Appendix A

Public and Agency Consultation

Appendix A-1

Contact List

Town of Tecumseh Contact List

Master Drainage Study

Salutation	Surname	First Name	Organization	Department	Title	Address	City	Province	Postal Code	Tel.	E-Mail
					Elected Officials						
Mr.	Mcnamara	Gary	Town of Tecumseh		Mayor	917 Lesperance Road	Tecumseh	Ontario	N8N 1W9	(519) 735-2184	gmcnamara@tecumseh.ca
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Mr.	Dowie	Andrew	Town of Tecumseh		Ward 1 Councillor	917 Lesperance Road	Tecumseh	Ontario	N8N 1W9	(226) 773-1910	adowie@tecumseh.ca
Ms.	Cossington	Rita	Town of Tecumseh		Ward 1 Councillor	917 Lesperance Road	Tecumseh	Ontario	N8N 1W9	(519) 735-8251	cossington@tecumseh.ca
Mr.	Altenhof	Bill	Town of Tecumseh		Ward 2 Councillor	917 Lesperance Road	Tecumseh	Ontario	N8N 1W9	(519) 818-1067	baltenhof@tecumseh.ca
Mr.	Houston	Brian	Town of Tecumseh		Ward 3 Councillor	917 Lesperance Road	Tecumseh	Ontario	N8N 1W9	(519) 819-5782	bhouston@tecumseh.ca
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					Town of Tecumseh						
Ms.	Moy	Laura	Town of Tecumseh		Director of Staff Services & Clerk	917 Lesperance Road	Tecumseh	Ontario	N8N 1W9	519-735-2184 ext 116	lmoy@tecumseh.ca
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Mr.	Paglia	Sam	Town of Tecumseh		Drainage Superintendent/ Engineering Technologist	917 Lesperance Road	Tecumseh	Ontario	N8N 1W9	519-735-2184 ext 105	spaglia@tecumseh.ca
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Mr.	McArdle	Kirby	Town of Tecumseh		Manager Roads & Fleet	917 Lesperance Road	Tecumseh	Ontario	N8N 1W9	519-735-2184 ext 144	kmcardle@tecumseh.ca
Ms.	Ronai	Paula	Town of Tecumseh		Tecumseh BIA Coordinator	1189 Lacasse Boulevard	Tecumseh	Ontario	N8N 2C7	519-735-3795	bia@tecumseh.ca
					County of Essex						
Ms.	Brennan	Mary	County of Essex		Director of Council Services / Clerk	360 Fairview Avenue West, Suite 202	Essex	Ontario	N8M 1Y6	519-776-6441 ext 1335	clerk@countyofessex.on.ca
Mr.	King	Bill	County of Essex	Planning	Manager of Planning Services	360 Fairview Avenue West, Suite 302	Essex	Ontario	N8M 1Y6	519-776-6441 ext 1329	bking@countyofessex.on.ca
Mr.	Bateman	Tom	County of Essex	Engineering Department	County Engineer	360 Fairview Avenue West	Essex	Ontario	N8M 1Y6	519-776-6441 ext 1317	tbateman@countyofessex.on.ca
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					Corporation of the City of Windsor						
					City Engineer/Corporate Leader-Environmental Protection &						
Mr.	Winterton	Mark	City of Windsor	Engineering - Infrastructure & Geomatics	Infrastructure Services	1266 McDougall Avenue	Windsor	Ontario	N8X 3M7	519-255-6247 ext 6356	mwinterton@citywindsor.ca
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Ms.	Godo	Anna	City of Windsor	Engineering - Infrastructure & Geomatics	Engineer III	350 City Hall Square West, Room 302	Windsor	Ontario	N9A 6S1	519-255-6100 ext 6508	agodo@citywindsor.ca
					Town of Lakeshore						
Mr.	Cavacas	Nelson	Town of Lakeshore	Engineering & Infrastructure Services	Director of Engineering & Infrastructure Services	419 Notre Dame Street	Belle River	Ontario	N0R 1A0	519-728-1975 ext 287	ncavacas@lakeshore.ca
Mr.	Kehoe	John	Town of Lakeshore	Engineering & Infrastructure Services	Manager of Environmental Services	419 Notre Dame Street	Belle River	Ontario	N0R 1A0	519-728-1975 ext 239	jkehoe@lakeshore.ca
Ms.	Fiorito	Jill	Town of Lakeshore	Engineering & Infrastructure Services	Drainage Superintendent	419 Notre Dame Street	Belle River	Ontario	N0R 1A0	519-728-1975 ext 289	jfiorito@lakeshore.ca
					Windsor-Essex County School Boards/Children's Day Care Centre						
Ms.	Kelly	Erin	Greater Essex County District School Board		Director of Education	451 Park Street West	Windsor	Ontario	N9A 6K1	519-255-3200 ext. 10259	director@ghcdsb.ca
Mr.	McKenzie	Gary	Windsor-Essex Catholic District School Board		Senior Manager of Facilities Services	1325 California Avenue	Windsor	Ontario	N9B 3Y6	519-253-2481	gmckenzie@wecdsb.on.ca
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Ms.	Dyneesen	Rosa	Children's House Montessori		Principal	444 Advance Boulevard	Tecumseh	Ontario	N8N 5G8	519-727-8900	schildshore@brightpathkids.com
					Provincial Agency Contacts						
Ms.	Hatcher	Laura	Ministry of Tourism, Culture, and Sport	Culture Services Unit, Programs and Services Branch	Team Lead - Heritage Land Use Planning	401 Bay Street, Suite 1700	Toronto	Ontario	M7A 0A7	(416) 334-3108	laura.a.hatcher@ontario.ca
Ms.	Manson-Smith	Rachel	Indigineous Relations and Reconciliation	Indigenous Relations and Programs Division	(Acting) Manager, Ministry Partnerships Unit	160 Bloor Street East, 9th Floor	Toronto	Ontario	M7A 2E6	(416)-325-7032	MAA.EA.Review@Ontario.ca
Mr.	Newton	Craig	Ministry of Environment, Conservation and Parks	Southwestern Region, London Regional Office	Environmental Planner	733 Exeter Road	London	Ontario	N6E 1L3	(519)-873-5014	craig.newton@ontario.ca
Ms.	Paller	Claire	Ministry of Natural Resources and Forestry		Aylmer District	615 John Street	Aylmer	Ontario	N5H 2S8	(519)-773-9241	claire.paller@ontario.ca
					Federal Agency Contacts						
No Contact - Send to General Email			Department of Fisheries and Oceans Canada	Central and Arctic		520 Exmouth Street	Sarnia	Ontario	N7T 8B1	1-866-290-3731	fisheriesprotection@dfo-mpo.gc.ca
					First Nations						
Chief	**White-eye**	**Leslee**	**Chippewas of the Thames First Nation**			**320 Chippewa Road**	**Muncey**	**Ontario**	**N0L 1Y0**	**(519)-289-5555**	**Send Via Mail - No Contact Required as per Chippewas Nations Letter Dated May 5, 2017**
Ms.	**Burch**	**Fallon**	**Chippewas of the Thames First Nation**		**Consultation Coordinator**	**320 Chippewa Road**	**Muncey**	**Ontario**	**N0L 1Y0**	**(519)-289-2662**	**Send Via Mail - No Contact Required as per Chippewas Nations Letter Dated May 5, 2017**
Chief	Henry	Jason	Chippewas of Kettle & Stony Point First Nation			6247 Indian Lane	Lambton Shores	Ontario	N0N 1J1	(519)-786-2125	Send Via Mail
Ms.	George	Valerie	Chippewas of Kettle & Stony Point First Nation		Consultation Coordinator	6247 Indian Lane	Lambton Shores	Ontario	N0N 1J1	(519)-786-2125	Send Via Mail
Chief	Plain	Chris	Chippewas of Aamjiwnaang			978 Tashmoo Avenue	Sarnia	Ontario	N7T 7H5	(519) 336-8410	Send Via Mail
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Chief	Mnjikaning	Daniel	Walpole Island First Nation			RR3	Wallaceburg	Ontario	N8A 4K9	(519)-627-1481	Send Via Mail
Chief	Hillier	Louise	Caldwell First Nation			14 Orange Street	Leamington	Ontario	N8H 1P5	(519) 322-1766	Send Via Mail
Chief	Peters	Greg	Moravian of the Thames			14760 School House Line, RR3	Thamesville	Ontario	N0P 2K0	(519) 692-3936	Send Via Mail
Ms.	Norheim Brookes	Linda	Metis Nation of Ontario		Manager, Lands, Resources and Consultations	75 Sherbourne Street	Toronto	Ontario	M5A 2P9	(416) 977-9881	Send Via Mail
					Conservation Authority						
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					Interest Groups						
					Utilities						
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Mr.	Hartlieb	Dave	MNSI		Network Planner	3363 Tecumseh Road East	Windsor	Ontario	N8W 1H4	519-985-8435	hartlieb@mnsi.net
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Mr.	Petriuk	Robert D.	Goshield North Communications Co-operative Limited		Chief Executive and Technology Officer	128 County Road 34	Cottam	Ontario	N0R 1B0	519-839-4734	rob.petriuk@goshield.ca
Mr.	Poggio	Norbert	Windsor Utilities Commission		Director, Water Engineering	787 Ouellette Avenue, P.O. Box 1625, Station A	Windsor	Ontario	N9A 5T7	519-251-7300	npoggio@enwin.com
					Interest Stakeholders						
Mr. & Mrs.	Sylvestre	Jim & Jeannette				1865 Manning Road	Tecumseh	Ontario	N8N 2L9	519-735-6606	pglen@mnsi.net
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Mr. & Mrs.	Perta	Vince & Anna				253 Manning Road	Tecumseh	Ontario	N8N 2G8		
Mr.	Tetreault	Peter				312 Cedar Crescent	Tecumseh	Ontario	N8N 2J4	519-551-2870	pletreault@bell.com
Mr.	McMillan	David				110 Christy Lane	Tecumseh	Ontario	N8N 4W4	226-280-1662	bmcmillan1660@gmail.com
Mr.	Grondin	Ron				260 Clovelly Road	Tecumseh	Ontario	N8N 1G3		rob.steph.grondin@gmail.com
Mr.	Drouillard	Dale				1790 Deslippe Drive	Tecumseh	Ontario	N9K 1C6		dyard1@computation.ca
Mrs.	Berthiaume	Patty				270 St. Mark's	Tecumseh	Ontario	N8N 2H7		pberthiaume@cogeco.ca
Mr. & Mrs.	Azzopardi	Mario & Linda				557 Estate Park	Tecumseh	Ontario	N8N 3C5	519-979-2864	mazzopardi@cogeco.ca
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Mr.	Rurak	William				1970 Shawnee Road	Tecumseh	Ontario	N8N 1S8		
Mr. & Mrs.	Gueniche	Clayton & Janet				12738 Riverside Drive	Tecumseh	Ontario	N8N 1A3		
Mr. & Mrs.	Boyd	Robert & Marie				951 William Street	Tecumseh	Ontario	N8N 2A5		
Mr.	Kane	Phil				322 Gordon Avenue	Tecumseh	Ontario	N8N 2Y7		
Mr.	McNamara	Gary	Town of Tecumseh/Resident			1562 Carmelita	Tecumseh	Ontario	N8N 0E3		
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Mr.	Sylvestre	Jeff				1951 Manning Road	Tecumseh	Ontario	N8N 2L9		
Mr.	Sutton	Sean				12426 Meander Crescent	Tecumseh	Ontario	N8N 4P3		
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Mr.	Houston	Brian	Town of Tecumseh/Resident			1812 Corbi Lane	Tecumseh	Ontario	N8N 2N1		
Mr.	Bachetti	Joe	Town of Tecumseh/Resident			1918 Corbi Lane	Tecumseh	Ontario	N8N 5C8		
Mr.	Dowie	Andrew	Town of Tecumseh/Resident			461 Amberly Crescent	Tecumseh	Ontario	N8N 3L8		adowie@tecumseh.ca
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	Cantial Capital Corp.		Business			14046 Riverside Drive East	Tecumseh	ON	N8N 1B6		
Mr. & Mrs.	Jamail	Charles & Jo-Ann	Resident			14054 Riverside Drive East	Tecumseh	ON	N8N 1B6		
Ms.	Adams	Nicola Jane	Resident			14062 Riverside Drive East	Tecumseh	ON	N8N 1B6		
	Beach Grove Golf & Country Club Ltd.		Business			14134 Riverside Drive East	Tecumseh	ON	N8N 1B6		
Mr. & Mrs.	Pupulin	Dennis & Cathy	Resident			14140 Riverside Drive East	Tecumseh	ON	N8N 1B6		
Ms.	Spencer (In Trust)	Linda	Resident			14146 Riverside Drive East	Tecumseh	ON	N8N 1B6		
Mrs. & Mrs.	Innocente	Norman & Janice	Resident			14051 Riverside Drive East	Tecumseh	ON	N8N 1B7		
Mr. & Mrs.	Boghean	Barry & Barbara	Resident			14055 Riverside Drive East	Tecumseh	ON	N8N 1B7		
Mrs. & Mrs.	Smart	Cary & Migena	Resident			14063 Riverside Drive East	Tecumseh	ON	N8N 1B7		
Mr. & Mrs.	Ochs	David & Kristy	Resident			101 Kensington Road	Tecumseh	ON	N8N 2K6		
Mr.	Knight	Gregory	Resident			12226 Riverside Drive East	Tecumseh	ON	N8N 1A2		
Mr. & Mrs.	Roy	Steven & Jennifer	Resident			12238 Riverside Drive East	Tecumseh	ON	N8N 1A2		
Ms.	Chodola	Mary Jane	Resident			12246 Riverside Drive East	Tecumseh	ON	N8N 1A2		
Mr. & Mrs.	Evans	George & Margaret	Resident			12310 Riverside Drive East	Tecumseh	ON	N8N 1A3		
Mrs. & Mrs.	Lesley	Kenneth & Carol	Resident			12318 Riverside Drive East	Tecumseh	ON	N8N 1A3		
Ms.	Warren	Patricia	Resident			12322 Riverside Drive East	Tecumseh	ON	N8N 1A3		
Mr.	Wachna	Alan	Resident			12874 Riverside Drive East	Tecumseh	ON	N8N 1A8		
Ms.	Cloutier	Jody	Resident			12902 Riverside Drive East	Tecumseh	ON	N8N 1A8		
Ms.	Reaume	Jacquie	Resident			12902 Riverside Drive East	Tecumseh	ON	N8N 1A8		
Mr. & Mrs.	Anand	Sandekere & Malavika	Resident			12906 Riverside Drive East	Tecumseh	ON	N8N 1A8		
Mr.	Hayes	Leo	Resident			12922 Riverside Drive East	Tecumseh	ON	N8N 1A8		
Mr.	Kassian	Zachary	Resident			12942 Riverside Drive East	Tecumseh	ON	N8N 1A8		
Ms.	Gidillini	Cassandra	Resident			12942 Riverside Drive East	Tecumseh	ON	N8N 1A8		
Mr.	Solcz	Michael, Jr.	Resident			12946 Riverside Drive East	Tecumseh	ON	N8N 1A8		
Ms.	Jakisch	Josie	Resident			12372 Charlene Lane	Tecumseh	ON	N9K 1B1		
Mr. & Mrs.	Fabbri	Sante & Franca	Resident			12372 Charlene Lane	Tecumseh	ON	N9K 1B1		
Mr. & Mrs.	Knehler	George & Maria	Resident			2010 Charlene Lane	Tecumseh	ON	N9K 1B1		
Mr.	Smith	Patrick	Resident			13676 Riverside Drive East	Tecumseh	ON	N8N 2M8		
Ms.	Fuhr	Shannon	Resident			13682 Riverside Drive East	Tecumseh	ON	N8N 2M8		
Mr.	Glatter	Gary	Resident			13694 Riverside Drive East	Tecumseh	ON	N8N 2M8		
Mr.	Linton	Robert	Resident			13706 Riverside Drive East	Tecumseh	ON	N8N 2M8		
Ms.	Baron	Melita	Resident			13706 Riverside Drive East	Tecumseh	ON	N8N 2M8		
Mr.	Peters (In Turs)	Robert	Resident			13710 Riverside Drive East	Tecumseh	ON	N8N 2M8		
Mr. & Mrs.	Peters	Robert F. & Mary Jeanne	Resident			13720 Riverside Drive East	Tecumseh	ON	N8N 2M8		
Mr. & Mrs.	Henderson	Neil & Sharon	Resident			13752 Riverside Drive East	Tecumseh	ON	N8N 2M9		
Ms.	Boundy	Rose-Marie	Resident			13760 Riverside Drive East	Tecumseh	ON	N8N 2M9		
Mr.	Raubi	Richard	Resident			13760 Riverside Drive East	Tecumseh	ON	N8N 2M9		
	G&G Holdings Windsor Ltd.		Business			13778 Riverside Drive East	Tecumseh	ON	N8N 2M9		
Ms.	Bondy	Jennifer	Resident			13784 Riverside Drive East	Tecumseh	ON	N8N 2M9		
Mr.	Cowley	Charles	Resident			13784 Riverside Drive East	Tecumseh	ON	N8N 2M9		
Mr. & Mrs.	Goroki	John & Colette	Resident			13788 Riverside Drive East	Tecumseh	ON	N8N 2M9		
Ms.	Bell	Susan	Resident			234 Southwind Crescent	Tecumseh	ON	N8N 4Y5		
Mr. & Mrs.	Lemay	Daniel & Patricia	Resident			248 Southwind Crescent	Tecumseh	ON	N8N 4Y5		
Ms.	Lambden	Sandra	Resident			252 Southwind Crescent	Tecumseh	ON	N8N 4Y5		
Mr. & Mrs.	Harling	John & Brenda	Resident			254 Southwind Crescent	Tecumseh	ON	N8N 4Y5		
Mr. & Mrs.	Mannina	Sam & Suzanne	Resident			262 Southwind Crescent	Tecumseh	ON	N8N 4Y5		
Mr. & Mrs.	Caster	Daniel & Cindy	Resident			270 Southwind Crescent	Tecumseh	ON	N8N 4Y5		
	South Port Sailing Club		Business			210 Brighton Road	Tecumseh	ON	N8N 2L3		

Various Comments Received

Appendix A-2

Notice of Commencement

This is an example of the Notice of Commencement cover letter sent to Agencies and First Nations on the project contact list.

Our File: 16-4880

April 28, 2017

Town of Tecumseh
917 Lesperance Road
Tecumseh, Ontario
N8N 1W9

Attention: RESIDENT

Town of Tecumseh
Tecumseh Storm Drainage Master Plan
Notice of Commencement

Dear RESIDENT

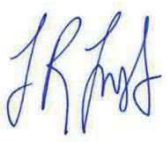
As outlined in the enclosed notice, the Town of Tecumseh has retained Dillon Consulting Limited to complete a Storm Drainage Master Plan for the northerly portion of the Town, as described in the attached Notice of Study Commencement.

Consultation with stakeholders, including the public and agencies, will be an important component of this study. An initial Public Information Centre (PIC) will be held later in 2017 to present the preliminary findings and a range of potential solutions for public and agency input. A second PIC is expected to be held in early 2018 to present more detailed alternative design solutions. Further notifications will be issued to confirm the dates for these PIC meetings.

Please contact the undersigned to provide your comments or to address any further questions you have at this time.

Yours sincerely,

DILLON CONSULTING LIMITED



Flavio R. Forest, P.Eng.,
Project Manager

FRF:d
Encls: Notice of Commencement
cc: Mr. Phil Bartnik, P.Eng., PMP, Town of Tecumseh

DILLON CONSULTING

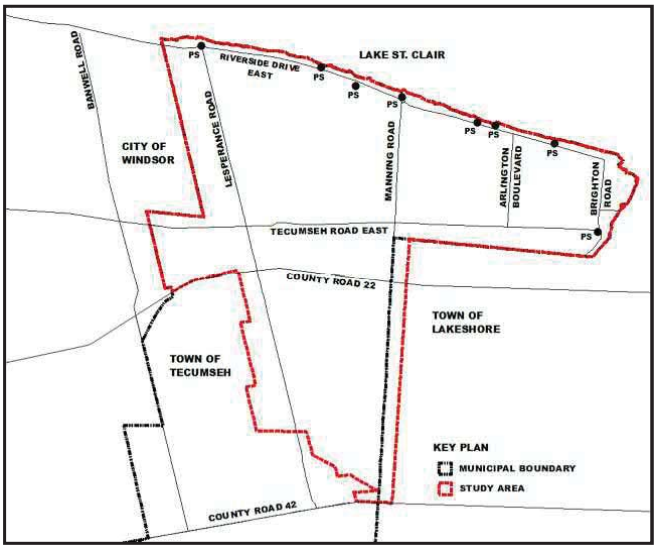
3200 Deziel Drive
Suite 608
Windsor, Ontario
Canada
N8W 5K8
Telephone
519.948.5000
Fax
519.948.5054

Dillon Consulting Limited

TOWN OF TECUMSEH
STORM DRAINAGE MASTER PLAN
NOTICE OF STUDY COMMENCEMENT

The Town of Tecumseh is initiating the preparation of a Storm Drainage Master Plan that would provide a long-range strategy for the implementation of storm drainage solutions to address surface flooding caused by significant rainfall events. The study area is largely developed and is currently served by eight (8) separate storm pump stations, as shown in the following key plan. The master plan will form another key component of the Town's broader program of sustainable infrastructure solutions that contribute to reducing the risks and impacts of flooding.

The study will include an assessment of the existing storm drainage system, which consists of storm sewers, open drains, pump stations and the overland drainage network, in order to identify opportunities for improvements. A range of alternative solutions will be developed and presented for public and agency input, based on which the preferred long-term, sustainable infrastructure strategy for this study area will be confirmed.



This study is being completed in accordance with Approach #2 of the Master Planning Process, as defined by the Municipal Class Environmental Assessment (Class EA) (2000, as amended in 2015). This approach involves the preparation of a Master Plan document at the conclusion of Phases 1 and 2 of the Class EA process that would be of sufficient detail to fulfill the requirements for Schedule B projects. This will include defining the problems and opportunities, considering and evaluating alternative solutions, and identifying the preferred storm drainage solutions within the study area.

Consultation with stakeholders, including the public, is an important component of this study. An initial Public Information Centre (PIC) will be held in late 2017 to gather feedback from the public and agencies on existing conditions, and present the preliminary findings and a range of potential solutions for public and agency input. A second PIC is expected to be held in spring of 2018 to present more detailed analysis and recommendations for public and agency input prior to finalizing the recommendations of the Master Plan for the study area. Further notifications will be issued to confirm the dates for these PIC meetings.

In addition, a website dedicated to this study has been established on the Town's website (www.tecumseh.ca/townhall/departmental-services/Engineering_Services/studies/storm_drainage_master_plan). This website will provide updated information and resources related to this study, as well as serving as a means of providing input to the study team.

If you require additional information related to this study or wish to be added to the mailing list, please contact:

Phil Bartnik, P.Eng., PMP
Manager, Engineering Services
Town of Tecumseh
917 Lesperance Road
Tecumseh, Ontario, N8N 1W9
Ph: (519) 735-2184 ext. 148
Fax: (519) 735-6712
Email: pbartnik@tecumseh.ca

Flavio Forest, P.Eng.
Project Manager
Dillon Consulting Limited
3200 Deziel Drive, Suite 608
Windsor, Ontario, N8W 5K8
Ph: (519) 948-4243 ext. 3233
Fax: (519) 948-5054
Email: TecumsehDrainageMP@dillon.ca

This notice first issued on April 28, 2017

Essex Region Conservation
the place for life

admin@erca.org
P.519.776.5209
F.519.776.8688
360 Fairview Avenue West
Suite 311, Essex, ON N8M 1Y6

July 18, 2018

Flavio Forest, P.Eng.,
Project Manager
Dillon Consulting Limited
3200 Deziel Drive, Suite 608
Windsor, Ontario, N8W 5K8

Dear Mr. Forest,

RE: Town of Tecumseh Storm Drainage Master Plan;
Class Environmental Assessment – Master Planning Process

Thank you for circulating the Notice of Study Commencement for the Class Environmental Assessment for the Storm Drainage Master Plan in the Town of Tecumseh. We understand that the intent of this project is to investigate options for the implementation of storm drainage solutions to address surface flooding caused by significant rainfall events.

The Essex Region Conservation Authority (ERCA) agrees with the principles of successful environmental assessment planning under the *Environmental Assessment Act*. Further, ERCA shares this intent and interest in furthering its program of conservation and protection of natural resources through watershed planning and providing comments on environmental assessment undertakings.

In order to advance this shared interest, ERCA intends to provide input towards the review of environmental assessment projects on a cost recovery basis. Beginning in 2018, the ERCA Board of Director's has directed that a fee for service be collected for the review of these types of undertakings (Enclosure: ERCA BD27/17). The following key areas and disciplines will inform our review:

- Providing information upon receipt of a request for data (e.g., mapping, species records, floodplain hazard locations, flood line maps, etc.);
- Providing comments at an early stage of the process (e.g., respond to the notice of study commencement, attending public open house meetings, etc.);
- Providing detailed comments through the review of the detailed technical report (e.g., Environmental Study Report or alternative applicable report); and,
- Offering to participate in meetings with in-house staff to discuss any comments in detail.

ERCA comments on environmental assessment and related undertakings will reflect our role in the environmental assessment process as outlined in appropriate provincial guidance documents. In addition, the most up to date ERCA Board policy and program direction will inform our comments within

areas of natural hazards management, watershed planning and floodplain management, natural heritage and natural heritage systems planning, and other areas as applicable.

We look forward to continuing our involvement in this study and ensuring that our technical input can lead to an improved product.

Per the direction in the attached ERCA Board Report, the appropriate fee is located in the 'Municipal Infrastructure' category. Should you wish for ERCA to provide these services, please remit payment of $2500 to the attention of planning@erca.org referencing the "Tecumseh Storm Drainage Master Plan - Class EA." It should be noted that this fee may be adjusted later to reflect the additional levels of staff input. This fee does not include any applications fees for activities occurring within the Limit of the Regulated Area that may be required during the implementation phase (i.e., ERCA permits).

If you have any questions, please contact Tim or me directly. Thank you,

Michael Nelson, Watershed Planner, Msc. Pl

CC: Phil Bartnik, P.Eng., PMP, Town of Tecumseh
Tim Byrne, Director of Watershed Management Services, ERCA

Attachment:

- **ERCA BD27/17** "Draft ERCA 2018 Fee Schedule"

Essex Region Conservation Authority
sustaining the place for life

regs@erca.org
P.519.776.5209
F.519.776.8688
360 Fairview Avenue West
Suite 311, Essex, ON N8M 1Y6

July 18, 2018

Phil Bartnik, P. Eng., PMP
917 Tecumseh Road
Tecumseh, Ontario
N8N 1W9

Dear Phil Bartnik:

RE: Storm Drainage Master Plan Municipal Class EA Notice of Study Commencement and Public Information Centre

This letter is in response to our receipt and review of the following Notice of Study Commencement for the Tecumseh Storm Drainage Master Plan. It is our understanding that this process is following the Municipal Class EA in accordance with the planning and design process for "Schedule B" projects as outlined in the Municipal Class Environmental Assessment (June 2000, as amended in 2007, 2011 and 2015) under the Ontario Environmental Assessment Act.

Information Request

ERCA may have information that may benefit the municipality for this project - natural heritage and environmental information, water quality monitoring station information and results, GIS extents of natural hazards mapping, flood plain mapping and studies, etc. Please contact me if there is an interest in obtaining any of this information - a data sharing agreement may be required in some cases depending on the type of the data request.

Funding for implementation

While the purpose of this master plan is to satisfy phases 1 and 2 of the Master Planning Process, there are two federal funding programs that may be of interest to the Municipality for consideration. First, the National Disaster Mitigation Program (www.publicsafety.gc.ca/cnt/mrgnc-mngmnt/dsstr-prvntn-mtgtn/ndmp/index-en.aspx) and second, the Disaster Mitigation and Adaptation Fund (http://www.infrastructure.gc.ca/dmaf-faac/index-eng.html).

Floodplain mapping

Floodplain mapping within the study area has been completed for the Pike Creek and the entirety of the shoreline. These studies were completed in the 1982 and 1976, respectively. While much of the study area is within the urban area of Tecumseh, the information will be valuable for some of the areas draining into the Pike Creek. The floodplain mapping is out of date and may need to be updated to reflect current conditions in the landscape.

Essex Region Conservation Authority
sustaining the place for life

July 12, 2018

Source Water Protection

Please note that Katie Stammler will be providing comments to the circulation from the perspective of the Essex Region Source Water Protection Plan.

Final Comments

Please also see attached letter requesting payment for our involvement in this project as it proceeds. As John Henderson is no longer employed with the conservation authority, please direct requests for technical input to Tim Byrne. Please add planning@erca.org to the distribution list for future mailings/updates to the project.

Sincerely,

Michael Nelson
Watershed Planner
/mn

C: Flavio Forest, Project Manager, Dillon Consulting Limited

Encl. (1) ERCA fee request letter, July 18, 2018.
(2) Fill Flood Map Inventory Sheet

Essex Region Conservation Authority Board of Directors BD27/17

From:	Richard Wyma, General Manager/Secretary-Treasurer
Date:	December 1, 2017
Subject:	Draft ERCA 2018 Fee Schedule
Strategic Action:	ERCA's Fee Schedule addresses all priorities and actions identified in the Strategic Plan
Recommendation:	THAT the draft 2018 ERCA Fee Schedule, as described herein, be approved; and further, THAT Administration post notice of the Fee Schedule in ERCA's administrative offices and on ERCA's website and other social media, and be distributed to member municipalities.

Summary

- In keeping with Board direction, ERCA charges fees for its services on a basis, consistent with the Fees Policy (BD 24/15).
- ERCA monitors and reviews its fees on an ongoing basis, considering costs to deliver the program or provide the service, a competitive analysis where similar services are provided locally (education programs, camping etc.); and peer analysis, considering fee schedules for similar sized/focused Conservation Authorities and municipal fee schedules. Additionally, ERCA staff regularly receives comments from users and clients regarding fees and considers those comments in recommending fees.

Discussion

ERCA charges fees for its services in accordance with the Fees Policy. ERCA monitors and reviews its fees on an ongoing basis, considering costs to deliver the program or provide the service, a competitive analysis where similar services are provided locally (education programs, camping etc.); and peer analysis, considering fee schedules for similar sized/focused Conservation Authorities and municipal fee schedules. Additionally, ERCA staff regularly receive comments from users and clients regarding fees and considers those comments in recommending fees.

Based on this review, administration is proposing increases in fees in the following areas:

Conservation Services:

Conservation Areas

The conservation area annual pass fee provides unlimited access to the John R. Park Homestead, Hillman Marsh and Holiday Beach Conservation Areas, including regular events. In 2017, ERCA sold 135 Annual Passes at $70 each (incl. HST) which generated

$9,450 in revenues for Conservation Areas. Point Pelee National Park ($88) and Wheatley Provincial Park ($175) similarly offer annual passes to access their sites. Based on those prices, Administration is proposing a $5 increase to ERCA's annual Pass, recognizing that activities offered at our locations are comparable to those provincially and federally funded park systems.

Similarly, Administration proposes increasing overnight camping fees at Holiday Beach $2.00 to keep pace with Parks Ontario and private campground fees.

Administration is also recommending an increase of $10 for fire wood sales (to $85.00) at Holiday Beach based on supplier cost increases.

Land Leases

ERCA enters into land leases for its properties. Lease rates are based on percentage of appraised value. Administration is proposing that lease rates be based on comparable market value where the cost of the appraisal may cost more than the value of the lease.

John R Park Homestead

Administration is proposing minor increases to the site use rental fees to more accurately reflect the staff time required to ready the site for these rentals.

Restoration Program

The cost of trees from suppliers has increased incrementally over the past few years. To keep pace with these costs, there are proposed increases to our seedling and large stock public costs. As we do not want to deter tree sales, we continue to provide trees to the public wanting to undertake restoration at a low cost that only allows for modest revenue.

Watershed Management Services:

In keeping with direction from the Board, Administration is increasing its emphasis on its watershed planning functions with municipalities. This is purposeful in that it ensures ERCA's commenting authorities under the *Conservation Authorities Act*, and the *Planning Act* related to natural hazards and heritage are received proactively and addressed prior to a regulatory process, where it is often difficult to address ERCA issues. It also reflects the increased role of ERCA in engineering, planning and environmental studies (as described in Report BD23/17).

This has been a shift in focus for ERCA and municipalities, but is resulting in more efficient planning and permitting processes for applicants, municipalities, and Administration.

In keeping with this, Administration is proposing some modifications to existing categories to more accurately reflect staff time required, and the increased complexities of responses.

- Lawyers requests for information on properties have increased as has the complexity of the requests and the expected timelines for review. Administration is proposing the proposed fee change is to increase the existing fee of $125.00 to $175.00 to more accurately reflect costs. This is also consistent with rates charged for this service by similar Conservation Authorities.
- With increased numbers of permits, ERCA is also increasing its numbers of site surveys to set elevations on site, and facilitate permits and development. This is also requiring additional time and costs to offset vehicle use and equipment upgrades required to maintain the service. Administration is proposing to increase the existing fee of $275.00 to $425.00.

  Applicants can also arrange to have their own surveys done through private sector, which, depending on timelines, costs $500 or more. If a survey is completed by or through the applicant, ERCA does need to confirm the elevations as set by the applicant.
- Fees associated with reviews under the Drainage and Regulation Team Protocols (DART). In its review under this protocol, Administration is spending additional time to research municipal drainage by-laws to complete the DART protocol submissions. Administration is proposing to increase DART reviews from $150 to $200.
- Administration proposes that large-scale municipal servicing plans, master drainage studies, subwatershed plans, and Environmental Assessments be included in the 'Municipal Infrastructure' category, which was created to facilitate cost recovery for ERCA time on large-scale development in municipalities (e.g. wind turbine studies). As noted in Report BD23/17, Administration is increasingly being asked to participate on, or coordinate these studies, which are development driven or focused, or to address specific areas in a municipality, but not at the same scale as Official Plans or Zoning By-Law input, which is captured through levy.

  Administration is proposing that studies in areas under 20 hectares be assessed the base cost of $2,500. For studies encompassing larger areas and or multi-disciplinary technical issues, Administration proposes the fees be assessed up to a maximum of $6,500.

Essex Region Conservation Authority
sustaining the place for life

Approved By:

Richard J.H. Wyma, CSLA
General Manager/Secretary Treasurer

Attachments:

- ERCA's 2018 Proposed Fee Schedule

Essex Region Conservation Authority
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2018 FEE SCHEDULE

Category	Detail	2018	2017	HST	Total
CONSERVATION SERVICES					
Conservation Areas					
Conservation Areas Annual Pass					
Annual Pass	Holiday Beach/Hillman CAs	$ 66.37	$ 61.95	$ 8.63	$ 75.00
	Deposit (key fob)	$ 10.00	$ 10.00	N/A	$ 10.00
Holiday Beach Conservation Area					
Daily Permits					
Daily vehicle permit	per vehicle	$ 8.85	$ 8.85	$ 1.15	$ 10.00
Special events	per vehicle	$ 13.27	$ 13.27	$ 1.73	$ 15.00
Daily bus permit	per bus	$ 53.10	$ 53.10	$ 6.90	$ 60.00
	+ per person	$ 1.77	$ 1.77	$ 0.23	$ 2.00
~~Daily walk-in/cycle in~~	~~per person/per family~~	~~$ -~~	~~$ -~~	~~$ -~~	~~$ -~~
Camping					
Camping	unserviced per night	$ 32.74	$ 30.97	$ 4.26	$ 37.00
	20 amp service per night	$ 37.17	$ 35.40	$ 4.83	$ 42.00
	50 amp service per night	$ 41.59	$ 39.82	$ 5.41	$ 47.00
	additional vehicle per night	$ 8.85	$ 8.85	$ 1.15	$ 10.00
Group camping	per night	$ 53.10	$ 53.10	$ 6.90	$ 60.00
	+ cost per person	$ 1.77	$ 1.77	$ 0.23	$ 2.00
Seasonal camping	15 amp service	$ 1,780.00	$ 1,780.00	$ 231.40	$ 2,011.40
	50 amp service	$ 1,780.00	$ 1,780.00	$ 231.40	$ 2,011.40
	Outdoor Winter Storage	$ 160.00	$ 160.00	$ 20.80	$ 180.80
Facilities Rental					
Property Rental (Wedding, etc.)	per event	$ 1,000.00	$ 1,000.00	$ 130.00	$ 1,130.00
Firewood		$ 75.22	$ 61.95	$ 9.78	$ 85.00
Cottage Rental	Peak Season Nightly - 2 night minimum	$ 200.00	200.00	$ 26.00	$ 226.00
	Peak Season Weekly	$ 1,100.00	1,100.00	$ 143.00	$ 1,243.00
	Shoulder Season Nightly - 2 night minimum	$ 125.00	125.00	$ 16.25	$ 141.25
	Shoulder Season Weekly	$ 700.00	700.00	$ 91.00	$ 791.00
	Cleaning Fee	$ 100.00	100.00	$ 13.00	$ 113.00
	Damage Deposit	$ 200.00	250.00	$ -	$ 200.00
Hillman Marsh Conservation Area					
Daily Permits					
Daily vehicle permit	per vehicle	$ 5.31	$ 5.31	$ 0.69	$ 6.00
Special Events	per vehicle	$ 8.85	$ 8.85	$ 1.15	$ 10.00
Camping					
Group camping	per night	$ 44.25	$ 44.25	$ 5.75	$ 50.00
	+ cost per person	$ 1.77	$ 1.77	$ 0.23	$ 2.00
Facilities Rental					
Visitor Centre (organized groups)	if open	$ 50.00	$ 50.00	$ 6.50	$ 56.50
	if closed and staff come in	$ 110.00	$ 110.00	$ 14.30	$ 124.30
	Damage deposit (refundable)	$ 110.00	$ 110.00	N/A	$ 110.00
Pavillion barn rental (organized groups)	per day	$ 30.00	$ 30.00	$ 3.90	$ 33.90
Property Rental (Wedding, etc.)	per event	$ 1,000.00	$ 1,000.00	$ 130.00	$ 1,130.00

Essex Region Conservation Authority
sustaining the place for life

2018 FEE SCHEDULE

Category	Detail	2018	2017	HST	Total
John R. Park Homestead Conservation Area					
Daily Permits					
Per person	Admission	**By Donations**			
Special Events	Adult	**$ 5.31**	$ 5.31	$ 0.69	**$ 6.00**
	Child 3-16	**$ 3.54**	$ 3.54	$ 0.46	**$ 4.00**
	Child 2 and under	**$ -**	$ -	$ -	**$ -**
	Family maximum	**$ 17.70**	$ 17.70	$ 2.30	**$ 20.00**
Group Tours	per person	**$ 4.42**	$ 4.42	$ 0.58	**$ 5.00**
	if requires site opening by staff	**$ 132.74**	$ 132.74	$ 17.26	**$ 150.00**
Facilities (Visitor Centre) Rental					
Less than 40 people/3 hours or less	Meeting/Event Rental	**$ 75.00**	$ 75.00	$ 9.75	**$ 84.75**
	Damage deposit (refundable)	**$ 250.00**	$ 250.00	-	**$ 250.00**
More than 40 people/up to 8 hours no tent, food or alcohol	Meeting/Event Rental	**$ 550.00**	$ 500.00	$ 71.50	**$ 621.50**
	Damage deposit (refundable)	**$ 1,000.00**	$ 1,000.00	-	**$ 1,000.00**
More than 40 people/up to 48 hours with tent, food and	Meeting/Event Rental	**$ 2,750.00**	$ 2,500.00	$ 357.50	**$ 3,107.50**
	Damage deposit (refundable)	**$ 5,000.00**	$ 5,000.00	-	**$ 5,000.00**
Miscellaneous					
Commercial & Wedding Photography (full site rental)	if open (90 minutes)	**$ 132.74**	$ 132.74	$ 17.26	**$ 150.00**
	if closed and staff come in (90 minutes)	**$ 221.24**	$ 221.24	$ 28.76	**$ 250.00**
Site Use Photography Permit	per hour	**$ 22.12**	$ 20.00	$ 2.88	**$ 25.00**
Birthday Parties	up to 20 children, 90 minutes	**$ 175.00**		$ 22.75	**$ 197.75**
Costume Rental	per costume	**$ 60.00**	$ 60.00	$ 7.80	**$ 67.80**
	Damage deposit (refundable)	**$ 100.00**	$ 100.00	N/A	**$ 100.00**
Food/Craft Vendors	per day	**$ 35.00**	$ 35.00	$ 4.55	**$ 39.55**
	weekend (indoors)	**$ 80.00**	$ 80.00	$ 10.40	**$ 90.40**
	weekend (outdoors)	**$ 50.00**	$ 50.00	$ 6.50	**$ 56.50**
Greenways					
Land Leases	Market Value				
~~Assistance and permits to landowners~~		~~**$ 175.00**~~	~~$ 175.00~~	~~N/A~~	~~**$ 175.00**~~
Hunting Programs					
Waterfowl Hunting					
Holiday Beach Conservation Area	half day	**$ 26.55**	$ 26.55	$ 3.45	**$ 30.00**
	full day	**$ 44.25**	$ 44.25	$ 5.75	**$ 50.00**
	non-refundable draw fee	**$ 15.04**	$ 15.04	$ 1.96	**$ 17.00**
	HBCA east beach discounted fee	**$ 26.55**	$ 26.55	$ 3.45	**$ 30.00**
Hillman Marsh Conservation Area	Seasonal hunting permit	**$ 630.00**	$ 630.00	$ 81.90	**$ 711.90**
	non-refundable draw fee	**$ 15.04**	$ 15.04	$ 1.96	**$ 17.00**
	day use hunting (full day)	**$ 44.25**	$ 44.25	$ 5.75	**$ 50.00**
	Annual trapping permit	**$ 100.00**	$ 100.00	$ 13.00	**$ 113.00**
Cedar Creek	5-Year Hunting Lease ($1,000 annual)	**$ 5,000.00**	$ 5,000.00	$ 650.00	**$ 5,650.00**
Big Creek	Seasonal hunting (minimum reserve)	**$ 650.00**	$ 650.00	$ 84.50	**$ 734.50**
Deer Hunting					
Various Properties	10-24 acre woodlot	**$ 525.00**	$ 525.00	$ 68.25	**$ 593.25**
	25-49 acre woodlot	**$ 775.00**	$ 775.00	$ 100.75	**$ 875.75**
	50 acre plus woodlot	**$ 1,025.00**	$ 1,025.00	$ 133.25	**$ 1,158.25**
	non-refundable draw fee	**$ 15.04**	$ 15.04	$ 1.96	**$ 17.00**

Essex Region Conservation Authority
sustaining the place for life

2018 FEE SCHEDULE

Category	Detail	2018	2017	HST	Total
Forestry Program					
Seedlings					
Cost of trees (per tree)	from	**$ 0.70**	$ 0.70	$ 0.09	**$ 0.79**
	to	**$ 1.50**	$ 1.50	$ 0.20	**$ 1.70**
Tree Planting	Machine Plant by ERCA (per tree)	**$ 0.65**	$ 0.65	$ 0.08	**$ 0.73**
	Hand Plant by ERCA (per tree maximum)	**$ 1.00**	$ 1.00	$ 0.13	**$ 1.13**
Maintenance/Guarantee Program	per seedling	**$ 0.40**	$ 0.40	$ 0.05	**$ 0.45**
Shipping & Handling Charge		**$ 25.00**	$ 25.00	$ 3.25	**$ 28.25**
Site Delivery Fee		**$ 50.00**	$ 50.00	$ 6.50	**$ 56.50**
Large Stock					
Trees provided for hand planting by landowner	from	**$ 13.00**	$ 13.00	$ 1.69	**$ 14.69**
	to	**$ 40.00**	$ 40.00	$ 5.20	**$ 45.20**
Hand planting by ERCA	Bare root trees (per tree)	**$ 23.50**	$ 23.50	$ 3.06	**$ 26.56**
	Potted/Balled & Burlapped trees/shrubs (per tree)	**$ 10.00**	$ 10.00	$ 1.30	**$ 11.30**
Mulch	per tree	**$ 5.00**	$ 5.00	$ 0.65	**$ 5.65**
Forestry Extension Services					
Tree assessments, Managed Forest Tax Incentive Program approvals, hazard/danger tree assessments or tree health assessments and related activities for municipalities	first hour	**$ 90.00**	$ 90.00	$ 11.70	**$ 101.70**
	each additional hour	**$ 65.00**	$ 65.00	$ 8.45	**$ 73.45**
Tree pruning	per hour	**$ 30.00**	$ 30.00	$ 3.90	**$ 33.90**
	minimum charge	**$ 60.00**	$ 60.00	$ 7.80	**$ 67.80**
Equipment rental	**MTO rental rates + administration and Transportation Costs**				

COMMUNITY AND OUTREACH SERVICES

School Programs					
Conservation Area Programs (Hillman Marsh/Holiday Beach/John R. Park Homestead Conservation Areas)					
Half Day	per program	**$ 175.00**	$ 175.00	-	**$ 175.00**
Full Day	per program	**$ 285.00**	$ 285.00	-	**$ 285.00**
	additional parents	**$ 8.50**	$ 8.50	-	**$ 8.50**
Special High Skills Major Certification Programs	per program, plus applicable special materials costs if required	**$ 309.73**	$ 309.73	$40.27	**$ 350.00**
Summer Camp programs	2 hours (per program)	**$ 150.00**	$ 150.00	-	**$150.00**
	4 hours (per program)	**$ 250.00**	$ 250.00	-	**$250.00**
Offsite Presentations					
School camps and in-class programs (not at a Conservation Area)	Half Day (per program)	**$ 150.00**	$ 150.00	-	**$150.00**
	Second class: same day/same school	**$ 100.00**	$ 100.00	-	**$100.00**
Travel fee to offsite presentation (not at a Conservation Area)	per kilometre	**$ 0.40**	$ 0.40	0.05	**$0.45**

Essex Region Conservation Authority
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2018 FEE SCHEDULE

Category	Detail	2018	2017	HST	Total
WATERSHED MANAGEMENT SERVICES					
Floodplain Regulations and Related Development Applications					
Requests for information on regulations for property transaction (lawyers, owners, purchasers or agents)		**$ 175.00**	$ 125.00	$ 19.50	**$ 194.50**
Applications for renewal of existing permits within one calendar year of expiration of original permit		**$ 115.00**	$ 115.00	-	**$ 115.00**
Technical review and clearance where permit or site visit is not required		**$ 115.00**	$ 115.00	-	**$ 115.00**
Placing or grading of fill within regulated areas, light repair of existing breakwalls, small out buildings not requiring a survey		**$ 150.00**	$ 150.00	-	**$ 150.00**
Completing files required for approvals complying with the DART Protocol for Municipal Darainage Act/Section 28		**$ 200.00**			**$ 200.00**
Technical evaluations (elevation, setback survey or site report; property evaluation for tax assessment; ecological evaluation and/or report)		**$ 775.00**	$ 775.00	$ 100.75	**$ 875.75**
Alteration to waterways/shorelines including breakwalls, finger docks less than 15 square metres , crossings, outlets, etc. (not requiring engineering or other detailed analysis)		**$ 500.00**	$ 500.00	-	**$ 500.00**
Alteration to waterways/shorelines including breakwalls, crossings, outlets, etc. (requiring engineering or other detailed analysis) and docks exceeding 15 square metres that include lifts/ PWC platforms/or other accessories		**$ 800.00**	$ 800.00	-	**$ 800.00**
Applications for new building construction including renovations and for sites not directly abutting shorelines or watercourses		**$ 500.00**	$ 500.00	-	**$ 500.00**
Applications for building construction sites directly abutting shorelines or watercourses (including additional impacting on setback)		**$ 800.00**	$ 800.00	-	**$ 800.00**
Application for non-inhabitable garage/storage building <53.5 m^2)and for building additions not including other interior renovations		**$ 250.00**	$ 250.00	-	**$ 250.00**
Applications involving more than one regulated activity, or those requiring engineering studies/designs, environmental studies		**$ 1,200.00**	$ 1,200.00	-	**$ 1,200.00**
Applications where work has proceeded without authorization and/or prior to application of permit		**Double noted fees to reflect costs in these situations**			
Development proposals involving multiple dwelling units (more than 5 lots) where stormwater management or other engineering evaluations are required.	Base cost (up to 5 lots)	**$ 2,000.00**	$ 2,000.00	-	**$ 2,000.00**
	Cost per additional lot	**$ 160.00**	$ 160.00	-	**$ 160.00**
	Maximum	**$ 5,000.00**	$ 5,000.00	-	**$ 5,000.00**
Commercial/industrial/institutional developments where stormwater management or other engineering evaluations are required.	Base cost (up to one hectare)	**$ 1,750.00**	$ 1,750.00	-	**$ 1,750.00**
	Cost per additional hectare	**$ 400.00**	$ 400.00	-	**$ 400.00**
	Maximum	**$ 4,000.00**	$ 4,000.00	-	**$ 4,000.00**
Municipal Infrastructure/Recreational Projects involving one or more regulated activities or those requiring specific engineering design and or Environmental studies.	Base Cost for projects less than 20ha	**$ 2,500.00**	$ 2,500.00	-	**$ 2,500.00**
	Maximum Cost for multidisciplinary activities and or ones larger than 20 ha	**$ 6,500.00**	$ 6,500.00	-	**$ 6,500.00**
Input/review/comment on full Environmental Impact Assessments (EIAs) done by consultants		**$ 1,025.00**	$ 1,025.00	-	**$ 1,025.00**
Input/review/comment on scoped EIAs done by consultants		**$ 500.00**	$ 500.00	-	**$ 500.00**
Technical review and clearance where EIA is not required		**$ 115.00**	$ 115.00	-	**$ 115.00**
Input, review, clearances on substantial drainage proposals in defined areas of environmental concern		**$ 800.00**	$ 800.00	-	**$ 800.00**
Input, review, clearances on other drainage proposals		**$ 150.00**	$ 150.00	-	**$ 150.00**
Other Development Services					
Survey services		**$ 425.00**	$ 275.00	$ 55.25	**$ 480.25**
Technical review fee assessed on resubmission of previously reviewed technical or environmental studies		**$ 250.00**	$ 250.00	N/A	**$ 250.00**

Essex Region Conservation Authority
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2018 FEE SCHEDULE

Category	Detail	2018	2017	HST	Total
Watershed Planning					
Planning Act Applications					
Minor Variance		**$ 115.00**	$ 115.00	-	**$ 115.00**
Draft Plan of Subdivision/Condominium Approval		**$ 300.00**	$ 300.00	-	**$ 300.00**
Clearance Letters for Subdivision/Condominium Approval (applies to each phase of subdivision requested)		**$ 115.00**	$ 115.00	-	**$ 115.00**
Consent		**$ 200.00**	$ 200.00	-	**$ 200.00**
Multiple Consent applications on a single application (up to 3)		**$ 200.00**	$ 200.00	-	**$ 200.00**
Multiple Minor Variance applications on a single application (up to 3)		**$ 115.00**	$ 115.00	-	**$ 115.00**
Minor Official Plan/Zoning By-Law Amdendment (E.g., Single Family Residence)		**$ 200.00**	$ 200.00	-	**$ 200.00**
Major Official Plan/Zoning By-Law Amendment (E.g., Industrial,Commercial,Institutional, Subdivision etc)		**$ 300.00**	$ 300.00	-	**$ 300.00**
Site Plan Control		**$ 200.00**	$ 200.00	-	**$ 200.00**
Official Plan Amendment and Zoning By-law Amendment Combination		**$ 275.00**	$ 275.00	-	**$ 275.00**
Part Lot Control Exemption		**$ 115.00**	$ 115.00	-	**$ 115.00**
Consent with Zoning By-Law Amendment Combination		**$ 250.00**	$ 250.00	-	**$ 250.00**
Consent with Minor Variance Combination		**$ 250.00**	$ 250.00	-	**$ 250.00**
CORPORATE SERVICES					
Other Fees					
Scan to file (wide format)	original sheet	**$ 15.00**	$ 15.00	$ 1.95	**$ 16.95**
	each additional sheet	**$ 2.00**	$ 2.00	$ 0.26	**$ 2.26**
Scan to print (wide format)	original sheet	**$ 15.00**	$ 15.00	$ 1.95	**$ 16.95**
	each additional sheet	**$ 10.00**	$ 10.00	$ 1.30	**$ 11.30**
NSF cheque fee		**$ 35.00**	$ 35.00	$ 4.55	**$ 39.55**

ERCA Fill Flood Line Mapping Inventory

Series ID	Watershed	Series Name	Series Date	Map Sheet Range	Map Sheet Total	Media	Engineering Consultant	Report Name	Report Date	Base Map Type	Base Map Consultant	Base Map Date	Scale	Contour Interval	Reference/Project No.	Note
ER1	Little River	Flood Risk Map Little River	June 1985	1-6	6	Mylar/Paper	MacLaren Engineers	flood plain mapping report	June 1985	Aerial Photo	Kenting Earth Sciences Limited	April 1984	1:5,000	1 metre	42141-A1	
ER2	Cedar, Wigle and Mill Creeks	Cedar, Wigle and Mill Creeks Floodline Mapping Study	February 1981	1 - 26	26	Mylar/Paper	Dillon Consulting Engineers and Planners	floodline mapping report	February 1981	Aerial Photo	Kenting Earth Sciences Limited	May 1979	1:5,000	none	8705-01	
										Fairdrawn			1:2,000	1 metre		
ER3	Pike, Puce, Belle, Duck, Moison, Ruscom	ERCA Fill & Flood Line Mapping [watercourse name]	January 1981	1 - 52	53	Mylar/Paper	Essex Region Conservation Authority	flood plain mapping report	January 1981	Aerial Photo	Kenting Earth Sciences Limited	May 1979	1:5,000			
ER4	Sturgeon Creek	Flood Plain and Fill Regulation Line Mapping Sturgeon Creek	March 1981	1 - 6	6	Mylar/Paper	Marshall Macklin Monaghan Limited			Aerial Photo	Kenting Earth Sciences Limited	May 1979	1:5,000		16-79014	Photogrammetric Cross-Sections by J.D. Barnes Limited
				A2 - H6	19	Paper				Fairdrawn	Kenting / JD Barnes	April 1979	1:2,000	1 metre		Coutour is 0.5m in flat areas
ER5	Canard River, Big Creek	Canard River and Big Creek Floodline Mapping Study	December 1982	1 - 67	68	Mylar/Paper	Proctor & Redfern Limited	floodline mapping report	December 1982	Aerial Photo	Kenting Earth Sciences Limited	March 1981	1:5,000		81021	
ER6	Turkey Creek	Fill and Floodline Mapping Turkey Creek	February 1982	2 - 34b	38	Mylar/Paper	Dillon Consulting Engineers and Planners		February 1982	Aerial Photo	Northway Survey Corporation Limited	February 1975	1":100'	1 foot		Contour interval is 2 feet with 1 foot machine interpolations
										Fairdrawn	Lockwood Survey Corporation Limited	April 1969				
		Fill Line Mapping Turkey Creek	1983	1	1	Mylar/Paper	Essex Region Conservation Authority			Aerial Photo	Kenting Earth Sciences Limited	Spring 1980	1:2,000			
		Turkey Creek Floodway Analysis	March 1991	1 - 11	11	Paper	MacLaren Engineers	Flood Damage Reduction Alternatives for the Turkey Creek Watershed Report Addendum No.1 - Hydrolic Floodway Analysis	March 1991	Fairdrawn	Ontario Ministry of Natural Resources	1986	1:2,000	1 metre		
		Grand Marais Drain Floodway Analysis		22, 28-29, 32-33	5				March 1991	Fairdrawn	Lockwood Survey Corporation Limited	April 1969	1":100'	1 foot		
ER7	Hillman Marsh, Muddy Creek	Fill Line Mapping Hillman Marsh, Muddy Creek	1987	1 - 7	7	Mylar/Paper	Essex Region Conservation Authority			Aerial Photo	Kenting Earth Sciences Limited	1980	1:5,000			
ER8	Shoreline	Essex County Fill and Flood Line Mapping	May 1976	1 - 75a	85	Mylar/Paper	Dillon Consulting Engineers and Planners	Essex County Shoreline Report	May 1976	Aerial Photo	Kenting Earth Sciences Limited	May 1975	1:5,000 1:2,000 (City of Windsor)			
ER9	Little Creek	Fill Line Mapping Little Creek	1987	1 - 3	3	Mylar/Paper	Essex Region Conservation Authority			Aerial Photo			1:5,000			
ER10	Pelee Island	Fill Line Mapping Pelee Island	1987	1 - 10	10	Mylar/Paper	Essex Region Conservation Authority		1987	Aerial Photo	Kenting Earth Sciences Limited	1984	1:5,000			
				TOTAL	338											

DILLON CONSULTING

Durocher, Maggie <mdurocher@dillon.ca>

Tecumseh Drainage Master Plan

1 message

Bert [redacted] Fri, Jun 2, 2017 at 5:23 AM
To: TecumsehDrainageMP@dillon.ca

Please add me to the mailing list for the Tecumseh Storm Drainage Master Plan.
Thank you for your attention to this matter.

[redacted] Wedgewood Lane
Tecumseh, Ontario
[redacted]

Durocher, Maggie <mdurocher@dillon.ca>

Re: Manning Rd.

1 message

Ryan Langlois <rlanglois@dillon.ca> Sun, Jul 22, 2018 at 3:27 PM
To: [redacted]
Cc: Tecumseh Drainage MP <TecumsehDrainageMP@dillon.ca>

Thank you for your inquiry [redacted]

The Town of Tecumseh is currently completing the final design to enclose the remainder of the drain along the West side of Manning. The design is set to be completed by the end of 2018. At this time, there is no timetable on when this work is to be completed, but please note that it is a Town priority.

I encourage you to attend the Tecumseh Storm Drainage Master Plan Public Meeting being held at the Tecumseh Legion on Lanoue Street across from St. Anne's church on Wednesday July 25th from 3-5pm and 5-8pm. I have attached the notice with further details.

Ryan Langlois, P.Eng., ENV SP
Associate
Dillon Consulting Limited
3200 Deziel Drive Suite 608
Windsor, Ontario, N8W 5K8
T - 519.948.5000 ext. 3231
F - 519.948.5054
M - 519.791.2157
RLanglois@dillon.ca
www dillon.ca

On Sat, Jul 14, 2018 at 6:20 PM [redacted] > wrote:

> Will The Town be filling in the ditch on the west side of Manning Rd. from where it left off to Riverside DR.
>
> [redacted]

Tecumseh Drainage MP PIC No1..pdf
99K

MEETING MINUTES

Subject:	Project Initiation Meeting Town of Tecumseh Storm Drainage Master Plan
Date and Time:	January 20, 2017 9:00 am
Location:	Tecumseh Town Hall
Our File:	16-4880

Attendees

Flavio Forest	Dillon
Nicole Caza	Dillon
Ryan Langlois	Dillon
Sarah Zaarour	Dillon
Phil Bartnik	Town of Tecumseh
Kirby McCardle	Town of Tecumseh

Notes

Item	Discussion	Action By
1.	**Project Communication and Schedule**	
1.1.	Regular status update meetings will be scheduled as per the current project schedule and sent out to the project team.	Dillon
1.2.	The main Town of Tecumseh contact for the project is to be Phil Bartnik. Dan Piescic and Kirby McCardle are to be cc'd on all email threads where necessary.	No Action
1.3.	It was recommended by Dillon that the Technical Steering Committee with ERCA to become more involved throughout the project to ensure the project team is up to date on any upcoming MOECC and ERCA guidelines. It has been recommended that ERCA attend the next project meeting.	Dillon
1.4.	Project communication for the public stakeholders will be set up as a quick link on the Town website. Project information, as it becomes available can be provided to the Town to be uploaded to the site.	Town of Tecumseh, Dillon
1.5.	Project Milestones were reviewed which included a background summary report to be completed by the end of May 2018	Dillon
2.	**Review of Project Scope and Purpose**	
2.1.	<u>LiDAR Mapping</u>	

2.1.1.	Dillon is to schedule the LiDAR Survey to be completed at the end of March/ early April.	Dillon
2.1.2.	The extent of the LiDAR to be within the boundaries of E. Pike Creek to the east, CR42 to the South and Banwell Road to the west. The Tecumseh Hamlet area is to be included within the LiDAR. Review of any overland flow contributing from the City of Windsor lands is to be assessed through the LiDAR.	Dillon
2.1.3.	On-the-ground topographic survey will be required beyond the LiDAR for all semi-urban areas, major intersections at significant overland flow routes and to spot check elevations obtained from the LiDAR.	Dillon

2.2. Data Collection/Background Investigation

2.2.1.	Consolidated drainage delineations for all pump station service areas will be reviewed and confirmed based on direction of storm sewer networks from Town GIS Data, municipal drainage reports and correspondence with the Town. Data gaps will be reviewed and addressed where necessary.	Dillon
2.2.2.	The town identified that there is a potential gate at the gravity storm outlet for Pilots Cove area. This is to be investigation through a field investigation.	Dillon
2.2.3.	All stormwater and flooding studies completed within the area will be reviewed	Dillon
2.2.4.	The Town of Tecumseh identified that running hours and some additional operating data was obtained from the September flooding event. The Town is to upload all available operating information from the September flooding event to the assigned ftp site. Dillon is to correspond with Kirby McCardle if a meeting is required with the Town to review any of the information.	Town of Tecumseh
2.2.5.	The Beachgrove Golf Course pump station to the Riverside Drive storm sewer system is to be investigated to determine the existing capacity. The model # on the pumps is to be determined.	Dillon
2.2.6.	The Town identified that Bruno Diloreto at Dillon has all available pump station information for the Town of Tecumseh as part of the previously completed assessments. Dillon is to compile all pump station data as part of the background investigation report.	Dillon

2.2.7.	A review of the Coronado area and lands surrounding the downstream end of the Lesperance PS area is to be investigated due to extended periods of surface flooding and drawdown during the September flooding event.	Dillon
2.2.8.	The Town identified that the residential development along Jason Court adjacent to St. Gregory's Road goes to the Manning Road pump station. Dillon is to review and confirm based on the Town's storm sewer GIS information and as-built data.	Dillon

2.3. Model development (1D/2D)

2.3.1.	Discussion of the MRSPA area and the potential future routing of the Baillargeon Drain to the MRSPA pond was discussed. At this time, existing conditions for this area will be incorporated within the model with the Baillargeon Drain routing to the ETLD and the MRSPA lands undeveloped.	No Action
2.3.2.	The town identified concerns with the drainage at the Bonduelle site along Tecumseh Road and Lacasse Blvd. There are currently multiple storm outlets with one discharging into the neighbouring farm field. Little is known about the areas contributing to each storm outlet. The new expansion is expected to potentially change the drainage areas for the Lesperance, West St. Louis, and East St. Louis pump stations. The team is to review and revise the model during development where necessary	Dillon, Town of Tecumseh
2.3.3.	The Town does not have any plan to reconstruct the semi-urban road cross section areas along St. Anne St, portions of Gouin St and within the Coronado area anytime soon. The study will model existing conditions, but recommend future improvements based on model results will be identified.	Dillon
2.3.4.	The semi-urban areas within the Scully/Edgewater, St. Marks and PJ Cecile/Kensington pump station areas will be incorporated in the model based on the recommended improvements from the previously completed studies. A review of consolidating the pump stations will be completed.	Dillon
2.3.5.	The improvements for Manning Road Phase 2/3 are to begin construction in 2018. The baseline model will take into consideration existing conditions with the	Dillon

proposed improvements to be part of future conditions.

2.4. Model analysis and remedial flood measure design

2.4.1.	During model analysis, Dillon identified that multiple storm simulations will be run for the major storm events including an unverified representation of the September 28/29th 2016 storm event.	Dillon
2.4.2.	The Town identified areas of significant flooding during the September 28/29th storm event in which extensive review is to be completed during the model analysis. This includes the Coronado area and areas directly upstream of the Lesperance pump station.	Dillon
2.4.3.	During model analysis, the use of any wet wells of pump stations proposed to be decommissioned are to be reviewed for use as emergency storage facilities for overland flow during extreme events.	Dillon
2.4.4.	Climate change is to be analyzed during remedial flood solution design based on the 1:100 year storm simulation with a 20% increase.	Dillon
2.4.5.	The town would like a review of the potential consolidation of the East and West St. Louis pump stations during the model analysis.	Dillon

3. September 28/29th 2016 Rainfall Event Analysis

3.1.1.	Dillon is currently completing an analysis of the September rainfall event. This will be documented in the background summary report and ready prior to the first PIC meeting.	Dillon

4. Barrier Land Forms

4.1.	The pros and cons of a barrier land form is to be reviewed with ERCA through their involvement with the technical steering committee. ERCA is to provide input throughout the project to ensure buy-in between the governing agency and the potential remedial flooding solutions proposed for each area.	Dillon

5.	**Environmental Assessment and Public Agency Consultation**	
5.1.	An EA Public Notice is to be completed which defines the problem and provides an opportunity statement regarding surface flooding. Wording within the document must identify that the study is not fully assessing basement flooding and discuss that the project will assist to reduce the risk and frequency of flooding.	Dillon
5.2.	The first set of PIC meetings will be scheduled for the last week of May 2017. The PIC meetings will be split into 2 (one for residents east of Manning Road and one for residents west of Manning Road).	Dillon
6.	**Project Value Added**	
6.1.	A resident survey is to be created for the project which can assist through the EA process and review of areas of concern. Dillon is to review past resident surveys from the completed sanitary analysis project for the Town to build upon, ensuring there are no redundancies.	Dillon
6.2.	Incorporation of a video for the first PIC summarizing the September flooding event and the recommended solutions that the project is hoping to achieve will be reviewed.	Dillon
7.	**Next Meeting**	
7.1.	The next meeting will be scheduled for February 28th 2017	Dillon

Errors and/or Omissions

These minutes were prepared by Sarah Zaarour and Ryan Langlois, P.Eng who should be notified of any errors and/or omissions.

MEETING MINUTES

Subject:	Project Meeting #2 Town of Tecumseh Storm Drainage Master Plan
Date and Time:	March 27, 2017 10:00 am
Location:	Tecumseh Town Hall
Our File:	16-4880

Attendees

Flavio Forest	Dillon
Ryan Langlois	Dillon
Sarah Zaarour	Dillon
Phil Bartnik	Town of Tecumseh

Outstanding Items

Item	Discussion	Action By
1.	**Project Communication and Schedule**	
1.1.	Project communication for the public stakeholders will be set up as a quick link on the Town website. Project information, as it becomes available can be provided to the Town to be uploaded to the site.	Town of Tecumseh, Dillon
2.	**Review of Project Scope and Purpose**	
2.1.	<u>LiDAR Mapping</u>	
2.1.1.	Dillon has scheduled the LiDAR Survey to be completed the week of April 10th 2017.	Dillon
2.2.	<u>Data Collection/Background Investigation</u>	
2.2.1.	The town has confirmed that the gate at the gravity storm outlet for Pilots Cove area is seized in the open position. This will be reflected within the model.	Town of Tecumseh, Dillon
2.2.2.	The Dillon team met with Kirby McArdle and Dan Desrosiers from The Town of Tecumseh and reviewed the running hours and operating data obtained from the September flooding event. Dan from the Town is to provide the Dillon team the operating level information for each pump station.	Town of Tecumseh
2.2.3.	The Beachgrove Golf Course pump station to the Riverside Drive storm sewer system is to be investigated to determine the existing capacity. The model # on the pumps is to be determined.	Dillon

2.2.4.	A review of the Coronado area and lands surrounding the downstream end of the Lesperance PS area is to be investigated due to extended periods of surface flooding and drawdown during the September flooding event.	Dillon
2.3.	Model development (1D/2D)	
2.3.1.	The town identified concerns with the drainage at the Bonduelle site along Tecumseh Road and Lacasse Blvd. There are currently multiple storm outlets with one discharging into the neighbouring farm field. Little is known about the areas contributing to each storm outlet. The new expansion is expected to potentially change the drainage areas for the Lesperance, West St. Louis, and East St. Louis pump stations. The team is to review and revise the model during development where necessary	Dillon, Town of Tecumseh

NEW ITEMS

Item	Discussion	Action By
1.	**Project Communication and Schedule**	
1.1.	The project contact list is to be updated with representatives from the Town of Lakeshore, City of Windsor, the County as well as any school boards within the Town of Tecumseh.	Dillon
1.2.	The project email is to be confirmed and set up through Dillon.	Dillon
1.3.	The project website is to be created through correspondence with Dillon and Town staff.	Dillon, Town of Tecumseh
2.	**Review of Project Scope and Purpose**	
2.1.	It was brought up by the Town what the ultimate goal is for this study. It must be clear to the client as well as the residents that the remedial flooding solutions that will be proposed will not eliminate all surface flooding during large/extreme storm events. The solutions will try and provide SWM upgrades within each service area to limit surface flooding during extreme events (through minor system, major system and PS upgrades) to criteria typically set out for new developments. This includes 1:5 year level of service for storm sewer conveyance (where applicable) and maximum 0.30m of surface ponding during the 1:100 year storm events.	Dillon

2.2.	Data Collection/Background Investigation	
2.2.1.	The town has identified that no new or existing residential developments have disconnected downspouts. This is to be reflected within the Master Drainage Model.	Dillon
2.2.2.	Tony DiCiocco has been contacted regarding the Boston Pizza commercial area and Tecumseh Golf and will review Town of Lakeshore files for SWM design and provide to Dillon.	Dillon
2.2.3.	The Town of Tecumseh is continuing to locate SWM reports and as-built design information for commercial and institutional areas throughout the service areas. Dillon will be provided all available documents when available. It was noted that the Dillon CO-OP student Sarah is only with us until the end of April to potentially assist the City in locating these documents.	Town of Tecumseh
2.2.4.	Dillon is to make a list of storm MH's required to be surveyed for invert elevations and provide to the Town.	Dillon
3.	**Model Analysis**	
3.1.	The PCSWMM model will incorporate all orifice controls along the adjacent streets connecting to the Lesperance storm sewer. Remedial flooding measures for this area will include options to maintain or potentially remove the controls, in which the effects of the Lesperance trunk sewer and PS will be identified and necessary upgrades would be proposed if determined to be a solution.	Dillon
4.	**Environmental Assessment and Public Agency Consultation**	
4.1.	An EA Public Notice of Commencement is to be sent out based on Town changes. Dillon is to send the Town the final notice.	Town of Tecumseh, Dillon
4.2.	Through a review of the project schedule, it has been determined that the first PIC meeting is to be rescheduled to fall 2017, and second PIC close to spring 2018. This change is to allow further modelling to be completed and have alternative solutions ready for public review.	Dillon

4.3.	It is expected that the first PIC should ensure that the public understand that this study is pertaining to surface flooding and not basement flooding. The SWM improvements will assist to limit basement flooding, but will not ensure any guarantees. The PIC should also provide as an educational experience for residents identifying ways they can do to protect their homes against the risks of basement flooding from both the storm and sanitary networks.	No Action

Errors and/or Omissions

These minutes were prepared by Sarah Zaarour and Ryan Langlois, P.Eng who should be notified of any errors and/or omissions.

MEETING MINUTES

Subject:	Project Meeting #3 Town of Tecumseh Storm Drainage Master Plan
Date and Time:	April 28, 2017 10:00 am
Location:	Tecumseh Town Hall
Our File:	16-4880

Attendees

Flavio Forest	Dillon
Ryan Langlois	Dillon
Sarah Zaarour	Dillon
Phil Bartnik	Town of Tecumseh

Outstanding Items

Item	Discussion	Action By
1.	**Review of Project Scope/Purpose/Model Development**	
1.1.	The Beachgrove Golf Course pump station to the Riverside Drive storm sewer system is to be investigated to determine the existing capacity.	Dillon
1.2.	A review of the Coronado area and lands surrounding the downstream end of the Lesperance PS area is to be investigated due to extended periods of surface flooding and drawdown during the September flooding event.	Dillon
1.3.	The town identified concerns with the drainage at the Bonduelle site along Tecumseh Road and Lacasse Blvd. There are currently multiple storm outlets with one discharging into the neighbouring farm field. Little is known about the areas contributing to each storm outlet. The new expansion is expected to potentially change the drainage areas for the Lesperance, West St. Louis, and East St. Louis pump stations. The team is to review and revise the model during development where necessary	Dillon, Town of Tecumseh
1.4.	It was brought up by the Town what the ultimate goal is for this study. It must be clear to the client as well as the residents that the remedial flooding solutions that will be proposed will not eliminate <u>all surface</u> flooding during large/extreme storm events. The solutions will try and provide SWM upgrades within each service area to limit surface flooding during extreme events	Dillon

	(through minor system, major system and PS upgrades) to criteria typically set out for new developments. This includes 1:5 year level of service for storm sewer conveyance (where applicable) and maximum 0.30m of surface ponding during the 1:100 year storm events.	
1.5.	The Town of Tecumseh is continuing to locate SWM reports and as-built design information for commercial and institutional areas throughout the service areas. The Town will be provided all available documents when available.	Town of Tecumseh
1.6.	The PCSWMM model will incorporate all orifice controls along the adjacent streets connecting to the Lesperance storm sewer. Remedial flooding measures for this area will include options to maintain or potentially remove the controls, in which the effects of the Lesperance trunk sewer and PS will be identified and necessary upgrades would be proposed if determined to be a solution.	Dillon
1.7.	Through a review of the project schedule, it has been determined that the first PIC meeting is to be rescheduled to fall 2017, and second PIC close to spring 2018. This change is to allow further modelling to be completed and have alternative solutions ready for public review.	Dillon
1.8.	It is expected that the first PIC should ensure that the public understand that this study is pertaining to surface flooding and not basement flooding. The SWM improvements will assist to limit basement flooding, but will not ensure any guarantees. The PIC should also provide as an educational experience for residents identifying ways they can do to protect their homes against the risks of basement flooding from both the storm and sanitary networks.	No Action

NEW ITEMS

Item	Discussion	Action By
1.	**Data Collection**	
1.1.	The Town identified that a survey of the VIA Rail ditch is recommended within the study area. Clearing of the Brush is proposed by the Town and could be completed during the survey to save on flaggers during this work. Dillon is to contact Kirby McCardle to discuss further and coordinate with the Dillon survey team to get cross sections and inverts of the ditch.	Dillon
1.2.	Dillon is currently going through all background documents referencing the study area and will incorporate these documents within the background study report to be submitted to the Town.	Dillon
1.3.	The town identified that a second pump station is located within the Beachgrove Golf Course along Tecumseh Road. Dillon is to set up a meeting with Beachgrove staff to investigate both pump stations within the site.	Dillon
1.4.	Dillon is to review the design brief for the Lesperance storm sewer south of CR22 to determine the allocated flows from the St. Anne Street area to this system from the existing outlets at N. Pacific, Intersection, Maissoneuve and Gouin Street.	Dillon
1.5.	Dillon is to confirm that Dillon drive has no curbs east of Lesperance	Dillon
1.6.	Dillon is currently reviewing all the pump station data provided by the Town. If any questions or comments arise during the review, Dan Desrosiers will be contacted to clarify anything outstanding.	Dillon
1.7.	The Town identified that storm sewer as-built drawings may be located within the watermain interactive mapping links on the Town site. Dillon is to review.	Dillon
2.	**LiDAR Mapping**	
2.1.	The LiDAR was completed on April 14th, 2017. It is expected that the data will be received within 3-5 weeks from the completion date.	None
3.	**Project Communication and Schedule**	
3.1.	The notice of commencement has been sent to everyone on the EA contact list and has been published within the April 28th Shoreline and will be re-published	Dillon

	in the May 5 Shoreline. The project website on the Town site is up and running. Within the next two weeks, Dillon will follow up with the First Nations contacts regarding the notice and document all correspondence, as required for the EA.	
3.2.	The project email has been set up to collect all correspondence from the stakeholders to the project team. Dillon will monitor the email address.	Dillon
4.	**Model Analysis**	
4.1.	Due to the southern portion of the Lesperance Road storm sewer system being designed for a 1:2 year level of service, St. Anne street is to be redesigned with the same level of service for the proposed storm sewers.	Dillon
4.2.	Dillon is to use all pump station data available in the model, including pump station curves and individual stop/start elevations where applicable.	Dillon
5.	**Environmental Assessment and Public Agency Consultation**	
5.1.	It is expected that the first PIC should ensure that the public understand that this study is pertaining to surface flooding and not basement flooding. The SWM improvements will assist to limit basement flooding, but will not ensure any guarantees. The PIC should also provide as an educational experience for residents identifying ways they can do to protect their homes against the risks of basement flooding from both the storm and sanitary networks.	No Action
5.2.	ERCA is to continue to be invited to the monthly project update meetings and provide input, where necessary	No Action

Errors and/or Omissions

These minutes were prepared by Sarah Zaarour and Ryan Langlois, P.Eng who should be notified of any errors and/or omissions.

MEETING MINUTES

Subject:	Project Meeting #7 Town of Tecumseh Storm Drainage Master Plan
Date and Time:	October 6th, 2017 10:00 am
Location:	Tecumseh Town Hall
Our File:	16-4880

Attendees

Flavio Forest	Dillon
Ryan Langlois	Dillon
Dan Piescic	Town of Tecumseh
Phil Bartnik	Town of Tecumseh
Kirby McArdle	Town of Tecumseh

Item	Discussion	Action By
1.	**Project Field Investigation and Background Documents Review**	
1.1.	A field investigation was completed by Dillon to review SWM controls and drainage outlets for L'Essor School, Lakewood Condominiums at 200 Manning Road and the existing soccer field and adjacent parking lots directly east of the Zehrs Plaza. The following was identified: • Design drawings for L'Essor identify a 600mm diameter outlet at MH STM2962 from the school. The 600mm outlet was identified in the field to have a small orifice plate (+-150mm diameter) at the outlet restricting flows into the St. Gregory storm sewer. This will be incorporated in the modelling. • Design drawings along St. Gregory fronting L'Essor identify that a brick bulkhead was to be installed between MH STM2962 and STM2963 with a 4" orifice to limit flows east to the Scully PS service area. Upon a field investigation, this bulkhead was not constructed. • Design drawings for Lakewood Condominiums at 200 Manning Road identify a 150mm orifice plate at the outlet to control flows into the ETLD. Upon a field investigation, this orifice plate was not installed at the outlet. For	Dillon

existing conditions modelling, it is assumed that flows from the site are controlled to the existing 300mm outlet pipe currently in place.

- A site investigation determined that the Tecumseh Soccer Field directly east of the Zehrs plaza including both parking lots discharge flows into the St. Gregory storm sewer via a 300mm diameter outlet sewer.

1.2.	Dillon identified that pump station curves were only found for the recently constructed Brighton and Manning Road/ELTD pumping stations. The remainder of the pumps within each pump station assume maximum capacity once the pumps kick on. The pumps also do not take into account an outflow rate beyond the known pump capacity due to increased head at the upstream end. The Town of Tecumseh is to contact the pump manufacturers and obtain pump curves where available, specifically for the Lesperance screw pump which is similar to the screw pumps within both the East and West St. Louis pump stations. Dillon will review internal files from previous projects to try and retrieve pump station name plates with pump serial numbers to assist.	Town, Dillon
1.3.	The Town would like to review the option of incorporating flow monitoring devises into the project beginning in April 2018 to accurately calibrate the PCSWMM model. It was identified by the project team that this would potentially delay the completion of the project, but would be reviewed once the existing conditions model is complete and the analysis has been completed. At that point, it will be determined if it is felt that flow monitoring will more accurately assess existing conditions based on a calibrated model.	Dillon
2.	**Model Development Updated**	
2.1.	The minor system development and all drainage area catchment delineation have been completed in the model. The majority of the data gaps have been filled in and the known SWM controls on ICI lands are currently in the process of being incorporated in the model. The pump stations have been developed in the model and all known information has been incorporated. Once any pump curves have been retrieved for the	Dillon

older stations, they will be included in the model.

2.2.	A decision has been made to now develop and analyze the full major system network using two-dimensional (2-D) modelling. This approach will more accurately assess major system flow and surface depression storage which will accurately identify areas of surface flooding during both frequent and infrequent storm events. The use of 2-D modelling will better asses both existing and future conditions.	Dillon
2.3.	For ICI lands where no SWM and STM outlet information is known, a model assumption will be made that the minor system outlet will be controlled to the 1:2 year post development flow (ie. uncontrolled during minor system events). During major system events beyond a 1:2 year, flows will backup and begin to use surface storage identified by the 2D surface until eventually spilling off the private lands based on the natural topography.	Dillon
2.4.	The town identified that they would like to include smaller pipe segments within the model below the existing limit of 525mm diameter. A review of the areas with smaller sewers was completed and smaller segments will be included within the model where necessary, specifically along Centennial, St. Pierre and areas within the Lesperance PS service area.	Dillon

3. Model Analysis/Review

3.1.	A coarse review of the model was completed by the project team taking into consideration just the minor system flow. Due to the lack of CB inlet restrictions in place and no major system currently developed, the model was yet to accurately identify existing conditions and the HGL within the minor system. Once the dual drainage 2D model is completed, an existing conditions analysis and current level of service analysis will be completed and presented to the project team.	Dillon
3.2.	The town identified that some of the older pump stations within St. Clair Beach do not run frequently for long periods of time during storm events. This could be due to the lack of a concentrated overland flow route (ie. no curbs and gutter) within the roadway to bring flows directly into the storm system and the heavy use of local surface depression storage within these rural roadway cross sectional areas.	Dillon

	Although reaching their life's end and previous analysis completed on the service areas using the rational method, it was identified by the Town that they would like the existing condition analysis for the study to now include the service areas for the Scully, St. Marks and Kensington pump stations. The recommended designs for these service areas and pump stations have already been developed and will be confirmed within the detailed SWM model as part of this study.	
3.3.	During the existing condition model analysis, the Town would like to run multiple scenarios as follows for the ICI lands: • Existing scenario where all ICI lands are uncontrolled into the system; and • Existing scenario where all ICI lands are controlled to the 1:2 year pre-development flow rate;	Dillon
3.4.	The Town would like to run simulations within the model to identify the impacts on the potential remedial flooding solution designs based on the rainfall collected during the recent historical storm events that took place on September 28/29 2016 and August 28 2017.	Dillon

Errors and/or Omissions

These minutes were prepared by Ryan Langlois, P.Eng who should be notified of any errors and/or omissions.

MEETING MINUTES

Subject:	Project Meeting #8 Town of Tecumseh Storm Drainage Master Plan
Date and Time:	November 27th, 2017 2:00 pm
Location:	Dillon Consulting
Our File:	16-4880

Attendees

Flavio Forest	Dillon
Ryan Langlois	Dillon
Sarah Zaarour	Dillon
Phil Bartnik	Town of Tecumseh

Item	Discussion	Action By
1.	**Model Development and Analysis Updated**	
1.1.	The minor system development and all drainage area catchment delineations have been completed in the model. The majority of the data gaps have been filled in. The ditches along Tecumseh Rd have not been represented, but are to be incorporated into the model during development of the 2D surface.	Dillon
1.2.	The 2-D surface will be developed for the major system network in December.	Dillon
1.3.	It was identified by the Town that the storm sewers identified within the interactive mapping for St. Marks are incorrect and represent the sanitary sewer sizes. The storm sewer strategy for Arlington, St. Marks and Edgewater are similar where rural cross sections with shallow swales convey flows ultimately north to the Riverside Drive system. Small diameter subdrains are under the swales which connect to the Riverside drive sewer system, but the condition of these sewers are unknown. With no current storm as-built data for the sewers, the rural swale system is expected to convey the majority of the flows and during smaller storm events, runoff is maintained on-site through surface depressions. This will be accurately represented within the 2D model.	
1.4.	It has been decided that to be conservative, rear yard areas are to remain lumped with the front yard	

	catchments, therefore taking a conservative approach to surface ponding along the municipal right-of-way within the model.	
1.5.	It was identified that a potential flow monitoring program be incorporated within the study in 2018 to accurately assess flows through the storm sewer system and complete model calibration. This is to be further discussed upon receiving a quote for the work from AMG. AMG will be contacted for an inquiry and a strategy will be completed to determine where the flow monitors can be located.	Dillon
2.	**Private SWM Connections**	
2.1.	The known SWM controls on ICI lands have been incorporated in the model. • Underground storage represented by pipe conduits and storage nodes; • Surface storage to be represented by the topographic LiDAR (2D surface); and • Unknown storm outlets directly connected to system.	Dillon
2.2.	For ICI lands where no private SWM design and storm sewer outlet information is known, a model assumption will be made that the minor system is conveyed by a sewer sized for the 1:2 year post development flow (ie. uncontrolled during minor system events). During major system events beyond a 1:2 year, flows will temporarily store on the surface until eventually spilling off the private lands onto municipal property based on the natural topography represented within the 2D surface.	Dillon
3.	**Initial Model Analysis (Level of Service – 1:2 Year Event)**	
3.1.	A coarse review of the model was completed by the project team taking into consideration minor system flow through the storm sewer system. Most sewers were surcharged beyond the obvert of the pipe during the 1:2 year event. HGL elevations were extremely high for the event due to potentially some of the assumptions that were made in the model. Further review of the model will be completed to ensure that private properties are being reasonably represented.	Dillon
3.2.	It was identified that the pumps within each station may not run continuously for a 1:2 year storm, but would run continuously during a 1:100 year storm	Dillon

	events.	
3.3.	The decision has been made to run both the rational method and the Chicago method during the existing condition model analysis for comparison purposes.	Dillon
3.4.	The Town would like to run simulations within the model to identify the impacts on the potential remedial flooding solution designs based on the rainfall collected during the recent historical storm events that took place on September 28/29 2016 and August 28 2017.	Dillon
4.	**Recommendations and First PIC**	
4.1.	Dillon is to reference the sanitary model that is in XP SWMM when considering possible recommendations. They must be functional based solutions.	Dillon
4.2.	The first PIC should provide a slideshow identifying historically what was used for design criteria and how infrastructure design has evolved to date.	Dillon

Other notes not included:

- Kirby may get info for these areas (St. Marks/ Arlington) in approximately 1 year, but not guaranteed.
- Lance to be sent out in any areas that require extra attention.
- Connections along Westlake are to be incorporated in the model that have been surveyed by the Town for the Tecumseh Town Centre.
- At this time, the Town and Dillon is in the process of coordinating the cleanout of the railside ditch.
- It is proposed that the 1st PIC will be located in the L'Essor gym.

Errors and/or Omissions

These minutes were prepared by Ryan Langlois, P.Eng who should be notified of any errors and/or omissions.

MEETING MINUTES

Subject:	Project Meeting #9 Town of Tecumseh Storm Drainage Master Plan
Date and Time:	January 31, 2018 - 10:00 am
Location:	Dillon Consulting
Our File:	16-4880

Attendees

Flavio Forest	Dillon Consulting
Ryan Langlois	Dillon Consulting
Phil Bartnik	Town of Tecumseh

Item	Discussion	Action By
1.	**Model Development Updates**	
1.1	The St. Marks Road storm sewer system was surveyed and it was determined that the sizes within the interactive mapping are correct. This included pipe sizes ranging from 375mm to 600mm. The sewers were updated in the existing conditions model accordingly.	Dillon
1.2	AMG was contacted and the storm sewer flow monitoring is scheduled to begin April 1, 2018. A total of 3 flow monitors and 2 rain agues will be installed for a minimum of 4 months. Dillon is to review proposed locations for each monitor.	Dillon
2.	**Existing Surface Flooding Conditions**	
2.1.	The general causes of surface flooding throughout the study area were identified as follows: • General surface/road grading and buildings constructed in low lying areas. • Lack of overland flow routes (ie. flat grades, land form barriers). • Storm sewer capacity. • Downstream conditions. • Catchbasin inlet efficiency.	
2.2.	Recommended levels of surface for new storm sewers to be designed in the model were summarized as follows: • Sewers sized for 1:5 year HGL below obvert, where feasible. • Where pump stations cause a tailwater condition, HGL must be below the surface during the 1:5 year event. • Where new storm sewers are discharging into an existing storm sewer system, the new sewers will be sized to not negatively impact the D/S system.	Dillon

2.3. Existing surface flooding conditions during the 1:100 year event as well as sewer HGL profiles during the 1:100 year and 1:2 year event were discussed with the team.

2.4. **Minor System Storm Event Analysis – 1:2 Year Event**

Analysis results identified that most existing storm sewer systems are surcharging to an elevation above the obvert of the pipe, but below the ground elevation. The existing pump stations were acting at almost full capacity, which verifies that most of the older pump stations are designed for approximately a 1:2 year event or less.

2.5. It was identified that there is a storm sewer interconnection between the ETLD PS system and the Scully PS system along St. Gregory's Road in front of École Secondaire l'Essor. The storm sewer interconnection between the systems causes flows to spread between the two areas at this location which causes sewer surcharging of the Cada Crescent / Grant Avenue storm sewer system. Dillon is to review the effects of disconnecting the two, which was proposed as part of a previous study completed. Dillon

2.6. **Major System Storm Event Analysis – 1:100 Year Event** Dillon

The 2D PCSWMM model during the 1:100 year event was analyzed through a review of each pump station service area on the following criteria:

- **Low Surface Flood Vulnerability < 0.15m depth**
  - Ponding is maintained within roadway (ie. curb to curb).
- **Medium Surface Flood Vulnerability >0.15 and < 0.25m depth**
  - Ponding exceeds curb height but is maintained within ROW.
- **High Surface Flood Vulnerability >0.25 and < 0.30m depth**
  - Ponding is reaching current acceptable limit of 0.30m.
- **Extreme Surface Flood Vulnerability >0.30 and < 0.40m depth**
  - Ponding is beyond current acceptable limits and may spill beyond ROW.

2.7. ETLD PS Drainage Area – Lesperance Road

- A low lying area along Lesperance Road directly north of Meconi Drive identifies significant ponding along the roadway (approx. 0.48m) and within private rear yards beyond 0.30m. This area currently has no overland flow relief.
- 1:100 year HGL is reaching the surface at this low point.

2.8. ETLD PS Drainage Area – Charlene, St. Agnes Area

- This area currently has no overland flow relief to the Baillargeon Drain. Overland flows are trapped within the localized roadway and pond beyond 0.30 with some areas ponding above 0.40m.

2.9. ETLD/Scully PS Drainage Area Interconnection along St. Gregory — Dillon

- Model results identify that due to the storm sewer interconnection between the two systems along St. Gregory's Road in front of École Secondaire l'Essor, a high HGL within the ETLD system is backing up down the St. Gregory's Road storm sewer and causing surface ponding to exceed 0.30m. Additionally, the surface flooding locations along St. Gregory's Road are low points with no overland flow relief which is causing surface ponding in excess of 0.4m.
- It is recommended that modelling be completed with the elimination of this interconnection to determine the effects of the disconnection.

2.10. Lesperance PS Drainage Area

- Surface ponding along Lesperance Road between St. Denis Street and McNorton Street is identified to exceed 0.30m due to a high HGL within the existing Lesperance Road trunk sewer. This location was also identified to be a low point within the system.
- Surface ponding along St. Pierre Street is identified to exceed 0.30m due to tailwater conditions within the Lesperance Road trunk sewer and ultimately the existing Lesperance Road PS.
- Surface ponding is identified to exceed 0.30 along Evergreen Drive and Papineau Court which outlet into the Lesperance Road trunk sewer.

2.11. West St. Louis PS Drainage Area

- Surface ponding is identified to exceed 0.30m along Meander Crescent and Clapp Street due to limited sewer capacity, the location being identified as a low point in the system and a lack of overland flow route within the area.
- Surface ponding is identified to exceed 0.30m along Lacasse Boulevard at the intersection with Little River Boulevard and Little River Boulevard between Lacasse Boulevard and Coronado Drive due to limited sewer capacity, the location being identified as a low point in the system and a lack of overland flow route within the area.
- Minor surface flooding was identified along Michael Drive south of Little River Boulevard. This is identified as the only localized low point.

2.12. East St. Louis PS Drainage Area

- Minor surface flooding was identified along Centennial Drive south of Little River Boulevard. This is identified as the only localized low point.
- Surface ponding was identified to exceed 0.30m (max of 0.45m) along Green Valley Drive between St. Gregory's Road and St. Thomas Street as well as along St. Thomas Street from Green Valley Drive to Dillon Drive. This is due to the low points as well as a high HGL within the existing storm sewer system.

2.13. Scully PS Drainage Area — Dillon

- Surface ponding is identified to exceed 0.30m along Cada Crescent, Gordon Avenue, and Grant Avenue. This is due to the high tailwater condition caused by the Scully PS as well as the lack of a sufficient overland flow route for relief.
- Surface ponding is identified to exceed 0.30m within the existing Edgewater Boulevard roadside ditches. This is to be expected due to the lack of a road curb which would cause a concentrated flow to the existing PS as well no adequate storm sewer system.
- It is expected that Edgewater Boulevard be redesigned with storm sewers for a 1:5 year level of service and the roadway be reconstructed to the Town standard curb and gutter. The PS will also be analyzed for improvements.

2.14. St. Mark's PS Drainage Area — Dillon

- Surface ponding is identified to exceed 0.30m within the existing St. Marks Road and Arlington Boulevard roadside ditches. This is to be expected due to the lack of a road curb which would cause a concentrated flow to the existing PS as well no adequate storm sewer system.
- It is expected that St. Marks Road and Arlington Boulevard be redesigned with storm sewers for a 1:5 year level of service and the roadway be reconstructed to the Town standard curb and gutter. The PS will also be analyzed for improvements.

2.15. Peter Cecile PS Drainage Area — Dillon

- No significant surface ponding was identified within the Kensington Boulevard dish area due to the amount of depression storage on private lands and the lack of a road curb to maintain flows within the roadway.
- It is expected that roadways within the Kensington Boulevard dish area be redesigned with storm sewers for a 1:5 year level of service and the roadway be reconstructed similar to Pentilly Road with flat curbs and localized shallow swales. The PS will also be analyzed for improvements.

2.16. Brighton PS Drainage Area

- No significant surface ponding was identified within this area.

3. September 28/29 2016 Storm Event

3.1. The September 28/29, 2016, flooding event was simulated in the 2D model and reviewed with the team. Overall, it was identified that the 2D model is accurately reflecting surface flooding conditions based on local accounts of the extent of flooding from this study.

4.	**Next Steps**	
4.1.	Dillon will continue to analyze the existing system and begin modelling alternative solutions to reduce surface ponding to the criteria outlined above. The majority of the alternative flooding solutions are to be completed by the end of March 2018.	Dillon
4.2.	A tentative PIC date has been scheduled for the end of March 2018.	

Other notes not included:

- Kirby is to coordinate the brushing and cleaning out of the VIA Rail ditch. At this time, Dillon is to complete a survey of the ditch to collect cross sections and bottom grades.

Errors and/or Omissions

These minutes were prepared by Ryan Langlois, P.Eng who should be notified of any errors and/or omissions.

RTL:ks

April 3, 2018

MEETING MINUTES

Subject:	Project Meeting #10 Town of Tecumseh Storm Drainage Master Plan
Date and Time:	March 5, 2018 - 2:00 pm
Location:	Dillon Consulting
Our File:	16-4880

Attendees

Flavio Forest	Dillon Consulting
Ryan Langlois	Dillon Consulting
Phil Bartnik	Town of Tecumseh
Dan Piescic	Town of Tecumseh
John Henderson	ERCA

Item	Discussion	Action By
1.	**Existing Condition Analysis**	
1.1	The presentation as part of the last meeting was presented to ERCA and the full existing condition analysis of surface flooding was discussed.	
1.2	ERCA identified that a review of the historic high water levels in Lake St. Clair and its effect on the system and surface flooding should be considered as part of this study. At this time, Dillon identified that although the study will not specifically design remedial flooding solutions to ensure that high water levels from the lake do not flood low lying lands within the study area, there will be some high level consideration on ways to provide a solution for this problem. The majority of the study area is also hydraulically disconnected from the system through the pump stations and any recommended pump station upgrades will be designed with the consideration of historic high lake levels. As part of this study, Dillon will complete a high level desktop analysis using the recently completed LiDAR and identify areas where spillover can occur based on historic high lake high water levels within the study area.	Dillon
2.	**Proposed Remedial Flooding Solutions – East of Manning Road**	
2.1.	**Scully, St. Marks, and Peter Cecile PS** The following scenarios were summarized in a power point presentation for the service areas: • **Scenario #1 (Maintain Three Pump Stations)** – Upgrade three pump stations to 1:5 year LOS. – Scully PS upgraded from 1.005cms to 2.47cms. – St. Marks PS upgraded from 0.315cms to 1.89cms.	Dillon

  - Peter Cecile PS upgraded from 0.857cms to 2.125cms.
  - Upgrade storm sewers along Edgewater Boulevard, St. Marks Road, Arlington Boulevard, and Kensington Dish to 1:5 year LOS.

- **Scenario #2 (Two Pump Stations)**
  - Upgrade Peter Cecile PS to 1:5 year LOS to 2.125 cms.
  - Decommission St. Marks PS and merge service are with Scully PS. Upgrade to 1:5 year LOS to 4.0cms.
  - Upgrade storm sewers along Edgewater Boulevard, St. Marks Road, Arlington Boulevard, and Kensington Dish to 1:5 year LOS.

- **Scenario #3 (One Pump Station)**
  - Decommission Peter Cecile PS and St. Marks PS and merge all three areas to new Edgewater PS sized to a 1:5 year LOS of 6.12cms.
  - Upgrade storm sewers along Edgewater Boulevard, St. Marks Road, Arlington Boulevard and Kensington Dish to 1:5 year LOS.
  - Sanitary conflicts existed along Riverside Drive between Arlington Boulevard and the existing Scully PS. Dillon will further review any conflicts and provide recommendations.

It was identified that with the upgrades proposed at the Scully PS location for all three scenarios, it caused a decrease in surface ponding along the Cada Crescent/Grant Avenue area. This was due to the reduction of the tailwater condition within the system

3. Proposed Remedial Flooding Solutions – West of Manning Road

3.1. Baillargeon Drainage Area

Dillon

- Solutions along Lesperance Road north of Meconi Drive at the local low point included the following:
  - Alternative #1 - Introduction of underground storage at this location did not significantly improve the system due to minimal cover and high tailwater conditions.
  - Alternative #2 - Incorporation of 2 shallow above ground surge ponds at the low point along Lesperance Road with 450mm connections to the Lesperance Road storm sewer system. This will entail the acquisition of 5 properties along the west side of Lesperance Road and would reduce the surface flooding in this area to below 0.30m. The total storage required in the dry pond would be 1,300 m^3 at a total depth of 0.30m.

It was determined that neither of these options would be feasible and instead, a new relief sewer me modelled along Charlene Lane with a connection with the Lesperance Road storm sewer and outlet into the future MRSPA lands once the trunk sewer is build.

4.	**Next Steps**	
4.1.	Dillon will continue to model and analyze alternative solutions for the other service areas to reduce surface ponding to the criteria outlined above. The majority of the alternative flooding solutions are set to be completed by mid-April 2018.	Dillon
4.2.	A tentative PIC date has been scheduled for the end of April 2018.	

Errors and/or Omissions

These minutes were prepared by Ryan Langlois, P.Eng who should be notified of any errors and/or omissions.

RTL:ks

April 3, 2018

MEETING MINUTES

Subject:	Project Meeting #11 Town of Tecumseh Storm Drainage Master Plan
Date and Time:	March 27, 2018 - 2:00 pm
Location:	Dillon Consulting
Our File:	16-4880

Attendees

Ryan Langlois	Dillon Consulting
Vic Hebert	Dillon Consulting – Conference In
Phil Bartnik	Town of Tecumseh

Item	Discussion	Action By
1.	**Initial Discussion**	
1.1.	• The Town identified that the preferred solutions are to be assessed with respect to climate change and a cost comparison is to be completed to accurately assess the benefit of designing for climate change, either at the pump stations or within the relief sewers. • Dillon is to analyze sizing the pump stations for a greater level of service (ie. 10 year +) even though the existing storm sewers are only sized for a 1:2 year and new sewers may only be sized for a 1:5 year. • The Town identified that redundancy will be required for any areas where LID measures are recommended to be implemented. • Dillon is to prioritize the recommended solutions and infrastructure improvements proposed for each service area so the Town has an idea of which solutions to design first and push up for construction. This is to be based on budget, schedule and extent of flooding. • For the first PIC, a presentation of the findings may be beneficial.	Dillon
2.	**Flow Monitoring**	
2.1.	• The flow monitors have been installed in three (3) locations as identified in the attached figure. The upstream drainage areas to these monitors have been highlighted. Two rain gauges have been installed within the study area. One on top of the existing Brighton Road PS and the second on top of Tecumseh Town Hall. • The flow monitoring period will begin April 1, 2018, and continue for a minimum of 4 months. From there, the monitors will collect data month to month for a maximum of 7 months until sufficient data has been collected. Dillon is to provide progress emails of the data on a monthly basis.	Dillon

2.2. Two rain gauges have been installed within the study area. One on top of the existing Brighton Road PS and the second on top of Tecumseh Town Hall.

3. Proposed Remedial Flooding Solutions – East of Manning Road

3.1. Scully, St. Marks, and Peter Cecile PS — Dillon

- The Scully, St. Marks and Peter Cecile pump station solutions were further discussed for the alternative upgrades identified in the previous meeting as well as the proposed storm sewer design for Edgewater Boulevard, St. Marks Road, Arlington and the Kensington Dish area. It was identified that due to the pump station improvements recommended for the Scully PS, the existing condition surface flooding beyond 0.30m within the Cada Crescent/Grant Avenue area have been reduced. This is due to a reduction in tailwater conditions during large storm events

3.2. Brighton PS — Dillon

- The enclosure of the Tecumseh Road ditch from Manning Road to the limit of the Tecumseh Road work completed as part of the Brighton Road PS improvements (directly west of D.M. Eagle Public School) was incorporated in the model. Analysis during the 1:5 year LOS design identified that the initial sizing was adequate. Further analysis is to be completed by Dillon to confirm during detailed design of the ditch enclosure.

4. Proposed Remedial Flooding Solutions – West of Manning Road

4.1. Baillargeon Drainage Area — Dillon

- A new 675mm relief sewer was modelled along Charlene Lane to provide surface flooding relief for the local area as well as along Lesperance where a connection with the existing Lesperance storm sewer system is recommended. This sewer was sized to be a 675mm and will discharge flows into the proposed MRSPA development trunk sewer. Dillon is to account for the increased flows when re-sizing the MRSPA trunk sewer based on updated C-values.

4.2. Coronado Dish Area — Dillon

- Storm Sewer Design of the existing Coronado Dish area was sized with pipes ranging from 375mm – 1050mm. Dillon is to review if the existing 900mm diameter storm sewer along Dillon Drive can be maintained and if a smaller sewer can be installed in parallel for cost savings.
- A new 1050mm storm sewer is proposed along Barry Avenue between Dillon Drive and Riverside Drive to convey flows to the West St. Louis PS. The improvements are to be merged with the master model and pump station updates, if necessary are to be analyzed.

4.3. **Ongoing Modelling – Lesperance, West & East St. Louis PS**

Model simulations currently running includes the following:

- Incorporation of a storm relief sewer along St. Pierre Street from Clapp Street to Riverside Drive and Lesperance PS increased by 4cms to reduce local surface flooding.
- Redirection of Meander Crescent from the Lacasse system to the St. Pierre relief sewer to reduce surface flooding.
- Relief sewer along Green Valley Drive to reduce surface flooding.
- Increase in PS capacity at the East St. Louis PS.

5. Next Steps

5.1. Dillon will continue to model and analyze alternative surface flooding solutions, including the following areas where extensive surface flooding exists: — Dillon

- Subdivision behind McDonalds.
- Little River Boulevard between Lacasse Boulevard and Barry Avenue.

5.2. Modelling will be completed for St. Anne Street between North Pacific Avenue and Gouin Street. The following alternatives will be analyzed: — Dillon

- Alternative 1: Restrict to acceptable release rate into existing Lesperance Sewer.
- Alternative 2: Convey flows to new Charlene relief sewer to MRSPA.

5.3. The team will incorporate the MRSPA development within the future conditions model based on the Charlene relief sewer. — Dillon

6. Public Information Centre #1

6.1. Draft slides for the first PIC were reviewed with the town, which included the following:

- Outline of the PIC objectives;
- Study Area Summary and Focus;
- Study Purpose and EA Process;
- Background Information;
- Existing Condition Results;
- Alternative Flooding Solutions; and
- Use of interactive Panel (post-it note format).

The PIC is to be held at École Secondaire l'Essor gymnasium.

7. Schedule

7.1. Alternative Solutions modelling is expected to be completed by the end of April 2018.

7.2. An alternative solutions matrix will be completed with budgetary costing.

7.3. PIC #1 is expected for the first week of May, but is to be confirmed at the next meeting scheduled for April 18 at 10 am.

Errors and/or Omissions

These minutes were prepared by Ryan Langlois, P.Eng who should be notified of any errors and/or omissions.

Encl.

RTL:ks

April 3, 2018

CLIENT/COMMUNITY TITLE
PROJECT/PLAN TITLE

PLAN/FIGURE TITLE
PLAN/FIGURE #

CLIENT LOGO

DILLON CONSULTING

MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR

MAP CREATED BY: PPM
MAP CHECKED BY: PK
MAP PROJECTION: NAD 1983 UTM Zone 17N

SCALE 1:XXX

FILE LOCATION: \\DILLON.CA\DILLON_DFS\LONDON\LONDON CAD\GIS\...

PROJECT: 11-1234 STATUS: DRAFT DATE: 09/24/11

MEETING MINUTES

Subject: Project Meeting #12
Town of Tecumseh Storm Drainage Master Plan

Date and Time: April 18, 2018 - 10:00 am

Location: Dillon Consulting

Our File: 16-4880

Attendees

Ryan Langlois	Dillon Consulting
Vic Hebert	Dillon Consulting
Sabrina Stanlake-Wong	Dillon Consulting
Phil Bartnik	Town of Tecumseh
Dan Piescic	Town of Tecumseh

Item	Discussion	Action By
1.	**Information**	
1.1.	The presentation slides from this meeting have been included within the meeting minutes.	Information
2.	**Flow Monitoring**	
2.1.	• Review of the flow monitoring and rain gauge data for the first month of monitoring identifies that the monitors are picking up accurate data. • The flow monitoring period will begin April 1, 2018, and continue for a minimum of 4 months. From there, the monitors will collect data month to month for a maximum of 7 months until sufficient data has been collected. Dillon is to provide progress emails of the data on a monthly basis. • Dillon will continue to review the data on a monthly basis to ensure the data being collected is valid.	Dillon
3.	**Update on Proposed Remedial Flooding Solutions – East of Manning Road**	
3.1.	**Scully, St. Marks, and Peter Cecile PS** • The Scully, St. Marks and Peter Cecile pump station solutions were further discussed and options for sizing the stations for a 1:5 year conveyance through the sewers or 1:5 year total runoff from the subcatchments was discussed to add more resiliency to the system. Dillon will be completing cost comparisons for the alternatives as part of the alternative solution matrix.	Dillon

3.2.	**Brighton PS** • The proposed Tecumseh Road storm sewer system from Manning Road to the limit of the Tecumseh Road work completed as part of the Brighton Road PS improvements (directly west of D.M. Eagle Public School) was incorporated in the model. Analysis during the 1:5 year LOS design identified that the initial sizing was adequate. • Further analysis is currently being completed to allow the proposed Rosati development within the old St. Gregory School site to release additional flow which is to be stored within the enclosure. The alternatives being reviewed include the development releasing the 1:5 year post development flow and storing the remainder on site, or allowing the site to only store 100m^3 on site and allowing the remainder to be discharged to the proposed enclosure.	Dillon
3.3.	Remaining modelling to be completed for the areas east of Manning Road include the incorporation of LID measures into the design as well as merging the isolated model with the full future conditions model to confirm the solution designs.	Dillon
4.	**Update on Proposed Remedial Flooding Solutions – West of Manning Road**	
4.1.	**Coronado Dish Area** • Dillon reviewed the feasibility of maintaining the existing 900mm diameter storm sewer along Dillon Drive. A realignment of the proposed storm sewer network for the Coronado dish area was highlighted with storm sewer sizes ranging from 375mm – 1050mm. The proposed sewer alignment is identified within the meeting presentation slides. • It was identified that the slight increase in pump station inflows due to the reconstruction of the Coronado Dish Area did not drastically affect the adjacent sewer HGL's and did not cause additional localized surface flooding. No PS improvements to the West St. Louis PS are necessary prior to the Coronado Dish area being reconstructed.	Dillon
4.2.	**St. Pierre Trunk Sewer** • It was identified that storm sewer improvements along St. Pierre and Riverside Drive from Clapp to the Lesperance PS would relief the adjacent streets, including St. Pierre. Storm sewer sizes ranged from 675mm – 1050mm. • The incorporation of the St. Pierre trunk sewer requires the Lesperance PS to be increased by 3cms.	No Action
4.3.	• The Town identified that there is currently sanitary connection issues along St. Pierre which may need to be reviewed during detail design of this solution. Dillon is to touch base with Kirby from the Town to discuss further.	Dillon

4.4. **Meander Crescent** Dillon

- Based on the existing topography of the street, this roadway is identified as a localized low point in the area with no overland flow relief. Additionally, the sewer system outlets into the Lacasse Park storm sewer which has a high HGL causing a tailwater condition.
- Multiple alternative solutions to alleviate the existing surface flooding along Meander Crescent have been simulated. This includes the following:

1) Upsize Meander Crescent storm sewers and redirect to St. Pierre Storm Sewer;
2) Upsize Meander Crescent storm sewers and Incorporate underground storage into Lacasse Park to reduce HGL within Lacasse trunk sewer;
3) Enlarge Meander storm system and introduce small pump at Meander and Lacasse to provide hydraulic disconnect from Lacasse system and pump out Meander system to reduce surface flooding;
4) Upsize Meander Crescent storm sewers and regrade roadway;

Based on the options above, Options 1 through 3 were unsuccessful to bring the surface flooding depths down to below 0.30m due to limited cover on the sewers to provide enough underground storage.

The project team will continue to evaluate alternative solutions to reduce the surface flooding, including reconstruction and improvements to the Lacasse Street trunk sewer.

4.5. **Green Valley /Dillon Drive** Dillon

- Alternative solutions for the streets surrounding Green Valley Drive and Dillon Drive include upsizing of the East St. Louis trunk sewer along Green Valley, Little River and Dillon from St. Gregory Road to the PS. Sizes ranged from 1200 – 1800mm in diameter. The PS was also to be increased by 2.6 cms.

The solution was identified as being very costly and additional alternatives are to be reviewed, including:

- Additional alternative solutions are to be reviewed, including the incorporation of an overflow sewer at Green Valley and St. Thomas to relieve the system west of Manning Road. The overflow sewer is to connect to the proposed local sewer to be constructed along the existing ETLD to service the local residential homes fronting Manning Road from St. Thomas to Riverside Drive. This sewer would be implemented as part of Manning Road Phase 2/3.

5. **PIC Discussion** Dillon

- Location of the first PIC will be at L'Essor High School. The format will include a split gymnasium to separate the solutions east and west of Manning Road for ease of resident review. The PIC will be interactive with presentations.
- An educational component will be included to provide residents a chance to review how they can protect their homes from basement flooding. This will be held in a separate small room during the PIC.
- Advertising for the PIC will include local newspapers, radio, social media and through the project website.
- No confirmed date has been selected for the first PIC, but it is expected to be at the end of May/early June. The team is waiting on a resolution on the status of the SWM Design for the MRSPA which may incorporate flooding solutions for the Baillargeon Drain area including the Charlene sewer extension to the MRSPA trunk sewer.
- The PIC slides were reviewed and changes are to be made in regards to the colours and images.

6. **Next Steps** Dillon

- Dillon will continue to model and analyze alternative surface flooding solutions.
- The project team will continue to monitor the flow monitoring data being collected from April – October 2018.

Errors and/or Omissions

These minutes were prepared by Ryan Langlois, P.Eng who should be notified of any errors and/or omissions.

Encl.

- Meeting Presentation Slides
- Draft PIC #1 Slides

RTL: May 2, 2018