

Subject: Combined Sewer Overflow (CSO) Control and Wet Weather Management (WWM) Program – 2019 Funding Recommendations

Report to: Planning and Economic Development Committee

Report date: Wednesday, April 17, 2019

Recommendations

1. That the 2019 Local Area Municipal projects under the Combined Sewer Overflow (CSO) Control / Wet Weather Management (WWM) Cost Sharing Program, as identified in Appendix 1 of Report PDS 14-2019, **BE APPROVED** in the amount of \$3,944,230;
2. That Regional staff **PREPARE AND EXECUTE** the respective partnership funding agreements with the Local Area Municipalities for qualifying projects to reflect the terms and conditions set out in Appendix 2 and Appendix 3 of Report PDS 14-2019; and
3. That information respecting Regional funding support, as outlined in Appendix 1 of PDS 14-2019, **BE PROVIDED** to the Local Area Municipalities for information.

Key Facts

- The purpose of this report is to provide background information to support the approval of the 2019 Local Area Municipal projects under the CSO Control / WWM Cost Sharing Program.
- The Combined Sewer Overflow (CSO) Control/Wet Weather Management (WWM) Program has been in place since 2007 and is intended to facilitate shared funding with the Local Area Municipalities (LAMs) to help mitigate the impacts of wet weather events on the Region-wide sanitary system and the environment. As a result, the Region benefits from this program by gaining capacity, which in return, could be used for growth without oversizing Regional infrastructure. The CSO Control/WWM Program supports Council's Strategic Priorities with a goal to increase capacity in the wastewater systems by mitigating impacts of and reducing inflow and infiltration (I/I).
- Representatives of the CSO/WWM Work Group developed administrative procedures to support this Program and to rank project submissions by the LAMs in accordance with the guiding principles. In 2018, the group added a weighted approach of a growth component into the existing evaluation matrix.

- The Region supports this approach and has included funding annually in its budget. For 2019, an amount of \$4,000,000 was budgeted in the Region's Wastewater Operating Budget.
- The total of eligible projects submitted by the Area Municipalities for 2019 adds up to \$3,944,230.

Financial Considerations

A gross budget of \$4,000,000 has been approved as part of the 2019 Wastewater Operating Budget for the CSO Control/WWM cost share program. Funding for this program is partially provided through the Development Charges – Sewer deferred revenue account (50%).

The recommended eligible projects submitted by the LAMs for 2019 totaled \$3,944,230; therefore, sufficient funds are available to accommodate this request. The total amount included a \$15,000 support contribution to Municipal I/I Collective Research Project for the reduction of I/I. This project is directly aligned with the CSO Control/WWM Program benefiting all LAMs. In support of it, each municipality signed a written consent agreeing that the contribution be taken from the 2019 CSO Control/WWM Funding Program.

The remaining \$55,770 budget will still be available for the rest of 2019 in order to accommodate any unforeseen or not yet approved projects requested by the LAMs. If still unused by year-end, this amount could be returned to the Regional reserves from which the funding originated. The list of recommended eligible projects is presented in Appendix 1.

Based on the preliminary consultations with the LAMs, 25 finished projects are being reviewed for potential closure this year, which could create a net total of \$1,581,961 to be returned to Regional reserves. During the consultations, LAMs suggested the Region review the CSO Control/WWM Policy to explore if possible to provide assistance with municipal offered programs region-wide for disconnection of private side I/I sources. It is an industry known estimation that 50% of all extraneous flows originate from the private sources. Regional staff will review the policy to prepare recommendations after receiving LAM program information and data, and report to Committee and Council at a later date.

In addition to the \$4,000,000 approved in the 2019 Wastewater Operating Budget, there are currently \$23,633,914 of previously approved and active CSO projects at December 31, 2018. Of that amount, \$5,709,612 had been paid to Local Area Municipalities at December 31, 2018.

Analysis

Forty six (46) applications were received from eight (8) municipalities. Fifteen (15) applications either did not align with the CSO Control/WWM Program or were retracted by the applicants and therefore, were not included for the final analysis.

Thirty one (31) applications from eight (8) municipalities were considered for the funding in the amount of \$3,929,230. In addition to, a \$15,000 support contribution to Municipal I/I Collective research project for the reduction of I/I was endorsed by all municipalities. This total requested funding of \$3,944,230 shows a surplus of \$55,770 that will be available for the rest of 2019.

Alternatives Reviewed

No alternatives were considered at this time.

Relationship to Council Strategic Priorities

This report was brought forward by Regional Staff, supported by the CSO/WWM Work Group, and supported by the Public Works Officials as the first priority in establishing a more holistic and strategic approach to the operational challenges in dealing with high flows in the collection system, basement flooding, and overflows to the receiving water bodies.

Other Pertinent Reports

- PWA 116-2008, October 29, 2008 – Combined Sewer Overflow (CSO) Control Policy-Proposed Policy Amendments
- PW 96-2014, September 23, 2014 – Combined Sewer Overflow (CSO) Control Policy Amendments

Prepared by:

Ilija Stetic
Project Manager
Planning and Economic Development

Recommended by:

Rino Mostacci, MCIP, RPP
Commissioner
Planning and Economic Development

Submitted by:

Ron Tripp, P.Eng.
Acting Chief Administrative Officer

This report was prepared in consultation with Phill Lambert, P. Eng., Director, Infrastructure Planning & Engineering and Joe Tonellato, P. Eng., Director of Water & Wastewater Services, and reviewed by Dan Ane, Manager, Program Financial Support.

Appendices

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Appendix 1: Recommended 2019 CSO Control/WWM Funding Requests

Municipality	Project Title	Region % Share	Funding Requested	Funding Approved
Fort Erie	Bertie Place Watermain Replacement (BRPL19) ¹	30%	\$ 73,500	\$ 73,500
	Highland Ave Sanitary Sewer Replacement & Road Reconstruction	30%	\$ 123,300	\$ 123,300
	Nigh Road Sewershed Trenchless Rehabilitation (NSST19)	30%	\$ 120,000	\$ 120,000
	Thunder Bay Trenchless Sewer Rehabilitation (TBTR19)	30%	\$ 48,000	\$ 48,000
	Lakeside Road Watermain Replacement and Road Reconstruction ¹	30%	\$ 320,700	\$ 320,700
	Sanitary Sewer Flow Monitoring (FLOMON)	60%	\$ 45,000	\$ 45,000
Lincoln	Jordan Station/Campden Sump Pump Disconnect - Phase 1	60%	\$ 360,000	\$ 360,000
	Jordan and Campden Downspout Disconnect Phase 2	60%	\$ 8,100	\$ 8,100
	Twenty-First Street Maintenance Hole Replacement	30%	\$ 29,400	\$ 29,400
Niagara Falls	Fifth & Sixth Avenue Sewer Separation	40%	\$ 153,320	\$ 153,320
	Fourth Avenue Sewer Separation	40%	\$ 179,640	\$ 179,640
	Ross Street Sewer Separation	40%	\$ 9,840	\$ 9,840
	St. James Avenue Sewer Separation	40%	\$ 155,400	\$ 155,400
	Third Avenue Sewer Separation	40%	\$ 65,040	\$ 65,040
	South Niagara Falls Infiltration and Inflow Study - Phase 2	50%	\$ 100,000	\$ 100,000
Niagara-on-the-Lake	CSO Flow Monitoring (Post Repair)-(Phase 1-King-Charlotte Area)	60%	\$ 30,000	\$ 30,000
	CSO Reduction Project - Old Town (Phase 2 - Front & Ricardo Streets)	50%	\$ 75,000	\$ 75,000
	Old Town CSO I/I Study (Phase 3 - Dorchester St. South Area)	30%	\$ 45,000	\$ 45,000
Pelham	Design - Church Street Upgrade	30%	\$ 15,000	\$ 15,000
St. Catharines	Hampstead Place Sewer Separation	50%	\$ 104,000	\$ 104,000
	Yale Crescent	40%	\$ 99,200	\$ 99,200
	Else Street Sewer Separation	50%	\$ 1,040,000	\$ 1,040,000
Thorold	Sanitary Sewer Spot Repair Project	30%	\$ 10,590	\$ 10,590
Welland	Edgar Elgin (SCF) Sewer Separation	40%	\$ 100,000	\$ 100,000
	West Main Area Inf. Improv. WW	40%	\$ 180,000	\$ 180,000
	West Main Area Inf. Improv. Storm Water	40%	\$ 120,000	\$ 120,000
	Catchbasin Separation Work	40%	\$ 74,200	\$ 74,200
	Lincoln & Coventry Flow Monitoring	60%	\$ 45,000	\$ 45,000
	CSO & Sewer System Flow Level Monitoring	60%	\$ 60,000	\$ 60,000
	Extraneous Sewer Flow Study	50%	\$ 50,000	\$ 50,000
	Evelyn Ditch Flow Monitoring	60%	\$ 90,000	\$ 90,000
Municipal I/I Collective Research Project for the Reduction of I/I		100%	\$15,000	\$15,000
Total			\$ 3,944,230	\$ 3,944,230

Note 1: These projects incorporate works on the sanitary sewer side applicable under the CSO/WWM program.

Appendix 2: CSO Control / WWM Policy Funding Conditions

The terms and conditions under which funding will be offered to the successful applications include the following:	
1.	<i>Amount of Funding, Studies</i> - The Region shall contribute 50% of total study costs for the PPCP and I&I studies, and 60% for the Pre and Post Flow monitoring projects provided the Region participates on a committee overseeing the study and the study covers the entire area tributary to the Wastewater Treatment Plant(s) and includes both local and Regional infrastructure.
2.	<i>Amount of Funding, Design & Construction projects</i> – The Region shall contribute defined percentage of the cost based on the Funding Options matrix, provided that; the facility or measure is supported by a recommendation from a current CSO study, life cycle cost comparisons of alternative solutions were undertaken and the Region agrees with the cost comparisons, the Region agrees with the 'best overall solution', and the Region participates on a committee overseeing the design. For multi-year projects, annual project applications are required for each new planning, design, construction or program phase, related to that funding request.
3.	<i>Third Party Funding</i> – The Region's funding shall be net of any third party funding approved for the project. If third party funding is obtained after Regional funding approval, the amount of Regional funding will be adjusted to be net of any third party funding. Payment of the funding to the Area Municipality shall be based on actual expenditures incurred up to the maximum amount approved by Regional Council based on the budget submitted with the application.
4.	<i>Project Lead Studies</i> – Lead by either the Area Municipality or the Region based on a mutual agreement prior to initiation of study.
5.	<i>Project Lead Design & Construction</i> – A project located in the Area Municipal wastewater system shall be managed by the Area Municipality while a project in the Regional wastewater system shall be managed by the Region. On a case-by-case basis the Region may consider managing a project in the local system, if requested by the Area Municipality.
6.	<i>Ownership and Operation of Assets</i> – The ownership and operation of all new and existing assets shall remain the responsibility of the current owner. The Area Municipality, on a case by case basis, may request the Region to operate and maintain an existing or new CSO control facility on behalf of the Area Municipality on a direct charge back basis.
7.	<i>Follow up Flow Monitoring</i> – On a case-by-case basis, the Region may include a condition or approval of funding that requires follow up flow monitoring to assess project's effectiveness.
8.	<i>Expiry of Funding</i> – Funding of a project by the Region may expire if the project is not initiated within one year of approval. Projects must be completed within three years of approval by Regional Council. Where a project is not completed within the three years, written notice must be provided to the Region, in advance of the deadline, and extensions for continued funding may be granted on a case-by-case basis.
9.	<i>Indemnity</i> – The Region, or its directors, officers, employees, agents or consultants will not be held liable as a result of providing funding for any project.
10.	<i>Regional Recognition</i> – The Area Municipality is to ensure that the Region is to be acknowledged in all advertising and publicity related to the project for which funding was provided.
11.	<i>Project Deliverables</i> – The Region shall receive copies of all project deliverables, including, but not limited to, reports, flow monitoring data, hydraulic modelling files, GIS layers/data, and technical memorandums.
12.	<i>Funding Agreement</i> - A letter formalizing the funding in accordance with the Region's CSO Funding Policy will be issued to the Area Municipality for signature and used as the agreement to the terms and conditions of the funding.

Appendix 3: Funding Options

Project Category No.	Project Types include design and/or construction. All projects must be recommended from a Study. All projects exclude internal costs incurred on projects.	100% Funding Amount Priority	Region %	LAM %
1.	Sewer Separation	40%		
Work Examples	Disconnection of road drainage		40	60
	Disconnection of road and private		60	40
	Disconnection of road, previous disconnection of private or opposite		50	50
2.	Studies	15%		
Work Examples	PPCP as per the PPCP Guide		50	50
	I&I and extraneous flow investigation including CCTV/smoke testing ¹		50	50
	Mandatory Flow Monitoring - Pre and Post		60	40
	Investigative work on Municipal/Private side		50	50
	Public Education/Water conservation and efficiency measures		50	50
	Sewer Use By-Law development/update and Municipal Policies		50	50
3.	Source Control - Private Side	20%		
Disconnection of roof leaders - prerequisite for other works on the private side.				
Work Examples	Disconnection of roof leaders		60	40
	Disconnection of weeping tiles from sanitary including applicable works		60	40
	Private property disconnection of sump pumps		60	40
	Backflow preventor installation on sanitary		40	60
4.	Conveyance and Flow control/storage	15%		
Work Examples	Real time control for detention		60	40
	In-line flow controllers design & construction (e.g. weirs)		60	40
	Off-line conveyance and pumping design and construction		60	40
	In-line / Off-line Storage		40	60
5.	Repair/ Rehabilitation/ Replacement of Sewers (estimated ≥50% flow reduction during WW events)	10%		
Work Examples	Repair of sanitary/ manholes - gel sealing, spot repairs		30	70
	Spot repair lining		30	70
	Full length liner		30	70

Note 1: CCTV inspection - only site/project specific. Regular **city wide** inspections should be part of municipal Asset Management or O&M programs.