

REPORT Meeting Date: 2019-11-14 Regional Council

DATE: November 4, 2019

REPORT TITLE: ENTERPRISE ASSET MANAGEMENT PROGRAM

FROM: Stephen VanOfwegen, Commissioner of Finance and Chief Financial

Officer

RECOMMENDATION

That the amendments to the asset classes and asset levels of service, outlined in Appendix II of the report from the Commissioner of Finance and Chief Financial Officer, titled "Enterprise Asset Management Program" be approved.

REPORT HIGHLIGHTS

- The Region of Peel's infrastructure is a public investment worth over \$29.6 billion (excludes Police and land assets).
- Peel Housing Corporation infrastructure is now fully included in the annual infrastructure assessment, and work is ongoing to support Peel Police with their asset management requirements.
- Peel's asset management program supports the Long Term Financial Planning Strategy objectives 1.2 "Ensure the Capital Plan is sustainable" and 1.3 "Maintain assets".
- In 2019, on average, the Region's infrastructure is in a 'Good' state of repair.
- 79 percent of the infrastructure portfolios meet Council's risk management targets.
- The proposed 2020-2029 capital investment of \$2.9 billion will maintain Peel's asset portfolio in good condition.
- Council has adopted a balanced approach for infrastructure, selecting a "moderate" appetite for infrastructure risk. The current state of the infrastructure is compatible with Council's risk appetite.
- Regional Council's proactive policy of ensuring adequate revenues to support Peel's long-term infrastructure needs has well-positioned the Region of Peel to manage the risks and challenges for the foreseeable future.
- A review of the Region's asset management program identified improvement opportunities which are being implemented and phased in over several years.

DISCUSSION

1. Background

Through each Term of Council, the Region will focus on achieving outcomes that support the vision of "Community for Life". These achievements facilitate progress in each of the areas of Living, Thriving and Leading and in turn create a place where everyone enjoys a

sense of belonging and has access to the services they need to thrive. A key component of creating such a place is having the infrastructure to do so. Roads, water and wastewater pipes, paramedic equipment, long term care facilities and housing are all critical for ensuring a healthy, vibrant and safe community. The Region recognizes that keeping these assets in good working order is essential to providing high quality and affordable municipal services.

The Region of Peel's infrastructure is a public investment worth over \$29.6 billion (excludes Police and land assets), and the Region is committed to effective stewardship of this public asset through good asset management. Peel's Asset Management Program supports the Long Term Financial Planning Strategy objectives 1.2 – "Ensure the Capital Plan is sustainable" and 1.3 – "Maintain assets".

This report provides an update on the status of Peel's asset management program and identifies any emerging issues or opportunities.

2. Region's Asset Management Program

Enterprise Asset Management is an integral part of the Region of Peel's strategic and long-term planning practices. Introduced in 2007, the program focusses on developing sustainable plans to maintain the assets over a planning horizon that can be as long as 100 years. Guided by the principle of continuous improvement, these plans support Council's level of service targets, emerging pressures and long-term financial strategies. The Region's Asset Management program is also guided by industry best practice, as well as regulatory requirements. As such, the program is continuously evolving in order to leverage opportunities, enhance service delivery and address challenges.

a) Region's Asset Management 2019 Status Update

One of the outcomes of the Region's Asset Management Program is the annual update of the Infrastructure Status and Outlook Report. The 2019 report, attached as Appendix I, summarizes the status of the Region's infrastructure. In addition, the report also describes some of the proposed major future actions required to maintain or improve the infrastructure in order to meet Council's level of service objectives. This year's status update includes Peel Housing Corporation and is the first to do so.

b) The Region of Peel's Infrastructure Status and Outlook

Currently the Region of Peel's \$29.6 billion infrastructure portfolio, on average, is in good state of repair. The good condition is due to previous capital programs that have added and replaced many outdated and deficient assets with new, modernized infrastructure. In time, the Region's relatively new infrastructure will age and the overall condition will deteriorate. In order to maintain a good state of repair status, the Region plans to invest approximately \$2.9 billion over the next 10 years. A summary of some of the major projects slated for the next ten years have been included in the "Outlook" column of the report contained in Appendix I.

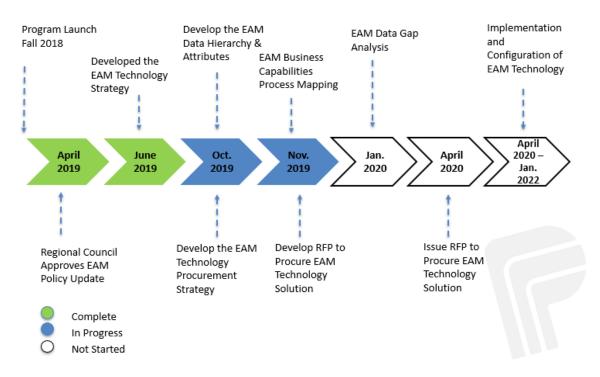
In addition to condition, 79 percent of the infrastructure portfolios are currently rated **Good** or **Very Good** in relation to Council's target of 70 percent. Rating of **Good** indicates that most assets in the portfolio are achieving the desired level of service.

The above two measures gauge the Region's ability to meet its service objectives. While current status of these measures is positive, over the long-term Peel's assets will age, and the size of the portfolio will grow, resulting in increased funding pressure to sustain a target asset portfolio of 'Good'.

c) Peel Asset Management Program Maturity Implementation

The Region, working with an independent consultant, has assessed and developed a plan that aligns the Region's asset management program with International standards and best practices. The result of the review, outlined in the January 10, 2019 report to Council, indicates that, while the Region has made progress, its asset management program continues to develop, and best practice activities continue to be established and entrenched in standard operating procedures. The Region's objective is to have these asset management activities fully developed and embedded in daily activities. To achieve this objective, staff have identified the key initiatives, resources and funding required. The outcome of this assessment is a multi-phase plan that enhances the Region's asset management program. As outlined in the January report to Council, the first phase of this plan was initiated in 2019 and implementation of future phases will take place over the next three years as indicated in the following figure.

EAM Technology Strategy and Roadmap



Another key pressure is climate change. The Region is experiencing more frequent and extreme events like flooding, ice storms and warming winters. These effects of climate change have necessitated that the Region address the risks to infrastructure and in turn to the community and the economy. To address these risks, it's essential that communities become more resilient. Understanding the impact of climate change and the required mitigation measures is important. As identified in the Region's Asset Management Policy

and Climate Change Master Plan, to address this pressure, in 2020, the Region will initiate an assessment to determine the effects of climate change and corresponding infrastructure vulnerabilities in order to prioritize actions.

Building on the work completed to date and taking into consideration the significant work required for regulatory compliance, climate change adaption and continuous improvement initiatives, staff have identified the next phase requirements and have included these requirements in the 2020 budget. As part of the next phase, staff have included funding for two full time staff positions in Finance and three in Public Works. Additional contract positions will be considered for project specific implementation. The contract positions will not be required once the key initiatives of the roadmap have been completed.

d) Asset Management Regulatory Compliance

The Government of Ontario Bill 6, *Infrastructure for Jobs and Prosperity Act* is now in effect. The Region has fully complied with the first requirement of the regulation and is on track to complying with subsequent phases. As part of the compliance initiative staff incorporated Peel Housing Corporation into this annual update. Working with Peel Regional Police towards full compliance, staff will incorporate police assets into Regional reporting prior to the 2023 deadline.

e) New and Amended Asset Levels of Service and Asset Classes

The Region of Peel's asset categorizations and levels of service require amendments from time to time to respond to current challenges and opportunities. Updating the asset classes and asset levels of service improves staff's ability to evaluate and quantify asset needs and to prioritize asset management actions.

Staff have identified a number of amendments to the Region's asset classes and asset levels of service which have been reflected in the infrastructure requirements and financing recommendations of the proposed 2020 Capital Budget and Forecast. It is therefore proposed that the Region of Peel's Asset Management Policy be amended per the revisions outlined in Appendix II. Approval of the amendments to the asset levels of service and asset classes will not alter the proposed 2020 Capital Budget and Forecast. The revised asset levels of service will more appropriately reflect the Region's current and potential risk to services. They serve as a foundation for planning infrastructure improvements and ensure that newly identified capital requirements and corresponding funding is accommodated in future plans.

FINANCIAL IMPLICATIONS

The 2020 Budget will include resources to support the next phase of Peel's Asset Management program maturity, including 5 full time staff positions and a \$4 million capital project for modernizing technology solutions. The investments are primarily funded through the utility rate budget reflecting the majority of assets are water and wastewater based. Resources to support future phases of the program will be brought to Council in advance of the annual budget process.

CONCLUSION

The Region of Peel's \$29.6 billion infrastructure portfolio is rated "**Good**" in relation to Council targets and assets are currently in a good state of repair. Regional Council's proactive policy of ensuring adequate funds to support Peel's long-term infrastructure needs has positioned Peel to manage the risks and challenges of the future. Staff will continue to implement the asset management roadmap in order to ensure the sustainability of Peels infrastructure.

Alber Georgian

Stephen VanOfwegen, Commissioner of Finance and Chief Financial Officer

Approved for Submission:

N. Polsinelli, Interim Chief Administrative Officer

APPENDICES

Appendix I – 2019 Infrastructure Status and Outlook Report Appendix II – New/Revised Asset Classes and Asset Levels of Service

For further information regarding this report, please contact Sam Sidawi, Director, Enterprise Asset Management, extension 3627, sam.sidawi@peelregion.ca.

Authored By: Sam Sidawi



2019 Infrastructure Status and Outlook Report

Maintaining the existing assets in a state of good repair and building new infrastructure which meets current and future needs is critical to the success of the Region of Peel. The Region's target asset level of service is to achieve an overall infrastructure status of Good. This goal allows the Region to balance investing enough in the infrastructure to support efficient and reliable services while maintaining affordable tax and utility rates for the community.

This report outlines the current state of the Region of Peel's infrastructure and highlights some of the organization's major improvement priorities.

The Region Overall

Infrastructure

The Region owns and operates roads, bridges, buildings, pipes, fleet and equipment to support services from Housing Support to Water Supply with a replacement value of approximately \$29.6 Billion.

Excludes Peel Regional Police managed infrastructure.

Outlook

Over the next 10 years, the Region plans to invest approximately \$2.9 Billion to maintain the infrastructure and continue to provide high quality Regional services, contributing to a Community for Life in Peel.

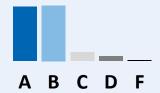
Status

Risk Management Rating



Good

Condition Grade





What do the symbols mean?

Risk	Risk Management Rating (
	Very Good Almost all assets in the portfolio are achieving the desired targets						
	Good	Most assets in the portfolio are achieving the desired targets					
\bigcirc	Fair	Many assets in the portfolio are not achieving the desired targets	Ī				
	Poor	Most assets in the portfolio are not achieving the desired targets	Ī				
\otimes	Very Poor Almost all assets in the portfolio are not achieving the desired targets						

Con	Condition Grade Key						
A	New or like new condition						
В	In a good state of repair						
	Some non-critical defects; some critical repairs						
C	in the near term						
	Some critical defects; many critical repairs in the						
D	near term						
	Many critical defects; immediate repairs or						
F	replacement required						

are sustained.

A B C D F

Very Poor achieving the desired targets F replacement required						
Service (Asset Value)	Infrastructure	Status	Outlook			
Water Supply (\$11,323M)	Two treatment plants, 14 wells, 20 pumping stations, 22 water storage facilities and 4,304 km of water pipes provide safe, reliable, high quality drinking water.	Very Good A B C D F	The Capital Plan includes adequate reinvestments to manage the assets. Studies are underway to optimize asset reinvestments, ensuring the long-term sustainability of the Region's distribution system and water treatment plants while maintaining the desired service outcomes.			
Wastewater (\$12,497M)	Two treatment plants, 32 sewage pumping stations and 3,667 km of sanitary sewer pipes provide safe and environmentally responsible collection and treatment of wastewater.	Fair A B C D F	The Capital Plan includes adequate reinvestments to maintain the condition of the assets. However, enhancements to the system are required to manage the growing risks from climate change and provide the desired level of service. Expansions and rehabilitations are in progress at the Wastewater Treatment Plant, many older pumping stations and critical trunk sewers. This work will improve the operational efficiency of the system and reduce the risk of overflows and backups.			
Operations Yards, Fleet and Equipment (\$98M)	Five Public Works yards, 461 vehicles and 243 pieces of major equipment support the delivery of the Region's services.	Very Good A B C D F	The Capital Plan includes adequate reinvestments to manage the assets and improve the current condition. On-going redevelopments across the yard's portfolio are being completed to support service delivery across Regional Programs.			
Heritage, Arts & Culture (\$31M)	Four Heritage facilities are home to the Peel Art Gallery, Museum and Archives, supporting and sustaining the historical and cultural fabric of Peel.	Good	The Capital Plan includes adequate reinvestments to manage the assets and improve the current condition. Planning is underway to address space utilization, storage and environmental needs to ensure services, archives and collections			

Long Term Care

(\$229M)



Five long term care centres provide long term care services and day programs to seniors, promoting quality of life, dignity, independence and community connections.



Very Good



The Capital Plan includes adequate reinvestments to manage the assets.

Council has approved the replacement of Peel Manor as part of the Long Term Care and Community Support Services Strategic Plan that will provide more complete senior care services and promote opportunities for seniors to experience greater independence and more community integration.

8.1-9 APPENDIX I ENTERPRISE ASSET MANAGEMENT PROGRAM Service Outlook Infrastructure Status (Asset Value) The Capital Plan includes adequate Seven affordable housing Housing reinvestments to manage the assets. buildings provide safe, Support1* **Very Good** accessible accommodations Reasonable and affordable rental fees (\$304M) geared to lower income ensure maintenance of the condition of housing stock over the life of the assets. families and individuals. ABCDF The Capital Plan includes adequate 88 affordable housing **Peel Housing** reinvestments to manage the assets. The buildings provide safe, Corporation^{2*} analysis is based on the most current Very Good accessible accommodations available data. (\$2,443M) geared to lower income families and individuals. Reasonable and affordable rental fees ensure maintenance of the condition of housing stock over the life of the assets. ABCDF The Capital Plan includes adequate Five homeless shelters Homelessness reinvestments to manage the assets and provide 24-hour access to Support improve the current condition. **Very Good** safe, secure, temporary living for families and individuals in (\$35M) Regular and proactive maintenance is required to maintain the facilities in good distress. condition. ABCDF Three child care centres host The Capital Plan includes adequate **Child Care** reinvestments to manage the assets and to private child care services for maintain the marketability of child care (\$9M) Good children between 18-months centres for private operators. and five years of age and provide a range of family



centred services.



Regional Office Complexes

(\$238M)



Two Regional office complexes centralize many operations and services and provide public access to Regional services and Council.



Good



The Capital Plan includes adequate reinvestments to manage the assets.

Suite A of 10 Peel Centre Drive is 39 years old and requires extensive work to modernize and efficiently use space to remain viable to meet growing service needs.



¹ Includes Region owned assets managed by either the Region or third party.

² Includes Peel Housing Corporation (PHC) assets managed by PHC, Region of Peel is the sole shareholder.

^{*}Excludes other social housing providers.

Service	Asset Class	Current Asset Level of Service	Proposed Change	Reason	New Asset Level of Service
Scretce	Asset class	(If applicable)	Troposed change	Reason	(if applicable)
		N/A	Change the 'Program'	Alignment with Strategic Plan	N/A
		N/A	heading to 'Service'	and Asset Hierarchy	N/A
All	All		Change the 'Service		
		N/A		Alignment with Asset Hierarchy	N/A
			'Service Catagory'		
			Change Service name	Alignment with Strategic Plan	
	All	N/A	from 'Water' to 'Water	and Asset Hierarchy	N/A
			Supply'	and Asset Hierarchy	
		N/A	New ALOS	New Asset Class	Building Condition = B (Good)
		NI/A	Nov. ALOC	Now Asset Class	Building Quality and Relationship to
		N/A	New ALOS	New Asset Class	Current Standards = C (Fair)
		N/A	New ALOS	New Asset Class	Facility Finishes and Fixtures = C (Fair)
					Caracity and Charac Adaptabilty for
	Water Administrative Offices	N/A	New ALOS	New Asset Class	Capacity and Change Adaptabilty for
					Program Requirements = C (Fair)
		N/A	New ALOS	New Asset Class	Building Environment and Security = B
		<u> </u>			(Good)
		N/A	New ALOS	New Asset Class	Building Amenities for Service Delivery =
		21/2	N. ALOG	No. Accord Chara	B (Good)
	Matau Turatura at Automatica Contant	N/A	New ALOS	New Asset Class	Accessibility Features = B (Good)
	Water Treatment Automation Systems	N/A	New ALOS	Risk of network server failure is	Provision of redundant network
	(SCADA)	·		mitigated	components
		N/A	New ALOS	Risk of network	Provision of redundant network
Matan Comple				communication failure is	components (WAN)
Water Supply				mitigated	
	Ground Water Systems Automation Systems (SCADA)	N/A	New ALOS	Risk of critital SCADA	Automotic and and informations
				component failure is mitigated	Automatic redundant infrastructure
		N/A	New ALOS	Risk of server failure is	Provision of redundant network
				mitigated	components
				New Asset Class	Replace hardware before it becomes
		N/A	New ALOS		less efficient/ not compatible with
					systems
		N/A	New ALOS	New Asset Class	Enough Standby Power to operate for
					36 hours without electricity
		N/A	New ALOS	New Asset Class	Two power feeds to the SCADA network
					components
		N/A	New ALOS	New Asset Class	Network is physically secured to
					prevent unauthorized access
		N/A	New ALOS	District Control of	,
					Server and switch configuration to block
				mitigated	and detect unauthorized access
	Water Pump Station Automation	N1/2	NI AL CC	Risk of network server failure is	Provision of redundant network
	Systems (SCADA)	N/A	New ALOS	mitigated	components
				-	

Service	Asset Class	Current Asset Level of Service (If applicable)	Proposed Change	Reason	New Asset Level of Service (if applicable)
	Water Pump Station Automation Systems (SCADA)	N/A	New ALOS	Risk of cyber attack is mitigated	Server and switch configuration to block and detect unauthorized access
	Distribution Mains	Maintain a minimum pressure of 50 psi during maximum day demand periods	Updated Level of Service Measure: Move from Max Day to Peak Hour	Alignment with Regional Specificaitons and Ontario Design Guidelines.	Maintain a minimum pressure of 40 psi during peak hour demand periods
Water Supply	Small Feeder Mains	Maintain a minimum pressure of 50 psi during maximum day demand periods	Updated Level of Service Measure: Move from Max Day to Peak Hour	Alignment with Regional Specificaitons and Ontario Design Guidelines.	Maintain a minimum pressure of 40 psi during peak hour demand periods
	Large Feeder Mains	Maintain a minimum pressure of 50 psi during maximum day demand periods	Updated Level of Service Measure: Move from Max Day to Peak Hour	Alignment with Regional Specificaitons and Ontario Design Guidelines.	Maintain a minimum pressure of 40 psi during peak hour demand periods
	South Peel Biosolids Disposal	Backup on-site fuel supply.	Remove Level of Service	Risk mitigated by other Level of Service in South Peel Plantwide Support Systems	
Wastewater	South Peel - Plant Wide Support Systems	N/A	New ALOS	Risk of Power Failure is mitigated	Secondary electrical supply and standby power for all critical process and life safety assets.
wastewater	Sub Trunk Sewers	Selective twinning, diversions, storage, and real time control opportunities from Diversion Strategy	Remove Level of Service	Not an ALOS	N/A
	Trunk Sewers	Selective twinning, diversions, storage, and real time control opportunities from Diversion Strategy	Remove Level of Service	Not an ALOS	N/A
	All	N/A	Change Service name from 'Works Yards' to 'Operations Yards, Fleet and Equipment'	Alignment with Asset Hierarchy	N/A
Operations Yards, Fleet and Equipment		N/A	Change Service name from 'All Public Works Programs' to 'Operations Yards, Fleet and Equipment'	Alignment with Asset Hierarchy	N/A
		N/A	New ALOS	New Asset Class	Building and Site Condition = B (Good)
		N/A	New ALOS	New Asset Class	Building Quality and Relationship to Current Standards = C (Fair)
Peel Living Housing Support	Peel Living High Density Affordable Housing	N/A	New ALOS	New Asset Class	Facility Finishes and Fixtures = C (Fair)
		N/A	New ALOS	New Asset Class	Capacity and Change Adaptabilty for Program Requirements = C (Fair)
		N/A	New ALOS	New Asset Class	Building Environment and Security = B (Good)

Service	Asset Class	Current Asset Level of Service (If applicable)	Proposed Change	Reason	New Asset Level of Service (if applicable)
	Peel Living High Density Affordable Housing	N/A	New ALOS	New Asset Class	Building Amenities for Service Delivery = B (Good)
	110031118	N/A	New ALOS	New Asset Class	Accessibility Features = B (Good)
		N/A	New ALOS	New Asset Class	Building and Site Condition = B (Good)
		N/A	New ALOS	New Asset Class	Building Quality and Relationship to Current Standards = C (Fair)
	Peel Living Medium Density Affordable	N/A	New ALOS	New Asset Class	Facility Finishes and Fixtures = C (Fair)
	Housing	N/A	New ALOS	New Asset Class	Capacity and Change Adaptabilty for Program Requirements = C (Fair)
		N/A	New ALOS	New Asset Class	Building Environment and Security = B (Good)
Peel Living Housing Support		N/A	New ALOS	New Asset Class	Building Amenities for Service Delivery = B (Good)
		N/A	New ALOS	New Asset Class	Accessibility Features = B (Good)
		N/A	New ALOS	New Asset Class	Building and Site Condition = B (Good)
	Peel Living Low Density Affordable Housing	N/A	New ALOS	New Asset Class	Building Quality and Relationship to Current Standards = C (Fair)
		N/A	New ALOS	New Asset Class	Facility Finishes and Fixtures = C (Fair)
		N/A	New ALOS	New Asset Class	Capacity and Change Adaptabilty for Program Requirements = C (Fair)
		N/A	New ALOS	New Asset Class	Building Environment and Security = B (Good)
		N/A	New ALOS	New Asset Class	Building Amenities for Service Delivery = B (Good)
		N/A	New ALOS	New Asset Class	Accessibility Features = B (Good)
Regional Office Complexes	All	N/A	Change Service name from 'Enterprise Support' to 'Regional Office Complexes'	Alignment with Strategic Plan and Asset Hierarchy	N/A
TransHelp	TransHelp	N/A	Change Service name from 'Accessible Transportation' to 'TransHelp'	Alignment with Strategic Plan and Asset Hierarchy	N/A
	All	N/A	Change Service name from 'Waste Management' to 'Waste'	Alignment with Strategic Plan and Asset Hierarchy	N/A
Waste	Leachate Collection System (Pumping Stations)	N/A	Change Asset Class name	To better reflect the assets under this asset class	Pumping and Treatment System
	Pumping and Treatment System	N/A	New ALOS	Risk of Power Failure is mitigated	Standby Power meets MECP (Ministry of Environment, Conservation and Parks) guidelines

Service	Asset Class	Current Asset Level of Service (If applicable)	Proposed Change	Reason	New Asset Level of Service (if applicable)
	Gas Collection Automation Systems (SCADA)	N/A	New ALOS	Risk of network communicaiton failure is mitigated	Provision of redundant network components (WAN)
		N/A	New ALOS	Risk of critital SCADA component failure is mitigated	Automatic redundant infrastructure
		N/A	New ALOS	Risk of server failure is mitigated	Provision of redundant network components
		N/A	New ALOS	Risk of cyber attack is mitigated	Server and switch configuration to block and detect unauthorized access
Waste	Public Offices	N/A	Remove Asset Class	Facilities under Public Offices were reclassified as Administrative Offices	N/A
	CRC Facilities Site Elements	N/A	New ALOS	New Asset Class: Waste Management Facilities Site Elements is split into CRC Facilities Site Elements and Heavy Industrial Site Elelments	Building and Property Condition = B (Good)
	Heavy Industrial Facilities Site Elements	N/A	Change Asset Class name	Waste Management Facilities Site Elements is split into CRC Facilities Site Elements and Heavy Industrial Site Elelments	Building and Property Condition = B (Good)
Paramedics Fleet & Equipment	Conveyance Equipment	N/A	Remove Asset Class	Move assets under Conveyance Equipment to Medical Equipment, as they impose same risk to services	N/A