



Langlois, Ryan <rlanglois@dillon.ca>

Information Request - Town of Tecumseh Pump Station Locations

ESA-Aylmer (MNR) <ESA.Aylmer@ontario.ca>

Wed, Jan 30, 2019 at 8:13 AM

To: "McLeod, Brad" <bmcLeod@dillon.ca>

Cc: "Hines, Emilee (MNR)" <Emilee.Hines@ontario.ca>, Flavio Forest <fforest@dillon.ca>, Ryan Langlois <rlanglois@dillon.ca>, Mark Brobbel <mbrobbel@dillon.ca>, 164880 <164880@dillon.ca>

Good morning Brad,

The Ministry of Natural Resources and Forestry (MNR) understands that Dillon Consulting is requesting natural heritage information for the Town of Tecumseh's pump stations located at 12280 Riverside Drive, 12920 Riverside Drive, 13079 and 13102 Riverside Drive, 13698 Riverside Drive, 13770 Riverside Drive, 14080 Riverside Drive, and 262 and 270 Brighton Road in the Town of Tecumseh, Essex County, as identified in the information provided.

MNR provides the following natural heritage information in response to your request.

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Species at Risk (SAR)

The Species at Risk in Ontario (SARO) List (<https://www.ontario.ca/laws/regulation/080230>) is Ontario Regulation 230/08 issued under the *Endangered Species Act, 2007* (ESA). The ESA came into force on June 30, 2008, and provides both species protection (under section 9) and habitat protection (under section 10) to species listed as endangered or threatened on the SARO List.

An initial SAR (Endangered and Threatened species) screening has been completed for the above-noted properties.

There are no known occurrences of SAR on the properties; however, there are known occurrences of SAR in the general project area (of all site locations), including:

- Eastern Sand Darter (endangered) – receives species and regulated habitat
- Northern Madtom (endangered) – receives species and general habitat
- Silver Chub (threatened) – receives species and general habitat
- Butler's Gartersnake (endangered) – receives species and general habitat protection
- Blanding's Turtle (threatened) – receives species and general habitat protection
- Barn Swallow (threatened) – receives species and general habitat protection

We recommend consulting Fisheries and Oceans Canada (DFO) for additional information on aquatic species. Please visit DFO mapping at <http://www.dfo-mpo.gc.ca/species-especes/fpp-ppp/index-eng.htm>.

Please note that this is an initial screening for SAR and the absence of an element occurrence does not indicate the absence of species. The province has not been surveyed comprehensively for the presence or absence of SAR and MNR data relies on observers to report sightings of SAR. Field assessments by a qualified professional may be necessary if there is a high likelihood for SAR species and/or habitat to occur within the project footprint and potentially be impacted.

Please note that this is an initial screening for SAR and the absence of an element occurrence does not indicate the absence of species. The province has not been surveyed comprehensively for the presence or absence of SAR, and MNRF data relies on observers to report sightings of SAR. If the project has the potential to contravene the ESA, an Information Gathering Form (IGF) should be submitted to ESA.Aylmer@Ontario.ca and no on-site activity (i.e. site alteration, vegetation/debris removal, etc.) should occur until notice is given. The IGF template and guidance document are available online at: <http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/MinistryResults?Openform&SRT=T&MAX=5&ENV=WWE&STR=1&TAB=PROFILE&MIN=018&BRN=21&PRG=31>.

It is important to note the following:

- The Committee on the Status of Species at Risk in Ontario (COSSARO) meets regularly to evaluate new species for listing and/or re-evaluate species already on the SARO List.
- As a result, species designations may change and changes may occur in both species and habitat protection which could affect the level of protection they receive under the ESA 2007 and whether proposed projects may have adverse effects on SAR.
- Habitat protection provisions for a species may change if a species-specific habitat regulation comes into effect.

If an activity or project will result in adverse effects to endangered or threatened species and/or their habitat, additional action would need to be taken in order to remain in compliance with the ESA. Additional action could be applying for an authorization under section 17(2)(c) of the ESA, or completing an online registry for an ESA regulation and following the rules in regulation if the project is eligible (<http://www.ontario.ca/environment-and-energy/natural-resources-approvals>). Questions about the registry process should be directed to MNRF's Registry and Approval Services Centre at 1-855-613-4256 or at mnr.rasc@ontario.ca. Please be advised that applying for an authorization does not guarantee approval and the process can take several months.

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Significant Wildlife Habitat (SWH)

Significant wildlife habitat (SWH) may be present on or adjacent to the above-noted subject lands (within 120 m). Please consult the Significant Wildlife Habitat Technical Guide (SWHTG, OMNR 2000), the Natural Heritage Reference Manual (NHRM) and the Ecoregion Criteria Schedules for criteria on identifying and determining significance of wildlife habitat. SWH is identified by planning authorities using the criteria and processes recommended in the SWHTG and Ecoregion Criteria Schedules.

Link to the SWHTG: <https://www.ontario.ca/environment-and-energy/guide-significant-wildlife-habitat>

Link to Ecoregion 7E criteria schedule: <https://www.ontario.ca/document/significant-wildlife-habitat-ecoregional-criteria-schedules-ecoregion-7e>

Habitat of species of special concern (not legally protected under the ESA) and those ranked S 1 to 3 receives consideration for SWH of Special Concern and Rare Wildlife Species. The following species are known to occur in the area for your information:

- Spotted Sucker (special concern)
- Channel Darter (special concern)
- Rainbow Mussel (special concern)
- Northern Map Turtle (special concern)
- Snapping Turtle (special concern)
- Climbing Prairie Rose (special concern)
- Swamp Rose-mallow (special concern)
- Bald Eagle (special concern)
- Monarch (special concern)
- Ghost Shiner (S2)

- Brindled Madtom (S2)
- Deertoe (S3)
- Shellbark Hickory (S3)
- Winged Loosestrife (S3)
- Elusive Clubtail (S2)
- Pawpaw (S3)
- Wood Thrush (special concern)

Areas of Natural and Scientific Interest (ANSIs)

There are no Provincially or Regionally Significant Earth or Life Science ANSI's within or adjacent to the proposed subject lands.

Significant Woodlands

There appears to be no woodland within or adjacent to the proposed subject lands.

Significant Wetlands

There is Provincially Significant Wetland (PSW) present east of 262 and 270 Brighton Road – Russell Woods Swamp (ER 25). Wetland shapefiles can be downloaded from Land Information Ontario (LIO) or viewed on our Make a Natural Heritage Map tool (<https://www.ontario.ca/page/make-natural-heritage-area-map>).

Significant Valleylands

MNRF does not possess significant valleylands mapping. The NHRM provides guidance and evaluation criteria for determining significant valleylands. Conservation authorities should be contacted to inquire about information pertaining to significant valleylands if they have not been identified in the applicable Official Plan.

Fish and Fish Habitat

There is no Aquatic Resource Area (ARA) data available within any of the pump station locations. However, ARA data is available for the East Townline Drain along Manning Rd (east of 13102 Riverside Drive):

- Thermal Regime: Warm - based on species present
- Species Summary: Banded Killifish, Bluntnose Minnow, Brook Stickleback, Green Sunfish, Largemouth Bass, Rock Bass, Spotfin Shiner, Yellow Perch

Please be advised that it is your responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals.

Please note, the MNRF process for responding to information requests on natural features is changing. In order to provide the most efficient service possible, the attached *Natural Heritage Information Request Guide* has been developed to assist you with accessing natural heritage data and values from convenient online sources.

It remains the proponent's responsibility to complete a preliminary screening for each project, to obtain available information from multiple sources, to conduct any necessary field studies, and to consider any potential environmental impacts that may result from an activity. We wish to emphasize the need for the proponents of development activities to complete screenings prior to contacting the Ministry or other agencies for more detailed technical information and advice.

The Ministry continues to work on updating data housed by Lands Information Ontario and the Natural Heritage Information Centre, and ensuring this information is accessible through online resources. Species at risk data is regularly being updated. In order to ensure access to reliable and up to date information, MNRF will provide a summary of species at risk that have been observed, or may potentially be present, at a geographic township / municipal level.

This information will assist in scoping the necessary field assessments for an area if development or site alteration is proposed. This information is not meant to circumvent the responsibility of the proponent to undertake species and / or habitat surveys. Surveys or additional site level assessment are often required to confirm presence or absence of natural heritage features and values. Environmental consulting firms have the professional and technical expertise to assess sites for natural heritage features and can gauge the potential for such features to exist.

Absence or lack of information for a given geographic area does not necessarily mean the absence of natural heritage features. Many areas in Ontario have never been surveyed and new plant and animal species records are still being discovered for many localities. In addition, new species may be listed and new natural heritage features may be defined over time. For these reasons, the Ministry cannot provide a definitive statement on the presence, absence or condition of natural heritage features in all parts of Ontario.

If you have any questions or require additional information, please feel free to contact me.

Regards,

Kathleen Buck

Management Biologist

MNRF Aylmer District

615 John St. N.

Aylmer, ON N5H2S8

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Kathleen.Buck@ontario.ca

As part of providing accessible customer service, please let me know if you have any accommodation needs or require communication supports or alternate formats.

From: McLeod, Brad <bmcleod@dillon.ca>

Sent: December-07-18 11:16 AM

To: ESA-Aylmer (MNRF) <ESA.Aylmer@ontario.ca>

Cc: Flavio Forest <fforest@dillon.ca>; Ryan Langlois <rlanglois@dillon.ca>; Mark Brobbel <mbrobbel@dillon.ca>; 164880 <164880@dillon.ca>


Subject: Information Request - Town of Tecumseh Pump Station Locations

Morning,

[Quoted text hidden]

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MEETING MINUTES

Subject: Project Meeting #13
Town of Tecumseh Storm Drainage Master Plan

Date and Time: August 23, 2018 8:30am - 10:00 am

Location: Tecumseh Town Hall

Our File: 16-4880

Attendees

Ryan Langlois	Dillon Consulting
Flavio Forest	Dillon Consulting
Phil Bartnik	Town of Tecumseh
John Henderson	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.	Public Information Centre #1 Discussion	
2.1.	The first Public Information Centre for the project was discussed along with a summary of all comments received.	Information
3.	Flow Monitoring	
3.1.	<ul style="list-style-type: none"> Review of the flow monitoring and rain gauge data was completed for the first 5 months of monitoring and 11 rainfall events were selected for review. In summary, the rainfall events collected so far are below a 1:2 year storm event in both volume and intensity based on the storm event duration. The flow monitoring program will continue until the end of October and Dillon will review the data on a monthly basis to ensure the data being collected is valid. 	Information/Dillon
3.2.	<ul style="list-style-type: none"> It was identified that the flow monitoring data in relation to the rain gauge data collected to date will provide sufficient data for a good model calibration representing flows contributing to the storm sewer system under more frequent events ($\leq 1:2$ year), but the model calibration to these events will not accurately represent what is occurring during larger storm events once soils are saturation and depression storage within private properties are at maximum used volume. 	Information/Dillon

- The project team will review the calibrated model results once completed at the end of the flow monitoring period and determine whether or not to use the calibrated model or the original baseline model, which may be a more conservative approach when determining recommended surface flooding solutions.

4. Modelling Updates

4.1. Lesperance Pump Station

Information/Dillon

- New information has been provided by A.A. Boscarol & Associates on August 3rd, 2018 in regards to the pumping capacity of the screw pump within the Lesperance Pump Station. The screw pump capacity has been updated in the existing conditions model from 2,830 L/s to 1,403 L/s. As this pump station was recommended for upgrades based on the originally future conditions modelling, no changes to the recommendations are required at this time.
- Dillon is to contact Rocco Lucente and set up a meeting to discuss the recently provided pump capacity.

4.2. East and West St. Louis Pump Station

Information/Dillon

- It was originally assumed that the East and West St. Louis screw pumps had the same pumping capacity of the Lesperance PS screw pump. The East and West St. Louis PS screw pumps have therefore been updated in the existing conditions model to reflect the new screw pump information. Screw Pump capacity for the E. (3 screws) & W. (2 screws) St. Louis PS are to be updated in the model from 2,830 L/s to 1,415 L/s each.
- The existing conditions model is to be re-run with the new pump station information. Regional surface flooding solutions may be recommended in the two service areas based on the reduction in pumping capacity at the two pump stations. To follow the EA process, alternative solutions will be modelling and a recommended regional flooding solution will be identified.

4.3.

- To validate the new screw pump data, Dillon is to review all available screw pump information including the dimensions, gear box information, mechanical components etc. to confirm the screw pump capacity at the Lesperance, East and West St. Louis pump stations.
- An investigation into the procedure for a drawdown test at each of the three pump stations is to be reviewed and discussed with the Town once drawdown procedures have been identified to obtain formal approval to proceed with the testing.
- The Town has identified that the pump capacities are critical

Dillon

parameters for the modeling and that the actual pump capacities will most likely vary due to wear and other site specific variations from the theoretical capacity. Drawdown tests are required at the pump stations to ensure the modelling is based on the best available information

4.4. **Areas of Roadway and Storm Sewer Improvement** Dillon

- It was identified that for the proposed roadway improvements within the municipal right-of-way beyond the curbs along Edgewater, St. Marks, Arlington, St. Anne Street and Coronado Dish area, boulevard slopes of approximately 2% (as per typical Town of Tecumseh roadway cross section) may not be feasible due to the lower lying front yard private properties adjacent to the streets. Dillon is to revise the current roadway cross section used in the PCSWMM model where a 1D major system network has been developed for the proposed streets to be reconstructed to assume that beyond the curb, roadway surface ponding would spill onto private property and ultimately be collected by landscape catchbasins.
- At this time, it is expected that curb and gutter will still be incorporated in the future roadway design and the existing roadside ditches will be filled in. The surface storage being eliminated in the future design will be compensated by the enlarged storm sewers. Final right-of-way cross sections are to be confirmed during detailed design.

4.5. **Discussion** Dillon

- The Town identified that they would like to see interim phasing and design strategies for the recommended solutions involving pump station and storm trunk sewer upgrades. This includes the feasibility of building out the trunk sewers first and restricting flow to the existing pump stations prior to the pump station improvements being completed. These details are to be summarized in the final report in a priority list for the Town to follow.
- The Town would like to review the feasibility of incorporating emergency spillways along the riverfront to Lake St. Clair in the instance where surface flooding is exceeding the acceptable limit within the area. This includes maintaining the wet wells of any decommissioned pump stations to be used under emergency situations. Dillon is to further review.
- The Town identified that a resident has a surface flooding concern directly north of the old Victoria School site. The resident claims that surface runoff coming from the school site floods her front yard. Dillon is to review the existing conditions model and known land topography in the area.

5. Next Steps

Dillon

Model Calibration

- Calibrate existing condition model based on flow monitoring and rainfall data once flow monitoring program is complete.
- Compare 1:100 year surface ponding and 1:2 and 1:100 year HGL elevations through main trunk sewers with original existing conditions model (pre-calibration).

Climate Change

- Run recommended solution model taking into consideration the climate change event (100yr +40%)
 - Must be consistent with the final SWM guidelines.
 - Provide an adaptive approach to the recommended flooding solutions, taking into consideration climate change in some areas for added resiliency.

Alternative Solutions Evaluation Matrix

- Evaluate each regional flooding solution alternative taking into consideration the Technical, Economic, Environmental, Cultural, Community and Cost impacts.
- Identify recommended surface flooding solutions based on evaluation matrix.

Functional Design Drawings

- Plan and profile drawings of recommended storm sewer improvements (11" x 17")
- Functional design drawings for pump station improvements (11" x 17")

Errors and/or Omissions

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

Encl.

- Meeting Presentation Slides

RTL:

August 28, 2018



MEETING MINUTES

Subject: Project Meeting #14
Town of Tecumseh Storm Drainage Master Plan

Date and Time: October 01, 2018 8:30am - 11:00 am

Location: Dillon Office, Windsor, ON

Our File: 16-4880

Attendees

Ryan Langlois	Dillon Consulting
Flavio Forest	Dillon Consulting
Aakash Bagchi	Dillon Consulting
Phil Bartnik	Town of Tecumseh
John Henderson	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.	<ul style="list-style-type: none"> Review of the flow monitoring and rain gauge data was completed for the months of July, August and September and 5 rainfall events were selected for review. In summary, the rainfall events collected in this period are up to a 1:5 year storm event in both volume and intensity based on the storm event duration. It was identified that data recorded at RG1, at Gauthier Sanitary PS, needs to be verified for its authenticity. This rain-gauge has been consistently recording considerably higher volume and intensity of rainfall than the other rain-gauges. One rain event (20th September, 2018) even recorded volumes higher than a 1:100 year event, which is more than double the volume recorded by the other gauges. It was identified that the rainfall event-R_11 should be broken down to a smaller duration (currently 29 hours). 	Information/Dillon
2.2.	<ul style="list-style-type: none"> It was identified that a more conservative approach should be taken for the surface flooding solutions. The calibrated model therefore may not be used to determine solutions for each problem area. Future programs like rearyard catchbasin connections to the system should be taken into account, which would add to flow into the system. 	Information/Dillon

3. **Modelling Updates - Climate Change Adaptation Solutions**

Information/Dillon

Some areas in the Town were identified as problem areas based on observed surface flooding after running the climate change simulation on the proposed conditions model.

- It was noted that there was a need to prioritize the implementation of the proposed solutions. Prioritization could be achieved by dividing the entire Town's area into individual catchment areas and looking at which solutions provided the most benefit for the costs incurred.
- The Town mentioned that municipal infrastructure reconstruction in older areas and rural road cross-sections, will be undertaken first and should be considered a priority.
- Dillon is to work on a staging plan to divide proposed solutions based on priority and prepare modelling scenarios for different stages of implementation for the final report.
- Dillon to prepare a graph/figure to compare the climate change design storm (1:100 year + 40%) with the 1:100 year design storm and major recorded rain events like the August 2017 event and the Hurricane Hazel storm.

3.1. **Lacasse Street flooding**

Dillon

- It was identified that the storm sewer profile presented was not representative of the storm sewers along Lacasse Street.
- Dillon is to confirm the size and inverts of the storm sewers from available as-built information and revise the model accordingly.

3.2. **Coronado Dish area**

Information/Dillon

- Increased surface flooding was observed along Little River Boulevard and Michael Drive during the climate change simulation (1:100 year + 40% design storm).
- Surface flooding was reduced to less than 0.40 m depth in most areas, except some low-lying areas, after incorporating additional solutions along Little River Boulevard, Michael Drive, Barry Avenue and Riverside Drive. The capacity of the West St. Louis PS was increased in the model as part of the solution to reduce surface flooding and lower HGLs in the storm sewers.
- The following were identified as problem areas for the climate change simulation in which upgrades to the original recommended design was considered and presented:
 - Scully/St. Marks PS service area
 - Kensington Dish area
 - St. Gregory's Road
 - Little River Blvd
 - North Lesperance PS service area

- St. Pierre Street
 - Solutions were proposed for all areas to reduce surface flooding.
- 3.3. **Kensington Dish area overland flow route** Information/Dillon
- It was noticed during model simulations that there exists an existing overland flow route from Kensington Boulevard towards east through the Beach Grove golf course. This overland flow route is proposed to be maintained in the future and noted in the final report.
 - Dillon to incorporate an overland flow map which shows direction of overland flow within the Town area as part of the final document of the Master Drainage Study.
- 3.4. Dillon identified that information related to the screw pump capacities at Lesperance, East and West St. Louis pump stations is still being analyzed by Spaans. Once this information is available, it will be incorporated in the existing conditions model. Dillon
- 3.5. It was noted that an adaptive approach to climate change requires looking at each problem area individually and adapting the solutions proposed to the area, if warranted. Not all areas may warrant an adaptive approach to the solution based on the climate change analysis. The adaptive approach will be implemented in areas fronting schools for ingress/egress and fronting Town Hall. Some areas may be adequate to provide surface storage beyond the allowable ponding depths of 0.30m. Information/Dillon
- 3.6. **Tecumseh Town Hall** Dillon
- An underground storage solution is proposed on the premises of the Tecumseh Town Hall. The Town identified that there are plans of a new Sportsplex in the area behind the fire hall and police station.
 - Dillon is to coordinate with Mr. Paul Anthony at the Town of Tecumseh to get plans for the proposed building and prepare a layout for the underground storage solution based on site constraints. Surface storage within the northern baseball field is to be reviewed to reduce underground storage for cost savings.
- 3.7. **Areas with new solutions required for climate change adaptation** Dillon
- It was identified that there are some new areas which did not show significant surface flooding during previous simulations, but now show higher amounts of surface flooding during the climate change simulation.
 - The following areas were identified and solutions were proposed:
 - Dillon Drive
 - Michael Drive and Revland Drive

- Kimberly Drive and Jelso Place
- Chene Street

Errors and/or Omissions

These minutes were prepared by Aakash Bagchi, P.Eng., M.Eng. who should be notified of any errors and/or omission

Encl.

- Meeting Presentation Slides

RTL:

October 04, 2018



MEETING MINUTES

Subject: Project Meeting #14
 Town of Tecumseh Storm Drainage Master Plan – Depressed Soccer Field Discussion
Date and Time: January 11th, 2019 1:00pm - 2:00 pm
Location: CSC Providence Office – 7515 Forest Glad Drive, Windsor, ON
Our File: 16-4880

Attendees

Ryan Langlois	Dillon Consulting
Paul Anthony	Town of Tecumseh
John Henderson	Town of Tecumseh
Joseph Picard	CSC Providence
Jean Blanchette	CSC Providence

Item	Discussion	Action By
1.	Tecumseh Storm Drainage Master Drainage Plan Introduction/Information	
1.1.	An overview of the Town of Tecumseh Storm Drainage Master Plan and a high level review of the general surface flooding solutions were discussed with the project team and members from CSC Providence.	Information
1.2.	The decision-making process of assessing flooding solutions for a traditional level of service (current standard) vs an enhanced level of service (more resiliency in the design to take into consideration vulnerable areas and climate change) was identified by Dillon staff.	Information
1.3.	The isolated surface problem area was identified by Dillon staff along St. Gregory's in front of École Secondaire Catholique L'Essor (hereafter referred to as L'Essor). Representatives from CSC Providence identified that this area has been susceptible to both surface flooding as well as building flooding within the school.	Information
2.	St. Gregory's Road/L'Essor Surface Entrance Flooding Solution Discussion	
2.1.	The traditional level of service approach to reduce surface flooding along St. Gregory's was discussed and included roadway and storm sewer improvements along St. Gregory's, downstream storm outlet and pump station improvements.	Information

Based on the solution decision matrix for the project, an enhanced level of service approach to further reduce surface flooding at St. Gregory's along the ingress/egress routes of L'Essor school was felt to be warranted and included two options:

- Option 1: Depression of a portion of the Tecumseh Soccer Fields directly west of L'Essor School in which the French school board currently owns.
- Option 2: Increased underground storage within the St. Gregory's Road municipal right-of-way in the form of underground storage structures.

Based on the assessment of both options, the depressed soccer field (Option 1) was identified as the recommended solution based on cost, overall constructability and ease of implementation to provide an enhanced level of service for the localized problem area within the ingress/egress at L'Essor.

2.2. Based on the review of the recommended solution, the following comments were brought with the respective responses by Dillon where necessary: Information

- CSC Providence identified that the soccer field must be tiled to ensure no standing water for long periods of time. Dillon identified that long standing ponding would only occur after larger storm events exceeding a 1:100 year with a drawdown within 24 hours.
- CSC Providence identified that there is to be no catchbasin structures within the playing surface. Dillon agrees.
- Based on the work proposed in the field area, CSC Providence identified that the fields would probably be out of commission for a season during/after construction to allow for grass to be restored. The Town identified that new soccer fields are proposed to be constructed directly south of L'Essor, which could provide as compensation in the interim during this time;
- The Town identified that a maintenance easement would be required for the proposed depressed soccer fields to allow the Town to enter the property, on an as-needed basis.

3. Next Steps

3.1. It was identified by CSC Providence that a presentation to the board of trustees outlining the project and the flooding solution is required to move forward with the recommended solution to depress the soccer fields. The next board meeting has been set to February 11th, 2019 at 7:00pm. Dillon is to present the solution at this time. Dillon Consulting

Errors and/or Omissions

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

RTL:

January 16th, 2019



MEETING MINUTES

Subject: Stakeholder Meeting with Beachgrove Golf and Country Club
 Town of Tecumseh Storm Drainage Master Plan – PJ Cecile PS
 Alternative Location Review
Date and Time: January 22nd, 2019 10:00am – 11:00 am
Location: Beachgrove Golf and Country Club Offices
Our File: 16-4880

Attendees

Ryan Langlois	Dillon Consulting
Phil Bartnik	Town of Tecumseh
John Henderson	Town of Tecumseh
Aiden Blunt	Beachgrove Golf and Country Club
Dave Gabriele	Beachgrove Golf and Country Club

Item	Discussion	Action By
1.	Tecumseh Storm Drainage Master Drainage Plan Introduction/Information	
1.1.	An overview of the Town of Tecumseh Storm Drainage Master Plan and a high level review of the extent of flooding solutions were discussed with the project team and members from Beachgrove Golf Course.	Information
1.2.	The alternative solutions for the location of the proposed PJ Cecile PS upgrades were discussed with Beachgrove including options of constructing the new pump station on Beachgrove Lands.	Information
2.	PJ Cecile Alternative locations Discussion	
2.1.	Based on the initial evaluation for the potential pump station location, 4 site options were considered. The location options included: <ul style="list-style-type: none"> • <u>Option 1:</u> Reconstruction of the PJ Cecile PS on the existing site and maintain the existing outfall into the Beachgrove Marina. The increased flows based on the upgraded station would be split away from the existing outlet and into a new outfall either through the existing Beachgrove Marina Jetty or at the existing beach access currently owned by local residents. • <u>Option 2:</u> Decommission of the existing pump station and construction of a new pump station along the western boundary of the existing Beachgrove property within the parking lot directly east of the existing pump station. The existing outfall to the Beachgrove marina would be maintained and the increased flows based on the upgraded station would be split away from the existing outlet and into a new outfall 	Information

either through the existing Beachgrove Marina Jetty or at the existing beach access currently owned by local residents.

- Option 3: Decommission of the existing pump station and construction of a new pump station along the southwest residential property at the intersection of Kensington and Riverside Drive. The existing outfall to the Beachgrove marina would be maintained and the increased flows based on the upgraded station would be split away from the existing outlet and into a new outfall either through the existing Beachgrove Marina Jetty or at the existing beach access currently owned by local residents.
- Option 4: Decommission of the existing pump station and construction of a new pump station along the eastern boundary of the existing Beachgrove parking lot. The outfall would be positioned along the eastern boundary of the site to not impact the club and outlet into a new outfall into the lake along the eastern Beachgrove property line.

The initial evaluation prior to stakeholder consultation has determined Option 1 and Option 4 as the recommended moving forward.

- 2.2. Based on the review of the alternative solutions with Beachgrove staff, the following comments were brought up with the respective responses by Dillon where necessary: Information
- Beachgrove staff identified that discussions with ERCA were had in regards to the existing pump station outfall into the marina. ERCA identified that the outfall is a benefit to the harbour in regards to eliminating stagnant water an encouraging flow through the marina. They would be ok with maintaining existing flows from the pump station to the marina.
 - Beachgrove staff identified that the existing jetty is predominantly made of armour stone and larger concrete pieces. This would be their preferred choice for an outlet with the new outfall enhancing the landscape within the jetty to include a lookout. Dillon identified that a rock cairn outfall similar to the East Townline Drain pump station could be incorporated in the design to make it aesthetically pleasing. Dillon did identify that the de-watering the jetty during construction to excavate could be very challenging and costly.
 - Beachgrove staff identified that development plans have been completed for the northeastern parcel of land along the waterfront where the proposed pump station outfall would be located for Option 4. The development plan includes room for a beach, volleyball courts etc. Beachgrove also identified that parking is limited for the club and they would not be willing to eliminate parking spaces for the pump station. The board of directors would

also be opposed to Option 2 & 4 due to the constraints already known within the clubs parking area. Dillon identified that the outfall for Option 4 could be orientated and constructed in a way to complement the potential development along the waterfront. The building footprint for either pump station option could be very minor (minimum 3m x 4m building) to reduce the number of parking spaces being eliminated. The housing for the pump station could also be architecturally pleasing to fit in with the clubs existing buildings.

- The preferred location for the new pump station for Beachgrove has been identified as Option 1 & 3 with no impacts to the Beachgrove property, including the proposed development parcel and the existing parking area.

3. Next Steps

- 3.1. A meeting is to be set up with the residents potentially affected by the alternative PJ Cecile pump station locations. Through the discussions had with both Beachgrove, the residents potentially impacted from the options and comments from the next Public Meeting being held on February 6th, a recommended location is to be selected to move forward. Follow-up with Beachgrove staff is advised once a preferred location is selected based on the evaluation process.

Dillon Consulting

Errors and/or Omissions

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

RTL:

January 24th, 2019



MEETING MINUTES

Subject: Kensington Beach Owners Group Stakeholder Meeting
Town of Tecumseh Storm Drainage Master Plan – PJ Cecile Pump Station
Alternatives Review

Date and Time: January 30th, 2019 5:00pm – 6:00pm

Location: Tecumseh Town Hall

Our File: 16-4880

Attendees

Ryan Langlois	Dillon Consulting
Flavio Forest	Dillon Consulting
John Henderson	Town of Tecumseh
[REDACTED]	Resident
[REDACTED]	Resident
[REDACTED]	Resident
[REDACTED]	Resident
[REDACTED]	Resident
[REDACTED]	Resident

Item	Discussion	Action By
1.	Tecumseh Storm Drainage Master Drainage Plan Introduction/Information	
1.1.	<p>An overview of the Town of Tecumseh Storm Drainage Master Plan and a review of the extent of existing condition surface flooding was shown to the residents of the Kensington Beach Association under both the 1:100 year and 1:100 year + 40% climate change event within the service area for the PJ Cecile pump station.</p> <p>A description of a 1:100 year event was discussed with the residents and is often misinterpreted by the general public. The 1:100 year event is defined as a 1% chance of occurrence in any given year for a substantial amount of rainfall to fall over a region. In this area, this rainfall amount is taken as 108mm over a 24 hour period. To put it this into perspective, the September 2016 event dropped 220mm of rainfall over a 24 hour period.</p>	Information
1.2.	The project team identified to the residents that the Town has plans to reconstruct the Kensington dish area roadways, which is the main service area to the existing PJ Cecile storm pumping station. With the incorporation of new storm sewers in this area, more flow will now be contributing to the downstream pump station, in which the pumps are required to be	Information

upgraded. Based on the computer model simulations and future stormwater conveyance conditions of the service area, the existing pump station is required to be expanded to accommodate an acceptable level of service to today's standards, as well as provide a level of resiliency to take into consideration the effects of climate change.

2. Alternative locations Discussion

2.1. Based on a thorough review of the existing site constraints and an evaluation for the potential pump station works required, Two alternative solution locations were identified: Information

- **Alternative 1:** Incorporation of a new pump station within the vicinity of the same location of the existing pump station with a number of optional footprint locations:
 - Option 1: Decommission and demolish the existing pump station and rebuild a new pump station within the same east-west footprint as the existing station to maintain the existing maintenance access to the beach along the western side of the property.
 - Option 2: Decommission and demolish the existing pump station and rebuild a new pump station within the Beachgrove Club parking lot property.
 - Option 3: Decommission and demolish the existing pump station and rebuild a new pump station on the southwest property at the intersection of Kensington Blvd and Riverside Drive; and
 - Option 4: Decommission and demolish the existing pump station and rebuild a new pump station directly north of the existing station, with no longer allowing for the existing maintenance access to the beach along the western side of the property.

Alternative 1 identified up to 3 options for a new pump station outfall, which included the following:

- Option A: Maintain outfall to Beachgrove Marina;
- Option B: New Outfall through the existing Beachgrove Marina jetty and outlet into Lake St. Clair; and
- Option C: New outlet through the existing Kensington Beach.

The details of the outfall locations, along with each pump station location option has been attached to the minutes.

- **Alternative 2:** Incorporation of a new pump station along the eastern edge of the Beachgrove property within the parking lot area with a new storm outlet to Lake St. Clair. The location would entail a new maintenance easement and additional storm trunk sewer reconstruction along Riverside Drive to bring storm sewer flows to the new pump station location. The location details have been attached to the minutes.

2.2. Based on the review of the alternative solutions with the residents, the following comments were brought up with the respective responses by the project team where necessary: Information

- [REDACTED] identified that the Kensington Beach has a maintenance access of approximately 20 feet. It was identified that they would like this maintained post-construction to ensure access.
- It was identified by all residents that attended the meeting that they would also need to maintain beach access in the future. The project team identified that Alternative 1 - Option C of a new pump station outlet through the Kensington Beach would require that the beach be no longer accessible to residents, as it would be reconstructed to an outlet channel. This was identified by the residents to not be a preferred choice for the Kensington Beach Association.
- The project team identified that it would be difficult to maintain the existing 20 foot maintenance access to the beach under Alternative 1- Location Option 4 where the station would be constructed north of the existing site.
- The residents expressed concerns with the condition of their roadways, in particular Kensington Blvd and existing infrastructure and identified that it should be a priority to reconstruct the area. The project team identified that it is always recommended to construct the pump station first prior to upstream stormwater works, but that phasing could be further reviewed in the future. The PJ Cecile pump station was identified to be 10-15+ years from being replaced.
- In summary, the residents of the Kensington Beach Association identified that their preferred option for the new pump station would be Alternative 2 where the station is decommissioned and removed off the beach site. They are also not opposed to Alternative 1 – Location Option 1/Outfall Option B where the beach would maintain the existing maintenance access and the new outfall would not negatively impact their beach.

3. Next Steps

- 3.1. A public information centre is schedule for February 6th, 2019 from 3:00pm – 5:00pm and 6:00pm – 8:00pm. All are encouraged to attend where the preferred option is to be identified and displayed. Information

Errors and/or Omissions

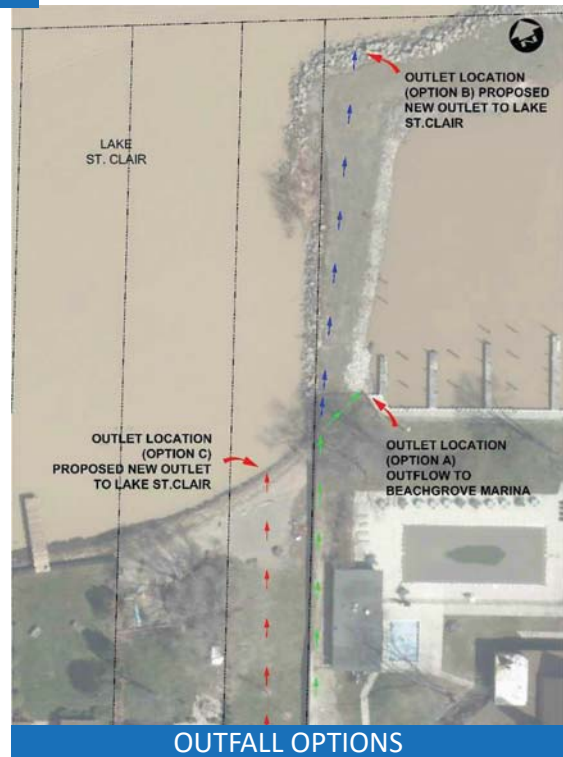
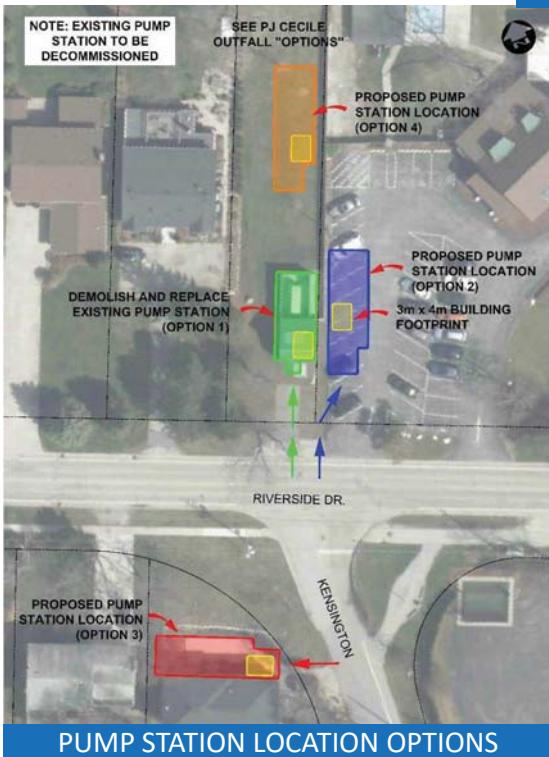
These minutes were prepared by Ryan Langlois, P.Eng., ENV SP who should be notified of any errors and/or omission.

RTL:

January 31st, 2019

PJ Cecile Pump Station Options

ALTERNATIVE 1



PJ Cecile Pump Station Options

ALTERNATIVE 2





MEETING MINUTES

Subject: Stakeholder Resident Meeting
Town of Tecumseh Storm Drainage Master Plan – Lesperance Pump Station Alternative Solutions Review

Date and Time: January 30th, 2019 3:30pm – 4:30pm

Location: Tecumseh Town Hall

Our File: 16-4880

Attendees

Ryan Langlois	Dillon Consulting
Phil Bartnik	Town of Tecumseh
John Henderson	Town of Tecumseh
[REDACTED]	Resident

Item	Discussion	Action By
1.	Tecumseh Storm Drainage Master Drainage Plan Introduction/Information	
1.1.	Prior to the beginning of the meeting, the residents expressed their concerns with the work proposed within the Lesperance Pump Station park area. There have been a history of distrust with the municipality from the initial stages of construction of the storm pump station at the Lesperance site. They are currently unhappy with the noise of the pump station and the size of the structure. There have also been incidents with the public encroaching on their beach property from the park beach access, which has caused concern for the residents. The Town has installed a fence between the two properties, but this fence has since fallen down due to high winds and lake levels/coastal flooding. The Town acknowledged the concerns of the residents and ensured them that the process being taken as part of this Environmental Assessment Master Plan would be transparent in nature to the solutions recommended and included up front consultation with the public.	Information
1.2.	An overview of the Town of Tecumseh Storm Drainage Master Plan and a high level review of the extent of surface flooding under existing condition within the Lesperance service area were presented to the meeting attendees.	Information
2.	Alternative Solution Discussion	
2.1.	Based on the evaluation of the existing Lesperance pump station, 2 alternative solutions have been considered: <ul style="list-style-type: none"> • <u>Alternative 1</u>: Incorporation of a pump station expansion to the north 	Information

of the existing screw pump station with the existing screw pump to remain in operation for the future.

- Alternative 2: Incorporation of a new pump station to the east of the existing screw pump station and the decommissioning and removal of the existing screw pump station.

Under both alternatives, the new pump stations are to incorporate vertical pumps. The outfall was initially identified to maintain its existing structure. Upon further review, it is identified that the outfall may require minor structural improvements to accommodate the larger pipes required for the new pump station as well as ensure the integrity of the structure for the lifespan of the new station. Details of potential outfall changes are to be finalized and presented at the Public Information Centre #2.

2.2.

Based on the review of the alternative solutions with the residents, the following comments were brought up with the respective responses by Dillon where necessary:

Information

- [REDACTED] identified that they would be against Alternative 1, as the structure of a new pump station is further north closer to their home. The initial preference is for Alternative 2.
- [REDACTED] identified that they would like to see the new pump station smaller in building footprint as well as quieter, as the existing screw pumps and generators are loud. The project team identified that the new pump station would be designed using vertical pumps and generators that would be much quieter than what is currently there. The aboveground housing for the pump station would also be smaller, as screw pumps typically have larger housing structures.
- [REDACTED] asked about the difference between both screw pumps and vertical turbine pumps. The project team identified that vertical pumps are typically used for storm pump stations at this time and that screw pumps, although simplistic in design and highly reliable, are expensive to maintain when they break down. It is also difficult to sometimes find the original screw pump suppliers and obtain parts to maintain.
- The project team identified that the Lesperance pump station is further down on the implementation phasing based on the more immediate improvements needed for other pump stations and storm infrastructure throughout the study area. The station is not set to be reconstructed for another 15+ years.

3. Next Steps

- 3.1. A public information centre is schedule for February 6th, 2019 from 3:00pm – 5:00pm and 6:00pm – 8:00pm. All are encouraged to attend where the preferred option is to be identified and displayed. Information

Errors and/or Omissions

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RTL:

January 31st, 2019

Lesperance Pump Station Options

ALTERNATIVE 1



ALTERNATIVE 2





MEETING MINUTES

Subject: Stakeholder Resident Meeting
Town of Tecumseh Storm Drainage Master Plan – Southwind Pump Station Alternatives Review

Date and Time: January 28th, 2019 3:30pm – 4:30pm
January 30th, 2019 4:30pm – 5:00pm

Location: Tecumseh Town Hall

Our File: 16-4880

Attendees

Ryan Langlois	Dillon Consulting
Phil Bartnik	Town of Tecumseh
John Henderson	Town of Tecumseh
[REDACTED]	Resident
[REDACTED]	Resident
[REDACTED]	Resident
[REDACTED]	Resident
Tim Aseltine	Southport Sailing Club Representative

Item	Discussion	Action By
1.	Meeting Details	
1.1.	Two separate meetings were held with residents potentially impacted by the alternative solutions proposed for the Southwind/Starwood area. The second meeting on January 30 th was with only the Southport Sailing Club (<i>hereafter referred to as sailing club</i>) representative. The meeting on January 28 th was with the remainder of the residents who live on Southwind Crescent and Starwood Lane.	
2.	Tecumseh Storm Drainage Master Drainage Plan Introduction/Information	
2.1.	An overview of the Town of Tecumseh Storm Drainage Master Plan and a high level review of the extent of surface flooding under existing condition were presented to the meeting attendees.	Information
2.2.	Under existing conditions, the Southwind/Starwood subdivision has a gravity storm outlet into Pike Creek. Under high lake levels, it was identified by the project team that based on modelling results, the lands were subject to surface flooding that exceeds the acceptable levels (above the provincial standard of 0.30m) during the 1:100 year event. It was identified that to add resiliency to the storm infrastructure and reduce surface flooding during these conditions, a pump station is proposed to be constructed to provide a hydraulic disconnect from the outlet watercourse.	Information

3. Alternative locations Discussion

3.1. Based on the initial evaluation for the potential pump station locations, 3 site options were considered. The location options included: Information

- Option 1: Incorporation of a pump station within the existing 4.5m storm water easement and discharge directly into the existing 525mm diameter gravity outlet to Pike Creek.
- Option 2: Incorporation of a pump station within the west side of the municipally owned Southwind right-of-way directly across from 254 Southwind. A forcemain would then be constructed through the right-of-way south and discharge into the existing 525mm diameter gravity outlet.

Option 3: Incorporation of a pump station along the Southport Sailing Club property directly north of 234 Southwind and discharge into a new outlet into Pike Creek.

Under all location options, the Town has approved the use of an aboveground electrical panel instead of a typical large housing structure for the pump station to reduce the aboveground footprint. A backflow prevention device is also proposed to be installed within the existing 525mm diameter gravity outlet pipe. A map of the three locations have been attached to the minutes.

3.2. Based on the review of the alternative solutions with the residents and sailing club member, the following comments were brought up with the respective responses by the project team where necessary: Information

- [REDACTED] and [REDACTED] identified that they would prefer to not have the station located within the existing easement (Option 1), as it is along the front side yard of their property. Dillon identified that the dimensions of the underground wet well would fit within the existing easement and the aboveground structure would consist of a small electrical panel, which during detailed design could be constructed with proper landscaping to hide the panel.
- [REDACTED] asked if the pump station could be built under the roadway. The project team identified that this would be more costly due to potential utility conflicts and increased roadway construction, but the aboveground electrical panel for the pump station could also be constructed within the municipally owned right-of-way.
- [REDACTED] raised the question on if a pump station is legally allowed to be constructed within a storm water easement. The

Town identified that details of maintenance easements are very general, but typically allow for storm infrastructure to be built.

- [REDACTED] identified that he does not prefer Option 2, as the pump station would be directly across the street from his home.
- [REDACTED] wanted to ensure that Option 3 was not in front of her home, but on the adjacent sailing club property. The project team identified that for Option 3, the pump station would be on the sailing club property.
- Mr. Aseltine from the sailing club during the second meeting identified that there are concerns with Option 3 in having the pump station on the sailing club property. There are potential long term plans for some works in that area, which may potentially include a future gravel laneway at the location of the outlet alignment. Dillon identified that a maintenance easement would be required for the pump station, but a gravel laneway could be accommodated. Mr. Aseltine identified that the location of the outlet to Pike Creek for Option 3 is in the existing area of boat docks which could not be compromised. Initial review identified that the outfall would need to be positioned at this location for Option 3 to be feasible.
- Mr. Aseltine identified that at this time, he cannot speak for all members and with that said, all members would have to weigh-in on such a decision. The subject of this pump station location was to be brought up at the next meeting to the board being held on the evening of January 30th, 2019.

4. Next Steps

- 4.1. A public information centre is schedule for February 6th, 2019 from 3:00pm – 5:00pm and 6:00pm – 8:00pm. All are encouraged to attend where the preferred option is to be identified and displayed. Information

Errors and/or Omissions

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

RTL:

Revised February 1st, 2019

Southwind/Starwood Pump Station Location Options

