**Subject**: Combined Sewer Overflow (CSO) Control and Wet Weather Management (WWM) Program – 2021 Funding Recommendations

**Report to:** Planning and Economic Development Committee

**Report date:** Wednesday, April 14, 2021

## Recommendations

1. That the thirty-four (34) Local Area Municipal projects under the 2021 Combined Sewer Overflow (CSO) Control / Wet Weather Management (WWM) Cost Sharing Program, as identified in Appendix 1 of Report PDS 19-2021, **BE APPROVED** in the amount of $3,252,976;

2. That Regional staff **PREPARE AND EXECUTE** the respective partnership funding agreements with the Local Area Municipalities (LAM) for qualifying projects to reflect the terms and conditions set out in Appendix 2 and Appendix 3 of Report PDS 19-2021; and

3. That the local Municipal partners **BE ADVISED** of the results of Regional funding support, as outlined in Appendix 1 of PDS 19-2021.

## Key Facts

- The purpose of this report is to provide background information to support the approval of the 2021 Local Area Municipal projects under the CSO Control / WWM Program.
- The Combined Sewer Overflow (CSO) Control Cost Share Program has been in place since 2007 and is intended to facilitate shared funding with the local Municipal partners 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 at regionally owned trunks, sewage pump stations and wastewater treatment plants, which in return, could be used for growth without oversizing Regional infrastructure.
- Representatives of the CSO/WWM Working Group developed administrative procedures and criteria to support this Program and to rank project submissions by local Municipalities in accordance with the guiding principles.

- The Region supports this approach and has included funding annually in its budget. For 2021, an amount of $4,000,000 was budgeted in the Region's Wastewater Operating Budget.
- The total of eligible projects submitted by local Municipal partners for 2021 was $3,252,976.
- Although the total requested amount is less than the approved program budget of $4,000,000 by $747,024 for 2021, the need to address wet weather issues in sanitary collection systems remains high.

## Financial Considerations

A gross budget of $4,000,000 has been approved as part of the 2021 Wastewater Operating Budget for the CSO Control Cost Share program. Funding for this program is partially provided through the Development Charges (50%).

The thirty-four (34) eligible projects considered for funding under the 2021 CSO Control Program totaled $3,252,976. As the total requested amount is less than the approved program budget of $4,000,000 by $747,024 for 2021, these existing funds will remain available for the remainder of 2021 in order to accommodate any unforeseen or not yet approved projects requested by LAM. If the funds are still unused by year-end, the 50% funded by DC revenues ($373,512) will remain unrecognized and the 50% funded through the water wastewater requisition ($373,512) will be recognized as surplus through the 2021 financial reporting process. Appendix 1 presents thirty-four (34) municipal projects being recommended for funding in full.

Included in the recommended projects list is a $15,000 support contribution for the Guidelines to Undertaking Flow Monitoring in New Construction for the reduction of I/I. This project is directly aligned with the WWM strategic approach benefiting both, Region and LAM. In support of this work, each municipality signed a written consent agreeing that the contribution be taken from the CSO Control Funding Program. This agreement was confirmed again for 2021 by the Working Group.

During mid-2021, Regional staff in collaboration with the local Municipal partners, will review the approved local budgets for the CSO related projects. This will insure that a consideration is given for a potential acceptance of the in-year applications should the increase in demand continue.

In addition to the $4,000,000 approved in the 2021 Wastewater Operating Budget, there are currently $22,105,628 of previously approved and active CSO projects at December

31, 2020. Of that amount, $8,672,415 has been paid to Local Area Municipalities at December 31, 2020 for qualifying CSO projects. As a result, there are $13,433,213 in commitments to 11 municipalities for approved but unspent CSO projects at December 31, 2020 as shown in Appendix 4.

## Analysis

Thirty-four (34) applications were received from ten (10) local Municipalities. Five (5) applications from Fort Erie, one (1) from Grimsby, two (2) from Lincoln, eight (8) from Niagara Falls, two (2) from NOTL, one (1) from Pelham, three (3) from Port Colborne, three (3) from St. Catharines, eight (8) from Welland and one (1) from West Lincoln.

Regional staff reviewed and evaluated thirty-four (34) eligible projects and incorporated all of them into the final recommendation list presented in Appendix 1.

The requested funding for all qualified projects totaled $3,252,976 including a $15,000 support contribution to Municipal I/I Collective research project, which was endorsed by all local Municipal partners. The total requested funding of $3,252,976 is $747,024 less than the 2021 approved budget of $4,000,000.

Previously the CSO Control Working Group adjusted the funding options structure for the eligible CSO cost share projects during 2018 and 2019. This adjustment incorporated a weighted approach of a growth component into the evaluation matrix and a change of funding priorities for different types of work. Appendix 2 shows the Funding Options.

Local Municipalities are encouraged to apply during 2021 for new eligible CSO projects as they are able to do so. Similar to other jurisdictions across Ontario, wet weather flows continue to negatively impact sanitary infrastructure resulting in potential basement flooding, overflows to the environment, and reduced capacity for future growth. The removal of wet weather flow and Inflow & Infiltration reduction is important work that needs on-going focus and support over the long term to be successful.

## Alternatives Reviewed

No alternatives were reviewed at this time.

## Relationship to Council Strategic Priorities

This report was brought forward by Regional Staff, supported by the CSO/WWM Working Group and by the Public Works Officials as the Responsible Growth and Infrastructure Planning priority in establishing objectives of Environmental Sustainability & Stewardship and Maintenance of Existing Infrastructure.

## Other Pertinent Reports

- PW4.S06.0, September 2, 2014 – Combined Sewer Overflow (CSO) Control & Wet Weather Management Policy
- PDS 12-2020, April 8, 2020 – Combined Sewer Overflow (CSO) Control and Wet Weather Management Program – 2020 Funding Recommendations")

**Prepared by:**
Ilija Stetic, B.Sc., PMP, CET
Project Manager
Planning and Economic Development

**Recommended by:**
Doug Giles, MES, BUP
Commissioner (Acting)
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, Lyndsey Ferrell, Program Financial Specialist, and reviewed by Dan Ane, Manager Program Financial Support.*

## Appendices

| | |
|---|---|
| Appendix 1 | Recommended 2021 CSO Control Program Funding Requests |
| Appendix 2 | Funding Options |
| Appendix 3 | CSO Control / WWM Policy Funding Conditions |

Appendix 4 Summary of CSO Project Remaining Budget Encumbrance by Municipality by 2020 Year-End

**Appendix 1:** Recommended 2021 CSO Control Program Funding Requests

| Municipality | Project Title | Regional Share % | Requested Funding $ | Recommended Funding $ |
|---|---|---|---|---|
| Grimsby | Investigative Work in the Roberts Rd. and Lake St. SPS Catchments | 50 | 43,393 | 43,393 |
| Fort Erie | Flow Monitoring Pre/Post - Targeted Areas | 50 | 15,000 | 15,000 |
| | Sanitary CCTV - Targeted Areas | 50 | 157,500 | 157,500 |
| | Thunder Bay Trenchless Sewer Rehabilitation (TBTR19) | 30 | 75,000 | 75,000 |
| | Trenchless Repairs - Targeted Area (TRSA21) | 30/60 [1] | 162,000 | 162,000 |
| | Catherine SPS I/I Reduction | 30 | 12,857 | 12,857 |
| Lincoln | Glenbrook Dr Sewer Replacement (D & C) | 30/30/60 [1] | 257,400 | 257,400 |
| | Beamsville, Vineland, Jordan: Sewer Rehab Project (D & C and post F/M) | 30/30/60 [1] | 284,970 | 284,970 |
| Niagara Falls | Corwin Area Sewer Separation Implementation Plan (Study) | 50 | 50,000 | 50,000 |
| | Dixon St Sewer Separation (Design) | 40 | 17,316 | 17,316 |
| | George St/ Fraser St Sewer Separation EA (Study) | 50 | 50,000 | 50,000 |
| | Hodgson Subdivision Sewer Separation Strategy (Study) | 50 | 50,000 | 50,000 |
| | Sanitary Sewer Rehabilitations Project Yr 2 | 30 | 300,000 | 300,000 |
| | South NF I&I Remedial Program Ph 2 | 60/30 [1] | 135,000 | 135,000 |
| | St. Peter Ave Sewer Separation (Construction) | 40 | 122,400 | 122,400 |
| | Valley Way Area Sewer Separation (Study) | 50 | 50,000 | 50,000 |
| Niagara-on-the-Lake | Mississauga Beach Study | 50 | 75,000 | 75,000 |
| | Dorchester North Repairs | 30 | 45,000 | 45,000 |
| Pelham | Sanitary I&I Study Program- Planned Replacements and Rehab | 30 | 30,000 | 30,000 |
| Port Colborne | Investigation of Innovative Stormwater Management Solutions-Omer Area | 50/60 [1] | 80,100 | 80,100 |
| | Investigation & Remediation - I&I Contributors Omer Area | 50/60 [1] | 108,000 | 108,000 |
| | Inflow and Infiltration Public Education Campaign | 50 | 15,000 | 15,000 |
| St. Catharines | Greenmeadow / Wood St Sewer Separation (Design) | 50 | 142,000 | 142,000 |
| | Carlton/Ontario Catchment Investigation and CSO Reduction Study | 50 | 75,000 | 75,000 |
| | Wastewater and Stormwater Model Development | 50 | 90,000 | 90,000 |
| Welland | Broadway Area I&I Reduction | 50 | 75,000 | 75,000 |
| | Merritt St Sewer Separation | 40/60 [1] | 104,160 | 104,160 |
| | Commercial Ontario Area MSP Trunk Sewer | 50/50/60 [1] | 78,000 | 78,000 |
| | Lincoln Conventry I&I Reduction | 50 | 75,000 | 75,000 |
| | Welland River Inflow & Check Valves | 50/60 [1] | 57,000 | 57,000 |
| | Dain City I&I Reduction | 30/50/50 [1] | 220,000 | 220,000 |
| | Parkdale Place Sewer Separation | 40/60 [1] | 41,680 | 41,680 |
| | Margaret Nye Gadsby Sewer Separation | 40/60 [1] | 84,200 | 84,200 |
| West Lincoln | I&I Study and Remedial Action Plan | 30 | 60,000 | 60,000 |
| Guideline to Undertaking Flow Monitoring in New Construction for I/I reduction [2] | | 100 | 15,000 | 15,000 |
| **Total** | | | **3,252,976** | **3,252,976** |

**Note 1**: Funding % share is dependent on specific project component and related work. Projects combined different works resulting in different Regional share. See Appendix 3 for a specific project cost share split.

Note 2: This collective project is for the reduction of I/I in new construction for the benefit of both, Region and Municipal partners.

**CSO Control Program Funding Options**

| Project Category No. | Project Types | 100% Funding Amount Priorities | Region % | Municipality % |
|---|---|---|---|---|
| 1. | Sewer Separation | 40% | | |
| Work Examples | Disconnection of road drainage | | 40 | 60 |
| | Disconnection of 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 dye 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 to be done by homeowners/municipalities as a 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 |
| | Disconnection of private sump pumps | | 60 | 40 |
| | Backflow preventer 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 and 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 | 10% | | |
| Estimated ≥50% flow reduction during WW events | | | | |
| 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 O&M.

**CSO Control Program Terms and Funding Conditions**

| The terms and conditions under which funding will be offered to the successful applications, include the following: | |
|---|---|
| 1 | *Amount of Funding, Studies* - 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 | *Amount of Funding, Design & Construction projects* – 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. |
| 3 | *Third Party Funding* – 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 | *Project Lead Studies* – Lead by either the Area Municipality or the Region based on a mutual agreement prior to initiation of study. |
| 5 | *Project Lead Design & Construction* – 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 | *Ownership and Operation of Assets* – 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 | *Follow up Flow Monitoring* – 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 | *Expiry of Funding* – Funding of a project by the Region may expire if the local Area Municipality does not invoice the Region within three (3) years of the date of funding approval by Regional Council. Also, if an Area Municipality decides not to proceed with a project, the Region may revoke funding. The Region may also withdraw funding for future phases if a project does not proceed on a continuous basis toward completion. |
| 9 | *Indemnity* – 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 | *Regional Recognition* – 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 | *Project Deliverables* – 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 | *Funding Agreement* - 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 4: Summary of CSO Project Remaining Commitments by Municipality at 2020 Year-End

| | Year | | | | | | |
|---|---|---|---|---|---|---|---|
| Municipality | Pre-2016 | 2016 | 2017 | 2018 | 2019 | 2020 | Grand Total |
| Fort Erie | $ 8,729 | $ 123,301 | | $ 308,990 | $ 783,839 | $ 138,500 | $ 1,363,359 |
| Grimsby | 1,503,293 | 13,521 | | | | 288,000 | 1,804,814 |
| I/I Collective Research | | | | | 5,720 | 15,000 | 20,720 |
| Lincoln | | 13,521 | 2,100 | 312,182 | 389,400 | | 717,203 |
| Niagara Falls | 112,728 | 11,074 | 320,207 | 101,663 | 410,929 | 1,185,613 | 2,142,214 |
| Niagara-on-the-Lake | | | | 115,292 | 52,000 | 100,286 | 267,578 |
| Pelham | 5,173 | | | 50,000 | 15,000 | | 70,173 |
| Port Colborne | | 186,460 | 98,684 | | | | 285,144 |
| St. Catharines | 803,618 | 1,018,842 | 128,082 | 314,001 | 1,243,200 | 364,500 | 3,872,243 |
| Thorold | 158,050 | 176,277 | | 299,465 | | | 633,792 |
| Welland | 148,980 | 62,000 | | 876,659 | 528,765 | 448,000 | 2,064,404 |
| West Lincoln | | 13,521 | | | | 178,048 | 191,569 |
| Grand Total | **$ 2,740,571** | **$ 1,618,516** | **$ 549,074** | **$ 2,378,252** | **$ 3,428,852** | **$ 2,717,948** | **$ 13,433,213** |