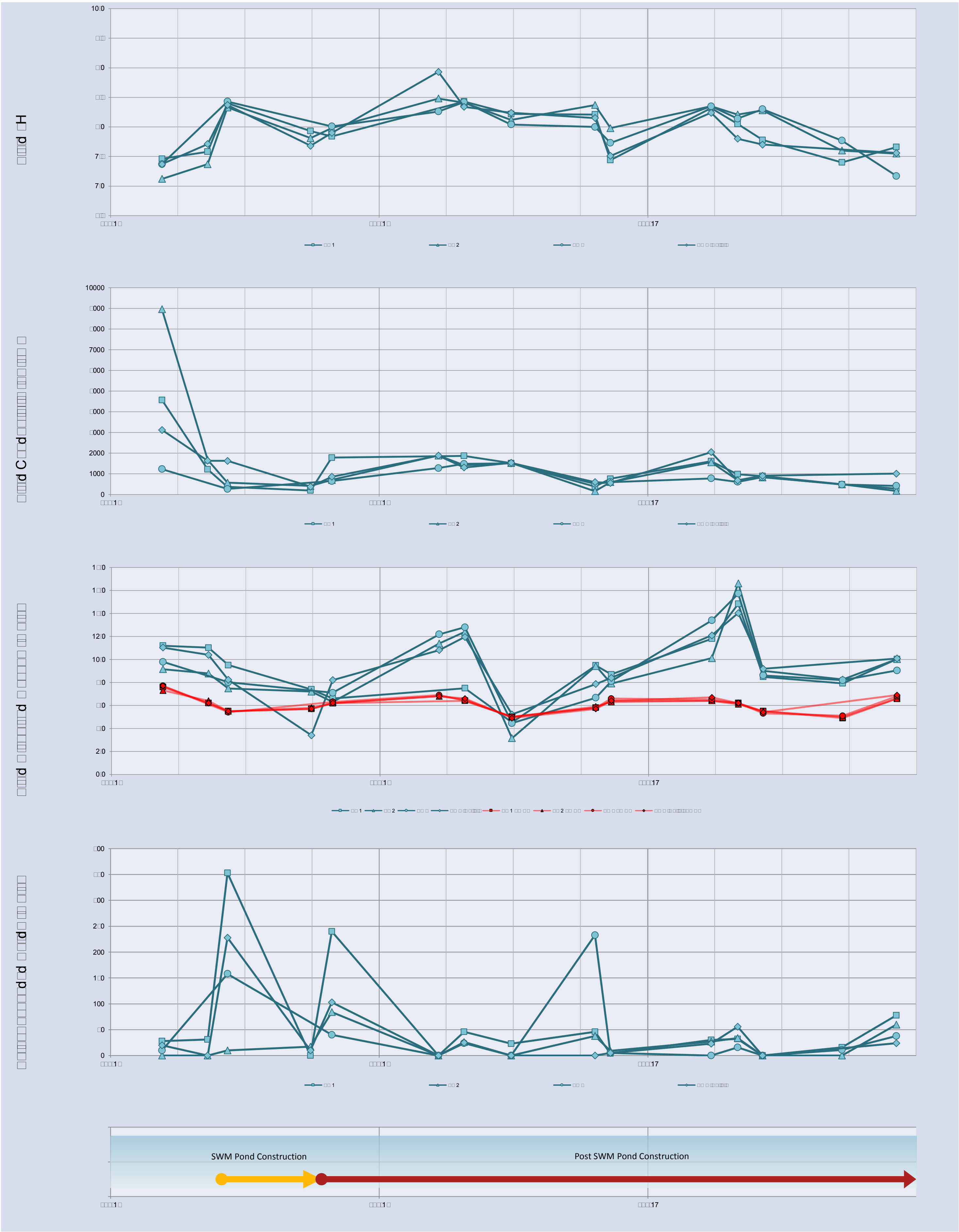
Table B-1
Surface Water Quality Data
East Fonthill Development



Parameter		PWQO	3/28/2017	5/3/2017	6/6/2017	9/22/2017	12/5/2017
Event Type	Freshet		Wet	Dry	Wet	Dry	
Event Phase							
Field Analyses							
PH				1	7	7	7/7
Cond			10	0	0	0	2
Temp			10.0	11	17	2	1
DO			11	1		7	10.0
ORP				2			
Amenity							
Laboratory Analyses							
d			0	2	10	1	7
Parameter		PWQO	3/28/2017	5/3/2017	6/6/2017	9/22/2017	12/5/2017
Event Type	Freshet		Wet	Dry	Wet	Dry	
Event Phase							
Field Analyses							
PH				2		7	7
Cond			10	700	1	0	1
Temp			10.1	12	17	22	0
DO			10.1	1	0		10.0
ORP				1		0	
Amenity							
Laboratory Analyses							
d			27		10	10	0
Parameter		PWQO	3/28/2017	5/3/2017	6/6/2017	9/22/2017	12/5/2017
Event Type	Freshet		Wet	Dry	Wet	Dry	
Event Phase							
Field Analyses							
PH				1		7	7/2
Cond			70	10		0	1
Temp			1	11.2	1	21	7.0
DO			1	1.7		2	0
ORP				2		1	
Amenity							
Laboratory Analyses							
d			10	1	10	11	
Parameter		PWQO	3/28/2017	5/3/2017	6/6/2017	9/22/2017	12/5/2017
Event Type	Freshet		Wet	Dry	Wet	Dry	
Event Phase							
Field Analyses							
PH			2	7	7/7	Dry	7
Cond			20.0	0	0		100
Temp			7	11	1		
DO			12.1	1.0	2		10.1
ORP			7	2			
Amenity							
Laboratory Analyses							
d			2		10		2

[illegible]

Figure B-1 Surface Water Quality East Fonthill Development



APPENDIX

C

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WSIP

Date (dd/mm/yyyy)	Event Type	SW1 Discharge Rate (L/sec)	SW2 Discharge Rate (L/sec)	SW3 Discharge Rate (L/sec)	SW4 Discharge Rate (L/sec)	SW5 Discharge Rate (L/sec)
12/201	r	2.0	1.0	2	1	
1/201	r	0.02	0.1	r	0.2	0
/201		10		1		
0/201	r			r		1
10/2/201		d	d	0.0	27	1
22/201	r					
2/201						7
2/201	r					0.2
1/201	r					
10/21/201		d	d	d	12	1
2/2017	r	1	1	0.7	2.2	
/2017	r	1	0	2		7
/2017			0	0	1	0
22/2017	r	0.0	0.0	0.0	r	r
12/2017			2.7	2	21.2	22.2

□□□□□□□□ □d□□□□□□ □□□□□□r□□□d□□□□□□ □r□d□□□□□□□□ □r□□□□□□□□□□□□ □□□□d□□□□□□ □r□□□□□□□□□□□□

□ □ C □ □ r □ □ □ □ □ r □ □ d □ □ □ □ □ r □ □ □ □ □ d □ □ □ □ □ r □ □ □ □ □

Figure C-1 - SW4 Flow Monitoring and Precipitation

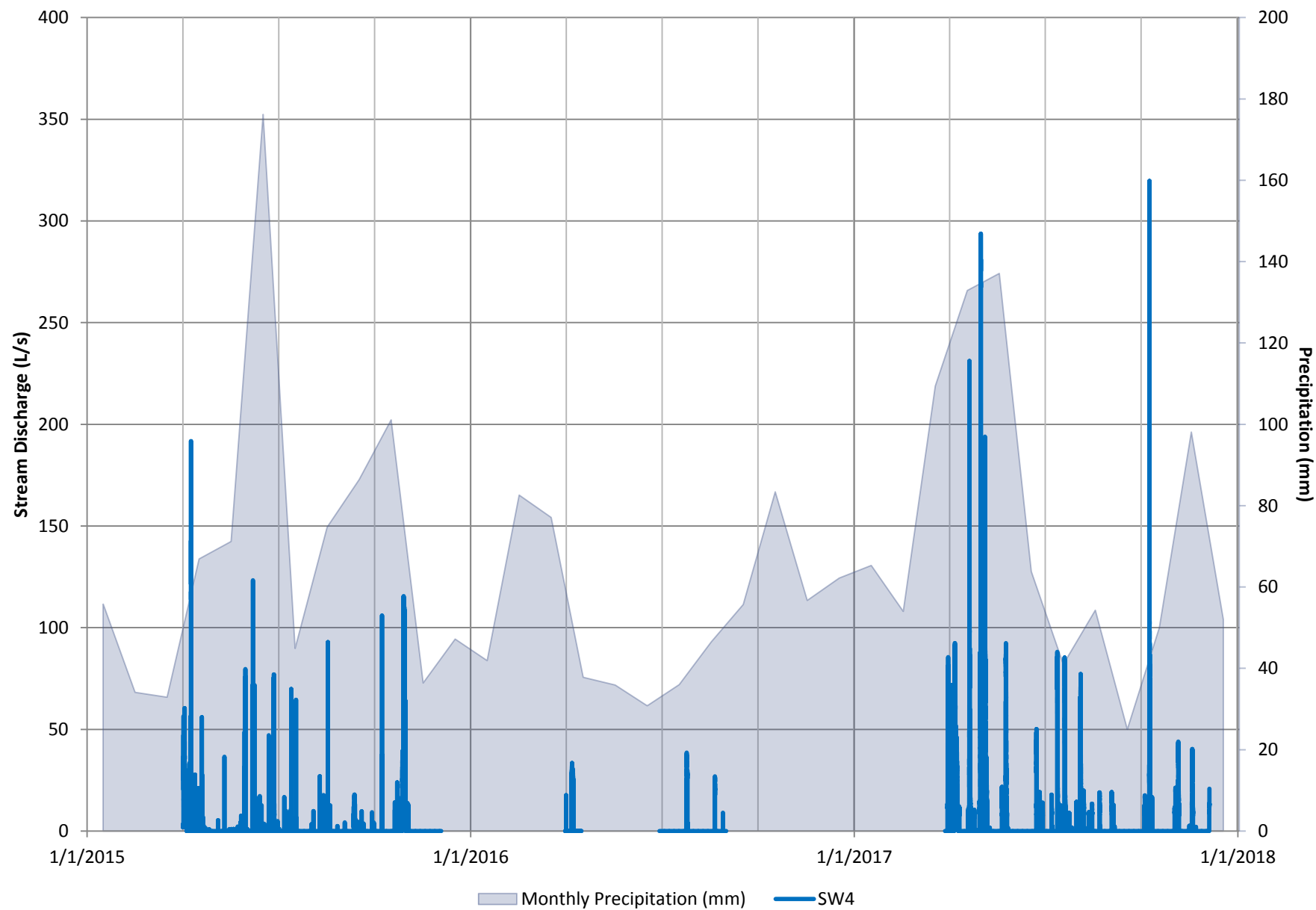


Figure C-2 - SW5 Flow Monitoring and Precipitation

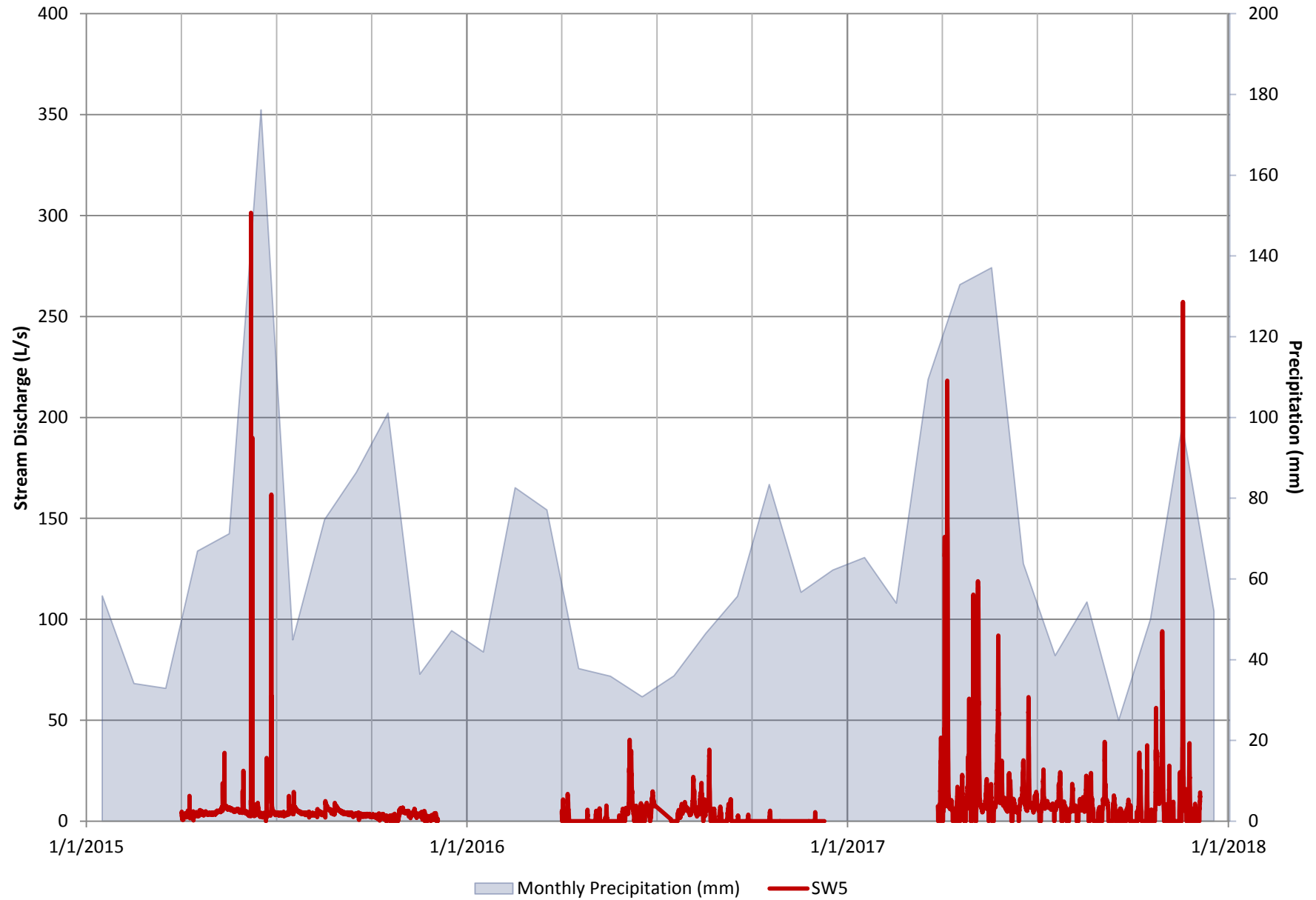
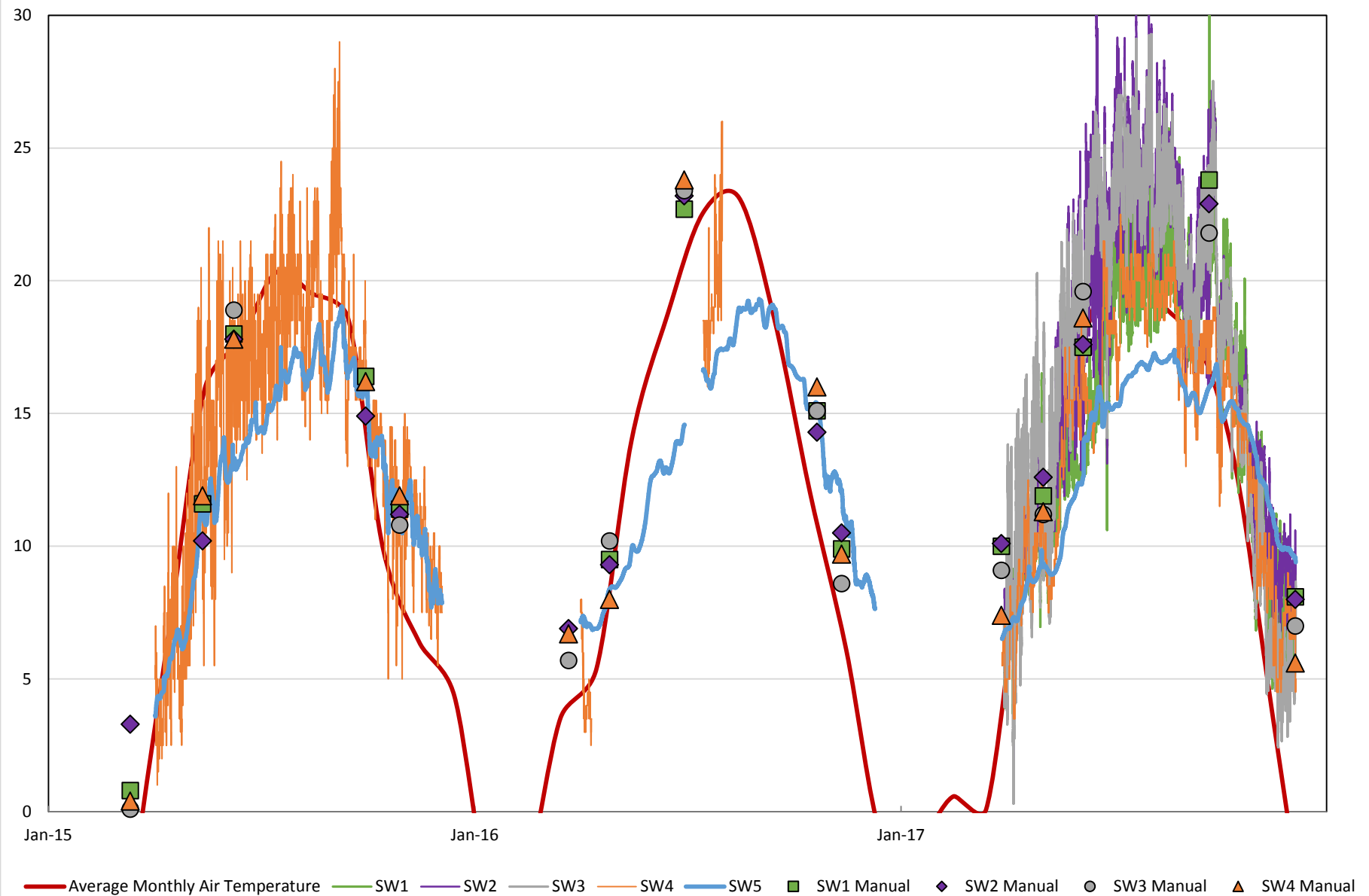


Figure C-3 - Temperature Monitoring



APPENDIX

D

C□□MA□□

Table D-1
Environment Canada Climate Data - Temperature and Precipitation
East Fonthill Development



Climate data for the East Fonthill Development project area is presented in the following table. The data is based on the climate data for the nearest weather station, which is located at the East Fonthill Development project area. The data is presented in the following table.

Climate data for the East Fonthill Development project area is presented in the following table. The data is based on the climate data for the nearest weather station, which is located at the East Fonthill Development project area. The data is presented in the following table.

Legend

Climate data for the East Fonthill Development project area is presented in the following table. The data is based on the climate data for the nearest weather station, which is located at the East Fonthill Development project area. The data is presented in the following table.

Date/Time	Maximum Temperat ure	Minimum Temperat ure	Mean Temperat ure	Heat Degree Days	Cool Degree Days	Total Rain	Total Snow	Total Precipitati on	Snow on Ground	Direction of Maximum Gust	Speed of Maximum Gust
	(°C)	(°C)	(°C)	(°C)	(°C)	(mm)	(cm)	(mm)	(cm)	(10's deg)	(km/h)
1/1/2010	0	-7	-3.5	21	0			0			1
1/2/2010	0	-3	-1.5	22	0			0			1
1/3/2010	-3	-10	-6.5	1	1	0		1			1
1/4/2010	7	-2	2.5	1	1	0		2			1
1/5/2010	-2	-12	-7	2	0			0	2		1
1/6/2010	-1	-12	-6.5	2	0			0			1
1/7/2010	-3	-1	-2	1	0			0			1
1/8/2010	-7	-1	-4	2	0			0			1
1/9/2010	-7	-1	-4	2	0			1	7		1
1/10/2010	-2	-1	-1.5	2	0			0	2		1
1/11/2010	0	-3	-1.5	20	0			2			1
1/12/2010	-0	-11	-5.5	2	0						1
1/13/2010	-11	-17	-14	2	0			0	2		1
1/14/2010	-3	-2	-2.5	2	0			0	2		1
1/15/2010	-1	-17	-9	27	0			0			1
1/16/2010	-2	-3	-2.5	22	0			0			
1/17/2010	-3										1
1/18/2010	-7	0	-3.5	1	0			0			1
1/19/2010	0	-3	-1.5	20	0			0	2		1
1/20/2010	-3	-1	-2	27	0			0	2		1
1/21/2010	-2	-1	-1.5	2	0			0	2		1
1/22/2010	-0	-3	-1.5	21	0			0			1
1/23/2010	-2	-7	-4.5	21	0			0			1
1/24/2010	0	-1	-0.5	20	0			0			1
1/25/2010	0	-3	-1.5	22	0			0			1
1/26/2010	-2	-10	-6	2	0			0	2		1
1/27/2010	-7	-1	-4	0	0			1			1
1/28/2010	-7	-1	-4	0	0			0			1
1/29/2010	1	-7	-3	22	0						1
1/30/2010	-1	-20	-10.5	2	0			0			1
1/31/2010	-2	-20	-11	2	0			0			1

Table D-1
Environment Canada Climate Data - Temperature and Precipitation
East Fonthill Development



Date/Time	Maximum Temperat ure	Minimum Temperat ure	Mean Temperat ure	Heat Degree Days	Cool Degree Days	Total Rain	Total Snow	Total Precipitati on	Snow on Ground	Direction of Maximum Gust	Speed of Maximum Gust
	(°C)	(°C)	(°C)	(°C)	(°C)	(mm)	(cm)	(mm)	(cm)	(10's deg)	(km/h)
2/1/2016	-2.0	-10.0	-6.0	2.0	0			2.0			1
2/2/2016	-0.0	-21.0	-10.7	0.7	0			1			1
2/3/2016	-0.0	-20.0	-12.0	0.0	0			0			1
2/4/2016	0.1	-0.0	-1.1	22.1	0			0.0			1
2/5/2016	-0.2	-17.7	-1.0	1	0			0.2			1
2/6/2016	-0.2	-12.0	-6.0	2.0	0			0.0			1
2/7/2016	-0.1	-11.2	-12.2	20.2	0			0.2			1
2/8/2016	-0.0	-10.1	-10.0	2.0	0			0.2			1
2/9/2016	-0.1	-10.0	-10.2	27.2	0			1.0			1
2/10/2016	-0.7	-11.2	-10.0	2.0	0			0.2			1
2/11/2016	-0.0	-1.0	-7.7	2.7	0			1.7			1
2/12/2016	-2.1	-22.0	-12.0	0.0	0			0.0			1
2/13/2016	-7.0	-2.0	-1.0	0.0	0			0.2			1
2/14/2016	-0.0	-1.0	-11.0	2.0	0			2.7			1
2/15/2016	-1.0	-2.7	-2.2	0	0			0.0			1
2/16/2016	-1.0	-1.0	-2.1	2.1	0			0.0			1
2/17/2016	-10.1	-2.0	-17.0	0.0	0			0			1
2/18/2016	-0.1	-1.0	-11.0	2.0	0			0.0			1
2/19/2016	-1.7	-2.2	-2.0	0	0			0.2			1
2/20/2016	-1.2	-2.0	-20.0	0.0	0			0			1
2/21/2016	-0.2	-1.2	-10.7	2.7	0			0.2			1
2/22/2016	-0.0	-1.0	-1.2	0	0			0.2			1
2/23/2016	-1.0	-2.0	-20.0	0.0	0			0.2			1
2/24/2016	-0.0	-2.0	-1.0	0.0	0			0			1
2/25/2016	-0.0	-17.0	-11.0	2.0	0			0.0			1
2/26/2016	-0.1	-1.0	-1.7	1.7	0			0.7			1
2/27/2016	-10.0	-2.0	-17.2	0.2	0			0.2			1
2/28/2016	-7.0	-2.0	-1.0	0.0	0			0			1
3/1/2016	-0.0	-1.2	-10.0	2.0	0			2.0			1
3/2/2016	-2.0	-2.1	-11.0	2.0	0			0.0			1
3/3/2016	-0.7	-22.1	-10.2	27.2	0			7.0			1
3/4/2016	-1.7	-7.0	-1.1	21.1	0			0			1
3/5/2016	-7.0	-1.0	-1.0	1.0	0			0.0			1
3/6/2016	-0.0	-2.0	-1.0	0.0	0			0			1
3/7/2016	0.0	-0.7	-1.1	21.1	0			0			1
3/8/2016	-1.7	-2.0	-10.0	1.0	0			0			1
3/9/2016	-0.2	-0.0	-1.1	1.1	0			0.0			1
3/10/2016	-7.1	-0.7	-10.0	1.0	0			0			1
3/11/2016	0	-1.1	-2	1.0	0			0			1
3/12/2016	-0.0	-0.0	-1	1.0	0			0			1
3/13/2016	-0.0	-0.2	-1.7	1.0	0			0			1
3/14/2016	-0.2	-1.7	-0.0	1.0	0			0			1
3/15/2016	-0.0	-1	-1.0	1.7	0			0			1
3/16/2016	-0.0	-0.7	-2.0	1.2	0			0			1
3/17/2016	0	-0.0	-0.0	17.7	0			0.2			1
3/18/2016	-1.0	-0.0	-2.1	20.1	0			0			1
3/19/2016	-1.0	-0.7	-0.0	21.0	0			0.2			1
3/20/2016	-0.0	-1.7	-2.0	1.0	0			0			1
3/21/2016	0	-0.0	-0.7	17.0	0			0.7			1
3/22/2016	-1.0	-7.0	-1.7	22.7	0			0.2			1
3/23/2016	-0.7	-0.2	-0.0	2.0	0			0			1
3/24/2016	-0.0	-0.1	-2.7	20.7	0			0			1
3/25/2016	-0.0	-0.0	-0.0	17.1	0			0.2			1
3/26/2016	-0.0	0.0	-2.0	1.1	0			0.0			1
3/27/2016	-1.1	-0.0	-0.7	21.7	0			1.0			1
3/28/2016	-1.0	-0.7	-1.1	2.1	0			0			1
3/29/2016	-0.0	-0.0	-2.0	20.0	0			0			1
3/30/2016	-0.0	-1	-2.7	1.0	0			0.1			1
3/31/2016	-0.0	-0.0	-1.1	1.0	0			0			1

Table D-1
Environment Canada Climate Data - Temperature and Precipitation
East Fonthill Development



Date/Time	Maximum Temperat ure	Minimum Temperat ure	Mean Temperat ure	Heat Degree Days	Cool Degree Days	Total Rain	Total Snow	Total Precipitati on	Snow on Ground	Direction of Maximum Gust	Speed of Maximum Gust
	(°C)	(°C)	(°C)	(°C)	(°C)	(mm)	(cm)	(mm)	(cm)	(10's deg)	(km/h)
01/2010	-2	-10	0	17	1	0		0			1
02/2010	1	0		2	0						1
03/2010	10	1		11	7	0		7			1
04/2010	1	2	0	17	1	0		0			1
05/2010	2	2	0	17		0		0	7		1
06/2010	11	2	0	7	12	0		0			1
07/2010		1	1	12		0		1			1
08/2010		0	2	1		0					1
09/2010	1	1		10	0			12			1
10/2010	1				0			0			1
11/2010	2	1		12	7	0		0	2		1
12/2010	1	7	1	7	10	0		0			1
01/2011	2		1		0			2			1
01/2011	1	2	2		0			0			1
01/2011	1	2	0	7	10	0		0	2		1
01/2011	20	1	2	10	7	1	0				1
01/2011	1	2	10	7	0			0	7		1
01/2011	21		12	2		0		0			1
01/2011	17		11	2		0		2			1
02/2011	1	7	1	12		0		12			1
02/2011	11		7	7	10	0		0			1
02/2011		0		1		0		1			1
02/2011	2	1	2	1	17	0		0			1
02/2011	7	2	1	2	7	1	0	0	2		1
02/2011	10	1			1	7	0	0			1
02/2011	12	7	1	2	7	11	0	0			1
02/2011	7			11	2	0		0			1
02/2011		1									1
02/2011	1	1			0			0			1
03/2011	1	7	11	1		0		0			1
04/2011	20		11		1	0		0			1
05/2011	1	2	11	1		0		0	2		1
06/2011	22	1	1		2	0		0			1
06/2011	2		17	1	0	0		0	2		1
06/2011	1		11	7		0		1			1
06/2011	22		1	1	1	0		0			1
07/2011	2	7	1		1	0		0	2		1
08/2011	0	10	20		0	2		0			1
08/2011	0	1	21		0			0			1
09/2011	27	2	1	20		0	2	0			1
09/2011	27	1	20	7	0	2	7				1
09/2011	17	10	1	1		0		0			1
09/2011											1
09/2011	1	0			0			0	2		1
09/2011	1		1	1		0		2	1		1
09/2011	2	11	17		0	0		0			1
09/2011	27	1	21	2	0	2		0	2		1
09/2011	2	1	21		0			0			1
09/2011	1	1	1			0		0			1
09/2011	12				0			0			1
09/2011	1	1	11		0			0			1
09/2011	17	7	0	2		0		0	2		1
09/2011	17	2	1	7	10	0		0			1
09/2011	2		1	2		0		0			1
09/2011	27	1	20		0	2		0			1
09/2011	27	1	22	7	0	7		2			1
09/2011	27	1	21		0			0			1
09/2011	2	1	1	1	0	0	1	0			1
09/2011	2	10	1		0	1		0			1
09/2011	27	7	1	20	0	2		2			1
09/2011	1		10	1	7	0					1

Table D-1
Environment Canada Climate Data - Temperature and Precipitation
East Fonthill Development



Date/Time	Maximum Temperat ure	Minimum Temperat ure	Mean Temperat ure	Heat Degree Days	Cool Degree Days	Total Rain	Total Snow	Total Precipitati on	Snow on Ground	Direction of Maximum Gust	Speed of Maximum Gust
	(°C)	(°C)	(°C)	(°C)	(°C)	(mm)	(cm)	(mm)	(cm)	(10's deg)	(km/h)
01/2010	100	07	100	77	0			02			01
02/2010	100	00	101	00	0			0			01
000/2010	22	01	101	00	0			02			01
000/2010	200	00	101	100	0			0			01
000/2010	200	100	200	0	200			02			01
000/2010	10	00	127	00	0			02			01
007/2010	200	00	107	200	0			100			01
000/2010	210	100	101	0	01			200			01
000/2010	200	120	100	100	0			02			01
010/2010	200	120	101	0	11			02			01
011/2010	222	107	10	0	0			0			01
012/2010	207	100	200	0	200			100			01
010/2010	220	10	100	0	000			0			01
010/2010	200	100	100	0	100			10			01
010/2010	201	170	21	0	0			0			01
010/2010	272	10	210	0	000			100			01
017/2010	200	100	101	0	11			0			01
010/2010	200	100	102	0	12			02			01
010/2010	200	111	100	21	0			02			01
020/2010	200	101	170	07	0			0			01
021/2010	202	107	21	0	0			000			01
022/2010	200	102	200	0	200			07			01
020/2010	200	101	100	0	100			102			01
020/2010	220	127	170	000	0			0			01
020/2010	200	100	100	0	100			0			01
020/2010	200	100	100	0	000			02			01
027/2010	10	100	107	200	0			000			01
020/2010	100	120	101	00	0			000			01
020/2010	227	100	101	0	01			0			01
000/2010	220	100	102	0	12			1			01
71/2010	222	10	100	0	000			200			01
72/2010	210	100	102	100	0			02			01
700/2010	202	0	101	100	0			0			01
700/2010	207	100	102	0	12			02			01
700/2010	200	100	100	0	100			02			01
700/2010	200	100	210	0	000			02			01
77/2010	200	100	220	0	000			000			01
700/2010	21	100	170	000	0			0			01
700/2010	21	100	170	000	0			100			01
710/2010	201	120	100	0	000			0			01
711/2010	201	127	100	0	100			000			01
712/2010	207	100	212	0	02			0			01
710/2010	20	100	222	0	02			01			01
710/2010	201	100	207	0	27			100			01
710/2010	211	110	102	100	0			000			01
710/2010	201	101	171	000	0			0			01
717/2010	200	107	100	0	100			1			01
710/2010	20	100	207	0	07			200			01
710/2010	270	100	207	0	07			000			01
720/2010	201	100	212	0	02			0			01
721/2010	207	100	200	0	200			000			01
722/2010	20	120	102	0	02			0			01
720/2010	201	112	107	0	07			0			01
720/2010	20	107	100	0	000			02			01
720/2010	20	170	227	0	07			0			01
720/2010	201	100	22	0	0			000			01
727/2010	200	100	220	0	000			07			01
720/2010	011	17	201	0	01			000			01
720/2010	010	170	200	0	000			000			01
700/2010	200	100	201	0	01			0			01
701/2010	270	100	212	0	02			000			01

Table D-1
Environment Canada Climate Data - Temperature and Precipitation
East Fonthill Development



Date/Time	Maximum Temperat ure	Minimum Temperat ure	Mean Temperat ure	Heat Degree Days	Cool Degree Days	Total Rain	Total Snow	Total Precipitati on	Snow on Ground	Direction of Maximum Gust	Speed of Maximum Gust
	(°C)	(°C)	(°C)	(°C)	(°C)	(mm)	(cm)	(mm)	(cm)	(10's deg)	(km/h)
01/2016	22.2	1.000	1.000	0	1.00			11			0.1
02/2016	20.7	1.07	20.2	0	2.2			0			0.1
000/2016	2.000	1.02	20.00	0	2.00			0			0.1
000/2016	2.000	1.000	20.2	0	2.2			7.00			0.1
000/2016	2.000	11.00	17.7	0.00	0						0.1
000/2016	2.07	.000	1.000	1.2	0			0			0.1
07/2016	2.07	11.00	1.000	0	0.00			0			0.1
000/2016	2.000	1.000	1.0	0	1			0			0.1
000/2016	2.0	11.1	1.000	0	0.00			0.2			0.1
010/2016	27.7	12.7	20.2	0	2.2			27.2			0.1
011/2016	2.07	1.07	20.7	0	2.7			0			0.1
012/2016	2.000	11	17.00	0.7	0			0			0.1
010/2016	2.000	.000	1.000	1.1	0			0			0.1
010/2016	2.000	20.00	22.00	0	.000			1.2			0.1
010/2016	27.00	1.000	2.000	0	.000			0			0.1
010/2016	2.01	17	22.00	0	.000			0			0.1
017/2016	2.000	1.000	2.000	0	.000			0			0.1
010/2016	2.01	1.000	22	0	.0			20.00			0.1
010/2016	2.000	1.000	2.000	0	.000			0			0.1
020/2016	2.000	17.00	21.00	0	.000			.000			0.1
021/2016	22.00	12.00	17.00	0.2	0			0			0.1
022/2016	2.07	10.2	17	1	0			0			0.1
020/2016	2.0	.000	17.00	0.2	0			0.2			0.1
020/2016	22.00	1.02	1.000	0	1.00			0			0.1
020/2016	1.000	1.000	17.1	0.00	0			0			0.1
020/2016	1.000	11.7	1.07	2.00	0			0			0.1
027/2016	1.000	11.2	1.000	2.00	0			0			0.1
020/2016	22.7	.000	1.000	1.7	0			0.2			0.1
020/2016	2.01	11.1	1.01	0	0.1			0			0.1
000/2016	2.07	17.00	21.00	0	.000			0			0.1
000/2016	27.1	1.000	21.00	0	.000			0			0.1
01/2016	2.000	1.07	21.2	0	.02			0.2			0.1
02/2016	2.01	17	2.01	0	.01			0			0.1
000/2016	2.000	1.01	2.02	0	.02			0			0.1
000/2016	.000	1.000	2.000	0	.000			0			0.1
000/2016	2.07	17	2.000	0	.000						0.1
000/2016	2.000	1.000	2.000	0	.000			0.2			0.1
07/2016	.000	1.02	2.000	0	.000			0			0.1
000/2016	2.000	21	2.000	0	7.00			0			0.1
000/2016	2.000	1.01	20.00	0	2.00			1.00			0.1
010/2016	2.07	10.1	17.00	0.00	0			0.2			0.1
011/2016	2.000	.01	17.2	0.00	0			.000			0.1
012/2016	1.000	11.00	1.02	.000	0			.0000			0.1
010/2016	1.000	.000	12	.0	0			1.07			0.1
010/2016	21.00	.07	1.02	.000	0			0			0.1
010/2016	2.000	.000	17	1	0			0.2			0.1
010/2016	2.07	11.7	1.02	0	1.2			0.2			0.1
017/2016	2.000	12.00	1.000	0	1.00			0.00			0.1
010/2016	2.02	11.00	1.01	0	1.1			0			0.1
010/2016	2.000	10.00	17.00	0.00	0			.000			0.1
020/2016	1.0	7.00	1.02	.000	0			0.2			0.1
021/2016	20.00	7.00	1.000	.02	0			0			0.1
022/2016	22.1	.000	1.000	2.00	0			0.00			0.1
020/2016	2.02	.07	1.000	1.00	0			0			0.1
020/2016	2.000	.000	17.00	0.00	0			0.2			0.1
020/2016	2.000	1.000	1.000	0	0.00			0.2			0.1
020/2016	2.01	12.00	17.00	0.1	0			0			0.1
027/2016	2.01	11.00	17.00	0.00	0			0.2			0.1
020/2016	20.00	17.00	1.01	0	1.1			1.00			0.1
020/2016	20.00	1.01	1.000	1.2	0			1.000			0.1
000/2016	1.0	.000	12.7	.000	0			0.2			0.1

Table D-1
Environment Canada Climate Data - Temperature and Precipitation
East Fonthill Development



Date/Time	Maximum Temperat ure	Minimum Temperat ure	Mean Temperat ure	Heat Degree Days	Cool Degree Days	Total Rain	Total Snow	Total Precipitati on	Snow on Ground	Direction of Maximum Gust	Speed of Maximum Gust
	(°C)	(°C)	(°C)	(°C)	(°C)	(mm)	(cm)	(mm)	(cm)	(10's deg)	(km/h)
10/1/2010	1	7	10	7	0			0			1
10/2/2010	11	7			0			0			1
10/3/2010		7			0			0			1
10/4/2010	1		12		0			0			1
10/5/2010	1	7	11	2	0			0			1
10/6/2010	1	12	1		0			0			1
10/7/2010	20	7	1	1	0			0			1
10/8/2010	1		11		0			7			1
10/9/2010	17		11		0			7			1
10/10/2010	1	7		7	0			0			1
10/11/2010	1	7	1	2	0			0			1
10/12/2010	22	1	1	0	0			0			1
10/13/2010	17	11	1		0			0			1
10/14/2010	1	2	7	10	0			0			1
10/15/2010	1	1		1	0			0			1
10/16/2010	1	1	7	10	0			0			1
10/17/2010	7	1		1	0			0	2		1
10/18/2010	7	1	2	1	0			0			1
10/19/2010	1		2	12	0			0	2		1
10/20/2010	1	11	1		0						1
10/21/2010	17	11	1		0			0			1
10/22/2010	17		11	1	0			0	2		1
10/23/2010	11	0		12	0			0			1
10/24/2010	1		11	7	0			7			1
10/25/2010	1	1	2		0			0			1
10/26/2010	11	1		12	7	0		0	2		1
10/27/2010	1	2	7	10	0			0			1
10/28/2010	1		12		0						1
10/29/2010	1			2	0			1	2		1
10/30/2010	10	0		1	1	0		0			1
10/31/2010	11	7	1		1	0		0			1
11/1/2010	1		7		0			1			1
11/2/2010	1	1	2		0			0	2		1
11/3/2010	1	7	11	2	0			0			1
11/4/2010	22	1	1		0			0			1
11/5/2010											1
11/6/2010	1	7	1	7	0			1			1
11/7/2010	11	7	2	7	10	0		0			1
11/8/2010	10	1		1	0			0			1
11/9/2010	1	2		12	0			0	7		1
11/10/2010	11	0		12	1	0		12	2		1
11/11/2010	11	1	7	10	0			0			1
11/12/2010	1		10	2	7	0					1
11/13/2010	7	2	1	11	0			0	2		1
11/14/2010	7	0		1	0			0			1
11/15/2010	1	2	2		0			0			1
11/16/2010	1	1	2		0			0	2		1
11/17/2010	1	2		10	0			0	2		1
11/18/2010	1	11	1	2	0			0			1
11/19/2010	1	7	10	7	7	0		0	7		1
11/20/2010	7	1	2	1	0			0	2		1
11/21/2010	7	0	2	1	0			1			1
11/22/2010			0	7	1	7	0	0			1
11/23/2010	2	7	2	2	20	2	0	1			1
11/24/2010			0	17	1	0		0	2		1
11/25/2010	10		2	1	0			0			1
11/26/2010	1		12	1	0			0			1
11/27/2010	1	1	2		0						1
11/28/2010	2		0	1	0			0			1
11/29/2010	7		0	1	0			0			1
11/30/2010		1	2	1	7	0		0			1

Table D-1
Environment Canada Climate Data - Temperature and Precipitation
East Fonthill Development



Date/Time	Maximum Temperat ure	Minimum Temperat ure	Mean Temperat ure	Heat Degree Days	Cool Degree Days	Total Rain	Total Snow	Total Precipitati on	Snow on Ground	Direction of Maximum Gust	Speed of Maximum Gust
	(°C)	(°C)	(°C)	(°C)	(°C)	(mm)	(cm)	(mm)	(cm)	(10's deg)	(km/h)
12:1:201	10		7.2	10	0			0			1
12:2:201		2.2		17	0			0			1
12:3:201	7	2.2	2.7	1	0			0			1
12:4:201		0	2	1	0			0			1
12:5:201			1	1	0			0			1
12:6:201	7	2	1.7	1	0			0			1
12:7:201	2		0.2	17	0			0			1
12:8:201		0	2	1	0			0			1
12:9:201	12				0			0			1
12:10:201	12	2		7	0			0			1
12:11:201	1	1		2	0			0			1
12:12:201	10.2	0.2		1	0			0			1
12:13:201	10.2		7	10.1	0			0			1
12:14:201	20.1		12		0						1
12:15:201		2.7		12	0			0.2			1
12:16:201		2		12	0			0	0		1
12:17:201	10.2	1	1.1	11	0			1	0		1
12:18:201	2	2	0.2	17	0			0.2			1
12:19:201	0		2	20	0			0			1
12:20:201	7	1	0	17.2	0			0			1
12:21:201	10	2		7	0			0.7			1
12:22:201	12.1	2	7	10	0			0.2			1
12:23:201	1										1
12:24:201	12		10	7	0			0.2			1
12:25:201		0	7	1	0			0			1
12:26:201		0	2	1	0			1	1		1
12:27:201		0		1	0			12	0		1
12:28:201	1		1	1	0			11.1			1
12:29:201	7	0		17	0			1	1		1
12:30:201		0	2.1	1	0			0			1
12:31:201	1.2	0	0	17	0			0.2			1
1:1:201	0.0	2	1	1	0			0.0			1
1:2:201	0	2	0.1	17	0			0.0	0		1
1:3:201	2	0	2	20	0			0.2			1
1:4:201	0	12.2	10.1	2.1	0			0	0		1
1:5:201	1	12		2	0			0.2			1
1:6:201	2		2.0	20.0	0			0	0		1
1:7:201		0	1	1	0			0.0			1
1:8:201	1		0	1	0			2.7			1
1:9:201			7	11	0			1			1
1:10:201		1	1.2	1	0			1			1
1:11:201	1		0	2.0	0			0.7	1		1
1:12:201	0	1		22	0						1
1:13:201		10		2	0			1.0	10		1
1:14:201	2	7	2	2.2	0			0	1		1
1:15:201	7		1	1	0			0	11		1
1:16:201	2	2	0	17.1	0			1.7			1
1:17:201	0.1	11.2		2	0			2			1
1:18:201	7	11		27	0			0.0			1
1:19:201		11.1		27	0			0.0			1
1:20:201	1	10.2	7.2	2.2	0			0.0			1
1:21:201	2	10.2		2	0			0.0			1
1:22:201		1	10.1	2.1	0			0			1
1:23:201	7	1	10.0	2.0	0			0.0			1
1:24:201	0.1	17	7	2	0			0.0			1
1:25:201	7	0	2.1	1	0			1			1
1:26:201		0		1.2	0			1	2		1
1:27:201	0.7	0	0.1	1.1	0			0.0	1		1
1:28:201		2.2	0.7	17	0			1	1		1
1:29:201	0.1			22	0			0	1		1
1:30:201	7	0	0	1	0			0.0	1		1
1:31:201	12		2		0			0.2	1		1

Table D-1
Environment Canada Climate Data - Temperature and Precipitation
East Fonthill Development



Date/Time	Maximum Temperat ure	Minimum Temperat ure	Mean Temperat ure	Heat Degree Days	Cool Degree Days	Total Rain	Total Snow	Total Precipitati on	Snow on Ground	Direction of Maximum Gust	Speed of Maximum Gust
	(°C)	(°C)	(°C)	(°C)	(°C)	(mm)	(cm)	(mm)	(cm)	(10's deg)	(km/h)
2/1/2010	0	-1	-0.5	1	0	0	0	0	0		1
2/2/2010	0	-2	-1	1	0	0	0	0	0		1
2/3/2010	1	-2	-0.5	1	0	0	0	1	0		1
2/4/2010	0	-1	-0.5	1	0	0	0	0	0		1
2/5/2010	0	-2	-1	1	0	0	0	0	0		1
2/6/2010	2	-1	0.5	1	0	0	0	0	0		1
2/7/2010	7	0	3.5	1	0	0	0	0	0		1
2/8/2010	0	-1	-0.5	1	0	0	0	1	0		1
2/9/2010	2	-2	0	1	0	0	0	2			1
2/10/2010	2	-1	0.5	2	0	0	0	2			1
2/11/2010	0	-1	-0.5	0	0	0	0	0	1		1
2/12/2010	0	-1	-0.5	2	0	0	0	2	1		1
2/13/2010	-1	-2	-1.5	0	0	0	0	0			1
2/14/2010	-1	-2	-1.5	0	0	0	0	0	1		1
2/15/2010	1	-2	-0.5	2	0	0	0	0	2		1
2/16/2010	0	-2	-1	1	0	0	0	1			1
2/17/2010	1	-1	0	2	0	0	0	1	1		1
2/18/2010	0	-1	-0.5	2	0	0	0	1	1		1
2/19/2010	0	-2	-1	2	0	0	0	0	1		1
2/20/2010	1	-1	0	7	0	0	0	0	0		1
2/21/2010	0	-1	-0.5	2	0	0	0	0	0		1
2/22/2010	1	-2	-0.5	2	0	0	0	0			1
2/23/2010	2	-1	0.5	2	0	0	0	0			1
2/24/2010	2	-1	0.5	1	0	0	0	0			1
2/25/2010	2	0	1	1	0	0	0	0			1
2/26/2010	2	0	1	1	0	0	0	2	1		1
2/27/2010	0	0	0	1	0	0	0	0	1		1
2/28/2010	1	0	0.5	0	0	0	0	0			1
2/29/2010	0	-1	-0.5	1	0	0	0	0	0		1
3/1/2010	-1	-7	-4	2	0	0	0	2	0		1
3/2/2010	0	0	0	2	0	0	0	0	1		1
3/3/2010	0	-7	-3.5	2	0	0	0	0	2		1
3/4/2010	0	-1	-0.5	2	0	0	0	0	2		1
3/5/2010	0	0	0	2	0	0	0	0	1		1
3/6/2010	2	-1	0.5	0	0	0	0	0	0		1
3/7/2010	12	1	6.5	1	0	0	0	0	0		1
3/8/2010	1	0	0.5	1	0	0	0	0			1
3/9/2010	1	7	4	0	0	0	0	0			1
3/10/2010	12	2	7	0	0	0	0	0			1
3/11/2010	7	-2	2.5	1	0	0	0	0			1
3/12/2010	12	2	7	1	0	0	0	0			1
3/13/2010	0	0	0	1	0	0	0	0			1
3/14/2010	1	0	0.5	0	0	0	0	0			1
3/15/2010	1	0	0.5	7	0	0	0	2			1
3/16/2010	1	0	0.5	1	0	0	0	1			1
3/17/2010	10	7	8.5	0	0	0	0	1	0		1
3/18/2010	0	-2	-1	1	0	0	0	0			1
3/19/2010	1	0	0.5	1	0	0	0	0			1
3/20/2010	0	0	0	0	0	0	0	0			1
3/21/2010	0	0	0	1	0	0	0	0	0		1
3/22/2010	10	0	5	1	0	0	0	0	0		1
3/23/2010	0	0	0	1	0	0	0	0			1
3/24/2010	0	0	0	1	0	0	0	1			1
3/25/2010	0	2	1	1	0	0	0	0			1
3/26/2010	7	0	3.5	1	0	0	0	0	0		1
3/27/2010	17	0	8.5	0	0	0	0	0			1
3/28/2010	1	0	0.5	7	0	0	0	0			1
3/29/2010	7	0	3.5	1	0	0	0	0			1
3/30/2010	1	-1	0	7	0	0	0	0			1
3/31/2010	17	0	8.5	0	0	0	0	1			1

Table D-1
Environment Canada Climate Data - Temperature and Precipitation
East Fonthill Development



Date/Time	Maximum Temperat ure	Minimum Temperat ure	Mean Temperat ure	Heat Degree Days	Cool Degree Days	Total Rain	Total Snow	Total Precipitati on	Snow on Ground	Direction of Maximum Gust	Speed of Maximum Gust
	(°C)	(°C)	(°C)	(°C)	(°C)	(mm)	(cm)	(mm)	(cm)	(10's deg)	(km/h)
01/2016	12	2	7	10	0			0			1
02/2016	1	-7	0.7	17	0			2			1
03/2016	0										1
04/2016	2.7	-2	-0	20	0			0			1
05/2016	0.1	-11.1		2	0			0.7			1
06/2016	1		2	1.7	0			2			1
07/2016		0	7	1	0			0			1
08/2016			0	17	0			0.7			1
09/2016	0		2	20	0			0.0			1
10/2016	1	7.7	2	20	0			0			1
11/2016	7	2	1	11	0			2			1
12/2016	0	2	2	1	0			0.2			1
01/2017	7.0		1	1.7	0			0.0			1
01/2017	12.1	1		12	0			0			1
01/2017	1	0			0			0			1
01/2017	1		11.1		0			1.1			1
01/2017	21	2	12.1		0			0			1
01/2017	20		12.0	0	0			0.7			1
01/2017	1.1		7		0			0			1
02/2017	17	0.2		2	0			0.7			1
02/2017	1.0	2	10	7.7	0			0.2			1
02/2017	1		12	1	0			7			1
02/2017	12.0	0	7	10	0			0.0			1
02/2017	1	0	7.1	10	0			0			1
02/2017	12	7			0			0			
02/2017	1										1
02/2017	12	2	1	12	0			0			1
02/2017		2.2		12.1	0			0.2			1
02/2017	11.1	1		11	0			0.2			1
03/2017	1.1	1		2	0			1.1			1
03/2017	12.7	7.0		1	0			7			1
03/2017	10		7.1	10	0						1
03/2017	1	2	2		0			0			1
03/2017	17.0	2		2	0			0			1
03/2017	1	7	11		0			0.2			1
03/2017	20	2	12	2	0			0			1
07/2017	1	7	1		0			0.2			1
08/2017	1		0	0	0			0.2			1
08/2017	1	2.1		1	0			1.1			1
10/2017	17.0	7	10	7	0			0.7			1
11/2017	22		1		0			0			1
12/2017	2		1	1.1	0			0.7			1
01/2018	17		1		0						1
01/2018	1	0		2	0						1
01/2018	1	2		12.7	0			0.2			1
01/2018	1	2			0			0			1
01/2018		7.7									1
01/2018	1	7	10	7	0			0.0			1
01/2018	1.7	2	10	7.2	0			0.2			1
02/2018	22.7		1.7		0			0.2			1
02/2018	1.7	11	1	2	0			0.2			1
02/2018	22.1		1.0	2.0	0			0.2			1
02/2018	2	7.7	1	1	0			0			1
02/2018	2.7	0	1	1	0			0			1
02/2018	27	11	1	0.0	1			0			1
02/2018	2	1.1	20	0.0	2			0.0			1
02/2018	2	1	21	0.0				0.0			1
02/2018	2	1	2	0.0				0.0			1
02/2018	27	1.2	22	0.0				0			1
03/2018	27	1.0	20	0.0	2			0.0			1
03/2018	2	1	21.0	0.0				0			1

Table D-1
Environment Canada Climate Data - Temperature and Precipitation
East Fonthill Development



Date/Time	Maximum Temperat ure	Minimum Temperat ure	Mean Temperat ure	Heat Degree Days	Cool Degree Days	Total Rain	Total Snow	Total Precipitati on	Snow on Ground	Direction of Maximum Gust	Speed of Maximum Gust
	(°C)	(°C)	(°C)	(°C)	(°C)	(mm)	(cm)	(mm)	(cm)	(10's deg)	(km/h)
01/2010	20.1	12.0	16.2	0.0	0.2			0.0			0.1
02/2010	20.2	10.0	15.0	0.0	1.0			0.7			0.1
03/2010	20.0	12.7	16.0	0.0	1.0			0.2			0.1
04/2010	20.0	11.0	15.0	0.0	1.0			0.0			0.1
05/2010	22.0	10.0	16.0	0.0	1.0			10.0			0.1
06/2010	20.1	10.0	15.0	0.0	0.0			0.0			0.1
07/2010	21.0	11.2	16.1	1.0	0			2.1			0.1
08/2010	10.0	0.2	10.0	7.2	0			0.0			0.1
09/2010	21.0	0.0	10.0	0.0	0			0.0			0.1
10/2010	21.0	0.1	10.0	0.0	0			0.2			0.1
11/2010	20.0	10.1	22.1	0.0	0.1			0.2			0.1
12/2010	22.1	10.0	16.2	1.0	0			0.2			0.1
01/2011	10.0	0.1	5.0	0.0	0			0.0			0.1
01/2011	22.0	7.0	14.1	2.0	0			0.0			0.1
01/2011	27.0	0.1	17.0	0.0	0			0.0			0.1
01/2011	27.2	10.7	21.0	0.0	0.0			0.0			0.1
01/2011	0.1	10.7	21.0	0.0	0.0			0.2			0.1
01/2011	0.0	12.0	21.0	0.0	0.0			0.0			0.1
01/2011	0.0	10.7	21.0	0.0	0.0			0.0			0.1
02/2011	20.0	17.7	20.0	0.0	0.0			0.0			0.1
02/2011	20.7	10.0	17.0	0.2	0			0.2			0.1
02/2011	20.0	10.2	15.0	0.0	1.0			0.0			0.1
02/2011	20.0	11.0	17.0	0.0	0			0.2			0.1
02/2011	27.7	10.1	18.0	0.0	0.0			0.0			0.1
02/2011	0.0	12.0	21.0	0.0	0.0			0.0			0.1
02/2011	0.0	10.0	20.7	0.0	0.7			2.2			0.1
02/2011	20.0	10.7	20.0	0.0	0.0			1.0			0.1
02/2011	20.0	10.1	15.1	0.0	1.1			0.0			0.1
02/2011	20.0	10.0	15.0	0.0	0.0			0.0			0.1
03/2011	20.0	0.0	17.0	0.0	0			0.0			0.1
7/1/2010	20.2	12.0	16.0	0.0	0.0			0.0			0.1
7/2/2010	20.0	10.0	15.2	0.0	0.2			0.0			0.1
7/3/2010	20.7	10.0	15.0	0.0	0			0.0			0.1
7/4/2010	20.0	11.1	20.0	0.0	2.0			0.0			0.1
7/5/2010	27.0	10.0	20.0	0.0	0.0			0.0			0.1
7/6/2010	0.1	10.0	20.0	0.0	0.0			0.0			0.1
7/7/2010	20.7	20.0	20.1	0.0	7.1			0.2			0.1
7/8/2010	20.0	20.0	20.0	0.0	0.0			1.0			0.1
7/9/2010	20.0	10.0	20.0	0.0	0			0.0			0.1
7/10/2010	27.0	10.7	21.0	0.0	0.0			0.0			0.1
7/11/2010	20.7	10.2	22.0	0.0	0			0.0			0.1
7/12/2010	0.2	10.1	20.2	0.0	7.2			0.2			0.1
7/13/2010	0.0	22.0	20.2	0.0	0.2			0.0			0.1
7/14/2010	27.0	20.1	20.0	0.0	0.0			0.0			0.1
7/15/2010	27.0	10.2	21.0	0.0	0.0			0.0			0.1
7/16/2010	20.0	10.0	15.0	0.0	0.0			0.0			0.1
7/17/2010	27.0	10.2	20.0	0.0	2.0			0.0			0.1
7/18/2010	0.0	10.0	20.0	0.0	0.0			0.2			0.1
7/19/2010	27.0	11.0	19.0	0.0	1.0			0.2			0.1
7/20/2010	27.0	10.1	18.0	0.0	0.0			0.2			0.1
7/21/2010	20.0	10.2	22.0	0.0	0			0.0			0.1
7/22/2010	0.7	10.0	20.0	0.0	0.0			0.0			0.1
7/23/2010	0.0	10.0	20.0	0.0	7			0.2			0.1
7/24/2010	0.2	17.2	20.7	0.0	0.7			0.0			0.1
7/25/2010	0.2	10.0	20.0	0.0	0.0			27.1			0.1
7/26/2010	27.0	10.0	22.1	0.0	0.1			0.0			0.1
7/27/2010	20.0	10.7	20.0	0.0	0			0.2			0.1
7/28/2010	20.0	10.0	20.7	0.0	0.7			0.2			0.1
7/29/2010	20.0	10.0	20.0	0.0	0.0			0.0			0.1
7/30/2010	20.0	10.7	20.1	0.0	0.1			0.0			0.1
7/31/2010	27.0	10.0	20.0	0.0	0.0			2.0			0.1

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Date/Time	Maximum Temperat ure	Minimum Temperat ure	Mean Temperat ure	Heat Degree Days	Cool Degree Days	Total Rain	Total Snow	Total Precipitati on	Snow on Ground	Direction of Maximum Gust	Speed of Maximum Gust
	(°C)	(°C)	(°C)	(°C)	(°C)	(mm)	(cm)	(mm)	(cm)	(10's deg)	(km/h)
01/2010	20.2	17.1	22.7	0.0	0.7			0.0			0.1
02/2010	0.0	1.0	22.0	0.0	0.0			0.0			0.1
03/2010	0.0	1.1	22.0	0.0	0.0			0.0			0.1
04/2010	1.0	1.0	2.0	0.0	0.0			0.2			0.1
05/2010	0.0	22.0	2.7	0.0	0.7			0.0			0.1
06/2010	20.2	1.0	2.1	0.0	0.1			0.0			0.1
07/2010	27.0	1.7	20.0	0.0	2.0			0.2			0.1
08/2010	20.0	1.1	21.1	0.0	0.1			0.0			0.1
09/2010	1.0	1.0	22.0	0.0	0.0			0.0			0.1
10/2010	1.0	22.0	27.1	0.0	0.1			0.0			0.1
11/2010	2.2	22.0	27.0	0.0	0.0			0.0			0.1
12/2010	1.0	2.0	2.0	0.0	10.0			2.1			0.1
01/2011	2.0	2.1	2.2	0.0	10.2			0.0			0.1
01/2011	2.1	1.2	2.2	0.0	0.2			0.0			0.1
01/2011	27.7	17.2	22.0	0.0	0.0			1.0			0.1
01/2011	2.0	1.7	22.0	0.0	0.0			0.0			0.1
01/2011	27.0	1.0	21.0	0.0	0.0			0.0			0.1
01/2011	20.2	17.0	2.1	0.0	0.1			0.0			0.1
01/2011	2.0	17.0	2.0	0.0	0.0			0.2			0.1
02/2011	0.0	1.7	2.0	0.0	7.0			0.0			0.1
02/2011	2.0	1.0	21.2	0.0	0.2			0.0			0.1
02/2011	2.0	12.0	17.0	0.1	0			0.0			0.1
02/2011	2.1	11.2	1.7	0.0	0.7			0.0			0.1
02/2011	2.0	1.0	21.7	0.0	0.7			0.0			0.1
02/2011	2.1	21.0	2.0	0.0	7.0			2.0			0.1
02/2011	2.0	17.1	22.0	0.0	0.0			0.0			0.1
02/2011	0.0	1.0	22.0	0.0	0.0			0.0			0.1
02/2011	2.0	1.1	2.0	0.0	0			0.0			0.1
02/2011	27.7	1.2	21.0	0.0	0			0.0			0.1
03/2011	27.0	1.0	20.0	0.0	2.0			0.0			0.1
03/2011	2.0	17.0	22.0	0.0	0			10.0			0.1
03/2011	2.1	1.0	1.0	0.0	0.0			0.2			0.1
03/2011	22.0	10.0	1.0	1.0	0			0.0			0.1
03/2011	2.0	0.0	1.7	1.0	0			0.7			0.1
03/2011	27.0	0.7	1.0	0.0	0.0			0.0			0.1
03/2011	2.0	12.1	20.0	0.0	2.0			0.0			0.1
03/2011	2.0	1.0	22.0	0.0	0.0			0.0			0.1
07/2011	0.0	21.0	2.0	0.0	7.0			0.0			0.1
08/2011	2.0	21.2	2.0	0.0	7			1.0			0.1
08/2011	2.0	1.0	2.0	0.0	0.0			0.0			0.1
10/2011	0.2	17.0	2.0	0.0	0.0			1.0			0.1
11/2011	22.0	11.0	1.0	1.1	0			0.0			0.1
12/2011	2.0	0.0	1.2	1.0	0			0.0			0.1
01/2012	2.0	11.2	1.0	0.0	0.0			0.0			0.1
01/2012	22.0	0.0	1.2	1.0	0			2.1			0.1
01/2012	21.7	0.1	1.0	2.0	0			0.0			0.1
01/2012	2.7	0.0	17.1	0.0	0			0.2			0.1
01/2012	20.2	1.2	21.7	0.0	0.7			0.0			0.1
01/2012	2.0	1.0	21.0	0.0	0.0			0.2			0.1
01/2012	2.0	1.0	20.0	0.0	2.0			0.0			0.1
02/2012	27.2	12.2	1.7	0.0	1.7			0.0			0.1
02/2012	27.0	0.0	1.7	0.0	0.7			0.0			0.1
02/2012		12.0									0.1
02/2012	22.7	1.0	1.0	0.0	0.0			0.0			0.1
02/2012	1.1	0.0	11.0	0.2	0			0.2			0.1
02/2012	1.0	0.0	12.0	0.7	0			0.2			0.1
02/2012	1.0	0.0	1.0	0.1	0			0.0			0.1
02/2012	21.0	0.0	1.2	2.0	0			2.7			0.1
02/2012	2.0	12.0	1.0	0.0	0.0			0.0			0.1
02/2012	1.0	1.0	1.7	0.0	0			11.7			0.1
03/2012	1.0	12.7	1.7	2.0	0			1.2			0.1

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Date/Time	Maximum Temperat ure	Minimum Temperat ure	Mean Temperat ure	Heat Degree Days	Cool Degree Days	Total Rain	Total Snow	Total Precipitati on	Snow on Ground	Direction of Maximum Gust	Speed of Maximum Gust
	(°C)	(°C)	(°C)	(°C)	(°C)	(mm)	(cm)	(mm)	(cm)	(10's deg)	(km/h)
10/1/2010	1	12/2	1	2	0			7			1
10/2/2010	1	12/2	1	2	0			1			1
10/3/2010	20/1	12/0	1	1	0			0			1
10/4/2010	22		1	2	0			0/2			1
10/5/2010	22/2	12	17		0			0/0			1
10/6/2010	2	1	1		0/0	0/1		0/0			1
10/7/2010	2	10	17/2	0	0			0			1
10/8/2010	1		12		0			2			1
10/9/2010	1		10/0		0			0/0			1
10/10/2010	1	1/7	7	10	0			0/2			1
10/11/2010	1	1/1			0			0/0			1
10/12/2010	22	11/1	17/0	1/0	0			0/0			1
10/13/2010	20/2	2/7	11		0			7/2			1
10/14/2010	1	7	0/0	7	10	0		0			1
10/15/2010	20		12/0		0			0/0			1
10/16/2010	22	1	1		0/0	1		0			1
10/17/2010	2	17	21/0	0/0				1			1
10/18/2010	2	0	1		0/0	0		0			1
10/19/2010	20/0		1		0			0/2			1
10/20/2010	1	10	12		7	0		1			1
10/21/2010	11			0	0	0		1			1
10/22/2010		2			11	0		0/2			1
10/23/2010	1			1		0		0/0			1
10/24/2010	10/7			0	10/0	0		0/0			1
10/25/2010			1/2		1	0		0/0			1
10/26/2010			1/2								1
10/27/2010		0		2	1	0		1			1
10/28/2010	12/0	1/0		12		0		0/0			1
10/29/2010	1	0	10	1	2			0/0			1
10/30/2010	10		1/7		11/7	0		1			1
10/31/2010		0/0		0	1/0	0		0/0			1
11/1/2010	20		0	10	7	0		0/0			1
11/2/2010	1	0	12	1	7	2		12			1
11/3/2010	1	7		10	7/7	0		1			1
11/4/2010	11		2	7	10	0		0/0			1
11/5/2010	1		0	10/0		0		0/0			1
11/6/2010	1	0	0	7	10/7	0		0/0			1
11/7/2010	1		1/2	7/7	10	0		0/0			1
11/8/2010	1		1			2	0	2			1
11/9/2010	10/7		0		2	12	0	0/2			1
11/10/2010	1		0		11	0		0			1
11/11/2010	12/1	2			1	1	0	0/0			1
11/12/2010			2/2	1		0		0/0			1
11/13/2010	11			2		0		0/0			1
11/14/2010	11		0/1		0	12/0	0	0/0			1
11/15/2010	1		1		0	12/0	0	0			1
11/16/2010	11		0/2		12	0		0/2			1
11/17/2010	12/2	2/0		1	12	0		0/2			1
11/18/2010	21/2	1	11			0		0/0			1
11/19/2010	17/1	0/0				0		2			1
11/20/2010	1		1	0/2	1	2	0	0			1
11/21/2010		1	2/7	0/2	17		0	0/0			1
11/22/2010				1/1	1	1	0	0/0	0		1
11/23/2010	1		7/0	2	20		0	1/2	0		1
11/24/2010	7/1	0			1	2	0		2		1
11/25/2010	7/2				12	0		1			1
11/26/2010		0	2		2	1	0	2/2			1
11/27/2010	7		1/0		1	7	0	0/0			1
11/28/2010	10/1				1		0	0			1
11/29/2010	1	7		1			0		0		1
11/30/2010	1	0				2	0				1

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Date/Time	Maximum Temperat ure	Minimum Temperat ure	Mean Temperat ure	Heat Degree Days	Cool Degree Days	Total Rain	Total Snow	Total Precipitati on	Snow on Ground	Direction of Maximum Gust	Speed of Maximum Gust
	(°C)	(°C)	(°C)	(°C)	(°C)	(mm)	(cm)	(mm)	(cm)	(10's deg)	(km/h)
12/1/2010	-1	-1	-0	12/0	0			0/0			-1
12/2/2010		-7									-1
12/3/2010	-1	0	-0	1/0	0			0/2			-1
12/4/2010	-2	0	2	1/7	0			0/0	0		-1
12/5/2010	-1	0	2/7	1/	0			2/	0		-1
12/6/2010			0	17/2	0			/	0		-1
12/7/2010		0	2	1/1	0			0/0			-1
12/8/2010	0	2	1/2	1/2	0			0/0	0		-1
12/9/2010	0/2		2	20/	0			0/2	0		-1
12/10/2010	0	7/0		21/	0			0/0			-1
12/11/2010	0		2/2	20/2	0			/			-1
12/12/2010	2	-1/7	0	17/	0			-2			-1
12/13/2010	0	-7	-0	21/0	0			0/			-1
12/14/2010		-11/2	-7/	2/	0			1/0			-1
12/15/2010	-7	-1/	-11/	2/	0			0/0			-1
12/16/2010		-12/	-0	27/0	0			1/			-1
12/17/2010	2	-0	-1/	1/	0			11/7	1/		-1
12/18/2010	0/0	-12/	-2	2/2	0			1/2	11		-1
12/19/2010	-2	-1/		27/	0			0/0	11		-1
12/20/2010	-0		-0/	1/	0			0/0	11		-1
12/21/2010	2/1	2/	-0/2	1/2	0			0/	11		-1
12/22/2010	2/7	0/2	1/	1/	0			1/	12		-1
12/23/2010	-0	0	1/7	1/	0			0/0	11		-1
12/24/2010	-2	1/7	/	1/	0			-7	10		-1
12/25/2010	2		-0/	1/	0			0/0			-1
12/26/2010	12/		/	1/	0			12/0			-1
12/27/2010	7/0	-1/7	2/7	1/	0			0/0	1		-1
12/28/2010	0	2/	-1/2	1/2	0			0/0	1		-1
12/29/2010	2/2	-1/1	0	17/	0			/			-1
12/30/2010	-0	2/	-1/	1/	0			0/2			-1
12/31/2010		2/	0	17/1	0			2/			-1