



## The Corporation of the Town of Tecumseh

Public Works & Environmental Services

**To:** Mayor and Members of Council

**From:** Phil Bartnik, Director Public Works & Environmental Services

**Date to Council:** July 23, 2019

**Report Number:** PWES-2019-02

**Subject:** Disaster Mitigation and Adaptation Fund  
Special Spring 2019 Flooding Intake  
Expression of Interest and Full Application

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### Recommendations

It is recommended:

**That** Administration **be authorized** to submit an Expression of Interest and the Full Application to the federal government for funding under the Disaster Mitigation and Adaptation Fund (DMAF) for the following projects:

- (i) Scully & St. Mark's Storm Pump Station Improvements
- (ii) P.J. Cecile Storm Pump Station Improvements

**And that** Administration **be authorized** to complete any business case(s), application(s), and/or to provide all information/documentation as required in order to constitute the application under DMAF;

**And further that** the Treasurer **be authorized** to sign any required documents necessary to complete the Expression of Interest and the Full Application to DMAF;

**And furthermore that** the Mayor and Clerk **be authorized** to sign any documents/agreements (if required) for the Expression of Interest and Full Application to DMAF, in a form satisfactory to the Town's Solicitor, financial content satisfactory to the Town's Treasurer and technical content satisfactory to the Town's Engineer.

## **Background**

The Government of Canada launched the Disaster Mitigation and Adaptation Fund (DMAF), a national merit-based program that will invest \$2 billion to support large-scale infrastructure projects to help communities better manage the risks of disasters triggered by natural hazards. DMAF projects will support the Government of Canada's objectives laid out in the Pan-Canadian Framework on Clean Growth and Climate Change.

DMAF projects must have a minimum of \$20 million in eligible expenditures. Project bundling is possible under the DMAF (i.e. a project comprising several sub-projects with a total value of more than \$20 million in eligible costs). The federal cost sharing and stacking limits for DMAF projects are up to 40% for municipalities.

The full details of the DMAF program are contained within Attachment No.1 to this report.

### **Town of Tecumseh, First Intake of DMAF**

At the July 24, 2018 Regular Meeting of Council, Council approved the recommendations (Motion RCM-232/18) of Report No. PWES-2018-19 titled "Disaster Mitigation and Adaptation Fund – Expression of Interest" that authorized Administration to proceed with submitting the Expression of Interest and subsequent Full Application under the first intake of DMAF.

In the fall of 2018, the Town was successful with our Expression of Interest under DMAF and invited to proceed with the submission of the Full Application under the program. The Town submitted the Full Application in January 2019, which included the following bundled projects for a total of \$30.70M:

- Manning Road Improvements, Phases 2 & 3 (\$11.99M)
- Riverside Drive Trunk Sanitary Sewer (\$2.80M)
- Scully & St. Mark's Storm Pump Stations & Riverside Drive Trunk Storm Sewers (\$15.91M)

On Friday May 31, 2019 the Town was made aware that we were unsuccessful with our Full Application under the first intake under DMAF.

## **Comments**

### **Special Spring 2019 Flooding Intake of DMAF**

On July 5, 2019 the Town received a letter from the Ministry of Infrastructure, Ministry of Municipal Affairs and Housing, and the Ministry of Natural Resources which identified a limited expedited intake to DMAF for projects supporting efforts for flood mitigation.

A subsequent email dated July 10, 2019 from the Ministry of Municipal Affairs and Housing provided additional details for the application process and deadlines. For municipalities that have a project (or bundled project) that can meet the minimum \$20M project threshold, both

the Expression of Interest and the Full Application would need to be submitted to Infrastructure Canada by **August 1, 2019**.

## **Recommended Bundled Projects – Special Spring 2019 Flooding Intake of DMAF**

DMAF projects must have a minimum of \$20 million in eligible expenditures, and project bundling is possible under the DMAF in order to achieve this minimum.

Administration has compiled the following bundled projects by conducting a review of the current PWES 5-year Capital Works Plan and 10-year Outlook and the Town's Asset Management Plan for individual projects that would be:

- (i) Relevant to the Town's Strategic Priorities;
- (ii) Identified within the Town's Flood Mitigation Strategy;
- (iii) Identified within the Town's Storm Drainage Master Plan (2019);
- (iv) Have the ability to be designed and constructed within the DMAF program timelines;
- (v) Based on the eligibility criteria and merit criteria listed for the Full Application under DMAF.

### **1) Scully & St. Mark's Storm Pump Station Improvements (\$17.05M)**

There are currently three vertical turbine pumps installed at the existing Scully pump station. No upgrades have been completed since the station was put into operation in 1974. The electrical equipment is approaching the end of its life. The St. Mark's pump station currently has two vertical turbine pumps and was constructed in 1957 and is also reaching its end of life. The current pump station structures on both sites cannot be expanded to accommodate the increased flow.

Based on the age of the pump station infrastructure at this location and through the modelling analysis, it is recommended that a new pump station is constructed at the Scully pump station site to handle flow from a consolidated service area of the Scully and St. Mark's pump stations. The new station would utilize vertical submersible axial flow pumps. The station would be located north of the existing structure and will require a new inlet and outfall pipe, and expanded outfall structure. The existing pump stations would be kept in service during construction.

Storm trunk sewer improvements and the redirection of storm drainage along Riverside Drive are required between Arlington Boulevard and the proposed consolidated storm pump station on the Scully site to convey flows from the existing St. Mark's storm pump station service area. The design of the storm trunk along Riverside Drive ranges from 1350 mm to 1500 mm in diameter.

With the proposed improvements of the storm trunk sewer along Riverside Drive and redirection of flows from the St. Mark's service area to the location of the consolidated Scully/St. Mark's storm pump station within the existing Scully site, sanitary sewer improvements are required along Riverside Drive due to potential conflicts with private drain connections of properties fronting Riverside Drive. To accommodate the new Riverside Drive storm trunk sewer from Arlington Boulevard to the new storm pump

station at the Scully storm pump station site, the following works are required beyond the storm sewer improvements:

- Lowering of the local Riverside Drive sanitary sewer by approximately 0.50 m between Arlington Boulevard and St. Mark's Road which currently outlets into the St. Mark's sanitary sewer. This local Riverside Drive sanitary sewer is proposed to be redirected to the Arlington sanitary sewer; and
- Lowering of the local Riverside Drive sanitary sewer by approximately 0.50 m between St. Mark's Road and Edgewater Drive and maintain the existing outlet to the Edgewater sanitary sewer.

## **2) P.J. Cecile Storm Pump Station Improvements (\$9.70M)**

There are currently two vertical turbine pumps installed at the pump station both equipped with 40 hp motors. No upgrades have been completed since the station was put into operation in 1974. The electrical equipment is approaching the end of its life.

Based on the age of the pump station infrastructure at this location and through the modelling analysis, it is recommended that a new pump station is constructed at the PJ Cecile PS site. Due to site restraints, the new pump station is proposed to be constructed over the footprint of the existing structure. The new station would utilize vertical submersible axial flow pumps. The installation of temporary pumps using portable pump stations is recommended to provide servicing during the construction. A new outfall pipe will be required to provide increased flow capacity. At this time, it is recommended to extend the new outfall to the northern end of the jetty bank to eliminate additional flow from entering the Beach Grove harbour, which is the location of the existing outfall. The inlet pipe to the pump station will be replaced with a larger diameter pipe in the existing alignment.

**Bundled Project Timelines and Distribution of Costs**

Year / Project	Scully & St Marks Storm PS Improvements (\$ Millions)	P.J. Cecile Storm PS Improvements (\$ Millions)	Totals (\$ Millions)
2018	-	-	-
2019	-	-	-
2020	\$0.90	-	\$0.90
2021	\$1.28	-	\$1.28
2022	\$1.00	-	\$1.00
2023	\$7.13	\$0.80	\$7.93
2024	\$3.88	\$1.50	\$5.38
2025	\$2.86	\$3.94	\$6.80
2026	-	\$2.59	\$2.59
2027	-	\$0.87	\$0.87
2028	-	-	-
<b>Totals</b>	<b>\$17.05</b>	<b>\$9.70</b>	<b>\$26.75</b>

**Consultations**

Financial Services  
 Dillon Consulting Limited

**Financial Implications**

Should the Expression of Interest and the Full Application for funding be successful, the following financial implications arise if the grant application is approved:

Total net eligible project costs: \$26.75 M  
 Requested federal funding (max 40%): \$10.70 M  
**Amount to be funded by Town: \$16.05 M**

Additional review will be undertaken to determine final funding sources but initial consideration would be to fund the Town’s share of bundled projects from the following reserve funds:

<b>Reserve Fund / Project</b>	<b>Scully &amp; St. Mark's Storm PS Improvements (\$ Millions)</b>	<b>P.J. Cecile Storm PS (\$ Millions)</b>	<b>Total (\$ Millions)</b>
<b>Road Lifecycle Reserve</b>	\$1.11	-	\$1.11
<b>Watermain RF</b>	\$0.41	-	\$0.41
<b>Wastewater Sewers RF</b>	\$0.37	-	\$0.37
<b>Storm Sewer Lifecycle*</b>	\$9.81	\$4.35	\$14.16
<b>Total</b>	<b>\$11.70</b>	<b>\$4.35</b>	<b>\$16.05</b>

\*DMAF Grant Applied between the projects

The current allocation to the Lifecycle - Storm Sewer Reserves (\$902,700) is intended for the replacement of the existing assets and not meant for 'level of service improvements'. There was no significant increase in the Lifecycle - Storm Sewer Reserves within the 2019 budget, however, it was intended that the 'level of service improvements' may be funded from the New Infrastructure Reserve (NIR) in the interim. This approach may find storm infrastructure projects competing for funding with other Council initiatives such as the Multi-Use Sportsplex and the Main Street CIP Streetscape project.

The Town's Asset Management Plan (AMP), last updated in 2018, incorporated the Town's 2016 Storm Pump Station condition assessment review, which included estimated rehabilitation costs. The rehabilitation costs contemplated did not consider level of service improvements. The review found that the pump stations were generally in good to fair condition and that rehabilitation costs of approximately \$1.5 million would be necessary in the short-term.

However, the results of the Town's recent Storm Drainage Master Plan (2019 – northern urban area of Town) recommend significant improvements to the Town's storm pump station infrastructure in order to address surface flooding that will occur in extreme rainfall events, such as what the Town experienced in September 2016. Included in this Master Plan are the recommended improvements to the Scully/St. Mark's pump station service area and improvements to the PJ Cecile pump station service area with total estimated cost of \$35.56 million related to storm infrastructure only. Of the total \$26.75M costs for the bundled projects described in the previous section, \$24.86M is attributable to storm infrastructure, specifically the three storm pump stations and the trunk storm sewers on Riverside Drive required to facilitate their construction.

The Town's AMP identified an annual funding shortfall of \$1.2 million over the 20-year planning period incorporating the recommendations of the 2016 Pump Station condition assessment. This annual funding shortfall increases considerably should the Town pursue the recommendations contained within the Storm Drainage Master Plan.

Funding of new infrastructure or infrastructure enhancements should generally come from the New Infrastructure Reserve (NIR), however, it must be noted that the current annual allocation to NIR does not incorporate the results of the Town’s recently completed Storm Drainage Master Plan.

Based on the projects identified in this report, the annual allocation to Lifecycle – Storm Sewer Reserves and NIR would have to increase by a combined amount of about \$700,000 to reach an annual combined allocation of \$1.6 million that would generate \$16 million over a 10-year period allowed to complete these works to satisfy DMAF requirements.

Administration intends to undertake a funding strategy study for storm sewer infrastructure in 2020 as part of the annual PWES Capital Works Plan, which will include a review of the implementation of stormwater charges. The funding strategy study will be brought forward for Council approval through a separate report.

### Link to Strategic Priorities

Applicable	2019-22 Strategic Priorities
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- Make the Town of Tecumseh an even better place to live, work and invest through a shared vision for our residents and newcomers.
- Ensure that Tecumseh’s current and future growth is built upon the principles of sustainability and strategic decision-making.
- Integrate the principles of health and wellness into all of Tecumseh’s plans and priorities.
- Steward the Town’s “continuous improvement” approach to municipal service delivery to residents and businesses.
- Demonstrate the Town’s leadership role in the community by promoting good governance and community engagement, by bringing together organizations serving the Town and the region to pursue common goals.

### Communications

Not applicable

Website       Social Media       News Release       Local Newspaper

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Phil Bartnik, P.Eng.  
Director Public Works & Environmental Services

Reviewed by:

Tom Kitsos, CPA, CMA, BComm  
Director Financial Services & Chief Financial Officer

Recommended by:

Margaret Misek-Evans, MCIP, RPP  
Chief Administrative Officer

<b>Attachment Number</b>	<b>Attachment Name</b>
1	DMAF Applicant's Guide
2	July 5, 2019 DMAF Letter