UTILITY RMR Capital Project Charters



YEAR:	2019					
CHARTER NUMBER:	WATER-002/WASTW-010/STORM-001					
CHARTER NAME:	Utilit	y Master Plan				
LEAD DEPARTMENT:	Utilit	ies – Water, Wastewater, Storm				
		⊠ RMR ☐ GROWTH				
TYPE:		The Utility Mater Plan Update is req water, wastewater and stormwater i required upgrades, repairs, or rehab	nfrastructure to determine			
ASSET CATEGORY:		☐ Civic Facilities ☐ Master Plan, Studies, & Other ☐ Roads & Other Engineered Structures ☐ Historical/Cultural	☐ Parks & Trails ☐ Mobile & Other Equipment ☐ Land & Land Improvements			
SCOPE STATEMENT:		Update of the Utility Master Plan due to changes in environmental regulations, deterioration and renewal of infrastructure, and pace and sequence of development. An extensive update to the UMP was started in 2013 and completed in 2014, another update will be required in 2019, with a complete reassessment in 2024.				
PROJECT CHARTER JUSTIFICATION:		The Utilities Master Plan (UMP) is a Albert strategic planning framework water, wastewater and storm system identify any required existing system recommend a utility servicing strategrowth. The UMP identifies the proservice levels in the existing system for growth.	that focuses on the City's ms. The intent of the UMP is to n improvements as well as to gy that supports the City's future jects required for meeting			
		The UMP does not include projects required for life cycle replacement or condition assessment of the existing infrastructure (covered under Asset Management Strategy through existing condition assessment programs). For a holistic picture of what is required for the overall repair, maintenance and replacement (RMR) of utility infrastructure, the UMP needs to be looked at in conjunction with the RMR capital projects driven by the Asset Management practices (i.e. life cycle replacement and repair due to deterioration).				
		The UMP update for the City's water system is to begin mid-2018 for completion in 2019. The update to the wastewater and storm systems are to begin late 2018 for completion in 2019 which will provide the time needed to complete the Inflow and Infiltration				

	Assessment that is cur system.	Assessment that is currently being done on the City's sewer system.				
	Project Risks					
	Availability of Consultants to complete the UMP.					
	Assumptions					
		will require the UMF 23/24 completely re	to be updated in 2018/19			
		II be available for th	e work and will be able to			
	Lifecycle Costing					
		ster Plan is updated done every 10 years	l every 5 years and is s.			
COMMUNITY VISION –	The UMP aligns with s	supporting Built Env	ironment, specifically:			
PILLAR / STRATEGY & RESULT:	We plan and manage can inherit the same s		ty so future generations nunity we've enjoyed.			
	Strategies include:					
	Ensure that municipal					
	efficient, economic, coordinated, and timely manner relative to the desired development of the city.					
STAKEHOLDER	Name & Role	Respons	ibility or Contribution			
IDENTIFICATION:	Utilities Primary	Primary Stakeholo				
	Filliary					
	Engineering	Primary Stakeholo	der			
	Engineering Services	Primary Stakeholo	der			
	Engineering Services Primary City of St Albert	Consulted on all p	projects to determine if			
	Engineering Services Primary City of St Albert Risk & Insurance		projects to determine if			
	Engineering Services Primary City of St Albert Risk & Insurance Department Secondary	Consulted on all prinsurance is requi	projects to determine if red.			
TIMELINE:	Engineering Services Primary City of St Albert Risk & Insurance Department Secondary 2018 – Initiate Utility M	Consulted on all prinsurance is requi	projects to determine if red.			
TIMELINE:	Engineering Services Primary City of St Albert Risk & Insurance Department Secondary 2018 – Initiate Utility M 2019 – Complete the U 2023 – Initiate 2024 M	Consulted on all purchaster Plan Update Utility Master Plan Renewa	projects to determine if red. through an RFP			
TIMELINE:	Engineering Services Primary City of St Albert Risk & Insurance Department Secondary 2018 – Initiate Utility M 2019 – Complete the U 2023 – Initiate 2024 M 2024 – Master Plan Re	Consulted on all prinsurance is requivable. Master Plan Update Utility Master Plan Uster Plan Renewalenewal	through an RFP			
TIMELINE:	Engineering Services Primary City of St Albert Risk & Insurance Department Secondary 2018 – Initiate Utility M 2019 – Complete the U 2023 – Initiate 2024 M 2024 – Master Plan Re Based on the original se	Consulted on all prinsurance is requivable. Master Plan Update Utility Master Plan Update Plan Renewalenewalesequence, 2019 wo	through an RFP			
TIMELINE:	Engineering Services Primary City of St Albert Risk & Insurance Department Secondary 2018 – Initiate Utility M 2019 – Complete the U 2023 – Initiate 2024 M 2024 – Master Plan Re Based on the original s completely redo the UI only be updated in 201	Consulted on all prinsurance is requivable. Master Plan Update Utility Master Plan Leaster Plan Renewalenewalesequence, 2019 wowever, it is pure 19. This is due to the	through an RFP Update I uld be a year to proposed that Master Plance fact that the MDP is to			
TIMELINE:	Engineering Services Primary City of St Albert Risk & Insurance Department Secondary 2018 – Initiate Utility M 2019 – Complete the U 2023 – Initiate 2024 M 2024 – Master Plan Re Based on the original s completely redo the UI only be updated in 201 be completed in the co	Consulted on all prinsurance is requivable. Master Plan Update Utility Master Plan Renewal sequence, 2019 wow MP; however, it is pure 19. This is due to the oming years and is a sequence of the control of the contro	through an RFP Update I uld be a year to proposed that Master Plance fact that the MDP is to			
TIMELINE:	Engineering Services Primary City of St Albert Risk & Insurance Department Secondary 2018 – Initiate Utility M 2019 – Complete the U 2023 – Initiate 2024 M 2024 – Master Plan Re Based on the original s completely redo the UI only be updated in 201 be completed in the co	Consulted on all prinsurance is requivalent to the consulted on all prinsurance is requivalent to the consultance of the consul	through an RFP Jpdate I uld be a year to roposed that Master Plan e fact that the MDP is to			
TIMELINE: FINANCIAL INFORMATION:	Engineering Services Primary City of St Albert Risk & Insurance Department Secondary 2018 – Initiate Utility M 2019 – Complete the U 2023 – Initiate 2024 M 2024 – Master Plan Re Based on the original s completely redo the UI only be updated in 201 be completed in the coaccurately reflect the f	Consulted on all prinsurance is requiversely insurance is requiversely insurance is requiversely insurance is requiversely insurance is a consultation of the consulta	through an RFP Jpdate I uld be a year to roposed that Master Plan e fact that the MDP is to			
	Engineering Services Primary City of St Albert Risk & Insurance Department Secondary 2018 – Initiate Utility M 2019 – Complete the U 2023 – Initiate 2024 M 2024 – Master Plan Re Based on the original s completely redo the UI only be updated in 201 be completed in the coaccurately reflect the f be completed in 2023/	Consulted on all prinsurance is requivered in the consulted on all prinsurance is requivered in the consultation of the consul	through an RFP Jpdate I uld be a year to roposed that Master Plan e fact that the MDP is to a critical document to growth. A full update will			
	Engineering Services Primary City of St Albert Risk & Insurance Department Secondary 2018 – Initiate Utility M 2019 – Complete the U 2023 – Initiate 2024 M 2024 – Master Plan Re Based on the original s completely redo the UI only be updated in 201 be completed in the coaccurately reflect the f be completed in 2023/	Consulted on all prinsurance is requivered. Master Plan Update Utility Master Plan Renewal sequence, 2019 wow MP; however, it is properties to the owning years and is a suture development and the owning the o	through an RFP Update I uld be a year to roposed that Master Plan e fact that the MDP is to a critical document to growth. A full update will			
	Engineering Services Primary City of St Albert Risk & Insurance Department Secondary 2018 – Initiate Utility M 2019 – Complete the U 2023 – Initiate 2024 M 2024 – Master Plan Re Based on the original s completely redo the UI only be updated in 201 be completed in the coaccurately reflect the f be completed in 2023/ Year 2019 Investmen	Consulted on all prinsurance is requiversely insurance is requiversely insurance is requiversely insurance is requiversely insurance is required. The consumption of	through an RFP Ipdate I uld be a year to proposed that Master Plane e fact that the MDP is to proposed to a critical document to growth. A full update will \$0 \$0			
	Engineering Services Primary City of St Albert Risk & Insurance Department Secondary 2018 – Initiate Utility M 2019 – Complete the U 2023 – Initiate 2024 M 2024 – Master Plan Re Based on the original s completely redo the UI only be updated in 201 be completed in the coaccurately reflect the f be completed in 2023/ Year 2019 Investmen Year 2021 Investmen	Consulted on all prinsurance is requiversely insurance is requiversely insurance is requiversely insurance is requiversely insurance is a consultation of the consulta	through an RFP Jpdate Uld be a year to proposed that Master Plane e fact that the MDP is to provide a critical document to growth. A full update will \$0 \$0 \$0 \$0			

	Year 2025 Investment	\$0			
	Year 2026 Investment	\$0			
	Year 2027 Investment	\$0			
	Year 2028 Investment	\$0			
	Total	\$975,000			
	See Capital Project Worksheet for details.				
OPERATIONAL IMPACTS:	☐ Yes ☒ No				
	If yes, refer to Operating Impacts Worksheets for details.				
ASSOCIATED OPERATING BUSINESS CASE:	N/A				

APPROVAL		
Author:	Kevin Cole	February 28, 2018
	Project Charter Developer	Date
	Kevin Cole	February 28, 2018
Director:		
	Director	Date
GM:	Fann	March 8, 2018
	General Manager	Date

PROJECT COMPONENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Land Determined Costs										
Concept Planning					\$975,000					
Detailed Planning and Design										
Site Servicing										
Structure/Building Construction										
Landscaping										
Construction Management										
Commissioning and QA/QC										
Contingency										
Public Participation Activities										
Equipment										
TOTAL					\$975,000					

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.

Comments:

Cost split equally among utilities (water, wastewater, and storm).

2018: \$630,000 based on 2014 rates plus inflation. Based on an average consultant cost of \$145/hr.

2023: Based on an average consultant cost of \$150/hr and approximately 6,500 hrs of work.

OPERATING IN	IPACTS WORKSHEET		
One Time	N/A		
Ongoing			
OPERATING IM	PACTS		
TOTAL			



YEAR:	2019					
CHARTER NUMBER:	STORM-002					
CHARTER NAME:	Stormwater Infrastructure Rehabilitation					
LEAD DEPARTMENT:	Utilities - Storm					
		⊠ RMR ☐ GROWTH				
TYPE:		This project supports the on-going a replacement of existing stormwater				
ASSET CATEGORY:		☐ Civic Facilities ☐ Master Plan, Studies, & Other ☑ Roads & Other Engineered Structures ☐ Historical/Cultural	☐ Parks & Trails ☐ Mobile & Other Equipment ☐ Land & Land Improvements			
SCOPE STATEMENT:		This program is for the rehabilitation of the City's Stormwater infrastructure.				
PROJECT CHARTER JUSTIFICATION:		This annual project involves 4 compinfrastructure condition assessment Television (CCTV), pipe rehabilitation (CIPP); outfall rehabilitation and exireplacement using appropriate rehamage of the City's stormwater assecondition assessments. This project collection program including CCTV infrastructure. Stormwater infrastructure to be redeprogram is prioritized based on available historical operation and maintenance and risk to the public. Work to be concludes rehabilitation of existing stomanholes, swales, culverts, oil and and outfalls. Stormwater Outfalls have been priostormwater Outfall Update, and will with the Sedimentation & Erosion C	through Closed Circuit on using cured in place pipe sting storm infrastructure ibilitation techniques. Itate existing storm infrastructure et management plan and it includes an on-going data and inspection data on storm esigned or enhanced under this ilable inspection data and ee information, risk to the City onducted under this program form mains, catch basins, grit separators, storm ponds, ritized based on the 2014 be rehabilitated in conjunction			

COMMUNITY VISION – PILLAR / STRATEGY & RESULT:	Project Risks Availability of consultants and contractors for the project. Weather. Unknown issues exposed during construction or design phase. Unknown conditions of existing infrastructure until CCTV and condition assessments conducted in 2017-2021 Prioritization and cost estimating subject to change pending condition assessments and further definition of asset management plan Assumption Project costs are within estimation. Weather will not cause delays in the construction phase. Qualified contractors will be available. Impacts Cost overruns. Schedule delays Project being postponed. Lifecycle Costing Underground Utilities have an approximate life of 75 years. The Stormwater Infrastructure Rehabilitation Program aligns with supporting Built Environment, specifically: We plan and manage the growth of our city so future generations can inherit the same strong, vibrant community we've enjoyed. Strategies include: Ensure that municipal utilities and services are provided in an efficient, economic, coordinated, and timely manner relative to the desired development of the city.
STAKEHOLDER IDENTIFICATION:	Name & RoleResponsibility or ContributionCPO Engineering servicesProject Management ServicesPrimaryOwner of the infrastructure Involved in project planning, prioritization and technical assistanceCity of St. Albert Risk & Insurance Department SecondaryConsulted on all projects to determine if insuranceResidents in the surrounding area SecondaryInformation timelinesOffice of theInformation and consulting
	Environment. Secondary Council Approval

TIMELINE:	Ongoing rehabilitation of stormwater infrastructure based on priorities provided by inspections.			
FINANCIAL INFORMATION:	Year 2019 Investment	\$295,000		
	Year 2020 Investment	\$1,560,000		
	Year 2021 Investment	\$3,105,000		
	Year 2022 Investment	\$2,075,000		
	Year 2023 Investment \$3,035,000			
	Year 2024 Investment \$2,200,000			
	Year 2025 Investment \$1,170,000			
	Year 2026 Investment \$745,000			
	Year 2027 Investment	\$1,970,000		
	Year 2028 Investment	\$295,000		
	Total	\$16,470,000		
	See Capital Project Worksheet for details			
OPERATIONAL IMPACTS:	☐ Yes ☒ No			
	If yes, refer to Operating Impacts Worksheets for details.			
ASSOCIATED OPERATING BUSINESS CASE:	N/A			

APPROVAL		
Author:	Kevin Cole	March 2, 2018
	Project Charter Developer	Date
	Kevin Cole	March 2, 2018
Director:		
	Director	Date
GM:	Fred	March 8, 2018
	General Manager	Date

PROJECT COMPONENT	2019**	2020	2021	2022	2023	2024	2025	2026	2027	2028
Land Determined Costs										
Concept Planning				\$250,000				\$250,000		
Detailed Planning and Design	\$150,000	\$415,000	\$410,000	\$405,000	\$360,000	\$75,000	\$200,000	\$125,000	\$250,000	\$100000
Site Servicing										
Structure/Building Construction	\$125,000	\$1,125,000	\$2,675,000	\$1,400,000	\$2,655,000	\$2,105,000	\$950,000	\$350,000	\$1700,000	\$175000
Landscaping										
Construction Management	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	20,000
Commissioning and QA/QC										
Contingency										
Public Participation Activities										
Equipment										
TOTAL	\$295,000	\$1,560,000	\$3,105,000	\$2,075,000	\$3,035,000	\$2,200,000	\$1,170,000	\$745,000	\$1,970,000	\$295,000

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.

Comments:

Cost based on the following breakdown:

Cost component	Cost expected to include and assumptions
Storm Water CCTV Program*	Large/medium diameter CCTV inspection contracted out; small diameter to be conducted with internal crews; complete inspections by 2026
Cured-in-Place Pipe Program	Allocate \$750,000 every other year, with design the previous year. **\$750, 000 was not included in the 2019 to provide administration the time to catch up with carry forward projects and funding.
Storm Water Rehab (Non-trenchless) program	Existing bi-annual storm design budget and \$1,000,000 bi-annually for any large diameter (open cut or large CIPP) rehabilitations, with design the previous year.
Existing Storm Outfall/Ravine Rehabilitation	From 2014 Outfall Condition Assessment, prices adjusted for inflation, assuming 3% inflation per year.

OPERATING IMPACTS WORKSHEET		
One Time		
Ongoing		
OPERATING IMPACTS		
TOTAL		



YEAR:	2019	2019				
CHARTER NUMBER:	STC	STORM-004				
CHARTER NAME:	Stor	Stormwater Management Level of Service (LOS)				
LEAD DEPARTMENT:	Utilit	ies - Storm				
		⊠ RMR ☐ GROWTH				
TYPE:		This project supports our existing stormwater collection system by addressing level of service limitations and increasing our stormwater collection capacity.				
ASSET CATEGORY:		☐ Civic Facilities ☐ Master Plan, Studies, & Other ☑ Roads & Other Engineered Structures ☐ Historical/Cultural	☐ Parks & Trails ☐ Mobile & Other Equipment ☐ Land & Land Improvements			
SCOPE STATEMENT:		This project addresses the need to upgrade storm infrastructure and drainage to improve level of service.				
in the City's storm sy identified in the 2013 that do not meet our Many of the older ne and require new stor damage to private primprovements through will begin to address addressing additional Deer Ridge Surge Pour Grandin Subdivision under this program. There is also a component to this primprovement to the control of the control		There is also a complaint driven or l component to this program where a locations which have been identified	apital storm projects have been and include under sized pipes of Service (LOS) St. Albert have drainage issues a fucture improvements to prevent the ed for level of service a drainage system. This program ations on a priority basis irements. Projects such as Park, Mission, Sturgeon and a system Upgrades are identified docalized storm/drainage issues dministration prioritizes			

This project also includes an annual budget of \$60,000 to provide flow monitoring. Storm flow monitoring constitutes one of the main data collection exercises carried out by municipalities to ensure proper data is being used for storm water modeling.

The 2008 and 2013 UMP Update recommended storm flow monitoring as one of the ongoing programs carried out by the City to ensure proper storm data is in place to capture the magnitude of storm events and quantify the storm runoff in the Storm system.

6 Locations will be identified annually where storm flow monitoring will be highly beneficial during summer months (May - Sept months). This project aligns with Councils Goals and Priorities of Cultivate Sustainable Infrastructure and Services.

Risks

- Availability of consultants and contractors for the project.
- Weather
- Extreme variability of scope for drainage and storm issues.
 High probability of unknown issues exposed during construction or design phase.
- Residential Issues
- Project prioritization may change over the years depending on optimization with other projects, development, demand, risk, and targeted level of service.

COMMUNITY VISION – PILLAR / STRATEGY & RESULT:

The Stormwater Management Level of Service Program aligns with supporting Build Environment, specifically:

We build innovative, long lasting infrastructure that is efficient, minimizes the use of our natural resources and creates harmony between the natural and build environment.

Strategies include:

Maintain corporate and infrastructure assets in an efficient and sustainable manner that meets the present and future growth needs of the city and in accordance with approved guiding principles.

STAKEHOLDER IDENTIFICATION:

Name & Role	Responsibility or Contribution
CPO Engineering	Project Management
services Primary	
Utilities Primary	Involved in project planning,
	prioritization and technical assistance
City of St. Albert Risk &	Consulted on all projects to
Insurance Department	determine if insurance required.
Secondary	
Office of the	Information and consulting
Environment	
Secondary	
Council	Approval

TIMELINE:	Ongoing yearly program with multiple local design and construction. Storm Flow Mononly.		
FINANCIAL INFORMATION:	Year 2019 Investment	\$3,740,000	
	Year 2020 Investment	\$1,915,000	
	Year 2021 Investment	\$9,540,000	
	Year 2022 Investment	\$1,375,000	
	Year 2023 Investment	\$4,340,000	
	Year 2024 Investment	\$2,095,000	
	Year 2025 Investment	\$2,665,000	
	Year 2026 Investment	\$2,695,000	
	Year 2027 Investment	\$2,665,000	
	Year 2028 Investment	\$1,390,000	
	Total	\$32,710,000	
	See Capital Project Worksheet for details		
OPERATIONAL IMPACTS:	☐ Yes ☒ No		
	If yes, refer to Operating Impacts Worksheets for details.		
ASSOCIATED OPERATING BUSINESS CASE:	N/A		

APPROVAL		
Author:	Kevin Cole	March 2, 2018
	Project Charter Developer	Date
	Kevin Cole	March 2, 2018
Director:		
	Director	Date
GM:	Fann	March 8, 2018
	General Manager	Date

PROJECT COMPONENT	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Land Determined Costs											
Concept Planning	\$40,000	\$110,000	\$55,000	\$280,000	\$40,000	\$130,000	\$60,000	\$80,000	\$95,000	\$80,000	\$80,000
Detailed Planning and Design	\$160,000	\$450,000	\$230,000	\$1,140,000	\$160,000	\$520,000	\$250,000	\$315,000	\$350,000	\$315,000	\$130,000
Site Servicing											
Structure/Building Construction	\$1,145,000	\$3,160,000	\$1,610,000	\$8,100,000	\$1,155,000	\$3,670,000	\$1,765,000	\$2,250,000	\$2,500,000	\$2,250,000	\$1,160,000
Landscaping											
Construction Management	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
Commissioning and QA/QC											
Contingency											
Public Participation Activities											
Equipment											
TOTAL	\$1,365,000	\$3,740,000	\$1,915,000	\$9,540,000	\$1,375,000	\$4,340,000	\$2,095,000	\$2,665,000	\$2,965,000	\$2,665,000	\$1,390,000

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.

Comments:

Costs based on 2015 estimates and the first 3 years of the program are reviewed in more detail annually.

Costs in 2021 include the Deer Ridge Diversion and Wet Ponds project identified in the UMP to provide additional capacity and overflow on the existing system (divert flows from Deer Ridge to a new Storm Water Management Facility). This capital project needs further conceptual planning as it currently doesn't have a site identified.

Cost based on the following breakdown:

Cost component	Cost expected to include and assumptions
Localized Storm Issues (Complaint Driven) & Minor Sag Locations	Annual program to address small complaint driven storm problems in addition to annual budget recommended in the UMP to address minor sag issues
Large Capital Storm Upgrades	Storm LOS projects identified in 2013 UMP Update. Design and construction.
Older Neighbourhood Minor System Upgrades	Annual program which includes design and construction of areas in Sturgeon, Grandin, Mission and other older neighbourhoods requiring addition of minor system.
Storm Flow Monitoring Program	From 2015 contract prices to have 5-6 locations over summer months

OPERATING IMPACTS WORKSHEET		
One Time		
Ongoing		
OPERATING IMPACTS		
TOTAL		



YEAR:	2019					
CHARTER NUMBER:	STO	STORM-007				
CHARTER NAME:	Sedi	Sedimentation and Erosion Control Plan				
LEAD DEPARTMENT:	Utilit	es - Storm				
		⊠ RMR □ GROWTH				
TYPE:		This program supports improvements to our existing storm program to reduce sediment accumulation and erosion into the Sturgeon River.				
ASSET CATEGORY:		☐ Civic Facilities ☐ Master Plan, Studies, & Other ☑ Roads & Other Engineered Structures ☐ Historical/Cultural	☐ Parks & Trails ☐ Mobile & Other Equipment ☐ Land & Land Improvements			
SCOPE STATEMENT:		This program reduces the sediment accumulation into the Sturgeon River.				
PROJECT CHARTER JUSTIFICATION:		This program was originally a 10-year plan from 2012 to 2021, to complete the study, design, and construction of sediment control measures for the storm water system to reduce the accumulation of sediments in the Sturgeon River.				
		Alberta Environment Guidelines for Stormwater indicate 85% of sediment 75 microns or larger must be removed from storm water prior to release to a natural water body.				
		The 2014 Sedimentation and Erosion Control Program Update prioritized several outfalls to be outfitted with sedimentation control facilities based on sedimentation loading due to basin size and land use as well as magnitude of observed sediment deposit at outfall.				
	This Update also assessed the condition of all storm outfalls into the Sturgeon River. It was advised that sedimentation control facilities be installed at outfalls requiring rehabilitation. Based on this recommendation, the program has been extended to address all of the high priority outfalls. This will extend the program until 2024.					



Project Risks

Plans based on current Alberta Environment Stormwater Guidelines, these could become more restrictive at any time.

Projects in the floodplain may require environmental approvals from Environment Canada, Department of Fisheries and Oceans, Alberta Environment, Public lands or Transport Canada, as well as First Nations Consultation and permits under the Alberta Historical Resources Act. Recent changes to some of these agencies may see increased permit processing timelines.

Land is available for the construction of most feasible solution, i.e. grit interceptors, sedimentation ponds, erosion control measures, for each outfall or ravine.

Weather is a concern with these types of projects and as such fall construction is ideal

Soil conditions

Qualified contractors are available

Affected infrastructure relocations and repairs

Assumption

- The City will comply with current federal and provincial regulations related to stormwater and its effects to the environment.
- Land is available and sufficient
- Budget will be approved and is adequate
- Weather will be conducive to fall construction
- AENV will provide approval
- Soil conditions are conducive to chosen construction method
- Qualified contractors are available

	Ι			
	Impacts			
	 Changes in regulations and legislation could change scope of projects in future years. Design and construction costs could escalate more than anticipated Project delays could be realized 			
	Lifecycle Costing			
	Underground Utilit	Underground Utilities have a life cycle of approximately 75 years according to Tangible Capital Asset reporting.		
COMMUNITY VISION – PILLAR / STRATEGY &	The Sedimentation and Erosion Control Program aligns with supporting Natural Environment, specifically:			
RESULT:		eserve, protect and enjoy our Sturgeon River and ravines and their contribution to		
	Strategies include:			
	Improve the water quality of the Sturgeon River through protection of the floodplain and riparian wetland natural areas, improved storr water management techniques and community education.			
STAKEHOLDER	Name & Role	Responsibility or Contribution		
IDENTIFICATION:	CPO Engineering services Primary	Project Management		
	Utilities Primary	Utility Infrastructure Owner		
	Infrastructure Branch - Primary	Input on capacity requirements, maintenance schedules, replacement timelines that could affect design		
	Office of Information and consulting, assist			
		Information and consulting, assistance		
	Community	Information and consulting, assistance with environmental regulatory		
	Community Sustainability - Primary	Information and consulting, assistance with environmental regulatory requirements, public educational aspects, attend open houses		
	Community Sustainability - Primary City of St. Albert	Information and consulting, assistance with environmental regulatory requirements, public educational aspects, attend open houses Consulted on all projects to determine if		
	Community Sustainability - Primary City of St. Albert Risk & Insurance Department	Information and consulting, assistance with environmental regulatory requirements, public educational aspects, attend open houses Consulted on all projects to determine if insurance required		
	Community Sustainability - Primary City of St. Albert Risk & Insurance Department City Culture Dept -	Information and consulting, assistance with environmental regulatory requirements, public educational aspects, attend open houses Consulted on all projects to determine if insurance required Consulted for future Public Art		
TIMELINE:	Community Sustainability - Primary City of St. Albert Risk & Insurance Department City Culture Dept - secondary	Information and consulting, assistance with environmental regulatory requirements, public educational aspects, attend open houses Consulted on all projects to determine if insurance required Consulted for future Public Art opportunities		
TIMELINE:	Community Sustainability - Primary City of St. Albert Risk & Insurance Department City Culture Dept - secondary	Information and consulting, assistance with environmental regulatory requirements, public educational aspects, attend open houses Consulted on all projects to determine if insurance required Consulted for future Public Art		
TIMELINE:	Community Sustainability - Primary City of St. Albert Risk & Insurance Department City Culture Dept - secondary 2012 – 2017 – Outfalls and #11.	Information and consulting, assistance with environmental regulatory requirements, public educational aspects, attend open houses Consulted on all projects to determine if insurance required Consulted for future Public Art opportunities completed to date include #3, #6, #7, #9,		
TIMELINE:	Community Sustainability - Primary City of St. Albert Risk & Insurance Department City Culture Dept - secondary 2012 – 2017 – Outfalls and #11. 2018 – Outfall #4 is on constructed in 2018/19 2019 - 2024 – Remaini #8b and #12. Design i Outfalls #5, #11D, #19	Information and consulting, assistance with environmental regulatory requirements, public educational aspects, attend open houses Consulted on all projects to determine if insurance required Consulted for future Public Art opportunities completed to date include #3, #6, #7, #9,		
TIMELINE:	Community Sustainability - Primary City of St. Albert Risk & Insurance Department City Culture Dept - secondary 2012 – 2017 – Outfalls and #11. 2018 – Outfall #4 is on constructed in 2018/19 2019 - 2024 – Remaini #8b and #12. Design i Outfalls #5, #11D, #19	Information and consulting, assistance with environmental regulatory requirements, public educational aspects, attend open houses Consulted on all projects to determine if insurance required Consulted for future Public Art opportunities completed to date include #3, #6, #7, #9, agoing, and #8 and #10 will be designed and ing outfalls based on sedimentation include, is scheduled one year prior to construction. and #17A/17B have been added to the		

	Year 2019 Investment	\$1,715,000		
	Year 2020 Investment	\$1,616,000		
	Year 2021 Investment	\$1,165,000		
	Year 2023 Investment	\$2,398,000		
	Year 2024 Investment	\$500,000		
	Year 2024 Investment			
	Year 2024 Investment			
	Total	\$9,789,000		
	See Capital Project Worksheet for details			
OPERATIONAL IMPACTS:	⊠ Yes □ No			
	If yes, refer to Operating Impacts Worksheets for details.			
ASSOCIATED OPERATING BUSINESS CASE:	N/A			

APPROVAL		
Author:	Kevin Cole	February 28, 2018
	Project Charter Developer	Date
	Kevin Cole	February 28, 2018
Director:		
	Director	Date
GM:	FmM	March 8, 2018
	General Manager	Date

PROJECT COMPONENT	2019	2020	2021	2022	2023	2024		
Land Determined Costs								
Concept Planning								
Detailed Planning and Design	\$258,000	\$262,000	\$134,000	\$410,000	\$85,000			
Site Servicing								
Structure/Building Construction	\$2,137,000	\$1,453,000	\$1,482,000	\$755,000	\$2,313,000	\$500,000		
Landscaping								
Construction Management								
Commissioning and QA/QC								
Contingency								
Public Participation Activities								
Equipment								
TOTAL	\$2,395,000	\$1,715,000	\$1,616,000	\$1,165,000	\$2,398,000	\$500,000		

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.

Comments:

Costs are based on 2014 program update by Stantec and recent historical information from past outfall projects.

Inflation of 3% is applied to each year based on 2014 cost estimates. Funding is to be from the utility model. Design to occur 1 years prior to construction.

Design and Construction Schedule by Outfall is currently:

Outfall #	Design Year	Construction Year
10	2018	2019
8	2018	2019
8B/12	2019	2020
5	2020	2021
11D	2021	2022
19	2022	2023
17A/17B	2023	2024
	· · · · · · · · · · · · · · · · · · ·	

OPERATING IMPACTS WORKSHEET

☐ One Time ☐ Ongoing	An additional \$5,000/year per outfall is required for cleaning and maintenance of the Sedimentation Control Devices. Costs will begin after Final Acceptance, 2 years after project completion.
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OPERATING IMPACTS	2019	2020	2021
Outfall 10 – Sedimentation Control Device Cleaning/Maintenance		\$3,000	\$3,000
Outfall 4 - Sedimentation Control Device Cleaning/Maintenance	\$3,000	\$3,000	\$3,000
Outfall 8 – Sedimentation Control Device Cleaning/Maintenance		\$3,000	\$3,000
TOTAL	\$3,000	\$9,000	\$9,000



YEAR:	2019					
CHARTER NUMBER:	WAS	SWT-001				
CHARTER NAME:	Wastewater Rehabilitation Program					
LEAD DEPARTMENT:	Utilities - Wastewater					
		⊠ RMR □ GROWTH				
TYPE:		This project supports on-going replacement rehabilitation of existing wastewater				
ASSET CATEGORY:		☐ Civic Facilities ☐ Master Plan, Studies, & Other ☑ Roads & Other Engineered Structures ☐ Historical/Cultural	☐ Parks & Trails ☐ Mobile & Other Equipment ☐ Land & Land Improvements			
SCOPE STATEMENT:		To optimize the capacity and timely rehabilitation of the City's wastewater collection system through proactive programs and initiatives.				
PROJECT CHARTER JUSTIFICATION:		This project encompasses Inflow and Infiltration reduction programs, the replacement/rehabilitation of wastewater assets nearing, at, or beyond the end of life cycle and CCTV inspection programs.				
		This project enables the City to continue the proactive programs and system upgrades with an outcome to reduce water infiltration into the wastewater collection system. As a result, this supports the increased capacity for the wastewater flows, reduces the potential risks associated with peak flows, and wastewater surcharging.				
		The project also provides the funding needed for the rehabilitation or replacement of wastewater appurtenances (i.e. piping, valves, pumps and access points) as determined through necessary operation and maintenance program activities, wastewater system studies, CCTV inspection programs that identify asset condition and prioritization and other supporting analytics.				
		Project Risks or Constraints				
		Inclement weather, contractor availability, seasonal staff availability conflicting underground infrastructure, emergency breakdowns ma require priorities to be shifted.				
		<u>Assumptions</u>				
		For the purpose of this project it is assumed that the funding is approved and contractors will be available to complete the work				

	pending on weather. Also, it is assumed substantially differ from the previous year					
	<u>Impacts</u>					
	The 2019 Inflow and Infiltration program is required to populate the City's utility model. If this project did not move forward, the data required for wastewater modeling would not exist which would affect the accuracy of the model. Also, the replacement of prioritized / end of life cycle infrastructure would not occur.					
COMMUNITY VISION – PILLAR / STRATEGY & RESULT:	Built Environment – We build our commun sustain balanced development, with a rev honouring our unique settlement history a	erent eye to the past,				
	3.4 Ensure that municipal utilities and ser efficient, economic, coordinated and timel desired development of the city.					
	4.0 We build innovative, long lasting infra- minimizes the use of our natural resource between the natural and built environmen	s and creates harmony				
	4.1 Maintain corporate and infrastructure assets in an efficient and sustainable manner that meets the present and future growth needs of the city and in accordance with approved guiding principles.					
STAKEHOLDER IDENTIFICATION:	Utilities Manager – Primary Finance – budget allocation and approval Capital Projects Office - Secondary Risk and Insurance- Secondary					
TIMELINE:	The majority of the work is seasonal in nature and can only be completed during the spring and summer. Seasonal field staff commence their work in May to assess flow data loggers for wastewater modeling input.					
	Testing and commissioning of replaced infrastructure occurs immediately after replacement is completed.					
FINANCIAL INFORMATION:	Year 2019 Investment	\$261,000				
	Year 2020 Investment	\$268,000				
	Year 2021 Investment	\$268,000				
	Year 2022 Investment	\$268,000				
	Year 2023 Investment	\$268,000				
	Year 2024 Investment	\$268,000				
	Year 2025 Investment \$268,000					
	Year 2026 Investment \$268,000					
	Year 2027 Investment \$268,000					
	Year 2028 Investment	\$268,000				
	Total	\$2,673,000				
	See Capital Project Worksheet for details					

OPERATIONAL IMPACTS:	☐ Yes ☐ No
	If yes, refer to Operating Impacts Worksheets for details.
ASSOCIATED OPERATING BUSINESS CASE:	N/A

APPROVAL		
Author:	Brian Brost, Manager of Utilities	February 28, 2018
	Project Charter Developer	Date
	Kevin Cole	February 28, 2018
Director:		
	Director	Date
GM:	FmM	March 8, 2018
	General Manager	Date

PROJECT COMPONENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2018
Land Determined Costs										
Concept Planning										
Detailed Planning and Design										
Site Servicing										
Structure/Building Construction	\$261,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000
Landscaping										
Construction Management										
Commissioning and QA/QC										
Contingency										
Public Participation Activities										
Equipment										
TOTAL	\$261,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000	\$268,000

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.

Comments:		

OPERATING IMPACTS WORKSHEET		
One Time		
Ongoing		
OPERATING IMPACTS		
TOTAL		



YEAR:	2019							
CHARTER NUMBER:	WAS	SWT-002						
CHARTER NAME:	Was	Wastewater Household Service Replacement						
LEAD DEPARTMENT:	Utilit	Utilities - Wastewater						
		⊠ RMR □ GROWTH						
TYPE:		This project supports on-going repla wastewater services that are defect						
ASSET CATEGORY:		☐ Civic Facilities ☐ Master Plan, Studies, & Other ☑ Roads & Other Engineered Structures ☐ Historical/Cultural	☐ Parks & Trails ☐ Mobile & Other Equipment ☐ Land & Land Improvements					
SCOPE STATEMENT:		To support the timely and cost effective replacement or rehabilitation of the City's portion of defective wastewater services to improve system reliability and achieve demonstrated cost savings for both the resident and the City.						
PROJECT CHARTER JUSTIFICATION:		Within the annual budget value of \$250,000 approximately 50 wastewater services (dependent upon the complexity of each service/construction method) can be replaced or rehabilitated accounting for the City's portion of the cost. the homeowner is responsible for their portion of the wastewater service replacement from connection at property line to their home if required. Overall, the cost savings to be realized are a result of sharing costs (i.e. expense for mobilization/demobilization of equipment, utility locates, and other applicable construction activities) between the City and the homeowner as opposed to both parties incurring these costs solely.						
		Approximately 19,000 residential sanitary services exist in the City with life cycles spanning 50 years yet remaining (new) to those requiring immediate replacement. A range of wastewater service laterals within the City have varying types of structural deficiencies requiring frequent maintenance to prevent sewer backups and several circumstances, the deficiencies occur regardless of life cycle.						
		The allocation of this budget essentially reduces the amount of sewer backups that have or could potentially occur as well as ongoing associated sewer service maintenance work that is conducted due to deficiencies						

	Project Risks or Constraints				
	Inclement weather, contractor availability, seasonal staff availability, conflicting underground infrastructure. Residents unwilling to rehab private portion of the service.				
	<u>Assumptions</u>				
	For the purpose of this project it is assumed that the funding is approved, contractors will be available to complete the work pending normal seasonal weather, and that the costs will not substantially increase from previous year.				
	<u>Impacts</u>				
	If the assumption is incorrect the amount of services expected to be replaced in 2019 would reduce.				
COMMUNITY VISION – PILLAR / STRATEGY & RESULT:	Built Environment – We build our community towards the future to sustain balanced development, with a reverent eye to the past, honouring our unique settlement history and distinct identity.				
	3.4 Ensure that municipal utilities and ser efficient, economic, coordinated and timel desired development of the city.				
	4.0 We build innovative, long lasting infrastructure that is efficient, minimizes the use of our natural resources and creates harmony between the natural and built environment.				
	4.1 Maintain corporate and infrastructure assets in an efficient and sustainable manner that meets the present and future growth needs of the city and in accordance with approved guiding principles.				
STAKEHOLDER IDENTIFICATION:	Utilities Manager – Primary Finance – budget allocation and approval Capital Projects Office - Secondary Risk and Insurance- Secondary				
TIMELINE:	Q1: RFQ				
	Q2-Q4: Construction Testing and commissioning to take place immediately after replacement is completed. Concrete and landscape restoration occurs in collaboration with PW Operations scheduling.				
FINANCIAL INFORMATION:	Year 2019 Investment \$250,000				
	Year 2020 Investment \$250,000				
	Year 2021 Investment \$250,000				
	Year 2022 Investment \$250,000				
	Year 2023 Investment \$250,000				
	Year 2024 Investment \$250,000				
	Year 2025 Investment \$250,000				
	Year 2026 Investment \$250,000				
	Year 2027 Investment \$250,000				
	Year 2028 Investment \$250,000				

	Total	\$2,500,000	
	See Capital Project Worksheet for details.		
OPERATIONAL IMPACTS:	☐ Yes ☒ No		
	If yes, refer to Operating Impacts Worksheets for details.		
ASSOCIATED OPERATING BUSINESS CASE:	N/A		

APPROVAL		
Author:	Brian Brost, Manager of Utilities	February 28, 2018
	Project Charter Developer	Date
	Kevin Cole	February 28, 2018
Director:		
	Director	Date
GM:	Fann	March 8, 2018
	General Manager	Date

PROJECT COMPONENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Land Determined Costs										
Concept Planning										
Detailed Planning and Design										
Site Servicing										
Structure/Building Construction	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Landscaping										
Construction Management										
Commissioning and QA/QC										
Contingency										
Public Participation Activities										
Equipment										
TOTAL	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.

Comments:		

OPERATING IMPACTS WORKSHEET		
One Time		
Ongoing		
OPERATING IMPACTS		
TOTAL		



YEAR:	2019				
CHARTER NUMBER:	WASWT-003				
CHARTER NAME:	Wastewater Main Replacement				
LEAD DEPARTMENT:	Utilities - Wastewater				
		⊠ RMR ☐ GROWTH			
TYPE:		This project supports the on-going assessment, rehabilitation and replacement of existing wastewater system infrastructure.			
ASSET CATEGORY:		☐ Civic Facilities ☐ Master Plan, Studies, & Other ☐ Roads & Other Engineered Structures ☐ Historical/Cultural	☐ Parks & Trails ☐ Mobile & Other Equipment ☑ Land & Land Improvements		
SCOPE STATEMENT:		Rehabilitation of wastewater infrastructure as determined through asset management and prioritization plans.			
PROJECT CHARTER JUSTIFICATION:		Repair of the wastewater main line pipes through various methods including the Cured in Place Pipe (CIPP Lining Program) and open cut methodologies. The pipe rehabilitation is prioritized based on data collected through Closed Circuit Television (CCTV) and excessive operation and maintenance issues. This ongoing initiative enables the City to proactively address the rehabilitation of structurally deficient pipes in the wastewater collection system. The goal of this program is to repair pipes before they degrade to such a point that there is serious risk of catastrophic failure, after which the costs of repair increases significantly and negatively impact the level of service provided by this infrastructure until repair is completed. Asset Condition:			
		The focus over the last several winters has been to get the backlog of video assessment data reviewed and now can focus on further assessment and prioritization of projects. This is an ongoing program, meaning that as sewer is rehabilitated, more needs are going to be identified through condition assessment as sewer ages and deteriorate.			
		This program will also be used to address manhole rehabilitation for manholes on sewer mains that are in poor condition. We will also use this budget to perform a study regarding H2S levels, their			

effects on our current infrastructure, and potential solutions to decrease H2S gas and therefore extend infrastructure life.

Project Risks

- 1. Finding additional issues with existing pipes when uncovered or when pre-inspection video condition is worse than expected.
- 2. The repairs are not completed prior to more expensive repairs or replacement being required.
- High flows in some trunks during peak daytime hours may require work to be done during the night in residential neighbourhoods to reduce risk of basement back-ups.
- 4. Some major wastewater mains are along major arterials requiring traffic impacts or night work.

Assumptions

- 1. Issues will not be encountered that will change the scope of the program.
- 2. Qualified Contractors and supplies will be available to perform work on time.
- 3. That large diameter and high cost projects (over annual \$500-\$600K budget) will be identified every 3 years.
- 4. No major breakthroughs in trenchless technologies and recommended best practices for waste water main rehabilitation therefore pricing will remain consistent with allowance for 5% inflation.
- 5. Number of new mains identified for rehabilitation with annual video inspections will remain consistent as in past years and proposed project budget will continue to reduce overall amount of Level 4 and 5 rated pipes.

Impacts

- 1. Cost overrun and project delay.
- 2. Rehabilitation on wastewater pipes postponed until contractors become available.
- Large cost rehabs do not occur on one of the larger budget years. Either have to go back to Council for higher budget or delay project by one-two years to ensure adequate budget.
- 4. Actual construction costs will be affected either negatively or positively depending on cost of new types of rehabilitation
- 5. Overall program progress could be affected positively or negatively which may require annual adjustment of capital program.

Lifecycle Costing

Underground utilities have a life of 75 years. With this program it will insure continued service through the pipes capacity and functionality.

COMMUNITY VISION – PILLAR / STRATEGY & RESULT:

The Wastewater Main Replacement program aligns with supporting Built Environment, specifically:

We plan and manage the growth of our city so future generations can inherit the same strong, vibrant community we've enjoyed.

Strategies include:

	Ensure that municipal utilities and efficient, economic, coordinated, desired development of the city.				
STAKEHOLDER IDENTIFICATION:	Name & Role Respondent		onsibility or ibution		
	Engineering Services Primary	Projec	t Management		
	Public Works – Utilities Primary	Inform assista	ation – technical		
	Residents Secondary	Inform	ation		
	City of St. Albert Risk & Insurance Department	Consulted on all projects to determine if insurance is required.			
	City Council Approval		val		
TIMELINE:	Ongoing yearly program, with a larger project taking place every third year.				
FINANCIAL INFORMATION:					
	Year 2019 Investment		\$688,000		
	Year 2020 Investment		\$1,250,000		
	Year 2021 Investment		\$688,000		
	Year 2022 Investment		\$688,000		
	Year 2023 Investment		\$1,250,000		
	Year 2024 Investment		\$688,000		
	Year 2025 Investment		\$688,000		
	Year 2026 Investment		\$1,250,000		
	Year 2027 Investment		\$688,000		
	Year 2028 Investment		\$688,000		
	Total		\$8,566,000		
	See Capital Project Worksheet for details.				
OPERATIONAL IMPACTS:	☐ Yes ⊠ No				
	If yes, refer to Operating Impacts Worksheets for details.				
ASSOCIATED OPERATING BUSINESS CASE:	N/A				

APPROVAL				
Author:	Kevin Cole	March 1, 2018		
	Project Charter Developer	Date		
	Kevin Cole	March 1, 2018		
Director:				
	Director	Date		
GM:	FmM	March 8, 2018		

Date

General Manager

PROJECT COMPONENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Land Determined Costs										
Concept Planning	\$20,500	\$37,500	\$20,500	\$20,500	\$37,500	\$20,500	\$20,500	\$37,500	\$20,500	\$20,500
Detailed Planning and Design	\$82,500	\$150,000	\$82,500	\$82,500	\$150,000	\$82,500	\$82,500	\$150,000	\$82,500	\$82,500
Site Servicing										
Structure/Building Construction	\$585,000	\$1,062,500	\$585,000	\$585,000	\$1,062,500	\$585,000	\$585,000	\$1,062,500	\$585,000	\$585,000
Landscaping										
Construction Management										
Commissioning and QA/QC										
Contingency										
Public Participation Activities										
Equipment										
TOTAL	\$688,000	\$1,250,000	\$688,000	\$688,000	\$1,250,000	\$688,000	\$688,000	\$1,250,000	\$688,000	\$688,000

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.

Comments:

Costs have not been increased for inflation this year

Included \$560,000 every three years (2020, 2023, and 2026) for a large diameter rehabilitation as identified by the asset management program.

DPERATING IMPACTS WORKSHEET					
☐ One Time					
Ongoing					
		I	I		
OPERATING IMPACTS					
TOTAL					



YEAR:	2018					
CHARTER NUMBER:	WAS	SWT-004				
CHARTER NAME:	Was	tewater Collection System Level of S	ervice (LOS)			
LEAD DEPARTMENT:	Utilit	ies - Wastewater				
	⊠ RMR □ GROWTH					
TYPE:		This project supports our existing was level of service limitations and incre existing system.				
ASSET CATEGORY:		☐ Civic Facilities ☐ Master Plan, Studies, & Other ☑ Roads & Other Engineered Structures ☐ Historical/Cultural	☐ Parks & Trails ☐ Mobile & Other Equipment ☐ Land & Land Improvements			
SCOPE STATEMENT:		Provide relief to areas affected by leas risk of basement flooding.	evel of service limitations such			
PROJECT CHARTER JUSTIFICATION:		This charter is intended to address level of service needs (i.e. increasing capacity of selected mains) as identified in the 2014 Utility Master Plan Update. While WASWT-003 addresses needs from a life cycle perspective (i.e. aging pipes), this charter is intended to provide relief to areas affected by level of service limitations such as surcharging of mains causing basement flooding.				
		The Utility Master Plan indicated a need for level of service (LOS) improvements throughout the wastewater collection system. This program will begin to address these LOS locations on a priority basis addressing additional capacity requirements through redesign and enhancement of the existing infrastructure or potentially new infrastructure.				
		A portion of the annual funding is to support wastewater flow monitoring locations to field verify the model results and aid in prioritization of the identified wastewater LOS locations.				
		A concept review was completed in 2016 which indicated that the next 3 priorities will be as follows:				
		2019: Design – Langley Ave/Malmo Ave				

2020: Construction - Langley Ave/Malmo Ave

2021: Design – Woodlands Road

2022: Construction - Woodlands Road

It is anticipated that further priorities will be determined in the 2018/19 UMP Update. The charters will be updated with more precise amounts for future locations (2023 and later) at that time.

Project Risks

- Areas identified for additional capacity will not expose more work than estimated.
- Construction cost will be within approved budget.
- Contractors will be available to perform work.
- Weather has significant impact on wastewater flows which will impact unpredictability of by-pass pumping and construction costs as well as schedule.
- Soil conditions affecting construction method and schedule.
- Utility conflicts.
- Maintain existing level of service during construction and commissioning in all flow conditions.

Assumptions

- 1. Issues will not be encountered with existing infrastructure and conditions that will change the scope of the program.
- 2. Plan will be reflective of optimizing both development and capacity issues.
- 3. Not performing the work will results in increase risk of basement flooding for affected properties in wet weather flow conditions.
- 4. Funds available will be sufficient.
- 5. Qualified contractors will be available for work.
- 6. Weather will not delay work
- 7. Work on major roadways will be able.
- 8. No unknown utility conflicts.
- 9. Services will be able to be maintained during construction.
- 10. Soil conditions will allow for any type of construction methods

Impacts

- 1. Change of construction method, increased construction cost with scope increase, schedule delay.
- 2. Increase risk of basement flooding or Development occurs prior to upgrade resulting in additional capacity issues.
- 3. Not performing the work will results in increase risk of basement flooding for affected properties in wet weather flow conditions.
- 4. Will have to delay project year or go to Council for increased budget.
- 5. Affects schedule and costs as lack of interest from contractors may require specialized procurement strategy. Re-tendering and delays on carrying out the work.
- 6. Increased construction cost and schedule delay.
- 7. Construction schedule adjusted to accommodate traffic and local users.
- 8. Impacts schedule and costs.

COMMUNITY VISION – PILLAR / STRATEGY & RESULT:	9. Increased cost to develop and maintain interim servicing strategy during construction. Lifecycle Costing • Underground utilities have a life of 75 years according to Tangible capital asset reporting. The Wastewater Collection System Level of Service program aligns with supporting Built Environment, specifically: We plan and manage the growth of our city so future generations can inherit the same strong, vibrant community we've enjoyed.				
	Strategies include: Ensure that municipal utilities and services are provided in an efficient, economic, coordinated, and timely manner relative to the desired development of the city.				
STAKEHOLDER IDENTIFICATION:	Name & Role		onsibility or		
	CPO Engineering services		ibution		
	Primary		t Management		
	Utilities Primary	Involve	r of the infrastructure ed in project planning, zation and technical ance		
	City of St. Albert Risk & Insurance Department		lited on all projects to nine if insurance is ed.		
	Council & Residents in area Secondary	Inform	ation and timelines		
TIMELINE:	Bi-annual program. In each of the	followin	g year:		
	2019, 2021, 2023 and 2025, 202 completed.	7 - Desi	gn and engineering will be		
	2020, 2022, 2024 and 2026, 2028 completed.	3 - Cons	truction will be started and		
FINANCIAL INFORMATION:	Year 2019 Investment		\$440,000		
	Year 2020 Investment		\$1,417,000		
	Year 2021 Investment		\$490,000		
	Year 2022 Investment		\$3,054,000		
	Year 2023 Investment	\$460,000			
	Year 2024 Investment		\$2,840,000		
	Year 2025 Investment		\$460,000		
	Year 2026 Investment		\$2,840,000		
	Year 2027 Investment		\$460,000		

	Year 2028 Investment	\$2,840,000		
	Total	\$15,301,000		
	See Capital Project Worksheet for details.			
OPERATIONAL IMPACTS:	☐ Yes ☒ No			
	If yes, refer to Operating Impacts Worksheets for details.			
ASSOCIATED OPERATING BUSINESS CASE:	N/A			

APPROVAL		
Author:	Michele Habrylo	March 1, 2018
	Project Charter Developer	Date
	Kevin Cole	March 1, 2018
Director:		
	Director	Date
GM:	FmM	March 8, 2018
	General Manager	Date

PROJECT COMPONENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Land Determined Costs										
Concept Planning										
Detailed Planning and Design	\$400,000		\$450,000		\$420,000		\$420,000		\$420,000	
Site Servicing										
Structure/Building Construction		\$1,377,000		\$3,014,000		\$2,800,000		\$2,800,000		\$2,800,000
Landscaping										
Construction Management	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Commissioning and QA/QC										
Contingency										
Public Participation Activities										
Equipment										
TOTAL	\$440,000	\$1,417,000	\$490,000	\$3,054,000	\$460,000	\$2,840,000	\$460,000	\$2,840,000	\$460,000	\$2,840,000

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.

	Comments:	
ı		

OPERATING IMPACTS WORKSHEET					
☐ One Time ☐ Ongoing					
OPERATING IMPACTS					
TOTAL					



YEAR:	2019				
CHARTER NUMBER:	WASWT-007				
CHARTER NAME:	Was	tewater CCTV Equipment Replacement	ent Requirements		
LEAD DEPARTMENT:	Utilit	ies - Wastewater			
		☐ RMR ☐ GROWTH			
TYPE:		This program supports the purchase television" (CCTV) lateral launch ins			
ASSET CATEGORY:		☐ Civic Facilities ☐ Master Plan, Studies, & Other ☐ Roads & Other Engineered Structures ☐ Historical/Cultural	☐ Parks & Trails ☑ Mobile & Other Equipment ☐ Land & Land Improvements		
SCOPE STATEMENT:	To purchase new "closed circuit camera television" (CCTV) lateral launch inspection equipment that is integral to effectively assessin the condition of infrastructure and establishing analytics that drive applicable preventative repairs, maintenance or replacement of wastewater pipelines and service laterals.				
PROJECT CHARTER JUSTIFICATION:		Current inspection process of wastewater services is carried out by personnel gaining access into homes typically after a resident reports a problem or back-up of a sewer service. In response and as a service by the City personnel conduct inspection through a laborious method of carrying equipment into the home, access sewer service clean-outs and complete the inspection with camera/cable equipment being extended and exposed to the sewer then retrieved all the equipment while attempting to maintain a clean work space within the home.			
		Approximately 1000 inspections are conducted annually in this reactionary method however, advances and innovation in inspection equipment offers the ability for proactive inspections of sewer laterals without any entry into the home and ability to detect a problem or assess conditions for RMR planning through a planned approach.			
		Benefits of this project investment in	nclude:		
		 Improved service to residents whereas significantly reducing the need/reasoning for entry into homes compared to traditional inspection methods; allows for inspections of service laterals concurrently with mainline inspections being performed realizing significant productivity/efficiencies; 			

	 conducting proactive inspections through a mainline entry along with inspection of the mainline significantly improves the ability to determine asset condition and annual capital program planning; offers the ability to recognize sewer/service conditions that if otherwise unnoticed or attended to, may likely cause a back-up; and Existing CCTV inspection equipment does not permit this capability of inspection however, its' design is compatible with "plug and deployment" of the same manufacturer equipment. 				
COMMUNITY VISION – PILLAR / STRATEGY & RESULT:	Built Environment – We build our community towards the future to sustain balanced development, with a reverent eye to the past, honouring our unique settlement history and distinct identity. 3.4 Ensure that municipal utilities and services are provided in an efficient, economic, coordinated and timely manner relative to the desired development of the city.				
	4.0 We build innovative, long lasting infrastructure that is efficient, minimizes the use of our natural resources and creates harmony between the natural and built environment.				
	4.1 Maintain corporate and infrastructure assets in an efficient and sustainable manner that meets the present and future growth needs of the city and in accordance with approved guiding principles.				
STAKEHOLDER IDENTIFICATION:	Utilities Manager – Primary Finance – budget allocation and approval Capital Projects Office - Secondary Risk and Insurance- Secondary				
TIMELINE:	Q1: RFQ Q3: Installation & Commissioning				
FINANCIAL INFORMATION:	Year 2019 Investment	\$130,000			
	Year 2020 Investment	\$0			
	Year 2021 Investment	\$0			
	Year 2022 Investment	\$0			
	Year 2023 Investment	\$0			
	Year 2024 Investment	\$0			
	Year 2025 Investment	\$0			
	Year 2026 Investment	\$0			
	Year 2027 Investment \$0				
	Year 2028 Investment \$0				
	Total	\$130,000			
	See Capital Project Worksheet for details				
OPERATIONAL IMPACTS:	☐ Yes ☒ No				
	If yes, refer to Operating Impacts Worksh	eets for details.			

ASSOCIATED OPERATING	N/A
BUSINESS CASE:	N/A

Author: Brian Brost, Manager of Utilities Project Charter Developer Date Kevin Cole Director: Director Date March 8, 2018 General Manager Date

PROJECT COMPONENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Land Determined Costs										
Concept Planning										
Detailed Planning and Design										
Site Servicing										
Structure/Building Construction										
Landscaping										
Construction Management										
Commissioning and QA/QC										
Contingency										
Public Participation Activities										
Equipment				\$130,000						
TOTAL				\$130,000						

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.

Comments:		

OPERATING IMPACTS WORKSHEET		
One Time		
Ongoing		
OPERATING IMPACTS		
TOTAL		



YEAR:	2019	9				
CHARTER NUMBER:	WAS	SWT-020				
CHARTER NAME:	Was	tewater Lift Station Study				
LEAD DEPARTMENT:	Utilities - Wastewater					
		⊠ RMR ☐ GROWTH				
TYPE:		This project is responsible for asses infrastructure at all City of St. Albert				
ASSET CATEGORY:		☐ Civic Facilities ☐ Master Plan, Studies, & Other ☐ Roads & Other Engineered Structures ☐ Historical/Cultural	☐ Parks & Trails ☐ Mobile & Other Equipment ☑ Land & Land Improvements			
SCOPE STATEMENT:		This project consists at an in-depth study of the condition of all the City Lift stations from a life cycle perspective (condition assessment).				
PROJECT CHARTER JUSTIFICATION:		A Life-Cycle Assessment study of the completed in 2018. The Assessment infrastructure and prioritized upgrade that are viable and cost- effective. The 2006, indicated a need to upgrade the recommended upgrades range from issues to a full reconstruction of sort study, many of the capital upgrades Riel Lift Station Reconstruction and Reconstruction. Life Cycle Assessment document, and need to be updated gives the City adequate time to impure update the capital programs, and erroperly. Lift stations are subject to building envelope and the pumping station. These studies ensure that the known, so that the City can proactive investments to ensure continuing of the building envelope. As part of a continuing asset management of the Comprehensive assessment of th	It will review the existing les and rehabilitation programs the previous study, completed in the facilities. These in minor repairs to address safety me lift stations. Since the 2006 is were performed including the the Gate Avenue Lift Station ment Studies are a living regularly. 10 years per study dement the recommendations, insure that the funds are used deterioration of both the equipment operation in the the condition of the lift station is rely plan the required peration and safe condition of			
		comprehensive assessment of the City's lift stations is recommended to be scheduled for 2027 to continue to update the capital and maintenance plan for all of the City's lift stations.				

Project Risks

- Risk of not performing includes out-dated condition assessment information which can result in increases operational issues and emergency (reactive) repairs versus optimizing the maintenance and replacement strategy for each lift station.
- Construction Costs do not escalate beyond funding levels.
- Qualified consultants will be available for the work.
- Completed within the time frame no significant delays.

Assumptions

- Qualified consultants available to perform study within budget.
- Consultant will be able to perform study in scheduled timeframe.
- Inflationary costs will be as expected or lower.
- Staffing available to manage including PW operations staff.

Impacts

- Project may need to be postponed
- Final report may not be submitted in Q4 in time for following year's capital planning.

Lifecycle Costing

Building structures have a life of 35 years and mechanical and electrical have a 25 years life on average. Different components on the lift station can be reaching their life expectancy and this is what this study would determine. Also, components can be reaching their expected life faster based on their specific operating conditions.

COMMUNITY VISION – PILLAR / STRATEGY & RESULT:

The Wastewater Lift Station Study aligns with supporting Built Environment, specifically:

We plan and manage the growth of our city so future generations can inherit the same strong, vibrant community we've enjoyed.

Strategies include:

Ensure that municipal utilities and services are provided in an efficient, economic, coordinated, and timely manner relative to the desired development of the city.

STAKEHOLDER IDENTIFICATION:

Name & Role	Responsibility or Contribution
Engineering Services Primary	Project Management
Public Works – Utilities Primary	Information – Input and technical assistance
Residents Secondary	Information

	City of St. Albert Risk & Consulted on all projects to				
	Insurance Department	determine if insurance is required.			
	City Council	Appro			
TIMELINE:	Studies are to be conducted ever	, 10 you	ro		
	Studies are to be conducted ever	y 10 yea	15.		
FINANCIAL INFORMATION:					
	Year 2019 Investment		\$0		
	Year 2020 Investment		\$0		
	Year 2021 Investment \$0				
	Year 2022 Investment	\$0			
	Year 2023 Investment	\$0			
	Year 2024 Investment	\$0			
	Year 2025 Investment \$0				
	Year 2026 Investment \$0				
	Year 2027 Investment		\$200,000		
	Year 2028 Investment		\$0		
	Total		\$200,000		
	See Capital Project Worksheet for details.				
OPERATIONAL IMPACTS:	☐ Yes ☒ No				
	If yes, refer to Operating Impacts Worksheets for details.				
ASSOCIATED OPERATING BUSINESS CASE:	N/A				

APPROVAL

Author:	Michele Habrylo	February 28, 2018
	Project Charter Developer	Date
	Kevin Cole	February 28, 2018
Director:		
!	Director	Date
GM:	Fann	March 8, 2018
	General Manager	Date

PROJECT COMPONENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Land Determined Costs										
Concept Planning									\$60,000	
Detailed Planning and Design									\$140,000	
Site Servicing										
Structure/Building Construction										
Landscaping										
Construction Management										
Commissioning and QA/QC										
Contingency										
Public Participation Activities										
Equipment										
TOTAL									\$200,000	

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.	

OPERATING IMPACTS WORKSHEET		
One Time		
Ongoing		
OPERATING IMPACTS		
TOTAL		



YEAR:	2019				
CHARTER NUMBER:	WATER-003				
CHARTER NAME:	Water System Infrastructure Rehabilitation				
LEAD DEPARTMENT:	Utilit	ies - Water			
		⊠ RMR ☐ GROWTH			
TYPE:		This project supports on-going replacement rehabilitation of existing water systems.			
ASSET CATEGORY:		☐ Civic Facilities ☐ Master Plan, Studies, & Other ☑ Roads & Other Engineered Structures ☐ Historical/Cultural	☐ Parks & Trails ☐ Mobile & Other Equipment ☐ Land & Land Improvements		
SCOPE STATEMENT:		To support the safe, reliable and se timely rehabilitation or replacement proactive programs and projects.			
PROJECT CHARTER JUSTIFICATION:		This project encompasses the rehal replacement/maintenance projects of fire hydrants, main valves, pressure cathodic protection systems, water and other associated water system. This project provides the funding nedeteriorated, nearing or beyond its' determined through necessary oper activities, water system studies, assignioritization and other supporting at the current inventory of the City's Viconsists of approximately: 365 km Water m=Main 2200 Fire Hydrants 2550 Main Line Valves 32 Pressure Relief/Control Valves (3 Reservoir Pump Stations	of water infrastructure including a control/air release valves, main spot replacements, pumps appurtenance. Reded for infrastructure that has intended life span as ration and maintenance set condition assessment and nalytics. Vater system infrastructure PRV's)		
		This project is intended to mitigate the disruption that can occur through undowns as well as the mitigating the both public and private or adverse fresult from failures of the water system.	nscheduled, emergent shut- potential for damage to property environmental impacts that may		

	Project Risks or Constraints Contractor availability and inclement wear underground infrastructure. Assumptions	ther, conflicting
	For the purpose of this project it is assum approved and contractors will be available Also that costs will not substantially differ	e to complete the work.
	Impacts If assumptions are incorrect the designate replaced in 2016 which could result in inc potential for infrastructure failure, unscheden environmental contraventions and additional contraventions.	reased frequency or duled service disruptions,
COMMUNITY VISION – PILLAR / STRATEGY & RESULT:	Built Environment – We build our communication balanced development, with a revision balanced development history at the settlement history at the settlement history at the settlement history at the settlement history at	erent eye to the past,
	3.4 Ensure that municipal utilities and ser efficient, economic, coordinated and time desired development of the city.	
	4.0 We build innovative, long lasting infra- minimizes the use of our natural resource between the natural and built environmen	s and creates harmony
	4.1 Maintain corporate and infrastructure sustainable manner that meets the preservor the city and in accordance with approve	nt and future growth needs
STAKEHOLDER IDENTIFICATION:	Utilities Manager – Primary Finance – budget allocation and approval Capital Projects Office - Secondary Risk and Insurance- Secondary	
TIMELINE:	Q1 – RFQ Q2-Q4 – Construction	
FINANCIAL INFORMATION:	Year 2019 Investment	\$530,000
	Year 2020 Investment	\$530,000
	Year 2021 Investment	\$530,000
	Year 2022 Investment	\$530,000
	Year 2023 Investment	\$550,000
	Year 2024 Investment	\$550,000
	Year 2025 Investment	\$550,000
	Year 2026 Investment	\$550,000
	Year 2027 Investment	\$550,000
	Year 2028 Investment	\$550,000
	Total	\$5,420,000
	See Capital Project Worksheet for details	

OPERATIONAL IMPACTS:	☐ Yes ☐ No
	If yes, refer to Operating Impacts Worksheets for details.
ASSOCIATED OPERATING BUSINESS CASE:	N/A

APPROVAL		
Author:	Brian Brost, Manager of Utilities	February 28, 2018
	Project Charter Developer	Date
	Kevin Cole	February 28, 2018
Director:		
	Director	Date
GM:	FmM	March 8, 2018
	General Manager	Date

PROJECT COMPONENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Land Determined Costs										
Concept Planning										
Detailed Planning and Design										
Site Servicing										
Structure/Building Construction	\$530,000	\$530,000	\$530,000	\$530,000	\$550,000	\$550,000	\$550,000	\$550,000	\$550,000	\$550,000
Landscaping										
Construction Management										
Commissioning and QA/QC										
Contingency										
Public Participation Activities										
Equipment										
TOTAL	\$530,000	\$530,000	\$530,000	\$530,000	\$550,000	\$550,000	\$550,000	\$550,000	\$550,000	\$550,000

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.

Comments:

Hydrants: Estimated \$20,000 per hydrant replaced.
Main line valves: Estimated \$10,000 per valve replaced.

Pressure Reducing Valves: Estimated \$20,000 per valve replaced, additional \$180,000 per location to replace the entire valve chambers and associated equipment up to current reliable operational standard.

These costs are derived from the 2015 construction programs and consultation with industry providers. No operational impacts.

OPERATING IMPACTS WORKSHEET		
One Time		
Ongoing		
OPERATING IMPACTS		
TOTAL		



YEAR:	2019				
CHARTER NUMBER:	WATER-004				
CHARTER NAME:	Water Network Level of Service				
LEAD DEPARTMENT:	Utilit	ies - Water			
		⊠ RMR ☐ GROWTH			
TYPE:		This project supports our existing war of service limitations and increasing existing water network.			
ASSET CATEGORY:		☐ Civic Facilities ☐ Master Plan, Studies, & Other ☑ Roads & Other Engineered Structures ☐ Historical/Cultural	☐ Parks & Trails ☐ Mobile & Other Equipment ☐ Land & Land Improvements		
SCOPE STATEMENT:		Construct new water mains or incremains to enhance network performal level of service (LOS) locations in the addressing additional capacity, reliawater network. This will be achieve in strategic locations throughout the performance in strategic areas.	ance. This program will address ne city on a priority basis bility and redundancy within the d by building new water mains		
PROJECT CHARTER JUSTIFICATION:		Asset Condition: The 2014 Utility Master Plan Update network looping and pipe upgrades level. This work is required to ensur for our residents. New needs are all fire flow and water quality testing. Treflect those needs, as well as recorplan updates, on an ongoing basis. In 2017 an assessment was done to identified in the 2014 UMP Update, testing to confirm requirements. Detail locations is to be completed in 2018.	are required to increase service e continued and reliable service so identified every year through his charter is to be updated to mmendations based on Master o prioritize the locations incorporating field level fire flow tailed design of the prioritized s.		

locations where due to aging infrastructure or soil conditions, the

		he line is questionable. Funds have been 23 to address some of these water mains.			
	Risks				
	surrounding proper is lower fire protect Service. 2. Construction near on arterials/collect 3. Soil conditions compened on affecting contractors 4. Maintenance of wardequate fire protes. Inclement weather	uld a specific construction method (trenchless, g budget, schedule and availability of qualified ater supply during construction to ensure ection of surrounding properties. r (impact dependent on construction method) onflicts at high level planning stage, could			
COMMUNITY VISION – PILLAR / STRATEGY & RESULT:	The Water Network Le Built Environment, spe	evel of Service program aligns with supporting ecifically:			
RESULT.		the growth of our city so future generations strong, vibrant community we've enjoyed.			
	Strategies include:				
	Ensure that municipal utilities and services are provided in an				
	desired development	pordinated, and timely manner relative to the of the city.			
STAKEHOLDER IDENTIFICATION:	Name & Role	Responsibility or Contribution			
IDENTIFICATION:	CPO	Project Management			
	Utilities	Owner of the infrastructure			
	Primary	Involved in project planning, prioritization and technical assistance			
	Residents	Information			
	Secondary	Once the Levelle of the Levelle of			
	City of St Albert Risk & Insurance	Consulted on all projects to determine if insurance is required?			
	Department	insurance is required:			
	City council	Approval			
TIMELINE:	This is an ongoing pro	ogram where every year design or			
	construction is taking	place in different locations:			
	2018 – Construction of	f High Priority Locations			
		ed in the 2019 to budget to show the updated ent 2018 budget is based on the prioritization pdate.			
	Design for each locati construction.	on will be completed one year prior to			

FINANCIAL INFORMATION:	Year 2019 Investment	\$40,000
	Year 2020 Investment	\$1,240,000
	Year 2021 Investment	\$2,440,000
	Year 2022 Investment	\$4,400,000
	Year 2023 Investment	\$6,780,000
	Year 2024 Investment	\$1,692,000
	Year 2025 Investment	\$1,790,000
	Year 2026 Investment	\$852,000
	Year 2027 Investment	\$1,855,000
	Year 2028 Investment	\$690,000
	Total	\$21,779,000
	See Capital Project Worksheet for details	
OPERATIONAL IMPACTS:	☐ Yes ☒ No	
	If yes, refer to Operating Impacts Worksh	eets for details.
ASSOCIATED OPERATING BUSINESS CASE:	N/A	

APPROVAL		
Author:	Kevin Cole	March 1, 2018
	Project Charter Developer	Date
	Kevin Cole	March 1, 2018
Director:		
	Director	Date
GM:	FmM	March 8, 2018
	General Manager	Date

PROJECT COMPONENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Land Determined Costs										
Concept Planning										
Detailed Planning and Design		\$200,000	\$400,000	\$750,000		\$202,000		\$250,000		\$100,000
Site Servicing										
Structure/Building Construction		\$1,000,000	\$1,800,000	\$3,650,000	\$6,740,000	\$1,450,000	\$1,750,000	\$562,000	\$1,815,000	\$550,000
Landscaping										
Construction Management	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Commissioning and QA/QC										
Contingency										
Public Participation Activities										
Equipment										
TOTAL	\$40,000	\$1,240,000	\$2,440,000	\$4,440,000	\$6,780,000	\$1,692,000	\$1,790,000	\$852,000	\$1,855,000	\$690,000

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.

Comments:

Costs estimates in 2015 dollars based on work required as indicated in the 2014 UMP Update. 2017 – 2019 Includes a 5% annual inflation. 2020-2026 is in 2019 dollars. 10% of the cost of each project has been allocated to the year before to begin design the year prior to construction.

Year	Project Type/Location
2019	Construction of High Priority Locations (Identified in 2018)
2020	Design of St. Vital Ave. and Montcalm Cres., Line Rehabilitation
2021	St. Vital Ave and Montcalm Cres. Construction, Giroux East Design
2022	Giroux East Water Main Construction, Sturgeon Fill Line Design
2023	Sturgeon Fill Line Upgrade Construction
2024	Fallhaven Pl. Construction, Larson Ave. Design, Line Rehabilitation
2025	Larson Avenue Construction
2026	Local looping/Upgrade Project, Erin Ridge Phase 2 Design
2027	Erin Ridge North Transmission Line Phase 2 Construction
2028	Local looping/Upgrade Project

TOTAL



YEAR:	2019	2019							
CHARTER NUMBER:	WAT	ER-	006						
CHARTER NAME:	Pump	Pump Station and Reservoir Rehabilitation Program							
LEAD DEPARTMENT:	Utilitie	Utilities - Water							
			RMR GRO	DWTH					
TYPE:		This project supports the ongoing rehabilitation of existing Pump Station and Reservoir infrastructure.							
		Sia	lion and Rese	- TVOII IIIITASITUCIUI	e. T				
ASSET CATEGORY:			☐ Civic Facilities ☐ Master Plan, Studies, & Other ☐ Roads & Other Engineered Structures ☐ Historical/Cultural ☐ Parks & Trails ☐ Mobile & Other Equipmer ☐ Land & Land Improvements						
SCOPE STATEMENT:			ndition Assess servoir and Pu		ilitation Program for	the City's			
PROJECT CHARTER JUSTIFICATION:		This is a comprehensive capital program that funds the condition assessments and lifecycle rehabilitation requirements for the City's three reservoirs and pump stations. Currently, the City owns and operates three reservoir and pump stations:							
			Pump Station	Construction Year	Most Recent Comprehensive Condition Assessment	Last Rehab			
			Sturgeon Heights Reservoir and Pump Station	1957 Add reservoirs in 1966,1972, and 1973	2007	2011			
			Oakmont Reservoir and Pump Station	1996	2014	None			
			Lacombe Park Reservoir and Pump Station	1980	None	2005 – complete rebuild			

As part of a continuing asset management strategy and in line with Council's Priority to Cultivate Sustainable Infrastructure and Services by improving existing community assets and services, a comprehensive assessment of the City's reservoirs and pump stations is recommended to update the capital and maintenance plan for all the City's reservoirs and pump stations.

Background:

Sturgeon Heights Reservoir and Pump Station: In 2010-2011 the pump station received a major rehabilitation which was expected to extend its life for approximately 10 years as indicated in the 2007 condition study. The study identifies that the pump station will need to be completely reconstructed to accommodate future water network needs and safe distribution of the City's water which aligns with Council's priority to cultivate sustainable infrastructure services by improving existing community assets and services.

As the life expectancy of the Sturgeon Reservoir and Pump Station is approaching its end and with some signs of issues due to condition are visible, and due to a major capital investment required to keep this infrastructure serviceable, it is recommended that complete condition assessment be performed in 2017 as the most recent condition assessment is ten years old and considered outdated.

Emergent repairs in 2017 have identified the urgency of the rebuild of this reservoir. In order to better understand the costs of rebuild and present Council with the best possible cost estimates, a preliminary design and cost estimate is proposed in 2020 in time for the 2021 budget cycle. This work will roll into the full design in 2021 and construction in 2022.

Oakmont Reservoir and Pump Station: In 2014, a complete condition assessment of Oakmont Reservoir & Pump Station was conducted identifying all lifecycle and growth needs of the reservoir and pump station allowing administration to develop a comprehensive rehabilitation and upgrade strategy. The high priority recommended upgrades and future assessments are put forward as part of this charter. Funding was identified in 2017 for recommended upgrades.

<u>Lacombe Park Reservoir and Pump Station:</u> No current improvements identified.

Lifecycle Costing

Underground utilities last approximately 75 years, the building approximately 50 years and the mechanical and electrical equipment approximately 35 years (according to Tangible Capital Assets expected life reported to the Province).

COMMUNITY VISION – PILLAR / STRATEGY &	The Reservoir and Pump House Rehabilitation Program aligns with supporting Built Environment, specifically:					
RESULT:			city so future generations mmunity we've enjoyed.			
	Strategies include:	-	, , , ,			
	Ensure that municipal utilities and services are provided in an					
	efficient, economic, coordinated, and timely manner relative to the desired development of the city.					
STAKEHOLDER	Name & Role Responsibility or Contribution					
IDENTIFICATION:	CPO	Project Manag				
	Public Works -		Owner and Responsible			
	Utilities Primary	Department				
	Residents	Information				
	Secondary					
	City of St Albert Consulted on all projects to determi					
	Risk & Insurance Department	Risk & Insurance is required? Department				
	City council Approval					
TIMELINE:	2021 – Design – Sturgeon Reservoir & Pump Station Rebuild					
	Q1 – RFP					
	Q3 Design completed					
	2022 – Rebuild					
	Q1 Tender Q2-4 Construction					
	Q2 + Construction					
FINANCIAL INFORMATION:	Year 2019 Investmen	t	\$0			
	Year 2020 Investmen	t	\$200,000			
	Year 2021 Investmen	t	\$2,500,000			
	Year 2022 Investmen	t	\$21,700,000			
	Year 2023 Investmen	t	\$0			
	Year 2024 Investmen	t	\$0			
	Year 2025 Investmen	t	\$0			
	Year 2026 Investmen		\$0			
	Year 2027 Investmen		\$200,000			
	Year 2028 Investmen		\$0			
	Total		\$24,600,000			
	See Capital Project We	orksheet for deta	ils.			
ODEDATIONAL INC. CTC	☐ Yes ☒ No					
OPERATIONAL IMPACTS:		na Importo Mari	aboata for dataila			
	If yes, refer to Operating	ig impacts work	sneets for details.			

ASSOCIATED OPERATING	N/A
BUSINESS CASE:	N/A

APPROVAL Kevin Cole Project Charter Developer Exercise Director: Director: Director Date February 28, 2018 February 28, 2018 February 28, 2018 February 28, 2018 March 8, 2018 General Manager Date

PROJECT COMPONENT	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Land Determined Costs										
Concept Planning			\$200,000						\$200,000	
Detailed Planning and Design			\$2,500,000							
Site Servicing										
Structure/Building Construction				\$21,700,000						
Landscaping										
Construction Management										
Commissioning and QA/QC										
Contingency										
Public Participation Activities										
Equipment										
TOTAL			\$2,700,000	\$21,700,000					\$200,000	

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.

Comments:

For 2022/2023 High level (+/- 50%) cost estimates based off 2007 Sturgeon Height Reservoir and Pump Station Study. High level design component for Sturgeon Reservoir Rebuild. To be re-evaluated in 2019 as part of the condition assessment, prices will be adjusted in the 2020 charter once the updated condition assessment has taken place. \$200,000 has been added for another condition assessment in 2027.

OPERATING IMPACTS WORKSHEET		
One Time		
Ongoing		
OPERATING IMPACTS		
TOTAL		



YEAR:	2019						
CHARTER NUMBER:	SOLWA-001						
CHARTER NAME:	Recycle Yard Upgrades						
LEAD DEPARTMENT:	Environment – Waste and Diversion						
TVDF.		⊠ RMR ☐ GROWTH					
TYPE:		This is for the ongoing maintenance	of the existing Recycle Depot.				
ASSET CATEGORY:		 ☑ Civic Facilities ☐ Master Plan, Studies, & Other ☐ Roads & Other Engineered Structures ☐ Historical/Cultural 	☐ Parks & Trails ☐ Mobile & Other Equipment ☐ Land & Land Improvements				
SCOPE STATEMENT:		Upgrades and replacement of equipment/infrastructure for the existing Mike Mitchell Recycling Depot at 7 Chevigny Drive.					
PROJECT CHARTER JUSTIFICATION:		Repair and replacement of existing Mitchell Recycling Depot (such as required due to the end of their life of the depot to are required to ensure service delivery and to comply with Current State – The existing Recycle and is directly adjacent to the Jack of Chevigny Drive. The Depot is approasing asphalt surface and is fenced and gointernal signage which provides path and site restrictions, traffic safety, where the area includes skid pads for 14 stairs and 10 platforms for patron and stand-alone bin for recycled glass. In 2011, additional areas for houseff electronics collection were added. In and small shed for staff were also a hazardous waste area was improve secondary containment to address of the north area of the Recycle Depot concrete block walls for bulk component.	ailing and platforms) will be cycle. Additionally, upgrades to staff and patron safety, maintain environmental requirements. cling Depot was built in 2000 Kraft Public Works facility at 7 eximately 50 X 80 metres with an eated. There is external and rons with information on hours easte and recycling instructions. – 40 cubic yard metal bins with excess to bins. There is also a mold hazardous waste and A fenced cardboard compactor dded. In 2015, the household d with a covered structure and environmental concerns.				

In 2017, with the funding received through the RMR Capital Budget, three platforms were resurfaced for \$20,000. Seven platforms remain to be resurfaced and\$50,000 for 2019 is requested to complete the resurfacing of the platforms. These platforms will have to be replaced or resurfaced in another 10-20 years.

There is also section of the depot where it is not paved. This area currently holds the compost giveaway and bicycle donations. Paving this area will assist with site maintenance and cleanliness. This will also allow for proper drainage on the site. \$20,000 (\$80 per square metre x 250 square meters of space) for 2019 is requested to complete this paving.

Issue – There is a need to repair and/or replace infrastructure as part of regular lifecycle maintenance such as skid plates and fencing. Special attention must be paid to infrastructure that is needed to ensure staff and patron safety such as the compactor, platforms and stairs, lighting and signage. Improvements to infrastructure may also be required to manage environmental risks identified through regular EMS inspections and/or changes to environmental regulations or guidelines.

Opportunities – As opportunities for additional recycling or waste diversion streams become available, there may be the need to add or modify existing infrastructure. An example of this was the addition of the block wall sections to the north part of the depot to allow for bulk compost give away to residents.

Risks – Special attention must be paid to infrastructure that is needed to ensure staff and patron safety such as the compactor, platforms and stairs, lighting and signage. Improvements to infrastructure may also be required to manage environmental risks identified through regular EMS inspections and/or changes to environmental regulations or guidelines.



Mike Mitchell Recycle Depot - 7 Chevigny Drive

COMMUNITY VISION – PILLAR / STRATEGY & RESULT:

BUILT ENVIRONMENT

We build innovative, long lasting infrastructure that is efficient, minimizes the use of our natural resources and creates harmony between the natural and built environment.

 Maintain corporate and infrastructure assets in an efficient and sustainable manner that meets the present and future growth needs of the city and in accordance with approved guiding principles

NATURAL ENVIRONMENT

We are an environmentally caring community, mindful of the nature that surrounds us, that puts the Earth first, which is reflected in our green living lifestyle and conservation of natural resources.

 Educate the community, including schools and businesses, on solid waste management principles through targeted programs and events.

SERVICE DELIVERY

Create positive customer service experiences with the community.

STAKEHOLDER IDENTIFICATION:

INTERNAL

Environment – Supervisor, Waste and Diversion Programs, Director, Environment / Project Management Finance – Budget allocation/approval Public Works/Utilities- Awareness

	EXTERNAL					
	Residents and Businesses – Service delivery expectations					
TIMELINE:	Varies, depending on replacement and required upgrades. It is anticipated that in any given year the projects will be completed in the year identified.					
FINANCIAL INFORMATION:	Year 2019 Investment \$70,000					
	Year 2020 Investment \$27,500					
	Year 2023 Investment \$30,000					
	Year 2026 Investment \$32,500					
	(Investment reoccurs every 3 years)					
	Total	\$\$160,000				
	See Capital Project Worksheet for details					
OPERATIONAL IMPACTS:	☐ Yes ☒ No					
	If yes, refer to Operating Impacts Worksheets for details.					
ASSOCIATED OPERATING BUSINESS CASE:	N/A					

APPROVAL

	Leah Kongsrude	March 2, 2018
Author:		
	Project Charter Developer	Date
	Leah Kongsrude	March 2, 2018
Director:		
	Director	Date
GM:	Im I	March 2, 2018
	General Manager	Date

PROJECT COMPONENT (Reoccurs every 3 years – to reassess costs in 2025 when Recycle Depot is 25 years old)	2019	2020	2023	2026	20XX						
Land Determined Costs											
Concept Planning											
Detailed Planning and Design											
Site Servicing											
Structure/Building Construction	70,000	27,500	30,000	32,500							
Landscaping											
Construction Management											
Commissioning and QA/QC											
Contingency											
Public Participation Activities											
Equipment											
TOTAL		\$27,500	\$30,000	\$32,500							

Please note Public Art and Branding will be reviewed and shown separately on the ten-year capital plan.

Comments:

Adding \$70,000 for 2019 to complete platform resurfacing of seven remaining platforms, and to pave a section of the depot.

Reoccurs every 3 years. \$2500 added to each year to account for inflation. Recommending a detailed assessment of facility in 2025 when Recycle Depot is 25 years old.

OPERATING I	MPACTS WORKSHEET			
	N1/A			
One Time	N/A			
☐ Ongoing				
OPERATING IN	IPACTS	20XX	20XX	20XX
N/A				
			+	

TOTAL