



**The Corporation of the City of St. Catharines
CITY COUNCIL AGENDA (Budget)
Regular, Wednesday, September 22, 2021
Council Chambers and Electronic Participation, 6:00 PM**

This Meeting of Council will be held in person at Council Chambers and electronically for the Members of Council. Due to capacity limits due to the COVID-19 pandemic the public can only participate electronically.

This Meeting may be viewed online at www.stcatharines.ca/youtube

Public Comments: The public may submit comments regarding agenda matters to the Office of the City Clerk by contacting clerks@stcatharines.ca by Wednesday, September 22, 2021 before Noon. Comments submitted will be considered as public information and entered into public record.

Electronic Delegations: Those wishing to speak to an item on the agenda must complete the [City's Electronic Delegation Form](#) by Wednesday, September 22, 2021 before 9:00 a.m. and attend a test session with City staff on Wednesday, September 22, 2021 at 10:00 a.m.

Budget Standing Committee Chair, Councillor Siscoe takes the Chair and opens the meeting with a Land Acknowledgement

Page

- 1. Chair's Report**
- 2. Adoption of the Agenda**
- 3. Adoption of the Minutes**
- 4. Declarations of Interest**
- 5. Motion to Move Consent Reports**

Consent Reports are approved in one motion which approves all of the recommendations contained in each report. Prior to this motion, a councillor may request that one or more of the reports listed under Item 6 be moved to the list of Discussion Reports.

- 6. Consent Reports**

- 6.1 Financial Management Services, Billing
Feasibility of Vacancy Rebate Program Extension

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- 34 - 46 6.2 Financial Management Services, Director
Year-to-Date Report - 2021 Second Quarter Operating Variance and
Year-End Forecast Report
- 47 - 50 6.3 Financial Management Services, Corporate Asset Management
Capital Project Report for Second Quarter Ended June 30, 2021
- 51 - 91 6.4 Legal and Clerks Services, Office of the City Clerk
Council Correspondence

7. Presentations

- 7.1 Jackie Gervais, Health Promoter, Chronic Disease and Injury
Prevention, Public Health, Niagara Region
Re. - Students On The Move Study

8. Discussion Reports

- 92 - 273 8.1 Engineering, Facilities and Environmental Services, Engineering and
Construction and Financial Management Services, Corporate Asset
Management
2021 Asset Management Plan for Core Assets
(Presentation by consultant - Andrea Clemencio, Senior Engineer, GM
BluePlan Engineering Ltd. precedes discussion of the report)
[Addenda]
- 274 - 283 8.2 Municipal Works, Operations
Sidewalk Snowclearing
- 284 - 293 8.3 Financial Management Services, Director
Vehicle Equipment Reserve Policy
- 294 - 297 8.4 Telephone Town Hall Engagement, Budget 2022

9. Motions

10. Call for Notices of Motion

11. Report Requests

12. Closed Session

Council will meet in Closed Session for the following purpose(s):

13. Motion Arising from Closed Session

14. Adjournment



Corporate Report City Council

Report from: Financial Management Services, Billing

Report Date: August 31, 2021

Meeting Date: September 22, 2021

Report Number: FMS-136-2021.

File: 10.57.99

Subject: Feasibility of vacancy rebate program extension

Strategic Pillar:

This report aligns with the following St. Catharines Strategic Plan pillars: Economic



Recommendation

That the City of St. Catharines not proceed with an extension of the vacancy rebate program as recommended in Report FMS-136-2021.

Summary

Since 2001, the Provincial Vacant Unit Rebate program has provided eligible commercial properties the ability to apply for a 30% rebate of the property taxes attributable to vacant space, with eligible industrial properties receiving a 35% rebate. While the program was originally implemented as a short-term aid to property owners in difficult economic times, in some cases the rebate has been used over many years.

Beginning in 2019, local municipalities in Niagara phased out the vacancy program, such that the 2020 property tax year was final rebate year with no requirement to maintain a program for 2021 or any subsequent year.

Key requirements of the vacancy rebate program are that the property must be vacant for 90 consecutive days and able to be rented by another tenant immediately. The flexibility regarding eligibility is limited to layering on additional requirements and does not support the removal or overriding of the program's base requirements. As indicated above, the core eligibility parameters of a property being vacant for 90 days, the ability to be occupied by a new tenant immediately will continue to apply. That is, you can make the eligibility rules tighter, but not looser.

This requirement makes COVID an ineligible option for qualification of the vacancy rebate program. The Provincial government offered other programs which provide property tax and utility assistance due to COVID business closures.

Relationship to Strategic Plan

Economic Sustainability Pillar

GOALS:

1. Attract public and private investment, support local businesses, and provide excellent customer service to demonstrate we are open for business.
2. Be an affordable city for all. Develop partnerships to enhance the economic vitality of the community.

Background

At the meeting of January 18, 2021, Council approved the motion that staff be directed to prepare a report related to the vacancy rebate program and the feasibility of a two-year extension to the program, and that the report be brought to the Budget Standing Committee.

The City of St. Catharines has been operating its vacant unit rebate program under special regulated rules contained in Ontario Regulation 325/01 since 2019. Specifically, local municipalities in Niagara Region were subject to a phase-out of the program which saw the rebate percentage reduced to 20% in 2019, 10% for 2020 and no requirement to maintain a program for 2021 or any subsequent year. **Appendix 1**

As part of its 2020 Budget Measures Act, (Bill 229), the Province of Ontario introduced a few new flexibilities to local municipalities regarding maintaining and managing Vacant Unit Rebate Programs under Section 364 of the Municipal Act, 2001 (The Act). These amendments, along with all the Municipal Act provisions came into force when Bill 229 received Royal Assent on December 8, 2020.

Report

Based on the special provisions set out under section 47 of Ontario Regulation 325/01 (Regulation), the City is not required to maintain a vacant unit rebate program for the 2021 or any subsequent taxation year. However, based on the statutory amendments to section 364 of The Act, the City may choose to maintain a vacant unit rebate program under default rules, or may establish a program with enhanced rules that will serve to meet their own local policy priorities or preferences.

Although the 2019-2021 phase-out provisions were requested and granted to the Region as a whole, it applies to local area municipalities, which are by default responsible for maintaining programs under section 364. When the Province invited municipalities to request special regulatory provisions, it made sense on a practical level to suggest this be coordinated at the upper-tier level. Under the Act, upper-tier municipalities have no authority over, and no role in the vacant unit rebate program.

Subsection 364(2.1) of The Act introduces the ability for local area municipalities to alter the requirements of the program, set specific eligibility exclusions and set rebate percentages up to 35%. The City of St. Catharines has requested the assistance of Municipal Tax Equity (MTE) Consultants Inc. to provide some insight and clarification around these new flexibilities and options.

The flexibility regarding eligibility is limited to layering on additional requirements and does not support the removal or overriding of the program's base requirements. As such, the core eligibility parameters of a property being vacant for 90 days, the ability to be occupied by a new tenant immediately, etc. will continue to apply. That is, you can make the eligibility rules tighter, but not looser.

If the City was to consider an extension of the vacant unit program, it would be recommended that a measured design exercise be undertaken if the City intends to continue offering this relief. This would be dependent on local goals, priorities, and preferences. The flexibility to tailor the program is quite broad and the City can set the parameters that work and fit best locally. The elements that may be set to meet local circumstances include, but are not limited to:

- Rebate percentage; and
- Eligibility rules, exclusions, limitations, etc.; and
- Administrative, timing, evidentiary, and documentation requirements/standards.

With legislation changes that now allows for the lower tier to approve their own vacancy rebate program it would be desirable to maintain consistency across the Region, but each local area municipality is free to, and will be required to make its own decision. Even if each municipality adopts the same rules and approach, each local Council will need to pass their own by-law.

Staff are not recommending the extension of vacant unit rebate. The vacant unit rebate program has become increasingly problematic for several reasons including properties remaining eligible for rebate program for years at a time or indefinitely; properties that have received rebates after securing assessment reductions and the application and enforcement of eligibility criteria are difficult to administer due to loosely defined rules and limited compliance provisions.

Should the City proceed with a new program for 2021, the rebate should continue at the 2020 rebate of 10%. The school boards will not share in the education portion of any rebate. The Region would have to contribute their share. as they have no authority over the program and cannot opt-out.

Of the Municipal Comparators that were surveyed, almost all have phased out their vacant unit rebate program. Local municipalities within Niagara Region were also subject to a phase-out of the program. There have been no additional discussions about reinstating or extending past 2020. The consensus in another four municipalities that were contacted was that the phase out of vacancies would foster site development and encourage landlords to enhance their properties. Based on area municipal discussions

with the Region it was recommended a move towards elimination of the Vacancy Rebate Program as it is believed that the program no longer served the purpose for which it was created. The vacant unit rebate was not seen as an incentive to accelerate commercial property owners to redevelop their properties. Association of Municipalities of Ontario (AMO) supported the move to zero to get owners to fill vacancies.

Financial Implications

The City received 146 applications in 2019, 119 in 2020, 105 in 2021 from property owners in the commercial and industrial property classes requesting compensation for vacancies of 90 or more consecutive days. In comparing 2018 and 2019 with 2020, 80% of these applications are recurring annually. The City's 2021 operating budget includes \$170,000 for the cost of the rebate program.

| | 2021 Budget | 2021 Actual 10% | 2020 Budget | 2020 Actual 20% | 2019 Actual | 2018 Actual |
|--------------|------------------------|--------------------------------|------------------------|--------------------------------|------------------------|------------------------|
| City | \$150,000 | \$111,700 | \$280,000 | \$89,238 | \$284,925 | \$329,363 |
| USA | \$20,000 | \$ 15,263 | \$ 40,000 | \$12,724 | \$ 36,738 | \$ 43,121 |
| Total | \$170,000 | \$126,963 | \$320,000 | \$101,962 | \$321,663 | \$372,484 |

With the elimination of the vacant unit program, this would remove the application of any 2021 taxation rebates in the 2022 budget year and a reduction of this item by \$125,000.

Environmental Sustainability Implications

There are no environmental implications associated with this report.

Conclusion

The Province introduced regulatory flexibility for municipalities to opt out of a mandatory Vacant Unit Property Tax Rebate program and the Vacant / Excess Land Subclass Property Tax rate for commercial and industrial properties. Local municipalities expressed their desire to exercise this option; however, the option needed to be decided by the Region. Consultations took place, and the Region chose to opt-out of the mandatory program and to seek the Province to adopt the necessary municipal specific regulation. Staff are not recommending the further extension of the vacant unit program.

Notifications

Niagara Region
1815 Sir Isaac Brock Way
P.O. Box 1042
Thorold, ON L2V 4T7

Prepared and Submitted by
Lisa Read, Manager of Revenue

Approved by

Kristine Douglas, CPA, CMA

Director of Financial Management Services / City Treasurer

Appendices

- Appendix 1 - CSD 3-2019 - Vacancy Program Revisions to Ministry of Finance

Subject: Vacancy Program Revisions to Ministry of Finance

Report to: Corporate Services Committee

Report date: Wednesday, January 9, 2019

Recommendations

1. That the proposed amendments to the existing Commercial/Industrial Vacant Unit Rebate and Vacant/Excess Land Subclass property tax rate reductions programs **BE APPROVED** as follows:
 - a. Vacant Unit Tax Rebate
 - i. Commercial Properties: Phase out the current program in its entirety, over three years, by reducing the eligible rebate percentage from the current rate of 30% in 2018, to 20% in 2019, 10% in 2020, and 0% in 2021 and onwards.
 - ii. Industrial Properties: Phase out the current program in its entirety, over three years, by reducing the eligible rebate percentage from the current rate of 30% in 2018, to 20% in 2019, 10% in 2020, and 0% in 2021 and onwards.
 - b. Vacant/Excess Land Tax Rate Reduction
 - i. Commercial Properties: Phase out the current program in its entirety, over four years starting 2021, by reducing the eligible rebate percentage from the current rate of 30% in 2018, to 22.5% in 2021, 15% in 2022, 7.5% in 2023 and 0% in 2024 and onwards.
 - ii. Industrial Properties: Phase out the current program in its entirety, over four years starting 2021, by reducing the eligible rebate percentage from the current rate of 30% in 2018, to 22.5% in 2021, 15% in 2022, 7.5% in 2023 and 0% in 2024 and onwards;
2. That the Province of Ontario **BE REQUESTED** to adopt regulations and make any other legislative amendments require to adjust Niagara Region's Vacant Unit and Vacant/Excess Land Tax Programs as per Recommendation 1.
3. That the Commissioner, Enterprise Resource Management Services/Treasurer **BE DIRECTED** to submit this report to the Ontario Minister of Finance, along with any other supporting documentation as required by the Ministry to enact the request program changes; and
4. That this report **BE CIRCULATED** to the Councils of the area municipalities for information.

Key Facts

- Commencing in 2017, the Province provided municipalities a greater range of options to modify or eliminate the Vacant Unit Property Tax Rebate and Commercial/Industrial Vacant/Excess Subclass property tax reduction programs.
- Currently, Niagara Region has adopted property tax rebate/reduction for the above noted programs of 30%.
- Report CSD 77-2017 Commercial and Industrial Sub Class Tax Rate Reduction and Rebates, dated November 29, 2019, Regional Council approved a public consultation process to be conducted in order to solicit opinions on program alterations. Both area municipal staff and business associations were consulted.
- Report CSD 41-2018 dated July 18, 2018 presented the result of the public engagement to Council and based on the comments provided by local stakeholders, Regional staff proposed amendments to the existing rebate and reduction programs as outlined in the recommendations section of this report.
- Council reviewed the proposed changes included in CSD 41-2018 and requested that additional public engagement occur in order to ensure communication of the proposed changes and input is achieved.
- Three additional public engagement sessions were held and no changes to the previously presented program revisions as per CSD 41-2018 are being recommended as a result of no new information being obtained from the business community coupled with an increased desire from the non-commercial/industrial property owners for program elimination.

Financial Considerations

Vacant Unit Rebates – The Region's vacancy rebate program is an application based program that provides for a 30% rebate to both commercial and industrial property classes if vacancies are experienced in year. The rebate program policy is a decision of Regional Council that applies to all the Niagara municipalities.

Unlike the subclass reduction program described below, the Region and each municipality budget for the cost of providing these vacancy rebates. The Region's 2018 budget expense for providing this program was approximately \$1 Million or 0.28% of the tax levy. The impact on the local area municipal levies would be of a similar dollar magnitude in aggregate. Elimination of this program could provide direct budget opportunities for both the Region and area municipality's budgets or could be used to provide mitigation against future budget increases.

Subclass Rate Reduction – The Region's vacant and excess land discount factor for commercial and industrial properties is 30% for 2018 for properties that are vacant or have excess land. The subclass rate reductions are one of the tax policy decisions the Regional Council must make each year that apply to all the Niagara municipalities.

The subclass reductions provided to commercial and industrial vacant/excess lands amounts to approximately \$1.6 million (Regional portion only). It is important to note, that any changes to this program would not provide direct budget relief to the tax levy. Any reduction of the subclass discount percentage would result in a tax shift away from all other classes (including the residential, farm, full commercial and industrial classes) onto the previously discounted commercial and industrial classes. Unlike the vacant unit rebates, discussed above, the property owners do not have to apply for the reduction. Eligibility for the subclasses is ultimately determined by MPAC and is reflected annually on the tax roll.

The impact to the average residential household of eliminating the vacant unit rebate plus the benefit of the tax shift from eliminating the subclass discounts is estimated at \$10.96 or 0.75% reduction for the average household (Region portion only). For commercial and industrial properties assessed at \$1 million, the benefit of eliminating the discounts and rebates is \$74 and \$112, respectively.

The savings of starting the phase-out in 2019 will result in a decrease in the Region's Vacant Unit Rebate budget by approximately \$300 thousand which has been repurposed to other Regional priorities in the 2019 operating budget. As a result of the program change, a similar impact can be expected for the area municipalities in aggregate.

Analysis

Additional Public Engagement

At the direction of Corporate Services Committee, staff undertook additional consultation with local area municipalities and business associations above what was originally conducted. The Niagara Industrial Association, Greater Niagara Chambers of Commerce and previous users of the program were further engaged in order to ensure communication of the changes and input was achieved.

Regional staff organized two additional engagement sessions open to both area municipal staff and business groups/residents. Notification was distributed to area municipal staff informing them of the upcoming meeting. In order to increase awareness of the engagement session with the business groups and residents, Regional staff coordinated press releases through both the Niagara Industrial Association and Greater Niagara Chamber of Commerce, undertook a social media campaign and provided further information on the Region's website.

In order to ensure a comprehensive public engagement, Regional staff invited area municipal finance staff to complete direct mail outs to former recipients of the vacant unit rebate informing them of the intended program revisions and directing them to the Region's online survey. The direct mail out did yield a few verbal enquiries, however,

staff believe that the increase in the number of surveys completed (in comparison to the May 2018 survey) can partially be attributed to the direct mail outs and the social media campaign.

Region staff were also contacted by the Niagara Industrial and Commercial Brokers association with comments on the proposed program revisions. As a result, an additional meeting was arranged between the members of the association and Region staff to further discuss the existing program, the proposed program revisions and the impact of such changes. This meeting was attended by representatives of many commercial and industrial property owners across Niagara.

Result of Additional Public Engagement

The results of the additional municipal engagement were consistent with the previous sessions held with municipal staff. There was an interest in eliminating the programs and allocating the funds currently utilized by these program elsewhere (i.e., economic development activities or to the tax levy).

The results of the additional public engagement session with the community were mixed. The representatives in attendance from one of Niagara Business Improvement Areas was in support of program alterations while those that identified as business owners were not in favour of the proposed changes. The discussion primarily focused on the vacant unit rebate instead of the vacant/excess land subclass reduction program. In general, comments received from those in attendance were in support of the vacant unit rebate program as it provides assistance to business owners during challenging periods and/or transition periods between tenants.

Comments received from the Realtors association were similar to those received during the additional public consultation from the community as well. Those in attendance noted that the Region should not enact program changes for the sole purpose of being consistent with other municipalities across Southern Ontario. Those in attendance stressed the importance of a “made in Niagara” solution. This meeting also resulted in 9 letters in support of the current program being submitted to the Region from business owners (included as **Appendix I**).

From the time that report CSD 41-2018 was presented to Council an additional 157 online surveys were completed by business owners and residents. The full summary of the results are included as **Appendix II** to this report. The survey was designed to separate those that are representatives or owners of commercial/industrial properties and those that are not. Approximately 38% of the survey respondents identified themselves as a representative or owner of a commercial or industrial property in Niagara while the remaining 62% did not. The responses from those that identified as representatives or owners of a business were for the most part, consistent with the verbal feedback received at all engagement sessions. Unlike the engagement sessions

though, significant input was received from those that did not identify as representatives or owners of a business property. The majority of this group did not feel that the existing vacancy programs creates a positive impact on the local community and as a result, both programs should be discontinued.

Recommendation Based on Public Engagement

As discussed in CSD 41-2018, staff presented rationale for eliminating the programs which included:

- Existing programs place strain on current municipal budgets;
- No limitation on the number of years a property can be considered vacant and eligible which can lead to lack of incentive to develop properties or fill vacancies;
- Assessment practices have led to “double-dipping” as properties can receive reduced assessed values related to vacancies (as a result of built in assessment obsolescence factors by MPAC) in addition to a vacancy tax rebate during the same period.

Based on discussions from all stakeholder engagements, staff are recommending that the below phase-out schedules for both programs be endorsed by Council. It should be noted that the recommended program revisions are a “made in Niagara” solution. Many Golden Horseshoe municipalities (as noted in **Appendix III**) have opted to eliminate the Vacant Unit program through a phase-out starting 2017 or eliminate the program immediately without a phase-out. As noted in Table 1, the “made in Niagara” solution is to phase-out the Vacant Unit rebate starting 2019 and a delayed 4 year phase-out for the vacant/excess land subclass discount starting 2021.

Table 1: Recommended Program Phase-out Schedule

| Year | Vacant Unit Rebate % | Vacant/Excess Land Reduction % |
|------------------|----------------------|--------------------------------|
| 2018 | 30% | 30% |
| 2019 | 20% | 30% |
| 2020 | 10% | 30% |
| 2021 | 0% | 22.5% |
| 2022 | 0% | 15% |
| 2023 | 0% | 7.5% |
| 2024 and onwards | 0% | 0% |

As discussed in CSD 41-2018, the intent of the phase out starting 2019 for the vacant unit rebate program is to allow for business owners that would be effected by the program change to adjust their business plans (i.e. seek tenants, better utilize available building space, etc.). The intent of the four year phase-out starting 2021 for the vacant and excess land subclass reduction program is to provide time for commercial and industrial land owners to create productive land and to match MPAC’s assessment phase-in cycles allowing for a “fresh start” in 2024. It should also be noted that the

Ontario Business Improvement Area Association is in support of eliminating the vacant unit rebate for similar reasons as noted above (press release included as **Appendix IV**).

Provincial Requirements to Enact Requested Program Revisions

As outlined in **Appendix V**, the Province established requirements that must be completed prior to submitting program changes for their consideration. Over the course of the review period conducted by Regional staff, all requirements have been completed save and except the final requirement of Council to pass a resolution indicating approval of the changes. If Council passes a resolution in accordance with the report recommendations as presented, staff will request the Province to enact the program revisions as outlined in Table 1 noted above.

Alternatives Reviewed

Continue both the commercial/industrial vacant unit and vacant/excess land subclass tax reduction programs as a status quo. This alternative is **NOT RECOMMENDED** as it does not respond to the concerns heard during the public consultation process.

Eliminate both the vacant unit and vacant/excess land subclass rebate and reduction programs immediately without phase-out. This alternative is **NOT RECOMMENDED** as it would not provide sufficient time for local business owners to adjust their business plans accordingly.

Continue the vacant unit program but limit the number of years that a property can be eligible for rebate. This alternative is **NOT RECOMMENDED** as it does not represent the majority of the input received during the public engagement sessions. It is also believed that this approach would create confusion with the program and increase administrative burden of having these programs.

Relationship to Council Strategic Priorities

Options provided supports Council's priority of fostering an environment for economic prosperity.

Other Pertinent Reports

CSD 79-2016 Recommended Actions for Correspondence from the City of St. Catharines respecting Tax Policy Changes
 CSD 77-2017 Commercial and Industrial Sub Class Tax Rate Reductions and Rebates
 CWCD 142-2017 Response to enquires from March 22, 2017 Corporate services Committee meeting
 CSD 18-2018 Property Tax Policy, Ratios and Rates
 CSD 41-2018 Results of Stakeholder Engagement for Vacancy Rebate Program Revisions

Prepared by:

Rob Fleming, MBA
Senior Tax & Revenue Analyst
Enterprise Resource Management
Services

Recommended by:

Todd Harrison, CPA, CMA
Commissioner/Treasurer
Enterprise Resource Management
Services

Submitted by:

Ron Tripp, P.Eng.
Acting Chief Administrative Officer

This report was prepared in consultation with Margaret Murphy, Associate Director, Budget Planning & Strategy and Ken Scholtens, Manager, Business Development & Expedited Services, and reviewed by Helen Chamberlain, Director, Financial Management & Planning /Deputy Treasurer.

Appendices

| | |
|--------------|---|
| Appendix I | Letters Re Vacancy Program Revisions |
| Appendix II | Survey Outcomes |
| Appendix III | Map of Neighbouring Municipalities with Council Approved Program Changes |
| Appendix IV | News Release - Ontario Business Improvement Area Association |
| Appendix V | Letter from Ministry of Finance Re: Vacant Unit and Vacant/Excess Land Subclasses |

Rob Flemming
Senior Tax & Revenue Analyst
Financial Management and Planning

Enterprise Resource Management Services
Niagara Region
1815 Sir Isaac Brock Way
Thorold, ON L2V 4T7

I'm the owner of the property located at 142 Cushman Road, St. Catharines, consisting of 53,800 sq. ft.

I'm opposed to any removal of the Vacancy Tax Credit.

Even though other regions have opted out of the Vacancy Tax Credit, I believe as with many of my colleagues that this should be a "Made in Niagara Solution". What may work in other Regions, I can assure you that this proposal will not work here. We are just coming into a healthy rental market with a forecast of a downturn come late 2019 through to 2022. Other Regions have experienced strong market conditions and have expanded significantly. Whereas Niagara is just starting to fill their industrial, commercial is holding its own and office is looking bleak. How could you even consider implementing a measure such as this when we have had such a dismal past.

Please remove this proposal from the Region and Municipalities.

Sincerely,



Collini Ferretti Holdings Inc

Rob Flemming
Senor Tax & Revenue Analyst
Financial Management and Planning

Enterprise Resource Management Services
Niagara Region
1815 Sir Isaac Brock Way
Thorold, ON L2V 4T7

I'm the owner of the property located at 1620 Dominion Road, Fort Erie, consisting of 8533 sq. ft.

I'm opposed to any removal of the Vacancy Tax Credit.

Even though other regions have opted out of the Vacancy Tax Credit, I believe as with many of my colleagues that this should be a "Made in Niagara Solution". What may work in other Regions, I can assure you that this proposal will not work here. We are just coming into a healthy rental market with a forecast of a downturn come late 2019 through to 2022. Other Regions have experienced strong market conditions and have expanded significantly. Whereas Niagara is just starting to fill their industrial, commercial is holding its own and office is looking bleak. How could you even consider implementing a measure such as this when we have had such a dismal past.

Please remove this proposal from the Region and Municipalities.

Sincerely,



Larry Stewart

Rob Flemming
Senior Tax & Revenue Analyst
Financial Management and Planning

Enterprise Resource Management Services
Niagara Region
1815 Sir Isaac Brock Way
Thorold, ON L2V 4T7

I'm the owner of the property located at 10 Dunlop St., St. Catharines, consisting of 4195 sq. ft.

I'm opposed to any removal of the Vacancy Tax Credit.

Even though other regions have opted out of the Vacancy Tax Credit, I believe as with many of my colleagues that this should be a "Made in Niagara Solution". What may work in other Regions, I can assure you that this proposal will not work here. We are just coming into a healthy rental market with a forecast of a downturn come late 2019 through to 2022. Other Regions have experienced strong market conditions and have expanded significantly. Whereas Niagara is just starting to fill their industrial, commercial is holding its own and office is looking bleak. How could you even consider implementing a measure such as this when we have had such a dismal past.

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Sincerely,



Larry Stewart

Rob Flemming
Senor Tax & Revenue Analyst
Financial Management and Planning

Enterprise Resource Management Services
Niagara Region
1815 Sir Isaac Brock Way
Thorold, ON L2V 4T7

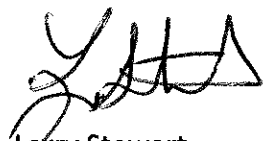
I'm the owner of the property located at 543 Allanburg Road, Thorold, consisting of 3150 sq. ft.

I'm opposed to any removal of the Vacancy Tax Credit.

Even though other regions have opted out of the Vacancy Tax Credit, I believe as with many of my colleagues that this should be a "Made in Niagara Solution". What may work in other Regions, I can assure you that this proposal will not work here. We are just coming into a healthy rental market with a forecast of a downturn come late 2019 through to 2022. Other Regions have experienced strong market conditions and have expanded significantly. Whereas Niagara is just starting to fill their industrial, commercial is holding its own and office is looking bleak. How could you even consider implementing a measure such as this when we have had such a dismal past.

Please remove this proposal from the Region and Municipalities.

Sincerely,



Larry Stewart

Rob Flemming
Senor Tax & Revenue Analyst
Financial Management and Planning

Enterprise Resource Management Services
Niagara Region
1815 Sir Isaac Brock Way
Thorold, ON L2V 4T7

I'm the owner of the property located at 101 Hannover Drive, St. Catharines, consisting of 3824 sq. ft.

I'm opposed to any removal of the Vacancy Tax Credit.

Even though other regions have opted out of the Vacancy Tax Credit, I believe as with many of my colleagues that this should be a "Made in Niagara Solution". What may work in other Regions, I can assure you that this proposal will not work here. We are just coming into a healthy rental market with a forecast of a downturn come late 2019 through to 2022. Other Regions have experienced strong market conditions and have expanded significantly. Whereas Niagara is just starting to fill their industrial, commercial is holding its own and office is looking bleak. How could you even consider implementing a measure such as this when we have had such a dismal past.

Please remove this proposal from the Region and Municipalities.

Sincerely,



Larry Stewart

CAUSEWAY PROPERTIES INC.

242 Main Street East
Hamilton, Ontario, L8N 1H5

Phone: (905) 528-8956
Fax: (905) 528-2165

November 15th, 2018

**Rob Flemming
Senor Tax & Revenue Analyst
Financial Management and Planning**

**Enterprise Resource Management Services
Niagara Region
1815 Sir Isaac Brock Way
Thorold, ON L2V 4T7**

Causeway Properties Inc. is the owner of the property located at 113-115 Cushman Road St. Catharines, Ontario, consisting of 185,642 sq. ft.

I'm opposed to any removal of the Vacancy Tax Credit.

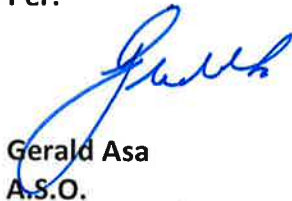
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Please remove this proposal from the Region and Municipalities.

Sincerely,

CAUSEWAY PROPERTIES INC.

Per:



Gerald Asa
A.S.O.

F.T.A. CONDOR HOLDINGS INC.

242 Main Street East
Hamilton, Ontario, L8N 1H5

Phone: (905) 528-8956
Fax: (905) 528-2165

November 15th, 2018

**Rob Flemming
Senior Tax & Revenue Analyst
Financial Management and Planning**

**Enterprise Resource Management Services
Niagara Region
1815 Sir Isaac Brock Way
Thorold, ON L2V 4T7**

F.T.A. Condor Holdings Inc. is the owner of the property located at 380 Vansickle Road, St. Catharines, Ontario, consisting of 99,762 sq. ft.

I'm opposed to any removal of the Vacancy Tax Credit.


Even though other regions have opted out of the Vacancy Tax Credit, I believe as with many of my colleagues that this should be a "Made in Niagara Solution". What may work in other Regions, I can assure you that this proposal will not work here. We are just coming into a healthy rental market with a forecast of a downturn come late 2019 through to 2022. Other Regions have experienced strong market conditions and have expanded significantly. Whereas Niagara is just starting to fill their industrial, commercial is holding its own and office is looking bleak. How could you even consider implementing a measure such as this when we have had such a dismal past.

Please remove this proposal from the Region and Municipalities.

Sincerely,

F.T.A. CONDOR HOLDINGS INC.

Per:



Gerald Asa
A.S.O.

F.T.A. CONDOR HOLDINGS INC.

242 Main Street East
Hamilton, Ontario, L8N 1H5

Phone: (905) 528-8956
Fax: (905) 528-2165

November 15th, 2018

**Rob Flemming
Senior Tax & Revenue Analyst
Financial Management and Planning**

**Enterprise Resource Management Services
Niagara Region
1815 Sir Isaac Brock Way
Thorold, ON L2V 4T7**

F.T.A. Condor Holdings Inc. is the owner of the property located at 360 York Road, Niagara-on-the-Lake, Ontario, consisting of 66,458 sq. ft.

I'm opposed to any removal of the Vacancy Tax Credit.

Even though other regions have opted out of the Vacancy Tax Credit, I believe as with many of my colleagues that this should be a "Made in Niagara Solution". What may work in other Regions, I can assure you that this proposal will not work here. We are just coming into a healthy rental market with a forecast of a downturn come late 2019 through to 2022. Other Regions have experienced strong market conditions and have expanded significantly. Whereas Niagara is just starting to fill their industrial, commercial is holding its own and office is looking bleak. How could you even consider implementing a measure such as this when we have had such a dismal past.

Please remove this proposal from the Region and Municipalities.

Sincerely,

F.T.A. CONDOR HOLDINGS INC.

Per:



Gerald Asa
A.S.O.

Rob Flemming
Senor Tax & Revenue Analyst
Financial Management and Planning

Enterprise Resource Management Services
Niagara Region
1815 Sir Isaac Brock Way
Thorold, ON L2V 4T7

I'm the owner of the property located at 150 Bunting Road, St. Catharines consisting of 42,000 sq. ft.

I'm opposed to any removal of the Vacancy Tax Credit.

Even though other regions have opted out of the Vacancy Tax Credit, I believe as with many of my colleagues that this should be a "Made in Niagara Solution". What may work in other Regions, I can assure you that this proposal will not work here. We are just coming into a healthy rental market with a forecast of a downturn come late 2019 through to 2022. Other Regions have experienced strong market conditions and have expanded significantly. Whereas Niagara is just starting to fill their industrial, commercial is holding its own and office is looking bleak. How could you even consider implementing a measure such as this when we have had such a dismal past.

Please remove this proposal from the Region and Municipalities.

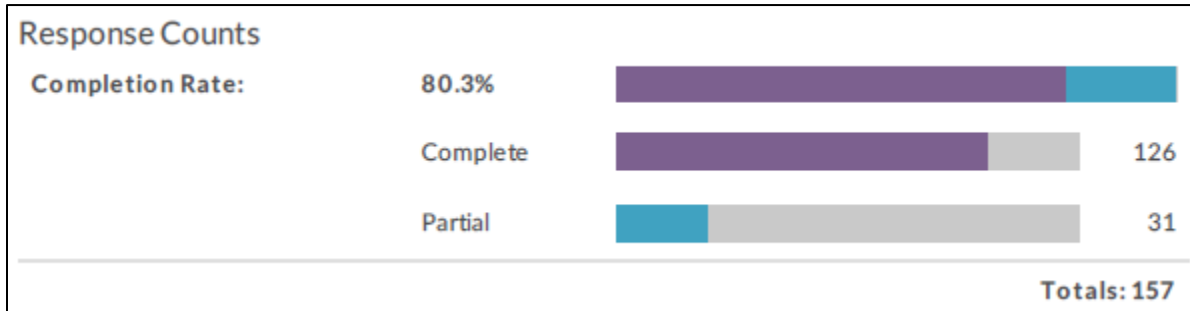
Sincerely,



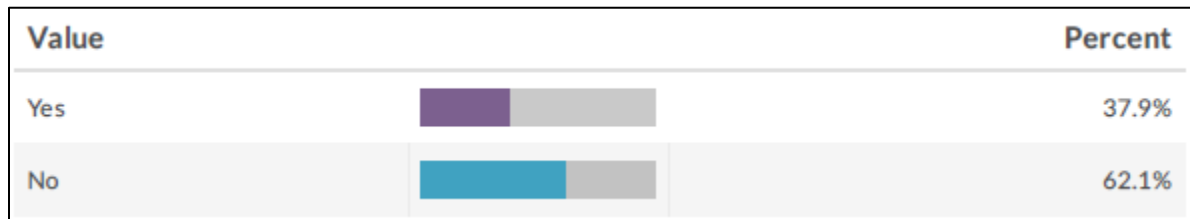
S & S PIEROG LIMITED

Survey Response Summary / Introductory Questions

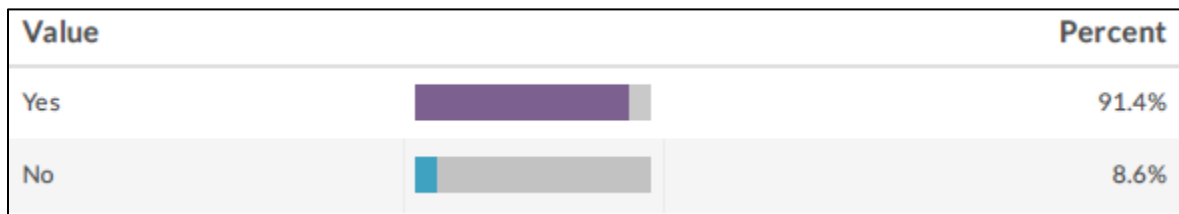
1. Summary/number of responses:



2. Do you own, or represent an owner, of a commercial / industrial property in Niagara?



3. Do you understand these two programs and the differences between them?



Responses from Niagara Commercial/Industrial Property Owners/Representatives

1. Did you know that for 2018 these programs cost commercial and industrial property owners approximately \$74 and \$112 in Regional property taxes, respectively? (Based on a \$1 million assessment)

| Value | Percent |
|-------|---------|
| Yes | 52.8% |
| No | 47.2% |

2. Indicate if you currently, or have previously, benefitted from either of these programs:

| Value | Percent |
|--------------------------------|---------|
| Vacant Unit Rebate | 80.6% |
| Vacant / Excess Land Reduction | 25.0% |
| Neither | 13.9% |



3. How important are the rebates and reductions in your business plan?

| Value | Percent |
|---------------------|---------|
| Not important | 5.6% |
| Somewhat important | 19.4% |
| Important | 22.2% |
| Very important | 22.2% |
| Extremely important | 30.6% |


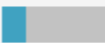

4. Would a multi-year phase out of these programs allow you to prepare for the elimination of these programs?

| Value | Percent |
|-------|---------|
| Yes | 55.6% |
| No | 44.4% |



5. Do you believe that either the rebate or reduction creates a positive impact on the local community?

| Value | | Percent |
|-------|---|---------|
| Yes |  | 65.7% |
| No |  | 34.3% |



6. Should the rebate or reduction continue?

| Value | | Percent |
|--------------------------------------|---|---------|
| Yes, continue both |  | 69.4% |
| Yes, continue the Vacant Unit Rebate |  | 22.2% |
| No, discontinue both |  | 8.3% |

7. Would you rather see these program expenditures allocated to other Economic Development incentives / programs or reduce the tax levy?



| Value | | Percent |
|-------|---|---------|
| Yes |  | 25.7% |
| No |  | 74.3% |

8. Did you know that as a commercial / industrial property owner, a portion of your property taxes goes toward subsidizing these programs?



| Value | | Percent |
|-------|---|---------|
| Yes |  | 72.2% |
| No |  | 27.8% |

Responses from Non-Commercial/Industrial Property Owners/Representatives





1. Did you know that the Region currently budgets \$1 million each year in Vacant Unit Rebates for commercial and industrial properties?

| Value | | Percent |
|-------|---|---------|
| Yes |  | 20.2% |
| No |  | 79.8% |



2. Do you believe that either the rebate or reduction creates a positive impact on the local community?

| Value | | Percent |
|-------|---|---------|
| Yes |  | 13.1% |
| No |  | 86.9% |

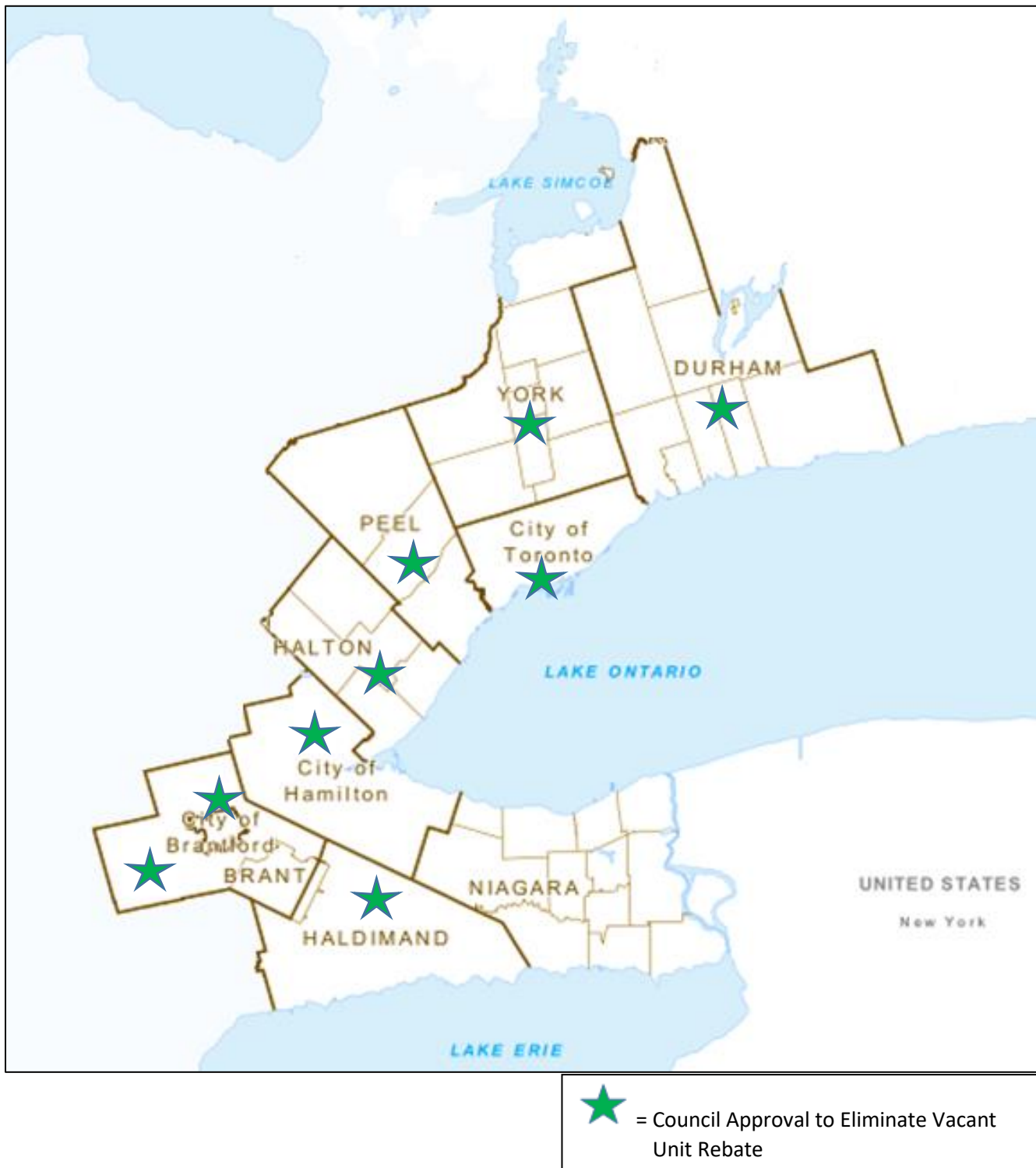
3. Should the rebate or reduction continue?

| Value | | Percent |
|--|---|---------|
| Yes, continue both |  | 7.1% |
| Yes, continue the Vacant Unit Rebate |  | 2.4% |
| Yes, continue the Vacant / Excess Land Reduction |  | 7.1% |
| No, discontinue both |  | 83.3% |

4. Would you rather see these program expenditures allocated to other Economic Development incentives / programs or reduce the tax levy?

| Value | | Percent |
|-------|---|---------|
| Yes |  | 88.0% |
| No |  | 12.0% |

Appendix I - Map of Neighbouring Municipalities with Council Approved Program Changes





FOR IMMEDIATE RELEASE - March 22, 2017

Changing the Landscape by Changing the Vacant Unit Rebate

The Ontario BIA Association works with the Province, through the Planning, Environment, Resources and Land Deputies Committee (PERL) and the Ministry of Finance to help BIAs change the landscape through Municipal Act Changes.

Ontario's BIAs have continued to raise the Vacant Unit Rebate ([Municipal Act 364](#)) as a deterrent from their beautification and revitalization efforts. Vacant and deteriorating buildings can and do result in a decrease in the marketable lease rates or the overall 'lease-ability' of a BIA area.

At the recent meeting of the PERL Deputy Ministers and the Board of OBIAA, the board sited contradicting strategies between BIAs and the Province, stated *"that BIAs build programs and invest funds to promote vacant property to prospective lessees and in order to achieve full occupancy, but"*, the board went on to state, *"the provincial incentives assist property owners with remaining vacant."*

Through consultation with the province's BIAs, the Board informed the Deputy Ministers, *"Once a property owner is accepted, to our knowledge, there is no mechanism in place to ensure that the property owner is actively seeking tenant occupancy."* Noting that *"Property owners purchasing property for purely financial reasons (tax write offs) and not for positive investment."* The OBIAA Board indicated that in the case of both large and small BIAs (Downtowns), those vacant and derelict buildings are a challenge.

OBIAA applauds The Province's consultation with Municipalities to consider changing the wording to allow Municipalities to opt in or out of the Vacant Unit Rebate, and would like to suggest to BIAs and Municipalities that the Vacant Unit Rebate be renamed and used as an Economic Development Tool. The Board is suggesting a new business classification of "Main Street Business" that would assist BIAs and Property Owners around the province to apply for an "Attraction Rebate". The OBIAA Board is suggesting the following timelines and guidelines:

| | |
|--|---|
| <p>Attraction Rebate for Main Street Class: (non-office towers)</p> <ul style="list-style-type: none"> • Year One - 100% of the 30% or 35% • Year Two - 50 % of the 30% or 35% • Year Three - 25 % of the 30% or 35% • Year Four - 0% of the 30% or 35% | <p>Attraction Guidelines for Main Street Class: (non-office towers)</p> <ul style="list-style-type: none"> • Property Standards as set by the Municipalities. Validation of state of the building(s) • Market Value Rental Value as set by the local marketplace • Education of local Economic Development Tools stimulus, as provided by the Municipalities (CIPs, Heritage etc.). • Pop Up vs Incubator – to allow a property owner to have either of these without losing the Vacant Unit Rebate. |
|--|---|

The Ministry of Finance is now moving forward with providing municipalities' broad flexibility for 2017 and in future years. This change was announced in November 2016 and is intended to allow municipalities to tailor the vacant rebate and reduction programs to reflect community needs and circumstances. Municipalities will be required to submit a response to a Ministry of Finance Checklist and a Council Resolution indicating how they will be implementing the changes to the Vacant Rebate and Reduction Programs.

OBIAA supports these changes and is encouraging BIAs and Municipalities to consider implementing the above noted "Attraction Rebate" as an Economic Development Tool that could make our Urban and Rural Communities stronger.



ONTARIO BUSINESS IMPROVEMENT AREA ASSOCIATION



Return on Investment of **BIAs**

-- 30 --

About OBIAA

OBIAA is the network that represents unique and vibrant BIAs across Ontario. The Association, incorporated in 2001, supports and advocates on behalf of its members through the building and nurturing of strong relationships and partnerships. OBIAA is a leader in the development and sharing of information, tools, resources and best practices, and is the ONE voice on common issues. www.obiaa.com

For more information, please contact:

Kay Matthews, Executive Director

OBIAA

info@obiaa.com



VACANT UNIT REBATE AND VACANT/EXCESS LAND SUBCLASSES

January 2017

Since 1998, the Vacant Unit Rebate and Vacant/Excess Land Subclasses have provided tax rebates and reductions to property owners who have vacancies in commercial and industrial buildings or land.

- **Vacant Unit Rebates:** The Vacant Unit Rebate provides a tax rebate to property owners who have vacancies in commercial and industrial buildings. This application-based program is administered by municipalities. The current rebate is 30% of the property tax for vacant commercial space and 35% for vacant industrial space.
- **Vacant and Excess Land Property Tax Subclass:** Commercial and industrial properties or portions of these properties in the Vacant and Excess Land Property Tax Subclasses are taxed at a fixed percentage rate below the tax rate of the broad class. These properties are discounted at 30% to 35% of the full Commercial and/or Industrial rate.

Currently, upper- and single-tier municipalities may choose to apply the same percentage of relief (between 30% - 35%) to both the commercial and industrial property classes.

NEW MUNICIPAL FLEXIBILITY FOR 2017 AND FUTURE YEARS

The Province has reviewed the Vacant Unit Rebate and the Vacant/Excess Land Subclasses in consultation with municipal and business stakeholders.

In response to municipal and other stakeholders' requests, the Province is now moving forward with providing municipalities broad flexibility for 2017 and future years. This change, announced in November 2016, is intended to allow municipalities to tailor the vacant rebate and reduction programs to reflect community needs and circumstances, while considering the interests of local businesses.

In order to provide the most flexibility for municipalities, changes to the rebate and reduction programs will be implemented through regulation. Upper- and single-tier municipalities that have decided to change the programs can notify the Minister of their intent to utilize this flexibility and provide details of the proposed changes along with a council resolution.

To support implementation of changes to the vacant rebate and reduction programs, municipalities should review the attached checklist prior to submitting a request for changes to the Minister.

IMPLEMENTATION

Municipalities wishing to utilize the flexibility available to them must submit details of proposed changes to the Minister along with a council resolution by one of the following dates to ensure amendments are included in a regulation as soon as possible.

- March 1, 2017
- April 1, 2017
- July 1, 2017

Municipalities will be notified when the regulation implementing the requested changes has been enacted.

Note that in two-tiered municipalities, any program changes to be implemented will be an upper-tier municipal decision, consistent with the flexibility currently available to upper-tier municipalities, to determine the rebate and reduction percentage between 30% and 35%.

The Province has an interest in continuing to ensure tax competitiveness and consistency for taxpayers and as such, the Minister will consider proposed program changes within this context.

FURTHER INFORMATION

For general information about the vacant rebate and reduction programs, please contact the Ministry of Finance at info.propertytax@ontario.ca.



**VACANCY REBATE AND REDUCTION PROGRAM CHANGES
CHECKLIST
January 2017**

BUSINESS COMMUNITY ENGAGEMENT

- ✓ Have you engaged the local business community?
- ✓ Can you provide details on how and when you have engaged the local business community?
- ✓ Have you considered the potential impacts the proposed changes may have on local businesses?
- ✓ Have you communicated potential impacts of proposed changes to the business community?
- ✓ Has Council been made aware of the potential impacts on the business community?

PROGRAM DETAILS

- ✓ Have you outlined details of program changes in your submission?
- ✓ For municipalities in a two-tiered system, have you discussed proposed changes with lower-tier municipalities?
- ✓ Have you considered how you will implement or administer any potential changes to the vacancy programs?
- ✓ Have you considered these changes as part of a multi-year strategy?
- ✓ Has Council passed a resolution indicating approval of these changes?

FURTHER INFORMATION

If you have any questions about implementation of changes to the vacant rebate and reduction programs, please contact the Ministry of Finance at info.propertytax@ontario.ca.



Corporate Report City Council

Report from: Financial Management Services, Director

Report Date: September 3, 2021

Meeting Date: September 22, 2021

Report Number: FMS-139-2021

File: 10.57.10

Subject: Year-to-Date Report – 2021 Second Quarter Operating Variance and Year-End Forecast Report

Strategic Pillar:

This report aligns with the following St. Catharines Strategic Plan pillars:



Recommendation

The Report FMS-139-2021, regarding the 2021 Second Quarter Operating Variance and Year End Forecast, be received for information.

Summary

This report provides insight on the financial position of the City for the second quarter and the forecasted expenditures and revenues for the remainder of the year. It also assesses the projected year-end position in comparison with the annual budget. The information included in this report provides useful and timely information for Council to assist in decision-making, accountability and tracking of budget performance.

Relationship to Strategic Plan

This report enhances the Economic Prosperity pillar of the Strategic Plan through providing timely and accurate financial updates to Council throughout the fiscal year, identifying potential financial risks and providing year-end forecast on the City's various budgets to strengthen the City's fiscal responsibility.

Background

The quarterly year-to-date reports are received initially by the Budget Standing Committee (BSC) throughout the fiscal year (January 1 – December 31). This report is intended to provide Council with the information and details pertaining to the operating budget performance.

The information contained within this year-to-date (YTD) - 2021 second quarter report is general and summarized.

Report

To prepare this report, City departments were requested to review their second quarter (Q2) figures and provide comments on their financial circumstances that would contribute to any significant shortcomings or overages. Any variances greater or less than 10% of the target (50%) have explanations for the discrepancy. Additionally, a forecast based on YTD actuals and planned expenditures for the fiscal year are also provided as an estimate of the City's financial position at year-end. These details by budget areas (Operating, Parking, Water and Wastewater Operations) can be found in Appendix 1, 2 and 3 of this report.

The City's outside boards and commissions were also requested to provide their second quarter financial results and year-end forecast with brief explanations.

COVID-19 Financial Impact

The COVID-19 pandemic continues to pose a threat to the community as well as the City's ability to provide all levels of services in the same manner as they were previously delivered. Although the Province started to reopen the economy, there has been a pause on reopening due to the threat of Delta variant. While the 2021 budget was developed with considerations of the financial impact of COVID-19 as well as strategic mitigation measures, there have been unforeseen impacts to the City's financials such as facility closures due to the provincial lockdown and stay-at-home orders as well as mandatory province-wide paid sick leaves. This has significantly impacted the estimated expenditures and revenues in the various City facilities and operations.

Within the City's Tax Levy Operating Budget, the annual COVID-19 cost is estimated to be approximately \$2.85 million at this point. This includes COVID-19 related cost for signage, equipment rental, personal protective equipment (PPE) purchases, staff overtime, security services, cleaning services, transfer to Parking Operations, etc. It also includes the City's operational cost of the COVID-19 vaccination site at Seymour Hannah Sports and Entertainment Centre (SMH) and the additional cost to implement the Beach Strategy. The total COVID-19 related revenue loss is estimated at \$3.21 million in 2021. This includes City arenas, recreational facilities, Meridian Centre, business licensing fees, and other revenues. In response to the significant financial pressure, the City has implemented various strategy cost mitigation measures including temporary workforce reductions, deferred hiring, and other discretionary expense

reductions. The total cost savings is projected to be \$2.20 million in the City's Tax Levy Operating Budget in 2021.

Therefore, the net COVID-19 financial impact on the City's Tax Levy Operating budget in 2021 is estimated at \$3.86 million.

In addition, the net COVID-19 impact on the City's Parking Budget is estimated to be \$427,000 in 2021.

With \$726,000 of 2021 portion of the Safe Restart Funding (SRA) received in late 2020, as well as the \$2.94 million COVID-19 Recovery Funding in 2021, there is total of \$3.67 million of combined COVID-19 federal and provincial funding allocated to 2021. At the time of this report, the City's estimated 2021 COVID-19 impact is \$4.29 million which exceeds the total emergency funding by \$0.62 million.

Tax Levy Supported Operating Budget

As of June 2021, the City's total expenditure for fiscal 2021 is at 47% with 50% of the year complete. It is important to note that not all expenses are evenly expended throughout the year in the City, and departments have identified these operational situations in their comments (Appendix 1).

City Departments

Legal and Clerks Services (LCS) has spent 54% of its annual expenditure budget at Q2 and is projecting an unfavourable variance for the year of 2021 due to the revenue losses of business licensing fees, civil ceremonies, and other fees and charges.

Planning and Building Services (PBS) has spent 42% of its annual expenditure budget at Q2 and is projecting an unfavourable variance for the year of 2021 due to unbudgeted costs to hire by-law enforcement officers as per the Beach Strategy and the unbudgeted staffing cost based on the Council approved short term rental licensing by-law, which is being offset partially by small cost savings in discretionary expenses.

Fire Services (FS) has spent 48% of its annual expenditure budget at Q2 and is projecting an unfavourable variance for the year of 2021 due to the higher than budgeted overtime and sick pay costs to maintain minimum staffing requirements since staff are required to self-isolate due to COVID-19 exposure.

Engineering, Facilities and Environmental Services (EFES) has spent 28% of their annual budgeted expenditures as of Q2. In EFES, there is an unfavourable year-end variance forecasted due to the revenue losses at arena facilities during COVID-19 pandemic, specifically converting the two ice rinks at Seymour Hannah Arena into a vaccination site has impacted the revenue forecast significantly from January to August. There are expenditure savings within this department as many facilities are running at a low service level due to the lockdowns, as well as the implementation of temporary workforce reductions. However, the revenue impact outweighs the expenditure savings.

Municipal Works (MW) has spent 40% of their annual budgeted expenditures as of Q2. In MW, there is an unfavourable year-end variance due to anticipated revenue losses at the golf course and sports fields. These facilities were closed during the Provincial Stay-at-Home order and therefore the membership revenue and other user fees are impacted significantly. The City's Beach Strategy in 2021 is imposing a significant impact on MW's year-end forecast due to unbudgeted cost occurring for additional staffing and cleaning services at the beaches. In addition, due to the provincial emergency paid sick leave mandate from April to December, staff have reflected the potential impact on the City's financial position accordingly.

In Community, Recreation and Culture Services (CRCS), 25% of their annual budgeted expenditures has been spent as of Q2. There is an unfavourable variance due to revenue loss at the Kiwanis Aquatics Centre (KAC), Welland Canal Centre, community centres, and market operations during the mandated Provincial Lockdown and Stay-at-Home order. Also, the St. Catharines Cultural Investment Program is experiencing a significant funding shortfall due to the COVID-19 pandemic. However, with temporary workforce reductions, overall CRCS is expected to end the year with a favourable variance.

Financial Management Services (FMS) has spent 44% of their annual budgeted expenditures as of Q2. This is mainly due to an increase in general liability insurance premiums.

Meridian Centre

Since approval of the 2021 Meridian Centre Operating budget, the following have impacted the budget:

- Niagara IceDogs (OHL) - the primary tenant of the venue – 2020/21 Season was cancelled eliminating 26 budgeted games from January to April. The 2021/22 Season is expected to begin in October 2021 with restricted capacities
- Niagara River Lions (CEBL) – reduction to 7 home games in their 2021 season. These games were held in July and August with a restricted number of attendees.
- Majority of events and concerts scheduled for 2021 have been postponed to 2022. The operator is optimistic that one event scheduled for November 2021 will be able to take place.

At the time of this report, the Meridian Centre is forecasting a loss of revenue based on the assumption of hockey games are not permitted until October 2021. The revenue shortfall is partially mitigated through expense reductions through wage and benefit reductions through reduced hours and gapping and general administration, operations, and supply costs due to the building being closed and receipt of the Canadian Emergency Wage Subsidy (CEWS).

At Q2, the net financial impact for Meridian Centre is estimated at \$336,000 unfavourable (including \$324,000 unfavourable from Meridian Centre operations and

\$12,000 unfavourable from building insurance cost).

The additional cashflow of \$138,000 from the City has been factored into the Meridian Centre's Q2 forecast (Council approved three equal payments from October to December in 2021 through the Q1 Variance Report [FMS-B019-2021](#)).

With the \$138,000 of additional municipal funding approved for the Meridian Centre is forecasting a positive cashflow position to mid-December 2021. At this time a small unfavourable cash balance is forecasted for the end of December. The revenue projections are estimates and could change pending future challenges and situations (e.g., further restricted capacity limits or expansion). Cash flow will be monitored, and any significant change will be updated by Meridian Centre. Should the cashflow shortfall become more significant City staff will report back to Council through the quarterly reports later this year.

Boards and Commissions

The St. Catharines Transit Commission is currently estimating a year-end position in line with the 2021 budget. Due to revenue being below budget during the lockdowns in Q1 and Q2, Transit is forecasting a deficit of \$200,000 as of Q2 which will be offset by the SRA Phase 3 funding provided by the Province of Ontario Transit Commission.

The First Ontario Performing Arts Centre (the PAC) is forecasting a surplus of \$44,000 at 2021 year-end which will be transferred to the PAC's reserve. Due to the facility closure, the PAC is forecasting total revenue loss of \$1.51 million in 2021 which is to be offset by the cost mitigation measures of \$1.55 million. The \$6,520 unfavourable variance shown with the PAC is due to the higher-than-expected building insurance cost.

The St. Catharines Public Library (the Library) is forecasting at Q2 that the year-end position will be in line with their 2021 budget. The COVID-19 pandemic has placed significant pressure on the Library's revenues. In late 2020, the library received notification regarding their Canada Emergency Wage Subsidy (CEWS) which was the subject of an administrative review. Correspondence from the Canada Revenue Agency (CRA) was received on March 5, 2021 denying the Library's claim for period #8 and indicating other claims would also be reviewed. The Library has filed a Notice of Objection with the CRA and is waiting on a CRA response. Should the Library be required to repay the CEWS funds received in 2020, adjustments made to 2021 operations at this time should be adequate to offset the 2020 surplus funds allocated to the 2021 budget. Although, there may be pressures created in future year budgets. This will be further addressed with future 2021 quarterly variance reporting, Council COVID Update Reports and 2022 budgets.

Non-Tax Revenues

The City experienced a few legacy tax appeals being settled in the first half of this year which is resulting with an unfavourable variance of \$707,000 in tax appeals and write-offs.

Investment income is forecasted to generate \$313,000 unfavourable variance at 2021 year-end due to low rates of return that have not been improved since the pandemic started.

Supplemental Taxes are forecasted to have a favourable variance of \$251,000 at 2021 year-end due to higher than anticipated MPAC assessments.

As at the end of Q2 2021, staff is estimating a favourable variance to the interest revenues of \$239,000 based on the YTD actuals. At the time of budget development and based on historical practice, staff took the conservative approach in projecting the revenues with consideration of the property tax collections in 2021.

In addition, the City has been successful in its court applications to receive previous tax sale property proceeds that had been paid into the courts and the one-year time frame had lapsed. This Provincial policy has since been amended whereas after a tax sale is completed and the City receives the funds that it is owed the remaining fees are paid into the Provincial Courts and the court retains those additional funds and the City is no longer eligible to receive these funds. This contributes to the favourable variance.

In review of non-tax revenue accounts, it is estimated at this time that there will be approximately \$268,000 unfavourable variance compared to the 2021 annual budget.

Overall, the Tax Levy Supported Operating Budget is expected to have an unfavourable variance of \$3.06 million at 2021 year-end (\$3.86 million unfavourable variance due to COVID-19 and \$0.80 million favourable variance due to non-COVID related items). The majority of the COVID-19 related unfavourable variance of \$3.86 million is expected to be accommodated by the \$3.24 million 2021 SRA and COVID-19 Recovery Funding allocated to the Tax Levy Supported Operating Budget.

Parking Budget

The City's parking budget continues experiencing financial hardships through foregone revenues estimated at a total of \$950,000 due to the waiving of parking charges in City owned garages, surface lots and on-street until June 2, 2021 as well as the high vacancy rate at parking facilities in downtown areas throughout the year due to the pandemic.

The Council approved temporary street closures in the downtown core from June 18 to October 10 is expected to result in an additional parking revenue loss of \$19,000.

The Council approved limited parking enforcement from mid-January until June 2, 2021 is estimated to create a cost saving of \$198,000. Other cost savings in parking operations total \$146,000.

The parking revenue at the beaches is estimated with \$278,000 favourable variance due to the implementation of Beach Strategy. The estimated additional cost to

implement the Beach Strategy is \$80,000, which includes parking enforcement, parking meters and mailing / permit supply cost.

These items above result in an estimated overall unfavourable impact on the Parking Budget of \$427,000.

This unfavourable variance is expected to be accommodated by the 2021 SRA and COVID-19 Recovery Funding to the City.

Water and Wastewater Budget

The City's Water and Wastewater Budget is estimated to have an unfavourable variance of \$2.18 million in 2021. Any deficit will be funded from the Water / Wastewater Reserve at year-end.

The Water Budget is expected to end the year with \$1.02 million unfavourable variance in comparison with the approved budget. The Wastewater Budget is forecasted with \$1.16 million unfavourable variance. Both variances are primarily due to the wet summer and lower than expected water usage.

Financial Implications

Based on Q2 YTD actuals, planned expenditures and departmental comments as of June 30, 2021, it's forecasted that the City's overall financial position will show as a small favourable variance of approximately \$0.18 million (\$0.18 million on tax levy operating budget and breakeven on Parking budget and Water and Wastewater budget) including the 2021 SRA and COVID-19 Recovery funding.

This forecast was developed based on the current situation and assumptions until the end of June 2021, unless there was a noted impact beyond that timeframe. Should the province enter another lockdown in Fall/Winter 2021, the financial impacts will further exceed the funding provided to date.

Environmental Sustainability Implications

There are no environmental sustainability implications associated with this report.

Conclusion

The quarterly variance report is an important financial management tool. It also provides useful and timely information to Council to assist in decision-making, accountability and tracking of budget performance.

Prepared by

Sebastian Zukowski
Budget Specialist, FMS

Submitted by

Lucia Chen CPA, CMA
Manager, Budgets and Procurement, FMS

Approved by

Kristine Douglas CPA, CMA
Director Financial Management Services / City Treasurer

Appendices

- Appendix 1 – 2021 Operating Budget Variance at June 30, 2021
- Appendix 2 – 2021 Parking Budget Variance at June 30, 2021
- Appendix 3 – 2021 Water and Wastewater Budget Variance at June 30, 2021

City of St. Catharines - 2021 Operating Expenditure Variance
as of June 30, 2021

Appendix 1
50% of the Year

| | 2021 Q2 Actuals | 2021 Budget | % Used | Budget to Actual \$ Variance Favourable / (Unfavourable) | 2021 Year End Forecast | Budget to Forecast \$ Variance Favourable / (Unfavourable) | Comments |
|--|--------------------|----------------|--------|--|------------------------------|--|--|
| Office of Mayor and Members of Council | 413,533 | 838,107 | 49.34% | 424,574 | 848,374 | -10,267 | In line with Budget |
| Grants and Committees | 2,097 | 18,000 | 11.65% | 15,903 | 18,000 | 0 | |
| City Departments | | | | | | | |
| CAO | 781,860 | 1,821,211 | 42.93% | 1,039,351 | 1,850,689 | -29,478 | Unfavourable budget to forecast variance attributed to a significant decrease in Advertising revenue collected due to COVID-19 |
| COVID-19 | 376,308 | 467,500 | 80.49% | 91,192 | 1,271,241 | -803,741 | Unfavourable variance due to COVID specific cost exceeding budget including labour, materials, equipment, Beach Strategy related cost, SMH vaccine site, etc. Additional unbudgeted security costs related to the Beach Strategy. |
| Legal Services and Clerks | 939,450 | 1,725,510 | 54.44% | 786,060 | 1,941,417 | -215,907 | Unfavourable variance in forecasted revenues due to the closure of City Hall to public during COVID-19 pandemic, specifically canceled charities, service charges, and civil ceremonies revenues impacted |
| Planning and Building Services | 935,339 | 2,233,084 | 41.89% | 1,297,745 | 2,331,881 | -98,797 | Unfavourable variance due to unbudgeted cost to hire by-law enforcement officers as per the Beach Strategy and the unbudgeted staffing cost based on the Council approved short term rental licensing by-law; offset partially by small cost savings in discretionary expenses. |
| Fire Services | 12,784,465 | 26,568,475 | 48.12% | 13,784,010 | 27,006,439 | -437,964 | Unfavourable sick pay variances exist due to personnel on long-term sick leave. Overtime budget at higher variance to maintain minimum staffing requirements especially since some staff are required to self isolate due to COVID-19 exposure. Personnel off on vacation, statutory holidays, and parental leave also impacts overtime. Remaining expenditures expected to be on track. |
| Fire Services Salaries/Wages-Overtime | 315,852 | 1,099,998 | 28.71% | 784,146 | 1,488,191 | -388,193 | Due to COVID protocol, additional fire fighters are required for overtime as others are forced to self quarantine. |
| Fire Services Sick Pay | 272,403 | 1,099,999 | 24.76% | 827,596 | 1,165,216 | -65,217 | |
| Economic Development & Tourism | 458,378 | 1,345,113 | 34.08% | 886,735 | 1,294,200 | 50,913 | Favourable variance due to in-kind services not required and unbudgeted grant funding received; this is offset by revenue loss of revenue producing activities due to COVID-19 |
| Engineering, Facilities and Environmental Services | 2,812,647 | 10,193,487 | 27.59% | 7,380,840 | 10,515,656 | -322,169 | Unfavourable variance due to revenue losses at arena facilities during COVID-19 pandemic, specifically converting the 2 ice rinks at Seymour Hannah Arena into a COVID-19 vaccine site has impacted revenue for the first two quarters, revenue anticipated to increase for the remainder of the year after the vaccine site closes; the variance is partially offset by cost savings from temporary workforce reductions at these facilities and with school crossing guards. |

City of St. Catharines - 2021 Operating Expenditure Variance
as of June 30, 2021

Appendix 1
50% of the Year

| | 2021 Q2 Actuals | 2021 Budget | % Used | Budget to Actual \$ Variance Favourable / (Unfavourable) | 2021 Year End Forecast | Budget to Forecast \$ Variance Favourable / (Unfavourable) | Comments |
|---|--------------------|-------------------|---------------|--|------------------------------|--|--|
| Municipal Works | 8,030,900 | 20,141,206 | 39.87% | 12,110,306 | 20,924,977 | -783,771 | Unfavourable yearend variance due to anticipated revenue losses at the golf course and sports fields. The City's Beach Strategy in 2021 is imposing a significant impact on MW's yearend forecast due to unbudgeted cost occurring for additional staffing and cleaning services at the beaches. |
| Community, Recreation and Culture Services | 1,784,867 | 7,134,619 | 25.02% | 5,349,752 | 6,899,143 | 235,476 | Unfavourable variance due to revenue loss at the Kiwanis Aquatics Centre (KAC), Welland Canal Centre, community centres, and market operations during the mandated Provincial Lockdown and Stay-at-Home order. SCCIP is experiencing a significant funding shortfall due to the COVID-19 pandemic. These are offset by cost mitigations from temporary workforce reduction. |
| Meridian Centre | 640,409 | 718,509 | 89.13% | 78,100 | 1,054,182 | -335,673 | Forecasting a loss of revenue based on the assumption of hockey games are not permitted until October 2021. The revenue shortfall is partially mitigated through expense reductions through wage and benefit reductions through reduced hours and gapping and general administration, operations, and supply costs due to the building being closed and receipt of the Canadian Emergency Wage Subsidy (CEWS). |
| Financial Management Services | 1,698,474 | 3,847,336 | 44.15% | 2,148,862 | 3,898,019 | -50,683 | Unfavourable variance due to an increase in general liability insurance premium. |
| Corporate Support Services | 2,656,567 | 6,167,504 | 43.07% | 3,510,937 | 6,152,496 | 15,008 | In line with Budget |
| Contribution to Capital | 1,000,000 | 1,000,000 | 100.00% | 0 | 1,000,000 | 0 | In line with Budget |
| Total City Departments & Commissions | 35,315,295 | 84,219,661 | 41.93% | 48,904,366 | 87,006,714 | -2,787,053 | |
| Debt Repayment | 7,815,492 | 15,630,984 | 50.00% | 7,815,492 | 15,630,984 | -0 | In line with Budget |
| Total City Expenditures | 43,130,787 | 99,850,645 | 43.20% | 56,719,858 | 102,637,698 | -2,787,053 | |

City of St. Catharines - 2021 Operating Expenditure Variance
as of June 30, 2021

Appendix 1
50% of the Year

| | 2021 Q2 Actuals | 2021 Budget | % Used | Budget to Actual \$ Variance Favourable / (Unfavourable) | 2021 Year End Forecast | Budget to Forecast \$ Variance Favourable / (Unfavourable) | Comments |
|--|---------------------|---------------------|----------------|--|------------------------------|--|---|
| Outside Boards and Commissions | | | | | | | |
| First Ontario Performing Arts Centre | 1,248,913 | 1,658,054 | 75.32% | 409,141 | 1,664,574 | -6,520 | Performing Arts Centre (the PAC) is forecasting a positive yearend position for 2021 of approximately \$44,000. The estimated surplus will be transferred into reserves in order to assist with their 2022 budget. However the City related PAC cost has an unfavourable variance attributed to an increase in insurance premiums as the City owns the building. |
| Library Board | 3,255,083 | 5,677,708 | 57.33% | 2,422,625 | 5,677,708 | 0 | Early in 2021, the Library expects to end the year with a deficit but a lower deficit than budget. If the CEWS funding from 2020 is eliminated. Although the Library may require use of Reserve funding in 2021, it was not required in the first half of 2021. At this time, the Library will likely need to utilize the Stabilization Reserve due to the significant risk related to the temporary reserves introduced through the 2021 budget cycle. This will strain the Library budget over the next several years |
| Transit Commission | 9,140,110 | 13,636,596 | 67.03% | 4,496,487 | 13,636,596 | 0 | Transit Commission has a deficit as of June 30, 2021 of \$200,000. This deficit will be covered by Safe Restart Funding. The main reason for the deficit is due to revenue being below budget. This was directly impacted by lockdowns within Ontario during Q1 and Q2. |
| Niagara District Airport | 218,421 | 436,842 | 50.00% | 218,421 | 436,842 | 0 | In line with Budget |
| Total Expenditures | 56,993,313 | 121,259,845 | 47.00% | 64,266,532 | 124,053,418 | -2,793,573 | |
| Total Tax Levy & Non-Tax Revenues | -116,132,759 | -121,259,845 | 95.77% | -5,127,086 | -120,991,576 | -268,269 | The unfavourable variance is primarily driven by tax appeals and write offs from prior year legacy appeals and investment income. This is offset by a favourable variance from supplemental taxes, interest income and court proceeds related previous tax sales. |
| Net Tax Levy Budget | -59,139,446 | 0 | 100.00% | 59,139,446 | 3,061,842 | -3,061,842 | |
| Safe Restart Funding Phase 2 - Operating Budget Portion | | 0 | | 0 | -316,039 | 316,039 | |
| 2021 Provincial COVID-19 Recovery Funding | | 0 | | 0 | -2,924,898 | 2,924,898 | |
| Net Tax Levy Budget After Funding | -59,139,446 | 0 | 100.00% | 59,139,446 | -179,095 | 179,095 | |

**City of St. Catharines - 2021 Parking
Variance**
as of June 30, 2021

Appendix 2
50% of the Year

| | 2021 Q2 Actuals | 2021 Budget | % Used | Budget to Actual \$ Variance Favourable / (Unfavourable) | 2021 Forecast | Budget to Forecast \$ Variance Favourable / (Unfavourable) |
|--|----------------------------|------------------------|----------------|---|--------------------------|---|
| Parking Services | | | | | | |
| Meters | -31,130 | -191,648 | 16.24% | -160,518 | -131,880 | -59,768 |
| Parking Violations | 164,102 | 149,423 | 109.82% | -14,679 | 223,730 | -74,307 |
| Off Street Parking | 14,905 | 89,008 | 16.75% | 74,103 | -30,456 | 119,464 |
| Ontario Street Garage | 223,264 | 362,104 | 61.66% | 138,840 | 545,315 | -183,211 |
| Carlisle St Garage | 572,275 | 922,709 | 62.02% | 350,434 | 1,151,698 | -228,989 |
| Investment Income | -4,428 | -14,800 | 29.92% | -10,372 | -14,800 | 0 |
| Transfer from Tax Levy Budget | -625,000 | -1,250,000 | 50.00% | -625,000 | -1,250,000 | -0 |
| Net Expenditures | 313,988 | 66,796 | 470.07% | -247,192 | 493,607 | -426,811 |
| Safe Restart Funding Phase 2 - Parking Budget Portion | | 0 | 0.00% | 0 | -409,961 | 409,961 |
| 2021 Provincial COVID-19 Recovery Funding | | 0 | 0.00% | 0 | -16,850 | 16,850 |
| Net Expenditures After Funding | 313,988 | 66,796 | 470.07% | -247,192 | 66,796 | 0 |

City of St. Catharines - 2021 Water Treatment Variance
as of June 30, 2021

Appendix 3
50% of the Year

| | 2021 Q2 Actuals | 2021 Budget | % Used | Budget to Actual \$ Variance Favourable / (Unfavourable) | 2021 Forecast | Budget to Forecast \$ Variance Favourable / (Unfavourable) |
|--|--------------------|-----------------|-----------------|---|------------------|--|
| Water Treatment | | | | | | |
| Water Treatment Expenditure | 6,748,675 | 12,749,223 | 52.93% | 6,000,548 | 12,732,106 | 17,117 |
| Water Treatment Revenue | -3,282,908 | -13,205,798 | 24.86% | -9,922,890 | -12,168,526 | -1,037,272 |
| Net Expenditure | 3,465,767 | -456,575 | 100.00% | -3,922,342 | 563,580 | -1,020,155 |
| Safe Restart Funding/Recovery Funding | | | | | | 0 |
| Net Expenditure After Funding | 3,465,767 | -456,575 | -759.08% | -3,922,342 | 563,580 | -1,020,155 |

City of St. Catharines - 2021 Wastewater Operations Variance
as of June 30, 2021

| | 2021 Q2 Actuals | 2021 Budget | % Used | Budget to Actual \$ Variance Favourable / (Unfavourable) | 2021 Forecast | Budget to Forecast \$ Variance Favourable / (Unfavourable) |
|--|--------------------|----------------|------------------|---|------------------|--|
| Wastewater Treatment & Disposal | | | | | | |
| Wastewater Treatment & Disposal Expenditure | 4,404,972 | 7,744,047 | 56.88% | 3,339,075 | 7,769,101 | -25,054 |
| Wastewater Treatment & Disposal Revenue | -385,860 | -6,766,960 | 5.70% | -6,381,100 | -5,629,052 | -1,137,908 |
| Net Expenditure | 4,019,113 | 977,087 | 411.34% | -3,042,026 | 2,140,049 | -1,162,962 |
| Safe Restart Funding/Recovery Funding | | | | | | 0 |
| Net Expenditure After Funding | 4,019,113 | 977,087 | 411.34% | -3,042,026 | 2,140,049 | -1,162,962 |
| Water & Wastewater Combined | 7,484,880 | 520,512 | 1,437.98% | -6,964,368 | 2,703,629 | -2,183,117 |



Corporate Report City Council

Report from: Financial Management Services, Corporate Asset Management

Report Date: September 1, 2021

Meeting Date: September 22, 2021

Report Number: FMS-142-2021

File: 10.57.10

Subject: Capital Project Report for Second Quarter ended June 30, 2021

Strategic Pillar:



Recommendation

That Report FMS-142-2021, regarding the Capital Project Report for the Second Quarter ended June 30, 2021, be received for information; and

That 50% of the FirstOntario Performing Arts Centre – Capital Sustainability Reserve's current uncommitted balance be transferred to the FirstOntario Performing Arts Centre – Equipment Reserve, and that a 50%/50% split of future funding between the two reserves be approved.

Summary

This report provides the list of projects greater than \$100,000 substantially completed for the second quarter (Q2) ended June 30, 2021.

This report also includes information on updated terms for the FirstOntario Performing Arts Centre (FOPAC) Reserves and a transfer to the reserves, both which support Corporate Strategy related to the sustainability of the City's buildings and facilities and the Relationship Agreement between the City and FOPAC.

Relationship to Strategic Plan

Regular reporting of capital activity compared to budget provides accountability and transparency. This financial control supports the City's commitment to building and growing a diverse and resilient economy.

Background

At the February 29, 2016 Council meeting, Council approved the following motion:

“That staff report quarterly to Council on all completed infrastructure projects detailing budgeted costs, amounts the contract was awarded for, and the final project costs that are over \$100,000 in awarded costs.”

The report on completed capital projects over \$100,000 will come forward to the Budget Standing Committee (BSC) on a quarterly basis.

Report

The purpose of this report is to provide information to the BSC and to Council about the capital projects over \$100,000 that have been completed in the first half of 2021. Capital projects are established for capital expenditures related to the renewal and replacement of the City's linear and non-linear assets. These projects are funded by debentures, operating fund contributions, water and wastewater contributions, infrastructure levy, grants, reserves, and donations. Staff rely upon, market trends, industry, past experience, various studies, and professional judgement to determine project budgets.

Where project costs exceed approved budget amounts, in accordance with the Delegation By-law 2019-163, authorized senior management can approve the transfer of additional budget from capital projects addressing similar needs. Alternatively, Council approval is requested for additional funding via a report that explains budget overage and a source for additional funding. The details of the nine capital projects completed during the first six months of 2021 are included as Appendix 1. All projects excepting one were completed within the approved budgets. Additional budget of less than \$500 was approved through delegated authority for Project P18-165-1.

When capital projects costs are lower than the approved budget:

- Funding requirements may be reduced, and consistent with the original funding sources, debt or reserve funding may be reduced. For example, the water / wastewater reserve funds will be returned to the applicable reserve. These reserves support the operation of the water and wastewater systems and assist in maintaining reasonable water and wastewater rates.
- Funds may be transferred to another project within the same infrastructure category that has an overage, in compliance with the Delegation By-law 2019-163 or with Council approval.
- If funds were from the operating budget, the funds remain in the operating budget and would be part of the year-end surplus.

Therefore, the completion of these projects under the approved budget amount does not necessarily mean that there are additional funds available.

Finalization of The FirstOntario Performing Arts Centre Project (FOPAC)

The City, Province, Federal Government, and private donors provided the funding for the FOPAC project. As per the terms of the Relationship Agreement between the FOPAC Board and the City, reserves were to be established to offset the costs of ongoing capital needs for FOPAC. The purpose of the reserves is to ensure that the building remains in a good state throughout its lifecycle, and with modern equipment, without tax support or debt financing. Under the Agreement, the funding from the \$2 ticket surcharge is to be split between the two different components of the reserve with at least 50% being allocated to the capital portion of the reserve, and remainder going to the equipment portion. The existing FirstOntario Performing Arts Centre-Capital Sustainability Reserve had an uncommitted balance of \$213,081 at 2020-year end. Staff are recommending that the reserve be formally split into two separate reserves to better support compliance and reporting under the terms of the agreement. This allocation between facility and equipment requirements has been established in consultation with the City's Facility Management and staff at FOPAC. Staff is also recommending that any further donations received related to the original project as well as the project surplus of \$788 (Appendix 1), be directed to these reserves.

Financial Implications

There are no financial considerations associated with the preparation of the quarterly capital project report, other than those discussed within the report and related appendix.

Environmental Sustainability Implications

There are no environmental sustainability implications associated with this report.

Conclusion

FMS and EFES staff have worked collaboratively to complete the capital project report for capital projects over \$100,000 for Q2 2021. It is recommended that BSC receive for information purposes the capital project report.

Notifications

It is in order to notify the FirstOntario Performing Arts Centre, Executive Director, and Director of Finance and Administration of Council's decision.

Prepared and Submitted by

A. Tourigny, Corporate Asset Manager

Approved by

K. Douglas, Director, Financial Management Services/City Treasurer

Anthony Martuccio, Director, Engineering, Facilities and Environmental Services

Appendices

1. Completed Projects in excess of \$100,000, for Second Quarter ended June 30, 2021

Capital Projects over \$100,000 Completed,
Second Quarter ended June 30, 2021

Appendix 1

| Project # | Project Name | Asset | Total Project Budget | Final Project Cost | Construction Award | Final Construction Cost | Favourable Variance between Project Budget & Actual | Report Comments |
|-----------|--|------------------------------|----------------------|--------------------|--------------------|-------------------------|---|--|
| ST14-009 | STORM SEWER IMPROVEMENT PROGRAM - EXTRANEEOUS FLOW AND COLLECTION SYSTEM EVALUATION | STORM SEWER & SANITARY SEWER | \$ 1,745,000 | \$ 1,676,164 | \$ 1,561,285 | \$ 1,561,558 | \$ 68,836 | Surplus operating funding contributes to annual operating results (2020 & 2021) |
| P18-101 | RENDALE AVE. WATERMAIN | WATERMAIN | \$ 750,000 | \$ 569,789 | \$ 636,184 | \$ 509,280 | \$ 180,211 | Unrequired watermain funding will transfer to the Water/Wastewater Reserve. |
| P18-100 | CHAMPA DRIVE WATERMAIN | WATERMAIN | \$ 465,000 | \$ 193,966 | \$ 252,279 | \$ 173,292 | \$ 271,034 | Unrequired watermain funding will transfer to the Water/Wastewater Reserve. |
| P20-143 | SEYMOUR HANNAH ARENA - REPLACEMENT OF COMPRESSOR, WATER PUMP, COOLING PUMP AND CONTROL PANEL UPGRADE | BUILDING | \$ 255,000 | \$ 225,116 | \$ 198,500 | \$ 195,929 | \$ 29,884 | Building debenture funding will be reduced. |
| P20-139 | BILL BURGOYNE ARENA - BOARD AND FLOOR | BUILDING | \$ 1,035,000 | \$ 1,005,815 | \$ 978,000 | \$ 949,594 | \$ 29,185 | Building debenture funding will be reduced. |
| RN18-01 | MARTINDALE ROAD IMPROVEMENTS | SIDEWALKS & WATERMAIN | \$ 190,000 | \$ 134,837 | \$ 115,273 | \$ 126,359 | \$ 55,163 | Increased construction costs were accommodated within the approved total budget. Unspent funds will remain in the FGT reserve |
| P18-165-1 | BILL BURGOYNE ARENA - BOWL ISOLATION AND ACCESSIBILITY UPGRADES | BUILDING | \$ 470,414 | \$ 470,414 | \$ 422,199 | \$ 422,199 | \$ - | Budget includes \$414 transfer from similar project. (Per Bylaw 2019-163) |
| P17-141 | CITY HALL - ELEVATOR MODERNIZATION | BUILDING | \$ 250,000 | \$ 247,464 | \$ 228,655 | \$ 230,712 | \$ 2,536 | Building debenture funding will be reduced. |
| P10-170 | NIAGARA CENTRE FOR THE ARTS | BUILDING | \$ 63,910,055 | \$ 63,909,267 | \$ 41,971,000 | \$ 42,651,522 | \$ 788 | Increased construction costs were for approved scope changes and were accommodated within the approved total budget. Unspent funds will be transferred to a reserve for the benefit of the facility. |



Corporate Report City Council

Report from: Legal and Clerks Services, Office of the City Clerk

Report Date: September 13, 2021

Meeting Date: September 22, 2021

Report Number: LCS-148-2021

File: 10.12.1

Subject: Council Correspondence

Strategic Pillar:

Recommendation

That Council receive and file the item listed within the report; and

That Council receive and file additional correspondence distributed for the meeting held September 22, 2021, which is available upon request.

Report

The Office of the City Clerk is submitting, for the approval of Council, correspondence received for the September 22, 2021 meeting:

1. Rodman Hall Art Centre Inc. – Request for early-stage funding (2022-2024) to support the development of a new public art gallery.

Prepared and Submitted by

Maureen Beatty
Council and Committee Coordinator

Approved by

Kristen Sullivan
Deputy City Clerk

RODMAN HALL ART CENTRE, Inc.

Request for Early-Stage Funding (2022 – 2024) From the City of St. Catharines To Support Development of New Public Art Gallery

Rodman Hall Art Centre, Inc. (RHAC, Inc.) proposes that the City of St. Catharines dedicate funds in the 2022 budget and recommend continued additional funds in 2023 and 2024 to support preliminary work to establish a new public art gallery in St. Catharines.

Background and Context

Rodman Hall Art Centre, founded in 1960, is now closed and our not-for-profit community-based organization — Rodman Hall Art Centre, Inc. — is responsible for the community's extraordinary art collection. Brock University has made this possible by transferring the collection to RHAC, Inc. along with a generous gift that will enable RHAC, Inc. to protect and support the collection while the community establishes a permanent and professional new public art gallery as home to the collection and a place to present the artwork of leading artist from our region and around the country.

It should be noted that the gift from Brock University is dedicated to storage, management, presentation, and development of the collection. RHAC, Inc. is seeking funds from the City of St. Catharines for necessary and prudent strategic planning to guide the development of a new public art gallery. Our organization is also seeking funding for creative and educational projects, operation and development of the gallery as it evolves from the Regional Municipality of Niagara, Ontario Arts Council, Canada Council for the Arts, Trillium Foundation, Canadian Heritage and other public sources and through earned revenue, donations, sponsorships and philanthropy. A detailed budget for the 2021-2024 can be found in the attached Preliminary Business Plan.

Goals and Benefits

We estimate it will take five or more years to establish permanent, purpose-designed and built visual arts infrastructure worthy of our community's cultural ambitions and Rodman Hall Art Centre's 60-year legacy of excellence in professional-level presentation of the visual arts. We wish, ultimately, to be part of the cultural and economic renaissance in downtown St. Catharines — an ambition that the City of St. Catharines is now realizing as a result of strategic investments in culture and economic development. We see a new public art gallery as a critical and essential addition to the cultural and entertainment amenities now clustered in downtown.

While we undertake planning for the future and grow our base of stakeholders beyond Brock University and the City of St. Catharines, we will operate as a gallery without walls — focusing on

display of the collection and the work of artists from the region through online presentation and innovative exhibitions and displays of art in collaboration with existing cultural institutions and organizations that will bring lively engagement in the visual arts to the public. Our first steps include the recently approved plan to relocate six outdoor sculptures to sites in the City's downtown; the creation of an online catalogue of the collection; and a web-based 3D virtual exhibition of selected works from the collection.

Preliminary investment from the City of St. Catharines is central to our community's achievement of a new public art gallery. The ultimate establishment of such arts infrastructure is consistent with the Cultural Renaissance pillar of the City's Strategic Plan through the Strategic Goal – Celebrate the City's rich history, diversity, arts and cultural assets through leadership, promotion and investments that support measurable, sustainable creative growth. Support for a public art gallery is also consistent with Priority # 2 of the City's Culture Plan 2020 which places priority on further developing opportunities to experience arts and heritage through direct programming, in partnership, and through investment in the cultural sector.

Early-Stage Investment, Details, and Deliverables

Rodman Hall Art Centre, Inc. is seeking confirmed funding from the City of St. Catharines for \$75,000 in 2022 and recommended funding of \$100,000 in 2023 and \$125,000 in 2024. These funds will enable our organization to undertake foundational work to establish a new art gallery. This will encompass strategic planning and dedicate staff to coordinate and advance this process. Such work is set to begin in 2022 with community and stakeholder consultations leading to needs assessment and vision for an art gallery and assessment of comparables and the market; economic impact study and site selection in 2023; and feasibility study and business plan that includes operation and capital development in 2024. The following is a budget for use of these funds:

| City of St. Catharines Early Stage Investment in Development of Public Art Gallery - Deliverables and Allocation of Expense | | | | | |
|---|------------------|--|---------------------|---|---------------------|
| <i>Deliverables</i> | 2022 | <i>Deliverables</i> | 2023 | <i>Deliverables</i> | 2024 |
| Community & Stakeholder consultation - vision & market assessment | 20,000.00 | Economic Impact Study process & report | \$20,000.00 | Feasibility Study (40% of cost) process & report | \$20,000.00 |
| Strategic Planning process and comprehensive Strategic Plan | 30,000.00 | Site Selection process & report | \$35,000.00 | Contract Strategic Plan for operation and capital project | \$20,000.00 |
| Staff (30% of Executive Director) | 25,000.00 | Staff (50% of Executive Director) | \$45,000.00 | Staff (50% of Executive Director and administrator) | \$85,000.00 |
| | 75,000.00 | | \$100,000.00 | | \$125,000.00 |

Note:

In 2022 we will begin conversations with Canadian Heritage, Cultural Spaces Program regarding a new building for a public art gallery in St. Catharines. We expect planning work specified above which is being undertaken in 2022/3 will enable identification of a site in 2023. We will continue to work with Cultural Spaces so that we may reasonably expect Canadian Heritage to

contribute significantly to this major feasibility study and ultimately to an ambitious capital arts infrastructure project.

It also bears noting that, in addition to funding from the City of St. Catharines, we will pursue all opportunities for funding from every level of government and strive for donations from corporate and individual sources to enable the future public art gallery to be viable and sustainable.

We refer the reader seeking additional information to the Rodman Hall Art Centre, Inc. Preliminary Business Plan submitted with this Request for Funding. We look forward to presenting to the Budget Standing Committee and answering questions on Sept. 20, 2021.

Submitted Aug. 31, 2021 by:

Rodman Hall Art Centre, Inc.
Board of Directors:

Jean Bridge, Chair

N'ora Kalb

Ken Lycyshyn

Shannon Passero

Reinhard Reitzenstein

Darren Schmahl

Shawn Tylee

Peter Vietgen

RODMAN HALL ART CENTRE, Inc.



PRELIMINARY BUSINESS PLAN

FOR START-UP PHASE

2021-2024

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EXECUTIVE SUMMARY

This report lays out dynamic plans by Rodman Hall Art Centre, Inc. (RHAC, Inc.) for continuing the legacy and benefits of a professional-level public art gallery in St. Catharines. In the coming three-year start-up phase, RHAC, Inc. will lay the foundations for the establishment of a vibrant new visual arts presentation venue that will deeply engage and reflect our community.

We begin with the remarkable gift from Brock University to the community of the 1000-piece Rodman Hall Art Centre collection. These art treasures will form the core of a future art gallery. In addition to the collection, Brock University has generously provided significant funding and endowments that will enable care of the collection and planning for its new home. Brock University's community-spirited support for the arts in the region will, we trust, be matched by new civic partnerships and philanthropy necessary to allow the community to realize a cultural goal central to the quality of life in our region.

RHAC, Inc. proposes in this Preliminary Business Plan innovative ways to honour Brock University's gift of the collection and link it to sustained robust exhibition of visual arts during the 3-year start-up period between 2021 and 2024 during which we will operate as a gallery without walls. RHAC, Inc. will focus during this time on:

- care for and store the community's art collection;
- presentation of early-stage art exhibits and other programs featuring the collection — online, on the street, and in collaboration with other cultural institutions;
- establishment of new sustaining partnerships and private-sector fundraising; and • pursuit of comprehensive planning for a new public art gallery.



Our community can, with growing commitment and support from donors, civic and other governments, ensure that the visual arts enjoy a prominent place in the dynamic cultural ecosystem we are building in Niagara. Over the past decade, strategic investments in cultural amenities such as the First Ontario Performing Arts Centre, transportation and urban design infrastructure, and in bolstering the creative activity of artists have resulted in flourishing urban spaces is positively impacting our economy. Niagara hosts award-winning theatre, music and arts festival offerings that engage residents and attract visitors to our region. The establishment of a new and significant public art gallery will be a vital complement to the culture, entertainment and gastronomic scene our communities have nurtured.

Such new arts infrastructure is critical to achieving the vision expressed in ambitious planning reports that guide development of the Region and the City of St. Catharines.

Over the next several years — with early-stage, incremental investments of \$75K in 2022, \$100K in 2023 and \$125K in 2024 by the City of St. Catharines — RHAC, Inc. will demonstrate the value of innovative and accessible visual art programming and collaborate with the City in strategic and feasibility planning for new arts infrastructure. This start-up funding will support staffing hires and engagement of professional strategic and feasibility planning services that will lay a firm foundation for a new public art gallery and its sustainability over time. Such funding and careful planning will enable RHAC, Inc. to also attract necessary support and commitment from new partners, stakeholders, and donors.

This Preliminary Business Plan outlines the priorities and goals for this work over the short- to medium-term. It details the many programs and activities necessary to achieve these goals and the timeframe in which these will be achieved. This plan is broken out into 6 main program areas — collection management, artistic program, community engagement, strategic planning, administration and volunteers — with strategies to advance each core program as listed below.

| <i>Collection Management</i> | <i>Artistic Program</i> | <i>Community Engagement</i> | <i>Strategic Planning</i> | <i>Administration</i> | <i>Volunteers</i> |
|------------------------------|-----------------------------------|---|--|---|--------------------------------------|
| Move & Store | Collaborate to Exhibit Collection | Resonant Communications and Brand | Environment, Vision, Benchmarks | Expand, Mature Operations | Foster and Manage Volunteer Programs |
| Facilitate Access | Present Contemporary Artists | Community Visioning and investment | Mid-term Plan, Stakeholder Commitments | Operational Systems | |
| Manage | Complementary Outreach Activities | Sustainability Partnerships and fundraising | Site Selection, Feasibility Study | Agreements, Approvals, Governance | |
| | | | Capital Planning | Grow and Diversify Revenue from all sources | |

The budget modelling summarized below and itemized in the full budget at the end of this Plan (see pages 17-19) is predicated on an early (2022, 2023, 2024) investment from the City of St. Catharines and the generous gift from Brock University. This budget reflects the focus on the art collection with its move to and maintenance in museum storage facilities. This budget provides for modest artistic programs (exhibitions, projects and events) and envisions, in 2024, an ambitious region-wide installation art festival that will be carried out as a collaboration between multiple art galleries in the region and private-sector partners. This budget includes expansion of human resources necessary for operation and investments in professional expertise to conduct strategic and feasibility planning. Ramping up fundraising, sponsorships, government and arts council grants, new partnerships and earned revenues will, along with civic and Brock University contributions, enable RHAC, Inc. to meet start-up and planning goals. Clear expectations of the performance by RHAC, Inc. in the coming 3 years (see pages 13-15) will assure that support from all sources is effective.

| RHAC NEAR-TERM OPERATIONS BUDGET SUMMARY | | | | |
|--|-------------------|-------------------|-------------------|-------------------|
| | 2021 | 2022 | 2023 | 2024 |
| REVENUE | | | | |
| Earned | 202,500.00 | 2,000.00 | 15,000.00 | 19,500.00 |
| Grants - City | | 75,000.00 | 100,000.00 | 125,000.00 |
| Grants - Region | 10,500.00 | 13,000.00 | 15,000.00 | 50,000.00 |
| Grants - Arts Councils and Government | | 12,000.00 | 25,000.00 | 230,000.00 |
| Sponsorships and fundraising | | 93,000.00 | 115,000.00 | 179,000.00 |
| Endowment interest | | 40,000.00 | 40,000.00 | 45,000.00 |
| Brock University gift | 140,000.00 | 560,000.00 | | |
| Total Revenue | 353,000.00 | 795,000.00 | 310,000.00 | 648,500.00 |
| EXPENSES | | | | |
| Exhibitions Projects Events Education | 33,500.00 | 44,700 | 45,600.00 | 196,000.00 |
| Collection and storage | 233,875.00 | 140,500.00 | 146,500.00 | 152,000.00 |
| Operation including other facility & human resources | 85,200.00 | 231,700.00 | 279,900.00 | 357,500.00 |
| Total Expense | 352,575.00 | 416,900 | 472,000.00 | 705,500.00 |

It is important to note that the \$600,000 gift from Brock University will be held in reserve to support the art collection for up to 5 years and to cover unforeseen contingencies during the period of start-up, however long it may be. An update to this plan and budget will be completed by early 2024 when additional information is known regarding the scope of the capital project and full-scale operations of the proposed permanent facility for the RHAC Inc.

INTRODUCTION

Rodman Hall Art Centre, Inc. (RHAC, Inc.) is a not-for-profit, independent, community-based organization committed to advancing the public's appreciation of the arts by caring for our community's art collection and providing a vibrant platform for the visual arts and creative experiences. RHAC, Inc. is in its early stage of start-up focusing in the coming three years on:

- maintenance, protection and public access to the Rodman Hall Art Centre collection;
- exhibitions, creative projects and related public events for the community; ○
- establishing sustaining stakeholder partnerships and private sector fundraising plan; ○
- strategic planning for creating a new permanent public art gallery for Niagara.

This Preliminary Business Plan identifies near-term goals of RHAC, Inc. and outlines the actions we will take to achieve these. It provides clear direction for RHAC, Inc in terms of expected organizational performance and establishes a framework for the measurement of outcomes. To give validity to this Business Plan, particular attention has been paid to the practical implementation of two key concepts:

- (i) development of appropriately scaled activities
- (ii) pursuit of stakeholders and market opportunities

This Preliminary Business Plan takes account of prior achievements, an analysis of strengths, weaknesses, opportunities, and threats (see Appendix A) and continues the process of defining RHAC, Inc.'s future through the development of a set of specific programs, management and marketing goals focusing on:

- (i) early-stage operation to safe-guard and present the collection and support presentation of artistic programs
- (ii) engage the community and increase stakeholder support
- (iii) planning and administration
- (iv) establishment of diverse income bases
- (v) planning for development of future public art gallery facilities

The actions – especially in strategic planning – laid out in this Preliminary Business Plan will create the context for a future capital arts infrastructure project that will continue the momentum of cultural and business development achievements in the City of St. Catharines and benefit the quality of life for the community. This will be achieved through:

- (i) developing partnerships with stakeholders, including artists, arts, cultural and community organizations, business sector (e.g. tourism) as well as Provincial and Federal Government agencies
- (ii) effective and efficient use of resources
- (iii) integrated planning with the City of St. Catharines and the Niagara Region
- (iv) marketing and promotion
- (v) acting through collaboration with other cultural institutions and local artistic initiatives

RHAC, Inc. PLANNING STATEMENTS

Mission:

RHAC, Inc. cares for the community's art collection through engagement with the visual arts and creative experiences.

Vision:

RHAC, Inc. is dedicated to collaborative visual art experiences that are inclusive and transformative

STRATEGIC OBJECTIVES

The strategic objectives of RHAC, Inc. for the next 4 years listed below provide an early-stage framework for the actions necessary to demonstrate the benefits of a temporary platform for visual arts in this community and to establish near-term stability within which to plan for a new permanent public art gallery. These objectives are based on the strategic priorities of RHAC, Inc. The objectives are to:

- care for the community's art collection and produce programs that position our new public art gallery as a fundamentally necessary public amenity, accessible to all
- tailor early-stage activities to the capacity of our community to sustain these
- engage visitors where they live – in person or online – in the visual arts through exhibitions, creative projects, and public programs
- expand our capacity for professionalism by securing relevant human resources.
- promote and market our programs and activities to the community
- collaborate with other public art galleries and exhibiting institutions in the region to extend the reach of RHAC, Inc. while it is not situated in a permanent location
- establish new civic, government and private-sector partnerships to sustain its operation

CURRENT ORGANIZATIONAL CAPACITY

RHAC, Inc. has an operational Board of Directors consisting of 8 members representative of the art, business, and education communities. It has executive, negotiating, and communications committees. Incorporated in 2019, RHAC, Inc. has established governance structures that include all necessary legal and financial frameworks to guide its operation.

The Art Gallery employs 3 contractually engaged part-time staff — Administrative Support and Community Engagement Coordinator, Collection Registrar, Collection and Program Assistant. Our board and supporters have devoted many hundreds of volunteer hours to establish governance, business processes, advocacy and planning. As implementation of planning for a permanent facility solidifies beyond this business plan (post 2024), human resources related to operation of a more fully functioning public art gallery will be assessed and updated.

BRIEF HISTORY AND CONTEXT FOR BUSINESS PLANNING

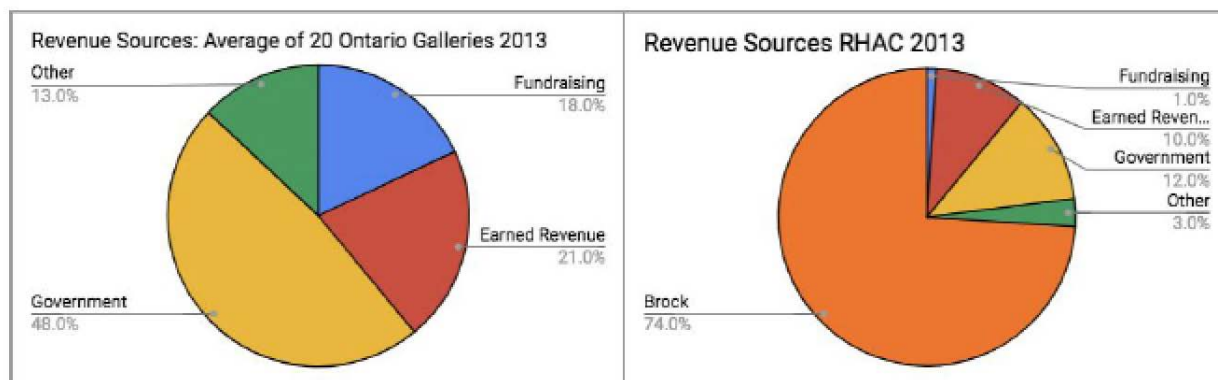
Rodman Hall Art Centre (RHAC) has been our community's public art gallery since 1960. Its extraordinary legacy is exemplary, having provided many hundreds of curated and award-winning exhibitions that celebrated and enhanced the careers of three generations of regional artists and brought the work of outstanding international and nationally renowned artists to this community. RHAC was operated by Brock University between 2003 and 2020 as a university art gallery that also served the St. Catharines community. The gallery's 1000-work art collection of primarily Canadian historical to contemporary art reflects our region and supports appreciation of and scholarship in the arts. RHAC has also contributed significantly to the art education of children, youth and adults in the region.



The gallery typically saw between 25,000 and 30,000 visitors annually with 2400 individuals participating in programs such as classes, workshops, and seminars. Collaborations within the community for programs and events have included: Brock University, Marilyn I. Walker School of Fine and Performing Arts, Niagara Artists Centre, District School Board of Niagara, Niagara Catholic District School Board, Ridley College, Foster Festival, Carousel Players, Willow Arts Community, St. Catharines Historical Society, Festival of Readers, First Ontario Performing Arts Centre, The Friends of Laura Secord, In the Soil Festival, and Culture Days Canada.

Brock University has been the main funding partner and 'parent' of RHAC supplying 74% of its annual operating budget of approximately \$750,000. Other sources of revenue included annual grants by federal and provincial arts councils, income from endowments and earning from community education fees and rentals. New and more diverse funding partnerships must be established to ensure sustainability of a future public art gallery of a similar scope.

The chart below represents 2013 data on funding sources for public art galleries in Ontario as compared to funding sources for Rodman Hall Art Centre. This amply demonstrates the need for municipal investment in our community's art gallery as a critical component of future sustainability.



The chart below maps the level of civic support for public art galleries in cities that are comparable to St. Catharines and provides insight into the range of expectations continuing civic support for our new public art gallery.

| Comparison of Municipally-Funded Art Galleries in Ontario | | | | | |
|---|---|---|-----------------|---|--------------------|
| Gallery and City | Type | Partners | Expense (\$) | Partner support (%) | Municipal support |
| INDEPENDENT (Primarily Supported by Municipality) | | | | | |
| Art Gallery of Windsor (AGW) | Independent (primarily supported by municipality) | City of Windsor, pop 233,763 | \$ 1,548,574.00 | In Kind Unbudgeted \$700,00) value (in 2017) | \$2.99 per capita |
| Kitchener-Waterloo Art Gallery (KWAG) | Independent (primarily supported by municipality) | Cities of Kitchener and Waterloo, pop 601,220 | \$ 1,187,287.00 | 34.80% | \$0.68 per capita |
| Oakville Galleries (Og2) | Independent (primarily supported by municipality) | City of Oakville, pop 211,382 | \$ 1,200,000.00 | 30% | \$1.70 per capita |
| Ottawa Art Gallery (OAG) | Independent (primarily supported by municipality via service agreement) | City of Ottawa, pop 934,243 | \$ 2,213,297.00 | 37% | \$0.88 per capita |
| Art Gallery of Sudbury (AGS) | Independent but primarily supported by municipality, with in-kind support by Laurentian U. | City of Sudbury and Laurentian U., pop 164,926 | \$ 613,711.00 | 30.9% | \$1.14 per capita |
| Art Gallery of Guelph (AGG) | Independent founded under provincial act. Partnership agreement with City of Guelph, University and School District. | City of Guelph, University of Guelph, School District, pop 135,474 | \$ 1,159,780.00 | 36% from the University of Guelph, 16% from the City of Guelph, .04% from School District | \$1.36 per capita |
| MUNICIPALLY OWNED FACILITY - INDEPENDENTLY OPERATED | | | | | |
| Maclaren Art Centre Barrie | Facility is municipally owned, Independent organization supported primarily through earned revenues, corporate sponsorships, fundraising events and donors/supporters | Grants (under 10%) each from municipality OAC and Canada Council, pop 153,356 | \$ 1,850,000.00 | 7% municipality/region | 0.84 per capita |
| MUNICIPALLY OWNED AND PRIMARILY FUNDED | | | | | |
| Judith and Norman Alix Gallery (JNAAG), Sarnia | Municipally owned and funded. | County of Lambton, pop 123,399 | \$ 1,667,424.00 | 90% | \$12.16 per capita |
| Cambridge Galleries (CAG) at the Idea Exchange (The Cambridge Public | Library unit municipally funded. | City of Cambridge, pop 145,623 | \$ 842,900.00 | 70 % plus in kind assistance | \$4.05 per capita |
| Grimsby Public Art Gallery (GPAG) | Municipally owned and funded. A separate sub-department under Parks, Recreation, Culture and Facilities division. Shares space with Library but separate staff. Budget does not include facility costs. | Town of Grimsby, pop 27,314 | \$ 395,000.00 | 70% | \$10.11 per capita |
| Woodstock Art Gallery | Municipally Owned and Funded. | City of Woodstock. Population approx 45,000 | \$ 800,000.00 | 70% | \$12.44 per capita |
| INDEPENDENT | | | | | |
| Niagara Falls Art Gallery | Independent | City of Niagara Falls and Federal Government Grants, pop 48,460 | \$ 407,298.00 | City of Niagara Falls 8.3%, Federal Grants 17.4% | \$0.69 per capita |

Compiled in 2020

As a critical contribution to future sustainability of our community's public art gallery, Brock University has agreed to transfer the RHAC art collection to RHAC Inc. along with 2 endowments. Brock has also provided significant funds to protect and maintain the collection. Brock has enabled a comprehensive audit of the collection which has been conducted by RHAC, Inc. Brock's generosity and potential partnership will continue to be a positive factor in the success of a new public art gallery.

THE ROLE OF A PUBLIC ART GALLERY IN ARTISTIC AND CULTURAL DEVELOPMENT FOR THE COMMUNITY

Arts and cultural development contribute to the well-being of the community in the broadest sense. The visual arts and public galleries are a marker of a community's quality of life. Galleries help define the identity of a community and region by visibly reflecting people, values and places. They engage a community's imagination. Galleries contribute to life-long learning, personal fulfilment, and community participation. A 2019 study for the Canadian Museums Association found that visiting museums can be linked with improved health and wellbeing – equivalent to receiving a monetary bonus of \$1,440 a year.¹ This study also found that for every dollar invested in non-profit museums, society gets nearly four dollars in benefits.

The Ontario Association of Art Galleries Data Exchange aggregate findings on participation and benefit from public art galleries published in 2014 is quantified as follows:

- The presentation of 667 exhibitions involving over 3,400 artists.
- Total attendance of 2.8 million people.
- Over 850,000 participants in the galleries' arts education programs.
- 1,456 staff members, compared with 4,789 volunteers.
- Total operating revenues of \$172 million and operating expenses of \$162 million.²

Cultural industries, including public galleries are a growing and vital part of the economy. A summary in Canadian Art Magazine of the 2016 report by Hill Strategies on culture and the Canadian economy estimated that the direct economic impact of Canada's culture industries was \$61.7 billion in 2014, or 3.3% of the country's GDP; an impact that is ten times that of sports.³ The local cultural sector provides substantial employment and should be viewed as a partner in



promoting Niagara and St. Catharines as a favourable destination for visitors from within the region as well as national and international tourists.

Rodman Hall Art Centre has amply demonstrated how a public art gallery can work in concert with social, cultural and educational organizations to leverage and expand opportunities across sectors. Partnerships with such educational institutions at all levels as well as community and cultural organizations, festivals and presenters have in the past and will continue to be critical in how a new public art gallery serves the community.

Local government plays a vital role in fostering an environment in which arts and cultural activity continue to flourish. This Business Plan is an invitation for the City and other stakeholders to join with RHAC Inc. to position the future public art gallery as an engine for transformative change that will influence innovation and creativity by enhancing the arts, creative activity and future economic prosperity of the region.

¹ Canadian Museums Association, Value Study of GLAMs in Canada, Report for the Ottawa Declaration Working Group. Dec. 2019. ms.ca/site/reportsandpublications/studyglamscanada2020

² Hill Strategies, Ontario Association Of Art Galleries Data Exchange. Nov. 2014. <https://hillstrategies.com/2014/11/26/ontario-association-of-art->

³ Study: Culture Affects Economy More Than Sports and Forestry, Canadian Art Magazine. Jun. 2016. <https://canadianart.ca/news/cultureimpacts-economy/>

CORE PROGRAMS

The following programs have been identified as essential to RHAC, Inc. achieving its Planning Statements, to address its weaknesses and threats, to maximise strengths and opportunities and to succeed in the role of a thriving public art gallery.

A. Collection management

B. Artistic program (Exhibitions, creative projects and related public events)

C. Community Engagement

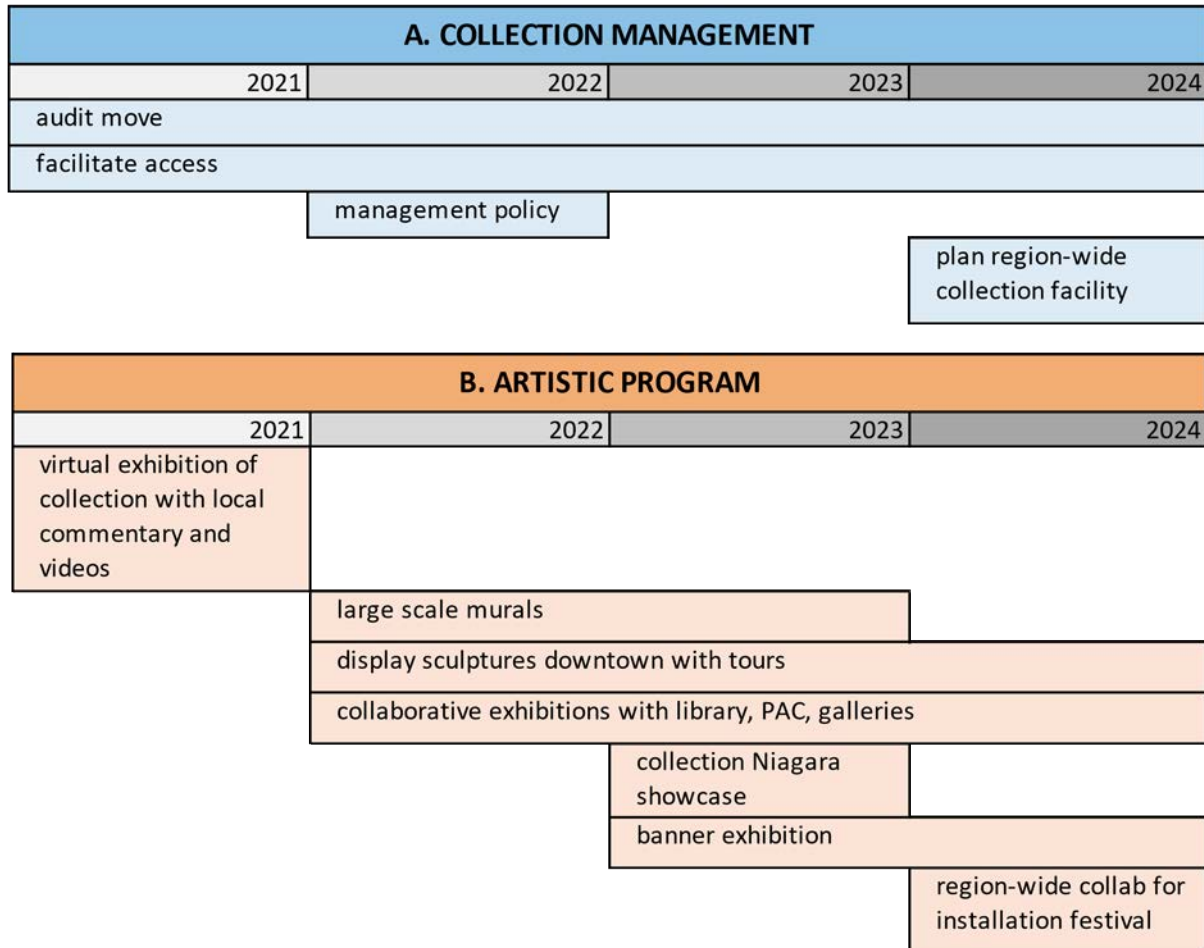
D. Strategic Planning

E. Administration

F. Volunteers

The charts below itemize and provides a timeline for the actions that correspond to key strategies associated with each core program.

This information is further detailed in Appendix B which specifically maps objectives, strategies, actions, time-lines and responsibilities necessary to accomplish each program.



| C. COMMUNITY ENGAGEMENT | | | |
|--|-------------------------------------|----------------------------------|------|
| 2021 | 2022 | 2023 | 2024 |
| board development, rebrand, market, advocacy | | | |
| | region-wide marketing collaboration | | |
| | community visioning | | |
| fundraising stratgey | fundraising campaign | | |
| | | youth council | |
| map partnerships | build partnerships | | |
| stewardship plan | | | |
| | establish and build endowment | | |
| grants- regional project | provincial and federal project | Canadian Heritage foundations | |

| D. STRATEGIC PLANNING | | | |
|------------------------------|---|-------------------------|---------------------------------------|
| 2021 | 2022 | 2023 | 2024 |
| Preliminary business plan | environmental analysis | | |
| | update BP with mid- term and capital planning | | |
| | stakeholder consultations | stakeholder commitments | |
| | | site selection | partnerships and feasibility study |
| | | | capital fundraising |
| | | | update Business Plan |

| E. ADMINISTRATION | | | |
|---|--|---|------------------------|
| 2021 | 2022 | 2023 | 2024 |
| collection ownership, approvals from PCH, charitable registration | | | |
| | early stage funding agreement City | Funding agreement Region | |
| HR/contract Collection, admin/CE, | Project coordinators, technicians, grant | | |
| | pt admin coordinator, | pt technician | |
| | HR/ ft staff Director/curator, | ft Director/curator ft admin coordinator pt program coordinator | ft program coordinator |
| operation systems, office | systems for HR, financial planning and donor relations, Plan for earned income | | |

| F. VOLUNTEERS | | | |
|----------------|--------------------------------|------|------|
| 2021 | 2022 | 2023 | 2024 |
| volunteer plan | | | |
| | volunteer drive | | |
| | training and management system | | |

BENEFITS TO THE COMMUNITY AND MEASURES OF SUCCESS FOR RHAC, Inc. OPERATION AND PROGRAMS

Promote, support and expand access to the visual arts

RHAC, Inc. programs provide access to all people including those from equity-seeking communities. Our early-stage programs are designed to engage and encourage participation in events and public programs in non-traditional formats and in institutional settings where audiences have reason to visit and discover art.

This will be measured by:

- *Numbers of copyright permissions to enable images to appear in online catalogue and artworks to be used in exhibitions and marketing (goal is 20% in 2022, 40% in 2023 and 60% in 2024)*
- *Numbers and participation in events as established through counting participants and through event feedback forms, and audience surveys that will provide evidence of the range and diversity of people who participate in our programs (goal is: 25% increase each year in numbers and 40% in diversity of participation each year)*

Support individual professional and artistic development

RHAC, Inc. will provide opportunities to regional artists and art workers through exhibitions, employment, and educational experiences (internships). Each presenter is paid Artist Fees for exhibition of artworks, the delivery of workshops, artist talks, presentations, demonstrations, etc. RHAC, Inc. can leverage a variety of federal and provincial youth employment programs aimed extending employment opportunities to students and recent graduates to expand its capacity to employ youth and those building careers in the culture sector. Such employment serves to help retain talent in Niagara.

Indicators of this benefit will be measured through:

- *Number of artists paid fees for their work (goal is 15% increase each year)*
- *Number of Young Canada Works and other youth employment positions created in collection and gallery administration, social media and web development (goal is 20% increase each year)*



Stimulate arts and cultural development in Niagara

RHAC, Inc. programs and creation of staff positions will do much to stimulate the arts in Niagara by enabling RHAC, Inc. to produce curated and juried exhibitions and creative projects that reflect this community. This includes participation by the public to talks, demonstrations and workshops

that accompany exhibitions, as well as exposure of artists themselves to knowledge in art practices of all types, and the full range of creative preoccupations that drive art production.

Indication of how RHAC, Inc. programs stimulate cultural development will be found in:

Numbers of participants

- *Qualitative response by artists to targeted surveys.*
- *Surveys that determine retention of talent in the community (artists choosing to stay and work in our community) and creative activities of graduates from art programs*

Contribute to innovation within and across art forms

RHAC, Inc.'s program for 2021 – 2024 encompasses a variety of innovative ways to present a number of art forms from digital creation and online presentation to digitally supported means to find and learn about art. Other planned elements of the artistic program that will be offered in collaboration with allied cultural institutions will engage creators and art audiences with other artistic form such as books, poetry and literature. The extent and nature of innovation and crossover between the arts will be measured by:

- *Number and type of collaborations with existing institutions (expansion of 10% each year)*
- *Amount and quality of creative production by participants in workshops (expand 15% each year)*
- *Qualitative participant feedback*

Improved community buy-in and support for a new public art gallery

The community has lost a significant arts amenity and a great deal of work is needed to build back an audience as well as the belief that the visual arts are integral to our community. By taking the gallery into existing institutions and non-traditional spaces where people already live, work and visit, RHAC, Inc. aims to encourage a new level of awareness of the arts. RHAC, Inc. will also bring information and offer new communities reason to support our gallery through offering speakers to service clubs and community groups, by reaching out and enlisting individuals, businesses and groups in our cause. *Key indicators of our success in this will be:*

- *Numbers who participate in community consultation and visioning sessions*
- *Numbers that join 'friends of' RHAC, Inc. (goal is increase of 100 each year)*
- *Revenue achieved from new sponsorships and donors (goal is \$35,000 in 2022, \$45,000 in 2023, and \$104,000 in 2024 when we launch region-wide installation art festival with partners)*

Build fiscal, organizational and governance stability

RHAC, Inc. must diversify and expand its revenues to replace those provided by Brock University and other sources in order to continue to offer an artistic program and maintain an operation, and to build credibility amongst all funders and donors. New levels of professional staffing will increasingly necessary to operate. The RHAC, Inc. board must recruit new, energetic members to its ranks and those of working committees who must provide sensitive and competent oversight and planning. *Indicators of success in these areas are:*

- *Commitment of interim civic funding from the City of St. Catharines in the coming three years (2022, 2023, 2024) leading to a agreement an annual operational funding*
- *Receipt of project grants from the Ontario Arts Council, Canada Council for the Arts, Niagara Cultural Investment Program*
- *Registration as a charity no later than Feb. 2022*

- *Successful application to other programs and foundations at the federal and provincial level to support cultural initiatives and sustainability (minimum goals are: Trillium Grant for outreach and equity and Canadian Heritage of feasibility study)*
- *establishment of an endowment to support gallery operations into the future (Community Foundation of Niagara or Ontario Arts Foundation)*
- *Meeting of sponsorship and fundraising goals as outlined in the budget*
- *Creation of new on-line store for art and art-related sales including fundraising art auction) (goal is net \$3,500 in 2025)*
- *Re-establishment of a community art education program. (goal is gross \$15,000 in 2025)*
- *Management of board and committee turn-over and recruitment based on a matrix that identifies skills, knowledge and community diversity goals; (goal is creation of executive and communications (2021), finance and fundraising (2022) and special projects committee (2023).*
- *Completion of a strategic planning process and feasibility study (goal is comprehensive community and stakeholder consultation (2021-22), benchmarks for market capacity, and economic impact (2022), site selection and feasibility analysis for a new public art gallery (2024).*

AUDIENCE DEVELOPMENT PLAN 2021 – 2024

TARGET AUDIENCES

1. people living and/or working in the region
2. young people including K-12 and postsecondary students in the arts
3. people from culturally and socio-economically diverse backgrounds
4. Indigenous people
5. people with a disability
6. people living and/or working in the GTA and elsewhere (tourists)

AUDIENCE DEVELOPMENT STRATEGIES

This Audience Development Plan outline's RHAC, Inc. strategies for audience development and participation.

The Gallery is committed to participation and engagement in the artistic programs and activities and building our audience. The strategies encompassed by this Audience Development Plan include programs which will aid audience research, and our marketing and promotions efforts.

RHAC, Inc. intends to utilize a number of strategies to increase visitor numbers as well as engagement and participation in our 2021-23 program. These strategies are as follows:

share information and promote programs in a widely circulated newsletter, in eblasts and social media

- develop relationships with school boards, postsecondary institutions and facilitate tours of exhibitions and creative projects and programs for school groups that contribute to and extend curriculum in areas of art appreciation and, where possible, skills development.
- train selected volunteers to become guides and interpreters of artistic programs
- employ artists as educational guides for school and targeted visitor groups from the general public
- use online platforms and technology where appropriate to further engagement
-

RHAC, Inc. has identified as high priority the collaboration with Niagara-based cultural institutions to carry out many of its programs. These collaborations will leverage such partnerships and networks to increase the reach of our audience and to position Niagara as a destination for cultural tourism.

RESULTS INDICATORS FOR PROGRAMS AND MARKETING

Results indicators will be used to evaluate the success, benefits (or otherwise) of the strategies outlined in the body of the Business Plan.

Examples of other results indicators, in addition to those set out in the Business Plan include:

- participant event feedback forms
- audience surveys
- email correspondence with artists in our database
- web-based response from 'Friends Of', recipients to newsletter and volunteers
- Visitor and Comments solicited online through THE RODMAN website • Website metrics

NEAR-TERM BUDGET

This budget provided below is based on comparisons, histories, best practices and all information available at this time.

| RHAC NEAR-TERM OPERATIONS BUDGET 2021-24 | | | | |
|---|-------------------|-------------------|-------------------|-------------------|
| REVENUES | | | | |
| | 2021 | 2022 | 2023 | 2024 |
| Contributed | | | | |
| Grants - City of St. Catharines | | 75,000.00 | 100,000.00 | 125,000.00 |
| Grants - Region of Niagara | | 13,000.00 | 15,000.00 | 50,000.00 |
| Grants - Arts Councils (projects) | 10,500.00 | 12,000.00 | 25,000.00 | 50,000.00 |
| Special Project Grants (International Art Festival) | | | | 120,000.00 |
| Grants - Canadian Heritage Cultural Spaces Program | | | | 60,000.00 |
| Grants - Operation | | | | |
| Partnerships | | 10,000.00 | 10,000.00 | 10,000.00 |
| Sponsorships | | 15,000.00 | 20,000.00 | 74,000.00 |
| Donations and Foundations | | 15,000.00 | 25,000.00 | 30,000.00 |
| Fundraising (events, memberships, auction) | | 51,000.00 | 60,000.00 | 65,000.00 |
| Endowment Interest | | 40,000.00 | 40,000.00 | 45,000.00 |
| Brock University gift | 140,000.00 | 560,000.00 | | |
| Total Contributed | 150,500.00 | 791,000.00 | 295,000.00 | 629,000.00 |
| Earned | | | | |
| Fee for Service Agreements | 202,500.00 | | | |
| Sales | | 2,000.00 | 3,000.00 | 3,500.00 |
| Education fees | | | 12,000.00 | 16,000.00 |
| Total Earned | 202,500.00 | 2,000.00 | 15,000.00 | 19,500.00 |
| TOTAL REVENUE | 353,000.00 | 793,000.00 | 310,000.00 | 648,500.00 |
| EXPENSES | | | | |
| | 2021 | 2022 | 2023 | 2024 |
| Artistic Program | | | | |
| Artistic salaries-permanent & temporary employees | | 42,500.00 | 62,500.00 | 85,000.00 |
| Artistic fee for service contracts | 11,000.00 | 16,500.00 | 11,500.00 | 30,000.00 |
| Copyright, reproduction and royalties | 7,000.00 | 6,500.00 | 6,500.00 | 38,500.00 |
| Production / technical salaries-permanent & temp | | | | |
| Production / technical and professional fees | 9,000.00 | 11,500.00 | 10,500.00 | 16,000.00 |
| programming /distribution / special projects | 6,500.00 | 7,000.00 | 7,500.00 | 98,500.00 |
| Touring / circulation expenses | | | 4,000.00 | 6,000.00 |
| Membership and Registration | | 1,200.00 | 1,600.00 | 2,000.00 |
| Other artistic, program and service expenses | | 2,000.00 | 4,000.00 | 5,000.00 |
| TOTAL Artistic Program Expenses | 33,500.00 | 87,200.00 | 108,100.00 | 281,000.00 |

| | | | | |
|--|-------------------|-------------------|-------------------|-------------------|
| Maintenance of Collection | | | | |
| Collections management salaries-temporary | | | | |
| Collections management fee for service contracts | 45,000.00 | 4,000.00 | 3,000.00 | 3,000.00 |
| Digitization | 20,200.00 | | | |
| copyright permissions | 3,000.00 | | | |
| Art handlers - temporary | 33,000.00 | 4,500.00 | 4,500.00 | 6,000.00 |
| Material | 25,675.00 | | | |
| Move | 48,000.00 | | | |
| Loans and presentation | | 35,000.00 | 35,000.00 | 35,000.00 |
| Storage rental | 28,000.00 | 79,000.00 | 84,000.00 | 88,000.00 |
| Contingency | 25,000.00 | | | |
| maintenance | 6,000.00 | 6,000.00 | 8,000.00 | 8,000.00 |
| Insurance | | 12,000.00 | 12,000.00 | 12,000.00 |
| TOTAL Collection Expenses | 233,875.00 | 140,500.00 | 146,500.00 | 152,000.00 |
| Facility | | | | |
| Facility operating salaries-permanent & temporary | | | | |
| Facility operating professional fees | | | | |
| General facility - operation | | | | |
| Other facility expenses (office and other rental) | 2,000.00 | 15,000.00 | 17,000.00 | 12,500.00 |
| TOTAL Facility Expenses | 2,000.00 | 15,000.00 | 17,000.00 | 12,500.00 |
| Marketing and Communications | | | | |
| Marketing / Communications salaries-permanent & | | | | |
| Marketing / communications professional fees | 2,500.00 | 5,000.00 | 6,500.00 | 7,500.00 |
| Marketing production fees | 2,000.00 | 1,000.00 | 2,000.00 | 2,500.00 |
| Advertising purchases | | | 2,000.00 | 2,000.00 |
| Other | | | | |
| TOTAL Marketing and Communications Expenses | 4,500.00 | 6,000.00 | 10,500.00 | 12,000.00 |
| Fundraising | | | | |
| Fundraising salaries-permanent & temporary | | | | |
| Fundraising professional fees | | | | |
| Fundraising costs | 20,000.00 | 20,000.00 | 20,000.00 | 25,000.00 |
| Other | | | | |
| TOTAL Fundraising Expenses | 20,000.00 | 20,000.00 | 20,000.00 | 25,000.00 |
| Administration and Planning | | | | |
| Administration salaries-permanent & temporary | | 42,500.00 | 82,500.00 | 85,000.00 |
| Administration fee for service contract | 31,000.00 | 32,000.00 | 6,000.00 | 7,500.00 |
| Administration professional fees | 5,200.00 | 5,200.00 | 6,000.00 | 7,500.00 |
| Education - coordination, contracts, materials | | 6,500.00 | 8,400.00 | 9,000.00 |
| Strategic and other business planning | 10,500.00 | 50,000.00 | 55,000.00 | 100,000.00 |
| Other (phone, postage, general office, software, | 12,000.00 | 12,000.00 | 12,000.00 | 14,000.00 |
| TOTAL Administration Expenses | 58,700.00 | 148,200.00 | 169,900.00 | 223,000.00 |
| TOTAL EXPENSES | 352,575.00 | 416,900.00 | 472,000.00 | 705,500.00 |

Budget Notes:

Revenues:

- The one-time gift from Brock University will be held in reserve to support management and presentation of the art collection for up to 5 years and to cover unforeseen contingencies that may occur during the period of start-up, however long it may be. Portions of this fund may also be applied to shortfalls in revenue to cover expenses.
- RHAC, Inc. will be required over multiple years to demonstrate high-level artistic programming and sustainable operational capacity to become eligible for funding from Federal and Provincial arts councils and other similar public sources. Until

that time, RHAC, Inc. will pursue all avenues for project (non-operating) funding from the Canada Council for the Arts, the Ontario Arts Council and from Civic governments.

- RHAC, Inc. will pursue funding from Arts Councils as well as funding from the Regional Municipality of Niagara and from Provincial and Federal Ministries for special projects such as the 2024 plan for a region-wide International Installation Art Festival. We will also seek funding from Canadian Heritage Cultural Space Program for feasibility studies and capital projects.
- The early-stage funding RHAC, Inc. anticipates from the City of St. Catharines will support RHAC, Inc. staff and external professional service providers to undertake specific elements of sustainability planning (stakeholder consultations, market assessment, strategic planning, evaluation of economic impact, analysis of site options, and feasibility study and follow up business plan to be carried out in sequence throughout 2022, 2023 and 2024).

Expenses:

- Expenses for human resources (salaried Executive Director and administrator and various contracts for curators, coordinators, technicians, marketers, educators, etc.) are assigned to program areas. Therefore the expense for the Executive Director and administrator is divided between Artistic Program and Administration/ Planning.
- Staff will expand from one Executive Director in 2022 to also include full-time Administrator and a part-time Program Coordinator in 2023 and both a full-time Program Coordinator and Administrative Coordinator in 2024.
- This budget includes a major escalation in operating expenses related to artistic program to allow us to develop a major region-wide art festival as a year-long international culture and tourism attraction in the form of showcase of major large-scale installation art works whose display will be distributed throughout the region. This project will be undertaken through a collaboration between art galleries cultural institutions and museums in the region and the wine/beverage industry.

Appendix 1

STRENGTHS, CHALLENGES, AND OPPORTUNITIES

The RHAC, Inc. Board conducted a analysis in 2021 of issues and circumstances that impact its decisions. The following emerged:

Strengths: Rodman Hall's unique 60-year history, art collection, exhibition record and education programs are the core assets that the Gallery brings to its transition into the future. Peter Harris, the founding director's contribution should be honoured and celebrated as a cornerstone of arts and culture in Niagara. The collection of over 1000 artworks, comprised primarily of Canadian historical through to contemporary art that was built largely through gifts from the local community, is an enormous source of pride. Brock University, whose diligent stewardship of the gallery and collection since 2003, is now transferring ownership of the collection to community along with significant endowments and financial gifts. These are a strong foundation upon which the community can build a new public art gallery. Brock is a wholehearted champion of the effort to establish a new gallery and they have dedicated crucial resources and advocated amongst future stakeholders for support of a future art gallery. This, coupled with the presence and dedicated work of volunteers and board members, will ensure that the future gallery is relevant and responsive to its community. The apparent political will of civic leaders to support strategic planning and development of new visual arts infrastructure is also a highly positive factor.

Challenges: The obstacles facing RHAC, Inc. are complex and multifaceted - requiring purposeful direction and an iterative approach with multiple initiatives and activities occurring at the same time. For the remainder of 2021 RHAC, Inc. must balance care and storage for the collection with development of modest operations that enable temporary, collaborative and popup art projects to keep it present as a community asset. At the same time RHAC, Inc. must establishment legal and accounting and HR frameworks and undertake necessary strategic planning and business modeling so that it is well positioned to attract stakeholders, grants and donors. The Board is acutely aware that political will and financial support from the community is key to its near-term survival and to its future viability.

Uncertainty, over the past several years, regarding the how RHAC would transition to the community has meant that the public knows little about the disposition of the gallery. As a result, RHAC, Inc. must rebuild connection the arts and culture community as well as general public. With Brock University having been the single, funding stakeholder for many years, RHAC, Inc. finds itself having to build a new base of stakeholders to sustain the gallery for the future. Without this, the organization faces an incapacity to operate as it once did and therefore its possible future viability.

Opportunities: RHAC, Inc. is poised to re-kindle its relationship with its community and reimagine how it will be an art gallery for the people of St. Catharines and the Niagara Region in a fiscally prudent and sustainable manner. RHAC, Inc. should develop a robust business model that broadens its base of financial support to include government and grant-based funders, philanthropic donations, sponsorship and earned revenues among other revenue streams. With the City of St Catharines preparing to engage in critical culture and civic space planning processes, RHAC, Inc. should position itself as a strategic partner that is committed to life-long learning through the arts, enhancing the quality of life of the community while also contributing to the social and economic fabric of the city and of the region. Building on its rich 60-year legacy the Gallery looks forward to being a reflection of the region by broadening its audience and base of stakeholders, collaborators and partners as it prepares to take on significant projects and physically re-locate to a more accessible location where it can offer a responsive and relevant program that showcases its collection and presents engaging high quality visual art programs.

Appendix 2A

PROGRAM A: COLLECTION MANAGEMENT**OBJECTIVE**

Ensure that the art collection is protected, enhanced and appreciated.

STRATEGIES

A 1 Move and store collection

A 2 Facilitate public and scholarly access to collection **A**

3 Manage the collection to museum standards

STRATEGY A1: Move and Store Collection

| ACTION | TIMING | RESPONSIBILITY |
|---|-----------------------|--|
| A1.1 Locate, evaluate facilities, and move collection to selected facility(s) suitable for the various levels of care required | Jun. – Aug. 2021 | Collection Registrar Board |
| A1.2 Obtain approvals and move outdoor sculptures to City of St. Catharines downtown sites | Jun. – Sep. 2021 | Board Chair |
| A1.3 Monitor collection and report on collection conditions to appropriate authorities. | Aug. 2021 ongoing | Collection Registrar Director/Curator |
| A1.4 Develop consortium of public art galleries, museums, and other institutions that manage cultural and historic archives to map needs, specify requirements and obtain funding for new collective region-wide museum storage facility | Jan. 2023 - Apr. 2024 | Director/Curator Board Regional Galleries Committee |

STRATEGY A2: *Facilitate Public and Scholarly Access to Collection*

| ACTION | TIMING | RESPONSIBILITY |
|--|------------------------------------|--|
| A2.1 Produce online collection catalogue with details and images (leveraging public domain copyright permissions) of the collection | Oct. 2021 | Collection Registrar Collection Assistant |
| A2.2 a) Establish policies for the loan of artworks to other qualified institutions b) Facilitate loans to qualified institutions for exhibition of works from the collection | Dec. 2021 Sep. 2021 ongoing | Collection Registrar Collection Registrar Admin/Community Engagement Coordinator Director/Curator |
| A2.3 Support curators and scholars in examination and research related to the collection | Sep. 2021 ongoing | Collection Registrar Director/Curator Admin. Coordinator |

STRATEGY A3: *Manage the Collection to Art Museum Standards*

| ACTION | TIMING | RESPONSIBILITY |
|--|------------------------------|--|
| A3.1 Systematically gather increasing level of copyright permissions for works in the collection that do not fall under public domain so that images of these works can be used in online catalogue of collection, exhibitions and marketing. | Jul. 2021 ongoing | Collection Registrar Collection Assistant Admin. Coordinator |
| A3.2 Review and revise collection policy | Jun. – Dec. 2022 | Director/Curator Board |
| A3.3 Identify items in the collection that do not conform to policy. deaccession to raise funds for care of the collection | Jan. – Dec. 2023 and ongoing | Director/Curator Board |

Appendix 2b

PROGRAM B. ARTISTIC PROGRAM

(exhibitions, creative projects, and related events)

OBJECTIVE

Demonstrate the value and purpose of a future public art gallery through the creation of curated exhibitions of professional calibre and related events during a period when the gallery will have not have a dedicated facility

STRATEGIES

- B 1** Leverage the Rodman Hall Art Centre Collection as a vital community asset in collaboration with existing institutions
- B 2** Present the work of artists from the region and elsewhere
- B 3** Develop community outreach activities to complement and extend exhibitions.

STRATEGY B1: *Leverage the Collection as Vital Community Asset in Collaboration with Existing Institutions*

| ACTION | TIMING | RESPONSIBILITY |
|---|------------------------------------|--|
| B1.1 Create integration of program and communications that fosters awareness of the collection | Jun. -Aug. 2021 | Board Communications Committee Admin/Community Engagement Coordinator |
| B1.2 Develop and market virtual 3D exhibition – Favourites from the Rodman Hall Art Centre Collection | Oct. – Nov. 2021 | Collection Registrar Collection Assistant Board Chair |
| B1.3 Develop and disseminate video documentary of the Favourites from the Rodman Hall Art Centre Collection with commentary from community members | Nov. 2021 ongoing | Board Chair Contract Project Coordinator Contract Video Artist |
| B1.4 Produce Downtown Public Art Walk featuring Rodman Hall Art Centre and other sculptures. Support this with signage and wayfinding | Oct. 2021 – Sept. 2022 and ongoing | Admin/Community Engagement Coordinator Board Chair Staff City of St.Catharines |

| | | |
|--|------------------------|---|
| tools and program of community engagement activities and events. | | Contract Project Coordinator |
| B1.5 Create three large-scale high-impact, vinyl outdoor murals in downtown St. Catharines that present significant works from the collection | Jun. 2022 to Sep. 2023 | Director/Curator St.Catharines Downtown Association Program Coordinator |
| B1.6 Present exhibition works from the collection that showcases Niagara artists and subjects in collaborating institution | Sept. – Dec. 2023 | Director/Curator Program Coordinator St.Catharines Museum |
| B1.7 Develop in collaboration with other public art galleries in the region an exhibition of artworks from the collection that highlights works by major International and Canadian artists | Apr. – Dec. 2024 | Director/Curator Program Coordinator RiverBrink Art Museum |

STRATEGY B2: *Present the Work of Artists from the Region and Elsewhere*

| ACTION | TIMING | RESPONSIBILITY |
|---|---|--|
| B2.1 Develop 3-year program of curated exhibitions and complementary public events (in collaboration with public art galleries in the region) to celebrate leading artists whose work is relevant to Niagara | Jun. 2021 | Director/Curator Contract Project Coordinator |
| B2.2 Augment Downtown Public Art Walk with inclusion of outdoor work(s) by regional artist(s) to complement works already included in project | Apr. 2022 - Jun. 2023 | Director/Curator Program Coordinator |
| B2.3 Seek Federal and other funding and establish curated biennial exhibition of artists from the Niagara region to be hosted simultaneously at multiple Niagara public art galleries. | Feb. 2023 | Director/Curator Program Coordinator Board TBD Committee |
| B2.4 With support from federal and provincial governments undertake planning for a major curated International Installation Art Festival with projects from leading artists from the region, Canada and other nations to be distributed throughout the region at public art galleries and wineries/breweries/distilleries. | Planning to commence in Jan. 2022 - Dec. 2023 | Director/Curator Board TBD Committee with Regional Galleries Committee |

| | | |
|---|-----------------------|--|
| B2.5 Exhibition of art banners throughout the city commissioned by regional artists | Sep. 2023 – Dec. 2024 | Director/Curator Program Coordinator |
| B2.6 Produce International Installation Art Festival described that is a significant cultural and tourist initiative with a duration of 2 seasons and that is supported by funding from federal, provincial, regional and city governments and by sponsorship from the Niagara wine and beverage industries. | May 2024 – Nov. 2025 | Director/Curator Board/Regional Committee Contract Curator |

STRATEGY B3: *Develop Community Outreach Activities and Collaborations*

| ACTION | TIMING | RESPONSIBILITY |
|---|------------------------------|---|
| B3.1 Produce a 'talk-back' event featuring responses of marginal and non-traditional audiences to the Favourites from the Collection exhibition. | Jan. 2022 | Program Coordinator |
| B3.2 Create wayfinding, online and face-to-face tours and community conversations to engage diverse communities in the Downtown Public Art Walk | Apr. 2022 | Program Coordinator |
| B3.3 Facilitate with the St. Catharines Library, visual art reading group. | Sep. 2022 ongoing | Director/Curator Program Coordinator |
| B3.4 Develop and implement Wellness Through Visual Arts program in collaboration with the Niagara Health system | Sep. – Dec. 2022 and ongoing | Program Coordinator Contract Project Coordinator |
| B3.5 Collaborate with public art galleries, private galleries and local businesses in the region on bus tours to enable broad regional audiences to access art exhibitions across the region | Jan. 2023 ongoing | Program Coordinator |
| B3.6 Create in collaboration with Niagara public art galleries a jointly operated community art education program designed to serve children, youth and adults in Cities across Niagara | Mar. 2023 and ongoing | Board/Regional Gallery Committee Program Coordinator Contract Staff |

Appendix 2C

PROGRAM C: COMMUNITY ENGAGEMENT**OBJECTIVE**

mobilize our community to enable and sustain dialogue, involvement and transformation through the visual arts.

STRATEGIES

- C1** Develop communications strategy that will create a new brand identity that resonates with the community
- C2** Build community vision and sense of ownership for our public art gallery
- C3** Pursue long-term sustainability and partnerships

STRATEGY C1: *Develop and Implement Communications and Marketing Strategy that will Create Brand Identity and Call to Action that Resonates with the Community*

| ACTION | TIMING | RESPONSIBILITY |
|---|----------------------------|--|
| C1.1 Establish brand and implement across types of platforms (website, social media) and all communications | Jun. – Sep. 2021 | Board Communications Committee Admin/Community Engagement Coordinator |
| C1.2 Develop messaging and deploy it across media platforms and in all advocacy and communications | Jun.-Sep. 2021 | Board Communications Committee Admin/Community Engagement Coordinator |
| C1.3 Establish marketing program to broad community: Newsletter, Farewell to Rodman Hall event in August, Information townhalls in the fall | Jun.– Oct.2021 and ongoing | Board Communications Committee Admin/Community Engagement Coordinator Director/Curator |
| C1.4 Plan and implement advocacy campaign among arts organizations, potential partners, governments to advance the establishment and funding of a new public art gallery | Jun. 2021 ongoing | Board Communications Committee Admin/Community Engagement Coordinator Director/Curator |

| | | |
|---|-----------------------|--|
| C1.5 Develop joint marketing campaign among public art galleries in Niagara to drive greater awareness of programs among the arts audience in Niagara and amongst tourists. | Apr. 2022 and ongoing | Board/Regional Gallery Committee Director/Curator |
| C1.6 Establish consortium of public art galleries in Niagara to support a regional art gallery brand and to cross-marketing of exhibitions, programs and events in the participating art galleries | Jan. 2024 and ongoing | Board/Regional Gallery Committee Director/Curator |

STRATEGY C2: *Build Community Vision and Investment*

| ACTION | TIMING | RESPONSIBILITY |
|--|------------------------|--|
| C2.1 Build working RHAC, Inc. board committees with board and new community members that is inclusive of the diversity of stakeholder communities that will benefit from a new public art gallery (indigenous, racialized and marginalized) | Jun. – Dec. 2021 | Board Admin/Community Engagement Coordinator |
| C2.2 Roll out advocate speakers (from board and committees) to service clubs, media interviews, and other public speaking roles | Jun. 2021 ongoing | Board and Committees |
| C2.3 Identify and enlist RHAC, Inc. champions to speak and advocate on our behalf. | Sep. 2021 ongoing | Board Admin/Community Engagement Coordinator |
| C2.4 Pursue relevant short-term and project funding to enable compelling and accessible programs. Early priority is funding from City 2022 budget and beyond | Jun. 2021 ongoing | Board Chair Admin/Community Engagement Coordinator Director/Curator |
| C2.5 Implement broad and inclusive community visioning event(s) and stakeholder consultations that engage the community in imagining and defining the short-, medium- and long-term future of a public art gallery for St. Catharines and Niagara | Jan. – Jun. 2022 | Board Strategic Planning Committee External Cultural Consultant Director/Curator |
| C2.6 Develop and implement “Friends of” Campaign | Sept. 2022 and ongoing | Board Fundraising Committee Admin. Coordinator |

| | | |
|--|------------------------|--|
| C2.7 Establish a youth action council that will advise and guide future planning for a public art gallery and all its programs. | Jan. 2023 and ongoing | Board Director/Curator |
| C2.8 Produce Gala Fundraising event | Feb. 2023 Feb. 2024 | Board Fundraising Committee Program Coordinator |
| C2.9 Develop a annual public weekend event focused on building awareness and excitement about a future public art gallery. | Jun. 2023 and ongoing | Board Fundraising Committee Program Coordinator |

STRATEGY C3: Pursue Long-Term Sustainability Partnerships and Fundraising

| ACTION | TIMING | RESPONSIBILITY |
|---|--------------------------|---|
| C3.1 Identify sustainability partners and build relationships around partner terms of reference and focusing on mutual benefit | Jun. 2021 – Jun. 2023 | Board Admin/Community Engagement Coordinator External Cultural Consultant |
| C3.2 Identify relevant funding and grant opportunities at all levels of government; prioritize and pursue grant writing and applications | Jun. 2021 ongoing | Admin/Community Engagement Coordinator Director/Curator Program Coordinator |
| C3.3 Present proposals to City of St. Catharines for early-stage project-based support for 2022, 2023 | Jun. 2021 Jun. 2022 | Board Admin/Community Engagement Coordinator |
| C3.4 Develop comprehensive fundraising strategy | Oct. 2021 ongoing | Board Fundraising Committee Admin/Community Engagement Coordinator |
| C3.5 Identify and build relationships with prospective angel donors and private-sector foundations | Oct. 2021 ongoing | Board Admin/Community Engagement Coordinator |
| C3.6 Identify and pursue potential operational funding stakeholders and initiate a stewardship plan. | Jan. - Jun. 2022 ongoing | Board Director/Curator |

| | | |
|---|-----------------------------------|---|
| C3.7 Establish endowment fund with the Community foundation of Niagara for operation of the public art gallery | Jun. 2022 | <u>Board</u> <u>Director/Curator</u> |
| C3.8 Apply for new project funding from Ontario Art Council and Canada Council for the Arts leading to establish track record and eligibility for future operational funding | Jun. 2022, 2023, 2024 and ongoing | Director/Curator Program Coordinator |

Appendix 2D

PROGRAM D: STRATEGIC PLANNING**OBJECTIVE**

Create relevant, inspiring, and effective plans that bring the community, stakeholders, board, volunteers and staff, and stakeholders together around defining common goals, performance measures, and means for implementation

STRATEGIES

- D1** Environment Scan, Community Visioning and Benchmarking
- D2** Mid-term Strategic Directions, Business Plan and Stakeholder Commitments
- D3** Site Selection and Feasibility Analysis
- D4** Plan and Establish Capital Infrastructure Project

STRATEGY D1: *Environmental Scan, Community Visioning and Benchmarking (pre-steps to strategic planning)*

| ACTION | TIMING | RESPONSIBILITY |
|---|------------------|---|
| D1.1 Board planning retreat to conduct preliminary environmental scan, risk analysis, stakeholder identification | Jan. 2022 | Board External Cultural Consultant |
| D1.2 Report on analysis of key issues and workshops for board, staff and potential stakeholders | Feb. 2022 | Board External Cultural Consultant |
| D1.3 Update Preliminary Business Plan with research including - community consultation and visioning sessions, market awareness and capacity study, stakeholder and fundraising feasibility study (ongoing operation and capital-build), economic impact study | Mar. - May 2022 | External Cultural Consultant Director/Curator Board Executive |
| D1.4 Analysis of D1.3 and development of future-oriented business model and plan for permanent gallery including revenues and expenses related to future and ongoing | Jun. – Sept 2022 | External Cultural Consultant Board Executive |

| | | |
|--|--|--|
| operation and programs as well as capital/build considering naming opportunities | | |
|--|--|--|

STRATEGY D2: *Mid-term Strategic Direction, Business Model, and Stakeholder Commitments*

| ACTION | TIMING | RESPONSIBILITY |
|--|------------------|---|
| D2.1 Board retreat for review of community consultation, review of foundation statements, scenarios goalsetting for revenue development | May. 2022 | Board Director/Curator External Cultural Consultant |
| D2.2 Strategic and business modeling process leading to full-scale roadmap for development of permanent public art gallery. | Jun. – Sep. 2022 | External Cultural Consultant Board Executive |
| D2.2 Stakeholder consultations in support of the fundraising plan | Sep. 2022 | External Cultural Consultant Board Fundraising Committee |
| D2.3 Establish stakeholder commitments and stewardship | Jan. – Jun. 2023 | Board Fundraising Committee Director/Curator |
| D2.4 Develop and roll out fundraising and marketing plan | Jun. – Dec. 2023 | Board Fundraising Committee |

STRATEGY D3: *Site Selection and Feasibility Analysis*

| ACTION | TIMING | RESPONSIBILITY |
|--|-----------------------|---------------------------------|
| D3.1 Identify site(s) | Jan. – Sep. 2023 | Board |
| D3.2 RFP and selection of consultant for feasibility analysis | Sep. 2023 | Board Executive |
| D3.3 Conduct feasibility analysis that includes full economic impact and estimate of preliminary buy-in from potential stakeholders | Oct. 2023 – Jan. 2024 | External Feasibility Consultant |

STRATEGY D4: *Plan and Establish Capital Infrastructure Project*

| ACTION | TIMING | RESPONSIBILITY |
|---|-------------------|--|
| D4.1 Match operational and community needs with cost projections | Jan. - Apr. 2024 | Board Capital Project Committee Director/Curator |
| D4.2 Develop capital fundraising case and strategy to support new cultural infrastructure campaign. Set campaign goals | Jan. – Jun. 2024 | Board Capital Project and Fundraising Committees Director/Curator |
| D4.3 Define, prioritize, and pursue funding opportunities at the federal and provincial level to support elements of arts infrastructure | June. – Dec. 2023 | Board Capital Project Committee Director/Curator |
| D4.4 Pursue and establish partnerships for capital infrastructure project | Apr. – Sep. 2024 | Board Capital Project Committee Director/Curator |
| D4.5 Preliminary functional plan leading to renovation or facility design | Sep. – Dec. 2024 | Board Capital Project Committee Project Partners External Feasibility Consultant |
| D4.6 Update business plan re capital project budget for fundraising and marketing | Sep. – Dec. 2024 | Board Capital Project Committee External Feasibility Consultant |

Appendix 2E

PROGRAM E: ADMINISTRATION**OBJECTIVE**

Provide professional and effective operational infrastructure for management of the Rodman Hall Art Centre collection and core artistic and community programs and support strategic and capital project planning

STRATEGIES

- E1** Expand and mature operation capacities
- E2** Establish and maintain operational systems
- E3** Conclude agreements, approvals and governance requirements
- E4** Pursue sources for contributed and earned revenue for operation and capital project

STRATEGY E1: *Expand and Mature Operation Capacities*

| ACTION | TIMING | RESPONSIBILITY |
|---|-----------------------|--|
| E1.1 Engage Collection Registrar and other staff for collection audit and planning/ facilitation of the collection's move into storage | Jan. 2021 ongoing | Board |
| E1.2 Engage Interim Administration and community engagement support | Jun. – Dec. 2021 | Board |
| E1.3 Engage project coordinators and other service providers as necessary for realization of 2022 programming | Jun. 2021 – Dec. 2022 | Board |
| E1.4 Engage Interim Director/curator (3-year contract) | Jan. 2022 | Board HR Committee |
| E1.5 Develop phased staffing plan to include administrative and programming coordinators | Feb. – Mar. 2022 | Board HR Committee Director/Curator |
| E1.6 Implement phased staffing plan | Apr. 2022 ongoing | Director/Curator |

| | | |
|--|---------------------|---|
| E1.7 Engage grant-writer to pursue wide range of funding opportunities consistent with core mission. | Apr. 2022 - ongoing | Director/Curator |
| E1.9 Update operational Business Plan and engage City in operational budget planning | Jun. 2023 | External Cultural Consultant Director/Curator Board Executive |
| E1.10 Develop capital fundraising case and strategy to support new cultural infrastructure campaign. Set campaign goals | Jan. – Jun. 2024 | Board Capital Project and Fundraising Committees |

STRATEGY E2: *Establish Operational Systems*

| ACTION | TIMING | RESPONSIBILITY |
|--|------------------|---|
| E2.1 Engage accountant and bookkeeper for year end and monthly accounts | May. 2021 | Board Chair |
| E2.2 Identify and establish productivity, project management and communication tools | Jun. – Jan. 2021 | Board Chair |
| E2.3 Establish office and IT services | Sep. 2021 | Admin/Community Engagement Coordinator Board Executive |
| E2.4 Renew access to NOVA system (Ontario Arts Council) | Jan. 2022 | Director/Curator |
| E2.5 Establish administrative systems for Human Resources management, fundraising and donor relations | Jan. 2022 | Director/Curator |
| E2.6 Establish financial planning policies to enable investments and manage income from endowments | Jan. – Apr. 2022 | Board Executive or Finance Committee |

STRATEGY E3: Conclude Agreements, Approvals and Governance Requirements

| ACTION | TIMING | RESPONSIBILITY |
|---|-----------------------|---|
| E3.1 Conclude agreement with Brock University for transfer of collection, endowments and startup fund (includes legal consultation) | Jun. 2021 | Board Negotiating Committee |
| E3.2 Gain approvals from Ministry of Canadian Heritage Movable Cultural Properties and Designation of Institutions regarding transfer and storage of collection. | Jun. 2021 | Board Chair and Brock University |
| E3.3 Achieve charitable registration, amend articles of incorporation, amend bylaws following legal consultation | Jun. – Dec. 2021 | Board Chair |
| E3.4 Establish core board working committees (executive, communications, finance, nominating) | Jun. – Sep 2021 | Board Admin/Community Engagement Coordinator |
| E3.5 Consult with and develop early-stage agreements for civic financial support (City and Region) | Jun. 2021 – Jun. 2022 | Board Executive Admin/Community Engagement Coordinator |
| E3.6 Develop mid-term agreements for civic financial support (City and Region) | Jun. – Dec. 2024 | Board Executive Director/Curator External Cultural Consultant |

STRATEGY E4: Pursue sources of Contributed and Earned Revenue for Operation and Capital Project

| ACTION | TIMING | RESPONSIBILITY |
|--|------------------|--|
| E4.1 Develop comprehensive list of one time and recurring arts project funding opportunities and plan for grant writing | Sep. - Oct. 2021 | Admin/Community Engagement Coordinator |
| E4.2 Research and pursue charitable foundations and angel funders in the cultural sector | Sep. - Oct. 2021 | Admin/Community Engagement Coordinator |

| | | |
|--|--------------------------------------|---|
| E4.3 Examine, weigh and map opportunities for generation of earned revenue | Oct. – Nov. 2021 | Admin/Community Engagement Coordinator Board |
| E4.4 Close outstanding Canada Council grant by producing artist catalogue | Oct. 2021 | External Contractor Board Chair |
| E4.5 Grant applications for artistic program project funding from civic agencies, Ontario Arts Council, Canada Council for the Arts for 2022 and 2023 | Mar. – Sep. 2022 Mar. – Sep. 2023 | Director/Curator Program Coordinator |

Appendix 2F

PROGRAM F: VOLUNTEERS**OBJECTIVE**

Provide an enjoyable, educational and participative program for gallery volunteers

STRATEGIES

- F1** Foster a vibrant volunteer program that reflects community commitment to the future sustainability of the cultural life of the region

STRATEGY F1: Foster Vibrant Volunteer Program

| ACTION | TIMING | RESPONSIBILITY |
|--|------------------------|---|
| F1.1 Establish sustainable plan for volunteer engagement that includes roles, tasks/skills matching and safety requirements | Nov. 2021. – Feb. 2022 | Board Volunteer Committee Admin/Community Engagement Coordinator |
| F1.2 Identify and implement management system for volunteers | Nov. 2021. – Feb. 2022 | Board Volunteer Committee Admin/Community Engagement Coordinator Director/Curator |
| F1.3 Conduct volunteer drive | Feb. 2022 | Director/Curator |
| F1.4 Present annual volunteer training sessions | Apr. 2022 ongoing | Director/Curator |



Corporate Report City Council

Report from: Engineering, Facilities and Environmental Services, Engineering and Construction (EFES) and Financial Management Services (FMS), Corporate Asset Management

Report Date: September 7, 2021

Meeting Date: September 22, 2021

Report Number: EFES/FMS-146-2021

File: 68.81.99 & 10.7.10

Subject: 2021 Asset Management Plan for Core Assets

Strategic Pillar:

This report aligns with the following St. Catharines Strategic Plan pillars: economic, social, environmental, and cultural.



Recommendation

That Report EFES/FMS-146-2021, regarding the 2021 Asset Management Plan, be referred to City Council for consideration of the Staff Recommendations at the Council meeting of October 4, 2021

Staff Recommendation

That Council endorse the 2021 Asset Management Plan, attached as Appendix 1, and

That Council continues to support the monitoring and improvement initiatives identified in the Asset Management Plan that will continue to strengthen the City's corporate asset management practices.

Summary

The 2021 Asset Management Plan for the City's core assets (AMP) valued at more than \$5 billion is a strategic guide that supports asset related activities.

The AMP provides a description of City's core assets and the services they support, key performance indicators, and costs to continue to provide services into the future.

The AMP identifies a funding deficit in the tax expenditures required to maintain infrastructure in its current state, largely due to significant infrastructure backlogs. For these tax supported services, the City will need to either reduce service offerings or increase funding to close the funding gap.

The AMP for the self-supported services reflects the impact of the increased funding that was incorporated into the 2019 Water Wastewater Financial Plan. While current funding supports the current service levels, moving forward, further increases in targeted service levels for drinking water and wastewater services may require additional funding.

The AMP for the City's core assets satisfies the Provincial Regulatory requirements (O. Reg. 588/17) due before July 1, 2022. In the upcoming years, AMPs will be prepared for the City's other assets, in compliance with the other phased requirements of O. Reg 588/17.

The AMP also identifies areas for continued improvement in asset management practices and planning that will support making the best possible decisions regarding infrastructure. Staff will continue to work collaboratively to develop long-term financial sustainability strategies that balance service levels, costs, and risks.

Relationship to Strategic Plan

The AMP is a high-level strategic document and, as such, it is aligned with and also supports each pillar of the Strategic Plan. The AMP is a foundational document, to assist the City in creating long-term strategies to chart a course that ensures the City of St. Catharines is a dynamic, innovative, sustainable, and livable community.

Specifically, the recommendation of this report supports the Economic Prosperity pillar within the Strategic Plan as it supports the following key work;

1.1 Develop a Financial Plan as an overarching guiding document that informs all financial decisions and investments.

1.2 Develop a 10-Year Capital Infrastructure Plan that includes all major investments to address City needs, priorities and growth.

Background

Ontario has focused on municipal asset management planning since 2012 when it introduced Building Together: Guide for Municipal Asset Management Plans.

The City developed its first asset management plan in 2013.

While many municipalities in Ontario developed asset management plans, significant differences exist between the completeness, detail, methodology and assumptions municipalities use to develop their current plans. In December 2017, the

province introduced a regulation to guide municipal asset management planning. Provincial Regulation 588/17: Asset Management Planning for Municipal Infrastructure Regulation (O. Reg. 588/17) <https://www.ontario.ca/laws/regulation/r17588>, made under the *Infrastructure for Jobs and Prosperity Act, 2015*, and it came into force on January 1, 2018. O. Reg. 588/17 sets out legislated asset management requirements and reporting deadlines for municipalities which are phased in over four stages. It has since been amended on March 15, 2021 to extend regulatory timelines for phases 2, 3 and 4 by one year. The amended phased schedule is shown below.

Phased schedule

July 1, 2019: Date for municipalities to have a finalized strategic asset management policy that promotes best practices and links asset management planning with budgeting, operations, maintenance, and other municipal planning activities.

July 1, 2022: Date for municipalities to have an approved asset management plan for core assets (roads, bridges and culverts, water, wastewater, and stormwater management systems) that identifies current levels of service and the cost of maintaining those levels of service.

July 1, 2024: Date for municipalities to have an approved asset management plan for all municipal infrastructure assets that identifies current levels of service and the cost of maintaining those levels of service.

July 1, 2025: Date for municipalities to have an approved asset management plan for all municipal infrastructure assets that builds upon the requirements set out in 2024. This includes an identification of proposed levels of service, what activities will be required to meet proposed levels of service, and a strategy to fund these activities.

The City completed the first stage with the adoption a [Strategic Asset Management Policy](#) on April 10, 2019.

On April 8, 2020, GM Blueplan Engineering Limited (GMBP) was retained to develop a corporate asset management plan (AMP) (2020 by-law No. 2020-42, as amended), in order to meet the requirements set out in O. Reg. 588/17 for core assets and for the subsequent development of an asset management plan for the remaining assets identified in the RFP.

The adoption of this AMP will meet the regulatory requirements for Core assets.

In order to further the City's plans to incorporate climate change with Council's endorsement, an application was made for a grant opportunity from the Federation of Canadian Municipalities' Municipal Asset Management Program for Enhanced Climate Change Assessment in conjunction with the Consulting Services for a Corporate Asset Management Plan (EFES-100-2020)

Report

The City owns a wide variety of assets that support the multiple services the City provides. Many of these services that are critical to the people of St. Catharines, rely on well-planned and well-maintained infrastructure.

O. Reg. 588/17 sets out legislated asset management requirements and reporting deadlines for municipalities. In March 2021, the province extended the reporting timelines by one year to assist with challenges many municipalities were having in meeting the deadlines while responding to the COVID 19 Pandemic.

Under the guidance of GMBP the City has worked over the past 16 months to improve asset management planning in-line with industry best practices. GMBP has produced this AMP in consultation with staff. Adoption of this report will achieve compliance with Phase 2 of the regulation ahead of the current July 1, 2022 requirements for core assets. O. Reg. 588/17 requires that this AMP must be approved by a resolution passed by Council.

The current AMP encompasses the core assets defined in O.Reg. 588/17 (roads, bridges and culverts, water, wastewater, and stormwater management assets) as well as additional transportation assets such as sidewalks and trails that support active transportation needs which help support complete streets.

2021 Asset Management Plan - The Purpose of the Plan

Asset management planning is a comprehensive process ensuring delivery of services from infrastructure is sustainable. This AMP details information about infrastructure assets with actions required to provide current levels of service while outlining associated risks. The plan defines the services provided, how the services are provided and what funds are required over the 10 and 25-year planning period.

The 2021 plan has been focused around the following service areas which include the core assets identified in the Regulation.

| Service | Supporting assets |
|---|--|
| Transportation: Provide a safe, efficient, accessible, and sustainable transportation system for all required uses and modes of transportation in accordance with regulatory requirements and expectations of the community | Core assets: Roads including on road cycling facilities; Other Assets: Road signage, streetlights and signals, guiderails. Sidewalks, trails, and pathways identified as active transportation routes |
| Structures: Connect transportation routes to provide a safe, efficient, accessible, and sustainable transportation system for all required uses and modes of transportation in accordance with regulatory requirements and expectations of the community | Core assets: Bridges and culverts (greater than 3m in span) Other Assets: Smaller span culverts/bridges over watercourses |

| Service (continued) | Supporting assets |
|--|---|
| Drinking water: Provide a sustainable and reliable supply of safe, high quality drinking water in accordance with regulatory requirements. | Core Assets: watermains including watermains and services and other associated components. Water metres, one booster pump station and one bulk water facility (water lines to service City owned facilities are in the Building and Facilities service) |
| Wastewater: Provide sustainable and reliable collection of wastewater that avoids basement flooding and environmental impacts. | Core Assets: Combined and separated sewers, forcemains and services and other associated components. CSO facilities and one pump station. (drains to service City owned facilities are in the Building and Facilities service) |
| Stormwater Management: Provide effective, sustainable, and reliable drainage of stormwater to both protect and benefit the community and environment. | Core assets: storm sewers and open channels along with Catch basins, outfall and other appurtenances. Oil grit separators and other treatment and or storage control devises such as wetlands and ponds. |

The above infrastructure assets have an estimated replacement cost of \$5.02 billion and significant total renewal needs over the next 10 years.

This AMP describes

- the City's core assets and the services they support,
- the strategies used to manage these assets
- current level of service (condition of the assets)
- how much it will cost to continue to provide services into the future.

For each service area the AMP provides information on state of local infrastructure, levels of service, lifecycle management strategy, risks, and data confidence.

State of Local Infrastructure

From existing inventories, assets were grouped into the services they provide. The State of the Local Infrastructure provides a summary of what the City owns, the condition of the assets and what they are worth. The plan also documents the information on data used and the assumptions made to fill gaps in the data. As the city continues to improve data the plan will improve over time.

Levels of Service

To establish the current level of service a number of qualitative and technical metrics were developed with some key performance indicators (KPI) to track going

forward which will help define how the services are currently being delivered. Current service levels and performance measures, will establish a benchmark for setting targeted performance levels that are appropriate and financially sustainable when required under phase 4 of the legislation by July 1, 2025.

The City's anticipated tax supported funding levels are insufficient to continue to provide existing levels of service. The main service risks of the anticipated annual funding for tax supported services are:

- Condition of assets will gradually deteriorate over time
- Failure of assets could cause property damage and risks to health and safety
- Some assets may deteriorate to a point of being unsafe and need to be closed and/or removed from service
- Valuable connections throughout the City that connect communities and support active transportation and the movement of goods and services could be lost

The City's rate supported funding levels were increased through the adoption of the 2019 Water, Wastewater Financial Plan. The annual increase in funding included in the plan was intended to increase service levels for drinking water and wastewater. The AMP reflects how these funding increases above historic levels are raising service levels for the City's customers.

Lifecycle Management Strategy

The AMP looks at the lifecycle activities that need to be undertaken to maintain the current levels of service. The forecast lifecycle costs necessary to provide the services covered by this AMP includes operations and maintenance, renewal, expansion, and disposal of assets.

Under the current funding model water and wastewater services are funded primarily through the rate supported budget. The structures, transportation and the stormwater management services are currently funded through the tax supported budget. As such the analysis for lifecycle management and financial strategy is split into these two major service areas.

The forecast required expenditures to maintain current levels of service for the rate-based assets (water and wastewater) between 2022-2032 is estimated at an equivalent annual cost of \$27 million. The forecast required expenditures to maintain current levels of service for the tax-based assets (storm, transportation and structures) between 2022-2032 is estimated at an average annual cost of \$42 million.

Data Confidence

The plan was completed with the best available data at the time. The AMP documents the information on data sources and the assumptions made to fill gaps in the data. This is of particular importance for the underground infrastructure which cannot be easily visually inspected. The City has a number of ongoing initiatives to enhance condition data and

capacity needs. This improved data will continue to be incorporated over time to improve the reliability of the data.

Expansion of Services

The demand for new services is often created by:

- Population increase and changing demographics
- Lifestyle and shifting trends
- Climate Change/ Extreme weather events
- Community expectations

Population growth forecasts, historical budgets and works identified in the recently completed Transportation Master Plan and Development Charges Study were used to identify expansions to the networks. As master servicing studies are completed, and the public is further engaged these numbers will be further refined.

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and service expectations. Demand management practices can include non-asset solutions, insuring against risks and managing failures. Opportunities for demand management will be further developed in future iterations of the AMP as more information becomes available.

Financial Summary

Anticipated funding for tax supported services is derived from past budget information and 2022-2025 Capital Forecast. For the rate-based services all forecasts are aligned with the 10-year Water/Wastewater Financial Plan, and beyond 2029, amounts are held at 2029 levels. Figure 1 below shows that for the tax supported services the average anticipated funding is significantly below the forecast cost to maintain the current average condition. Also, over the next twenty-five years funding would need to grow by 8.09% annually to meet the cumulative tax supported expenditure needs.

Of note, the anticipated rate-based investments identified in the recent 10-year Water and Wastewater Financial Plan, which the City should continue to implement, are sufficient to maintain the current condition and forecast a slight improvement to service, however are still below the optimal renewals identified.

Figure 1: Forecasted Required Funding and anticipated Funding (in \$Millions)*

| Major Service Area | 2022 - 2032 Average Annual | | | 25 year cumulative | |
|--|--|---|-----------------------------|-----------------------------|---|
| | Forecast costs for all identified activities | Forecast cost to maintain current average condition | Average Anticipated Funding | Cumulative Expenditure Need | Required Cumulative Funding on top of anticipated funding to maintain current average condition |
| Rate Supported (water / wastewater) | 53 | 27 | 31.0 | 869 | 0.34% (2030 -2046) |
| Tax Supported (stormwater / transportation /structures) | 52 | 42 | 21.2 | 1,152 | 8.09% |

*Values are in current dollars and do not include inflation

The reality is that the current infrastructure backlogs identified in the AMP were built over many decades. Likewise, the backlog and current gap will need to be addressed over a longer timeframe. Informed decision making depends on emphasizing the consequences of budgets on the service levels provided and risks.

As shown in Figure 1, the City currently does not allocate enough funding to sustain these tax supported services at the existing levels of service and to provide all new services being sought.

There are also different funding gaps for the individual service areas comprising each of these two major service areas. Reallocation of a portion of the total anticipated funding between different asset classes will result in adjusted levels of service and different funding gaps for the various service areas. In the short-term funding can be directed to critical assets with as focus on minimizing risks.

The City will also continue to seek funding solutions to close the infrastructure gap. Actions include lobbying higher levels of government for financial support and accessing grants. The City can also adopt funding strategies that fully utilize the longer debt terms available on long life infrastructure and evaluate options to switch grant funding to debt funding within the rate supported services.

Implementing and integrating asset management practices into operations and maintenance with a focus on preventative maintenance that extends the life of the assets and lower lifecycle costs can assist in addressing the funding gap.

In the long-term stakeholders should be engaged to determine the desired levels of service into the future and the willingness to pay for those services.

Managing Risks

Risk is generally considered to be the multiple of the consequence of an asset failing and the likelihood that the event will occur. Through the development of the AMP, in collaboration with the City's subject matter experts and based on best practices for risk, a risk management framework was developed for each of the asset categories. The intent is to minimize exposure to risk and focus limited funding on existing assets that have high financial, social and/or environmental consequences of failure. Where possible, existing data was used at the asset level to establish a consequence of failure score using a triple bottom line analysis approach to evaluate:

- Social impacts of asset failure, including impacts to customers and Businesses
- Environmental impacts of asset failure
- Economic impacts of failure including the cost to remediate the situation.

Anticipated Annual Funding levels are insufficient to renew all works identified in the medium term. The consequences are increase risks which generally include:

- General deterioration in the condition of the assets and potential safety risks for users
- Watermain breaks and sewer back ups could result in property damage
- Potential load restrictions or closures of structures resulting in potential closures of trails and sidewalks or roads

These risks will be managed within available funding by prioritizing spending based on the risk framework and monitor external funding opportunities to help assist in addressing the gap.

Future Plans

For Phase 3 Municipalities are required to expand their asset management plans to cover all infrastructure for current levels service by July 1, 2024. As part of the original assignment GMBP will work with staff to develop an AMP to meet these requirements. This plan will take a similar approach to incorporate other assets such as:

- City owned shoreline
- Buildings and Facilities (including fire)
- Fleet (including fire)
- Improved lands (including parks, playgrounds and sporting fields) and
- Corporate Infrastructure

The final phase in the regulation (required by July 1, 2025) requires that for each asset category the City shall be required to update the AMP to establish the levels of service

that the City proposes to provide for the next 10 years in accordance with qualitative descriptions and technical metrics. Completion of this phase requires Council to endorse target levels of service that would be selected after considering the related costs and related risk associated with the provision of different levels of service.

In order to be in a position to establish these levels the public will need to be engaged to research customer expectations and levels of satisfaction with those expectations. The Asset Management Working Group has identified the need to develop a communication plan and will work the City's communication staff to formalize this plan over the next year.

COVID-19 Pandemic

The COVID-19 pandemic may impact both funding and levels of service which will need to be assessed in more detail. Longer term changes precipitated by COVID-19 that impact our assets will be reflected in updates to the AMP once these changes can be identified and measured.

Climate Change

The impacts of climate change can have a significant impact on the assets we manage and the services they provide. In the context of the asset management planning process, climate change can be considered as both a future demand and/or a risk.

How climate change will impact on assets can vary significantly depending on the location and the type of services provided, as will the way in which we respond and manage those impacts.

Climate change has the potential to substantially affect the effectiveness and lifespan of infrastructure, and yet climate change is still one of the most complex challenges facing municipalities today. Addressing climate change falls under two categories, Mitigation (taking actions to reduce climate related impacts such as greenhouse gas effects) and Adaptation (changing policy, processes, designs and asset management strategies to reduce the risks and impacts from extreme weather and long-term climatic changes).

As a minimum the City should consider both how to manage its existing assets given the potential climate change impacts, and how to create resilience to climate change in any new works or acquisitions. Additionally, the way in which the City constructs new assets should recognize that there is opportunity to build in resilience to climate change impacts. Building resilience will have benefits of:

- Assets will better withstand the impacts of climate change in the future
- Services can be sustained into the future
- Assets that can endure impacts of climate change may potentially lower the lifecycle cost and reduce their carbon footprint

The City has recently commenced a Climate Changes Adaption and Asset Management Project which will expand the climate change sections of this AMP.

The project will integrate enhanced climate change considerations in the AMP. Detailed analysis will be done to determine probability of events, vulnerability and the development of detailed strategies to deal with how climate change might impact the performance of infrastructure assets and ultimately the level of service received by the customer. With this information, Council will be better able to make informed decisions when allocating resources to infrastructure.

Building off work already done by staff, GMBP will look at climate change events that would impact all assets and conduct a probability analysis. Then focus enhanced risk assessment and climate change adaption strategies for the water and wastewater assets. The methodology and framework developed for Water and Wastewater assets could then be applied across other asset classes in the future.

Monitoring and Improvement Plan

Asset management is continuously evolving. To ensure the City's asset management practices are aligned with best practices there should be continuous improvement of documentation, data, implementation of tools and resources that support asset management across the corporation. The next step is to take the recommendations for improvements from the AMP and refine the City's asset management strategy and roadmap, which will include:

- Condition assessments and studies (including CCTV infiltration and inflow studies and leak detection and other best practices)
- Modelling to determine existing and future capacity needs (considering climate change and growth)
- Decision support tools including IT solutions
- Resources including staffing

Financial Implications

The 2021 AMP should be used to guide prioritization of capital investment needs and potential funding strategies as part of the development of capital budgets, and forecasts, starting with the 2022 Capital Budget

Environmental Sustainability Implications

The AMP uses a triple bottom line approach to sustainability balancing economic, social, and environmental sustainability. All parts of an asset's lifecycle need to have a focus on sustainability including construction, operations, maintenance, renewal, replacement, and disposal in order to have increased environmental benefits and outcomes.

Direct sustainability and environmental benefits vary by asset class. For example, stormwater assets can lead to improved water quality outcomes and transportation assets can lead to reduced greenhouse gas emissions. The City will continue to embed environmental sustainability approaches into asset management programs and projects.

Conclusion

The City's 2021 AMP is being presented for Council's information and approval to achieve compliance with O. Reg. 588/17, Asset Management Planning for Municipal Infrastructure. The analysis contained in this report will be used to inform the ongoing work of the Asset Management Working Group and in the prioritization of capital investment needs and potential funding strategies as part of the development of capital budgets, and forecasts, starting with the 2022 Budget.

Moving forward, City staff guided by recommendations within the AMP will continue to advance the City's asset management processes in line with best practices. Non-core assets, as required by legislation will be worked into the next AMP which will further refine the overall funding gap analysis. Staff will continue to work collaboratively to develop long-term financial sustainability strategies that balance service levels, costs, and risks.

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Appendix

- Appendix 1 - 2021 Asset Management Plan



City of St. Catharines **2021 Asset Management Plan**



Foreword

We want our community to be one where citizens' way of life can continue long into the future and one that can withstand unexpected events and adapt to change.

Our success will be measured by our ability to embrace innovation, ensure sustainability, and improve the livability of the city for citizens of all ages, abilities, and backgrounds.

Well maintained infrastructure is a prerequisite to achieving this vision and ensuring a high quality of life in St. Catharines and communities everywhere.

Infrastructure assets support the provision of safe drinking water and wastewater capacity; powering economies through efficient movement of people and goods; provide venues for cultural expressions and community interaction; and promote healthy lifestyles.

Asset Management is the coordinated effort of the organization to realize value from infrastructure assets. This includes a systematic approach to managing the asset lifecycles while balancing costs, opportunities, and risks against the desired performance of the assets. This Asset Management Plan documents the current state of City assets, the desired levels of service, the lifecycle activities to support them, and the financing strategy to

fund the full asset lifecycle. Ultimately, it supports the City in making the best possible decisions regarding building, operating, maintaining, renewing, replacing, and disposing of infrastructure assets. It also helps achieve the following objectives:

- Ensuring that all City-owned infrastructure assets are sustainable into the future;
- Providing guidance on decisions related to infrastructure asset investment and divestment;
- Providing guidance in the development of standard maintenance and rehabilitation policies;
- Providing a framework for lifecycle and cost / benefit analyses; and
- Promoting better integration of infrastructure decisions within larger strategic, community and land-use goals.

With the development of this Asset Management Plan, the City is well positioned to embark on the next phase of the Asset Management process. This is a key component in achieving the City's vision of St. Catharines being the most dynamic, innovative, sustainable, and livable city in North America.

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Abbreviations

The table below provides a summary of the abbreviations referenced in this document.

| Acronym | Definition |
|---------|--|
| AM | Asset Management |
| AMP | Asset Management Plan |
| AODA | Accessibility for Ontarians with Disabilities Act. |
| BCI | Bridge Condition Index |
| BSC | Budget Standing Committee |
| CAE | Chief Administrative Officer |
| City | Corporation of The City of St. Catharines (City of St. Catharines) |
| CLOS | Customer Levels of Service |
| ESL | Estimated Service Life |
| FCM | Federation of Canadian Municipalities |
| KPI | Key Performance Indicators |
| LCA | Lifecycle Activities |
| LOS | Levels of Service |
| MACP | Manhole Assessment Certification Program |
| OSIM | Ontario Structure Inspection Manual |
| PACP | Pipeline Assessment Certification Program |
| PQI | Pavement Quality Index |
| PRV | Pressure Reducing Valves |
| ROW | Right-of-Way |
| SME | Subject Matter Expert |

| | |
|------|-------------------------------|
| TLOS | Technical Levels of Service |
| WSF | Wastewater Storage Facilities |



Glossary of Terms

The table below provides a summary of the definitions referenced in this document. Terminology within this document has been developed to align with the ISO55000 series of standards where possible.

| Term | Definition |
|-----------------------|---|
| Asset | Items, object or entity that has potential or actual value to an organization. These can be physical (tangible) or non-physical (intangible). |
| Asset Life | Period from asset creation to asset end-of-life. |
| Asset Management | Coordinated activity of an organization to realize value from assets. |
| Asset Portfolio | Assets that are within the scope of Asset Management. |
| Asset Type | Grouping of assets having common characteristics that distinguish those as a group or class. |
| Continual Improvement | Recurring activity to enhance performance. |
| Level of Service | Parameter or combination of parameters, which reflect social, political, environmental and economic outcomes that the organization delivers. |

| Term | Definition |
|--------------------------|--|
| Lifecycle | Stages involved in the management of an asset. |
| Objective | Results to be achieved. These can be strategic, tactical or operational. Objectives can be related to different disciplines. |
| Organization | Person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives. |
| Organizational Objective | Overarching objective that sets the context and direction for an organization. |
| Policy | Intentions and direction of an organization as formally expressed by its top management. |
| Preventive Action | Action to eliminate the cause of a potential nonconformity or other undesirable potential situation. |
| Risk | Effect of uncertainty on objectives. An effect is a deviation from the expected positive and/or negative. |
| Stakeholder | Person or organization that can affect, be affected by, or perceive themselves to be affected by a decision or activity. |

Executive Summary

The City of St. Catharines is responsible for delivering core services that support its community while enhancing the quality of life experienced by residents. These services include the distribution of drinking water for consumption; conveying wastewater to reduce the risk of health-related issues and environmental impacts; conveying stormwater runoff to mitigate flooding and erosion; and facilitating movement of people, goods, and services via transportation and structure networks.

The City's engagement in improving and enhancing Asset Management practices dates back over 30 years during which time core asset information has been recorded for internal practices such as tracking water mains breaks and pavement management. By 1999, efforts were underway towards formalizing the collection and retention of assets in a structured spatial repository. In 2007 core asset data was moved to an enterprise database, completing the transition to a standardized infrastructure inventory. The 2013 Corporate Asset Management Plan established an internal governance structure and started the process to incorporate Asset Management Planning into asset owning divisions. Furthermore, the City also undertook the development of a Strategic Plan to define the City's vision to ensure economic prosperity, social well-being, environmental stewardship, and a cultural renaissance for the

community. The Strategic Plan and its vision serve as a baseline for defining the Asset Management roadmap. The 2019 Strategic Asset Management Policy further enhanced Asset Management practices to comply with the requirements of O.Reg.588/17.

The City's 2021 Asset Management Plan has been developed to enable the management of infrastructure assets in a way that supports the provision of services to the community. The Asset Management Plan is structured into core services as defined by the Ministry of Infrastructure (water, wastewater, stormwater, transportation, and structures) to provide consistency and ease of understanding for readers. It then concludes with the financial strategy and improvement plan recommendations. Each service included on this plan is subdivided into the following:

- State of Local Infrastructure
- Levels of Service
- Lifecycle Management Strategy
- Data Confidence

This planning document is a strategic guide to support continuous improvement of asset related activities and provide the following:

- Alignment with provincial regulatory landscape;

- Understanding of the current state of City infrastructure necessary to support the core services;
- Defining and measuring key performance indicators that support the provision of core services from a customer and technical perspective;
- Providing an integrated forecast for Asset Management Planning with financial budgeting; and
- Recommending data improvements for enhancement of future iterations of the plan.

Each of the services assessed are dependent on a wide variety of asset categories that have unique functions and components with an estimated value of \$5 billion.

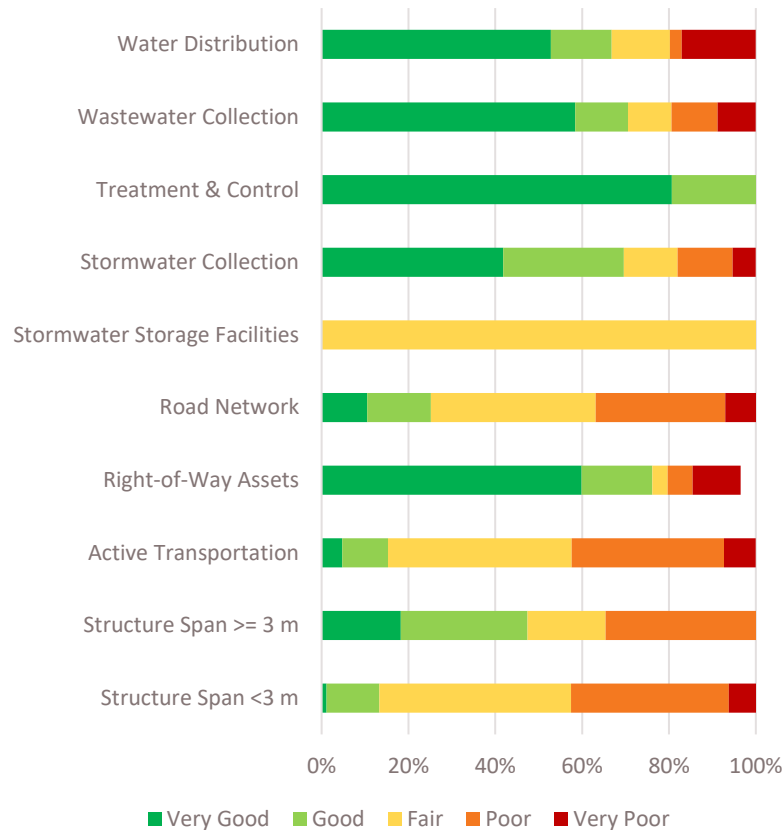
Table ES1 provides an overview of the replacement value of assets within each asset category.

The condition distribution of service functions as a percentage of their replacement value is shown in **Figure ES1**. Overall, the services condition can be summarized as follows: Water, Wastewater, Stormwater and Structures are good and Transportation is fair. It must be highlighted that the Stormwater Discharge category have been excluded from the graph as their condition is unknown.

Table ES1. City's Infrastructure Valuation

| Service | Service Function | Replacement Value (2021 Dollars) |
|-----------------------|--|----------------------------------|
| Water | Water Distribution | \$ 1,366,701,000 |
| Wastewater | Wastewater Collection | \$ 1,556,414,000 |
| Stormwater | Stormwater Collection | \$ 874,463,000 |
| | Treatment & Control | \$ 824,000 |
| | Stormwater Discharge | Cost to be Determined |
| | Storage Facilities | \$ 540,000 |
| Transportation | Road Network | \$ 974,445,000 |
| | Right-of-way Assets | \$ 45,358,000 |
| | Active Transportation | \$ 133,783,000 |
| Structures | Bridges and Culverts with a Span equal or above 3 metres | \$ 50,166,000 |
| | Bridges and Culverts with a Span under 3 metres | \$ 15,764,000 |
| Total | | \$ 5,018,458,000 |

It must be highlighted that future iterations of this AMP will include non-core asset classes in the assessment.

Figure ES1. Condition Distribution by Category

Level of service metrics are key drivers for decision-making within the City and aim to document service outcomes from a customer perspective. As part of managing levels of service, the City has documented current and past performance for the indicators as well as metrics to be considered in the future once data becomes available for analysis. The defined frameworks for each core service are to be updated annually to reflect improvement on the City's indicators.

Asset lifecycle activities include the maintenance, rehabilitation, replacement, disposal, improvement, and expansion of assets. These activities have been prioritized based on risk and are funded through the operating and capital budgets at the City. **Figures ES2 and ES3** provide a summary of the forecasted lifecycle investment requirements for the core services; these are based on current activities performed within anticipated budgets and available information. It is understood that as the City improves the AM practices, needs will be revised to match future activities.

There is an investment shortfall for tax-based expenditures of around \$20.8M annually to maintain the current condition of the assets that support stormwater, transportation and structures. The City must either reduce service offerings to their residents or increase funding to be able to maintain services at the current level. The anticipated rate-based investments identified in the recent Water and Wastewater Financial Plan, which the City should continue to implement, are sufficient to maintain the current condition and forecast a slight improvement to service, however are still below the optimal renewals identified. To fully fund the tax and rate-

based asset portfolios by 2046, an 8.09% and 0.34% compound annual increase would be required respectively. Note that this is in addition to general inflationary increases.

COVID-19 may impact both funding and levels of service which will need to be assessed in more detail. Longer term changes precipitated by COVID-19 that impact City assets will be reflected in updates to the AMP once these changes can be identified and measured.

Figure ES2. Forecasted Asset Portfolio for Tax Based Expenditures

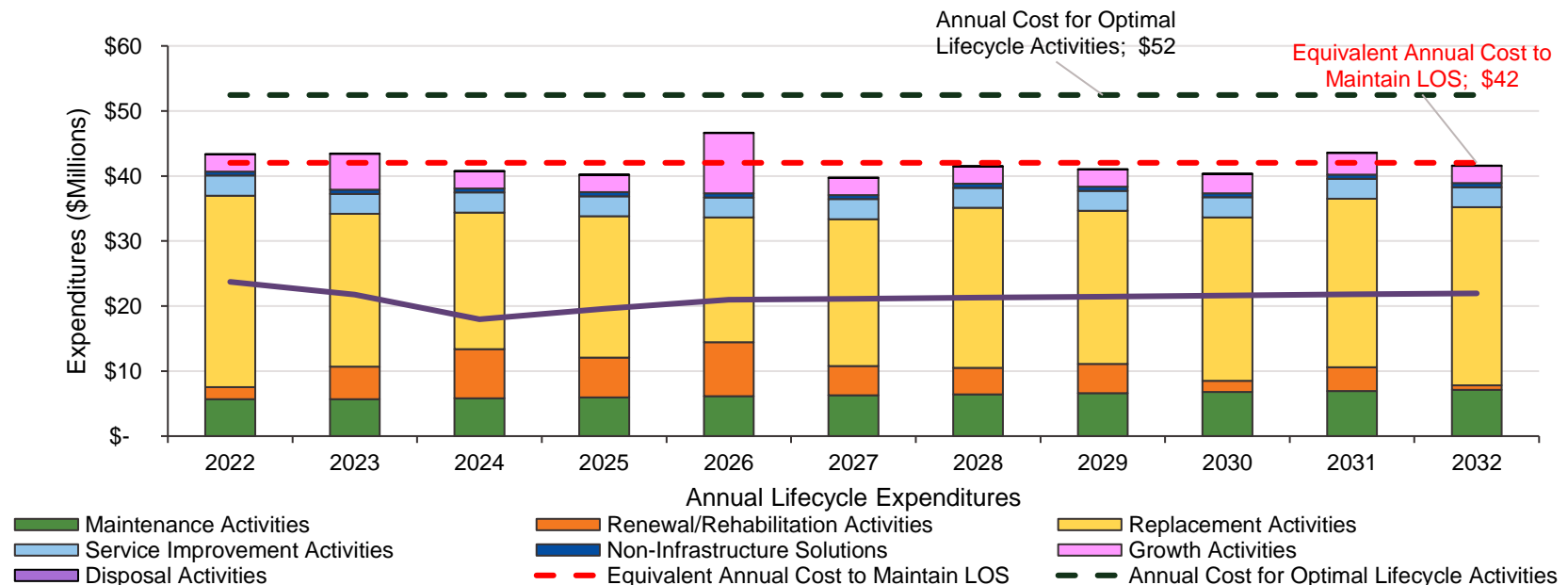
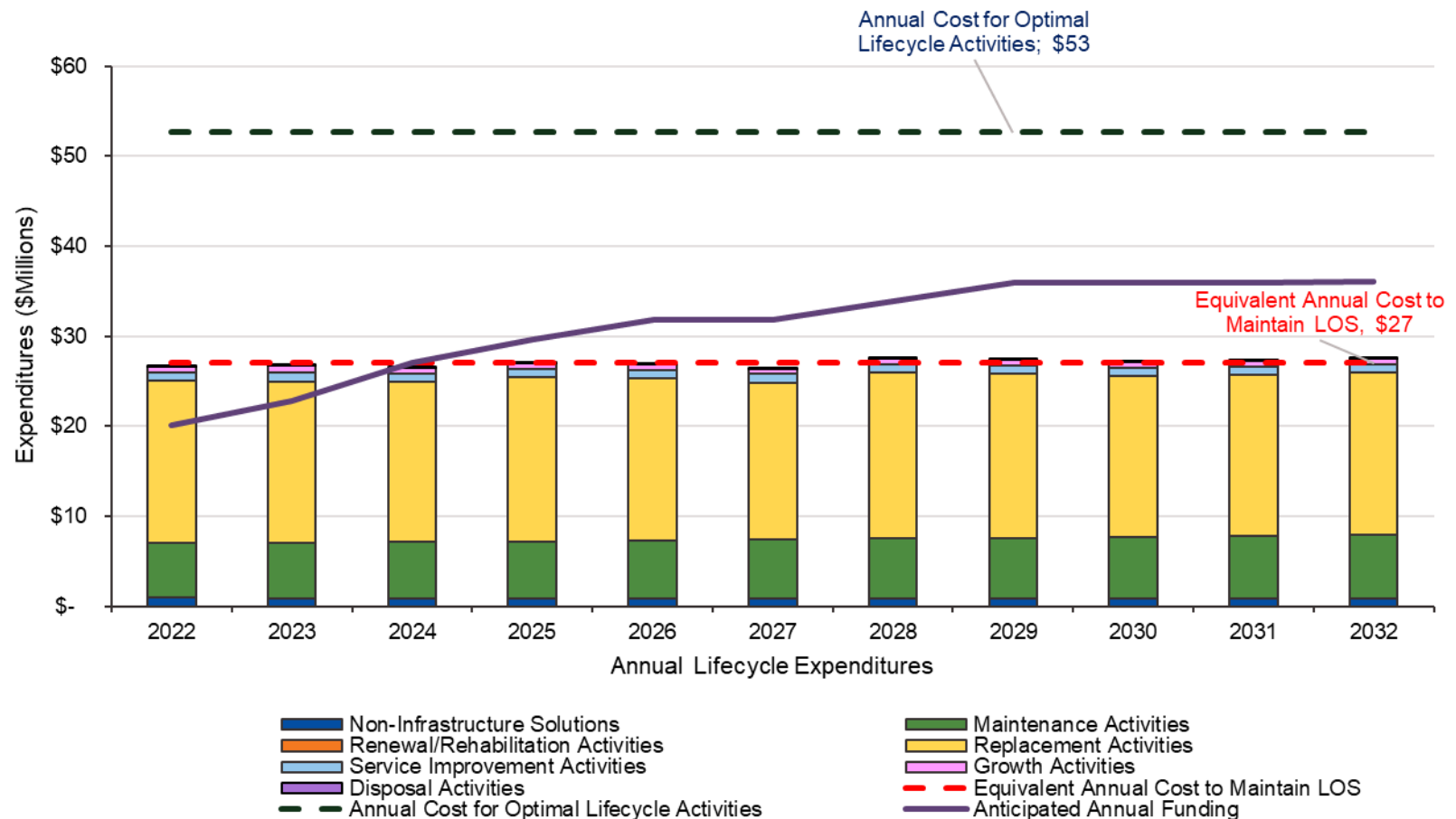


Figure ES3. Forecasted Asset Portfolio for Rate Based Expenditures



An overall data confidence assessment has been conducted as part of this plan. Recommendations for improvements include confirmation of asset inventories and condition, as well as validation of assumptions made throughout the development of the plan.

1.0 Introduction

The Corporation of the City of St. Catharines (City of St. Catharines or City), located within the Niagara Region, has a population of 133,113 as per the 2016 census within a geographic area of 96.1 square kilometres. This Asset Management Plan includes the City's Core Infrastructure with an estimated value of 5 billion distributed between the following core asset classes:



594 kilometres of Water Distribution System



563 kilometres of Sanitary Sewer Collection System



404 kilometres of Storm Sewer Collection System



573 kilometres of Road and
577 kilometres of Sidewalks and Pathways



117 Structures (Bridges & Culverts)

It must be highlighted that the Core Infrastructure has been defined by the Ontario Regulation 588/17– Asset Management Planning for Municipal Infrastructure, as will be further discussed in Section 1.4. Future iterations of this AMP will include non-core asset classes in the assessment.

1.1 City of St. Catharines' Asset Management Journey

The City recognized it needed to improve and enhance its Asset Management practices in 2011 when the *Sustainability Strategy "Tending the Garden City"* was developed with considerations on defining the infrastructure inventory and identifying operating and maintenance requirements. In 2013, the City developed its first Asset Management Plan (AMP), establishing an internal governance structure and starting the process to incorporate Asset Management Planning into all asset owning divisions.

The 2013 AMP identified the following goals:

- Ensure all City-owned infrastructure assets are sustainable into the future;
- Provide guidance in the development of standard maintenance and rehabilitation policies;
- Guide decisions related to infrastructure asset investment and divestment;

- Provide a framework for lifecycle and cost/benefit analyses; and
- Promote better integration of infrastructure decisions within larger strategic, community, and land-use goals.

The City of St. Catharines Strategic Plan (2019 – 2028) sets out the City's vision to ensure economic prosperity, social well-being, environmental stewardship, and a cultural renaissance for the community. To achieve the economic prosperity objective, the City has committed to develop a 10-year capital infrastructure plan that includes all major investments to address City needs, priorities, and growth.

The City approved a Strategic Asset Management Policy in 2019 to further enhance the Asset Management practices and comply with the requirements of O.Reg.588/17. The policy applies to all operational areas and defines principles and objectives that will define the City's practices, as well as the roles and responsibilities of staff required to successfully implement Asset Management.

Like many other municipalities in the area, the City is developing long-term forecasts and implementing the necessary tools to support decision making regarding building, operating, maintaining, renewing, replacing, and disposing of infrastructure assets. A significant component of the plan is a long-term financial projection

to aid with complex decision-making associated with these activities.

This document updates and replaces the 2013 AMP and aligns the City's Asset Management practices with the requirements of O.Reg.588/17 for core assets. This will enable the City to manage its assets and connect day-to-day infrastructure investment decisions with the services provided to residents.



1.2 The City's Guiding Principles for Asset Management

The City's 2019 Strategic Asset Management Policy (the Policy) applies to all operational areas under the direct authority of St. Catharines City Council which contribute to service delivery using City owned infrastructure or assets that require deliberate management. The Policy highlights the strategic alignment of Asset Management practices with the City's Corporate Strategic Plan.

The following guiding principles from the City's Asset Management Policy were adopted as fundamental for the management of the City's assets:

- **Customer focused:** The City will apply Corporate Asset Management practices including defined levels of service to promote confidence of customers in how the City assets are managed, core services are provided, and community wellbeing is fostered for all.
- **Forward looking:** The City will consider current and long-term needs when making decisions and plans to better enable its assets to meet future demands, including changing demographics and populations, customer expectations, legislative requirements, technology, and environmental factors (climate change).
- **Service based:** The City will take a holistic approach to Corporate Asset Management practices both in assessing levels of service, prioritizing capital

spending, and maintaining assets. When assessing levels of service provided by its assets, the City will consider all related assets rather than each asset in isolation.

- **Evidence based:** The City's Corporate Asset Management practices will be based on relevant and reliable information that will form the basis of transparent decision making aimed at reducing asset life cycle costs.
- **Risk based:** The City will take a risk-based approach to prioritizing projects for the acquisition and renewal of assets. Risk will be considered in relation to the likelihood of the asset failing and the impact of asset failure. Asset failures that may impact health and safety shall be ranked as the highest priority for investment.
- **Value based and affordable:** The City will deliver the greatest value from its investment in assets respecting available funding and its customers' ability to pay.
- **Continually evolving:** Corporate Asset Management practices and Asset Management systems will continue to evolve and improve through ongoing evaluation of best practices, innovation, and consideration of future directions, regulations, and requirements.

- **Cooperation and coordination with other governmental plans and strategies:** The City will consider strategies, policies, and plans of other governmental entities established under an act or otherwise to promote integration while providing efficient and effective service delivery for all of our customers and stakeholders.

1.3 City's Mission, Vision and Strategic Goals

To make a positive impact and drive change, in 2015 Council approved the following City mission and vision statements:

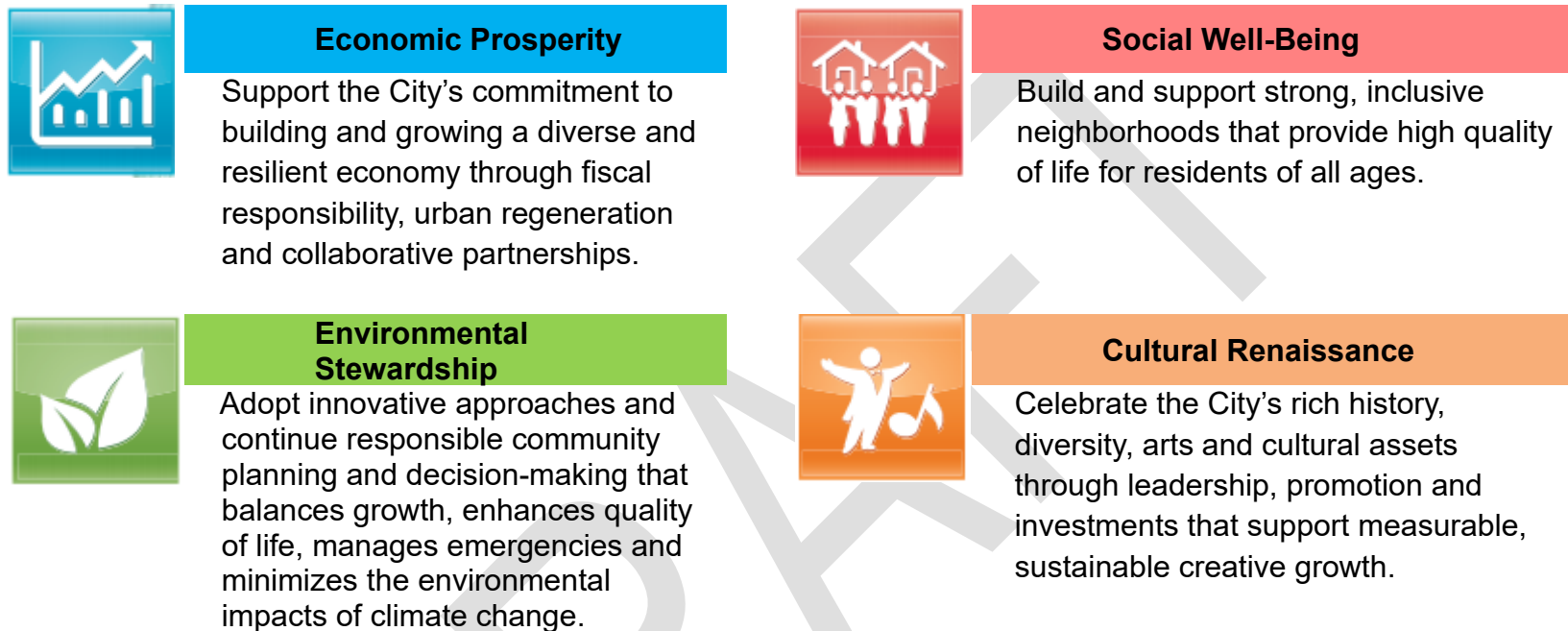
Figure 1. City Vision and Mission Statement



A key component of achieving the City's mission, vision and strategic goals is to ensure that the best possible decisions are made regarding the City's infrastructure assets. The following identifies how they are supported by the Asset Management Plan. The Asset Management Plan:

- Provides the necessary data to implement long-term financial plans to manage the City's infrastructure by tracking accountability through performance indicators;
- Improves transparency of the decisions related to services delivered and all the associated risks and costs;
- Allows the City to benchmark practices to identify areas for improvement; and
- Provides business continuity by documenting the management practices applied to the City's infrastructure.

Furthermore, the City's 2019 – 2028 Strategic Plan has set out a clear path to embracing its mission and vision by defining the following strategic goals:

Figure 2. City of St. Catharines Strategic Goals

1.4 Provincial Asset Management Planning Requirements

In 2012, the Province published 'Building Together: Guide for Municipal Asset Management Plans' (Building Together) to encourage and support municipalities in Ontario to develop Asset Management Plans (AMPs) in a consistent manner. The guide describes a general

approach to structuring AMPs and provides insight into the content that should be included in sections related to the State of Local Infrastructure, Levels of Service, Asset Lifecycle Management Strategies, and Financing Strategies.

Building Together outlines the information and analysis that municipal Asset Management Plans are to include and was designed to provide consistency across the

province for Asset Management. To encourage the development of AMPs, the Provincial and Federal governments also made an AMP a prerequisite to accessing capital funding grants.

In 2015, Ontario passed the Infrastructure for Jobs and Prosperity Act which affirmed the role that municipal infrastructure systems play in supporting the vitality of local economies. After a year-long industry review process, the Province created Ontario Regulation

588/17– Asset Management Planning for Municipal Infrastructure as the first regulation made under the Infrastructure for Jobs and Prosperity Act. O.Reg. 588/17 further expands on the Building Together guide, mandating specific requirements for municipal Asset Management Policies and Asset Management Plans, phased in over a five-year period. **Table 1** summarizes the general requirements and timelines of O.Reg. 588/17, as well as the status of these requirements for the City of St. Catharines.



Table 1. Regulatory Requirements and Timeline for Asset Management Planning based on O.Reg. 588/17

STRATEGIC ASSET MANAGEMENT POLICY

Timeline: By January 1, 2019
Update: Every 5 years

A Strategic Asset Management Policy must be developed to articulate specific principles and commitments that will guide decisions around when, why and how money is spent on infrastructure systems.

City Status: Policy FMS-001-2019 was issued April 10, 2019.

MUNICIPAL ASSET MANAGEMENT PLAN – CORE ASSETS
(PHASE 1)

Revised timeline: By July 1, 2022, Previously: July 1, 2021

An Asset Management Plan that documents the current levels of service being provided and the costs to sustain them for the core assets which are defined as: water, wastewater, stormwater, roads and bridges infrastructure systems (i.e., ‘core’ assets per O.Reg. 588/17).

City Status: This AMP is intended to align with the requirements of the legislation.

MUNICIPAL ASSET MANAGEMENT PLAN – NON CORE ASSETS
(PHASE 2)

Revised Timeline: By July 1, 2024, Previously July 1, 2023

An Asset Management Plan that documents the current levels of service being provided and the costs to sustain them for the remaining assets (i.e., ‘non-core’ assets per O.Reg. 588/17).

City Status: GM BluePlan has been retained by the City to assist in developing sections of the AMP to include assets associated with buildings and facilities, corporate infrastructure (including IT), fleet, improved lands (parks, playgrounds and sporting fields), shoreline protection, and watercourses.

MUNICIPAL ASSET MANAGEMENT PLAN
(PHASE 3)

Revised Timeline: By July 1, 2025, Previously July 1, 2024
Update: Every 5 years

An Asset Management Plan that outlines the desired levels of service, the costs to achieve the desired levels of service, and the financial strategy to fund the expenditures necessary to achieve the desired levels of service for all infrastructure systems in the City.

City Status: Some components such as the performance forecasts are to be addressed during the development of Phase 1 and 2.

1.5 Asset Management Plan: Definition and Purpose

The Federation of Canadian Municipalities (FCM) has defined an Asset Management Plan as, “a plan for the management of one or more infrastructure assets that combines multi-disciplinary management techniques (including technical and financial) over the life cycle of the asset in the most cost-effective manner to provide a specified level of service.”

The goals of the City of St. Catharines Asset Management Plan are to:

- Develop asset inventory documentation, with any identified gaps filled based on a strategy based on best practices and in consultation with City stakeholders.
- Define current levels of service, targets and key performance indicators (KPIs) that enable the City to quantify and measure efficiency and effectiveness in support of service-centric decision making, as well as communicate the services provided to its residents.
- Provide asset lifecycle strategies to enable the prediction of asset interventions based on condition and strategic business factors such as costs, levels of service, and risks.

- Provide a framework for funding requirements to support levels of service and the lifecycle management strategy.
- Develop a risk management strategy to enable the prioritization of capital investments that will provide the City with a standardized definition of asset criticality and will particularly consider risks related to climate change.
- Recommend improvement actions for data management, resources, and technology.

Part of the complexity with Asset Management is that it is not about doing one thing – it is about building a robust understanding of asset needs and implementing good practices to manage community infrastructure assets. For these reasons, this plan will help support the City’s development of skills and practices in the following competency areas:

- Policy and governance to lead organizational alignment and commitment.
- People and leadership to create and sustain connections across teams.
- Data and information about assets when needed.
- Planning and decision making to ensure policies, objectives, and information consistently guide the organization.

- Contributions to Asset Management practices to support continuous improvement and ensure internal stakeholders are well-informed, especially when communicating and participating in external knowledge sharing.

1.6 City's Asset Management Governance

The City's Asset Management practices are mandated by the Asset Management Plan and directed by the City's Asset Management Policy.

Furthermore, the City's Asset Management practices are intended to support the City's mission and vision statements. This is achieved through ongoing and continuous improvement of the Asset Management Plan. These relationships are illustrated below in **Figure 3**.

Figure 3. City of St. Catharines Governance Framework for the 2021 AMP



1.7 Asset Classes Included in the scope of this Asset Management Plan

This Asset Management Plan includes the City's core assets illustrated below in a parent-child relationship

called the asset hierarchy. Using an asset hierarchy provides the City with the ability to organize and manage its asset information and support decision making. The subsequent chapters in this plan will provide information with the same structure that is detailed below.

Table 2. Hierarchy of Assets Included in the City's 2021 Asset Management Plan

| City Service | Service Function | Assets and Components Included |
|-----------------------|--|---|
| Water | Water Distribution | Water mains (including corresponding service connections), in-line valves, pressure reducing valves, hydrants, curb stops and booster pumping station, bulk water station |
| Wastewater | Wastewater Collection | Sanitary sewer mains (combined or separated), force mains, maintenance holes, service connections, sewage pump station, wastewater storage facilities |
| Stormwater | Stormwater Collection | Storm sewer mains, maintenance holes, catch basins, service connections, grates, outfalls |
| | Treatment & Control | Oil grit separators |
| | Stormwater Discharge | Open channels |
| | Storage Facilities | Ponds and constructed wetlands |
| Transportation | Road Network | Roads (including curbs and on-road bike lanes) |
| | Right-of-way Assets | Streetlights, signalized intersections, guide rails and signs |
| | Active Transportation | Sidewalks, pathways and multi-use trails |
| Structures | Bridges and Culverts with a Span equal or above 3 metres | Bridges and culverts that require regulatory inspections every 2 year or provide crossings of natural water courses. |
| | Bridges and Culverts with a Span under 3 metres | |

1.8 Asset Management Plan Stakeholders

The development of this AMP was led by the Engineering, Facilities and Environmental Services and Financial Management Services departments with the support of the City's Asset Management Working Group. Key representatives from all departments were consulted

through different stages via workshops and contributed to the development of the data necessary to support this Plan. **Table 3** identifies the roles and responsibilities of the corporate stakeholders for developing, implementing, and approving the City's Corporate Asset Management Plan.

Table 3. City's Asset Management Stakeholders, Roles and Responsibilities

| Key Stakeholder | Roles and Responsibilities |
|--|--|
| Council | <ul style="list-style-type: none"> • Final Decision maker of all Asset Management decisions including approval of the Asset Management Policy and Corporate Asset Management Plan • Serve as representatives of citizens to set the level of services delivered, considered in conjunction with the cost-of-service provision and associated risks • Approve funding levels for both capital and operating budgets associated with Asset Management through the annual budget |
| Chief Administrative Officer (CAO) | <ul style="list-style-type: none"> • Maintains compliance with related Asset Management policy, regulations. • Provides direction that demonstrates commitment to the success of the continued improvement of Asset Management practices and documentation |
| Asset Management Working Group | <ul style="list-style-type: none"> • Support the CAO in fulfilling their role • Provide corporate collaboration to guide Asset Management Systems • Champion continuous improvement within their respective service areas and the City |
| Corporate Asset Manager and Engineering Asset Manager | <ul style="list-style-type: none"> • Support Asset Management Working Group in their roles and responsibilities • Support development of City Asset Management System • Coordinate with departments to establish corporate work plans and priorities to meet legislated requirements |

| Key Stakeholder | Roles and Responsibilities |
|--|---|
| Departmental Directors | <ul style="list-style-type: none"> • Oversee Asset Management activities that fall within their service area • Contribute in a manner that supports a multi-disciplinary approach to Corporate Asset Management and promotes its ongoing success • Liaise with members of the Asset Management Working Group to ensure they are supporting CAM and that departmental planning is aligned to AMPs |
| Service Delivery Areas or Asset Operators | <ul style="list-style-type: none"> • Team of staff who engage with internal and external stakeholders daily to deliver services • Oversee Asset Management Planning activities within their respective area • Help set service objectives and monitoring progress • Offer expertise in the development of city plans, strategies, assessments, and workflows • Collect and track asset information and other data related to assets within their functional area • Apply operation, maintenance, rehabilitation, replacement, and disposal practices to achieve levels of service, mitigate risk, and comply with regulatory requirements |
| Other City Staff | <ul style="list-style-type: none"> • Support the development, implementation, and improvement of the Asset Management system in their daily roles and responsibilities • Capture quality data as part of the daily operations |

1.9 Developing the Corporate Asset Management Plan

The Asset Management Plan's initial steps of development included data collection, compiling data, developing an analysis tool, and meeting with various asset system working groups to discuss, review and provide feedback on each component of the Plan. The

AMP was developed for the core service groups, which are presented as main sections in this report as follows:

- Water
- Wastewater
- Stormwater
- Transportation
- Structures

In addition to the sections on each asset group, the final section of the AMP is a financial strategy. This is one of the Plan's key components, as it puts the document into action. The financial plan provides a way for municipalities to integrate Asset Management Planning with financial forecasting.

As suggested by Building Together – Guide for Municipal Asset Management Plans (Ministry of Infrastructure, 2012), the financial management strategy outlines annual expenditure projections in alignment with the long-term investment forecast developed for the lifecycle activities.

The City acknowledges that COVID-19 may impact both funding and levels of service which will need to be assessed in more detail. Longer term changes precipitated by COVID-19 that impact City assets will be reflected in updates to the AMP once these changes can be identified and measured.

The following provides more details on the key sub-sections that were covered as part of the plan tasks and will be presented for each of the core groups.

1.9.1 State of Local Infrastructure

The State of Local Infrastructure section provides a quantitative assessment of the infrastructure owned by the City. The primary objective is to provide a high-level inventory and insights on the overall age, condition, replacement costs, and key metrics of the assets owned by the City based on provided datasets and documents

that were assessed for data maturity (completeness) and confidence (accuracy) and discussed with Subject Matter Experts (SMEs). This section provides the City with:

- A repeatable and consistent methodology to track and report comparative analysis of asset data;
- Transparency in terms of the confidence of the asset data available;
- A consolidated overview of inventory, condition, cost, and performance indicators for each asset class; and
- The ability to track improvements to the background data over time.

The 2013 AMP provided details for bridges, structures, roadways, water mains and service connections, sanitary mainlines, service connections, and maintenance holes. This AMP provides a more detailed discretization of the assets for all core asset groups.

This chapter of the AMP summarizes the inventory of assets and their replacement values and provides the age and condition profiles for each asset category in the City's portfolio. Condition ratings were assigned to all assets across each service area using the condition rating scale shown on **Table 4**. The rating scale is consistent with the Canadian Infrastructure Report Card (2016) to facilitate benchmarking between other Canadian municipalities.

Table 4. Condition Rating Scales Descriptions and Estimated Service Life (ESL) Distribution

| Value | Category | Estimated Service Life (Percentage) | Description |
|-------|-----------|-------------------------------------|--|
| 0 | Unknown | N/A | Not enough data exists to respond. |
| 1 | Very Good | 80% - 100% | Well maintained, in good condition, new or recently rehabilitated. |
| 2 | Good | 60% - 79% | Acceptable and generally within the mid-stage of its expected service life. |
| 3 | Fair | 40% - 59% | Requires attention, it shows signs of deterioration and some elements exhibit deficiencies. |
| 4 | Poor | 20% - 39% | There is an increasing potential for its condition to affect the service it is intended to provide. It is approaching the end of its service life; the condition is below the standard and a large portion of the system exhibits significant deterioration. |
| 5 | Very Poor | 0% - 20% | Unfit for sustained service. It is near or beyond its expected service life and shows widespread signs of advanced deterioration. Some assets may be unusable. |

1.9.2 Levels of Service

The Levels of Service (LOS) section provides key performance indicators that support the provision of the respective service for each City asset group. Some LOS include mandatory metrics prescribed as part of O.Reg. 588/17. In general, LOS were documented as tables that provided the following information:

- Level of Service Statement: A brief description presented in plain language for public understanding of the service provided to residents based upon the City's core values and mission.
- Key Service Attribute: Provides customer values categorized in terms of safety, reliability, quality, cost efficiency, and environmental stewardship.

- Customer Levels of Service (CLOS): A statement that describes quantifiable metrics of the service delivery outcomes from the perspective of the customer, expressed in non-technical terms that can be easily understood by customer.
- Technical Levels of Service (TLOS): Quantifiable metrics applied against assets that are subject-matter specific inputs or outputs supported by day-to-day activities of the City staff.

Both CLOS and TLOS were defined as current or future metrics based on the City's existing available data. Furthermore, current and target performance were identified and established by City staff. Each Performance Measure should be defined using the SMART acronym (specific, measurable, achievable, relevant, and time-bound).

1.9.3 Lifecycle Management Strategy

The Lifecycle Management Strategy defines the set of planned actions that will enable the assets to provide their desired level of service in a sustainable way while mitigating risks and reducing costs. The goal of this assessment is to capture the deterioration model for each asset category.

Understanding the optimal budget at which lifecycle activities (LCA) sustain the desired LOS at the lowest lifecycle cost is the main objective of this section.

The actions are usually grouped as rehabilitation or replacements and these are supported by the City's operating and capital budgets. Further to the usual maintenance and operations activities, the LCA section is also intended to capture non-infrastructure solutions that extend the asset life (such as policies and procedures) as well as activities that extend beyond the day-to-day operation of the assets such as expansion planning and disposal once end of life is reached. **Table 5** provides a summary of the lifecycle activity types that will be considered for all assets within scope, as defined by the Building Together Guide for Municipal Asset Management Plans.

An Optimal Lifecycle Activities scenario was analyzed for each of the core services. This scenario focused on the cost to achieve optimal renewal. Historic values were used to estimate the maintenance, non-infrastructure solution and expansion and thus may not be optimal. The City can explore those optimal needs and include in this analysis.

Table 5. Lifecycle Activity Type Summary

| Lifecycle Activity | Definition |
|------------------------------|--|
| Non-Infrastructure Solutions | Actions or policies that can lower costs or extend useful lives. |
| Maintenance Activities | Including regularly scheduled inspection and maintenance or |

| Lifecycle Activity | Definition |
|---------------------------------------|---|
| | more significant repair and activities associated with unexpected events. |
| Renewal / Rehab Activities | Significant repairs designated to extend the life of the asset. |
| Replacement / Construction Activities | Activities that are expected to occur once an asset has reached the end of its useful life and renewal/rehab is no longer an option. |
| Disposal Activities | Activities associated with disposing of an asset once it has reached the end of its useful life or is otherwise no longer needed by the City. |
| Service Improvement Activities | Planned activities to improve the asset's capacity, quality, and system reliability. |
| Growth Activities | Planned activities required to extend services to previously unserved areas or expand services to meet growth demands. |

A risk management framework was developed for each of the asset categories in the portfolio to assist with prioritization of investments within the forecasts. Where

possible, geospatial scripts were used to establish a consequence of failure score using a triple bottom line analysis approach to evaluate:

- Social impacts of asset failure, including impacts to customers, businesses, and the City's reputation;
- Environmental impacts of asset failure; and
- Economic impacts of failure including the cost to remediate the situation.

In the context of Asset Management, risk is the multiple of the consequence of an asset failing and the likelihood that the event will occur. The risk framework was developed in collaboration with the City's subject matter experts and based on best-in-class practices for risk assessment. The likelihood of failure is expressed as a percentage and calculated for each asset based on available condition data and deterioration modelling. As previously mentioned, the consequence of failure framework is based on the parameters specific to each asset category based on their financial, social, and environmental impact. **Table 6** provides an overview of the criteria used for the risk analysis and the asset classes within which each criterion was included. The final risk score for each asset has been calculated by multiplying the consequence of failure score by the likelihood of failure score.

Table 6. Risk Framework Categories

| Criteria | Definition | Water | Wastewater | Stormwater | Transportation | Structures |
|---|--|-------|------------|------------|----------------|------------|
| Financial | | | | | | |
| Replacement Cost | The financial expenditure required for the replacement of the asset or remediation of the asset failure. | ✓ | ✓ | ✓ | ✓ | ✓ |
| Social | | | | | | |
| Annual Average Daily Traffic | The volume of road users that would be likely to be impacted if the asset fails. | ✓ | ✓ | ✓ | ✓ | ✓ |
| Pipe Diameter | The larger the pipe diameter, the larger the potential discharge or disruption to service. | ✓ | ✓ | ✓ | | |
| Critical Water Users | The number of critical customers that would be impacted if the asset fails. | ✓ | | | | |
| Access to critical customer/facilities like hospitals, schools, and long-term care facilities | The number of critical customers that would be impacted if the asset fails. | ✓ | ✓ | ✓ | ✓ | |
| Land Use | A representation of the number and type of affected customers, which would be proportional to service disruption. These represent impact to water quality, businesses, potential for flooding. | ✓ | ✓ | ✓ | ✓ | ✓ |
| Redundancy | The ability to maintain supply if there is an asset failure. | ✓ | | | | |

| Criteria | Definition | Water | Wastewater | Stormwater | Transportation | Structures |
|--|---|-------|------------|------------|----------------|------------|
| Sewer Type (combined or separated) | The separation of sewer mains provides the system resiliency against climate events. | | ✓ | | | |
| Road sharing | Impacts to transit users and cyclists in the event of asset failure. | | | | ✓ | ✓ |
| Escarpment Crossing | If there is a closure of the segment, there would likely be significant detours at escarpment crossings. | | | | ✓ | |
| Functional Class | Number of users that would be impacted as well as the speed limits on the road. | | | | ✓ | |
| Structure span | Structures with span greater than 3 metres have more significant impacts upon failure or closure. | | | | | ✓ |
| Structure impact on adjacent infrastructure | Structure failures adjacent to critical infrastructure (such as highways and railways) have significant impacts | | | | | ✓ |
| Environmental | | | | | | |
| Distance to watercourses, environmentally sensitive areas, or habitat. | Environmental impacts as a result of failure including remediation and potential charges. | ✓ | ✓ | ✓ | ✓ | ✓ |

The cost associated with each lifecycle activity is also considered as part of the strategy. A long-term investment forecast has been developed for each asset in scope to illustrate the capital and operational needs to support current levels of service. **Table 7** provides a summary of the assumptions made to model the costs

associated with each lifecycle activity type for all core services.

These are based on current activities performed within historical budgets and available information. It is understood that as the City improves the AM practices, needs will be revised to match future activities.

Table 7. Lifecycle Activities Cost Assumptions

| Lifecycle Activity | Model Assumptions |
|---------------------------------------|---|
| Non-Infrastructure Solutions | Developed based on a review of the historical annual budget and using an average of the 2017-2021 budgets (both operating and capital). |
| Maintenance Activities | Developed based on a review of the 2021 and historical budget. |
| Renewal / Rehab Activities | Forecasted based on a lifecycle model applied to each asset in the asset register. This is based on the activities that the City has determined that should be completed. |
| Replacement / Construction Activities | |
| Disposal Activities | Generally, disposal activities have been incorporated within the replacement and renewal costs for most assets. |
| Service Improvement Activities | Developed based on the 2017 to 2021 annual expansion costs as a percentage of the 2021 asset portfolio replacement value. |
| Growth Activities | |

1.9.4 Data Confidence

A summary of the data sources used in the analyses of this AMP are included for reference under each asset

category section. For the development of this AMP, the available data was assessed for each asset category and a data quality rating was assigned based on availability and quality of relevant data.

Table 8. Data Quality Rating Scale for all Assets Within Scope

| Value | Category | Definition |
|----------|------------------|---|
| A | Very Good | No assumptions, with available condition data from a reliable data source, and age and value are known. |
| B | Good | Minor assumptions are made for condition, age, or replacement values (e.g., most of condition, age, and replacement values are known). |
| C | Fair | Minor assumptions are made for condition, age, or replacement values from moderately reliable sources. |
| D | Poor | Data comes from significantly out of date documents or two of condition, age, or replacement values come from a moderately reliable source and the third item is unknown or unreliable. |

1.10 Integrating Climate Change into Asset Management

Climate change is one of the most complex challenges facing municipalities today. In recent years, Southern Ontario has experienced a significant number of extreme weather events and its adverse impacts such as flooding, ice storms, power outages, and infrastructure damage. Rising average temperatures, shifting historical precipitation patterns with increased intensity, duration and frequency of storm events and periods of drought, increasing windstorms, and fluctuations in lake levels are anticipated to continue into the future and Asset Management Plans must reflect this reality.

The City's Climate Adaptation Plan (2021) evaluated climate impacts, risks, and vulnerabilities the municipal government currently faces, or is expected to experience in the future, due to climate change. Understanding climate related risks and vulnerabilities that impact the City allows municipal operations, policies, and procedures to best align with the future climate.

Positioning adaptation planning throughout the municipal government will provide proactive decision-making, climate orientated action and implementation focused on creating a climate responsible and resilient community.

The City has partnered with local experts in climate change and Asset Management to ensure that the City's policies and practices adapt to reduce both immediate

and long-term impacts on municipal infrastructure. By assessing the probability and risk associated with various climate factors, various design and operation practices can be altered to proactively build resilience into the systems to help mitigate extreme weather. This strategy will ensure that all asset life is maintained most efficiently.

1.11 Continuous Improvement of the City's Asset Management Program

The City's Asset Management Program is founded on the principles of continuous improvement, transparency, and accountability. Moving forward, the AMP is intended to be a living document that reflects and supports implementation of the Asset Management Policy and Strategic Plan. As a living document, continuous improvement will be driven by:

- Implementing, revising, refining, and reporting Asset Management based on the City's strategic priorities.
- Continual cross-functional collaboration towards identifying AM improvements in processes, systems, data, AMPs, and AMP implementation strategies.
- Monitoring progress on the AMP implementation while quantifying and reporting benefits from AM Program activities.

- Improve with ongoing evaluation of best practices, innovations, and regulatory requirements.

Best practices to achieve continuous improvement include the development of an improvement plan and delivering the improvement plan with defined annual targets, appropriate benchmarks, and responsibilities for internal resources with their associated funding levels, as approved by the City's annual budgeting process. The continuous improvement of the City's AMP is supported by a broader Asset Management strategy that is developed in various forms for guiding the management of the assets to provide governance to City practices.

1.12 Asset Management Plan Assumptions and Limitations

This Asset Management Plan was developed based on the best available information and by employing professional judgement and assumptions to address gaps where necessary. Asset specific assumptions are recorded in the following sections.

Where gaps or opportunities were identified, they have been included in the improvement plan.

Background information and reports related to this AMP are available to the public upon request through the City of St. Catharines.



Introduction

Estimated Replacement Value

The City's water distribution system is valued at approximately **\$1.4 billion**.

Condition Rating

The overall average condition of the assets for the water distribution system is **Good**.

Water

The City of St. Catharines provides safe drinking water to its residents, businesses, and other consumers. The City owns and operates a Class II residential water distribution system. Drinking water is supplied by the Region of Niagara's Decew Water Treatment Plant which draws water from Lake Erie. As a lower-tier municipality, the City is responsible for the local water distribution system which includes the following assets:

- 594 kilometres of Water Mains
- 3,559 Hydrants
- 5,706 Valves
- 41,816 Water Metres
- 1 Booster Pumping Station
- 1 Bulk Water Station

2.0 Water

Water is essential to life. It is a service that supports many uses including consumption as drinking water, service for households and commercial uses, fire protection, other municipal services, and even recreational activities such as pools.

The following section summarizes the asset portfolio associated with the City Water Service.

2.1 State of Local Infrastructure

2.1.1 System Valuation

The City's water distribution system obtains potable water from the Region of Niagara and supplies it to consumers including residents, institutions and businesses; as well as uses it for fire protection and to support City services. The City's water system is distributed into three pressure zones within the urban boundary, which historically has provided consistent service to its users. The water distribution system is divided into linear and vertical asset types.

- **Water Linear Assets** represent the majority of the distribution portfolio as they include mains and appurtenances, as well as hydrants, metres, and service connections.

- **Water Vertical Assets** include the facilities required to pump or distribute water in the system.

For the valuation of the water distribution system, the replacement values considered are intended for the replacement of a similar asset (like-for-like) on a complete and standalone basis. These were calculated based on historical values that the City has incurred as part of previous replacements of similar assets. For certain materials (e.g., Ductile Iron), the replacement values that were applied assumed a more modern material (PVC) would be used in the event of a replacement and thus do not align with the "like-for-like" scenario described above. Furthermore, the estimated value for water facilities was calculated from a bottom-up approach based on the assets located within each facility and industry standard costing for these assets.

Based on the approach taken to calculate the replacement values for each asset category, the data confidence grade for this service is as follows:

- **C** for water mains;
- **B** for the remaining linear assets; and
- **D** for vertical assets.

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Table 9. Water System Inventory Valuation

| Service Function | Asset Category | Count | Unit | Replacement Value (2021 Dollars) |
|--|--------------------------------------|---------|--------|-------------------------------------|
| Water Distribution | Water Mains ^(a) | 594,422 | Metres | \$ 1,301,682,000 |
| | Hydrants ^(b) | 3,559 | Each | \$ 33,889,000 |
| | Valves ^(c) | 5,706 | Each | \$ 13,683,000 |
| | Water Metres | 41,816 | Each | \$ 17,164,000 |
| | Bulk Water Station ^(d) | 1 | Each | \$ 140,000 |
| | Water Booster Station ^(e) | 1 | Each | \$ 143,000 |
| Overall Water System Replacement Value | | | | \$ 1,366,701,000 |

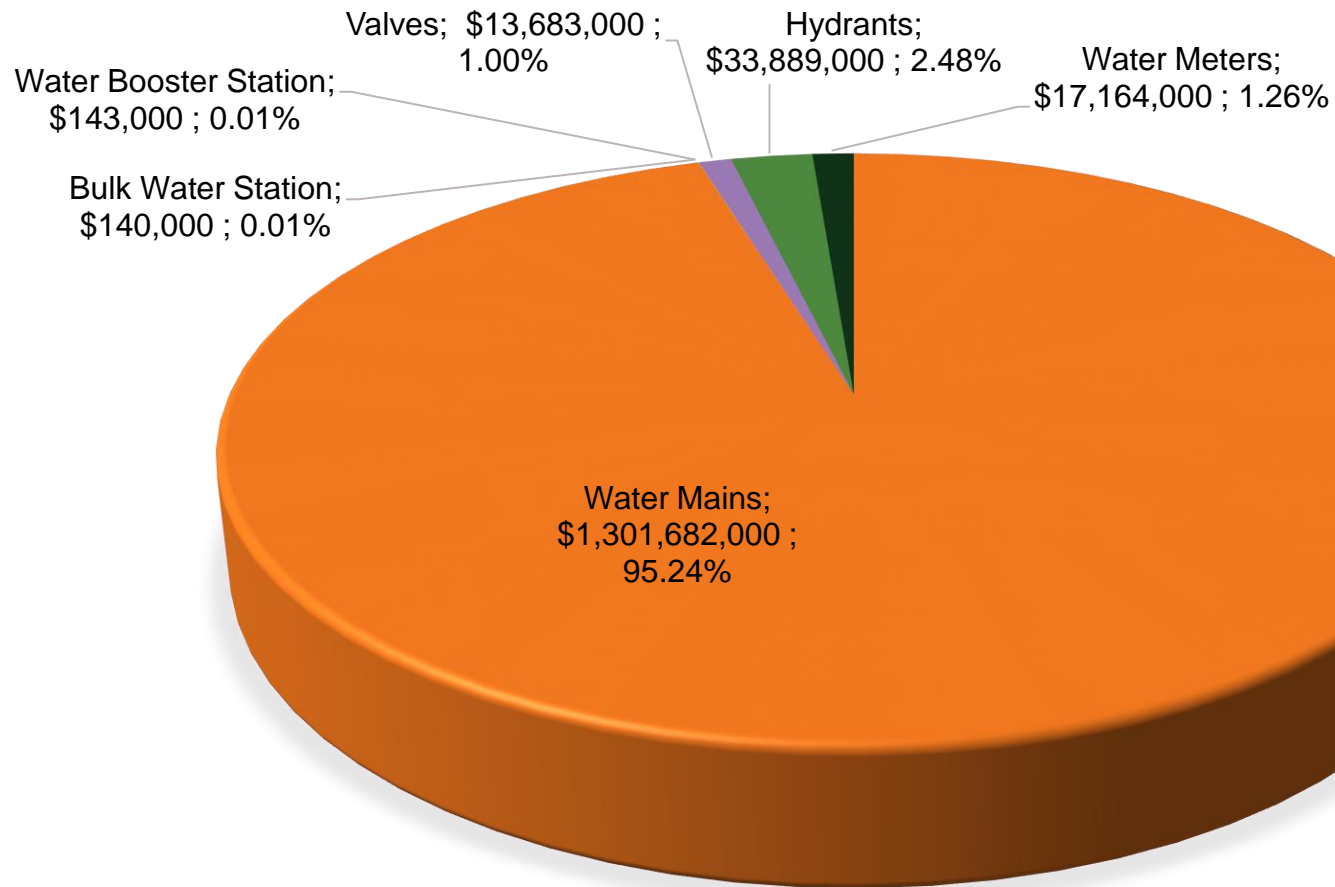
Notes:

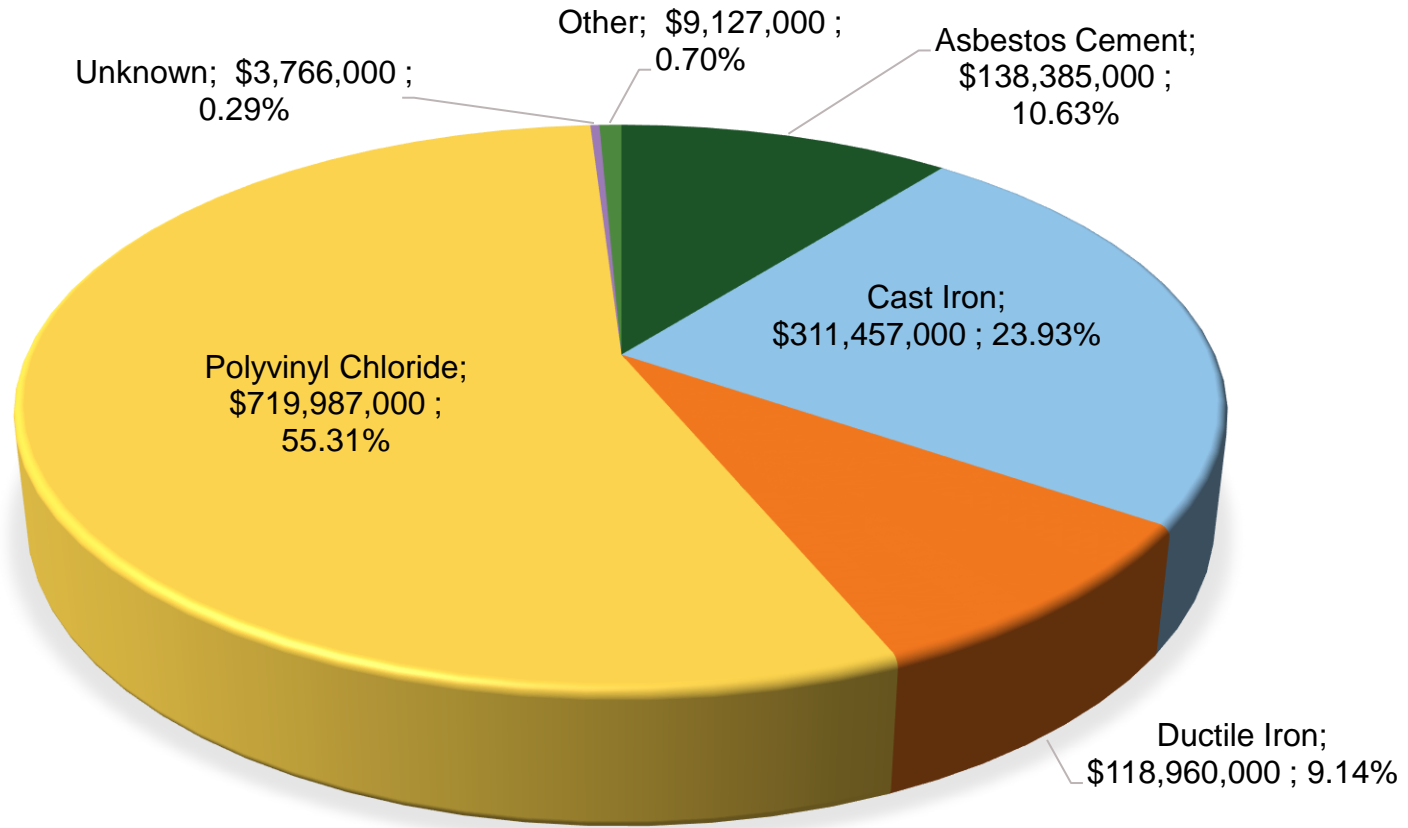
- (a) Water mains asset category includes the water service connections associated with these.
- (b) Hydrants asset category also includes their associated secondary valve.
- (c) The Valves asset category includes only in-line valves, pressure reducing valves, air release valves, and blow-off valves. All other valve types have been recorded under the water main.
- (d) Bulk water station replacement cost was based on historical documentation on the replacement cost for the facility.
- (e) Replacement values for water booster station show the sum of all process and structural assets within the facilities

The overall distribution of replacement values by asset type for the entire water distribution system is shown in **Table 9**. The water mains have the highest replacement value in the portfolio, totaling 95.24% of the entire system, as shown in **Figure 4**. The remaining assets

correspond to 4.76% of the value associated with the water distribution system.

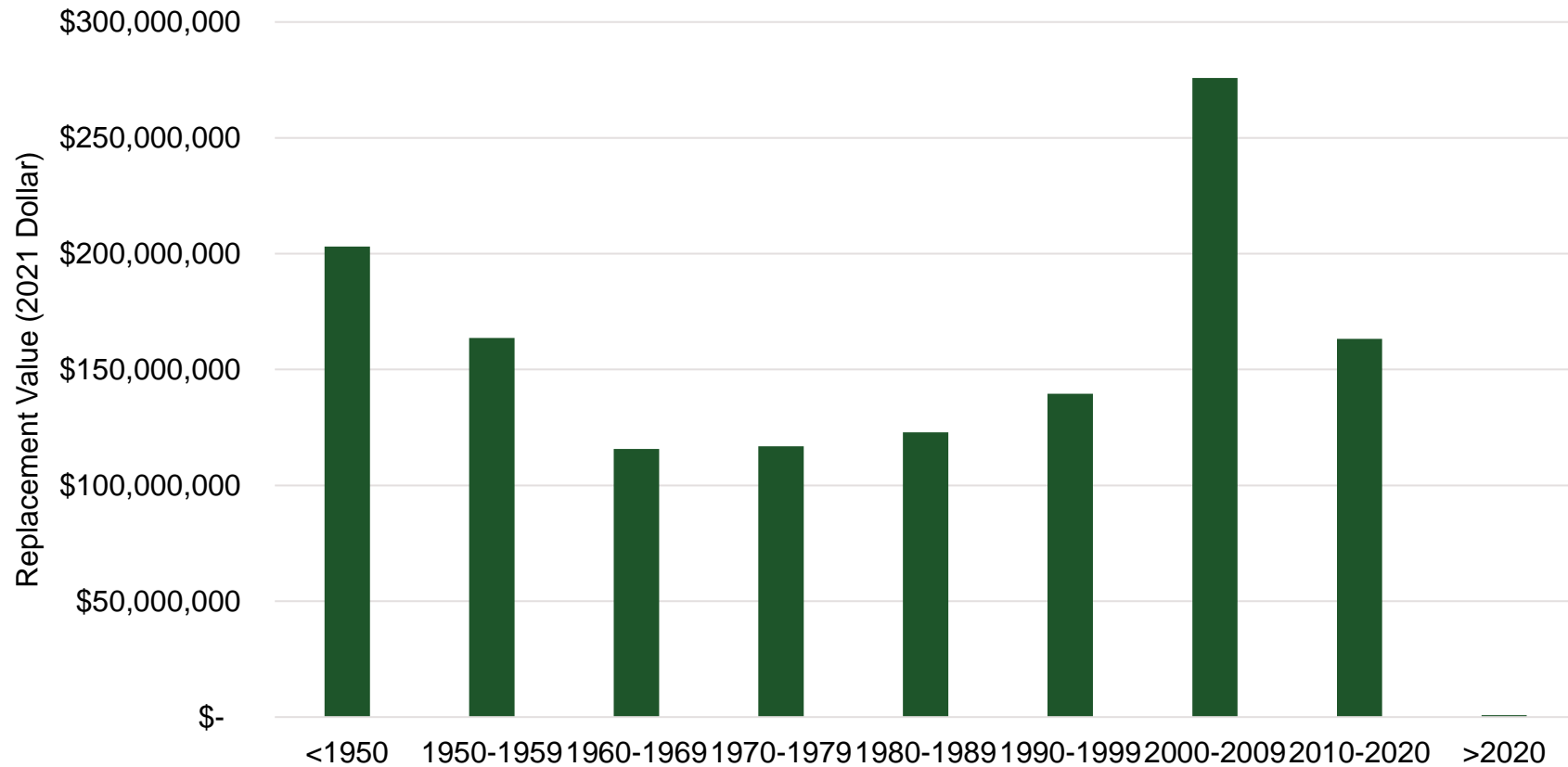
Figure 5 provides a summary of the distribution of replacement values on the water mains based on materials.

2. Water**State of Local
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2. Water**State of Local
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The figure below summarizes the replacement value for water mains grouped by installation decade. Based on

the distribution, many of the water mains owned by the City are in the relatively early stages of their lifecycles.

2. Water**State of Local
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The construction materials for water mains (**Figure 5**) and their age (**Figure 6**) are aligned due to the preferred materials changing over time. For instance, in the mid-1970s Polyvinyl Chloride overtook Ductile Iron as the

preferred material for water mains. Thus, since Polyvinyl Chloride was the most popular material while infrastructure spending at the municipal level also began

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to increase, it is currently the most prevalent material in the distribution system.

2.1.2 Water System Condition

Condition was assigned to water system assets using diverse approaches depending on the asset category.

For water mains, the historical number of breaks was considered to determine a break index that is based on:

- Break Rate: The historical number of breaks per 100m of main.
- Break Score: Calculated based on the frequency of those breaks.

The break index is then converted into a performance score, condition score, and condition rating as shown in **Table 10**.

Table 10. Water mains Condition Scale

| Condition Score | Condition Rating | Water main Break Index | Water main Performance Score |
|-----------------|------------------|------------------------|------------------------------|
| 1 | Very Good | 0 | 1 |
| 2 | Good | 0.1-0.2 | 0.8-0.6 |
| 3 | Fair | 0.2-1 | 0.6-0.4 |
| 4 | Poor | 1-4 | 0.4-0.2 |
| 5 | Very Poor | Over 4 | Less than 0.2 |

The age of the main was also considered for determining the condition of water mains, as per **Table 4**.

The final condition score was calculated by taking the highest of the break-index performance score and the age-based performance score. The condition scale was assigned to all segments in the network individually.

Condition scores for all other water system assets were computed using a deterioration curve based on estimated service life remaining and the scores were converted to a rating based on the criteria in **Table 4**.

The current conditions of water distribution assets have been summarized and weighted by replacement value in **Figure 7**. The overall condition of the water facilities is based on the average condition of its components.

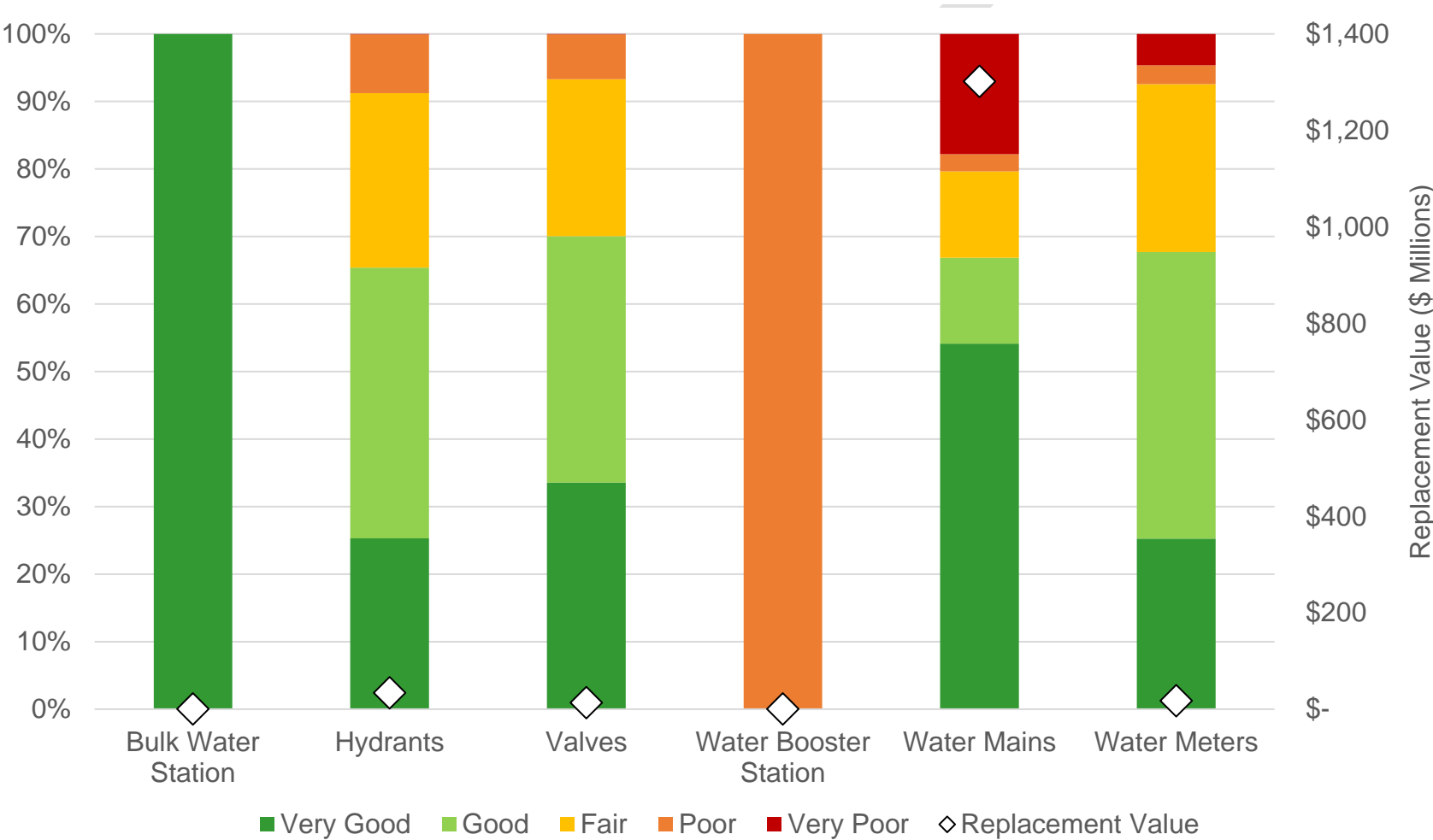
As the group representing the majority of distribution assets, the water main condition distribution by diameter is shown in **Figure 8**, and their location is indicated in **Figure 9**.

Overall, 17% of the water assets are in the very poor rating category (based on replacement value) and 3% are in the poor category.

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| State of Local Infrastructure | Levels of Service | Lifecycle Management Strategy | Data Confidence |
|-------------------------------|-------------------|-------------------------------|-----------------|
|-------------------------------|-------------------|-------------------------------|-----------------|

Figure 7. Condition Distribution by Replacement Value for all Water Asset Types



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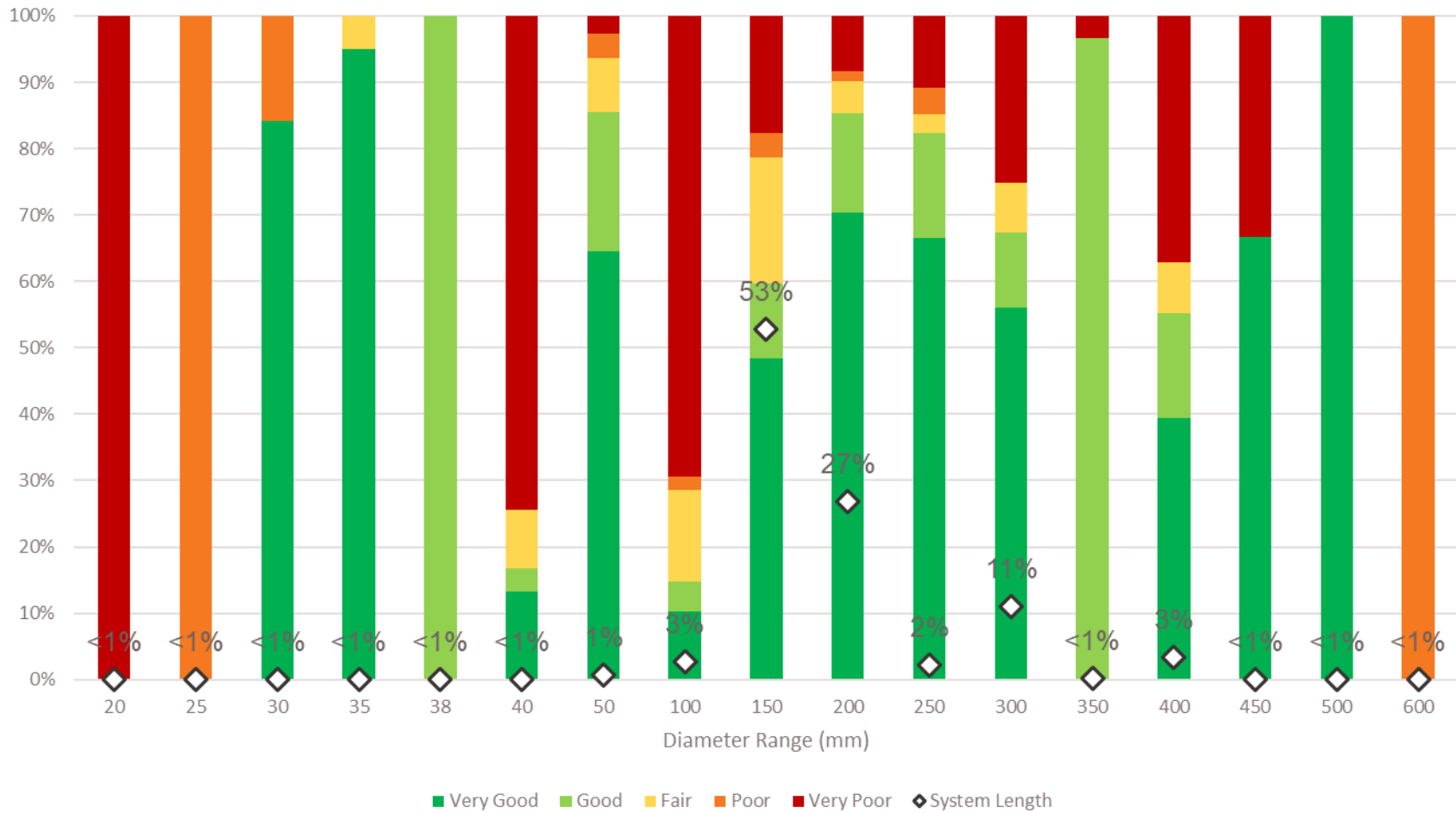
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Figure 8. Condition Distribution by Diameter for all Water mains



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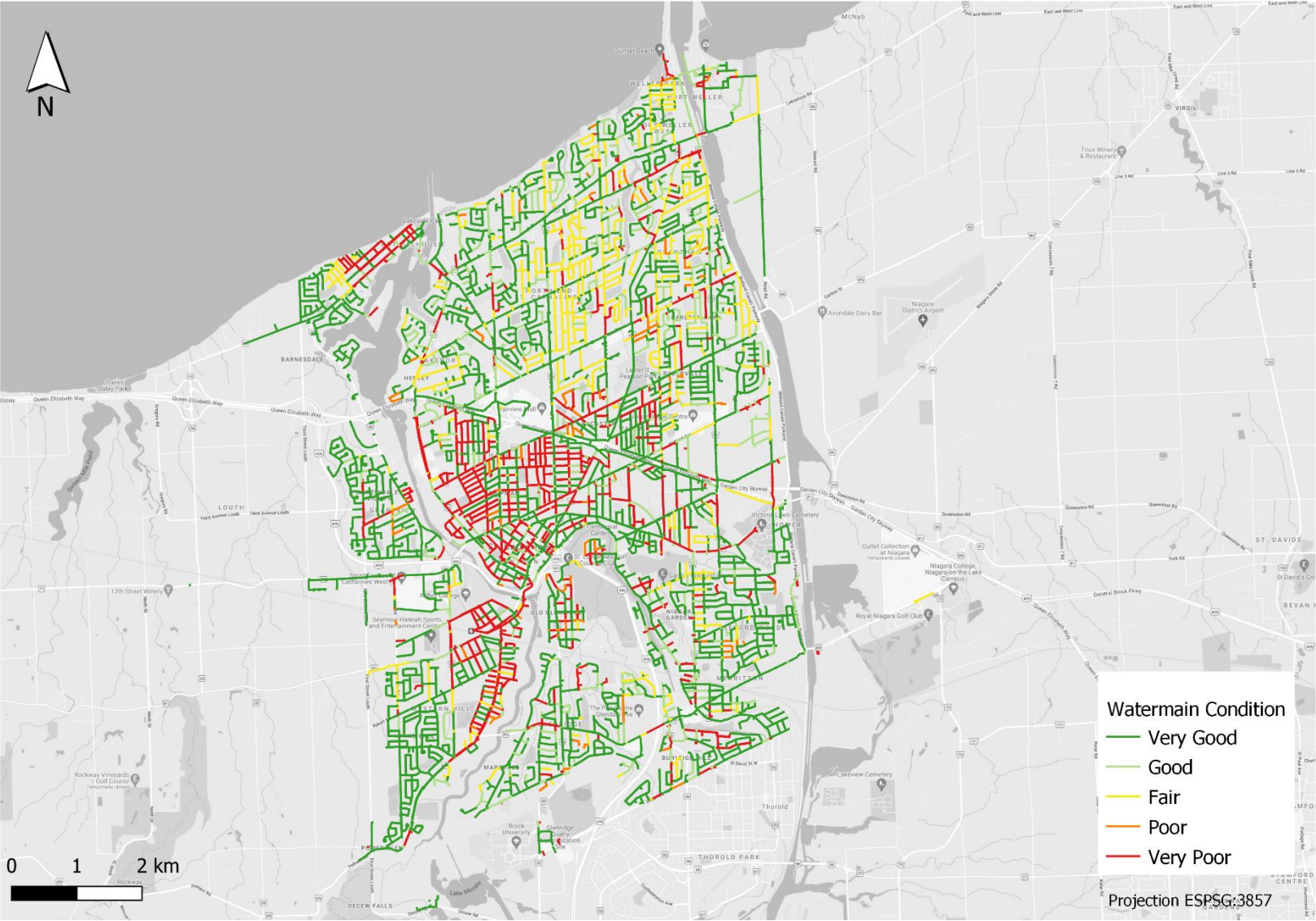
State of Local Infrastructure

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Figure 9. Condition Distribution by location for all Water mains



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State of Local Infrastructure

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Lifecycle Management Strategy

Data Confidence

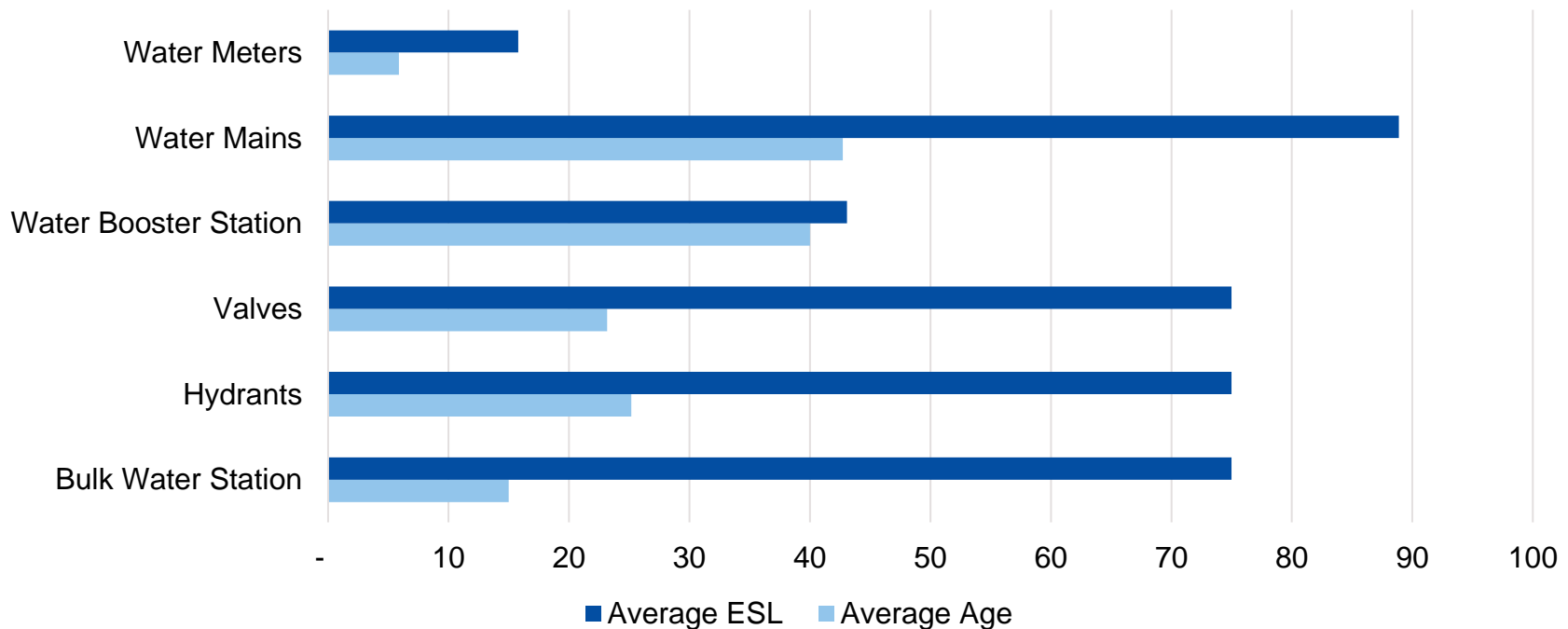
2.1.3 Water Age Summary

Comparing the average age of the assets with the average estimated service life (ESL) provides a representation of the average overall portfolio remaining life. The average age of water asset categories is around half of the average estimated service life, which is in

alignment with the Fair and Good condition distribution reported above.

The ESL is based on asset types and their attributes (i.e., material type for water mains).

Figure 10. Average Age as a Proportion of Expected Service Life by Asset Type All Water Assets

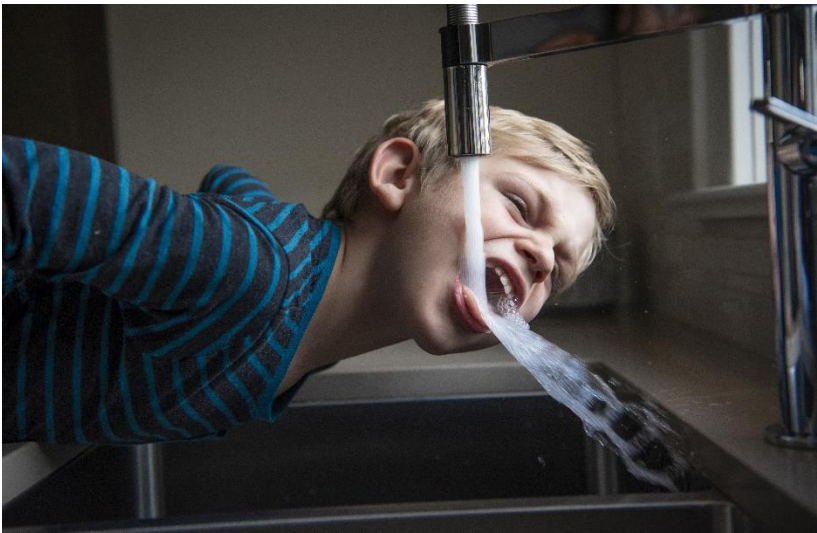


2.2 Water Levels of Service

The City of St. Catharines is committed to providing a sustainable and reliable supply of safe, high quality drinking water in accordance with regulatory requirements.

The Ontario Ministry of Environment, Conservation and Parks (MECP) conducts extensive annual inspections of the City’s water distribution system to determine the compliance of the system with requirements under the Safe Drinking Water Act and associated regulations.

The defined levels of service for the City’s water system are a key driver for the consistent performance that the City delivers to its residents as these provide the planned outcome from a functional perspective.



The Key Service Attributes associated with the water LOS and their associated statements are defined in the table below:

Table 11. Water LOS Service Attributes

| Service Attribute | Attribute Statement |
|---------------------------|--|
| Scope | Providing adequate water services to the community |
| Safety | Water system provides safe potable drinking water |
| Quality | Providing high quality water to customers |
| Reliability | Providing water services with minimal interruptions |
| Environmental Stewardship | Providing a water service in an environmentally conscious manner |
| Cost Efficiency | Providing water services in an efficient manner |
| Capacity | Water system supports community fire protection |

The following sections provide a summary of the levels of service for the City’s water services including those required by the O.Reg.588/17.

2.2.1 Water Customer Levels of Service

The City’s CLOS provides a means to assess the level to which customer expectations are being met. The

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following provides a summary of the CLOS associated with St. Catharines water service.

- Description, which may include maps, of the user groups or areas of the municipality that are connected to the municipal water system (Scope)**
 The City owns and operates a Class II residential water distribution system, that receives its drinking water from the Regional Municipality of Niagara's Decew Water Treatment Plant. The distribution system is comprised of 594 km of water main pipe, 3,559 hydrants, 1 booster station and a bulk water facility servicing, which service a total of 42,566 customers including 145 bulk water customers. See Figure 9 for a map of the water distribution system.
- Description, which may include maps, of the user groups or areas of the municipality that have fire flow (Scope)**
 Fire flow is provided by 3,559 hydrants within the serviced area.
- Description of boil water advisories and service interruptions (Reliability)**
 There have been no boil water advisories in 2019 or 2020

Additional customer levels of service are provided in **Table 12**.

Table 12. Water CLOS Indicator

| Service Attribute | Customer Levels of Service | 2020 Performance |
|-------------------|--|------------------|
| Quality | Number of complaints due to rusty / discoloured water | 29 |
| | Average Condition of water mains | Good |
| Reliability | Length of water mains in Poor or Very Poor condition | 121 kilometres |
| | Percentage of water assets in fair or better condition | 80% |
| Cost Efficiency | Annual cost to provide water service (per customer) | \$309.12 |

The current customer performance is based on billing information, customer service requests received, and the findings from the City's water model.

2.2.2 Water Technical Levels of Service

In addition to setting performance levels associated with customer expectations, the City has also documented

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current technical performance indicators that align or support the CLOS presented in **Table 12**.

The following provides a summary of the TLOS associated with the water service at the City of St. Catharines.

Table 13. Water TLOS Metrics

| Service Attribute | Technical Levels of Service | 2020 Performance |
|---------------------------|---|------------------|
| Scope | Percentage of properties connected to the municipal water system ^(a) | 94.2% |
| Safety | Percentage of water sampling meeting Safe Drinking Water Standards | 99.9% |
| Reliability | Percentage of water assets in poor or better condition | 83% |
| | The number of connection-days per year where a boil water advisory notice is in place compared to the total number of properties connected to the municipal water system ^(a) | Zero (0) |
| | The number of connection-days per year due to water main breaks compared to the total number of properties connected to the municipal water system ^(a) | 10.6 |
| | Total number of water main breaks | 115 |
| | Percentage of customers where service is interrupted due to a water main break | 9% |
| | Number of water main breaks per 100 km | 19 |
| | 5 year rolling average water main breaks per 100km | 19 |
| | 5-year average number of water main breaks | 111 |
| Environmental Stewardship | Water loss as a percentage of Water Purchased | 15% |
| Cost Efficiency | Preventative maintenance as a percentage of total maintenance | 6% |
| | Maintenance cost per km of distribution network | \$ 8,745 |
| | Capital investment vs sustainable investment forecast | 20% |
| | 100-year sustainable investment equivalent annual cost | \$ 42,044,939 |

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| Service Attribute | Technical Levels of Service | 2020 Performance |
|----------------------------|--|------------------|
| Cost Efficiency (Cont.) | Water linear (Mains + Appurtenances) Reinvestment Rate - (Annual average of projected lifecycle capital budgets as a % of replacement value) | 0.9% |
| | Total water linear asset replacement value | \$ 819,579,254 |
| Capacity | Percentage of properties where fire flow is available ^(a) | 98.6% |

Notes:

(a) Required by O.Reg. 588/17

2.2.3 Water Future Metrics for Consideration

As part of the definition of levels of service, the City identified possible level of service metrics that could be added to their framework as data becomes available. The following table provides a summary of the metrics that have been proposed for future consideration.

Table 14. Water LOS Future metrics

| Service Attribute | Levels of Service Proposed Future Metric | Type of LOS |
|-------------------|--|-------------|
| Reliability | Percentage of system with high or low pressure | Technical |

2.3 Water Lifecycle Management Strategy

The levels of service presented in the previous section are supported by the achievement of a variety of lifecycle activities in accordance with the activity types presented in **Table 5**. These activities are targeted to extend the asset life, ensure levels of service are being met, and reduce overall lifecycle costs.

The water service staff implement a variety of lifecycle activities on its entire portfolio. **Table 15** provides a summary of these activities and the risk associated with not doing them.

2. WaterState of Local
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Service**Lifecycle Management
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| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|--------------------------------|--|--|---|
| Non-Infrastructure Solutions | <ul style="list-style-type: none"> Master plans are developed and updated to provide a baseline for future growth projections in the water system. Hydraulic analysis is conducted to evaluate the capacity of the linear water system and identify areas that require improvements. Condition assessments of booster station and bulk water station as required. The City provides continuous tracking on water quality complaints to ensure customer satisfaction. | <ul style="list-style-type: none"> Inaccurate growth numbers lead to inadequate estimations for funding requirements and insufficient capacity. Asset deterioration is over or underestimated. Regulatory requirement and standard changes. | <p>\$ 120,000</p> <p>Based on the historical 2017 to 2021 average expenditures. It is recommended that future studies be identified based on best practices and cost estimates be developed.</p> |
| Renewal / Rehab Activities | <ul style="list-style-type: none"> Renewal and rehabilitation as identified through ongoing maintenance, inspection, and condition assessments. | <ul style="list-style-type: none"> Incorrect assumptions of the expected improvement in useful life after maintenance is completed. Increased lifecycle cost if renewal/rehab are done improperly or not as scheduled. Water loss to the environment. | <p>-</p> <p>Currently done on a reactive basis. A strategy needs to be developed to have a regular program to identify good candidates for the implementation of these technologies at an appropriate time and prior to an asset needing full replacement</p> |

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| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|--------------------------------------|--|--|--|
| Maintenance Activities | Linear Assets <ul style="list-style-type: none"> Routine maintenance program including flushing of water mains, exercise in-line valves, sampling for lead in service connections, seasonal maintenance of hydrants. Leak detection program and break repairs as needed. Repair program for valves and hydrants as required. Relining (in the future) Vertical Assets <ul style="list-style-type: none"> Routine maintenance program including inspection and equipment checks. | <ul style="list-style-type: none"> Increased lifecycle cost if maintenance is done improperly or without scheduled frequency. Insufficient maintenance could lead to unplanned and urgent work when there are inadequate resources available (labour, materials, etc.). Insufficient maintenance may contribute to asset failure resulting in service disruptions. | <p>\$ 4,825,000</p> <p>Based on the 2020 to 2021 budget increase applied annually from 2021 onwards. Incorporating the maintenance of growth assets following construction</p> |
| Replacement/ Construction Activities | <ul style="list-style-type: none"> Replacement of deteriorated assets. | <ul style="list-style-type: none"> Coordination with other asset classes (if applicable) might delay or advance timeframe of construction activities. Delays in construction could results on cost over-runs. | <p>\$ 28,563,000</p> <p>Forecasted based on the lifecycle management activities.</p> |
| Growth Activities | <ul style="list-style-type: none"> Asset additions to accommodate for population growth in new sub-divisions within the City. Linear Appurtenance additions to support changes in system configuration. | <ul style="list-style-type: none"> Growth activities are delayed or cancelled resulting in system being unable to accommodate increased growth demands. Loss of compensation through Development Charges. | <p>\$ 224,000</p> <p>Based on the average between the maximum of 2017 to 2021 average capital growth activities and the projected development charges</p> |

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| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|--------------------------------|--|--|--|
| Disposal Activities | <ul style="list-style-type: none"> Decommissioning assets at the end of their useful life. Disposal of abandoned or obsolete infrastructure during construction projects. Salvage and reuse of parts where appropriate. Hydrants scrapped if barrel is defected and there is a salvage value associated with their disposal and some are salvaged and used for spare parts. | <ul style="list-style-type: none"> Improper disposal could lead to environmental impacts and result in cost overruns. | <p>\$ 40,000</p> <p>Based on the 2017 to 2021 average disposals</p> |
| Service Improvement Activities | <ul style="list-style-type: none"> Water service improvements are conducted during water main replacement projects, or when at the request of a customer based on pipe diameter and/ or material type to copper or plastic. Water main upsizing based on design standard compliance and flow requirements. Inclusion of water mains looping to minimize dead ends in the water network. Automatic Meter Reader replacement program for older water meters. | <ul style="list-style-type: none"> Lack of improvements can result in health and safety risks. Loss in efficiency of delivering service. | <p>\$ 69,000</p> <p>Based on the 2017 to 2021 average service improvement activities</p> |

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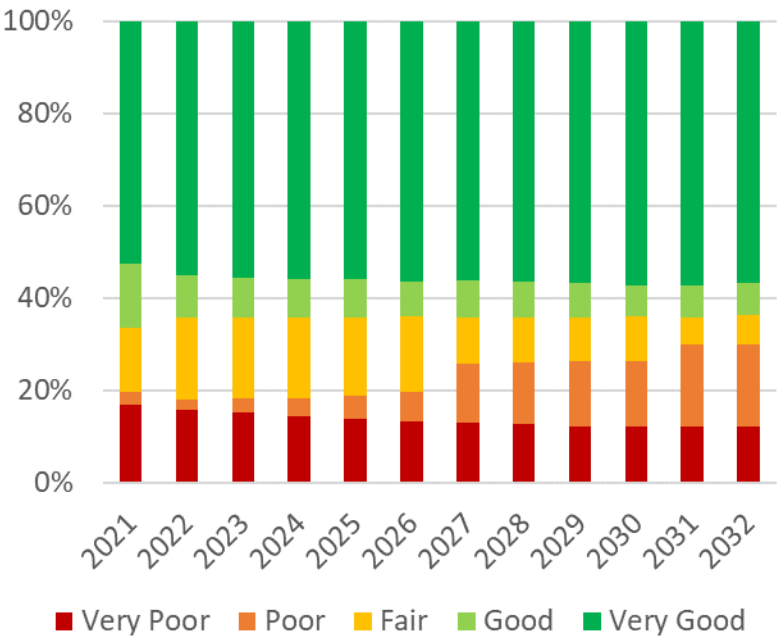
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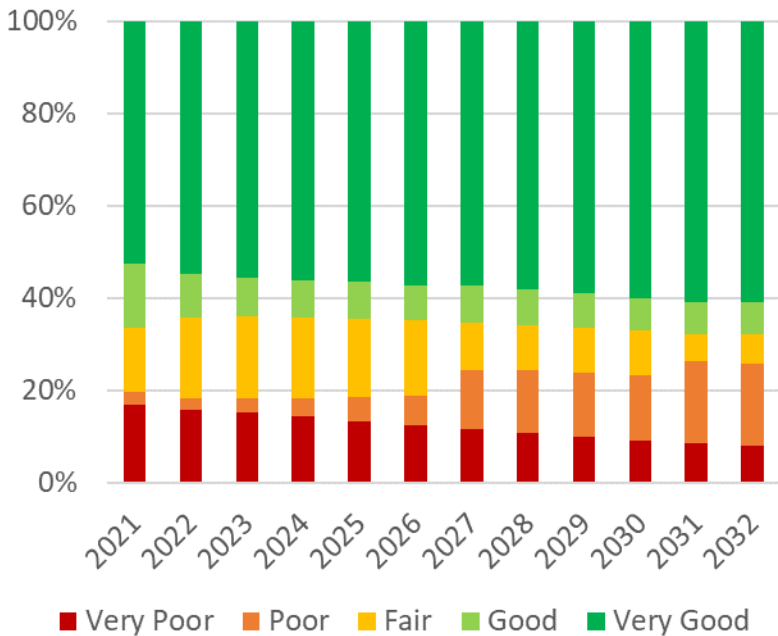
The City uses these strategies to plan work and determine future expenditure needs. The TLOS used in the AM analysis for water assets was defined as maintaining the current portion of assets with poor or better performance. The cost to maintain this scenario was determined to be \$16.2M annually over a 25-year period and resulted in the performance forecast shown in **Figure 11**. The percentage of assets in poor or better condition holds around 83% with slight improvement over the 10-year period.

Figure 11. Water Condition Distribution Performance with Cost to Maintain Performance



The current planned budget was also analyzed to determine if a funding gap exists. However, it was identified in the recent water and wastewater financial plan that an improvement to LOS was required to meet the Community's needs. The current planned expenditures, starting around \$9M in 2021 and increasing to \$19.5M by 2029, resulted in the performance forecast shown in **Figure 12**. The percentage of assets in poor or better condition improves from 83% to 92% over the 10-year period.

Figure 12. Water Condition Distribution Performance with Anticipated Budget



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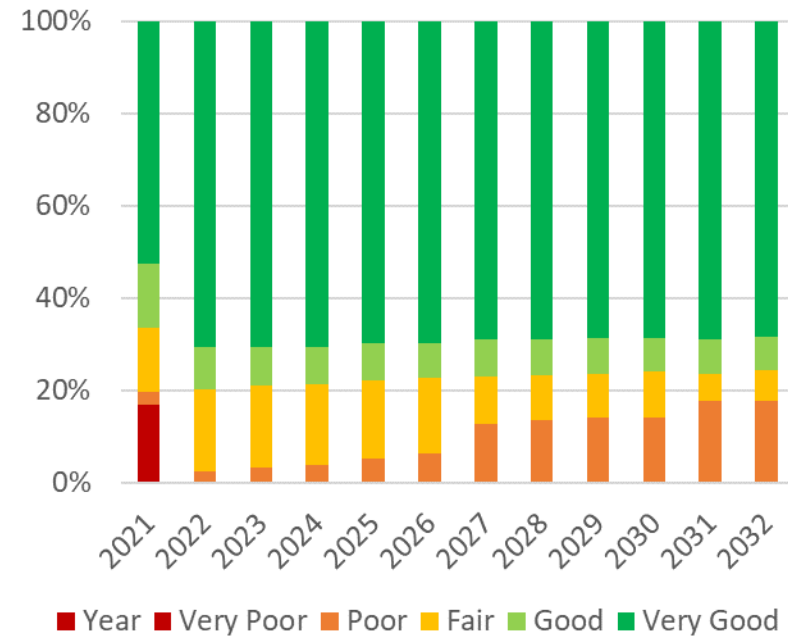
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Additionally, an optimal lifecycle scenario was analyzed, which was used to determine the cost to meet all lifecycle strategies described in **Table 15**. This scenario addresses the backlog and ensures no asset reaches very poor performance. The cost to achieve this scenario was determined to be \$33.7M annually over a 25-year period and resulted in the performance forecast shown in **Figure 13**.

The costs for the 10-year lifecycle forecast are presented in **Figure 14**. The graph shows the forecasted expenditures by lifecycle category for the cost to maintain scenario. The equivalent annual cost to maintain LOS, the annual expenditures for the optimal lifecycle scenario and the anticipated annual funding is also provided on the graph. The City should continue to implement the recommendations from the water and wastewater financial plan.

Figure 13. Water Condition Distribution Performance with Optimal Lifecycle Activities



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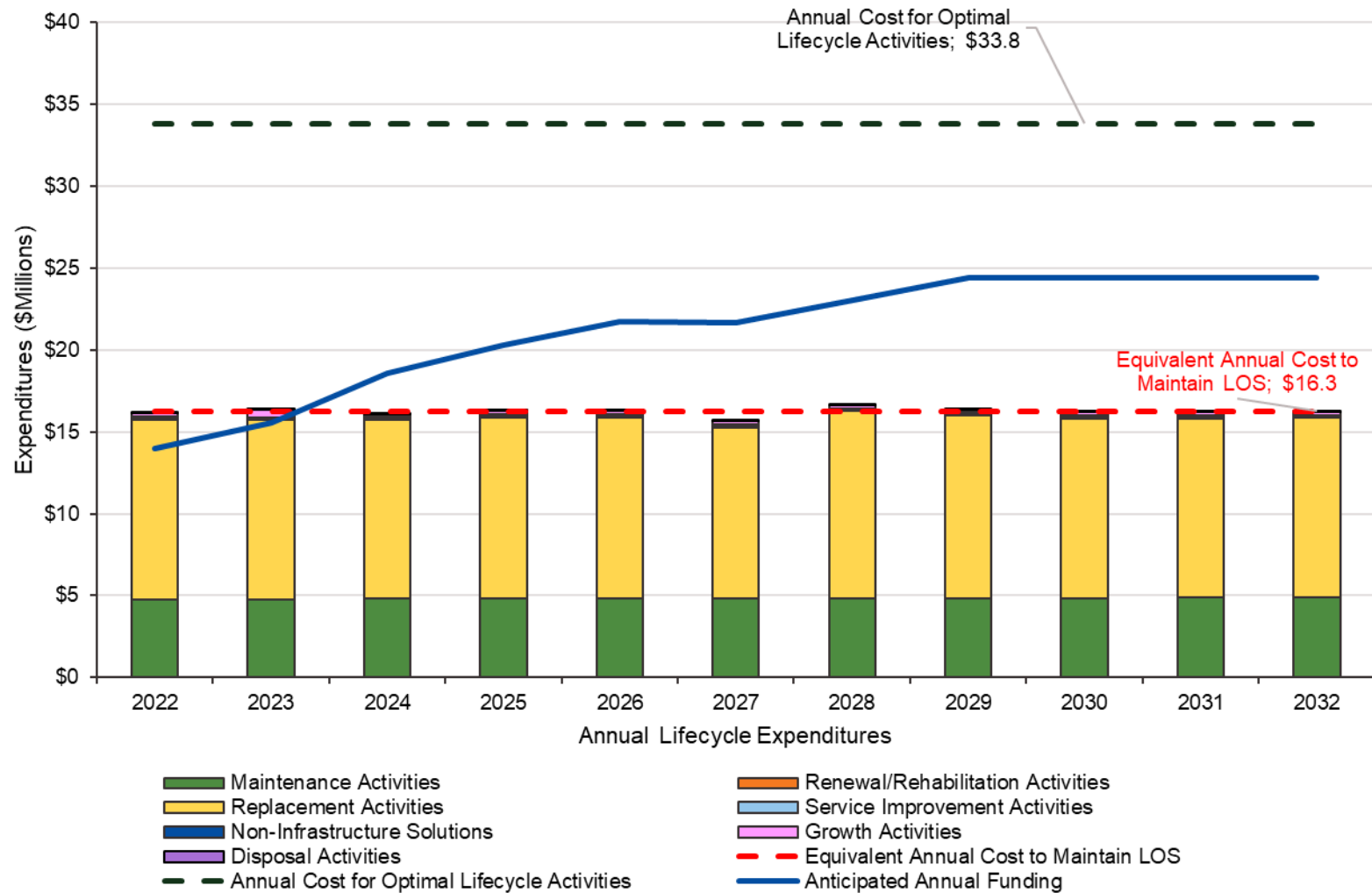
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Figure 14. Water Forecasted Lifecycle Needs



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2.4 Water Service Associated Risks

As noted, the assets associated with the water service are key to providing clean and safe drinking water to the community. In addition to the risk associated with the lifecycle activities for this service, as shown on **Table 15**, the following are considered general risks with this service:

- Water main breaks resulting in service disruption;
- Hydrant failure resulting in limited fire flow access;
- Revenue loss due to water meter failure, leaks and water main breaks;
- System operational restrictions due to valve failure;
- Inability to isolate parts of the system due to valve failure;
- Third party damage during repair activities
- Service disruptions and reduction of water quality; and
- Service interruptions as a result of water station failure, both booster pumping and bulk water.

2.5 Water Climate Change Considerations

While the City's location by the Great Lakes would seem to assure its water supply source is relatively secure, water quality can be impacted by climate change and pollution. In the past decade, there have been increased

incidents of algal blooms in Lake Erie and Lake Ontario which threaten fish and wildlife habitat, interfere with recreational activities, as well as increase costs for treating drinking water. Excess nutrients from stormwater runoff, warm temperatures, and sunlight trigger various types of algae growth which can contaminate water and affect its taste and odour.

With climate change, increasing annual average temperatures and a trend towards more heat waves and summer droughts are expected to continue in the future. Dry weather increases peak demand for water which impacts the sizing of various water infrastructure. Rural residents that rely on non-municipal sources will be impacted by droughts that affect evaporation patterns, groundwater recharge, and agricultural production. Various measures for system design and operation will need to be assessed to deal with these issues.

2.6 Water Data Confidence

The following data sources were used to support this chapter's assessment of the City's water assets.

- Water mains, valves, hydrants, and meters: GIS shapefiles of the full inventory for these categories with their associated key attributes such as installation date, type, size, length;
- Unit Cost Summary documentation provided by the City based on historical data;

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- Historical water main break records;
- City Tangible capital asset estimated service life values; and
- Bulk Water Station and Booster Station drawings.

The following assumptions were made during the assessment of the data for the development of the different assessments:

- The water facility inventory was based on high-level information available from the drawings. The cost of these assets was determined based on estimates of similar assets and their age was assumed as per the drawings provided;
- Water main break data from years prior to the initial assessment in the break records were considered with an age approach for condition;
- Missing installation dates in linear assets were filled based on the material standard install date period; and
- Replacement costs were forecasted based on available unit rates for the diameters not included in the original dataset.

A data confidence assessment is provided below:

Table 16. Water Data Confidence Assessment

| Asset Category | Confidence Rating | Confidence Data |
|-----------------------|-------------------|--|
| Water mains | C | Assumptions were made for age, break data, and replacement values from reliable sources. |
| Hydrants | B | Minor assumptions were made on age and replacement costs |
| Valves | | |
| Water Meters | | |
| Bulk Water Station | D | Data based on historical information and assumptions on key parameters |
| Water Booster Station | | |

Estimated Replacement Value

The City's wastewater collection system is valued at approximately **\$1.5 billion**.

Condition Rating

The overall average condition of the assets for the wastewater collection system is **Good**.

Wastewater

The City collects wastewater from residential, industrial, commercial, and institutional facilities within its boundary to be treated at a Niagara Region's wastewater treatment plants. As a lower tier municipality, the City is responsible for the local wastewater collection system that includes the following portfolio of assets:

563 kilometres of Wastewater Gravity Mains

7,878 Maintenance Holes

5.4 kilometres of Forcemains

9 Wastewater Storage Facilities

1 Wastewater Pump Station

3.0 Wastewater

Conveying wastewater from homes and businesses within the City to the wastewater treatment plants decreases the risk of health-related issues from exposure to bacteria in wastewater, while also mitigating the environmental impact of untreated effluent entering the natural environment.

The following section summarizes the portfolio associated with the City Wastewater Service.

3.1 Wastewater State of Local Infrastructure

3.1.1 Wastewater System Valuation

The City's wastewater collection system is divided into linear and vertical asset types. These serve to convey both wastewater and combined (wastewater and stormwater) flows.

- **Wastewater Linear Assets** represent the majority of the collection portfolio as they include mains, force mains, and service connections. For the purpose of this assessment, service connections were not discretized single asset categories, these were considered components of the sewer mains.

- **Wastewater Vertical Assets** include the facilities required to further pump or store wastewater in the system.

For the valuation of the wastewater collection system, the replacement values considered are intended for replacement of a similar asset (like-for-like) on a complete and standalone basis. These were calculated based on historical values that the City has incurred as part of previous projects for similar assets. Furthermore, the estimated value for wastewater facilities was calculated using a bottom-up approach based on the assets located within each facility and industry standard costing for these assets.

Based on the approach taken to calculate the replacement values for each asset category, the data confidence grade is:

- **D** for the pump station,
- **C** for sewer mains, and
- **B** for the remaining asset categories.

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Table 17. Wastewater System Inventory Valuation

| Asset Type | Asset Category | Count | Unit | Replacement Value (2021 Dollars) |
|--|--------------------------------|---------|--------|----------------------------------|
| Wastewater Collection | Gravity Mains | 563,128 | Metres | \$ 1,445,630,000 |
| | Force Mains | 5,448 | Metres | \$ 12,995,000 |
| | Maintenance Holes | 7,878 | Each | \$ 71,877,000 |
| | Pumping Station ^(a) | 1 | Each | \$ 962,000 |
| | Wastewater Storage Facility | 9 | Each | \$ 24,950,000 |
| Overall Wastewater System Replacement Value (2021 Dollar) | | | | \$ 1,556,414,000 |

Notes:

(a) Replacement values for pump stations were based on an estimate of the replacement of each of the assets within these facilities

The overall distribution of replacement values by asset type for the wastewater collection system is as shown in **Figure 15**. The wastewater gravity mains have the highest replacement value in the portfolio, totaling 92.88% of the entire system. The remaining assets correspond to 7.12% of the value associated with the wastewater collection system.

As wastewater gravity mains represent the majority of the wastewater collection asset replacement values, **Figure 16** provides a summary of the distribution of replacement values based on materials.



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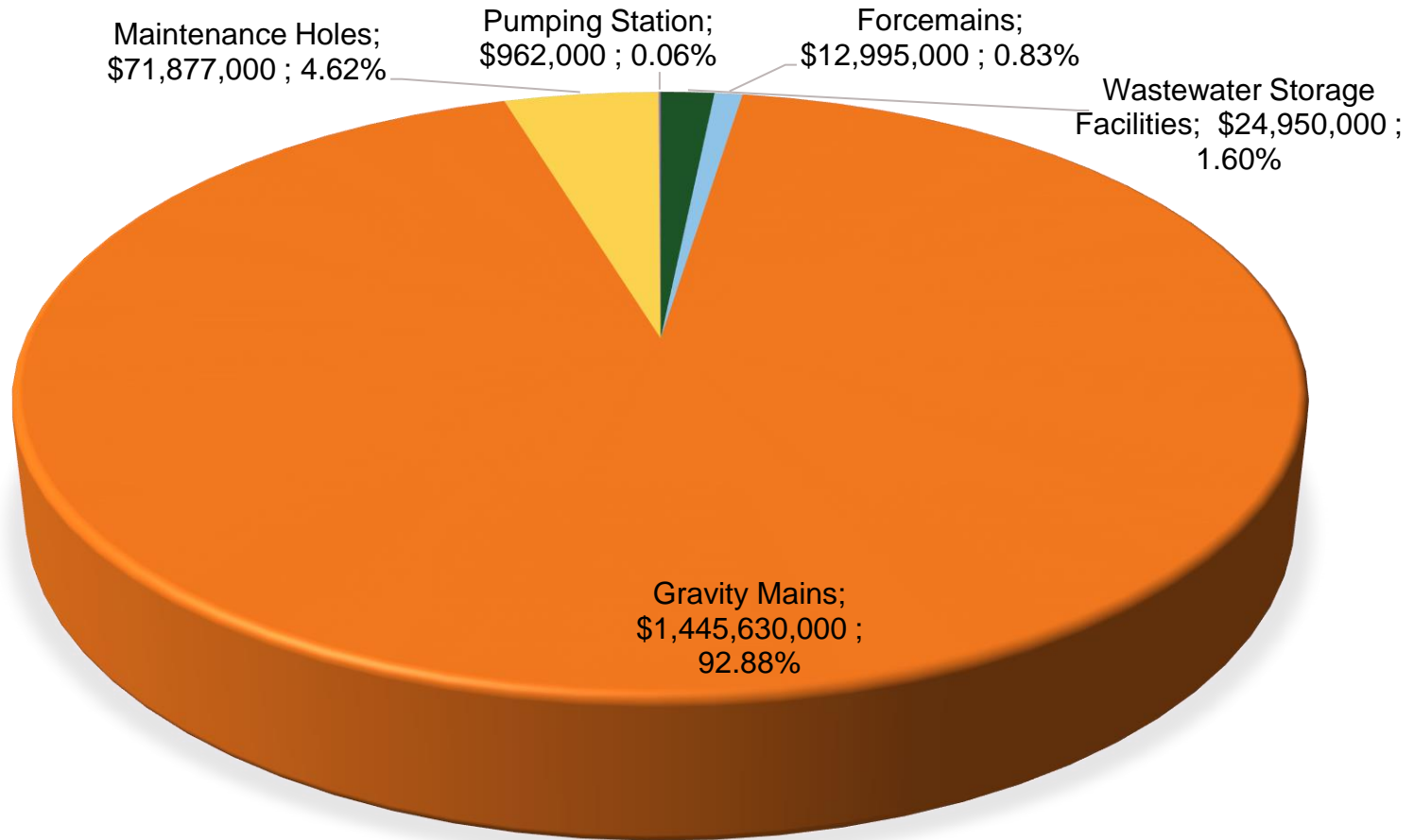
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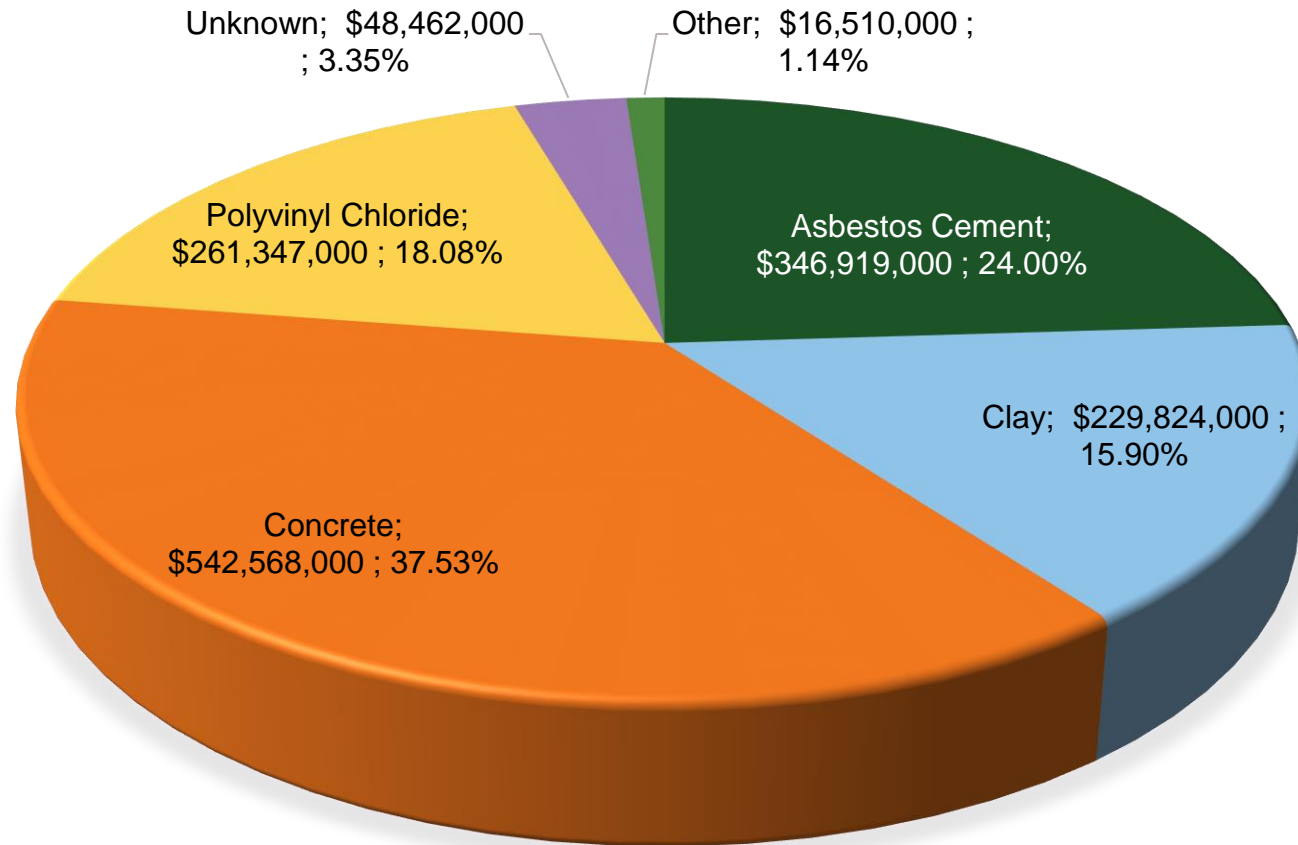
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Figure 15. Asset Replacement Value for All Wastewater Assets



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Confidence**Figure 16. Asset Replacement Value for All Wastewater Gravity Mains by Materials**

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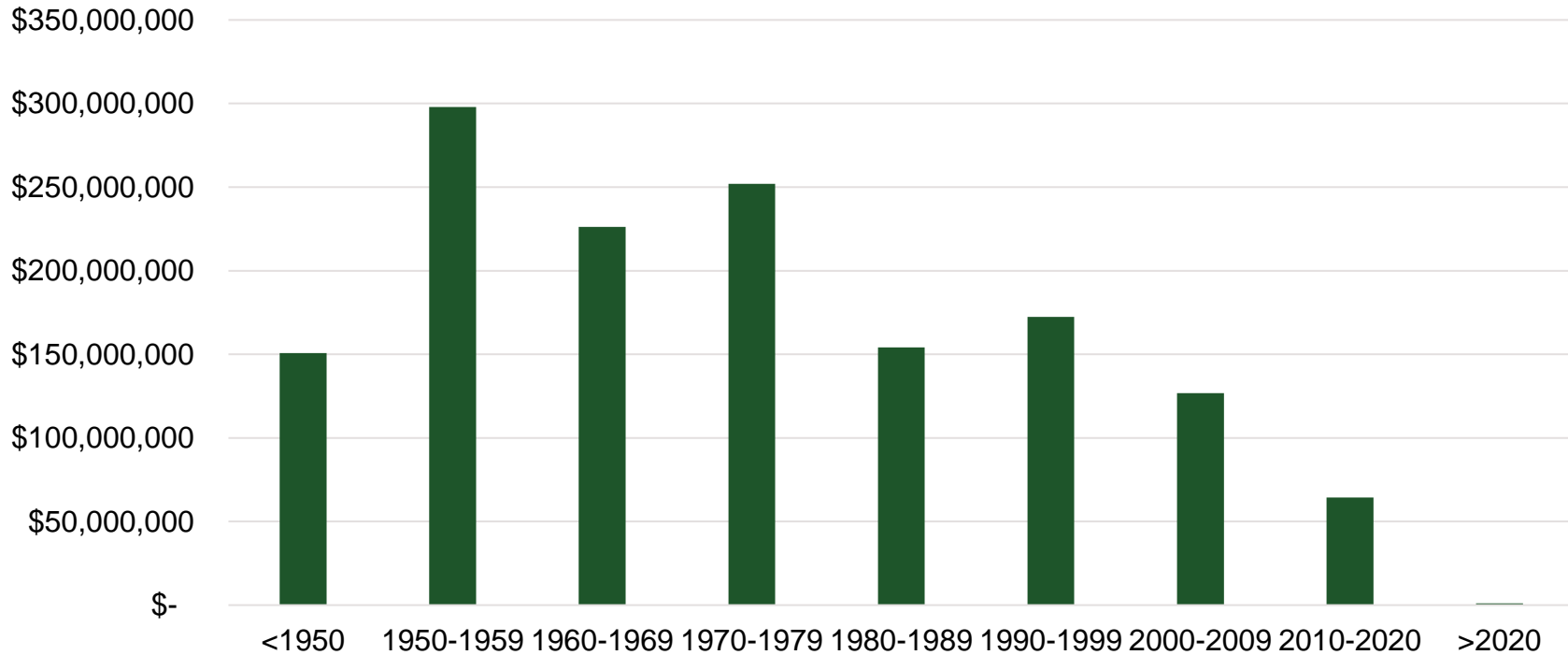
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To further assess the wastewater gravity mains, as the major asset category within the wastewater service, the

figure below summarizes the decade of the year of installation by replacement value.

Figure 17. Distribution by Replacement Value for all Wastewater Gravity Mains by Installation Decade



As shown in **Figure 17**, a large portion of the wastewater collection portfolio was constructed over 70 years ago which indicates that these assets will be reaching the end of their useful life in the coming years resulting in increasing capital requirements.

3.1.2 Wastewater System Condition

Using Markov probability distributions based on observed and predicted conditions, a condition score was computed for each asset into five rating categories ranging from Very Good to Very Poor. The City has

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completed condition assessments on wastewater sewers and maintenance holes according to the NASSCO PACP standards. The assessments of pipes without a recent CCTV inspection were completed using zoom camera inspections which is limited in that approximately 30% of the pipe is assessed. The assumption is that the observed section is indicative of the remaining pipe, however this may not always be the case. Where the condition assessment scores were available, they have been used to determine the associated condition rating. The recent zoom camera project recommends targeted CCTV inspections to refine the data. **Table 18** provides a summary of the rating scale for sewer mains. The condition of the other wastewater asset classes is based on the scale in **Table 4**.

Table 18. Sewer Mains and Maintenance Holes Condition Scale

| Condition Score | Condition Rating | Pipeline & Maintenance Holes Structural Score (PACP & MACP) |
|-----------------|------------------|---|
| 1 | Very Good | 0-1 |
| 2 | Good | 2 |
| 3 | Fair | 3 |
| 4 | Poor | 4 |
| 5 | Very Poor | 5 |

The current condition of assets has been summarized and weighted by replacement value in **Figure 18**. As the group representing the majority of distribution assets, the condition distribution of gravity mains has been represented by diameter in **Figure 19**, which also indicates the percentage of system length. The condition ratings are visualized in the map shown in **Figure 20**.

It should be noted that the sewers' performance data was assessed using zoom camera and CCTV inspections, each of which has its limitations. Staff have come across many sewers that have been observed to be in good condition through the inspections but were actually in very bad condition when exposed for any reason. Additionally, sewers that were near other construction activity started crumbling and provoked replacements that were not originally scheduled within projects.

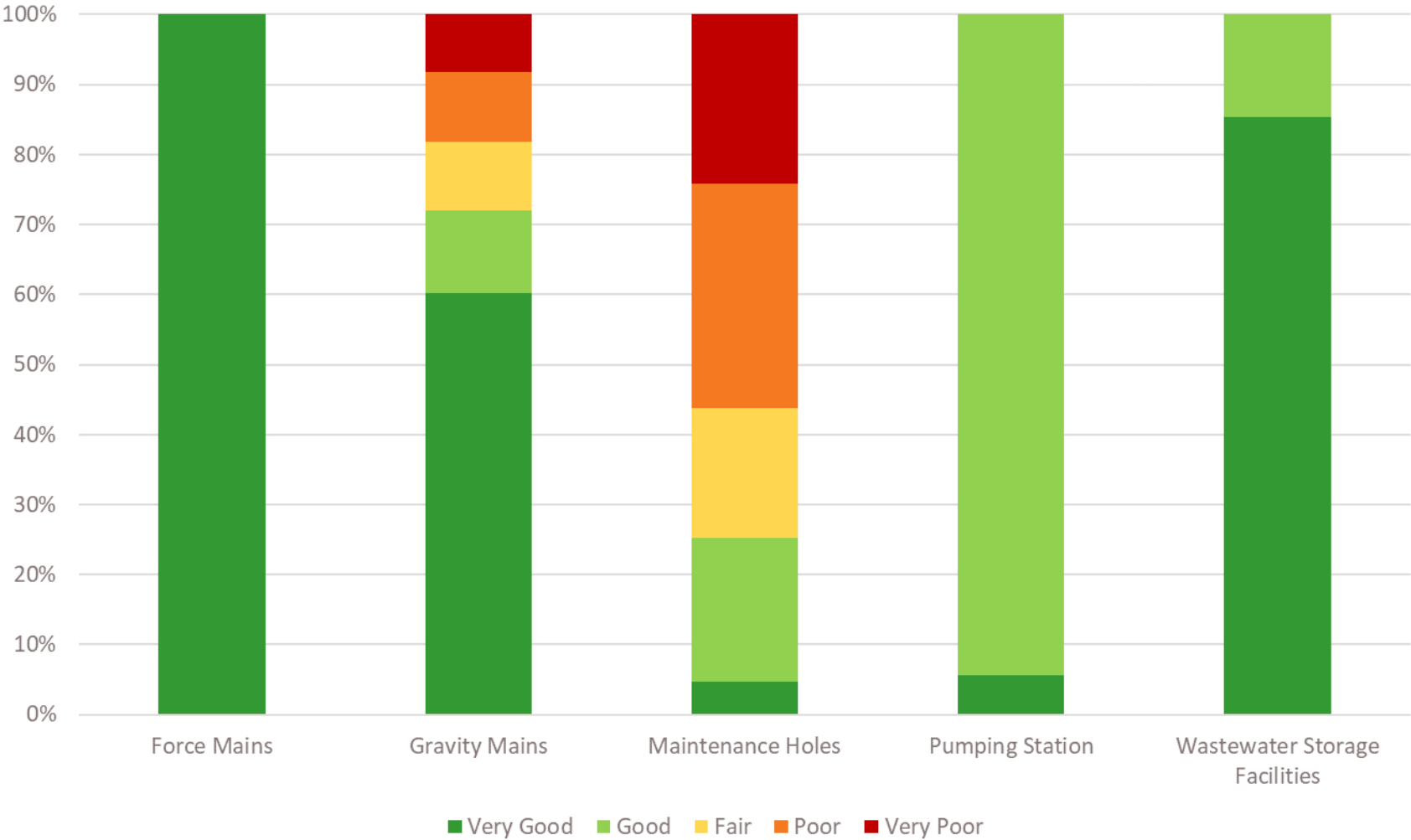
The overall condition of the wastewater facilities is based on the average condition of its components.

Overall, 9% of the wastewater assets are in the very poor rating category (based on replacement value) and 11% are in the poor category.

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Figure 18. Condition Distribution by Replacement Value for all Wastewater Asset Types



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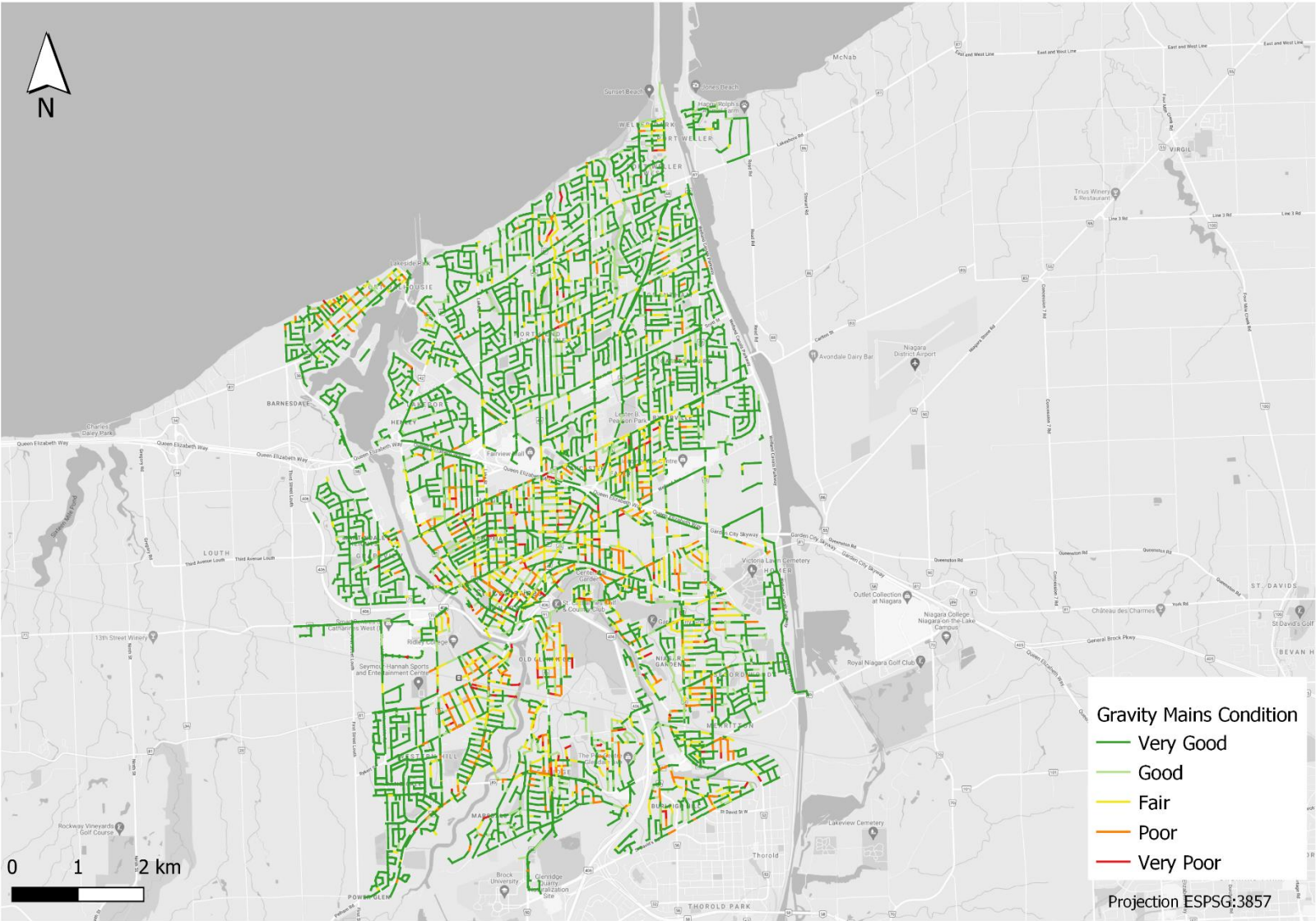
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Figure 19. Condition Distribution by Replacement Value for all Wastewater Mains



Figure 20. Condition Distribution by Location for all Gravity Mains



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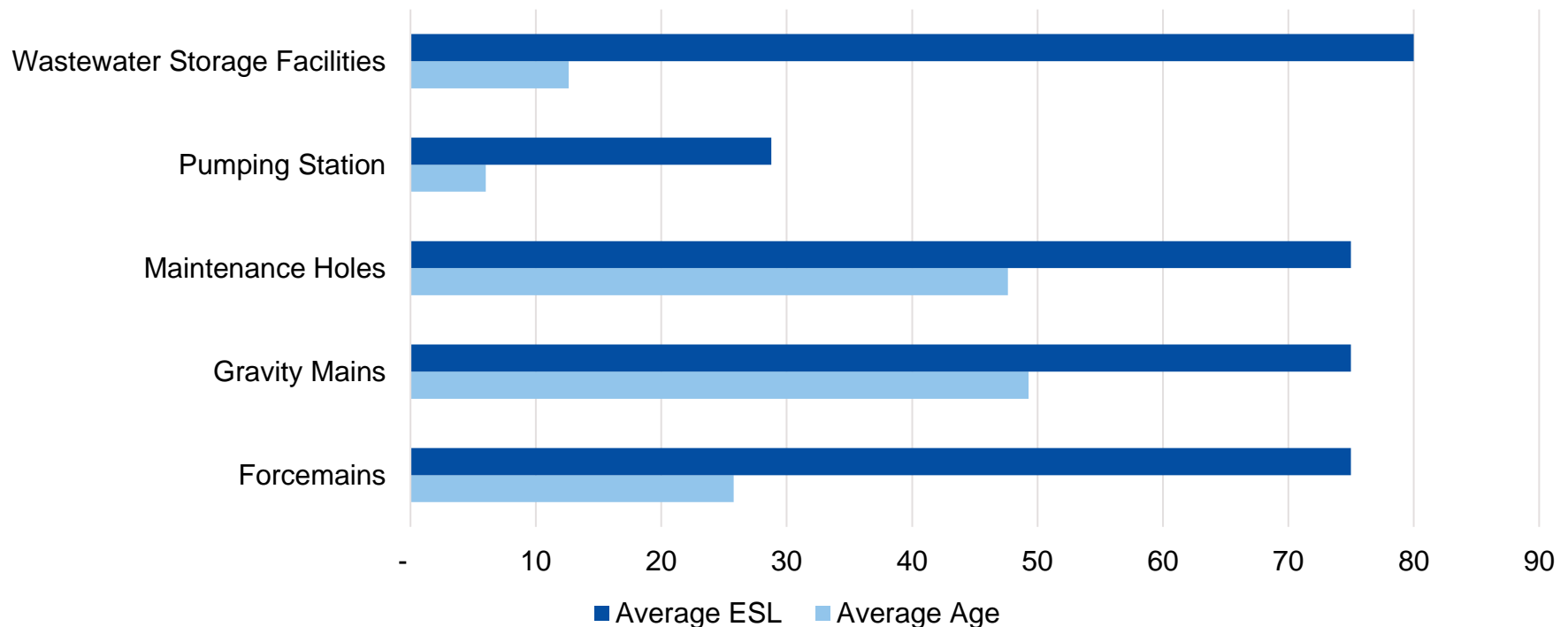
3.1.3 Wastewater Age Summary

Comparing the average age of the assets with the average estimated service life (ESL) provides a representation of the average overall portfolio remaining life.

The figure below summarizes the average ages of each asset type in the wastewater collection system.

It is apparent that the gravity mains are performing better than their age suggests. One concern was that old, vitrified clay sewers could be observed as good from CCTV inspections but are actually very brittle and susceptible to collapse. It is recommended that the staff further review the performance data, especially for older assets.

Figure 21. Average Age as a Proportion of Expected Service Life by Asset Type All Wastewater Assets



3.2 Wastewater Levels of Service

The City wastewater services are based on providing sustainable and reliable collection of wastewater that avoids basement flooding and environmental impacts.

The City follows the Ontario Ministry of Environment, Conservation and Parks (MECP) Design Guidelines for Sewage Works as minimum standard for the design, review, approval and installation of sewage works.

As part of the City’s efforts to improve wastewater services, the City has implemented a program to separate combined sewers into individual wastewater and stormwater mains, improving the resiliency of the system. An additional benefit of separating storm and wastewater sewers is that it reduces the quantity of stormwater being treated at the wastewater treatment plants, therefore reducing costs.

The Key Service Attributes associated with the wastewater LOS and their associated statements are defined in the **Table 19**.

Table 19. Wastewater LOS Service Attributes

| Service Attribute | Attribute Statement |
|---------------------------|--|
| Scope | Providing adequate wastewater services to the community |
| Reliability | Providing wastewater services with minimal interruptions |
| Environmental Stewardship | Providing wastewater services that have minimal impacts on the environment |
| Cost Efficiency | Providing wastewater services in an efficient manner |

The following sections provide a summary of the levels of service for the City’s wastewater services including those required by the O.Reg.588/17.

3.2.1 Wastewater Customer Levels of Service

The City’s CLOS provides a means to assess the level to which customer expectations are being met. The following provides a summary of the CLOS associated with St. Catharines wastewater service.

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- **Description of the user groups or areas of the municipality that are connected to the municipal wastewater system. (Scope)**

Within the urban boundary there are 563 km of City-owned main sewers that drain to Region-owned trunk sewers which carry wastewater to one of the two sewage treatment plant. The system also has nine wastewater storage facilities to store sewage that cannot be accommodated in the existing sewers during wet weather.

- **Description of how combined sewers in the municipal wastewater system are designed with overflow structures in place which allow overflow during storm events to prevent backups into homes. (Reliability)**

75% of the City's collection system is combined or partially combined sewers. During large rainstorms, the volume of flow can exceed the capacity of the sewer system. When this happens, a portion of the flow is diverted away from the wastewater plant and untreated sewage, mixed with storm water, is released directly into the environment. The diversions occur at a series of overflow regulator chambers located along the combined sewer system. The strategically located overflow regulators are designed to prevent sewer backups. The system also has nine wastewater storage facilities to temporarily store sewage that

cannot be accommodated in the existing sewers during wet weather. The stored sewage is then released into the sewer system at a favorable time when the sewers can accommodate the extra volume.

- **Description of the frequency and volume of overflows in combined sewers in the municipal wastewater system that occur in habitable areas or beaches. (Reliability)**

There are 53 locations where combined sewers can outlet to the environment. The number of overflows incidences is directly related to the duration and intensity of wet weather. Based on a hydraulic model of the sewer system, there were 21 overflow occurrences resulting in 48 ML discharged to the environment at eight locations in 2020.

- **Description of how stormwater can get into sanitary sewers in the municipal wastewater system, causing sewage to overflow into streets or backup into homes. (Reliability)**

In areas with combined sewers, water may enter the system directly through catch basins. Other sources of inflow to the sewer main can result from: stairway drains, driveway drains, floor drains/basement sump pumps, uncapped yard

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cleanouts and downspouts. Groundwater infiltration can also enter from foundation drains.

Even in areas that are fully separated, water can still flow into the sanitary sewers through maintenance hole covers or infiltrate through pipe defects such as cracks, or offset joints and poor service connections.

- **Description of how sanitary sewers in the municipal wastewater system are designed to be resilient to avoid events that could cause sewage to overflow into streets or backup into homes. (Reliability)**

Sanitary sewer design follows the Ontario Design Guidelines for Sewer Works and the St. Catharines Engineering Standards Manual.

CCTV and smoke testing programs identify sources of infiltration and inflow and guide repairs.

- **Description of the effluent that is discharged from sewage treatment plants in the municipal wastewater system. (Reliability)**

This regulatory metric is not applicable to the City as the sewage treatment plants are owned and operated by the Regional Municipality of Niagara.

Additional customer levels of service are provided in **Table 12**.

Table 20. Wastewater CLOS Indicator

| Service Attribute | Customer Levels of Service | 2020 Performance |
|-------------------|---|------------------|
| Quality | Average Condition of Sewers | Good |
| Reliability | Length of Sewers in poor and Very poor condition | 48 kilometres |
| | Percentage of wastewater assets in fair or better performance | 81% |
| Cost Efficiency | Annual cost to provide wastewater service (per customer) | \$330 |

3.2.2 Wastewater Technical Levels of Service

The City has defined technical requirements and key performance indicators that support internal reporting. The following provides a summary of the TLOS associated with the wastewater service at the City.

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Table 21. Wastewater TLOS Metrics

| Service Attribute | Technical Levels of Service | 2020 Performance |
|---------------------|---|--|
| Scope | Percentage of properties connected to the municipal wastewater system ^(a) | 94% |
| Reliability | Percentage of wastewater assets in poor or better performance | 91% |
| | Percentage by km of network with issues prone to blockages | 6% |
| | Total number of Wastewater Storage Facilities | 9 |
| | The number of events per year where combined sewer flow in the municipal wastewater system exceeds system capacity compared to the total number of properties connected to the municipal wastewater system ^(a) | 0.00052 |
| Reliability (Cont.) | The number of connection-days per year due to wastewater backups compared to the total number of properties connected to the municipal wastewater system ^(a) | 0.0106 |
| | The number of effluent violations per year due to wastewater discharge compared to the total number of properties connected to the municipal wastewater system ^(a) | This metric is not applicable to the City as the sewage treatment plants are owned and operated by the Regional Municipality of Niagara. |

Notes:

(a) Required by O.Reg. 588/17

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3.3 Wastewater Lifecycle Management Strategy

The levels of service presented in the previous section are supported by the achievement of a variety of lifecycle activities for wastewater assets in accordance with the activity types presented in **Table 5**. These activities extend the asset life and reduce overall lifecycle cost.

The water service staff implement a variety of lifecycle activities on its entire portfolio. **Table 22** provides a summary of these activities and the risk associated with not doing them.

Table 22. Wastewater Lifecycle Activities, Associated Risk, and estimated Lifecycle Cost

| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|------------------------------|--|---|--|
| Non-Infrastructure Solutions | Linear Assets <ul style="list-style-type: none"> Capacity analysis to confirm the capacity of the wastewater system in current flow demands. Hydraulic Analysis is conducted to evaluate the capacity of the linear wastewater system and identify areas that require improvements. Flow Monitoring program in place to calibrate and confirm estimates related to hydraulic model. CCTV and maintenance hole inspections. Smoke testing program in place to identify cross connections between sewer and storm systems. | <ul style="list-style-type: none"> Potential risk of sewer backup and basement flooding. Asset deterioration is over or underestimated. Regulatory requirement and standard changes. Reduced ability to understand potential impacts of climate change on the infrastructure. | <p>\$ 912,000</p> <p>Based on the historical 2017 to 2021 average expenditures. It is recommended that future studies be identified based on best practices and cost estimates be developed.</p> |
| | Vertical Assets <ul style="list-style-type: none"> Annual reports to Ministry on overflows | | |

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| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|----------------------------|---|---|---|
| Maintenance Activities | Linear Assets <ul style="list-style-type: none"> Routine maintenance program including sewer flushing and reaming and spot repairs. As required clearing of blocked lateral connections. Vertical Assets <ul style="list-style-type: none"> Routine maintenance program including inspection and equipment checks. | <ul style="list-style-type: none"> Increased lifecycle cost if maintenance is done improperly or not with scheduled frequency. Resource limitations to conduct unplanned, urgent work. Insufficient maintenance may contribute to asset failure resulting on service disruptions. | <p>\$ 1,680,000</p> <p>Based on the 2020 to 2021 budget increase applied annually from 2021 onwards. Incorporating the maintenance of growth assets following construction.</p> |
| Renewal / Rehab Activities | Linear Assets <ul style="list-style-type: none"> Relining of sewer, including laterals. Plastic maintenance hole inserts are used if the maintenance hole is identified as a major source of infiltration through the pick holes. | <ul style="list-style-type: none"> Incorrect assumptions of the expected improvement in useful life after maintenance is completed. Increased lifecycle cost if renewal/rehab are done improperly or not as scheduled. Increased costs to treat increased amounts of inflow & infiltration | <p>-</p> <p>Currently done on a reactive basis. A strategy needs to be developed to have a regular program to identify good candidates for the implementation of these technologies at an appropriate time and prior to an asset needing full replacement</p> |

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| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|---------------------------------------|--|---|---|
| Replacement / Construction Activities | <ul style="list-style-type: none"> Replacement of deteriorated assets. | <ul style="list-style-type: none"> Coordination with other asset classes (if applicable) might delay or advance the timeframe of construction activities. Delays in construction could result in cost over-runs. | <p>\$ 15,068,000</p> <p>Forecasted based on the lifecycle management activities.</p> |
| Disposal Activities | <ul style="list-style-type: none"> Decommissioning assets at the end of their useful life. Disposal of abandoned or obsolete infrastructure during construction projects. | <ul style="list-style-type: none"> Improper disposal could lead to environmental impacts and result in cost overruns. | <p>\$ 2,000</p> <p>Based on the 2017 to 2021 average disposals</p> |
| Service Improvement Activities | <p>Linear Assets</p> <ul style="list-style-type: none"> Annual replacement program to separate combined sewers. Sewer main upsizing/downsizing based on design standard compliance and flow requirements. | <ul style="list-style-type: none"> Lack of improvements can result in health and safety risks as well as negative environmental impacts. Continued cost to treat inflow and infiltration. Reduced capacities in the system to accommodate new developments without upgrades. | <p>\$ 884,000</p> <p>Based on the 2017 to 2021 average service improvement activities</p> |

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| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|-------------------------|---|---|--|
| Growth Activities | <ul style="list-style-type: none">Asset additions or upsizing to accommodate for population growth in new and existing sub-divisions within the City. | <ul style="list-style-type: none">Growth activities are delayed or cancelled resulting in system being unable to accommodate increased growth demands.Reduced capacity in the system to accommodate new developments without upgradesReduced ability to adapt to increased intensity rainfall events. | <p>\$ 396,000</p> <p>Based on the 2017 to 2021 average growth activities. There were no development charges forecasted for this service.</p> |

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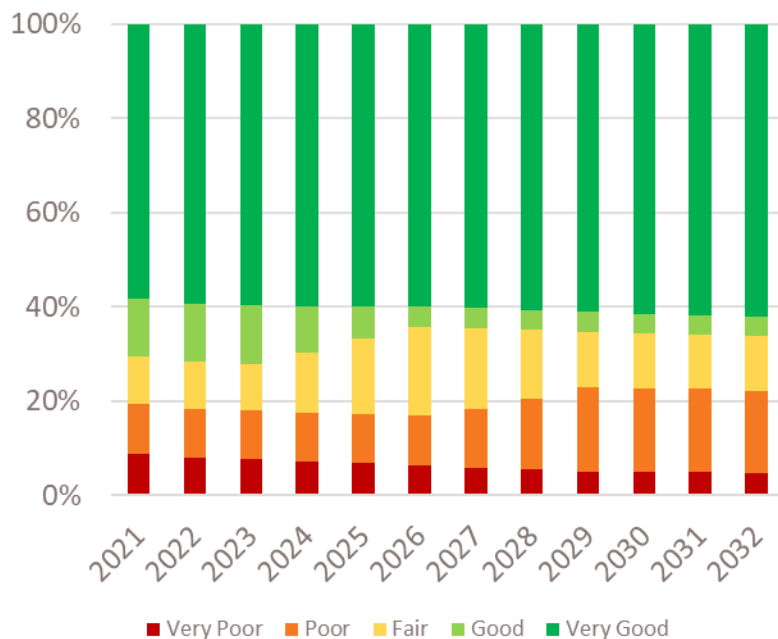
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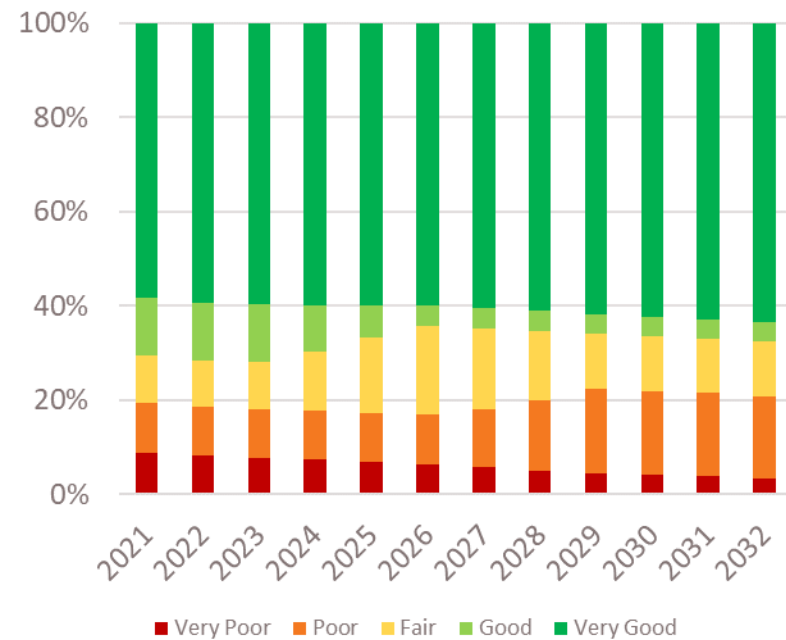
The City uses these strategies to plan work and determine future expenditure needs. The TLOS used in the AM analysis for water assets was defined as maintaining the current portion of assets with poor or better performance. The cost to maintain this scenario was determined to be \$10.9M annually over a 25-year period and resulted in the performance forecast shown in **Figure 22**. The percentage of assets in poor or better condition holds around 91%.

Figure 22. Wastewater Condition Distribution Performance with Cost to Maintain LOS



The current planned budget was also analyzed to determine if a funding gap exists. The current anticipated investments go from \$6.3M to ~\$12M by 2029. This resulted in the performance forecast shown in **Figure 23**. The percentage of assets in poor or better condition increases to 97% by 2032.

Figure 23. Wastewater Condition Distribution Performance with Anticipated Budget



3. Wastewater

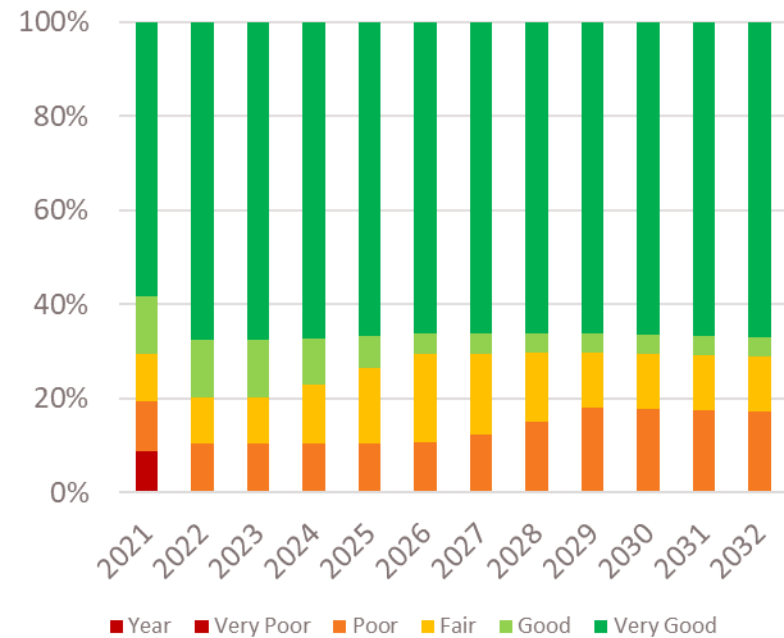
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Additionally, an optimal lifecycle scenario was analyzed, which was used to determine the cost to meet all lifecycle strategies described in **Table 22**. This scenario addresses the backlog and ensures no asset reaches very poor performance. The cost to achieve this scenario was determined to be \$18.9M annually over a 25-year period and resulted in the performance forecast shown in **Figure 24**.

The reason the anticipated investment levels increase above the annual Cost to Maintain LOS are because the data currently relies on the zoom camera and CCTV condition assessments for the sewers. The City has found that these approaches can overestimate how well the sewers are performing. Recommendations for data review are provided in the conclusions.

The costs for the 10-year lifecycle forecast are presented in **Figure 26**. The graph shows the forecasted expenditures by lifecycle category for the cost to maintain scenario. The equivalent annual cost to maintain LOS, the annual expenditures for the optimal lifecycle scenario and the anticipated annual funding is also provided on the graph. It is recommended that the City should continue with anticipated spending.

Figure 24. Wastewater Condition Distribution Performance with Optimal Lifecycle Activities



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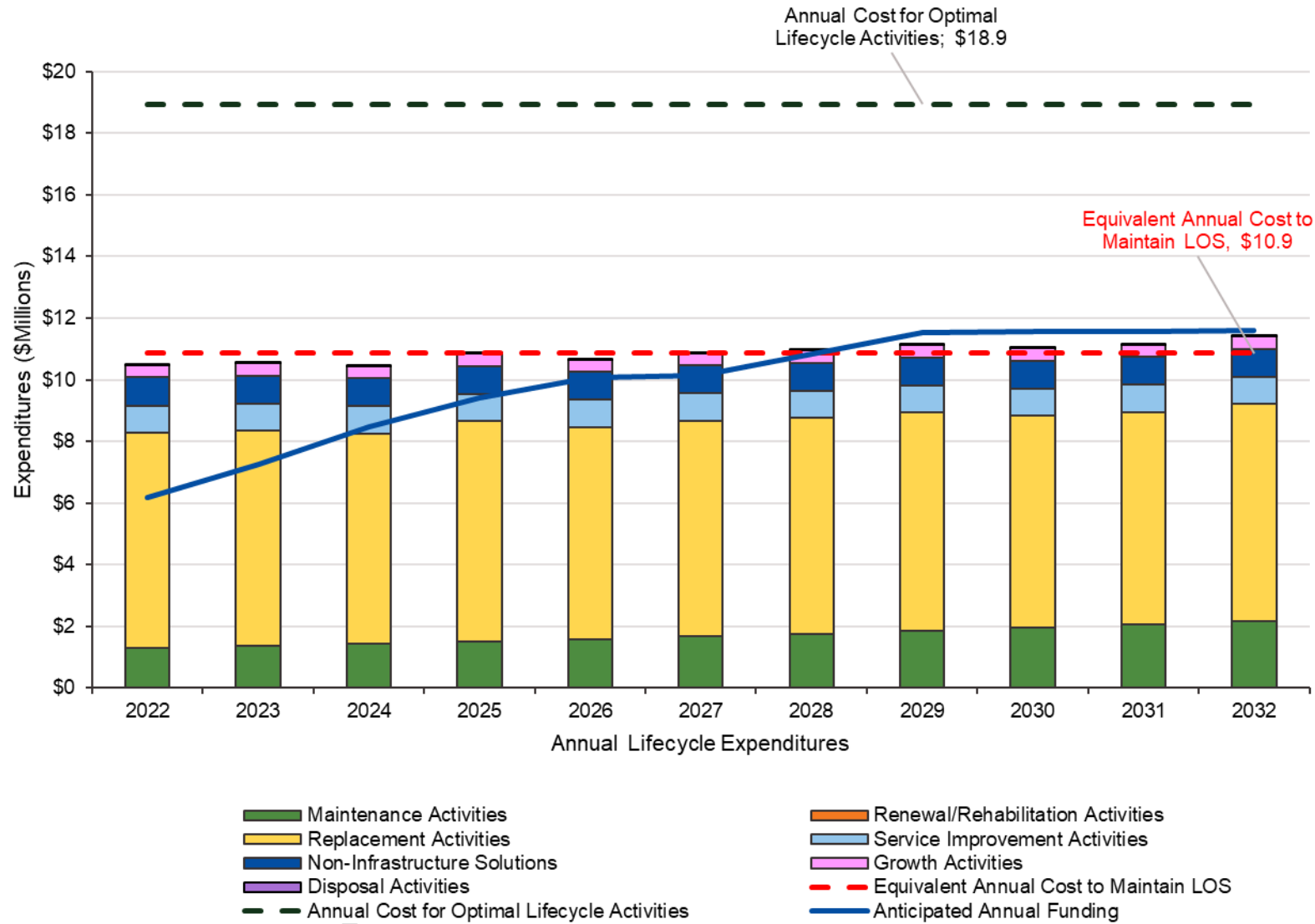
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Figure 25. Wastewater Forecasted Lifecycle Needs



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3.4 Wastewater Service Associated Risks

In addition to the risk associated with the lifecycle activities for this service described in **Table 22**, the following are considered general risks with this service:

- Gravity main deterioration could result in a collapsed sewer, possible sinkholes, third party damage, and environmental contamination;
- Capacity limitations could result in increased releases to the environment;
- Sewer backups could take place as part of failures on the overall system or due to capacity issues;
- The failure of storage facilities could result in system backups or increase release of sewer into the environment; and
- Pump station failure could result in sewer backups including overflows and potential basement flooding.

3.5 Wastewater Climate Change Considerations

The wastewater collection system is greatly influenced by wet weather conditions which cause inflow and infiltration of rainwater into the system, decreasing its capacity for sanitary flow and increasing the cost of treatment. With climate change, increases in the intensity, duration, and frequency of rain events leads to more runoff entering the

system and the greater likelihood of basement flooding and discharges of combined flow to local waterbodies. Similarly, more rain and less snow in the winter as well as rain on snow and ice during freeze-thaw cycles increases the chance of flooding.

Preventative maintenance, rehabilitation of wastewater infrastructure, and increased focus on green infrastructure and low impact development which replicates pre-development hydrology are critical to moderate increased flood risk. This includes actions for residents such as disconnecting downspouts and foundation drains from the sewer system to decrease peak flows. This helps reduce the need for expensive wastewater storage facilities which store peak flows to reduce combined sewer overflows. Design and operating modifications and development of emergency response procedures can also help mitigate some predicted adverse impacts.

3.6 Wastewater Data Confidence

The following data was used to support this chapter's assessment of the City's wastewater assets.

- Gravity mains, force mains, and maintenance holes: GIS shapefiles of the full inventory for these categories with their associated key attributes such as installation date, diameter, and length;

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- Unit cost summary documentation provided by the City based on historical data;
- City tangible capital asset estimated service life values;
- Pumping station drawings;
- Combined sewage storage facility inventory with install dates and replacement cost for most assets; and
- City zoom camera inspection database.

The following assumptions were made during the assessment of the data:

- Gravity main and forcemain condition data was taken from the zoom camera and CCTV inspection peak structural PACP scores. While zoom camera inspections covered most of the sewer system, there are limited recent CCTV inspection records for a large portion of the system.
- The wastewater pumping station inventory was based on high-level information available from the drawings. The costs of these assets were determined using estimates based on similar assets and their age was assumed as per the drawings provided; and

- Replacement costs were forecasted based on available unit rates for the diameters not included on the original dataset.
- Growth and expansion have been assumed based on projected development charges and historical growth budgets, however the City has a large portion of combined sewers, and expansion needs should be quantified moving forward.

A detailed data confidence assessment is provided in **Table 22:**

Table 23. Wastewater Data Confidence Assessment

| Asset Category | Confidence Rating | Confidence Data |
|-----------------------------|-------------------|--|
| Gravity Mains | C | Condition was based on Zoom Camera and CCTV inspections. Age was used where not available. |
| Force Mains | B | Minor assumptions were made on age, replacement costs, and condition |
| Maintenance Holes | | |
| Wastewater Storage Facility | | |
| Pumping Station | D | Data based on historical information and assumptions on key parameters |

Estimated Replacement Value

The City's stormwater collection system is valued at approximately **\$876 million**.

Condition Rating

The overall average condition of the assets for the stormwater collection system is **Good**.

Stormwater

The City of St. Catharines collects stormwater from within its boundary to be released to Lake Ontario. The City is responsible for the stormwater collection system that includes the following assets:

- 404 kilometres of Stormwater Mains
- 31 Oil & Grit Separators
- 6,484 Maintenance Holes & Catchbasins
- 3 Stormwater Ponds
- 1 Constructed Wetland
- 11 Open Channels

It should be noted that stormwater collection is generally the responsibility of the City except in situations where the primary purpose is to drain a Regional right of way. Therefore, all sewer 675mm and less on Regional roads are the responsibility of the Region.

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4.0 Stormwater

Stormwater infrastructure collects and conveys rainwater runoff from wet weather events, minimizing flooding and erosion. As we see more frequent and greater intensity storms the importance of the stormwater collection system is ever increasing.

The following section summarizes the portfolio associated with the City's Stormwater Service.

4.1 Stormwater State of Local Infrastructure

4.1.1 Stormwater System Valuation

The City's stormwater collection system is comprised of linear infrastructure that includes stormwater mains, oil and grit separators, stormwater maintenance holes, and catch basins. For the purpose of this assessment, service connections were considered components of the stormwater mains. It should be noted that while roadside ditches provide a service, there is currently limited information on them, and therefore they have not been incorporated into the analysis.

For the valuation of the stormwater collection system, the replacement values are developed based on replacement with similar assets (like-for-like) on a complete and standalone basis. These were calculated based on

historical values and market replacement costs for the similar specification assets.

Based on the approach taken to calculate the replacement values for each asset category, the overall data confidence grade is **C** for stormwater mains, maintenance holes, and catch basins and **D** for all remaining assets.

It should be noted that the asset register information is based on the system that is in place and does not take into account identifying the gaps in the performance or needs of the overall system.



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Table 24. Stormwater System Inventory Valuation

| Asset Type | Asset Category | Count | Unit | Replacement Value (2021 Dollars) |
|---|---------------------------------|---------|--------|-------------------------------------|
| Stormwater Collection | Stormwater Mains ^(a) | 403,982 | Metres | \$ 819,047,000 |
| | Stormwater Maintenance Holes | 6,484 | Each | \$ 55,416,000 |
| Treatment & Control | Oil & Grit Separators | 31 | Each | \$ 824,000 |
| Stormwater Discharge | Open Channels | 3,575 | Metres | TBC |
| Storage Facilities | Wetlands | 1 | Each | \$ 540,000 |
| | Stormwater Ponds | 3 | Each | TBC |
| Overall Stormwater System Replacement Value | | | | \$ 875,827,000 |

(a) Stormwater mains include 13,236 catch basins in the City's portfolio.

The overall distribution of replacement values by asset type for the entire stormwater collection system is as shown in **Figure 27**. The stormwater mains have the highest replacement value in the portfolio, totaling 94% of the entire system. The remaining assets correspond to 6% of the value associated with the stormwater collection system.

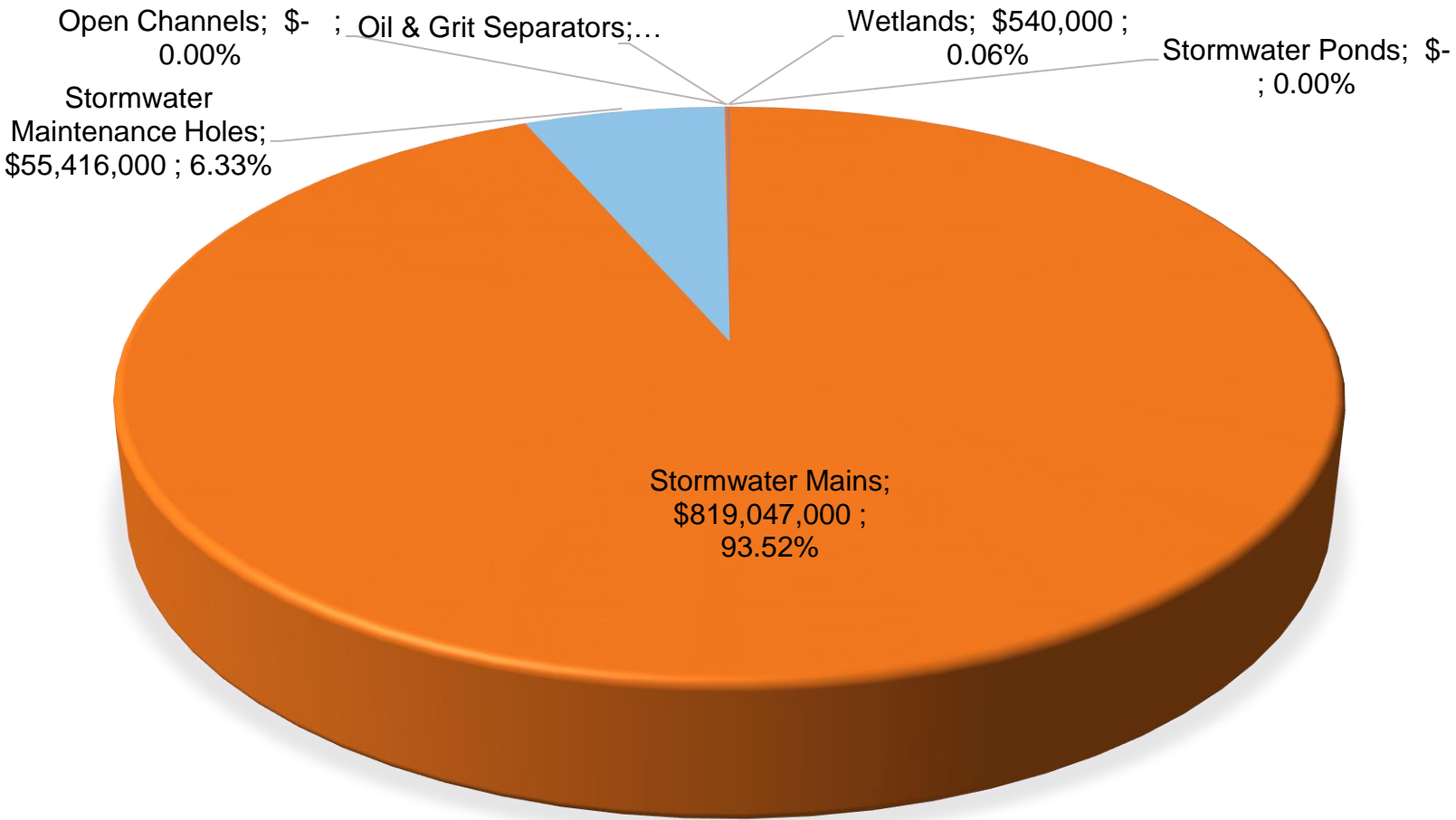
As stormwater mains represent the majority of the stormwater collection asset replacement values, **Figure 31** provides a summary of the distribution of replacement values based on materials.

It should be highlighted that stormwater associated operational costs are covered by wastewater; however, as it has been stated, the City is moving toward separating the costs associated with this service.

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| | | | |
|-------------------------------|-------------------|-------------------------------|-----------------|
| State of Local Infrastructure | Levels of Service | Lifecycle Management Strategy | Data Confidence |
|-------------------------------|-------------------|-------------------------------|-----------------|

Figure 26. Asset Replacement Value for All Stormwater Assets



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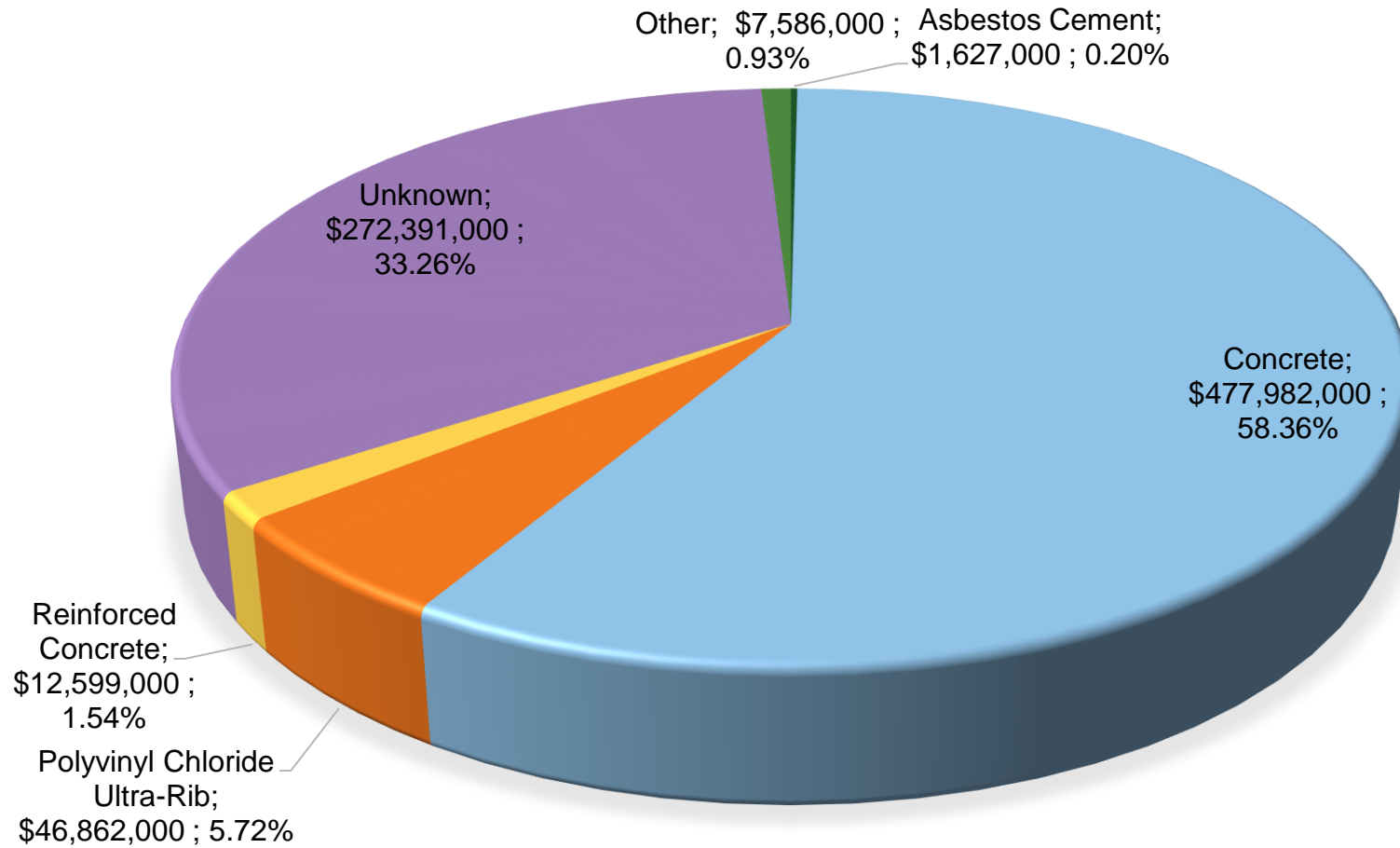
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Figure 27. Asset Replacement Value for All Stormwater Mains by Material Type



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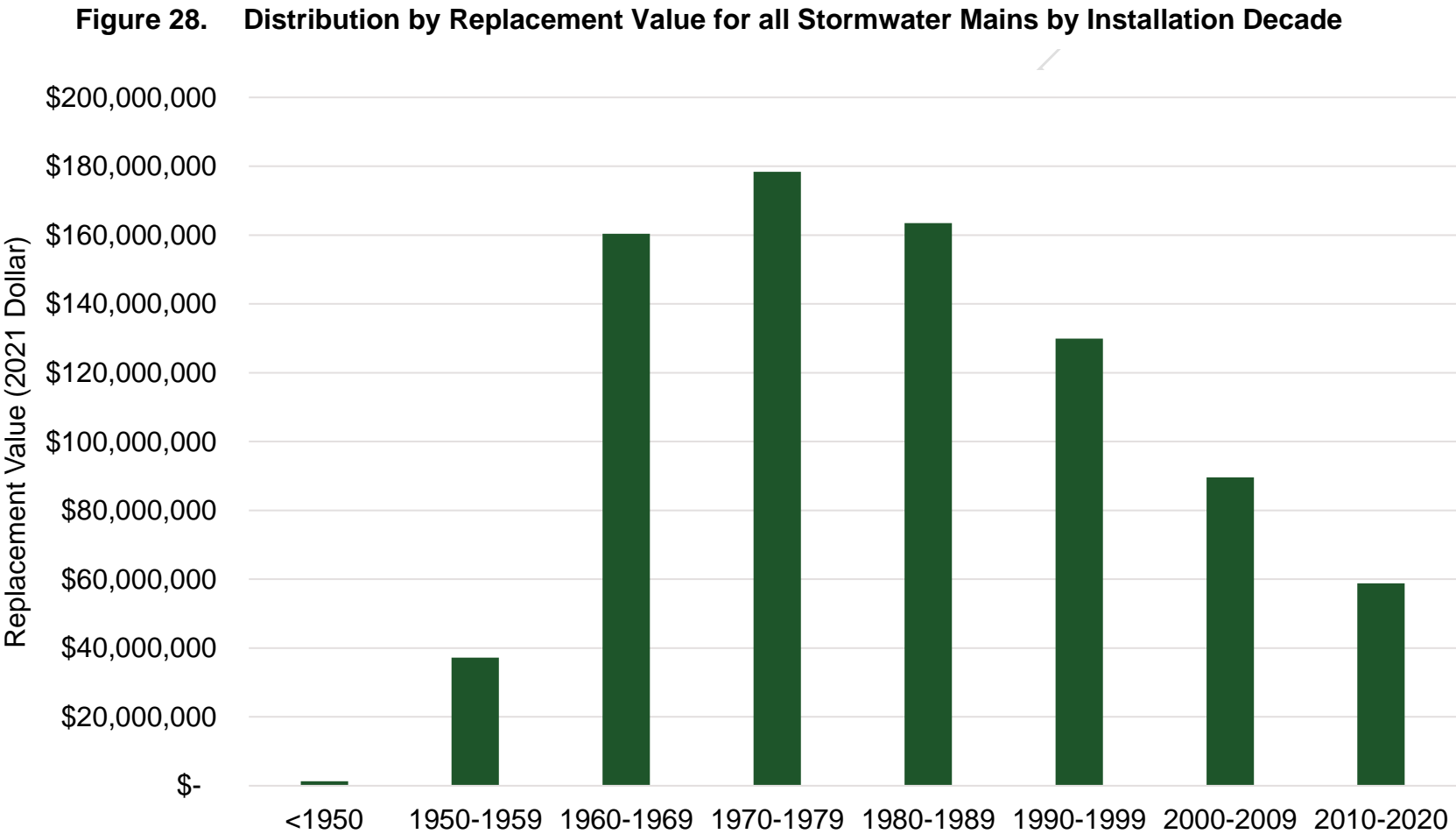
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The figure below summarizes the decade of the year of installation by replacement value.



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4.1.2 Stormwater System Condition

Using deterioration curves based on estimated remaining life as per **Table 4**, a condition score was computed for each asset into five rating categories ranging from Very Good to Very Poor. For storm sewers, where a PACP condition score was available, the score was used to estimate the condition. The assessments were completed using zoom camera inspections which is limited in that approximately 30% of the pipe is assessed.

The assumption is that this is indicative of the remaining pipe, however, it is known that this is not always the case and should be validated in the future. Where that was not available, a Markov deterioration model was used to estimate the condition based on age. The current condition of assets has been summarized and weighted by replacement value in **Figure 30**.

The stormwater main condition distribution has been represented by diameter in **Figure 31** indicating the percentage of system length these represent. The condition ratings are visualized in the map shown in **Figure 32**.

Overall, 5% of the stormwater assets are in the very poor rating category (based on replacement value) and 13% are in the poor category.



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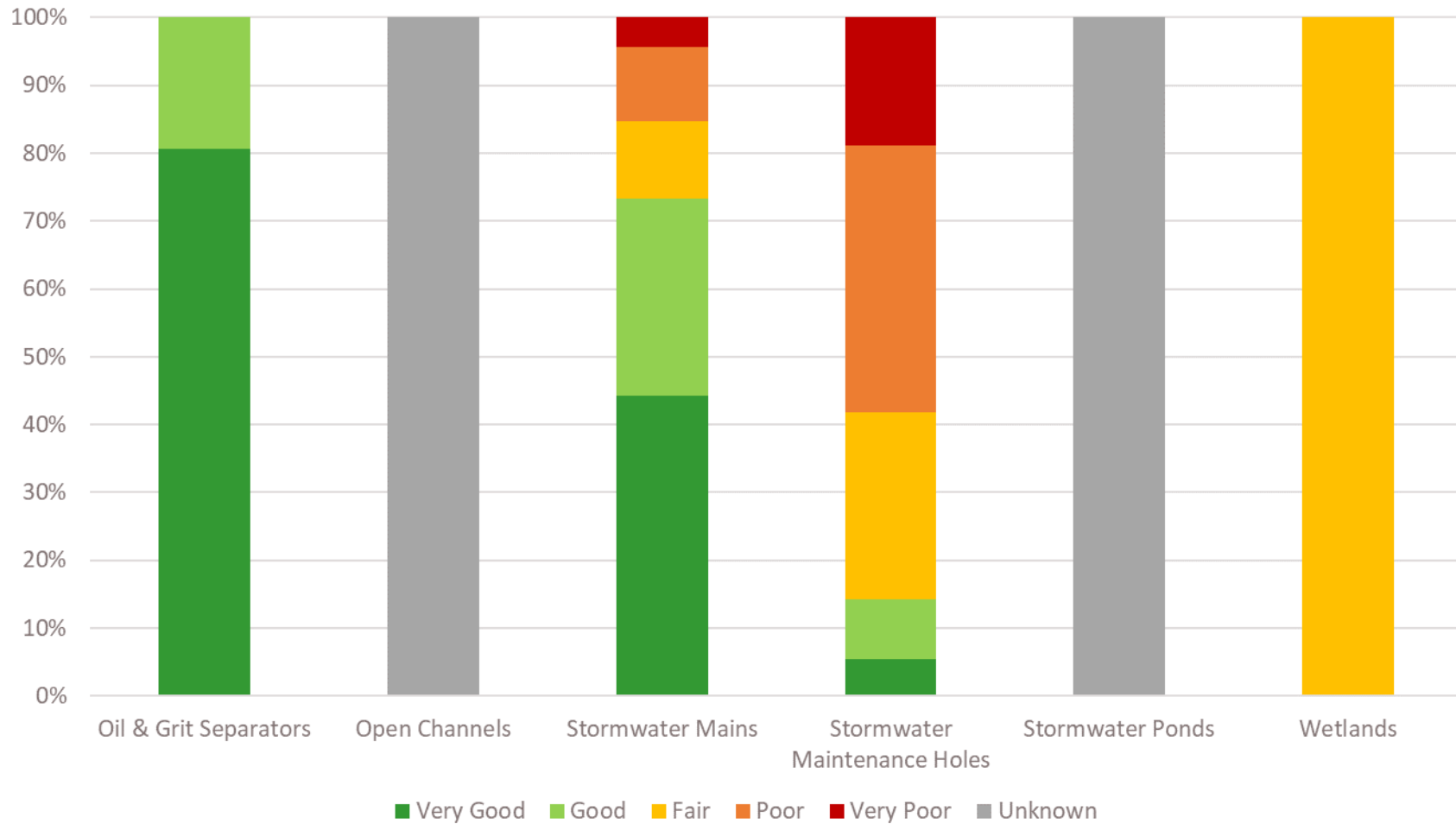
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Figure 29. Condition Distribution by Replacement Value for all Stormwater Asset Types



Note: 67% of “Stormwater Maintenance Hole” assets are based on condition inspections according to the Manhole Assessment Certification Program (MACP). Where condition data was not available, age has been used to estimate condition.

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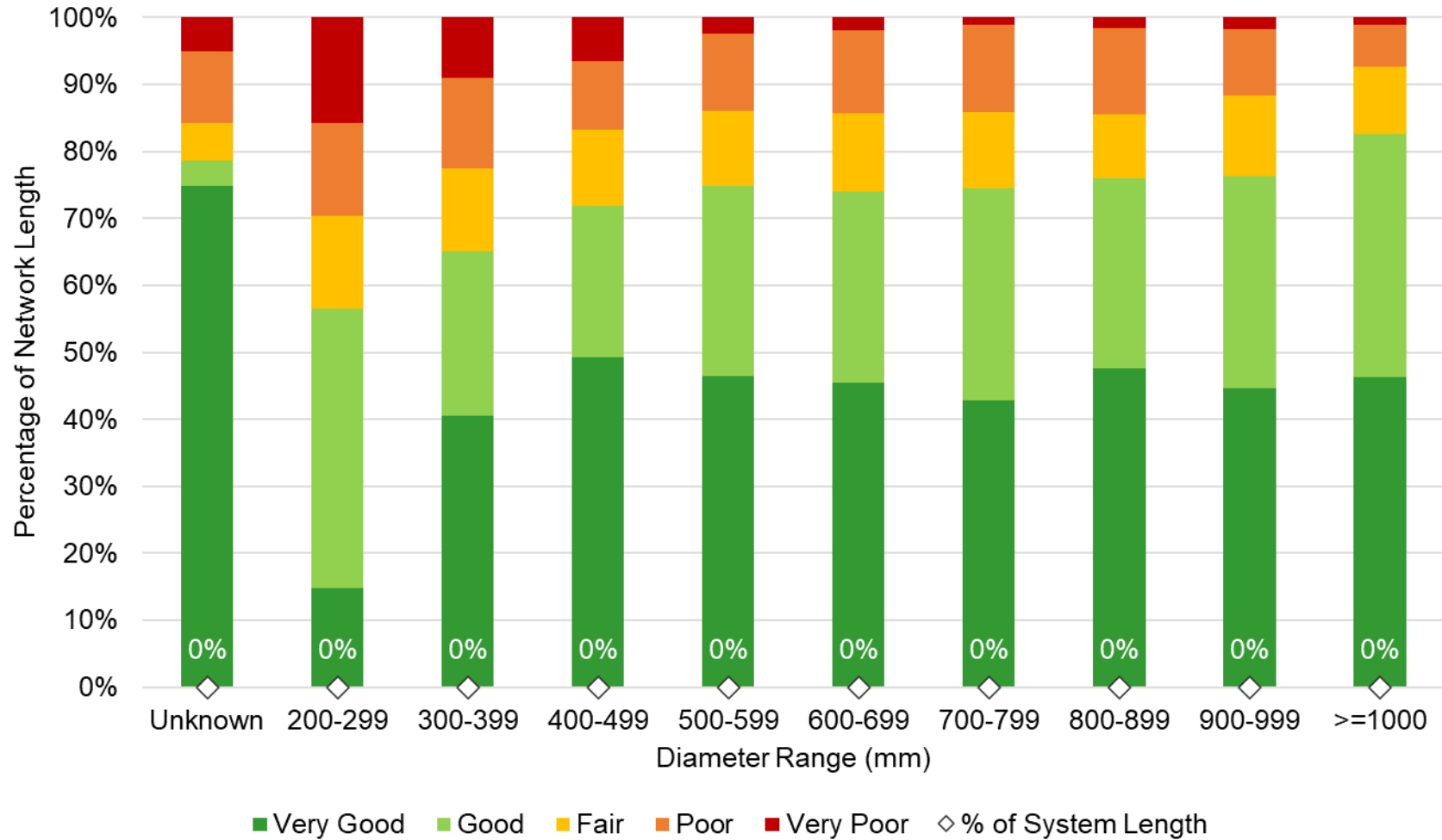
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Figure 30. Condition Distribution by Replacement Value for all Stormwater Mains



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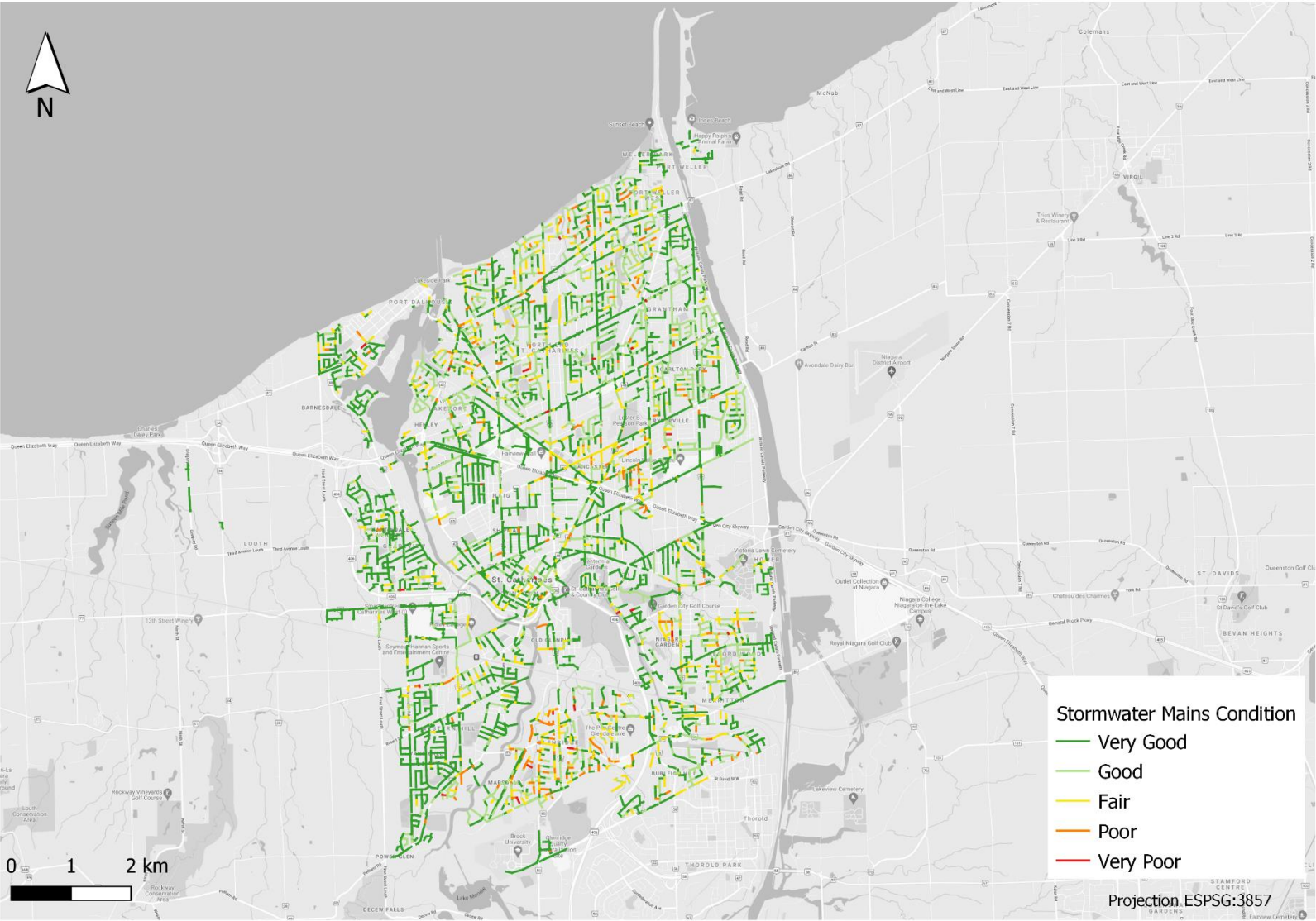
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Figure 31. Condition Distribution by Location for all Stormwater Mains



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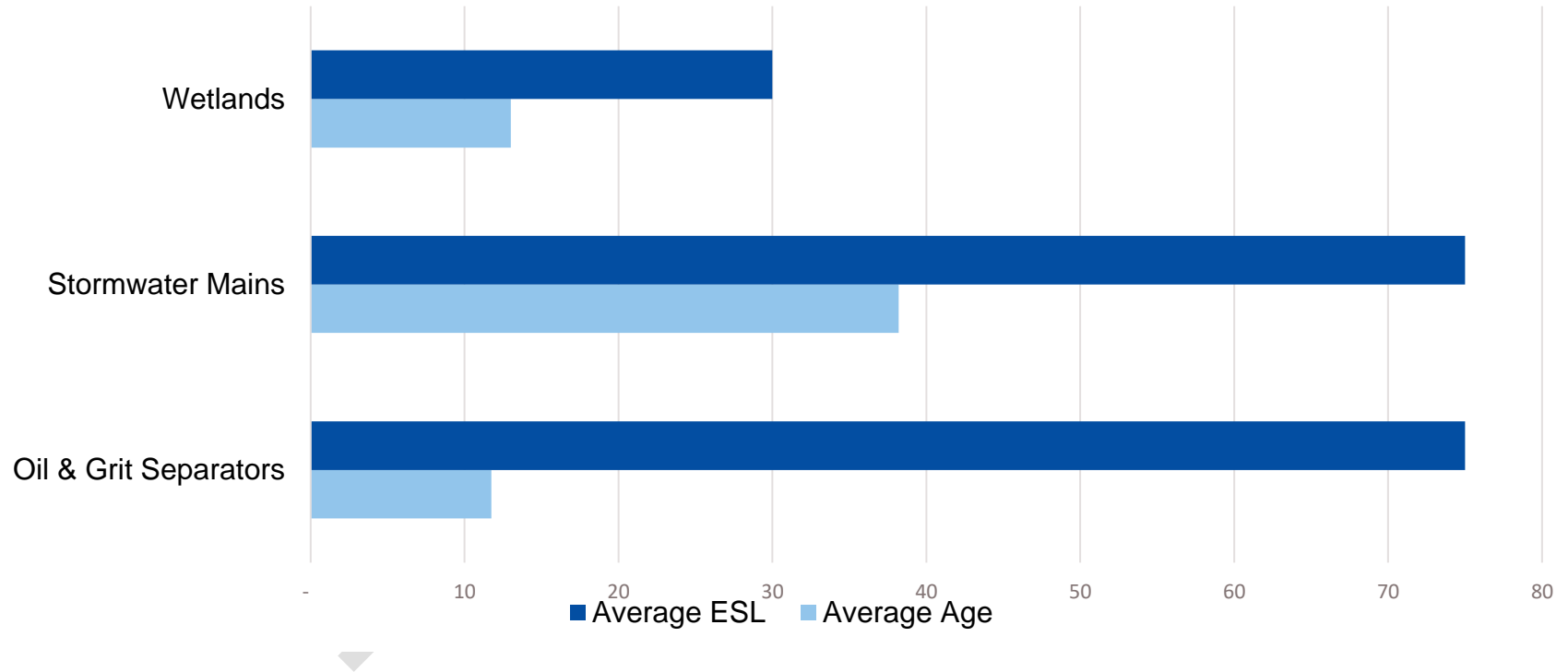
4.1.3 Stormwater Age Summary

By comparing the average age of the assets against the average estimated useful life, an understanding of the asset remaining life can be ascertained. The figure below

summarizes the average age of each asset type in the stormwater collection system.

Stormwater Ponds and Open Channels installation dates are unknown and therefore these have been excluded from **Figure 33**.

Figure 32. Average Age as a Proportion of Expected Service Life by Asset Type All Stormwater Assets



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4.2 Stormwater Levels of Service

The City is committed to providing effective, sustainable, and reliable drainage of stormwater to both protect and benefit the community and environment.

The Key Service Attributes associated with the stormwater LOS and their associated statements are defined at the table below:

Table 25. Stormwater LOS Service Attributes

| Service Attribute | Attribute Statement |
|---------------------------|---|
| Scope | Providing adequate stormwater services to the community. |
| Reliability | Providing stormwater services with minimal impact to the community. |
| Environmental Stewardship | Providing stormwater services that protect and benefit the environment. |
| Cost Efficiency | Providing stormwater services in an efficient manner. |

The following sections provide a summary of the levels of service for the City's stormwater services including those required by the O.Reg.588/17.

4.2.1 Stormwater Customer Levels of Service

The City's CLOS provides a means to assess the level to which customer expectations are being met. The

following provides a summary of the CLOS associated with the stormwater service at the City.

- **Description, which may include maps, of the user groups or areas of the municipality that are protected from flooding, including the extent of the protection provided by the municipal stormwater management system (Scope)**

To protect areas from flooding, storm water is conveyed across the City through 404 km of storm water pipes as well as along overland drainage routes, swales, ditches, and natural watercourses. Some older established areas utilize combined sewers to drain storm water; these assets are included in wastewater system. Oil and Grit Separators, stormwater ponds and a constructed wetland help control the quantity and quality of the storm water.

The following table provides additional CLOS metrics for the City stormwater services.

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Table 26. Stormwater CLOS Metrics

| Service Attribute | Customer Levels of Service | Current Performance |
|-------------------|---|---------------------|
| Scope | Total number of catch basins | 13,236 |
| | Total length of stormwater network | 404 kilometres |
| Quality | Average Condition of storm mains | Good |
| Reliability | Length of storm mains in poor or very poor condition | 20 kilometres |
| | Percentage of stormwater assets in fair or better performance | 82% |
| Cost Efficiency | Annual cost to provide stormwater service (per household) | \$148 |

4.2.2 Stormwater Technical Levels of Service

In addition to setting performance levels associated with customer expectations, the City has also defined technical requirements and key performance indicators that align or support the CLOS presented on **Table 26**.

The following provides a summary of the TLOS associated with the stormwater service at the City of St. Catharines.



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Table 27. Stormwater TLOS Metrics

| Service Attribute | Technical Levels of Service | 2020 Performance |
|-------------------|--|---|
| Scope | Percentage of properties in municipality resilient to a 100-year storm ^(a) | Currently not available, however the planned budgeted storm water master plan (SWMP) project will be able to partly address this metric. ¹ |
| | Percentage of the municipal stormwater management system resilient to a 5-year storm ^{(a)2} | 54% ² |
| Reliability | Percentage of stormwater assets in poor or better condition | 95% |
| | Percentage of catchbasins inspected and cleaned annually. | 19% |
| | Percentage of storm sewers and appurtenances in Poor or Very Poor condition. | 5% |
| | Number of complaints of flooding during a wet weather event. | 1 |
| | Percentage of network inspected within last 5 years. | 38% |
| Env. Stewardship | Percentage of inspections & maintenance carried out on oil/grit separators annually | 0% in 2020 61% in 2019 |

¹ The currently budgeted storm water master plan (SWMP) project will be able to partly address this metric, but it is not yet clear if the SWMP work will fully address this point. The SWMP will not be delivered in time to meet the Core AMPs deadline.

When storm water design is undertaken consideration is given to 100-year storm events (and other storm events) and any new subdivision or land development are asked to comply with City design standards.

² When storm water design is undertaken, consideration is given to 5-year storm events (and other storm events) and any new subdivision or land development are asked to comply with City design standards. Since 1980 storm sewers have been typically designed to meet a 5-year storm. It is assumed that all sewer constructed since then or a minimum 54% of system is designed to be resilient to the 5-year storm. This number will be further refined with the development of SWMP.

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| Service Attribute | Technical Levels of Service | 2020 Performance |
|-------------------|--|------------------|
| | Percentage of constructed wetlands in Poor or Very Poor condition | 0% |
| Cost Efficiency | Maintenance cost per 100 km of stormwater network | \$72 |
| | Capital investments in comparison with sustainable investment forecast | 25% |
| | Stormwater Conveyance Reinvestment Rate | 0.1% |

Notes:

(a) Required by O.Reg. 588/17

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4.2.3 Stormwater Future Metrics for Consideration

As part of the definition of levels of service, the City identified possible level of service metrics that could be added to their framework in the future as data becomes available. The following table provides a summary of the metrics that have been proposed for future consideration.

Table 28. Stormwater LOS Future metrics

| Service Attribute | Levels of Service Proposed Future Metric | Type of LOS |
|-------------------|---|-------------|
| Reliability | Percentage of community with stormwater quality control | Customer |
| | Percentage of stormwater management facilities in Poor or Very Poor condition | Technical |
| Env. Stewardship | Percentage of community with stormwater quality treatment control | Technical |
| | Number of Stormwater | Technical |

| Service Attribute | Levels of Service Proposed Future Metric | Type of LOS |
|-------------------|---|-------------|
| | management ponds that have exceeded their target dredging frequency | |

4.3 Stormwater Lifecycle Management Strategy

The levels of service presented in the previous section are supported by the achievement of a variety of lifecycle activities in accordance with the activity types presented in **Table 5**. These activities are targeted to extend the asset life, ensure levels of service are being met, and reduce overall lifecycle costs.

The stormwater service staff implement a variety of lifecycle activities on its entire portfolio. **Table 29** provides a summary of these activities and the risk associated with not doing them.

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Table 29. Stormwater Lifecycle Activities, Associated Risk, and Estimated Lifecycle Cost

| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|------------------------------|--|---|---|
| Non-Infrastructure Solutions | <ul style="list-style-type: none"> Capacity analysis to confirm the capacity of the stormwater system in current flow demands. Master Plans are developed and updated to provide a baseline for future growth projections in the stormwater system. Natural watercourses review to include the assessment of channels for stormwater management. CCTV inspections.³ | <ul style="list-style-type: none"> Growth projections follow an accelerated rate not following planned estimates. Inadequate planning assumptions can provide incorrect forecasted estimates. Regulatory requirement and standard changes. Reduced ability to understand potential impacts of climate change on the infrastructure. | <p>\$ 179,000</p> <p>Based on the historical 2017 to 2021 average expenditures. It is recommended that future studies be identified based on best practices and cost estimates be developed.</p> |
| Maintenance Activities | <ul style="list-style-type: none"> Routine maintenance program including spot repairs, catchbasin sump cleanout, outfall inspections, vegetation removal in culverts, wetlands, watercourses, ponds, and open channels. As required clearing of blocked lateral connections. Targeted reactive ditching program. | <ul style="list-style-type: none"> Increased lifecycle cost if maintenance is done improperly or not with scheduled frequency. Resource limitations to conduct unplanned, urgent work. Insufficient maintenance may contribute to asset failure resulting in service disruptions. | <p>\$ 1,051,000</p> <p>Based on a review of comparable stormwater O&M programs with an average O&M cost of \$2,593/km of network. It is recommended that this cost be evaluated based on stormwater maintenance investment needs.</p> |

³ Historically storm sewers have not been CCTV inspected. Based on recommendations from a recent Zoom Camera Inspections Project, storm sewers are currently being prioritized for CCTV inspections. Once the priority CCTV inspections are completed, a system to periodically inspect and monitor the condition of storm sewers needs to be established and completed on required/necessary cyclical basis.

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| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|---------------------------------------|--|--|---|
| Renewal / Rehab Activities | <ul style="list-style-type: none"> Relining of stormwater mains. Coordinated renewal and rehabilitation activities with the stormwater mains. Dredging, re-grading, and excavating open channels, wetlands, and ponds to ensure the proper flow of water. | <ul style="list-style-type: none"> Incorrect assumptions of the expected improvement in useful life after maintenance is completed. Increased lifecycle cost if renewal/rehab are done improperly or not as scheduled. | <p>\$ 25,000</p> <p>Forecasted based on the lifecycle management activities.</p> <p>Currently done on a reactive basis. A strategy needs to be developed to have a regular program to identify good candidates for the implementation of these technologies at an appropriate time and prior to an asset needing full replacement</p> |
| Replacement / Construction Activities | <ul style="list-style-type: none"> Replacement of deteriorated assets or based on client's complaints. Replacement of concrete structures for concrete open channels. | <ul style="list-style-type: none"> Coordination with other asset classes (if applicable) might delay or advance the timeframe for construction activities. Delays in construction could result in cost over-runs. | <p>\$ 4,793,000</p> <p>Forecasted based on the lifecycle management activities.</p> |
| Disposal Activities | <ul style="list-style-type: none"> Decommissioning assets at the end of their useful life. Disposal of abandoned or obsolete infrastructure during construction projects. | <ul style="list-style-type: none"> Improper disposal could lead to environmental impacts and result in cost overruns | <p>-</p> <p>Stormwater assets are sometimes left in place or disposal is included within the removals associated with replacement/construction activities</p> |

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| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|--------------------------------|---|--|--|
| Service Improvement Activities | <ul style="list-style-type: none"> Annual program to separate combined sewers. Stormwater main upsizing based on design standard compliance and flow requirements. Installation of storm sewers in areas with ditches Replacement of ditches based on identified needs due to flooding and drainage | <ul style="list-style-type: none"> Lack of improvements can result in health and safety risks. | <p>\$2,298,000</p> <p>Based on the historical 5-year capital funded service improvements as a percentage of the replacement value of the network</p> |
| Growth Activities | <ul style="list-style-type: none"> Asset additions to accommodate for population growth in new and existing sub-divisions within the City. Annual sewer separation provides capacity within the system to accommodate growth. | <ul style="list-style-type: none"> Growth activities are delayed or cancelled resulting in system being unable to accommodate increased growth demands. Reduced ability to adapt to increased intensity rainfall events. | <p>\$ 1,020,000</p> <p>Based the average projected development charges</p> |

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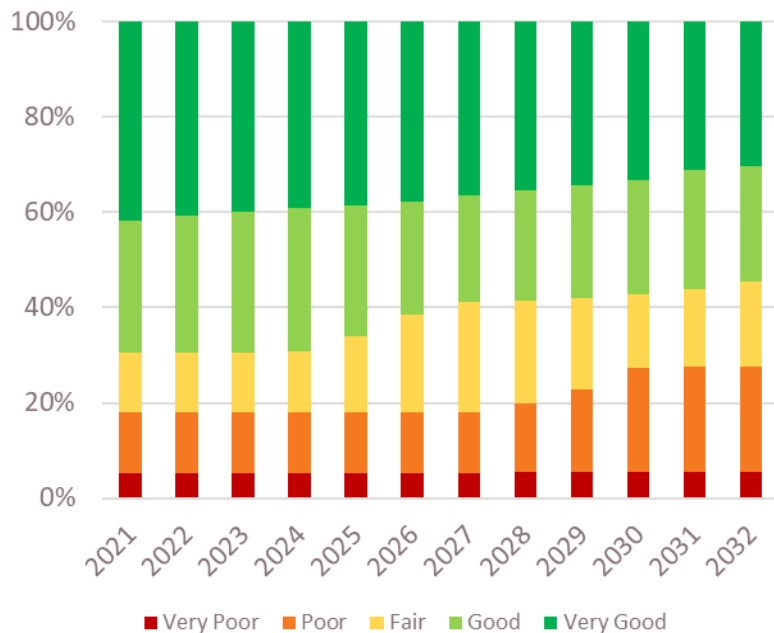
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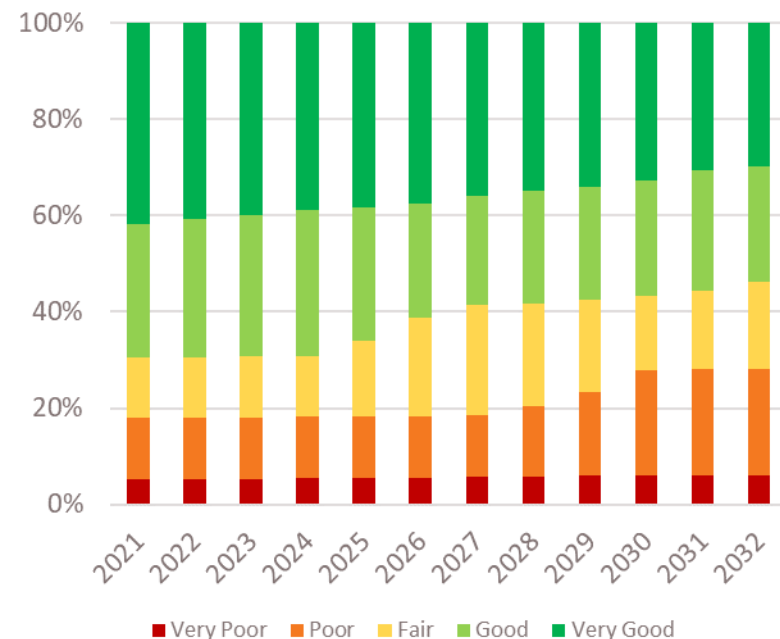
The City uses these strategies to plan work and determine future expenditure needs. The TLOS used in the AM analysis for wastewater assets was defined as maintaining the current portion of assets with poor or better performance. The cost to maintain this scenario was determined to be \$5M annually over a 25-year period and resulted in the performance forecast shown in **Figure 33**. However, this is broken down to be \$500K annually until 2032 and then \$6M annually onwards. The percentage of assets in poor or better condition holds around 95%.

Figure 33. Stormwater Condition Distribution Performance with Cost to Maintain LOS



The current planned budget was also analyzed to determine if a funding gap exists. The current anticipated investments, \$4.3M annually, resulted in the performance forecast shown in **Figure 34**.

Figure 34. Stormwater Condition Distribution Performance with Anticipated Budget



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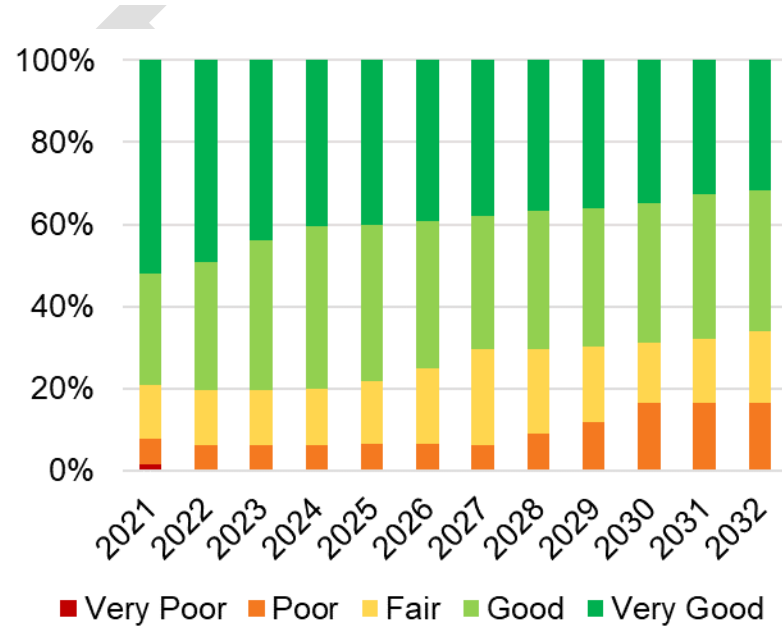
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Additionally, an optimal lifecycle scenario was analyzed, which was used to determine the cost to meet all lifecycle strategies described in **Table 29**. This scenario addresses the backlog and ensures no asset reaches very poor performance. The cost to achieve this scenario was determined to be \$9.3M annually over a 25-year period and resulted in the performance forecast shown in **Figure 35**.

The costs for the 10-year lifecycle forecast are presented in **Figure 36**. The graph shows the forecasted expenditures by lifecycle category for the cost to maintain scenario. The equivalent annual cost to maintain LOS, the annual expenditures for the optimal lifecycle scenario and the anticipated annual funding is also provided on the graph. It is recommended that the City should consider moderate investment increases to address the replacement and operational needs for the existing system.

Figure 35. Stormwater Condition Distribution Performance with Optimal Lifecycle Activities



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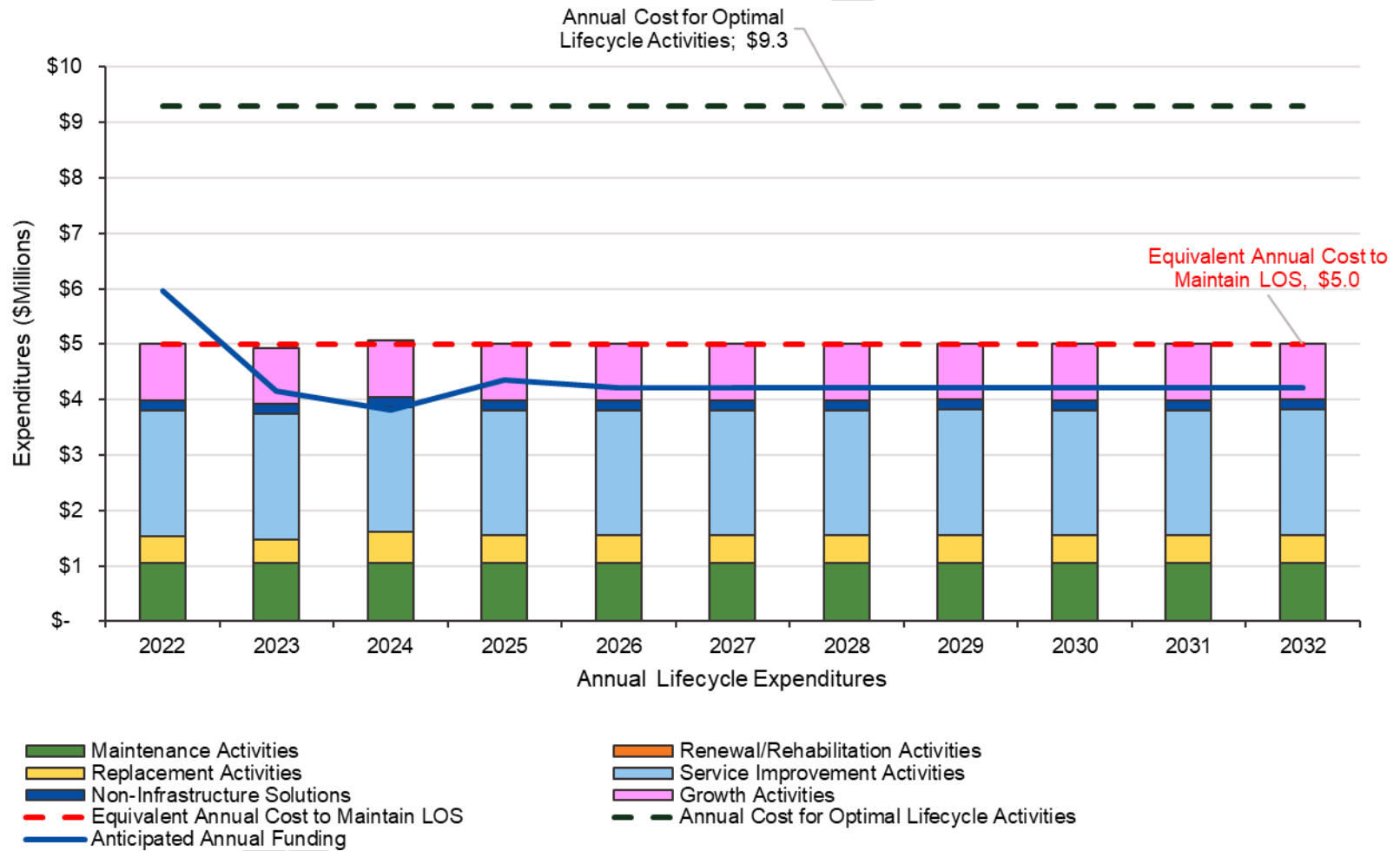
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Figure 36. Stormwater Forecasted Lifecycle Needs



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4.4 Stormwater Service Associated Risks

As noted, the assets associated with the stormwater service are key to conveying runoff in the community in order to mitigate flooding events. In addition to the risk associated with the lifecycle activities for this service, as shown in **Table 29**, the following are considered general risks with this service:

- Capacity limitations could result in increased flooding; and
- Infiltration into mains due to structural defects could result in decreased system capacity.

Until a fully separated stormwater system is in place, it should be noted that the risk associated with the stormwater system will also impact the wastewater system.

4.5 Stormwater Climate Change Considerations

While the stormwater collection system is essential for conveying excess runoff, it is also essential to change the way we think about rainwater. In the past, stormwater systems were primarily designed to carry runoff quickly away to the nearest waterbody. It is generally now recognized that rainwater should be considered a valuable resource that is best managed as close to its source as possible to replicate the hydrologic system that

was in place prior to development. As municipalities develop and are paved, there is less available ground for runoff to infiltrate and recharge groundwater levels. Furthermore, it is understood that the intensity of rainfall events is likely to increase in the future; this further increases the capacity requirements of both natural and constructed stormwater drainage systems.

Low impact development and green infrastructure policies will contribute to reducing the peak flows of runoff which can lead to flooding issues. As storm system infrastructure is maintained and replaced over time, opportunities for implementing these policies can be encouraged as they can incorporate many social and environmental benefits to the City.

4.6 Stormwater Data Confidence

The following condition data was used to support this chapter's assessment of the City's stormwater assets.

- Stormwater mains, maintenance holes, oil grit separator, wetlands, ponds and open channels: GIS shapefiles of the full inventory for these categories with their associated key attributes such as installation date, diameter and length;
- Unit cost summary documentation provided by the City based on historical data;
- The City's tangible capital asset estimated service life values; and

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- The zoom camera inspection database.

The following assumptions were made during the assessment of the data for the development of the different assessments:

- Stormwater main data was taken from the zoom camera inspection peak structural PACP results;
- Missing installation dates in linear assets were filled based on the install date of nearby related assets (i.e., road for stormwater mains);
- Oil grit separator costs were assumed based on available information;
- Replacement costs were forecasted based on available unit rates for the diameters not included on the original dataset;
- Wetland replacement costs were based on recent construction records; and
- Estimated service lives not available in the City’s tangible capital asset database were assumed based on industry best practices.

A data confidence assessment is provided in **Table 30**.

Table 30. Stormwater Data Confidence Assessment

| Asset Category | Confidence Rating | Confidence Data |
|---|-------------------|---|
| Stormwater Mains | C | Minor assumptions were made on age, replacement costs, and condition from reliable sources. |
| Stormwater Maintenance Holes & Catch basins | | |
| Oil & Grit Separators | D | Data based on historical information and assumptions on key parameters. |
| Open Channels | | |
| Wetlands | | |
| Stormwater Ponds | | |

Estimated Replacement Value

The City's transportation system is valued at approximately **\$1.1 billion**.

Condition Rating

The overall average condition of the assets for the transportation system is **Fair**.

Transportation

The City of St. Catharines is responsible for roadways and right-of-way assets. Roadways are classified under several categories such as Arterial, Collector, and Local. Right of way assets include items such as streetlights and signalized intersections. In summary, the City owns:

574 kilometres of Roadways

578 kilometres of Sidewalks and Pathways

13 kilometres of Guide Rails

13,300 Streetlights

54 Signalized Intersections

22,000 Signs

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5 Transportation

The movement of people, goods and services is a key component in ensuring quality of life and supporting daily needs of City's customers.

The City's local transportation network is connected to the Provincial highways via the Queen Elizabeth Way (north end) and 406 (downtown area) which are under the jurisdiction of the Ministry of Transportation. Furthermore, the local system also provides linkage to various regional roads that are under the jurisdiction of the Niagara Region.

The following section summarizes the City's Transportation Service.

5.1 Transportation State of Local Infrastructure

5.1.1 Transportation System Valuation

The City's transportation system is comprised of the following roads and right-of-way assets:

- **Road** assets include all road classes as per the Ministry of Transportation (arterial, collector, and local) and sub classifications as identified in the City's

Transportation Master Plan. It must be highlighted that attributes recorded against the road indicate those that include bike lanes, or bus routes.

- **Right-of-Way Assets** include those that provide support to other transportation assets, such as traffic signals, signs, guide rails, and streetlights.
- **Active Transportation** include those assets that provide multiple uses (walkways, off-road cycling) associated with transportation assets like sidewalks, pathways, and multi-use trails.

For the valuation of the transportation system, the replacement values are based on the replacement of similar assets (like-for-like) on a complete and standalone basis. These have been calculated based on historical costs and market values.

The overall data confidence grade for road assets is **B**, while the remaining assets' overall confidence is **C**.

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Table 31. Transportation System Inventory Valuation

| Asset Type | Asset Category | Asset Sub-Category | Count | Unit | Replacement Value (2021 Dollars) |
|---|-----------------------------|--------------------------------|---------|------------|----------------------------------|
| Roads | Arterial | Downtown Corridor | 5,245 | metres | \$ 10,699,000 |
| | | Main Mixed Use | 39,993 | metres | \$ 79,502,000 |
| | | Main Residential | 19,005 | metres | \$ 36,328,000 |
| | | Rural Corridor | 12,442 | metres | \$ 16,141,000 |
| | Collector | Collector Industrial | 15,246 | metres | \$ 27,172,000 |
| | | Collector Mixed Use | 15,161 | metres | \$ 28,627,000 |
| | | Collector Residential | 18,847 | metres | \$ 31,556,000 |
| | Local | Local Community Street | 431,134 | metres | \$ 726,380,000 |
| | | Downtown Community | 3,118 | metres | \$ 5,721,000 |
| | | Rural Community | 13,601 | metres | \$ 12,319,000 |
| Right-of-Way Assets | Guide rails | Not Applicable | 12,633 | metres | \$ 1,586,000 |
| | Streetlights ^(a) | | 13,358 | Each | \$ 25,926,000 |
| | Signalized Intersections | | 54 | Each | \$14,969,000 |
| | Signs | | 22,040 | Each | \$ 2,877,000 |
| Active Transportation | Sidewalks and Pathways | Emergency | 430 | metres | \$ 194,000 |
| | | In boulevard Multi-use trail | 778 | metres | \$ 175,000 |
| | | Park Access | 1,471 | metres | \$ 331,000 |
| | | School Access | 1,093 | metres | \$ 246,000 |
| | | Sidewalk - Conventional | 474,020 | metres | \$ 106,654,000 |
| | | Sidewalk - Curbface | 81,553 | metres | \$ 22,019,000 |
| | | Walkway | 18,327 | metres | \$ 4,124,000 |
| | | Other | 177 | metres | \$ 40,000 |
| | | Off-Road Trails ^(b) | 109 | kilometres | TBC |
| Overall Transportation System Replacement Value | | | | | \$ 1,153,586,000 |

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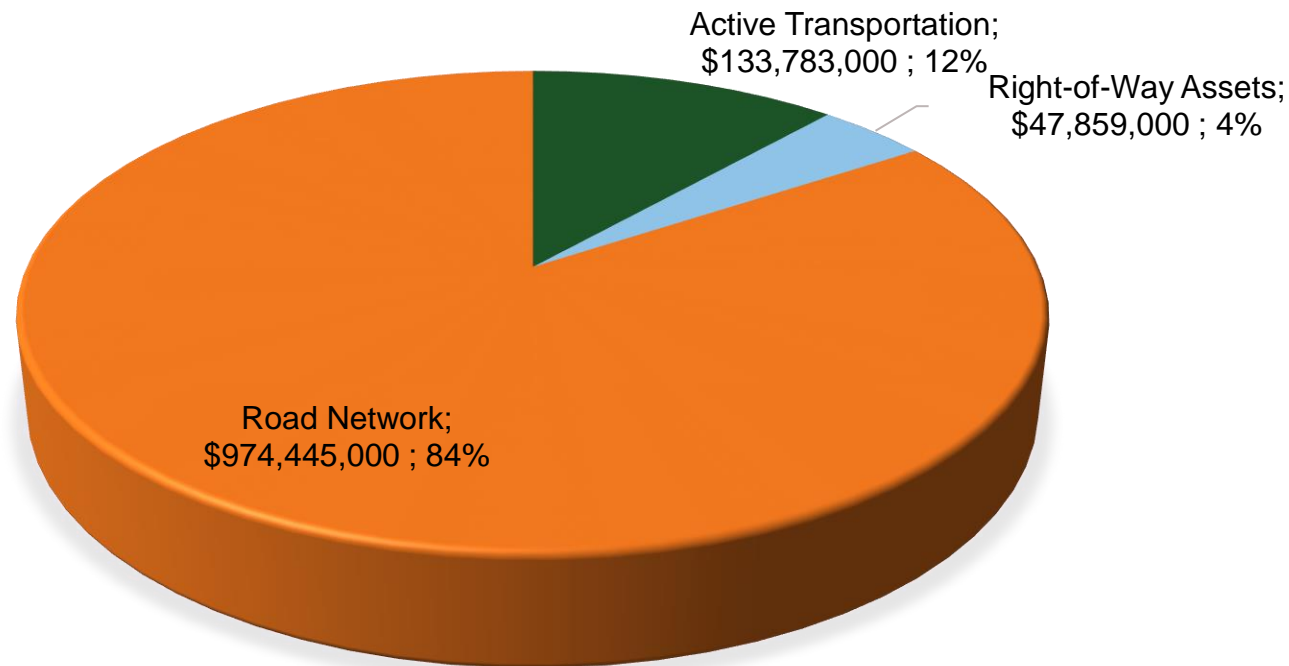
Note:

- (a) Streetlights includes only those with recent LED fixtures installed, a total of 1,439 City owned streetlights have been excluded from the assessment at this stage.
- (b) The Off-Road Trail network is currently being developed as part of the Transportation Master Plan.

The overall distribution of replacement values by asset type for the entire transportation system is as shown

below. The roads have the highest replacement value in the portfolio, totaling 84% of the entire transportation system. It must be highlighted that arterial roads owned by the Region have been excluded from the assessment. Furthermore, the bike lanes that are part of the road are considered within the road assets as an attribute. This attribute is used to further define risks associated with levels of service and prioritizing capital projects.

Figure 37. Asset Replacement Value for All Transportation Assets



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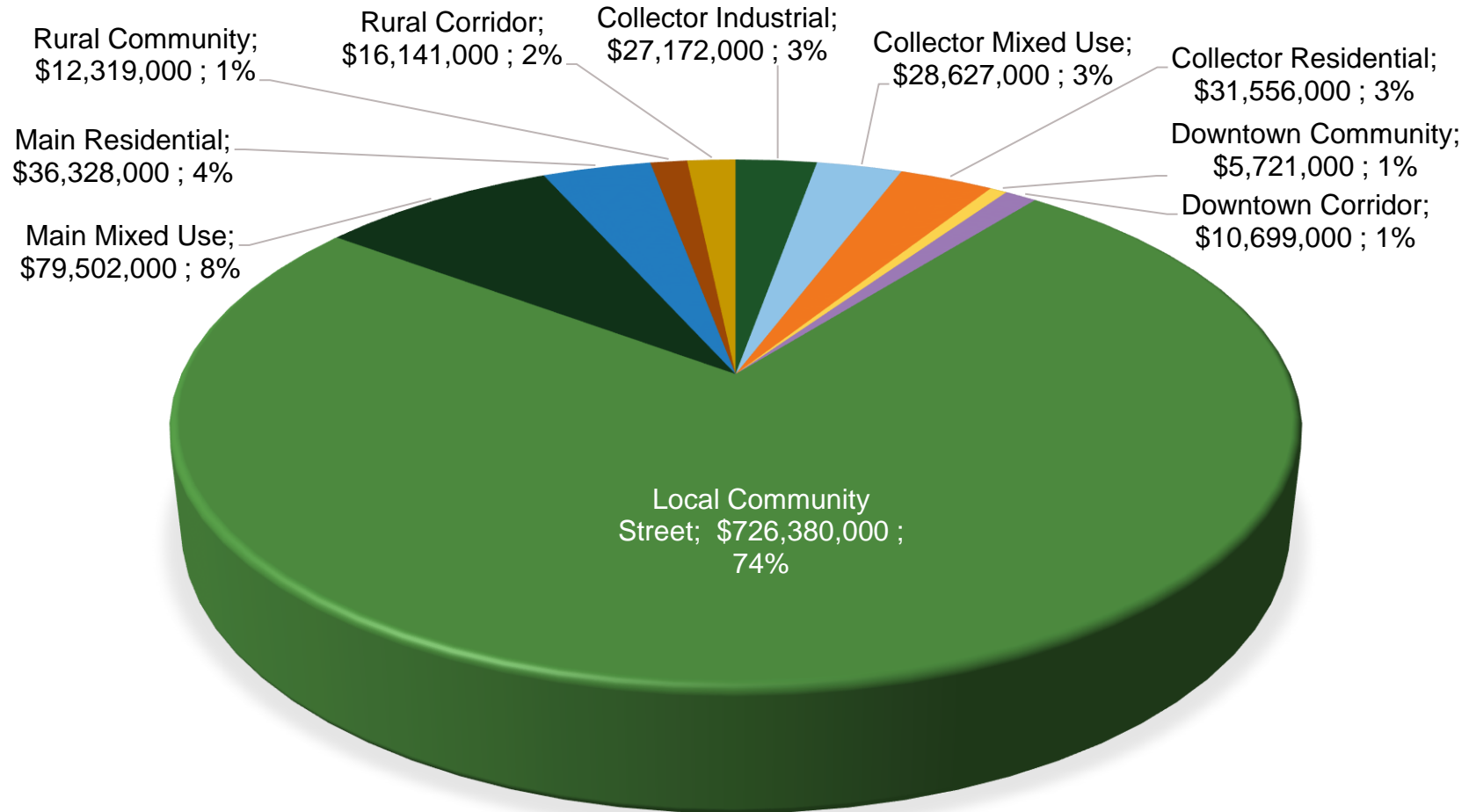
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As roads represent the majority of the transportation asset replacement values, the following provides the distribution of replacement values based on road category.

Figure 38. Asset Replacement Value for All Road Assets



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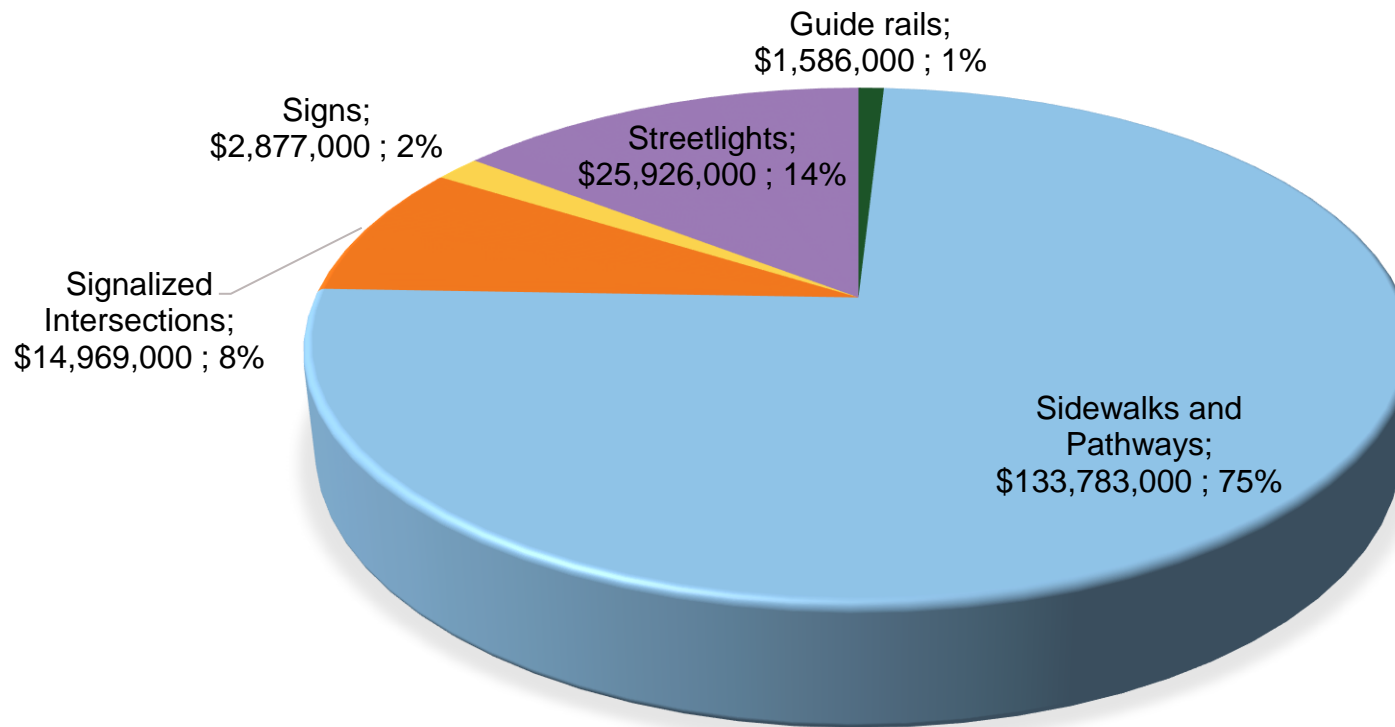
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As shown in **Figure 38**, the local community streets represent the majority of the replacement values on road assets, followed by main mixed-use roads.

Figure 39 provides a summary for the transportation assets beyond the roadway and indicates that sidewalks and pathways represent the majority of the portfolio (74% of the total).

Figure 39. Asset Distribution Value for All Other Transportation Assets



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5.1.2 Transportation System Condition

Using deterioration curves based on estimated remaining life and the condition provided as pavement quality index (PQI), a condition score was computed for each asset into five rating categories ranging from Very Good to Very Poor. **Table 32** provides a summary of the scale for roads.

Table 32. Roads Condition Scale

| Condition Score | Condition Rating | PQI: Concrete and Gravel | PQI: Composite and Flexible |
|-----------------|------------------|--------------------------|-----------------------------|
| 1 | Very Good | 81-100 | 81-100 |
| 2 | Good | 61-80 | 61-80 |
| 3 | Fair | 41-60 | 41-60 |
| 4 | Poor | 21-40 | 12.6-40 |
| 5 | Very Poor | 0-20 | 0-12.5 |

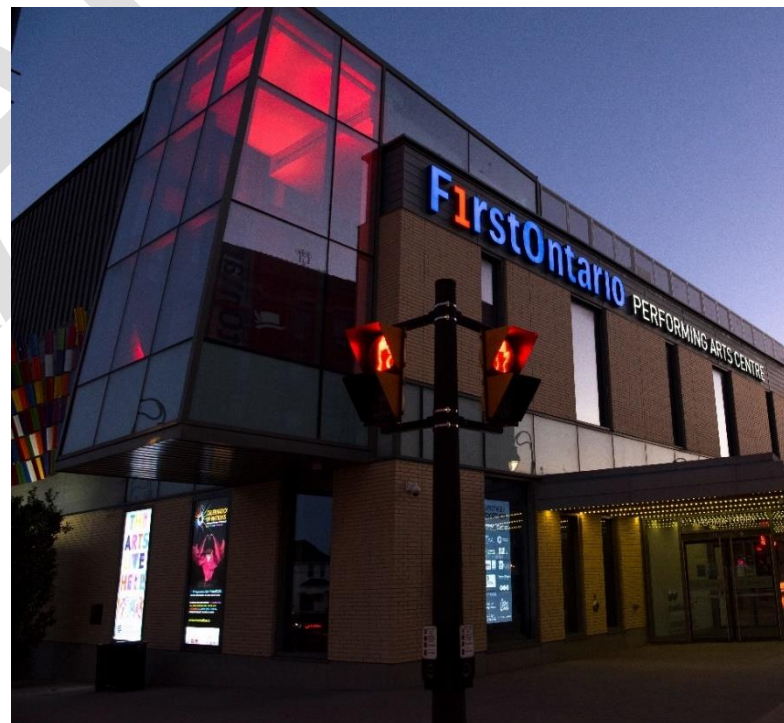
The condition of streetlights was calculated based on the estimated service life of the full structure as one asset; and no discretization was made to separate the condition of the pole and fixtures due to limited data. This approach may result in condition being based partly on the lamp fixture which is the lowest cost portion of the asset. A pole condition assessment that will be completed in the future will provide updated condition estimates with a higher degree of confidence. Only those that have recently have fixture replacement have been included as part of the assessment.

The signs condition and age were projected based on the degradation of the condition assessment results from 2018.

All other transportation assets condition is based on **Table 4** on page 14.

The current condition of all transportation assets has been summarized and weighted by replacement value in **Figure 40**.

Overall, 7% of the transportation assets are in the very poor category, and 30% are in the poor category.



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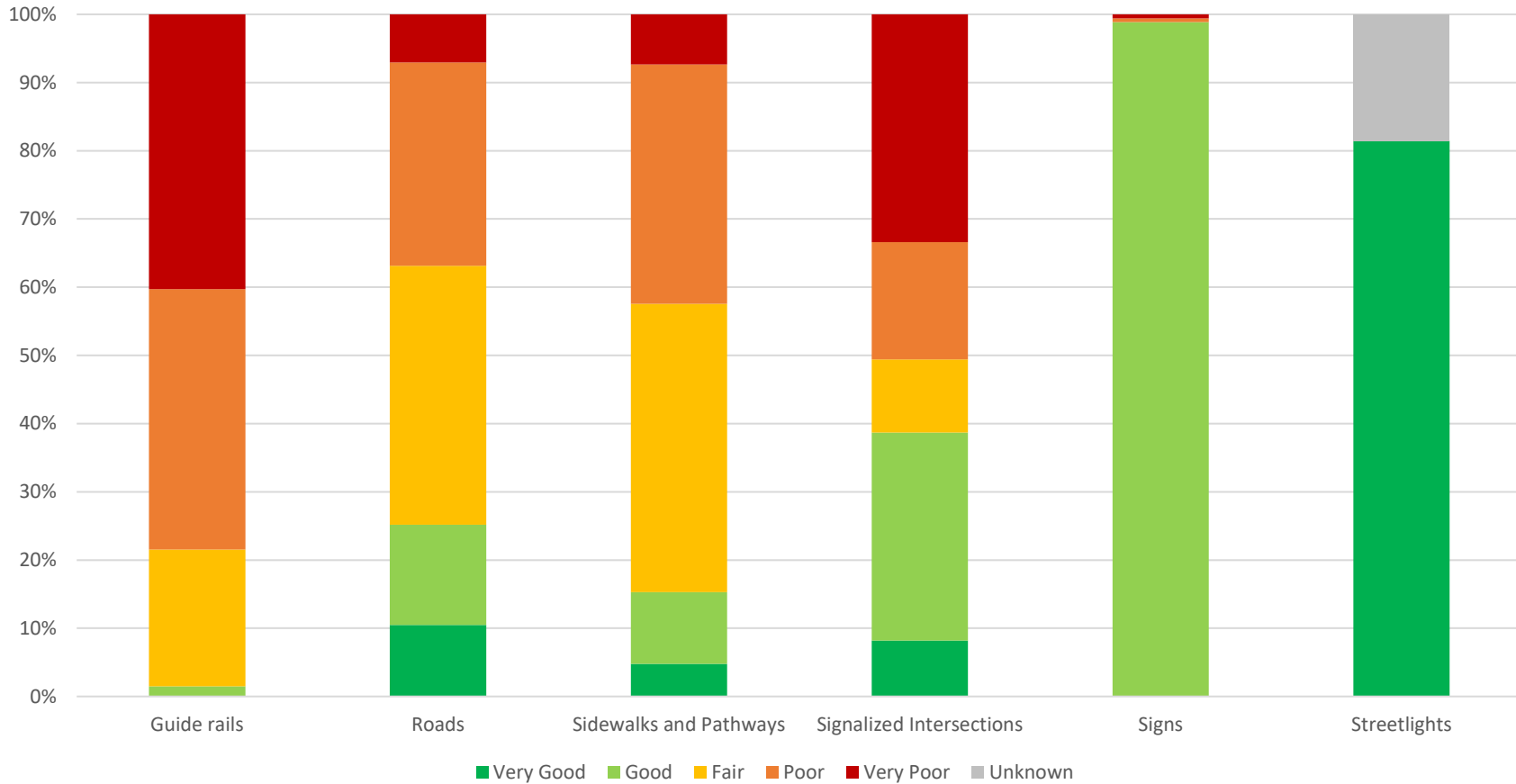
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Figure 40. Condition Distribution by Replacement Value for all Transportation Asset Types



Note: The streetlights category includes streetlights with unknown installation dates. 3,047 of 16,442 streetlight assets do not have an installation date recorded in the data, therefore the condition is unable to be estimated at this time. This estimate also only includes the heads and the condition of poles are unknown.

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Understanding that roads are the major category for the transportation service, **Figure 41** provides the specific distribution of condition for the different road types based on the categories defined in the Transportation Master Plan. As shown in the figure, the majority of the roads are in Fair condition. The geographic distribution of road condition is shown in **Figure 42**.

Figure 41. Condition Distribution by Replacement Value for all Roads Assets

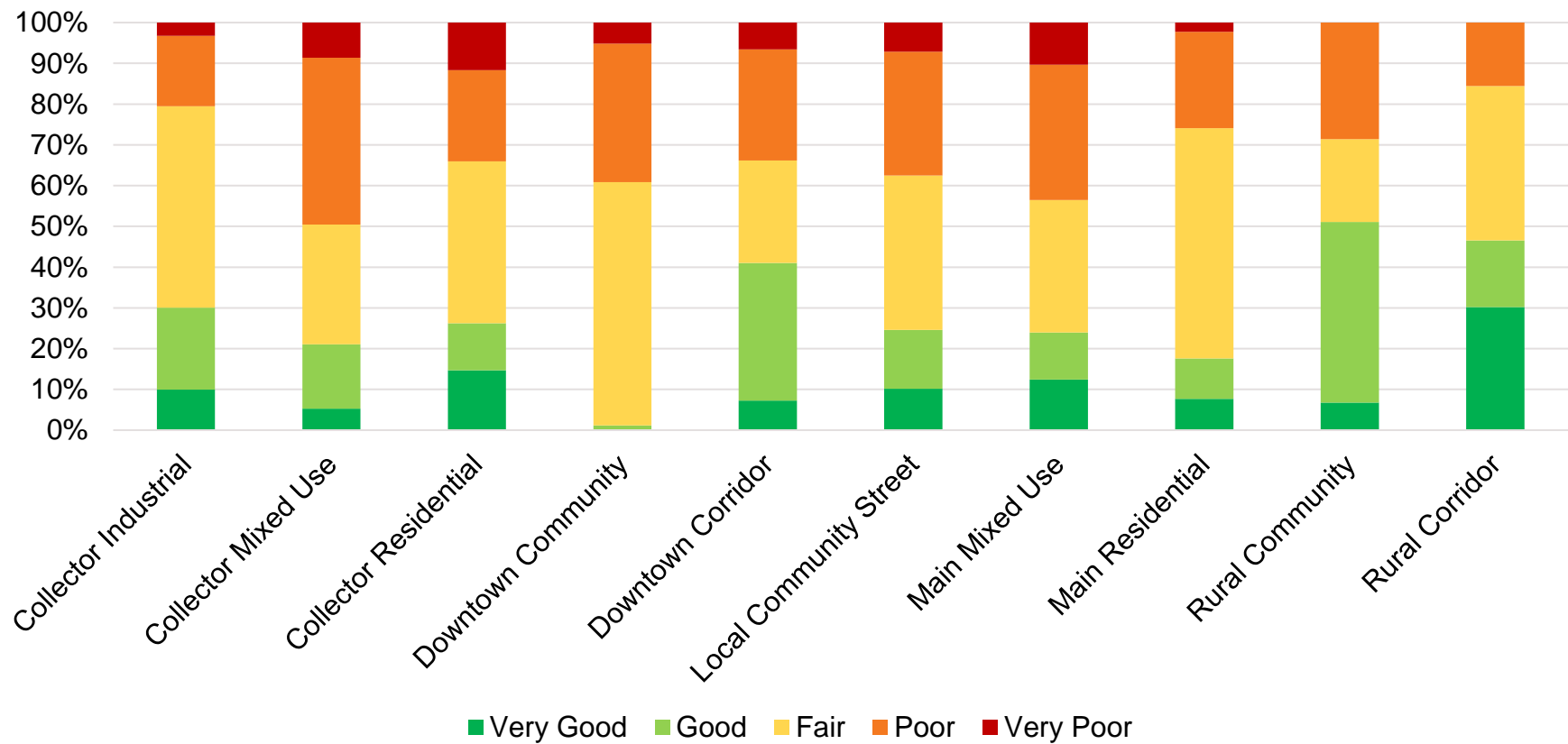
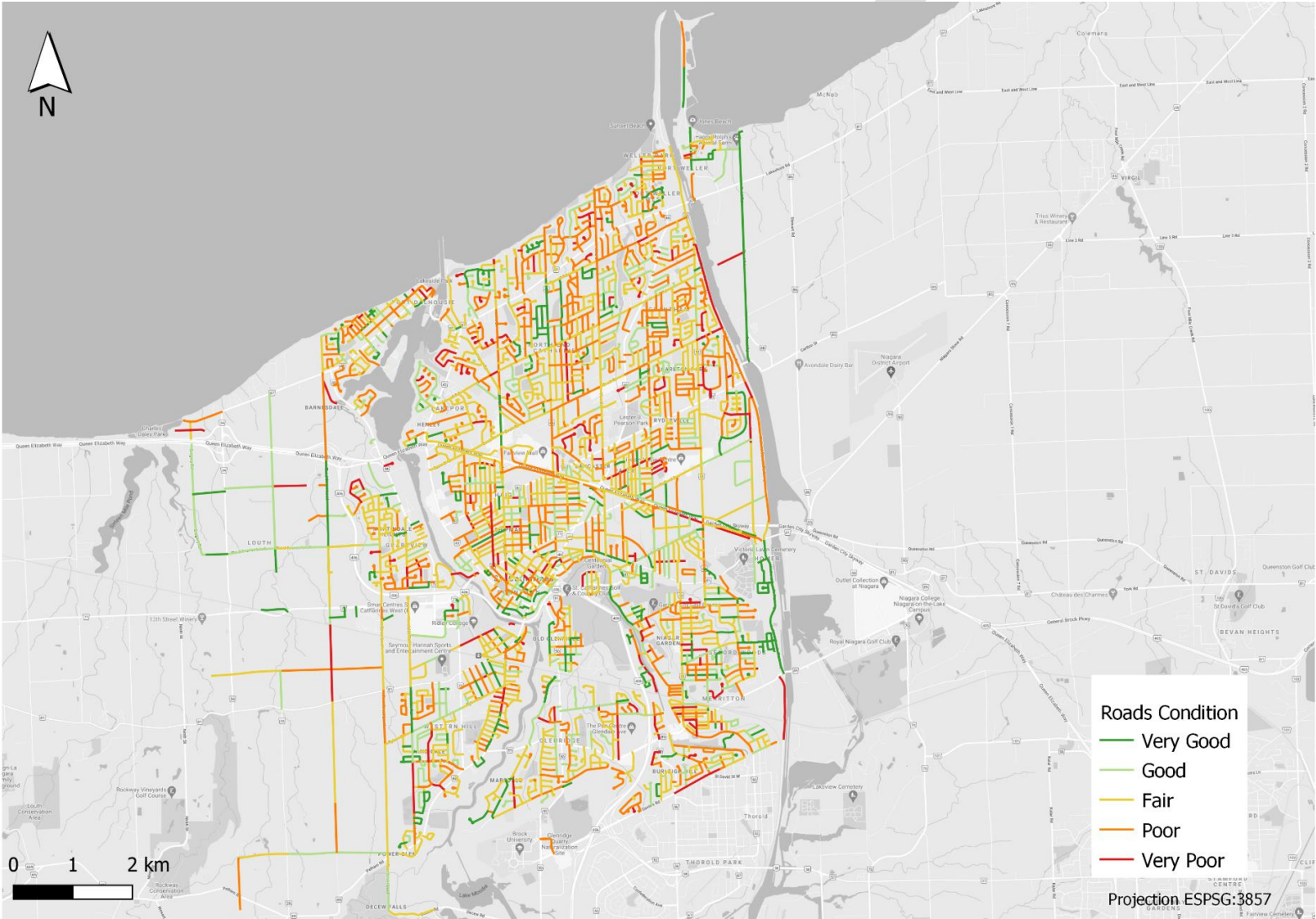


Figure 42. Condition Distribution by Location for all Roads



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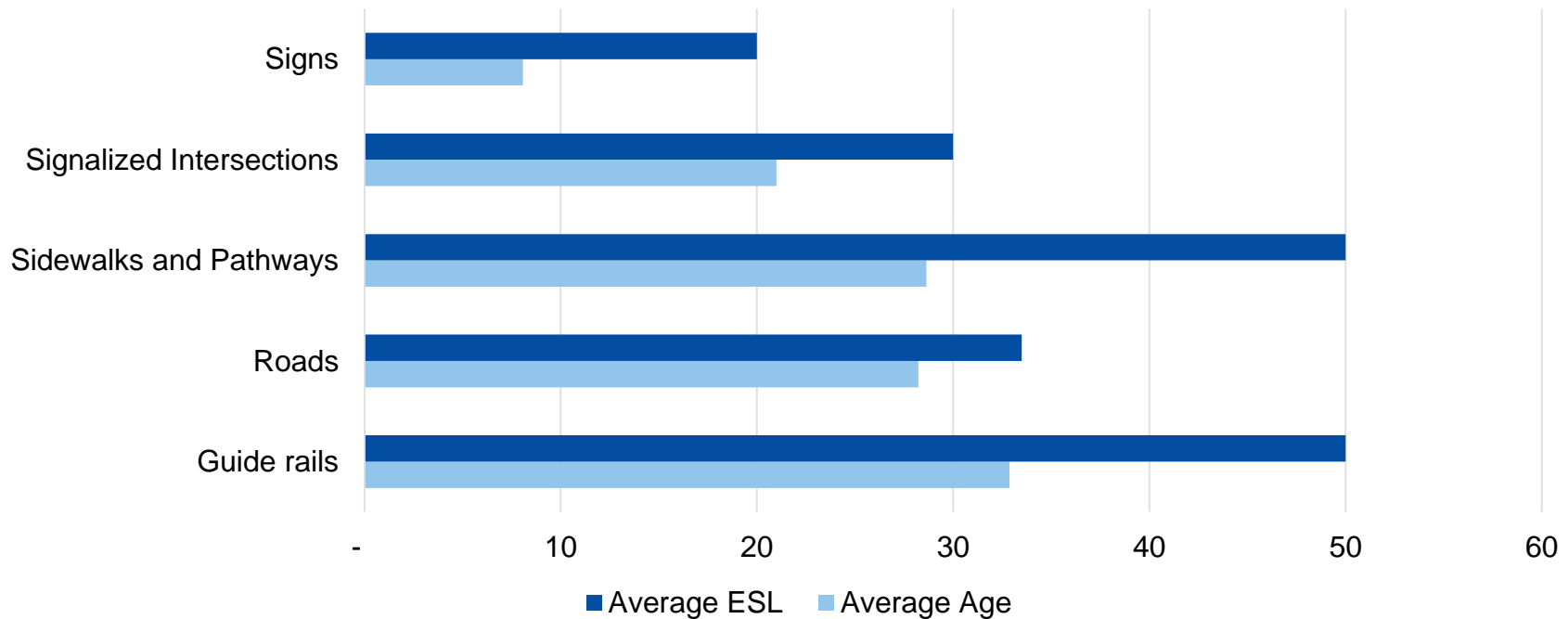
5.1.3 Transportation Age Summary

By comparing the average age of the assets against the average estimated useful life, the overall average remaining life of the assets can be derived.

The figure below summarizes the average ages of each asset type in the transportation system. As can be seen in the figure, the only transportation asset nearing end of

their service life are roads. Furthermore, as above noted, the streetlights' age is based on available information and does not represent the differences between poles and recently replaced fixtures and therefore these have been excluded.

Figure 43. Average Age as a Proportion of Expected Service Life by Asset Type All Transportation Assets



5.2 Transportation Levels of Service

The City of St. Catharines is committed to providing a safe, efficient, accessible, and sustainable transportation system for all required uses and modes of transportation in accordance with regulatory requirements and expectations of the community.

The Key Service Attributes associated with the transportation LOS and their associated statements are defined in the table below.

Table 33 Transportation LOS Service Attributes

| Service Attribute | Attribute Statement |
|---------------------------|---|
| Scope | Providing adequate transportation services to the community |
| Safety | Providing an operational and accessible transportation network that is safe for all modes and uses of the transportation network. |
| Quality | Providing a transportation network at the appropriate material quality with smooth and safe surfaces. |
| Reliability | Providing a transportation network that is reliable. |
| Environmental Stewardship | Providing a transportation network that is environmentally conscious. |

| Service Attribute | Attribute Statement |
|-------------------|--|
| Cost Efficiency | Providing a cost-efficient transportation network for all modes. |

The following sections provide a summary of the levels of service for the City’s transportation services including those required by the O.Reg.588/17.

5.2.1 Transportation Customer Levels of Service

The City’s CLOS provides a documented measure of customer-focused outcomes. The following provides a summary of the CLOS associated with the transportation service.

- **Description, which may include maps, of the road network in the municipality and its level of connectivity. (Scope)**
The existing road network in the City of St. Catharines includes provincial, regional, and municipal roads. Municipal roads are classified as either arterial roads, collector roads, or local roads, in decreasing order of size and capacity.
- **Description or images that illustrate the different levels of road class pavement condition. (Quality)**
The City of St. Catharines adheres to and follows the American Society for Testing Materials Pavement Condition Index (PCI) rating system

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model when defining pavement condition. Where a PCI of 100 indicates a perfect surface and zero indicates a surface that has completely deteriorated.

Ride comfort Index (RCI) is also gathered, and Pavement Quality Index (PQI) is based on both ride comfort and/or condition.

These standards are followed by the third-party consultants engaged by the City to perform pavement inspections.

The following table provides additional CLOS metrics for the City transportation services.

Table 34. Transportation CLOS Metrics

| Service Attribute | Customer Levels of Service | 2020 Performance |
|-------------------|---|------------------|
| Safety | Number of complaints about leaf/debris/snow obstructions in cycling facilities or sidewalks | 429 |
| Quality | Average pavement condition of paved roads | Fair |
| | Percentage of road network with fair or better pavement condition | 66% |

| Service Attribute | Customer Levels of Service | 2020 Performance |
|---------------------|--|------------------|
| Quality (continued) | Length of roads in poor and very poor condition | 215.4km |
| | Percentage of Transportation assets in fair or better performance | 63% |
| Env. Stewardship | Percentage of streetlights that are energy efficient | 93% |
| Cost Efficiency | Total cost to provide transportation services (Roadway, Structure, Street Lighting) (\$/household) | \$350.22 |

5.2.2 Transportation Technical Levels of Service

In addition to setting performance levels associated with customer expectations, the City has also defined technical requirements and key performance indicators that align or support the CLOS presented on Table 34.

The following provides a summary of the TLOS associated with the transportation service.

Table 35. Transportation TLOS Metrics

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| Service Attribute | Technical Levels of Service | 2020 Performance |
|-------------------|---|------------------|
| Scope | Number of lane-kilometres of arterial roads (Class 1 and Class 2 highways) as a portion of square kilometres of land area of the City ^(a) | 0.1 |
| Scope (Cont.) | Number of lane-kilometres of collector roads (Class 3 and Class 4 highways) as a portion of square kilometres of land area of the City ^(a) | 2.7 |
| | Number of lane-kilometres of local roads means (Class 5 and Class 6 highways) as a portion of square kilometres of land area of the City ^(a) | 9.0 |
| Safety | Length of off-road trails ^(b) | 109 kilometres |
| | Length of roads with dedicated bike lanes ^(b) | 6.2 kilometres |
| | Length of routes with paved shoulders ^(b) | 16 kilometres |

| Service Attribute | Technical Levels of Service | 2020 Performance |
|-------------------|--|-----------------------|
| | Length of Signed Route with sharrow ^(b) | 8 kilometres |
| | Length of Signed Route (no sharrow) ^(b) | 2 kilometres |
| | Length of in-boulevard multi-use trails | Less than 1 kilometre |
| | Total length of on-road and off-road cycling facilities ^(b) | 141 kilometres |
| Safety (Cont.) | Number of complaints that action a by-law ticket related to snow removal on residential areas | 26 |
| | Number of complaints about snow removal in downtown core | 0 |
| | Number of complaints about leaf/debris obstructions in cycling facilities or sidewalks | 429 |
| Quality | For paved roads in the municipality, the average pavement condition index value (PCI) ^(a) | 47 |

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| Service Attribute | Technical Levels of Service | 2020 Performance |
|-------------------|---|------------------|
| | For unpaved roads in the municipality, the average surface condition ^(a) | Fair |
| | Average Ride Condition Index (RCI) | 42 |
| | Percentage of roads that are paved | 99.8% |
| Reliability | Percentage of Transportation assets in poor or better condition | 92% |
| | Percentage of roads/paved area in poor or very poor condition | 37% |
| | Percentage of Minimum Maintenance Standard Inspections completed on time as per MMS O. Reg 239/02 | 99% |
| | Percentage of Minimum Maintenance Standard Repairs completed on time as per MMS O. Reg 239/02 | 92% |
| | Percentage of streetlights owned by the City with | 93% |
| Env. Stewardship | | |

| Service Attribute | Technical Levels of Service | 2020 Performance |
|-------------------|--|------------------|
| | LED or low energy fixtures | |
| | Volume (in Liters) of anti-icing liquids applied to roads per lane-kilometre | 15.58 |
| | Volume of sand applied to roads per lane-kilometre | 1.22 Ton |
| | Volume of salt applied to roads per lane-kilometre | 4.69 Ton |
| | Total roadway replacement value | \$ 974,444,527 |
| Cost Efficiency | Preventive maintenance as a percentage of total maintenance records | 13% |
| | Maintenance cost per km of road network for non-winter control activities | \$ 5,508 |
| | Maintenance cost per km of road network for winter control activities | \$ 3,404 |
| | Capital investments in comparison with sustainable investment forecast | 20% |

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| Service Attribute | Technical Levels of Service | 2020 Performance |
|-------------------|----------------------------------|------------------|
| | Transportation reinvestment rate | 0.9% |

Notes:

(a) Required by O.Reg. 588/17

(b) Metrics developed from Transportation Master Plan, which includes Regional roads.

5.2.3 Transportation Future Metrics for Consideration

As part of the definition of levels of service, the City identified possible level of service metrics that could be added to their framework as data becomes available. The following table provides a summary of the metrics that have been proposed for future consideration.

Table 36. Transportation LOS Future metrics

| Service Attribute | Levels of Service Proposed Future Metric | Type of LOS |
|-------------------|--|-------------|
| Safety | Percentage by kilometre of sidewalks that are AODA compliant | Technical |

| Service Attribute | Levels of Service Proposed Future Metric | Type of LOS |
|-------------------|---|-------------|
| | Length of sidewalks that are AODA compliant | Technical |
| | Percentage of pedestrian crossings and crossings that are FADM/AODA compliant | Technical |
| | Number of pedestrian crossings and crossings that are FADM/AODA compliant | Technical |
| | Total number of pedestrian crossings and crossings | Technical |
| | Number of locations identified for traffic control enhancements | Technical |
| Reliability | Percentage of guide rails in poor or very poor condition | Technical |

5.3 Transportation Lifecycle Management Strategy

The levels of service presented in the previous section are supported by the achievement of a variety of lifecycle activities in accordance with the activity types presented in **Table 5**. These activities are targeted to extend the

asset life, ensure levels of service are being met, and reduce overall lifecycle costs.

The water service staff implement a variety of lifecycle activities on its entire portfolio. **Table 37**Table 15 provides a summary of these activities and the risk associated with not doing them.

Table 37. Transportation Lifecycle Activities, Associated Risk, and Estimated Lifecycle Cost

| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|------------------------------|---|---|--|
| Non-Infrastructure Solutions | <ul style="list-style-type: none">• Master Plans are developed and updated to provide a baseline for future growth projections in the transportation network.• Traffic studies and counts are conducted to evaluate the capacity and flow efficiency of the transportation system.• Condition assessments are conducted to determine the condition of the assets on the network such as: roads and streetlights.• Third party assessments are conducted to develop a base inventory for assets such as: roads and guide rails. | <ul style="list-style-type: none">• Inadequate planning assumptions can provide incorrect forecasted estimates.• Regulatory requirement and standard changes.• Reduced ability to understand potential impacts of climate change on the infrastructure. | <p>\$ 389,000</p> <p>Based on the historical 2017 to 2021 average expenditures. It is recommended that future studies be identified based on best practices and cost estimates be developed.</p> |

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| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|----------------------------|---|---|--|
| Renewal / Rehab Activities | <ul style="list-style-type: none"> Scheduled rehabilitation activities such as resurfacing. Repair of shoulders and sidewalks. | <ul style="list-style-type: none"> Incorrect assumptions of the expected improvement in useful life after maintenance is completed. Increased lifecycle cost if renewal/rehab are done improperly or not as scheduled. | <p>\$ 10,545,000</p> <p>Forecasted based on the lifecycle management activities.</p> |
| Maintenance Activities | <ul style="list-style-type: none"> Inspections are conducted in accordance with the Minimum Maintenance Standards and the necessary maintenance activities are triggered based on findings. Sweeping of roads is conducted four times per year to reduce dust and pollutant loadings (all roads swept in spring, curbed roads swept twice in summer, fall leaf pickup all roads in fall). Downtown is swept weekly. Completion of winter maintenance such as snow plowing and salting. Grinding, roller patching, crack sealing, spot repairs, and mud jacking. | <ul style="list-style-type: none"> Increased lifecycle cost if maintenance is done improperly or not with scheduled frequency. Resource limitations to conduct unplanned, urgent work. Insufficient maintenance may contribute to asset failure resulting on service disruptions. Unsafe road conditions due to insufficient maintenance. | <p>\$ 5,019,000</p> <p>Forecasted based on the lifecycle management activities.</p> |

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| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|---|---|---|---|
| Replacement/ Construction Activities | <ul style="list-style-type: none"> Replacement of deteriorated assets. | <ul style="list-style-type: none"> Coordination with other asset classes (if applicable) might delay timeframe of construction activities. Delays in construction could result in cost over-runs. | <p>\$ 21,616,000</p> <p>Forecasted based on the lifecycle management activities.</p> |
| Disposal Activities | <ul style="list-style-type: none"> Decommissioning assets at the end of their useful life. Disposal of abandoned or obsolete infrastructure during construction projects. Contaminated soils are disposed in accordance with regulation based on Geotechnical reviews conducted in construction projects. | <ul style="list-style-type: none"> Improper disposal could lead to environmental impacts and result in cost overruns. | <p>-</p> <p>Disposal costs are included with replacement costs</p> |
| Service Improvement Activities | <ul style="list-style-type: none"> Retrofit of transportation system to include active transportation facilities. City is implementing a replacement program to convert streetlight heads to energy efficient components. Sidewalks program is intended to replace them for AODA compliant ones to improve accessibility in the network based on system condition. Granular trails maybe converted to hard surfaces. Fish habitat additions to include fish crossings. | <ul style="list-style-type: none"> Lack of improvements can result in health and safety risks. Increased service expectations come with increased cost implications. | <p>\$ 827,000</p> <p>Based on the 2017 to 2021 average service improvement activities</p> |

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| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 to 2032) |
|-------------------------|---|---|---|
| Growth Activities | <ul style="list-style-type: none">Additions to support changes in demand and as per developments in the area. | <ul style="list-style-type: none">Growth activities are delayed or cancelled resulting in system being unable to accommodate increased demands. | <p>\$ 1,986,000 Based the average projected development charges</p> |

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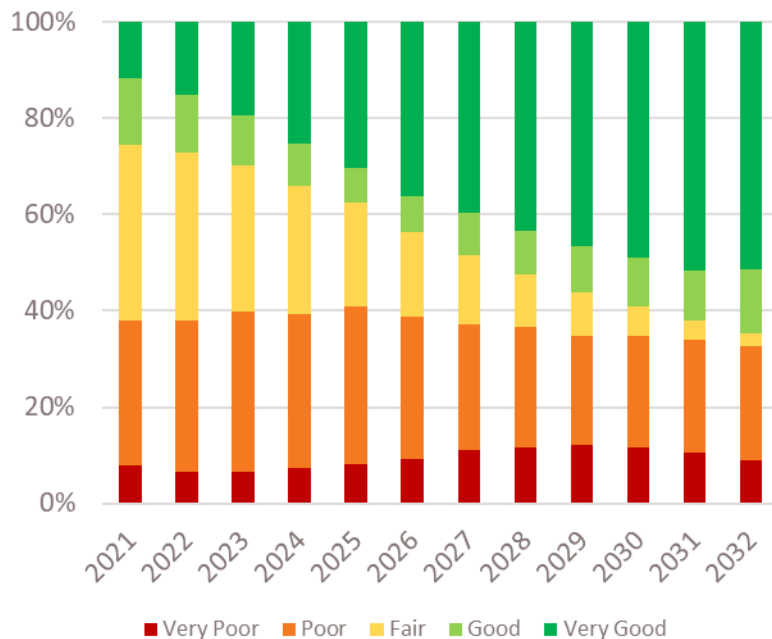
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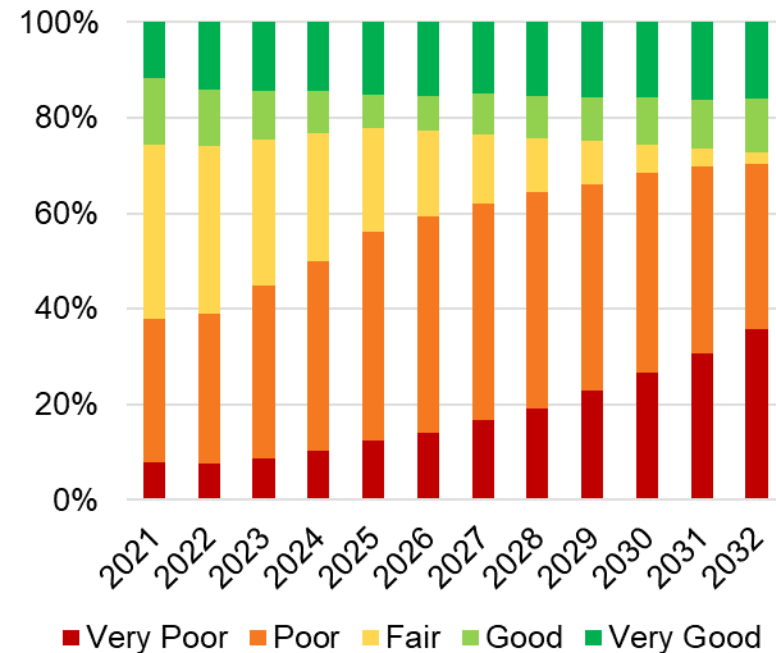
The City uses these strategies to plan work and determine future expenditure needs. The TLOS used in the AM analysis for water assets was defined as maintaining the current portion of asset with poor or better performance. The cost to maintain this scenario was determined to be \$35.3M annually over a 25-year period and resulted in the performance forecast shown in **Figure 44**. The percentage of assets in poor or better condition holds around 92%.

Figure 44. Transportation Condition Distribution Performance with Cost to Maintain LOS



The current planned budget was also analyzed to determine if a funding gap exists. The current anticipated investments, \$15.8M annually, resulted in the performance forecast shown in **Figure 45**. The percentage of assets in poor or better condition declines to 64% by 2032. This suggested an investment shortfall of \$19.5M annually.

Figure 45. Transportation Condition Distribution Performance with Anticipated Budget



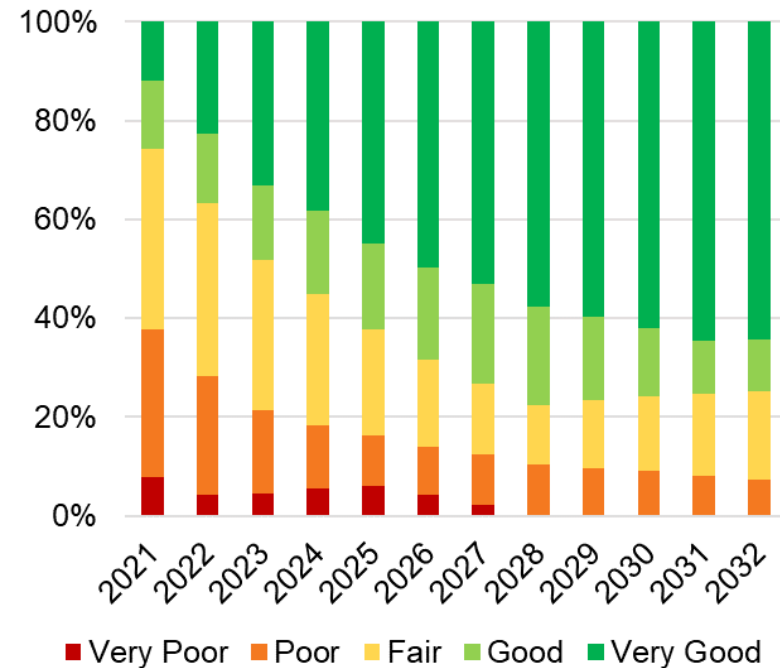
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Additionally, an optimal lifecycle scenario was analyzed, which was used to determine the cost to meet all lifecycle strategies described in **Table 37**. This scenario addresses the backlog and ensures no asset reaches very poor performance. The cost to achieve this scenario was determined to be \$40.4M annually over a 25-year period and resulted in the performance forecast shown in **Figure 46**.

The costs for the 10-year lifecycle forecast are presented in **Figure 47**. The graph shows the forecasted expenditures by lifecycle category for the cost to maintain scenario. The equivalent annual cost to maintain LOS, the annual expenditures for the optimal lifecycle scenario and the anticipated annual funding is also provided on the graph. The City should explore options to increase the investment levels for Transportation assets within the next 2-3 years.

Figure 46. Transportation Condition Distribution Performance with Optimal Lifecycle Activities



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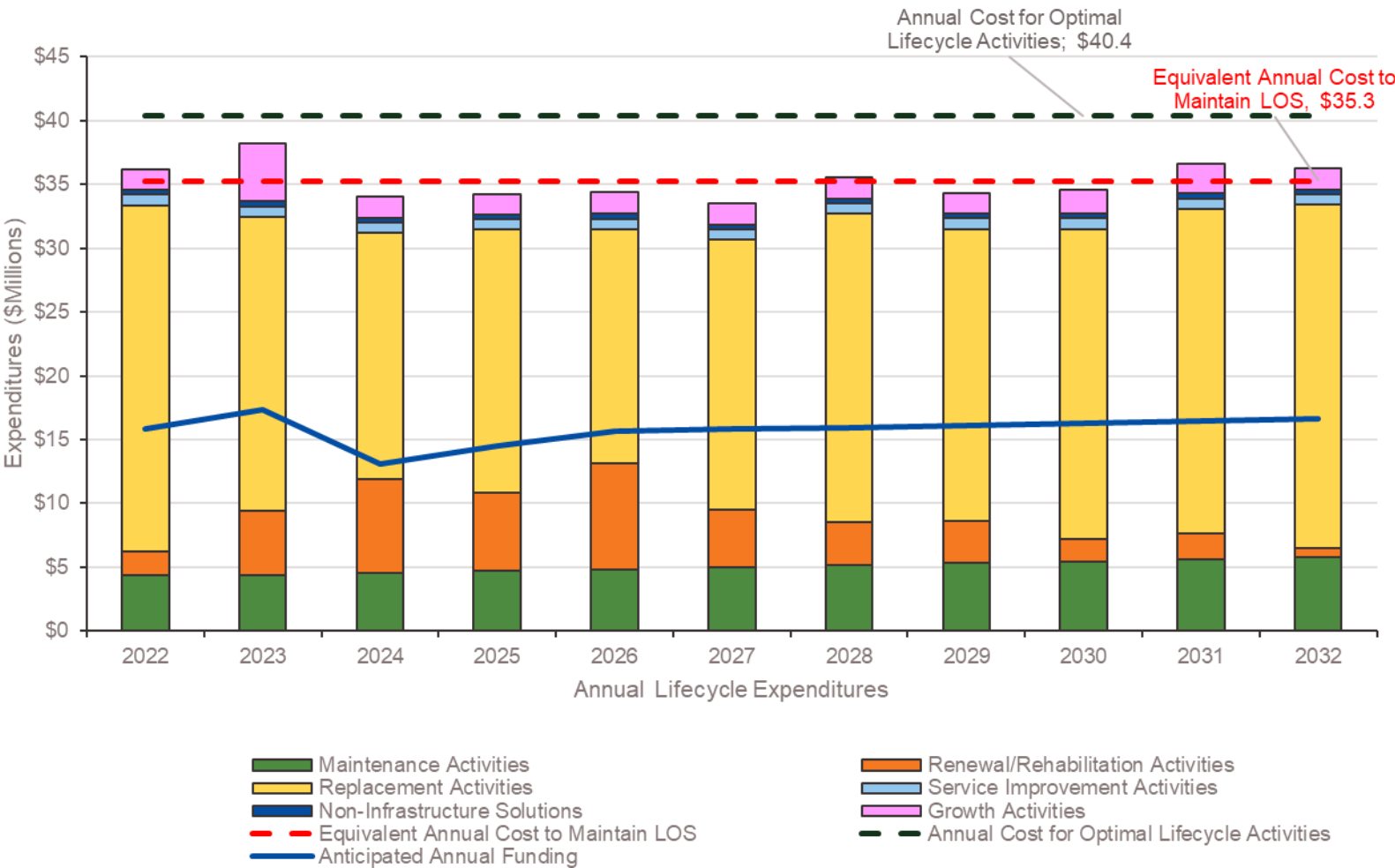
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Figure 47. Transportation Forecasted Lifecycle Needs



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5.4 Transportation Service Associated Risks

In addition to the risks associated with the lifecycle activities for this service, as shown on **Table 37**, the following are considered general risks with this service:

- Road's deterioration could result in closures and therefore impact the flow of traffic in the City;
- Signalized intersection, streetlight and sign failure could disrupt traffic flow and increase the risk of traffic collision in the area;
- Sidewalk failure could result in reduced accessibility; and
- Guiderail failure could result in increased risk to drivers or pedestrians.

In addition to the above, failure of assets from other services (like underground infrastructure or flooding) could impact the transportation network resulting in increased deterioration, erosion, and potentially full road closures.

5.5 Transportation Climate Change Considerations

The City's road network and related assets are also vulnerable to the impacts of climate change. Extreme flooding can cause structural damage as well as disruptions to traffic as roadways are expected to convey stormwater during 100-year events which may need to be

revised as climate change alters the frequency and intensity of extreme events.

Higher summer temperatures can cause pavements to soften and expand, which allows ruts and potholes to form more easily, increasing the need for more frequent maintenance and reconstruction.

Climate change is anticipated to increase the probability of high wind speeds and gusts which may impact the design and maintenance of right-of-way assets which must withstand these forces.

5.6 Transportation Data Sources

The following condition data was used to support this chapter's assessments of the City's transportation assets.

- Roadmatrix database with segment inventory, installation date, and PQI information;
- The guide rail inventory from previous assessment included all the necessary attributes;
- Niagara Region signalized intersection data;

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- Signs and streetlights: GIS shapefiles of the full inventory for these categories with some key attributes. Guiderail locations were also provided as a shapefile;
- Unit Cost Summary documentation provided by the City based on historical data; and
- The City’s tangible capital asset estimated service life values.

The following assumptions were made during the analysis:

- Signalized intersection replacement costs were assumed based on available data. Their installation date was assumed to be the latest legal drawing date;
- Missing installation dates in linear assets were filled based on the install date of nearby related assets (i.e., mains for roads); and
- Estimated service lives not available in the City’s tangible capital asset were assumed based on industry best practices.

A data confidence assessment is provided below:

Table 38. Transportation Data Confidence Assessment

| Asset Category | Confidence Rating | Confidence Data |
|--------------------------|-------------------|---|
| Roads | B | Minor assumptions were made on age, replacement costs and condition from known values. |
| Guiderail | | |
| Streetlights | C | Minor assumptions were made on age, replacement costs, and condition from reliable sources. |
| Signs | | |
| Sidewalks | | |
| Signalized Intersections | | |

Estimated Replacement Value

The City's structures are valued at approximately **\$66 million**.

Condition Rating

The overall average condition of the structures is **Good**.

Structures

The City of St. Catharines structures provide a safe and efficient flow of people and goods. The City is responsible for the following:

71 Bridges

46 Culverts

6 Structures

The movement of people, goods, and services is a significant aspect of our everyday life and is supported by the City's Structure assets.

6.1 Structures State of the Local Infrastructure

The following section summarizes the quantity and state of the structures asset portfolio.

6.1.1 Structures System Valuation

The City's structure system is comprised on standard categories based on OSIM requirements, in the following:

- **Span (< 3m)** encompasses bridges and culverts (under 3 metres span)⁴
- **Span (>= 3m)** encompasses bridges and culverts (over 3 metres span)

These have been further divided into vehicular and pedestrian bridges and culverts to indicate the service type they support. It should be noted that the spans <3m category excludes most CSP culverts and all driveway culverts.

These are culvert that provide crossing of natural water courses. Driveway culverts and other roadside culverts

For the valuation of the transportation system, the replacement values are based on replacing the asset with a similar asset (like-for-like) on a complete and standalone basis. These were calculated based on costs provided during the latest OSIM inspections completed in 2020. In the absence of OSIM data, historical values from similar projects were used.

Based on the approach taken to calculate the replacement values for each asset category, the data confidence grade is **A**.



that are part of the ditch system will be inventoried and included with the storm water system in future.⁴

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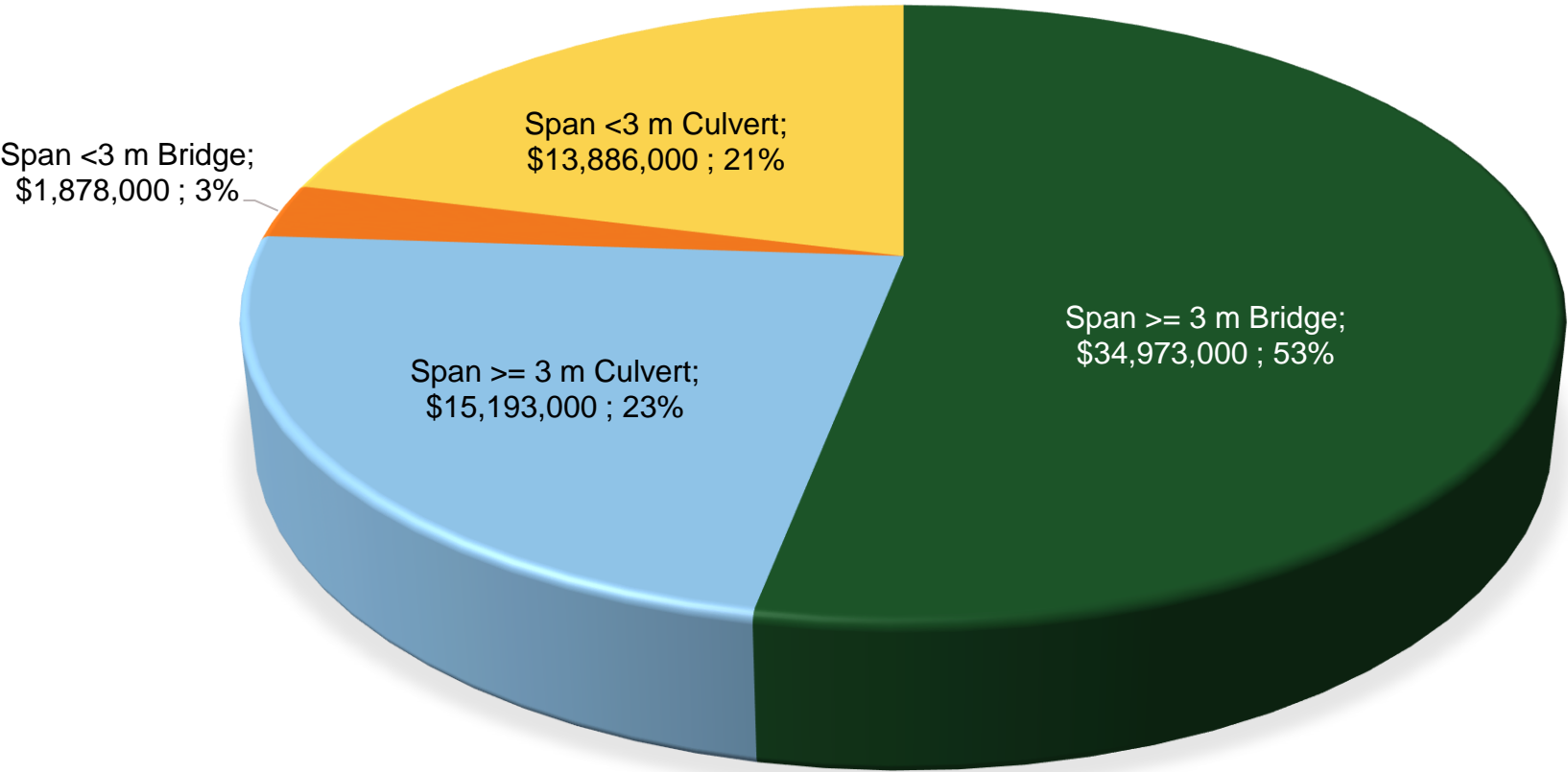
Table 39. Structures Valuation

| Asset Type | Asset Category | Count | Unit | Replacement Value (2021 Dollars) |
|---|-----------------------------|-------|------|-------------------------------------|
| Structures | Span (\geq 3m) - Bridge | 54 | Each | \$ 34,973,000 |
| | Span (\geq 3m) - Culvert | 17 | Each | \$ 15,193,000 |
| | Span (< 3m) - Bridge | 15 | Each | \$ 1,878,000 |
| | Span (< 3m) - Culvert | 31 | Each | \$ 13,886,000 |
| Overall Transportation System Replacement Value | | | | \$ 65,930,000 |

The overall distribution of replacement values by asset type for all structures is as shown below in **Figure 48**. Bridges (\geq 3m) have the highest replacement value and make up about 53.05% of the portfolio. Culverts in both size categories account for another 44.1% of the portfolio in approximately equal proportions and Bridges (< 3 m) make up the remaining 2.85%.



Figure 48. Asset Replacement Value for All Structures Assets



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6.1.2 Structures System Condition

Using deterioration curves based on estimated remaining life and the condition provided as part of the OSIM inspection bridge condition index (BCI), a condition score was created for each asset into five rating categories ranging from Very Good to Very Poor as shown below.

Table 40 provides a summary of the condition scale.

Table 40. City of St. Catharines Structures Condition Scale

| Condition Score | Condition Rating | BCI |
|-----------------|------------------|--------|
| 1 | Very Good | 80-100 |
| 2 | Good | 70-79 |
| 3 | Fair | 60-69 |
| 4 | Poor | 40-59 |
| 5 | Very Poor | 0-39 |

The current condition of assets is summarized and weighted by replacement value in **Figure 49**.

As shown in the figure, the structures with spans over three metres are overall in Good and Fair condition. The structures under three metres also have an average of Good condition.

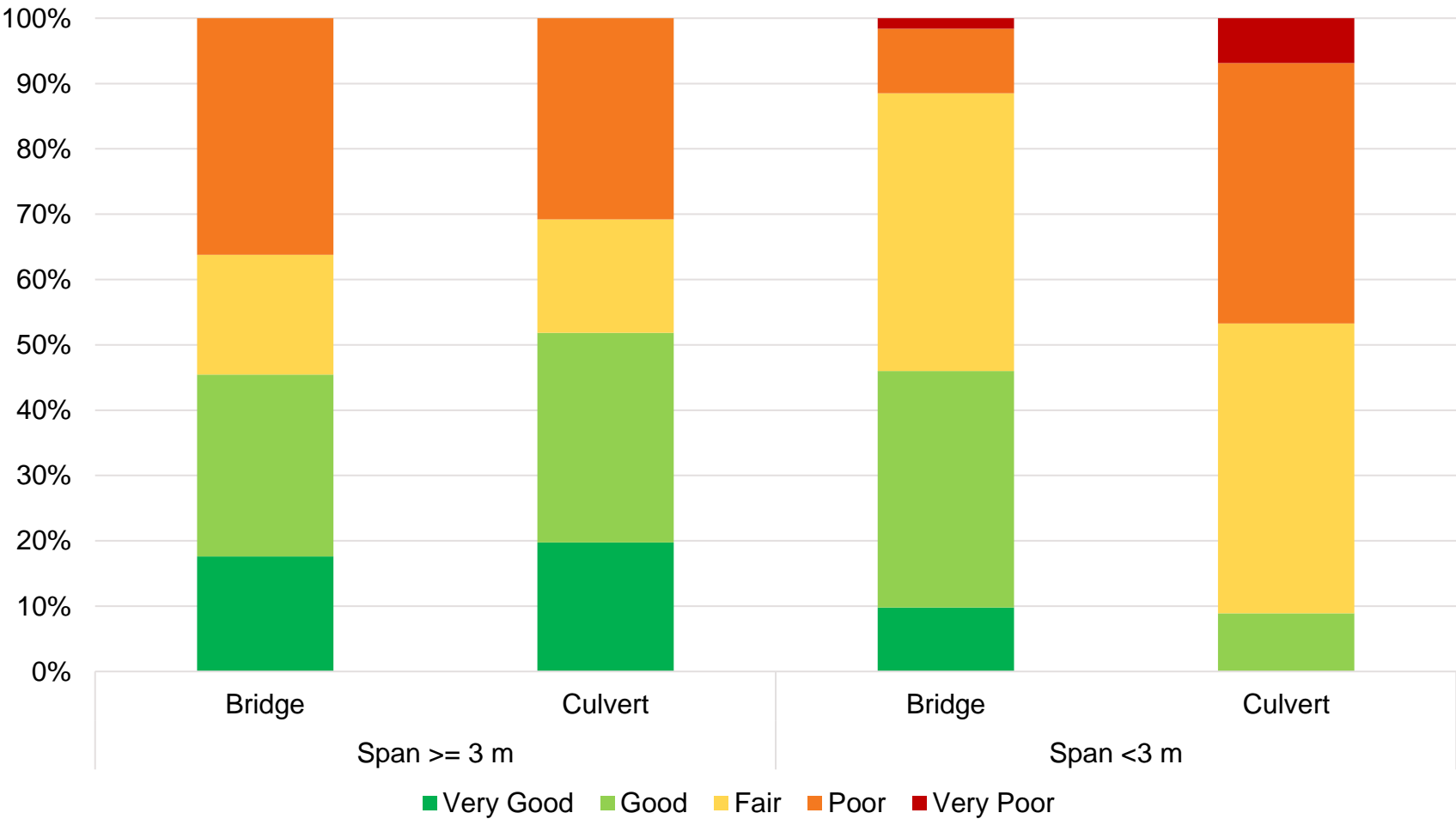
Overall, 1% of the structure assets are in the very poor category and 35% are in the poor category.



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| State of Local Infrastructure | Levels of Service | Lifecycle Management Strategy | Data Confidence |
|-------------------------------|-------------------|-------------------------------|-----------------|
|-------------------------------|-------------------|-------------------------------|-----------------|

Figure 49. Condition Distribution by Replacement Value for all Structure Asset Types



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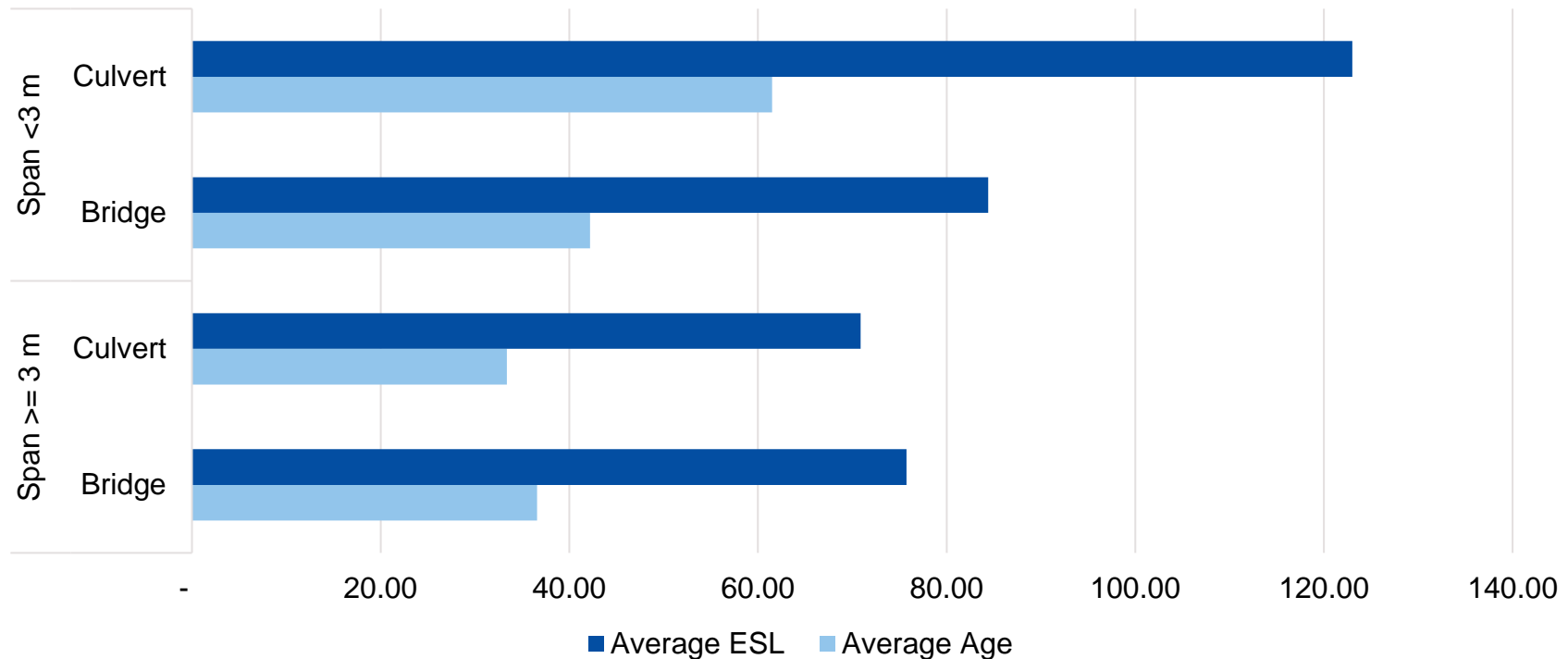
6.1.3 Structures Age Summary

By comparing the average age of the assets against the average estimated useful life, the estimated remaining life of the portfolio from an age perspective can be understood.

The figure below summarizes the average ages of each structure asset type.

The results align with those asset categories that indicated the majority of their assets are in Good and Fair condition as these are around mid-way of their estimated useful life.

Figure 50. Average Age as a Proportion of Expected Service Life by Asset Type All Structures Assets



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6.2 Structure Levels of Service

The City of St. Catharines is committed to providing safe, efficient, accessible, and sustainable structures that support the transportation system for all required uses and modes of transportation in accordance with regulatory requirements and expectations of the community.

The City has set a minimum quantitative target for its bridge assets of 60 BCI, which is equivalent to bridge structure being in fair condition. This proactive approach results on bridges not reaching Poor or Very Poor condition states.

The City also strives for no disruptions to vehicular or pedestrian traffic due to load restrictions, and that travel routes are safe with no harmful environmental impacts.

The Key Service Attributes associated with the transportation LOS and their associated statements are defined in the table below:

Table 41. Structures LOS Service Attributes

| Service Attribute | Attribute Statement |
|-------------------|---|
| Scope | Providing adequate transportation services to the community by maintaining accessible structures. |

| Service Attribute | Attribute Statement |
|---------------------------|---|
| Safety | Providing safe and accessible structures. |
| Quality | Providing structures at the appropriate material quality. |
| Reliability | Providing structures that are reliable. |
| Environmental Stewardship | Providing structures that are environmentally conscious. |
| Cost Efficiency | Providing cost efficient structures for all transportation modes. |

The following sections provide a summary of the level of services for the City’s structures including those required by the O.Reg.588/17.

6.2.1 Structures Customer Levels of Service

The City’s CLOS documents the asset performance from a customer perspective. The following provides a summary of the CLOS associated with the structures in the City of St. Catharines.

- **Description of the traffic that is supported by municipal bridges (e.g., heavy transport vehicles, motor vehicles, emergency vehicles, pedestrians, cyclists). (Scope)**
Bridges & Culverts on roads support all classes of vehicles including motor vehicles, heavy transport vehicles, buses, and emergency vehicles, as well

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as pedestrians and cyclists. Pedestrian bridges support both pedestrians and cyclists.

- **Description or images of the condition of bridges and/or culverts and how this would affect their use. (Quality)**

City of St. Catharines follows the standards and best practices outlined in the Ontario Structure Inspection Manual in order to determine the condition of the bridges and culverts. Third party consultants who are experts in the design and assessment of bridges are engaged to complete these assessments.

Additional customer levels of service are provided in **Table 42.**

Table 42. Structures CLOS Indicator

| Service Attribute | Customer Levels of Service | 2020 Performance |
|-------------------|--|------------------|
| Quality | Average Condition of structures | Good |
| Reliability | Number of structures in Poor or Very Poor condition | 34 |
| | Percentage of structures in fair or better performance | 64% |

| Service Attribute | Customer Levels of Service | 2020 Performance |
|-------------------|--|------------------|
| Cost Efficiency | Annual cost to provide structure service (per household) | \$29 |

6.2.2 Structures Technical Levels of Service

The City has defined technical requirements and key performance indicators that support internal reporting. The following provides a summary of the TLOS associated with the structures service.

Table 43. Structures TLOS Metrics

| Service Attribute | Technical Levels of Service | Current Performance |
|-------------------|---|---------------------|
| Scope | Total number of bridges and culverts with a span of 3 metres or greater | 71 |
| | Number of pedestrian bridges with a span of 3 metres or greater | 38 |
| | Total number of bridges and culverts with a span less than 3 metres | 46 |
| | Number of pedestrian bridges with a span less than 3 metres | 2 |

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| Service Attribute | Technical Levels of Service | Current Performance |
|-------------------|---|---------------------|
| Safety | Percentage of bridges in the municipality with loading or dimensional restrictions ^(a) | 5% |
| Quality | Percentage of bridges in poor or better condition | 99% |
| | For structural bridges in the municipality, the average bridge condition index value (span of 3m or greater) ^(a) | 69.5 |
| | Smaller bridges in the municipality, the average bridge condition index value (span less than 3m) ^(a) | 60.3 |
| | For structural culverts in the municipality, the average bridge condition index value. (span of 3m or greater) ^(a) | 72.2 |

| Service Attribute | Technical Levels of Service | Current Performance |
|-------------------|---|---------------------|
| | Smaller span culverts in the municipality, the average bridge condition index value (span less than 3m at water courses) ^(a) | 60.3 |

Notes:

(a) Required by O.Reg. 588/17

6.2.3 Structures Future Metrics for Consideration

As part of the definition of levels of service, the City identified possible level of service metrics that could be added to their framework as data becomes available. The following table provides a summary of the metrics that have been proposed for future consideration.

Table 44. Structures Future Metrics

| Service Attribute | Levels of Service Proposed Future Metric | Type of LOS |
|-------------------|--|-------------|
| Safety | Percentage of culverts that meet MTO capacity requirements | Technical |

6.3 Structures Lifecycle Management Strategy

The levels of service presented in the previous section are supported by the achievement of a variety of lifecycle activities in accordance with the activity types presented in **Table 5**. These activities are targeted to extend the

asset life, ensure levels of service are being met, and reduce overall lifecycle costs.

The structures service staff implement a variety of lifecycle activities on its entire portfolio. **Table 45** provides a summary of these activities and the risk associated with not doing them.

Table 45. Structures Lifecycle Activities, Associated Risk, and Estimated Lifecycle Cost

| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 and 2032) |
|------------------------------|--|--|--|
| Non-Infrastructure Solutions | <ul style="list-style-type: none">Condition assessments are conducted to determine the condition of the assets above three metres on the network bridges (OSIM inspections). | <ul style="list-style-type: none">Growth projections follow an accelerated rate not following planned estimates.Inadequate planning assumptions can provide incorrect forecasted estimates.Regulatory requirement and standard changes.Reduced ability to understand potential impacts of climate change on the infrastructure. | <p>\$ 69,000 Based on the historical 2017 to 2021 average expenditures</p> |

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| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 and 2032) |
|----------------------------|--|--|---|
| Maintenance Activities | <ul style="list-style-type: none"> Inspections are conducted in accordance with the Minimum Maintenance Standards and the necessary maintenance activities are triggered based on findings. Sweeping on bridges is conducted as part of the road sweeping program as presented on Section 5. | <ul style="list-style-type: none"> Increased lifecycle cost if maintenance is done improperly or not with scheduled frequency. Resource limitations to conduct unplanned, urgent work. Insufficient maintenance may contribute to asset failure resulting on service disruptions. | <p>\$ 247,000</p> <p>Based on the 2020 to 2021 budget increase applied annually from 2021 onwards. Incorporating the maintenance of growth assets following construction.</p> |
| Renewal / Rehab Activities | <ul style="list-style-type: none"> Repairs are conducted as identified in the OSIM inspections. | <ul style="list-style-type: none"> Incorrect assumptions of the expected improvement in useful life after maintenance is completed. Increased lifecycle cost if renewal/rehab are done improperly or not as scheduled. | <p>\$ 710,000</p> <p>Forecasted based on the lifecycle management activities</p> |

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| Lifecycle Activity Type | Asset Management Practices | Risk Associated with the Activity | Equivalent Annual Cost (2022 and 2032) |
|---------------------------------------|---|---|--|
| Replacement / Construction Activities | <ul style="list-style-type: none"> Replacement of deteriorated assets. | <ul style="list-style-type: none"> Coordination with other asset classes (if applicable) might delay timeframe of construction activities. Delays in construction could result in cost over-runs. General deterioration in the condition of the structures and potential safety risks for users. Potential load restrictions on structure. Premature failures resulting in potential closures of trails and sidewalks and roads. | <p>\$ 1,119,000</p> <p>Forecasted based on the lifecycle management activities</p> |
| Disposal Activities | <ul style="list-style-type: none"> Decommissioning assets at the end of their useful life. Disposal of abandoned or obsolete infrastructure during construction projects. | <ul style="list-style-type: none"> Improper disposal could lead to environmental impacts and result in cost overruns. | <p>\$ 43,000</p> <p>Based on the 2017 to 2021 average disposals</p> |
| Growth Activities | <ul style="list-style-type: none"> Additions to support changes in demand and as per developments in the area. | <ul style="list-style-type: none"> Growth activities are delayed or cancelled resulting in system being unable to accommodate increased growth demands. | <p>\$ 591,000</p> <p>Based on the average distribution of the \$ 6,500,000 projected development charges for a new structure in 2026</p> |

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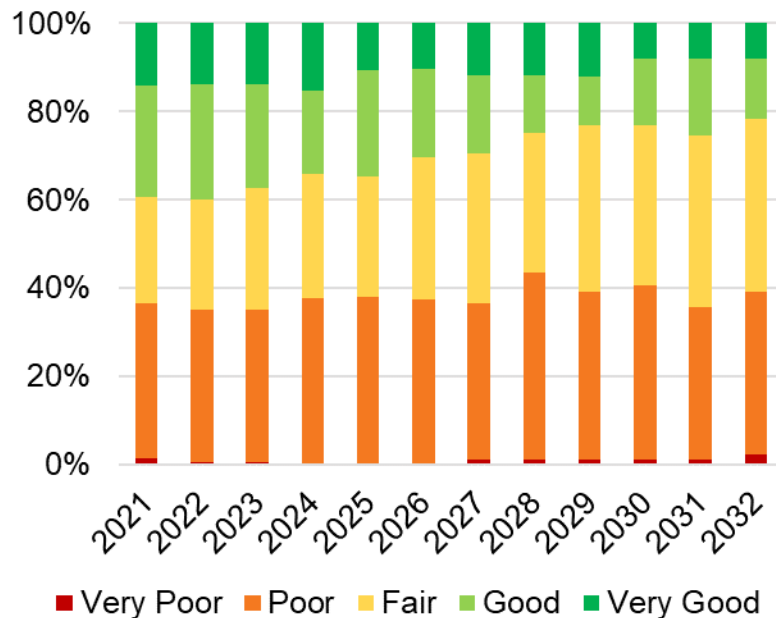
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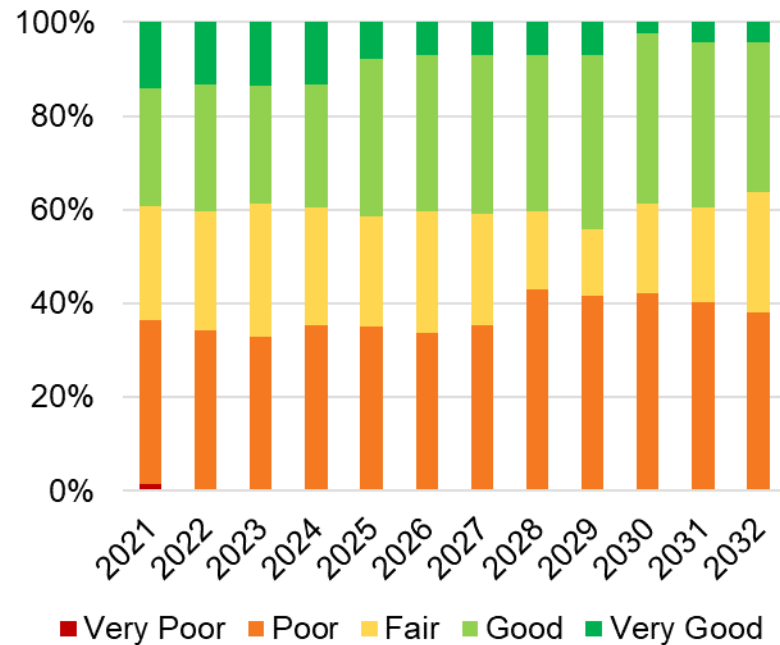
The City uses these strategies to plan work and determine future expenditure needs. The TLOS used in the AM analysis for wastewater assets was defined as maintaining the current portion of asset with poor or better performance. The current planned budget of \$1.8M annually appears to maintain LOS and resulted in the performance forecast shown in **Figure 51**. However, this is without adding additional structures, which would require an increase to annual investments. The percentage of assets in poor or better condition holds around 99%. This suggests that the anticipated budget is enough to maintain current LOS.

Figure 51. Structures Condition Distribution Performance with Anticipated Budget



Additionally, an optimal lifecycle scenario was analyzed, which was used to determine the cost to meet all lifecycle strategies described in **Table 45**. This scenario addresses the backlog and ensures no asset reaches very poor performance. The cost to achieve this scenario was determined to be \$2.8M annually over a 25-year period and resulted in the performance forecast shown in **Figure 24**.

Figure 52. Structures Condition Distribution Performance with Optimal Lifecycle Activities



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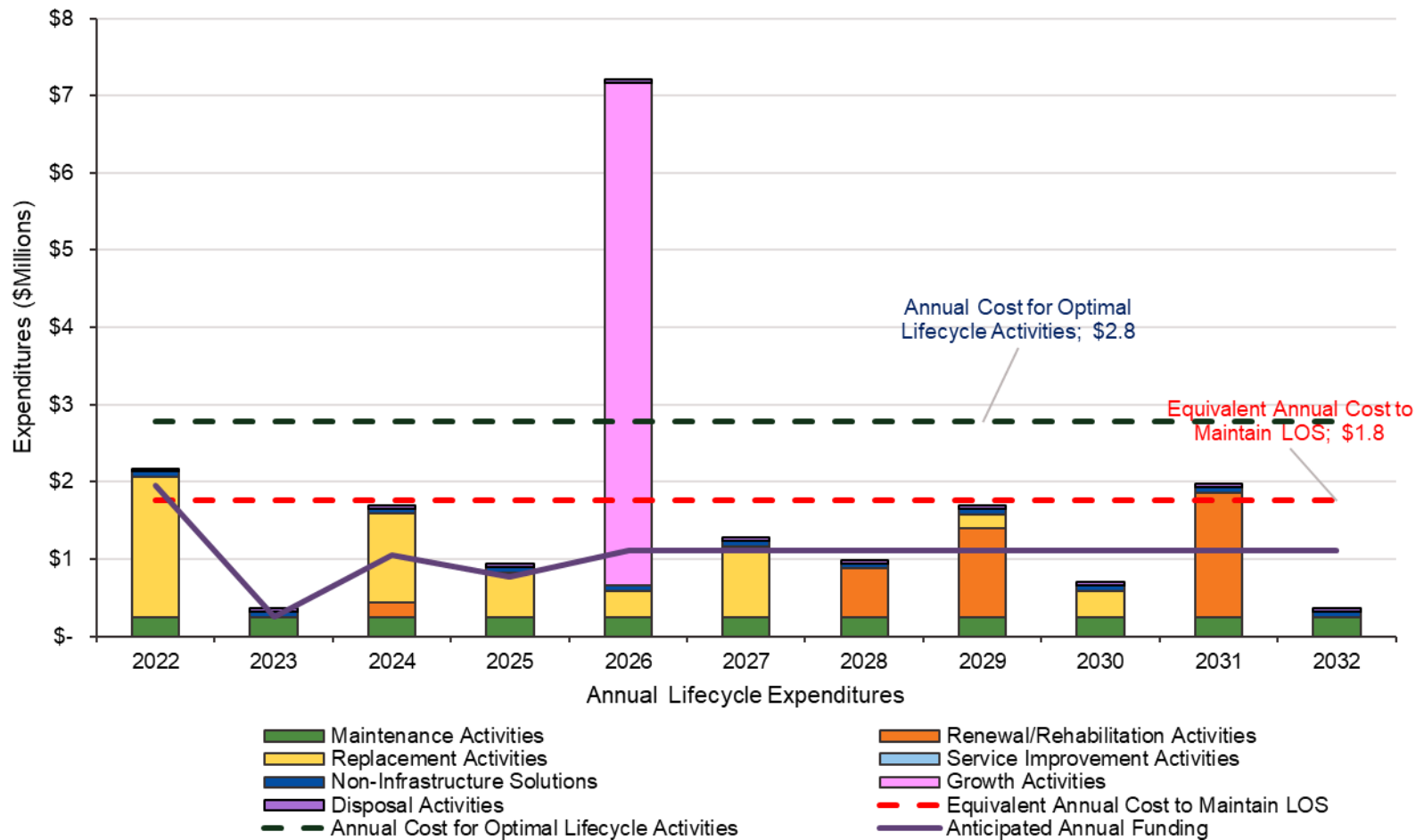
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The costs for the 10-year lifecycle forecast are presented in **Figure 53**. The graph shows the forecasted expenditures by lifecycle category for the cost to maintain scenario. The equivalent annual cost to maintain LOS, the annual expenditures for the optimal lifecycle scenario and the anticipated annual funding is also provided on the graph. It is recommended that the City should continue with anticipated spending.

Figure 53. Structures Forecasted Lifecycle Needs



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6.4 Structures Service Associated Risks

In addition to the risk associated with the lifecycle activities for this service described in **Table 45**, the following are considered general risks with this service:

- Deterioration of structures could result in load restrictions, closure, or potentially collapse; and
- Culvert failure could result in erosion to road bases and sink holes.

6.5 Structures Climate Change Considerations

Depending on their location, various City structures may be more susceptible to the impacts of climate change than others. Culverts are designed to convey flows based on past historical storm events and development projections. As storms increase in intensity, the resulting flows may exceed their capacity, increasing flood risk and the potential for structural damage or collapse during extreme storm events. As these assets are renewed, design modifications may be required to improve their future performance.

Similarly, during extreme storm events, bridges over waterbodies may be subject to high flood levels for which they were not designed. Hot and cold temperature

extremes and freeze/thaw cycles may weaken concrete or structural components. It is essential that vulnerable structures be evaluated, and any necessary improvements are planned for future consideration.

6.6 Structures Data Sources

The following condition data was used to support this chapter's assessments of the City's structure assets.

- 2020 OSIM Inspection database

No assumptions were made during the assessment of the data for this asset group.

A data confidence assessment is provided below:

Table 46. Structures Data Confidence Assessment

| Asset Category | Confidence Rating | Confidence Data |
|-----------------------------|-------------------|-----------------|
| Span (\geq 3m) - Bridge | A | No assumptions |
| Span (\geq 3m) - Culvert | | |
| Span ($<$ 3m) - Bridge | | |
| Span ($<$ 3m) - Culvert | | |

7 Financial Strategy

The financial strategy of this AMP aims to identify the appropriate funding levels required to provide the intended levels of service. It takes into consideration revenues, operating and capital expenditures, debt, and any future commitment for all the asset classes in the plan.

The City's budgets are developed to allocate the necessary funding to provide services, maintain, and construct infrastructure assets. These are based on required costs (expenditures) and available funding (revenues). The City allocates a portion of their revenues from property taxes and utilities to support current year projects, contribute to reserve funds, and make debt repayments.

Property taxes fund the City's core asset programs and services including stormwater management, road and structure operations, active transportation, and right-of-way maintenance. Water and wastewater are funded by rates.

In terms of expenditures, the City categorizes their budget into the following:

- **Operating budget:** Supports the day-to-day activities and functions conducted to provide City services. Samples of the expenditures funded from the operating budget include staff salaries, equipment maintenance, materials supply, and facilities services. These are expensed within the fiscal year.
- **Capital budget:** Includes large expenditures associated with construction or purchase of infrastructure. It leverages the debt and reserve funds available to manage the financial position over a ten-year period. Defining capital budgets includes the evaluation of long-term investment proposals along with estimating future cash flows.

As part of the annual budget development process, the City ensures continued financial sustainability through effective financial planning and risk management.

The following sections describe the interrelations between the City's infrastructure investment needs and the financing strategies.

7.1 Operating Revenues and Expenditures

The City's operating revenues for core and non-core assets by funding sources are as outlined below:

Table 47. Tax & Non-Tax Operating Revenues by Funding Source (\$'000)

| Funding Source | 2019 | 2020 | 2021 |
|---------------------------------------|---------|---------|---------|
| General Levy | 91,908 | 95,729 | 97,678 |
| Urban Service Area Levy | 12,690 | 12,792 | 13,354 |
| Investment in CIP | (1,200) | (1,250) | (1,250) |
| Tax Appeals and Write offs | (880) | (920) | (920) |
| Commercial /Industrial Vacancy Rebate | (320) | (320) | (170) |
| Supplemental Taxes | 665 | 695 | 522 |
| Municipal Utilities | 549 | 527 | 536 |
| Universities and Hospitals | 668 | 676 | 700 |
| Other Revenues | 10,781 | 11,297 | 10,810 |

Source: City Operating Budget 2021 and 2020

The other operating budget revenues include contributions from other governments, rents, concessions, franchises, fines, penalties, and interest, income from investments, surplus from previous year, transfer from reserve, reserves support, and miscellaneous revenues.

An additional source of revenue for the City is via the water and wastewater rates which are dedicated to the

provision of the related services. The following provides a summary of rate support between the City and the Niagara Region expenditures.

Table 48. Rates Gross Operating Revenues and Distribution (\$'000)

| Funding Source | 2019 | 2020 | 2021 |
|---|---------------|---------------|---------------|
| Water and Wastewater Rates Revenue | 50,030 | 54,942 | 55,234 |
| City of St. Catharines Expenses | 17,942 | 20,954 | 19,913 |
| Related Region of Niagara Expenses | 32,088 | 33,988 | 35,261 |

Source: City 2021 Water and Wastewater Budget Book

The net historical and projected operating budget for the assets included in this plan are shown below.

Table 49. Net Operating Budget by Service (\$'000)

| Service | 2019 | 2020 | 2021 |
|------------|-------|-------|-------|
| Water | 3,233 | 6,027 | 5,776 |
| Wastewater | 4,220 | 2,955 | 2,900 |
| Stormwater | - | 154 | 204 |

| Service | 2019 | 2020 | 2021 |
|----------------|-------|-------|-------|
| Transportation | 6,913 | 5,255 | 5,341 |
| Structures | 317 | 497 | 488 |

Since 2020 discrete budgets for Stormwater for the assets included in this plan have been included in the operating budget. The City has stated that it is moving to further separate the costs associated with this service.

7.2 Capital Financing and Expenditure

The capital budget is used for major investments like construction of infrastructure, supporting non-infrastructure solutions like technical studies and master plans. The capital budget for each service is shown below.

Table 50. Capital Budget by Service (\$'000)

| Service | 2019 | 2020 | 2021 |
|----------------|-------|--------|--------|
| Water | 6,828 | 8,166 | 8,129 |
| Wastewater | 2,000 | 4,786 | 4,761 |
| Stormwater | 3,241 | 4,367 | 2,783 |
| Transportation | 7,672 | 10,004 | 11,388 |
| Structures | 3,864 | 2,420 | 1,290 |

It should be noted that the water and wastewater anticipated funding was developed based on the current Water and Wastewater Financial Plan up to 2029. The breakdown of the funding is shown in **Table 51**.

Table 51. Water and Wastewater Funding (\$'000)

| Year | Water | Wastewater |
|------|--------|------------|
| 2021 | 8,129 | 4,762 |
| 2022 | 9,166 | 5,358 |
| 2023 | 10,726 | 6,262 |
| 2024 | 13,761 | 7,473 |
| 2025 | 15,420 | 8,397 |
| 2026 | 16,904 | 9,033 |
| 2027 | 16,814 | 9,081 |
| 2028 | 18,151 | 9,743 |
| 2029 | 19,514 | 10,418 |

7.3 Reserves & Reserves Funds

The City has a number of reserve funds that are each used to support the capital program requirements. The source of these includes tax, grants, and Development Charges.

7.4 Debenture Financing

The City debenture funding can be utilized as a source for annual capital investments and is utilized after all other applicable funding has been applied. Debenture financing allows the City to spread the costs of capital over the term of debt rather than requiring funding in the year of construction. Debt management is necessary to ensure that the City maintains an appropriate debt level.

The City has a Council approved debt management strategy that is part of their capital budget; for more detail refer to *Capital Financing Report FMS-B011-2021*. For additional details please refer to Section 4 of the City's capital budget book.

7.5 Projected Financing Strategies

For the purpose of the analysis, the investment needs have been assessed against the projected tax and rate funds for the next ten (10) years. The assumed annual expenditures are based on the lifecycle costing analysis outlined for each asset group.

The expenditure summary provided under each service section and in the following pages is based on the investment required to maintain levels of service, specifically the proportion of assets in poor or better performance.

The future projections were developed using the assumptions shown in **Table 52**.

Table 52. Forecasted Funding Assumptions

| Activity Type | Model Assumption |
|-----------------------------------|--|
| Asset at End of Life | Reflects the current assets that have overdue treatments in 2022 and require replacement. |
| Non-Infrastructure Solutions | Estimated based on the current five years average for these expenditures. |
| Maintenance Activities | Developed based on a review of the historical maintenance expenditures as a percentage of the portfolio replacement value. |
| Renewal/Rehabilitation Activities | Forecasted based on a lifecycle model applied to each asset in the asset register. |
| Replacement Activities | Forecasted based on a lifecycle model applied to each asset in the asset register. |
| Disposal Activities | If available, these were calculated as an average of current disposal activities costs. |

| Activity Type | Model Assumption |
|--------------------------------|--|
| Service Improvement Activities | Calculated as a percentage of the replacement cost of the total portfolio based on the average of the service improvement investments of the last five years. |
| Growth Activities | <p>Calculated as the maximum value between:</p> <ul style="list-style-type: none">• Historical 5-year average growth as a percentage of the replacement cost of the total portfolio.• Projected Development Charges. <p>Population and employment forecasts, and resulting impacts on demand from growth, are assessed and documented in the City of St. Catharines Development Charges Background Study (June 2021).</p> <p>Forecasted capital and significant operating expenditures due to increase in demand from growth are assessed in the City of St. Catharines Development Charges Background Study (June 2021). It is assumed that growth projections in the City's financial forecasts, used in the development of this AMP, include and align with the projections from the DC Study.</p> |

The resulting graphs reflect the forecasted amounts for each of the activity types and summarize the equivalent annual costs over the 10-year period. **Figure 54** provides the summary of the tax-based expenditures which includes the transportation, structures, and stormwater asset portfolios. This portfolio has an annual equivalent annual cost of \$42 million to maintain the current LOS. There is an investment shortfall for tax-based expenditures of around \$20.8M annually to maintain the current condition of the assets that support storm, transportation and structures. The City must either reduce service offerings to their residents or increase funding to be able to maintain services at the current level.

Figure 54. Forecasted Asset Portfolio for Tax Based Expenditures

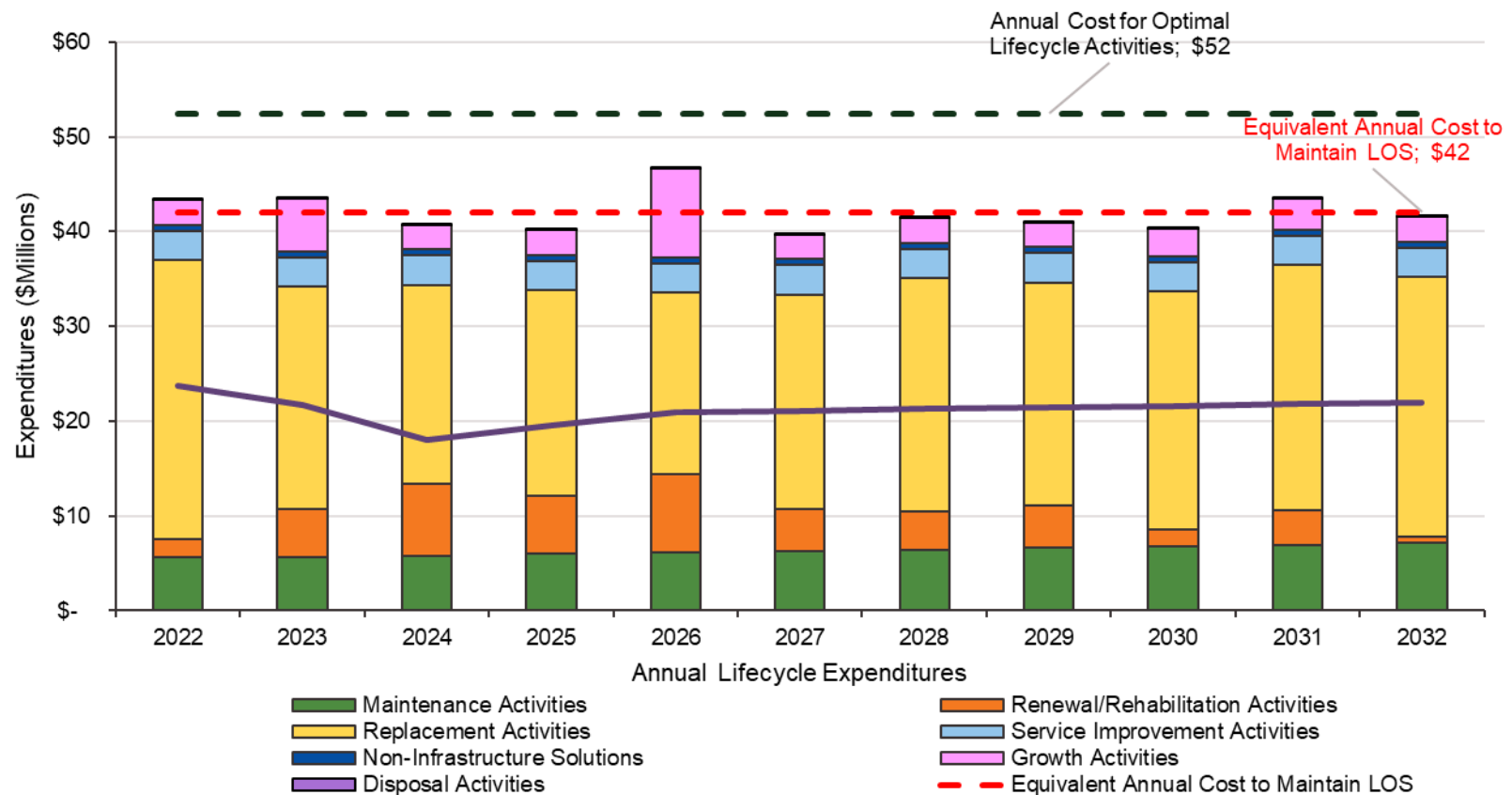
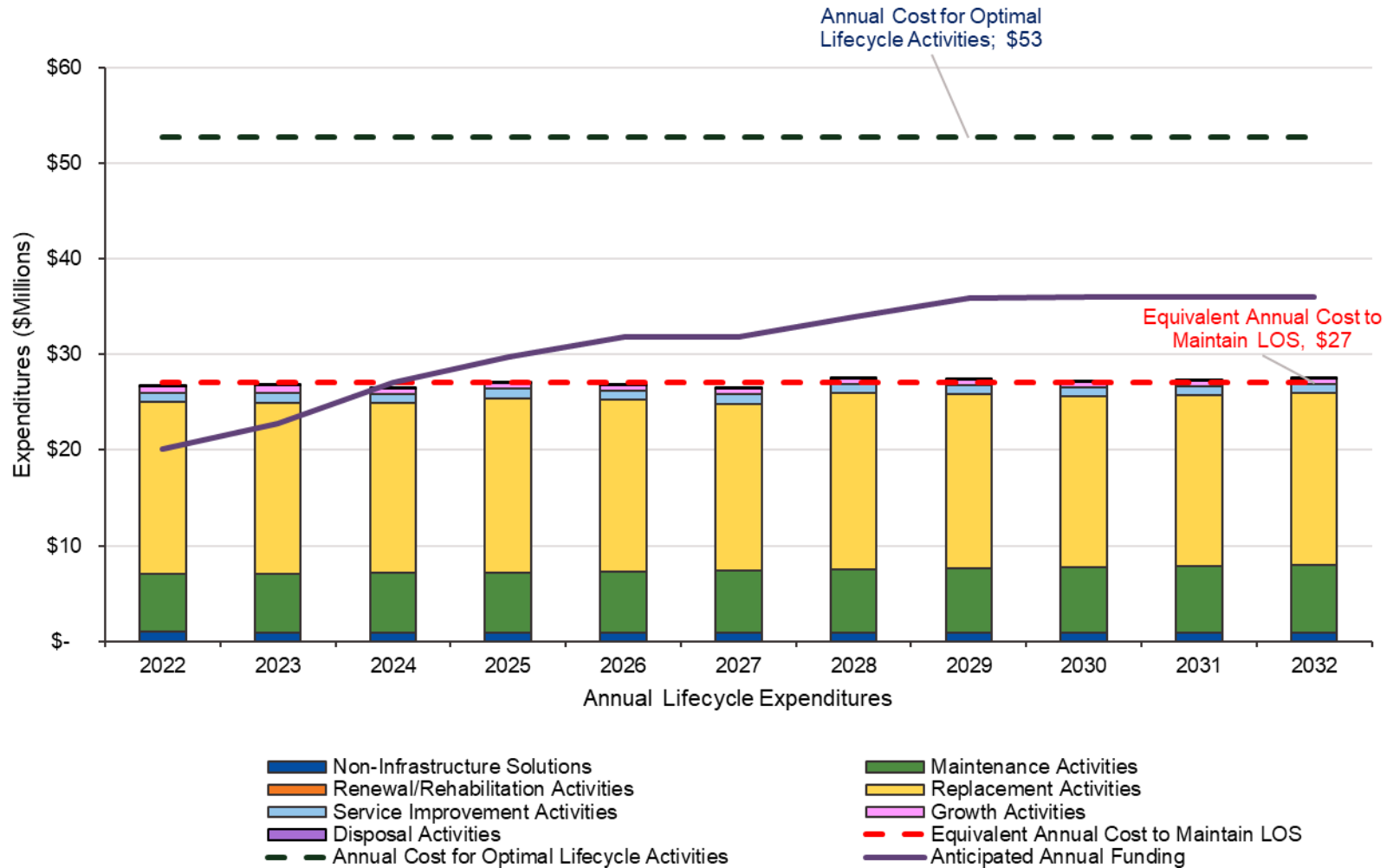


Figure 55 provides the summary of the rate-based expenditures which includes the water and wastewater asset portfolios, which has an equivalent annual cost of \$27 million. The anticipated rate-based investments identified in the recent Water and Wastewater Financial Plan, which the City should continue to implement, are sufficient to maintain the current condition and forecast a slight improvement to service, however are still below the optimal renewals identified.

Figure 55. Forecasted Asset Portfolio for Rate Based Expenditures



One method to gain an understanding of the forecasted required funding and the planned available funding is to view the costs cumulatively over time. **Figure 56** and **Figure 57**, provide the cumulative forecasted capital funding needs versus the cumulative available funding for 2022 to 2046. The grey area represents the cumulative capital expenditures, based on the same lifecycle cost estimate information presented in **Figure 54** and **Figure 55**.

The red line on each graph represents the current forecasted funding. The forecasted funding for the tax-based assets is based on the City's currently planned capital funding from 2021 to 2025. Beyond 2025, the average annual 5-year funding has been used. For the rate-based assets, the forecasted funding is based on the water and wastewater financial plan to 2029 (as

previously presented in **Table 51**). Beyond 2029, the annual average funding from 2021 to 2029 has been used.

The black line on each graph represents the compound annual budget increase required beyond the currently planned funding to fully fund the cumulative capital expenditures by 2046. It should be noted that for tax assets, the compound annual funding increase starts from 2026 onwards, and for the rate assets, the increase starts from 2030 onwards. The figures show that to fully fund the tax and rate-based asset portfolios by 2046, an 8.09% and 0.34% compound annual increase would be required respectively. Note that this is in addition to general inflationary increases.

Figure 56. Forecasted Cumulative Tax Based Funding

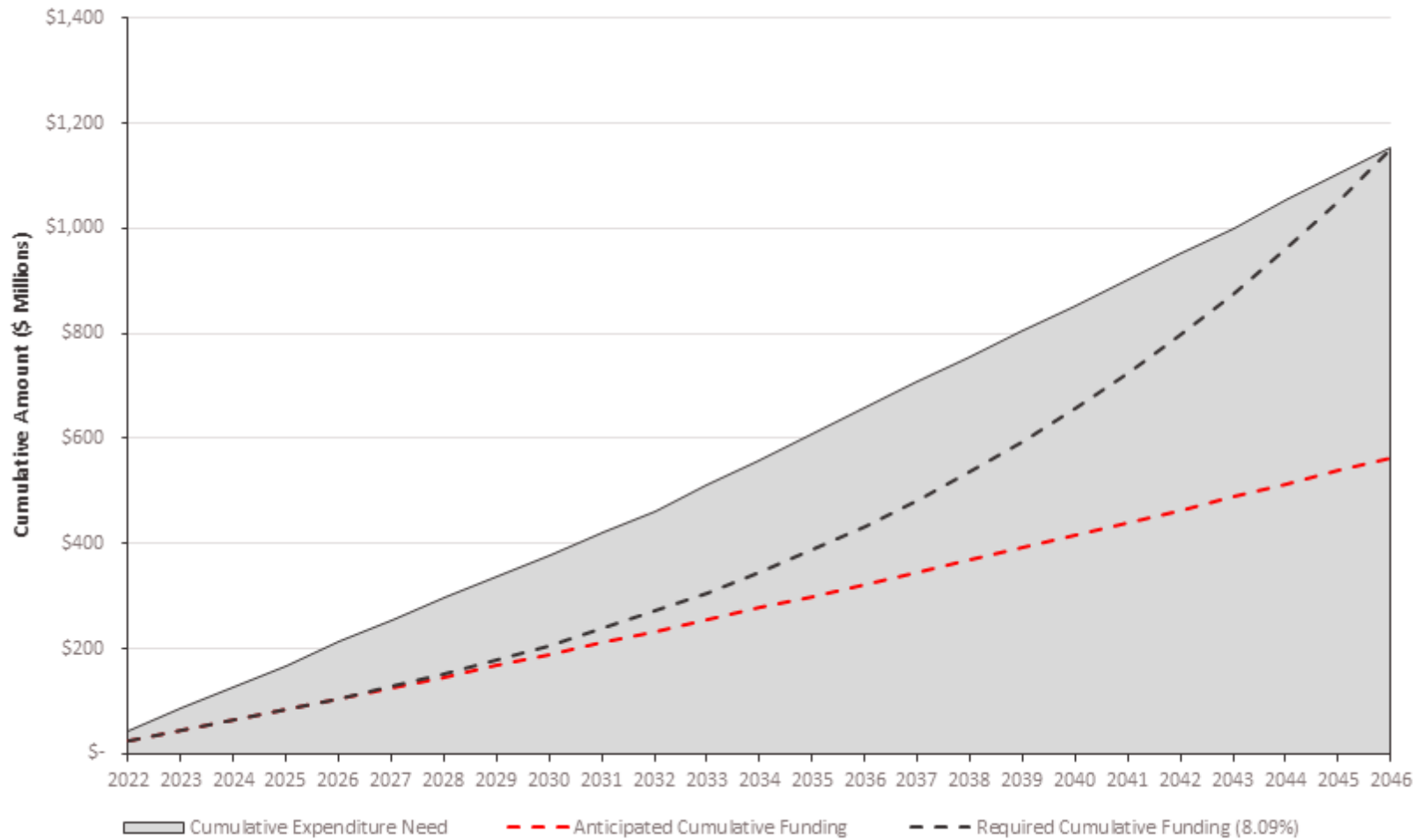
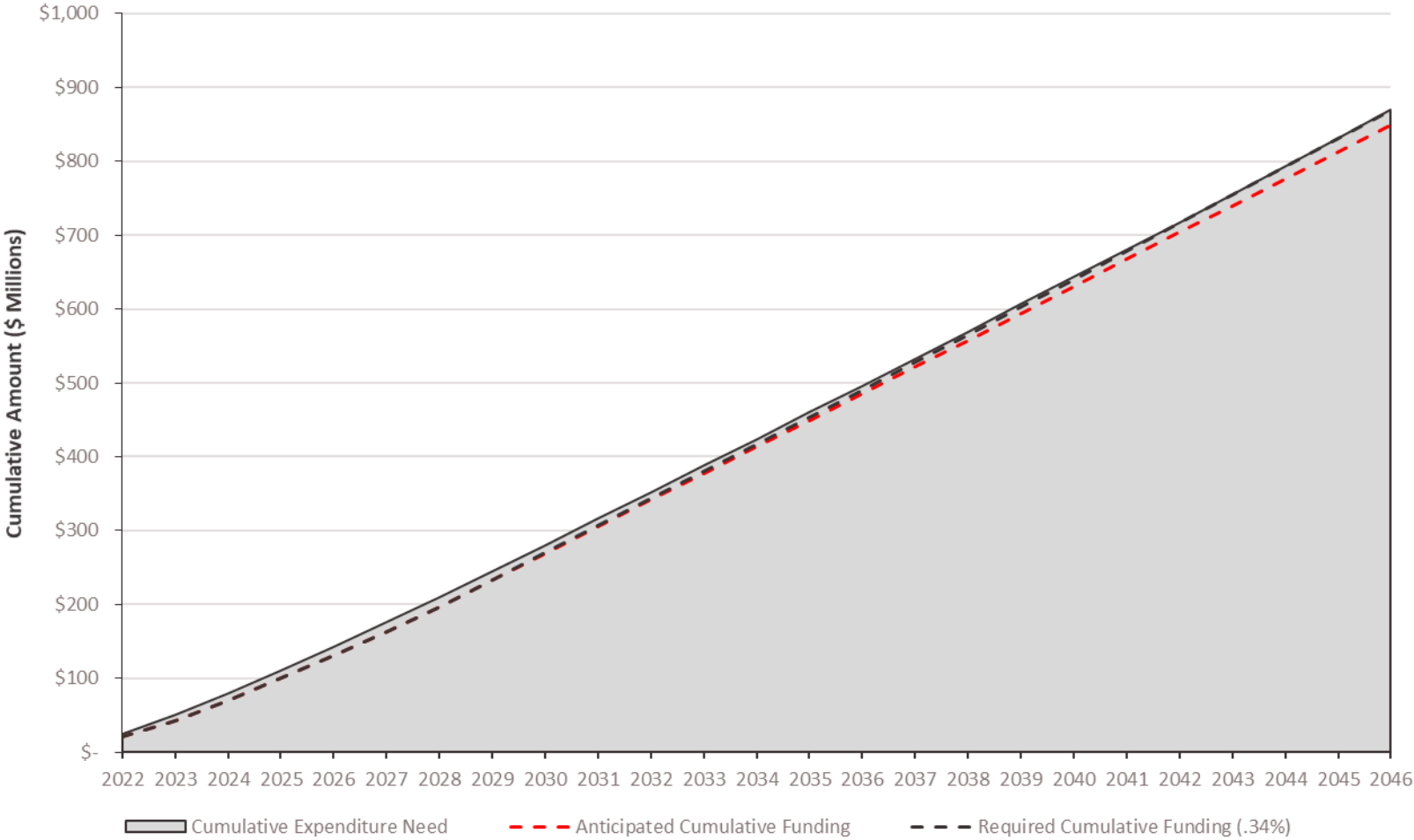


Figure 57. Forecasted Cumulative Rate Based Funding



8 Conclusions

The City is generally managing and planning for the future core asset needs in a successful manner. As described in the sections earlier, only Transportation exhibits an investment shortfall to maintain current LOS.

Additionally, a few recommendations can be drawn:

Explore opportunities to understand the largest operating costs. Significant operating costs are a fundamental lifecycle cost that can be overlooked, and this may be an excellent time to consider updating the existing work management system'. Asset-centric management of work can help the City establish a baseline of costs related to levels of service and assets and may provide opportunity to optimize maintenance as a lifecycle activity. This will enable the City to move towards an optimized and preventative approach to maintenance.

Improve the accessibility of data. A significant amount of data was centralized for this assignment. The City may consider continuing to integrate disparate data sets so that asset management analysis, and other business processes, can be more readily conducted.

Improve data quality, suitability, and confidence. This will continue to be a significant element in asset management. Collecting all data is not the objective – collecting relevant and repeatable data that informs asset managers and decision-makers is the key. The City

should continue to define the data that provides the most value for specific tasks, and then focus on enhancing the data suitability and confidence in a strategic sense. Relevant data that is up to date, accurate and fit for use is a fundamental enabler in successful asset management. For example, the current wastewater and stormwater main performance data may not reflect all the parameters that staff use to plan future work.

Build on the success of this AMP. The City can use the annual AM review to both look back and project forward, celebrate successes and learn from efforts made. Some levels of service and performance measures identified in this AMP can provide valuable performance feedback and an opportunity for the City to check in on progress. Performance management programs can also connect to these levels of service.

Continue to prepare for upcoming legislative requirements. In alignment with upcoming legislative asset management deadlines, continue preparations for new asset management prescribed requirements, including new regular asset management effectiveness review and reporting, maintaining public consultation and communication of data, and discussions/negotiations around proposed levels of service, costs and risk using the updating asset management information in the AMP. In particular, the levels of service within this AMP are based on legislative requirements. For the next AMP update, consider setting levels of service first based on corporate goals and objectives, since these define the

City's priorities and guide future spending. Also set levels of service based on citizen needs - the expectations of the public have a direct impact on the level of service demanded from infrastructure.

9 Improvement Plan

Asset Management practices at the City of St. Catharines rely on making the best possible decisions regarding infrastructure. As part of the development of this AMP, opportunities for improvement of asset management practices and the asset management plan were identified. When establishing an improvement plan, it is useful to consider international standards and well-known asset management guidance for advancing Asset Management capabilities including:

- ISO 55000;
- International Infrastructure Management Manual (IIMM) 2015; and
- BSI PAS55:2008.

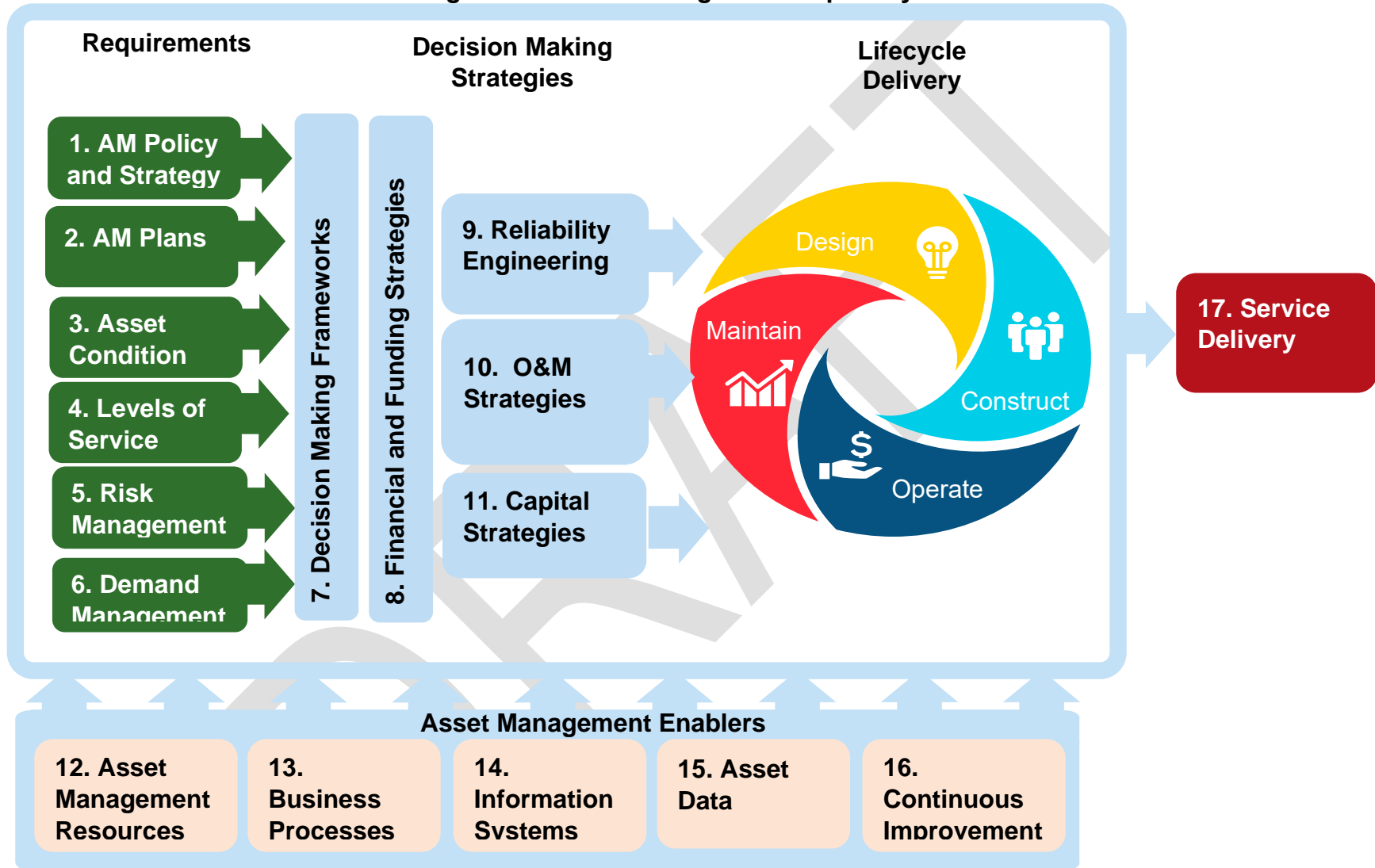
These standards were developed over several years with international collaboration and are widely regarded as best practices for the field of Asset Management. Key recommendations have been categorized according to

Figure 58 on the next page, which organizes efforts related to Asset Management into:

- **Asset Management Requirements:** key documentation that defines the governance, objective and direction of the AM practices;
- **Decision Making Strategies:** tools that support decision making with a full asset lifecycle perspective; and
- **Asset Management Enablers:** processes and resources available to ensure Asset Management remains a well-established component of successful service delivery.

Understanding that the City is committed to improving the Asset Management practices over the long-term, the following provides a summary of recommended improvements. These are provided to guide strategic decisions for the City to continually improve levels of service, asset reporting (valuation and condition), risk, and therefore improve future iterations of the AMP for core and non-core assets.

Figure 58. Asset Management Capability Framework



Source: Adapted from IPWEA, 2015 and ISO/IEC 550001

9.1 Asset Management Requirements

As indicated in Section 1, the City has proactively been working on developing the necessary documentation to guide their AM practices. The following sub-sections provide an overview of continuous improvement opportunities for each framework element.

9.1.1 Asset Management Policy and Strategy

As discussed in Section 1, the City has an Asset Management Policy in place and an Asset Management Working Group has been established in which representatives from all departments are part of the decision making associated with AM and with the updates of objectives, policies, and procedures.

A key factor to consider as part of this is the overall City staff buy-in beyond those that are directly involved in the AM working group and AM projects. It is recommended that the City establish communications strategies for the asset management policy and strategy, which may include in-house AM posters, staff on-boarding training that outlines the AM policy, and other practices to promote the role and advantages of Asset Management to all levels of staff.

Outcome: Improved corporate buy-in.

9.1.2 Asset Management Plan

This document and the subsequent non-core AMP will fulfill the requirements for Asset Management Plans as

set out by O.Reg. 588/17. It is recommended that ongoing work be conducted to improve background data and the processes for the development of asset management plans.

Outcomes: Meet Provincial legislative requirements for Asset Management Plans.

9.1.3 Asset Condition

To establish continuity between services, it is recommended to develop a standardized condition assessment protocol and templates to ensure condition and capacity information are collected and returned in a defined structure. The protocol would outline the restrictions, assumptions, and requirements of the work as well as how to complete the template. This template would be set up for ease of transfer to an internal or external user and would have the ability to be seamlessly uploaded to the respective system post completion. This of course needs to align with the business processes, City reporting needs, and roles and responsibilities in place; for example, incoming data should be verified prior to upload. The templates may include but not be limited to the following:

- Defining the level of detail required for condition, capacity, and risk;
- Defining the level at which assets will be identified (granularity) for condition assessments;

- Assigning grading standards for each process group for condition as well as performance; and
- Defining the costing methodology, including threshold, defining labour requirements, etc.

Outcomes: High confidence in data that can be used to inform decision-making processes related to capital planning and lifecycle activity planning.

9.1.4 Levels of Service

Both CLOS and TLOS were established for core assets as part of this AMP. However, processes need to be put in place to capture data for LOS metrics identified as future measures. It is recommended to put in place a full LOS program that will allow an annual review, revisions based on data availability and the identification of additional metrics required.

Moreover, in order to understand customer expectations, it is recommended for the City to conduct a customer satisfaction survey to gauge the citizens' feedback and priorities based on funding constraints.

Outcomes: Sets targets for levels of service and provide an understanding of the costs to provide the levels of service.

9.1.5 Risk Management

An enterprise risk management framework and management system will streamline the process of

establishing and identifying risks to which the City is exposed. It is recommended to consider a formal risk assessment protocol as part of the condition assessment templates, as per section 9.1.3.

Outcomes: Well defined and repeatable processes to assess asset risk that will aid in decision-making activities at the City.

9.1.6 Demand Management

The completion of Master Plans will help the City develop a greater understanding for the Capital Projects that need to be planned. This can enable the City to ensure there is capacity within its infrastructure systems to accommodate a growing population.

Outcomes: Improved understanding of needs for capital planning initiatives.

9.2 Decision Making Strategies

The City has multiple systems in place to manage the different services; however, limited integrations are in place and the decentralized information increases challenges in the AM review processes.

9.2.1 Decision Making Framework

By establishing formal processes for decision making and choosing and implementing a software system that will support the process, the City will be able to make well-

informed choices and ensure their infrastructure is being managed in a financially sustainable way.

Outcomes: Well established processes and systems to support them so the City can make well informed and defensible decisions.

9.2.2 Financial and Funding Strategies

It is recommended that the City continues to integrate and create alignment between the current financial plans and the asset management plan. This includes developing long-term forecasts for all asset classes in alignment with the lifecycle strategies outlined in the asset management plan. This includes ongoing continuous improvement of asset state of good repair needs (through condition assessments) and capacity needs (through master planning and growth studies).

Outcomes: Aligned funding strategy and asset management plan.

9.2.3 Reliability Engineering

The City is working towards improving the recording of asset failure in their systems. It is recommended that the City establish a plan to acquire the necessary resources (staff and budget) to implement a more proactive approach based on reliability engineering and industry best practices. This will be refined as the potential impacts of climate change on the assets is better

understood and strategies to build resilience are developed.

Outcomes: Improved reliability and optimized lifecycle costs.

9.2.4 Operations and Maintenance

As part of this AMP, an asset register was drafted to record key data and a centralized source of asset information for the City. In order to keep the register updated, it is critical to audit and develop comprehensive strategies around all work processes that capture assets and asset information, such as updating asset information and retiring assets while maintaining historical data. For that reason, the City should connect asset data within the Computerized Maintenance Management System, tying asset data to day-to-day activities. In addition, the City should implement integrations to ease the flow of information between specialized systems and their Computerized Maintenance Management System to reduce the manual transfer of information.

It is also recommended to assess the adequacy of current operations and maintenance budgets since the current asset management plan is based on existing budgets which maybe underfunded.

Outcomes: Improved operations and maintenance processes and funding.

9.2.5 Capital Works Strategy

Well established capital planning is a key component of effective service delivery as it provides the opportunity to look forward and identify what projects need to be done in order to maintain levels of service at the City. By implementing an AM system as recommended in Section 9.2.1, the City will be able to establish a baseline of projected investments. A formal prioritization document should be created to standardize the decision-making criteria between the different services.

In addition, it is recommended that the City establishes processes to evaluate assets that are co-located, such as assets within the right of way. Corridor analysis tools, such as the integrated corridor coordination tools currently in place at the City should be utilized to support decision-making.

Outcomes: A prioritized list of projects that will aide in establishing funding requirements.

9.3 Asset Management Enablers

These initiatives form the foundation the City needs to continually be successful in their AM practices.

9.3.1 Asset Management Resources

The City Asset Management Working Group should continue to have frequent meetings and review asset management resourcing requirements across the organization. The City should also evaluate establishing

a dedicated asset management team with dedicated asset management staff.

Outcomes: Continuous improvement of asset management practices.

9.3.2 Business Processes

Documenting current and optimized target business processes for all AM capabilities with clear data flow will improve the successful completion of AM activities. Furthermore, establishing roles and responsibilities provides structure and ownership to the continued maintenance of asset information.

This will include a detailed review of processes currently in place at the City to identify ways they can be improved and ensure they reflect new technology systems.

Outcomes: Allows for visibility in business processes, status, and accountability.

9.3.3 Information Systems

The main system to consider is the asset register which provides a complete list of assets in the City, regardless of ownership or status. Accurate, up-to-date, and mineable asset data is key to making informed and defensible decisions with respect to the management of assets in the short and long term. Asset registers are typically structured in a hierarchy for ease of access to information, and to allow for the summary and analysis of data at multiple levels as needed. The main purpose of

this approach is to reduce the need for managing duplicated datasets as this is resource and cost intensive. The City should consider implementing a formal decision support system in conjunction with a CMMS as well as the registry

Outcomes: Provides a Corporate “single source of truth”, for asset data, including condition, capacity, cost, and criticality. This would enable a full and complete “cradle to grave” description of a singular asset or system based on accurate data for improved decision making.

9.3.4 Asset Data

As outlined through the asset portfolio sections, assumptions have been made and documented for the development of this plan with the goal of reducing gaps identified in future iterations of the AMP.

It should be highlighted that despite the different levels of data confidence recorded in the document, the information gathered is considered to generate a reliable plan for the City’s asset portfolio. Further refinements will provide improved estimates.

The following provides a summary of the recommended asset data improvements for the City:

Table 53. Recommended Asset Data Improvements

| Service | Recommendation |
|--------------------|---|
| Water & Wastewater | Bulk water station, water booster station, and wastewater pumping station inventories were created based on drawings with the associated attributes. To improve the quality of these asset categories, it is recommended that the City implement a condition assessment program for both facilities in order to develop a comprehensive inventory of the structural and process assets with their associated age, condition, and replacement costs. It is also recommended that wastewater storage facilities are assessed, and formalized operations and maintenance schedules are established for these facilities. |

Improvement Plan

| Service | Recommendation |
|-------------------------|---|
| Wastewater & Stormwater | Sewer and maintenance holes condition were based on peak structural PACP condition ratings from the zoom camera assessments. It is recommended that the City continue to implement this approach and target detailed CCTV condition assessments based on condition and priority. It is recommended for additional modeling to be completed for wastewater and stormwater to understand capacity needs and potential impacts due to climate change. This includes the completion of Master Plans to identify areas that require service improvements and expansions to the system. Through these exercises, it is recommended to validate all O.Reg. 588/17 level of service measures applicable to the asset class. |
| Stormwater | Oil grit separator replacement costs were assumed independently of the details of each asset (size, location). To improve the quality of the dataset it is recommended that the City develop a comprehensive inventory for this |

| Service | Recommendation |
|----------------|---|
| | asset category, including validation of key attributes and detailed cost estimates. |
| Stormwater | Open channel, wetland, and stormwater pond asset inventories provide high-level details of these assets. To improve the quality of the dataset, the City should develop a comprehensive inventory for these asset categories, including validation of the following key attributes: location, confirmation of the necessary components (i.e., inlet, outlet, and structure for ponds) and detailed cost estimates. It is also recommended to complete an inventory for roadside ditches, culverts, and natural assets that require capital or operating expenditures or require management by the City. |
| Transportation | The signalized intersection inventory is maintained by Niagara Region, it is recommended that the City coordinate improvement of the install dates information over time. |
| Transportation | Streetlights are to be considered as a combination of the pole, arm, and |

| Service | Recommendation |
|------------|---|
| | fixture in terms of condition. The City should conduct a full streetlight condition assessment to get a more accurate representation of the actual condition of these assets. It is recommended to collect condition data for sidewalks to understand overall condition. In addition, it is recommended to establish expansion and service improvement needs to meet the target right-of-way cross section and level of service requirements. |
| Structures | For future OSIM inspections, it is recommended to align the condition categorization scale with that provided in this AMP in addition to the BCI. |
| All | Review data gaps and work towards filling/refining the datasets. It is recommended to develop standardized base data across assets and where possible have the data collected in the field to reduce errors |
| All | Estimated service lives were assumed based on best practices where these were not available in the City's |

| Service | Recommendation |
|---------|---|
| | tangible capital asset policy and register. These should be added for future reference. |

9.3.5 Continuous Improvements

Asset Management is always evolving and to ensure the City's Asset Management practices are in alignment with best practices it is important to make a concerted effort to continually improve documentation, data, tools, and resource availability. This involves the following:

- Refining and reviewing progress of Asset Management roadmap initiatives; and
- Conducting a full AM maturity assessment as a baseline to set a target maturity for the next years and update it on a set frequency to understand progress against targets.

It is recommended that the City establishes resources and an implementation plan to complete the assessed improvements and prioritize the order of work based on the available resources.

Outcomes: Up to date AM practices that support the needs of the City of St. Catharines.



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Corporate Report City Council

Report from: Municipal Works, Operations

Report Date: August 20, 2021

Meeting Date: September 20, 2021

Report Number: MW-135-2021

File: 68.81.6

Subject: Sidewalk Winter Maintenance

Strategic Pillar:

This report aligns with the following St. Catharines Strategic Plan pillar:



Recommendation

That Report MW-B022-2021 regarding the costs and issues associated with sidewalk winter maintenance be received for information purposes.

Summary

The report provides an overview of the operating costs, capital asset requirements and other issues associated with the city expanding winter maintenance services for sidewalks.

Relationship to Strategic Plan

An underlying principal of this report is financial sustainability. This aligns with Economic Prosperity and the following Strategic Goal: "Support the City's commitment to building and growing a diverse and resilient economy through fiscal responsibility, urban regeneration and collaborative partnerships the City's Strategic Plan."

Background

The request for this report was made by way of resolution at the Budget Standing Committee Meeting of March 22, 2021. The resolution included specific direction for staff to examine the costs to provide sidewalk winter maintenance for three service delivery scenarios:

- i. all municipal sidewalks in the city
- ii. sidewalks in the high use commercial areas of the central Downtown Core, Merritton and Port Dalhousie
- iii. sidewalks in all high traffic pedestrian areas

The city's current Service Level Standard aligns requirements for winter maintenance of sidewalks with the provincial Minimum Maintenance Standards set out in Ontario Regulation 239/02 under the Municipal Act, 2001. While there are a number of requirements, the primary criteria for compliance is two-fold: snow must be removed to a depth of less than 8 cm within 48 hours after the end of winter event and; ice formation must be mitigated within 48 hours of the city being aware of its formation. Proactive patrol and documentation of observed conditions is also a requirement.

Currently, the city limits direct snow and ice clearing to three (3) subsets of the sidewalk network: sidewalks that exist on bridge overpasses; single width sidewalks that directly abut travelled lanes (i.e. no area for snow storage) and; sidewalks abutting municipally owned lands (i.e. parks, facilities). Sidewalk winter maintenance on the balance of the network is delegated, in accordance with By-law 2008-315 to the adjacent property owner. The city also has a program to provide sidewalk maintenance for elderly and/or infirm residents.

St. Catharines current practice of relying on adjacent owners for winter maintenance of a significant subset of the sidewalk network is consistent with six (6) of our ten (10) comparator municipalities, albeit there is considerable variance across our comparators as to how commercial and high volume pedestrian areas are serviced. This presumably reflects the relative local needs, priorities and economic climate of each city.

The gross breakdown of the sidewalk inventory by current maintenance provider is shown below:

| Maintained By | Type | Length (metres) | Percentage of Network (%) |
|----------------|-------------------------------|-----------------|---------------------------|
| City | Fronting Parks and Facilities | 19,935 | |
| | Curb Faced and Overpasses | 97,372 | |
| Sub total | | 117,307 | 20 |
| | | | |
| Adjacent Owner | All | 475,120 | 80 |
| | | | |
| Total | | 592,427 | 100 |

In this climate zone, there is a significant degree of variance inherent with the annual cost for winter maintenance activities. Level of effort and corresponding expenditures are affected by a number of climate factors such as: snow accumulation; temperature change/icing; wind/drifts and; the timing of a winter event (i.e. night, weekend). A high-level summary of current costs to deliver winter maintenance on the limited amount of sidewalk (i.e. 20%) the city currently services, is shown below:

| Year | 2018 | 2019 | 2020 | 3 year Average |
|----------------------------------|------------|------------|------------|----------------|
| Cost | \$ 274,663 | \$ 238,617 | \$ 143,939 | \$ 226,573 |
| Variance from Average (%) | 121 | 105 | 64 | NA |

Report

The estimated costs for the city to deliver expanded sidewalk winter maintenance as per scenario i) and ii) are summarized below. Staff are not able to generate a cost for scenario iii), because the city lacks sufficient data on pedestrian movements. Significant effort and time would be required to generate this information. For the purposes of this report, the commercial service areas have been defined as shown on “Figures 1, 2 and 3” appended.

The total costs shown are based on unit costs (\$/metre/season) developed from the current three (3) year average annual expense. Unit costs for service in the commercial area have been adjusted to reflect the increased effort to remove snow offsite, in areas with no boulevard storage.

With reference to the table below, the annual increase in operating costs (only) to provide winter maintenance of sidewalks in all areas not currently serviced by the city, is estimated to be just over one million dollars. This amount does not include the up-front capital investments required for Municipal Works to scale up its service delivery capacity. Capital investments and other requirements are discussed later in the report.

| Sidewalk Type/Location | Length (metres) | Percentage of Network (%) | Annual Operating Cost |
|---|------------------------|----------------------------------|------------------------------|
| Sidewalk Currently Maintained by City | 117,307 | 20 | \$ 226,573 |
| | | | |
| Sidewalk in: | | | |
| Downtown Commercial Area | 21,610 | 4 | |
| Merritton Commercial Area | 10,886 | 2 | |
| Port Dalhousie Commercial Area | 4,048 | >1 | |
| Sub Total | | | \$ 182,911 |
| | | | |
| All Remaining Sidewalk | 438,575 | 74 | \$ 847,088 |
| | | | |
| Total | 592,426 | 100 | \$ 1,256,572 |
| Values do not include required capital equipment and facility expansion costs | | | |

Direct Service Delivery by City

Sidewalk winter maintenance is both labour and equipment intensive. Currently, the Municipal Works Department has no reserve capacity to service additional sidewalks. The department is already challenged in attempting to meet its obligations for the subsets of sidewalk it is currently responsible to maintain.

In order to achieve Provincial Regulatory response times for snow removal and/or ice mitigation, any decision to significantly expand the amount of sidewalk serviced by the city, will require additional staff and equipment. Furthermore, with the consolidation of all municipal operations to one facility (i.e. Lake Street), sufficient space is not available to accommodate the additional equipment and materials required. Therefore, any significant expansion of sidewalk winter maintenance will require the city to expand or secure, a supplemental operations facility.

Changes will also be necessary to the current Collective Agreement. Simply put, the current agreement is very restrictive and precludes an efficient response. In terms of staffing, given the uncertainties associated with winter weather, expanding the seasonal workforce to address the relatively few winter events the city typically experiences in a season will be costly, as well as, challenging from both a recruitment and training perspective.

Finally, with the assumption of sidewalk snow removal, the city would also be assuming the responsibility to repair sod and other decorative features adjacent to the sidewalk, that are prone to either direct or indirect damage from sidewalk tractor units.

By way of summary, before the city can deliver any significant expansion of sidewalk winter maintenance it would first require: proactive/upfront investment in an expanded or new operations facility; capital equipment acquisition; development of a staffing/labour plan and a companion financing strategy to fund both the capital and ongoing operation costs.

Contracted Service Delivery

Given the foregoing, staff has also considered the alternative of issuing a tender/contract for the private sector to provide winter maintenance for sidewalks. However, several factors complicate this option.

In this climate, there is a large variance in the type and magnitude of winter events and correspondingly, the size of workforce and equipment required. As such, to achieve our service level standards across the network, several contractors would likely need to be engaged. The city would also be directly competing with larger commercial clients, who would need these contractors at the same time as the city. Therefore, to ensure both availability when/if required and a priority response, it is almost certain that the city would need to pay significant standby fees.

Contractors the city has recently used to augment its capacity have reported sharp increases in recent years in insurance premiums when they provide winter control on municipal roads. In fact, some of the smaller firms will no longer provide the city with assistance in winter operations.

Assuming the city was able to secure a service provider/providers with the equipment and trained staff necessary to ensure regulatory compliance, it is expected that the savings in annual operating costs would be minimal. This is because in addition to standby fees, costs such as insurance, fuel, labour, equipment depletion and overhead would all be reflected/passed on in the rates charged to the city.

However, utilizing contracted services would reduce the upfront capital (equipment and facility) expenses and the seasonal staffing challenges associated with direct service delivery.

Customer Satisfaction

There is an intangible, yet important social aspect around the city delivering this service, in terms of public satisfaction. Currently, neighbours do assist each other with sidewalk snow and ice clearing. As such, there is an inherent public tolerance in the quality and timelines for sidewalk snow clearing in residential areas, particularly after large events. To the contrary, expectations are generally higher when the municipality is delivering a service.

Financial Implications

The report contains preliminary estimates of the annual operating cost (in 2021 dollars) to deliver expanded winter maintenance on sidewalks. It also contains qualitative information on companion capital costs and staffing requirements. Addressing these has significant long-term financial ramifications. Cost implications to insurance and risk management/liability have not been examined.

Environmental Sustainability Implications

There are no environmental implications associated with this report.

Conclusion

Before any decision is made to expand winter maintenance services for sidewalks, a transition plan must be in place to address the issues outlined in this report, including the development of a financing strategy to fund both the significant ongoing operation costs and capital asset requirements.

Therefore, the city is not in a position to deliver any significant expansion in sidewalk winter maintenance at this time.

Next Steps

Ultimately, the city must reconcile its operational capabilities with its current mobility needs and its aspirational transportation master plan. This entails the city “right sizing” its winter maintenance operations, both in terms of scope and delivery model.

With respect to scope of service, the city’s mobility plans clearly indicate a desire of Council for expansion of networks serving pedestrians and cyclists as well as, the need to improve accessibility on existing pedestrian networks (i.e. sidewalks, trails). Therefore, staff have not contemplated relaxing the current winter service standards.

In this climate zone, addressing the linear amount of pedestrian corridor is not the primary challenge but rather, being able to mobilize sufficient forces quickly enough to respond to peaks in snowfall or freeze-thaw cycles in a timely fashion.

Staff have reviewed other municipal operations and are of the opinion that in this climate zone, winter maintenance of sidewalks, bike paths and other walkways can best be delivered via a dual services model, whereby both municipal forces and private sector contractors are utilized.

However, it must be realized that there will be both significant capital investment (i.e. upgrade substandard sidewalks and trails, new equipment and facility needs) as well as, increased and ongoing operation funds required to accomplish the aforementioned service expansion. Therefore, while all pedestrian infrastructure is important, from a practical financial perspective, the city needs to identify what it feels is paramount from an accessibility and transportation perspective and focus its direct service delivery efforts on this subset of the pedestrian network.

At a high level, the primary tasks required to move forward with expanded services can be summarized as follows:

- i. Identify priority pedestrian network for direct service delivery. This would be guided by the Active Transportation Master Plan as well as, input from city staff, User Groups, Transportation Advisory Committee and the Accessibility Advisory Committee.
- ii. Determine local private sector capacity and strategies to secure service (i.e. multi-year contracts, etc.)
- iii. Identify capital equipment and facility requirements
- iv. Determine staffing requirements and strategy (i.e. fulltime & casuals) including negotiating necessary changes to current Collective Agreement
- v. Develop robust cost estimates including liability/risk exposure (direct capital, overhead/insurance, staffing, contract)
- vi. Develop a financing strategy
- vii. Commence staged implementation

In terms of timing, staff estimate it will take approximately two (2) years to complete the background work and processes associated with steps i) through vi). In terms of step vii) implementation, staff believe it will take an additional three (3) years to implement the administrative/contractual and physical changes necessary to service a city wide enhanced pedestrian network.

If Council wishes to advance this initiative, staff would recommend that a Core Working Group be established with staff from Transportation Services, Finance, Human Resources and Municipal Works.

Prepared and Submitted by

John Kukalis, C.E.T.
Manager of Operations

Approved by

David Oakes
Chief Administrative Officer

Appendices

- Figure 1 - Commercial Area for Downtown Sidewalk Winter Maintenance
- Figure 2 - Commercial Area for Merritton Sidewalk Winter Maintenance
- Figure 3 - Commercial Area for Port Dalhousie Winter Maintenance

Figure 1 - Downtown Commercial Area

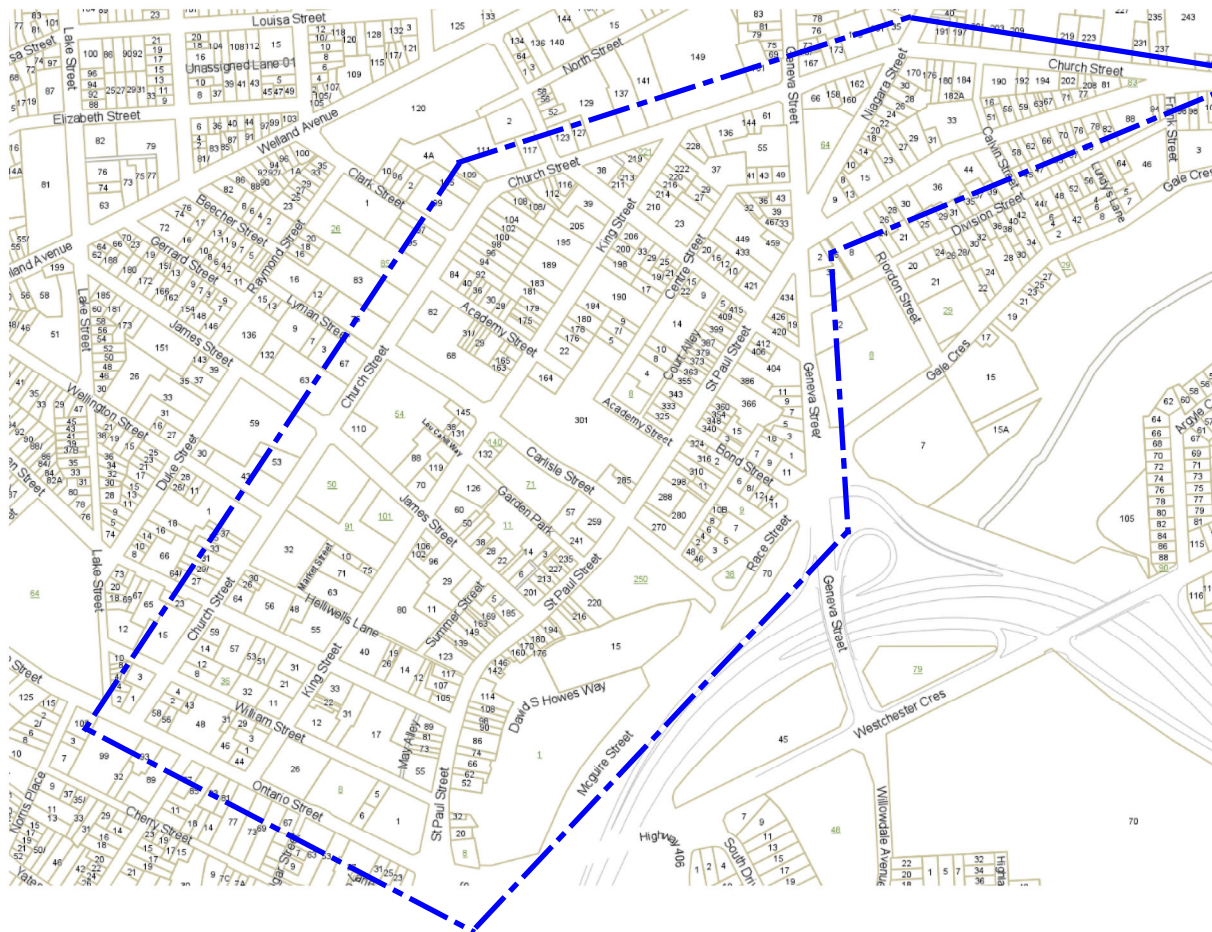


Figure 2 - Merritton Glendale Commercial Area

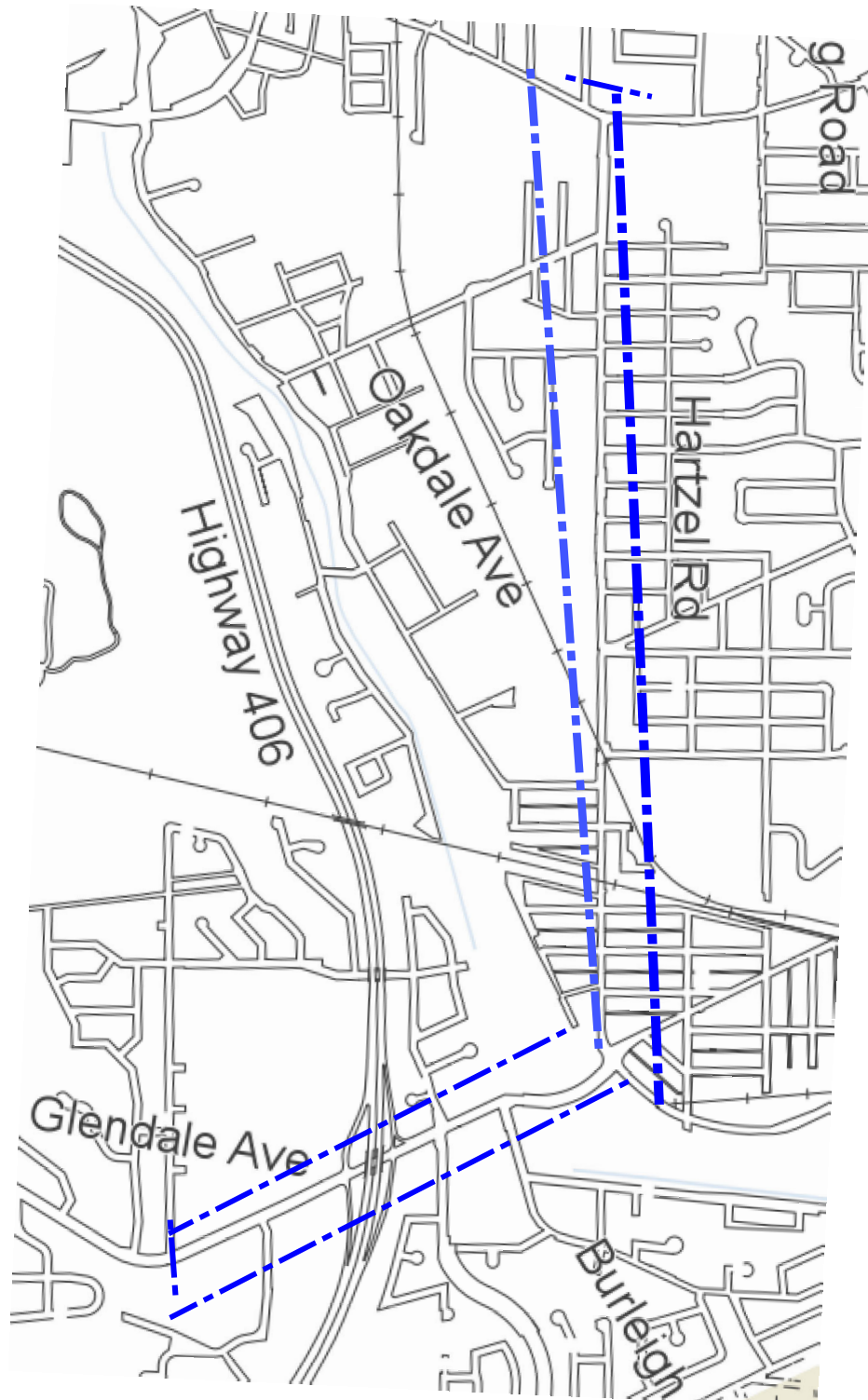
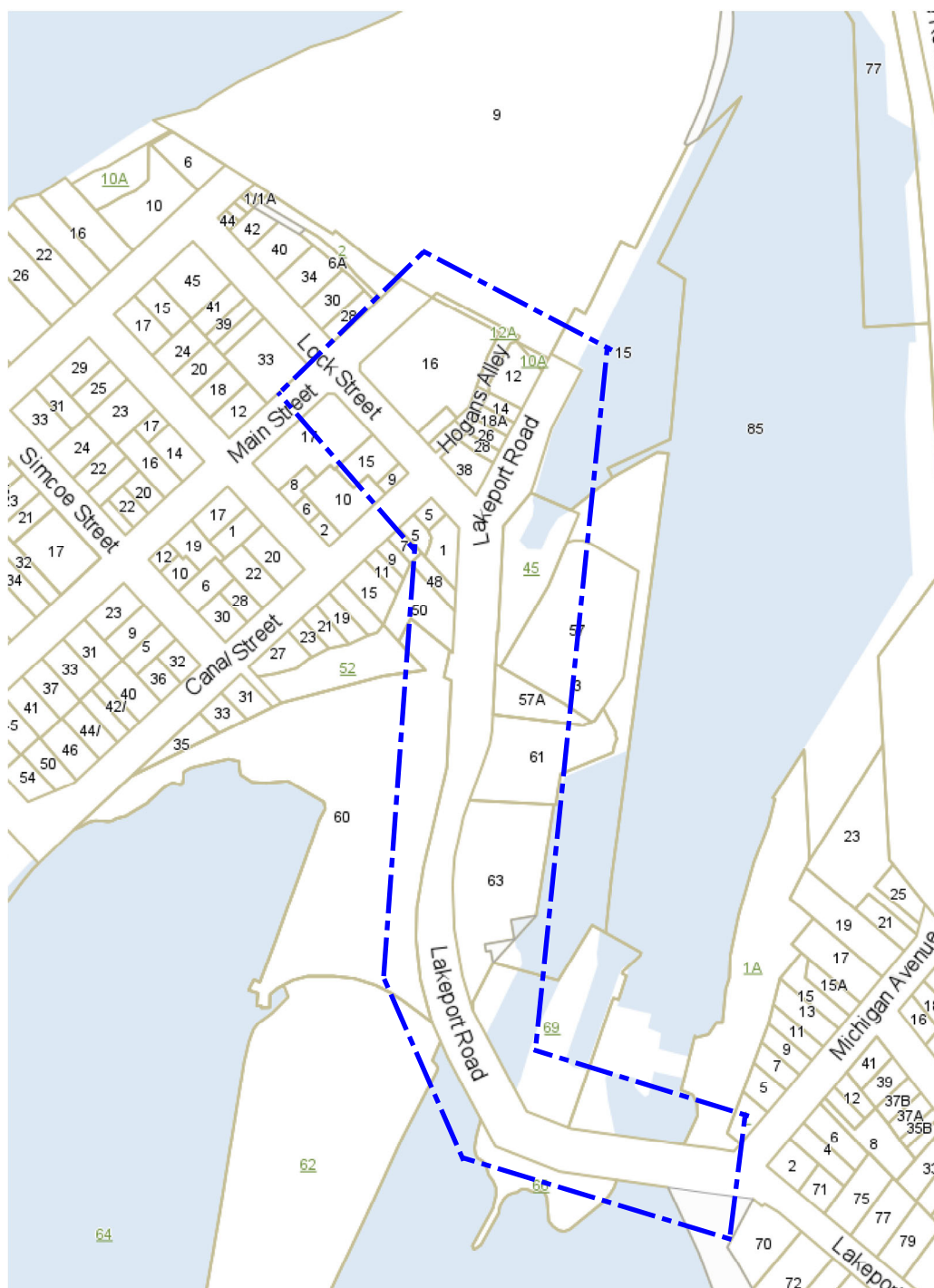


Figure 3 - Port Dalhousie Commercial Area 3





Corporate Report City Council

Report from: Financial Management Services, Director

Report Date: August 27, 2021

Meeting Date: September 22, 2021

Report Number: FMS-137-2021

File: 10.57.1 & 10.57.10

Subject: Vehicle and Equipment Reserve Policy

Strategic Pillar:

This report aligns with the following St. Catharines Strategic Plan pillars:



Recommendation

That Council approve the consolidation of the two following vehicle and equipment reserves into one Municipal Works Vehicle and Equipment Reserve:

- Municipal Works Vehicle and Equipment Reserve (formerly Parks, Recreation and Culture Services Equipment Reserve)
- Municipal Works & Engineering, Facilities and Environmental Services Overhead Vehicle and Equipment Reserve (formerly Transportation and Engineering Services Equipment Reserve); and

That Council approve an annual increase of \$0.2 million to the provision to the consolidated Municipal Works Vehicle and Equipment Reserve (the “MW Vehicle Reserve”) from 2022 to 2026; and

That Council approve to use debt financing to fund vehicle replacements exceeding \$0.3 million in 2022, 2023 and 2025 based on current purchase plan to maintain a sustainable reserve balance.

Summary

This report identifies the significant and urgent funding challenge of vehicle and equipment replacement using the reserves and provides a 10-year forecast outlining the

current state with recommendations to Council on how to maintain a sustainable level of funding into future years.

The report also includes staff recommended policy changes required to the MW Vehicle Reserve.

Relationship to Strategic Plan

This report enhances the Economic Prosperity Pillar of the Council Strategic Plan through updating the City's financial strategy and policies to improve assets stewardship and supports the City's commitment to building and growing a diverse and resilient economy.

This report also highlights the Environmental Stewardship Pillar of the Council Strategic Plan through continuing responsible community planning and addressing energy conservation and demand management.

Background

The City currently maintains both the Municipal Works Vehicle and Equipment reserves. When a new or replacement vehicle or equipment is purchased, funding is supported by these reserves. An annual provision to these reserves is included in the City's annual Operating Budget with the purpose of replenishing the reserve.

Report

Current Challenges

Currently there are 504 vehicles and pieces of equipment (excluding small tools) that are associated with these reserves with an approximate total replacement value of \$21 million up to year 2030. In addition, there are 57 surplus units that have been replaced under these reserve accounts that the City has needed to retain and keep in service to meet service level expectations as well as to have replacement units available when another unit is out of service for an extended repair. Some of these units are quite old with several being more than 20 years old.

The City has generally tried to follow a 10-year vehicle and equipment replacement program as most units have reached their useful life in that time and repair and maintenance costs after ten years become excessive. With a replacement value of \$21 million, this replacement cycle suggests an annual investment in replacement equipment at an average of \$2.1 million. Unfortunately, annual contributions to the reserves have never approached this amount due to budget constraints.

Since the annual replacement costs have always exceeded contributions to the reserves, fleet purchases have been routinely deferred to future years beyond the normal replacement life of the unit. While this has helped in reducing the amount being spent annually on replacement equipment, it has also resulted in increased

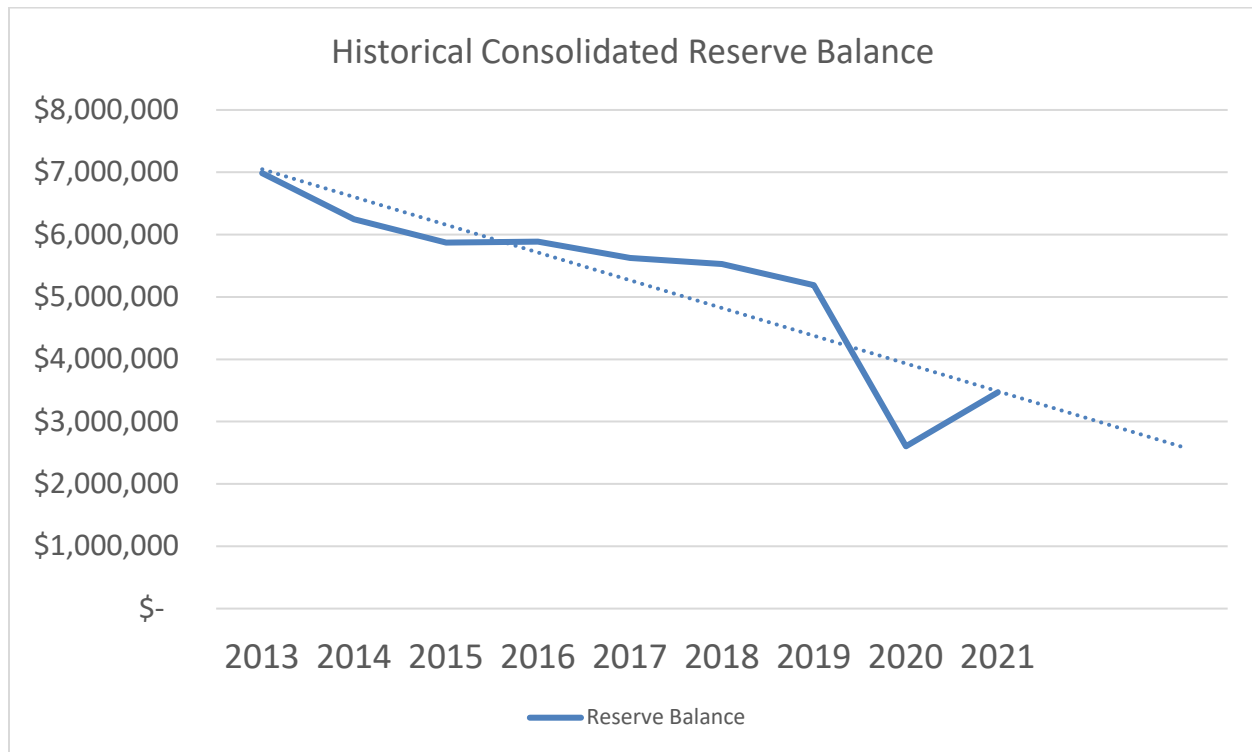
maintenance and operational costs to keep a unit that should have been replaced in service.

Reviewing historical data from 2013-2021 (see Chart 1 below), the budgeted Funding to Expenditure Ratio (Total \$ Budgeted Funding / Total \$ Budgeted New or Replacement Equipment Cost) has been below 1 consistently. This indicates that the reserve is always drawing out more funds than it is replenishing and therefore further highlights the City's need to review and update the vehicle and equipment reserve policy to address this issue.

Chart 1 – Annual Funding to Expenditure Ratio

| Year | Funding to Expenditure Ratio |
|----------------|---|
| 2013 | 0.26 |
| 2014 | 0.46 |
| 2015 | 0.39 |
| 2016 | 0.35 |
| 2017 | 0.38 |
| 2018 | 0.29 |
| 2019 | 0.36 |
| 2020 | 0.73 |
| 2021 | 0.39 |
| Average | 0.40 |

Looking at the two Vehicle and Equipment Reserves from a consolidated view, the reserve balance is currently trending downward and will continue to do so unless a sustainable reserve policy is implemented as highlighted in Chart 2 below.

Chart 2 – Historical Consolidated Reserve Balance 2013-2021

According to the City's current purchase and replacement plan the vehicle and equipment reserves are projected to be depleted by the end of 2023. In Appendix 1 of this report, Table 1 forecasts out the vehicle and equipment reserve balances if no changes are made to the policy.

Recommended Solutions

Staff have reviewed and have the following proposals to mitigate the funding shortfall and maintain a sustainable reserve for future years.

Since the City's reorganization and the creation of Municipal Works Department in 2019, Fleet Services has been assigned to Municipal Works. Therefore, staff recommend combining the two existing vehicle and equipment reserves (excluding Fire Services) into one consolidated MW Vehicle Reserve for better tracking and more comprehensive review of the transactions.

Increase Annual Provision

Staff recommend that the annual provision to the reserve be increased by \$0.2 million each year for the next 5 years (2022-2026) for a total increase of \$1 million.

The City maintains an internal rate system where the City user departments are charged with a rental fee for utilizing the City-owned vehicle and equipment, and the vehicle and equipment accounts receive the rental revenues to offset the operating

expenses such as fuel cost, maintenance, and repairs. The annual total surplus (i.e., net revenue) of these accounts is averaging to \$1 million. Traditionally these funds have been contributed to the City's year-end surplus result. Staff are recommending transferring a portion of these funds into the MW Vehicle Reserve starting with \$0.2 million in 2022 and gradually increasing to \$1 million by 2026.

In Appendix 1 of this report, Table 2 forecasts out the reserve balances based on this recommended approach and assuming that the annual provision is increased by \$0.2 million each year. However even with this change in the reserve is forecasted to be in a negative balance by the end of 2023, indicating that further mitigation measures are needed.

Debt Financing

A potential solution to address the remaining shortfall would be to fund some vehicle and equipment purchases through debenture issuance.

While this is not recommended for all vehicle purchases of lower dollar value, staff recommend funding purchases that are greater than \$0.3 million through debt financing temporarily for the reserve to build up to a more sustainable level.

The fleet purchases funded with debt will be issued for terms that comply with the City's debt strategy, which limits debt terms to no more than 75% of the assets' useful life. This requirement would result in issuing 5-year debentures for fleet with a useful life of ten years.

In Appendix 1 – Table 3, there is a forecast of the reserve assuming that the interest rate on debt is 4% and principal payments are paid equally over a 5-year period. Based on the City's current purchase plan, it will be in year 2022, 2023 and 2026 when the replacement cost that exceeds \$0.3 million is expected to occur.

As shown in Table 3, with the combined approach of increasing annual reserve provision and debt financing, the reserve balance is projected to remain at a sustainable level in the next 10 years to support all the planned vehicle and equipment replacement and purchases.

Financial Implications

The total cumulative increase in Operating Budget over the next 10 years would be approximately \$3.5 million (including annual reserve provision and debt repayment cost), with a \$225,600 tax levy increase in 2022 (See Appendix 2).

Based on the approved 2021 tax rates, the estimated annual impact on the median household would be \$3.22 or 0.2%.

Environmental Sustainability Implications

City staff have included electric and hybrid vehicles in the purchase and replacement plan as the City continues its efforts to reduce its carbon footprint and contribute to the

fight against climate change. Having declared a Climate Emergency, the City has committed to reducing its greenhouse gas emissions by 45 per cent by 2030 under its Energy Conservation and Demand Management Plan.

The City currently maintains predominantly a gas-powered fleet, with minimal hybrid/electric vehicles. Staff is currently working with partners such as Enbridge and Alectra to reduce greenhouse gas emissions and help meet the City's environmental sustainability objectives.

As of April 2021, electric powered vehicles on average are 25% more expensive than the equivalent gas-powered vehicles. Staff is monitoring applicable rebates and associated operational cost savings with respect to electric vehicles. However, it's important to consider that moving the City's fleet to a more carbon neutral solution will require additional funding to the Vehicle Equipment Reserve beyond that of which is forecasted in this report.

Conclusion

By increasing the reserve provision by an additional \$0.2 million annually and debt financing vehicle replacement purchases greater than \$0.3 million for the next 5 years, the Municipal Works Vehicle and Equipment Reserve will be maintained at a sustainable level.

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Approved by

Kristine Douglas, Director of Financial Management Services / City Treasurer

John Kukalis, Acting Director of Municipal Works

Appendices

- Appendix 1 – 10-Year Forecast of MW Vehicle Reserve Balance
- Appendix 2 – 10-Year Levy Tax Impact

Table 1

| Consolidated MW Vehicle & Equipment Reserve | | | | | | |
|--|--------------------------------|------------------------------|---|-------------------------------|-------------------------------------|-------------------------------|
| Year | Opening Reserve Balance | Add: Annual Provision | Add: Proceeds from Auction Sales | Less: Replacement Cost | Less: New Vehicle Purchases* | Ending Reserve Balance |
| 2021 | \$ 3,358,592 | \$ 896,500 | \$ 73,038 | \$ (2,644,322) | \$ - | \$ 1,683,809 |
| 2022 | \$ 1,683,809 | \$ 896,500 | \$ 50,000 | \$ (1,986,000) | \$ (100,000) | \$ 544,309 |
| 2023 | \$ 544,309 | \$ 896,500 | \$ 50,000 | \$ (2,607,000) | \$ (80,000) | \$ (1,196,191) |
| 2024 | \$ (1,196,191) | \$ 896,500 | \$ 50,000 | \$ (1,619,000) | \$ (80,000) | \$ (1,948,691) |
| 2025 | \$ (1,948,691) | \$ 896,500 | \$ 50,000 | \$ (1,759,000) | \$ (80,000) | \$ (2,841,191) |
| 2026 | \$ (2,841,191) | \$ 896,500 | \$ 50,000 | \$ (2,429,500) | \$ (80,000) | \$ (4,404,191) |
| 2027 | \$ (4,404,191) | \$ 896,500 | \$ 50,000 | \$ (795,000) | \$ (80,000) | \$ (4,332,691) |
| 2028 | \$ (4,332,691) | \$ 896,500 | \$ 50,000 | \$ (1,622,000) | \$ (80,000) | \$ (5,088,191) |
| 2029 | \$ (5,088,191) | \$ 896,500 | \$ 50,000 | \$ (2,569,000) | \$ (80,000) | \$ (6,790,691) |
| 2030 | \$ (6,790,691) | \$ 896,500 | \$ 50,000 | \$ (2,634,000) | \$ (80,000) | \$ (8,558,191) |
| 2031 | \$ (8,558,191) | \$ 896,500 | \$ 50,000 | \$ (1,216,000) | \$ (80,000) | \$ (8,907,691) |
| Average Annual Replacement Cost | | | | \$ (1,989,166) | | |

* 2023 and beyond the new vehicle purchases are estimated based on 2021 & 2022's two year average

Table 2

| Consolidated MW Vehicle & Equipment Reserve | | | | | | | |
|---|-------------------------|-----------------------|----------------------------------|------------------------|------------------------------|------------------------|--|
| Year | Opening Reserve Balance | Add: Annual Provision | Add: Proceeds from Auction Sales | Less: Replacement Cost | Less: New Vehicle Purchases* | Ending Reserve Balance | |
| 2021 | \$ 3,358,592 | \$ 896,500 | \$ 73,038 | \$ (2,644,322) | \$ - | \$ 1,683,809 | |
| 2022 | \$ 1,683,809 | \$ 1,096,500 | \$ 50,000 | \$ (1,986,000) | \$ (100,000) | \$ 744,309 | |
| 2023 | \$ 744,309 | \$ 1,296,500 | \$ 50,000 | \$ (2,607,000) | \$ (80,000) | \$ (596,191) | |
| 2024 | \$ (596,191) | \$ 1,496,500 | \$ 50,000 | \$ (1,619,000) | \$ (80,000) | \$ (748,691) | |
| 2025 | \$ (748,691) | \$ 1,696,500 | \$ 50,000 | \$ (1,759,000) | \$ (80,000) | \$ (841,191) | |
| 2026 | \$ (841,191) | \$ 1,896,500 | \$ 50,000 | \$ (2,429,500) | \$ (80,000) | \$ (1,404,191) | |
| 2027 | \$ (1,404,191) | \$ 1,896,500 | \$ 50,000 | \$ (795,000) | \$ (80,000) | \$ (332,691) | |
| 2028 | \$ (332,691) | \$ 1,896,500 | \$ 50,000 | \$ (1,622,000) | \$ (80,000) | \$ (88,191) | |
| 2029 | \$ (88,191) | \$ 1,896,500 | \$ 50,000 | \$ (2,569,000) | \$ (80,000) | \$ (790,691) | |
| 2030 | \$ (790,691) | \$ 1,896,500 | \$ 50,000 | \$ (2,634,000) | \$ (80,000) | \$ (1,558,191) | |
| 2031 | \$ (1,558,191) | \$ 1,896,500 | \$ 50,000 | \$ (1,216,000) | \$ (80,000) | \$ (907,691) | |
| Average Annual Replacement Cost | | | | \$ (1,989,166) | | | |

* 2023 and beyond the new vehicle purchases are estimated based on 2021 & 2022's two year average

Appendix 1

| Table 3 | | | | | | | | |
|---|-------------------------|-----------------------|----------------------------------|------------------------|------------------------------|----------------------------|------------------------|--|
| Consolidated MW Vehicle & Equipment Reserve | | | | | | | | |
| Year | Opening Reserve Balance | Add: Annual Provision | Add: Proceeds from Auction Sales | Less: Replacement Cost | Less: New Vehicle Purchases* | Add: Debt Funded Purchases | Ending Reserve Balance | |
| 2021 | \$ 3,358,592 | \$ 896,500 | \$ 73,038 | \$ (2,644,322) | \$ - | \$ - | \$ 1,683,809 | |
| 2022 | \$ 1,683,809 | \$ 1,096,500 | \$ 50,000 | \$ (1,986,000) | \$ (100,000) | \$ 640,000 | \$ 1,384,309 | |
| 2023 | \$ 1,384,309 | \$ 1,296,500 | \$ 50,000 | \$ (2,607,000) | \$ (80,000) | \$ 1,260,000 | \$ 1,303,809 | |
| 2024 | \$ 1,303,809 | \$ 1,496,500 | \$ 50,000 | \$ (1,619,000) | \$ (80,000) | \$ - | \$ 1,151,309 | |
| 2025 | \$ 1,151,309 | \$ 1,696,500 | \$ 50,000 | \$ (1,759,000) | \$ (80,000) | \$ 310,000 | \$ 1,368,809 | |
| 2026 | \$ 1,368,809 | \$ 1,896,500 | \$ 50,000 | \$ (2,429,500) | \$ (80,000) | \$ - | \$ 805,809 | |
| 2027 | \$ 805,809 | \$ 1,896,500 | \$ 50,000 | \$ (795,000) | \$ (80,000) | \$ - | \$ 1,877,309 | |
| 2028 | \$ 1,877,309 | \$ 1,896,500 | \$ 50,000 | \$ (1,622,000) | \$ (80,000) | \$ - | \$ 2,121,809 | |
| 2029 | \$ 2,121,809 | \$ 1,896,500 | \$ 50,000 | \$ (2,569,000) | \$ (80,000) | \$ - | \$ 1,419,309 | |
| 2030 | \$ 1,419,309 | \$ 1,896,500 | \$ 50,000 | \$ (2,634,000) | \$ (80,000) | \$ - | \$ 651,809 | |
| 2031 | \$ 651,809 | \$ 1,896,500 | \$ 50,000 | \$ (1,216,000) | \$ (80,000) | \$ - | \$ 1,302,309 | |
| Average Annual Replacement Cost | | | | \$ (1,989,166) | | | | |

* 2023 and beyond the new vehicle purchases are estimated based on 2021 & 2022's two year average

| Tax Levy Impact | | | | | | |
|-----------------|------------------------------|--------------------------|---------------------------------|--|--|---|
| Year | Principal Payment of Debt | Debt Interest Payment | Annual Provision increase | Annual Operating Budget Increase | Annual Estimated Tax Impact on Median Household (\$) | Annual Estimated Tax Impact on Median Household (%) |
| 2022 | \$ - | \$ 25,600 | \$ 200,000 | \$ 225,600 | \$ 3.22 | 0.20% |
| 2023 | \$ 128,000 | \$ 70,880 | \$ 200,000 | \$ 398,880 | \$ 5.69 | 0.36% |
| 2024 | \$ 380,000 | \$ 55,680 | \$ 200,000 | \$ 635,680 | \$ 9.06 | 0.58% |
| 2025 | \$ 380,000 | \$ 52,880 | \$ 200,000 | \$ 632,880 | \$ 9.02 | 0.58% |
| 2026 | \$ 442,000 | \$ 35,200 | \$ 200,000 | \$ 677,200 | \$ 9.66 | 0.62% |
| 2027 | \$ 442,000 | \$ 17,520 | \$ - | \$ 459,520 | \$ 6.55 | 0.42% |
| 2028 | \$ 314,000 | \$ 4,960 | \$ - | \$ 318,960 | \$ 4.55 | 0.29% |
| 2029 | \$ 62,000 | \$ 2,480 | \$ - | \$ 64,480 | \$ 0.92 | 0.06% |
| 2030 | \$ 62,000 | \$ - | \$ - | \$ 62,000 | \$ 0.89 | 0.05% |
| 2031 | \$ - | \$ - | \$ - | \$ - | \$ - | 0.00% |
| Total | \$ 2,210,000 | \$ 265,200 | \$ 1,000,000 | \$ 3,475,200 | \$ 49.56 | 3.16% |



Corporate Report City Council

Report from: Office of the Mayor, Administration

Report Date: September 15, 2021

Meeting Date: September 22, 2021

Report Number: MO-156-2021

File: 10.57.10, 10.57.12

Subject: Telephone Town Hall Engagement, Budget 2022

Strategic Pillar:

This report aligns with the following St. Catharines Strategic Plan pillars: economic



Recommendation

That Council Committee approve the public engagement questions for the 2022 budget engagement, including the telephone town hall, as Appendix 1.

Relationship to Strategic Plan

This report supports all pillars of the strategic plan, namely economic: Support the City's commitment to building and growing a diverse and resilient economy through fiscal responsibility, urban regeneration and collaborative partnerships.

Background

At its meeting of November 10, 2020, General Committee approved a motion that included that the wording of all questions to be posed to the public regarding budgets are to be approved by the Budget Standing Committee.

Report

In March 2021 the BSC received report [LCS-B008-2021](#) on public engagement for the 2022 capital and operating budgets with feedback from the Budget Engagement Task Force. This report presents the draft questions for the 2022 budget engagement initiatives including the Telephone Town Hall (TTH) and EngageSTC platform for the BSC's approval, as requested.

The draft questions were prepared collaboratively by staff in finance, clerks and the Mayor's Office, with input from the Senior Leadership Team and information from the

BSC meetings and reports, the Task Force, as well as Council reports related to budgetary discussions and the strategic plan.

As requested by the Task Force, the draft questions include general demographic information (age, ward) to seek to have a better understanding of the participants in the TTH. Some of this information is gathered in the registration for EngageSTC and will also be asked on the platform to develop a broader understanding of the residents and taxpayers who are participating in the budget engagement and to plan for the future.

As noted in the March report, staff will continue to develop other communication materials to support public engagement in the budget process including video and social media content to share information about the City's budget and encourage participation in the TTH and EngageSTC.

Financial Implications

The 2021 Operating budget included \$9,050 for the Telephone Town Hall. The RFP for the TTH closed on Sept. 15 and staff are reviewing submissions. It is expected that the TTH will be completed within budget and all other communications tasks related to the budget will be completed by city staff.

Environmental Sustainability Implications

There are no environmental implications associated with this report.

Conclusion

It is important for the BSC to review approve the budget engagement questions so that staff can prepare the EngageSTC platform and work with the successful vendor in time for the 2022 budget engagement events, beginning in Oct. 2021.

Prepared by

Julie Rorison, Mayor's Chief of Staff

Submitted by

Julie Rorison, Mayor's Chief of Staff

Approved by

David Oakes, Chief Administrative Officer

Appendices

- 1 - Draft Telephone Town Hall questions

Telephone Town Hall 2022
Draft Questions

Part 1: Demographic Questions

What is your age group?

- a. Under 18
- b. 18 to 29
- c. 30 to 49
- d. 50 to 69
- e. Over 70

Has your employment or income been impacted by the pandemic?

- Yes – positively
- Yes – negatively – I lost my job or income
- No

Have you reviewed any information about the City's budget before now?

- reviewed the city website
- educational videos
- watch budget committee meetings

What Ward do you live in?

- Ward 1, Merritton
- Ward 2, St. Andrews
- Ward 3, St. George's
- Ward 4, St. Patrick's
- Ward 5, Grantham
- Ward 6, Port Dalhousie
- don't know

Part 2) Poll Questions

The COVID pandemic has impacted all households and organizations with added costs and challenges. At the same time, the City must continue to deliver essential services and infrastructure. For the 2022 budget, which of the following options would you support to manage increased costs?

- 2% or less increase - with significant service cuts and closures
- over 2% to 5% increase - with some service disruptions
- over 5% increase or higher - to sustain or enhance services

If the City had to reduce services to manage cost increases, what services do you think could be reduced?

- recreation - reduced hours and programs at recreation centres, arenas

- horticulture and landscaping - reduced grass cutting, tree trimming, gardens and hanging baskets
- outreach – reduce outreach and support to homeless and vulnerable people
- I'm not supportive of reducing any city services.

What services in your neighbourhood are you willing to pay more to receive?

- winter maintenance – increase snow clearing on sidewalks
- horticulture and landscaping – more flower beds and hanging baskets
- recreation and culture - increased hours and programs at recreation centres
- outreach - increase outreach and support for homeless and vulnerable people
- I'm not willing to pay more taxes

What community infrastructure would you like to see the City invest in your neighbourhood?

- road maintenance: potholes, resurfacing
- renew greenspaces, parks, and playgrounds
- splashpads
- swimming pools
- fire stations
- more active transportation: bike lanes, trails, sidewalks

City Council is bringing in new charges to offset property tax increases including development charges to pay for the costs of growth (like underground infrastructure to service new buildings). What other revenue sources would you support instead of property tax increases?

- increase user fees for recreation centres, arenas, recreation programming
- expand paid parking across the city
- user fees and paid parking at public beaches
- Municipal Accommodation Tax – for stay at hotels, motels
- storm water management user charge – additional charge based on property type and size

Affordable housing is an important issue in all communities. While the City is not directly responsible for affordable housing, would you support additional measures to support and fund affordable housing such as sale of surplus city assets, vacant residential unit tax?

- Yes - the City should support investments in affordable housing
- No – this is the responsibility of other levels of government / funding