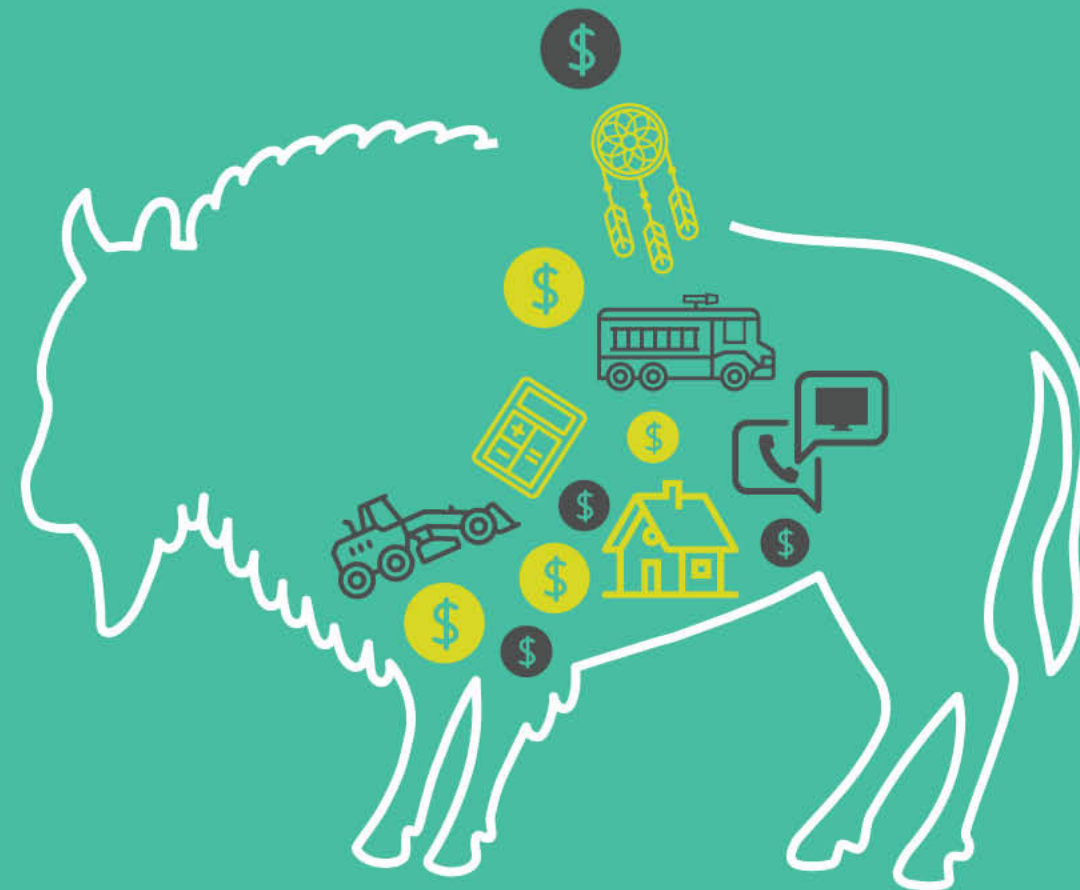


2022 Proposed Capital Budget

Department
Environmental Services

Presenter
Antoine Rempp, Director

Date
February 1 – 4, 2022



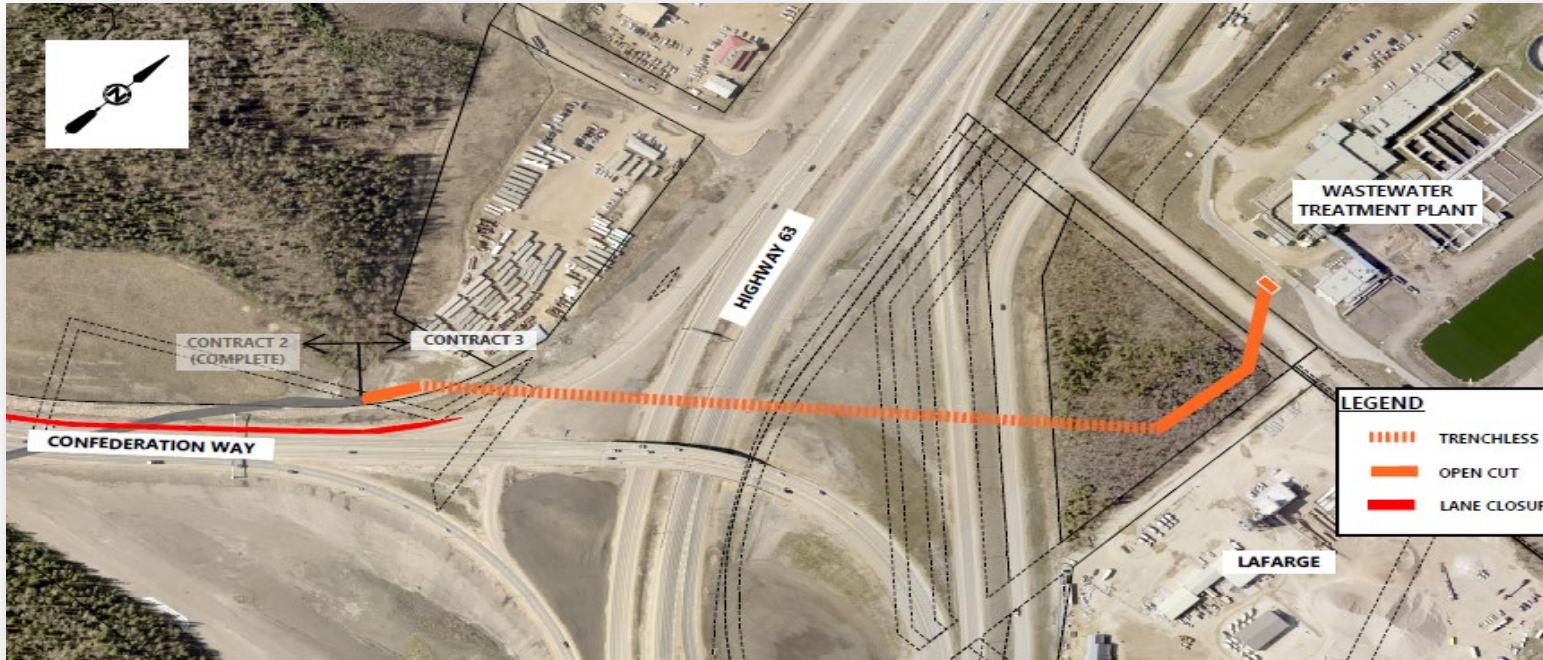
2022 Capital Budget Summary - Resourced (Funded)

Major Category	2021 & Prior Budget	2022 Proposed Budget	2023-2027 Plan	Total Budget
Public Facilities	\$80,975,000	\$47,730,000	\$128,700,000	\$257,405,000
Recreation and Culture	-	-	-	-
Transportation	-	-	-	-
TOTAL	\$80,975,000	\$47,730,000	\$128,700,000	\$257,405,000

2022 Capital Project

Project Name:	Confederation Way Sanitary Sewer Phase 2 - Construction			
Reference No:	007	Sponsoring Department: Environmental Services		
Description:	This project is for the construction of a sanitary sewer line along Confederation Way between the Eagle Ridge Overpass and the Wastewater Treatment Plant.			
Major Outcomes:	To improve the capacity of Sanitary Sewer Systems in Timberlea Area.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 33,000,000	\$ 9,000,000	\$ 2,000,000	\$ 44,000,000	

2022 Capital Project Features



Confederation Way
Sanitary Sewer Phase
2 - Construction

2022 Capital Project

Project Name:	Saunderson Pressure Reducing Valve PRV - Construction			
Reference No:	009	Sponsoring Department: Environmental Services		
Description:	The water supply system for Downtown is being optimized by replacing the existing 3-way PRV chamber that is currently at the end of its useful life and constructing a new watermain along MacDonald Avenue & Biggs Avenue. The remaining deep municipal utilities will also be replaced in streets that are disrupted to minimize future impacts to the finished areas.			
Major Outcomes:	This project will result in a more efficient operation and reduction in maintenance cost to the water systems in the Downtown area while also improving the flow to communities south of the Urban service area			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 3,000,000	\$ 5,000,000	\$ 24,000,000	\$ 32,000,000	

2022 Capital Project Features



Saunderson Pressure
Reducing Valve (PRV)
Construction

2022 Capital Project

Project Name:	Fort Chipewyan Lift Station Upgrades - Construction			
Reference No:	011	Sponsoring Department: Environmental Services		
Description:	This project is for the re-construction the of 3 lift stations in Fort Chipewyan. These stations are showing detrimental conditions in their mechanical, structural and electrical components and required replacement.			
Major Outcomes:	To maintain continuous operation of the wastewater collection system in the community.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 25,000,000	\$ 5,000,000	\$ 0	\$ 30,000,000	

2022 Capital Project Features



Fort Chipewyan Lift
Station Upgrades -
Construction

2022 Capital Project

Project Name:	A Frame Road Paving, Lift Station and Sanitary Forcemain Installation		
Reference No:	015	Sponsoring Department: Environmental Services	
Description:	The project is to pave the road, install the sanitary lift station, and sanitary Forcemain which will serve 65 hectares of industrial land east of the airport.		
Major Outcomes:	To support the development of the industrial park.		
Multi-Year Project			
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years
\$ 6,500,000	\$ 5,300,000	\$ 1,000,000	\$ 12,800,000

2022 Capital Project Features



A Frame Road Paving, Lift
Station and Sanitary
Forcemain Installation

2022 Capital Project

Project Name:	Fort McMurray Landfill Closure Cells 1,2,3, Lateral Expansion and Old Landfill			
Reference No:	019	Sponsoring Department: Environmental Services		
Description:	This request is for the closure of cells 1, 2, 3, lateral expansion and the old landfill. The work completed would include the design and completion of the final cover, erosion control, surface water drainage, leachate collection, landfill gas monitoring and control systems, decommissioning and removal of structures, and preparation of the post closure plan.			
Major Outcomes:	Compliance with provincial regulations in properly closing cells at the old and new landfill.			
Multi Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 500,000	\$ 0	\$ 6,000,000	\$ 6,500,000	

2022 Capital Project Features

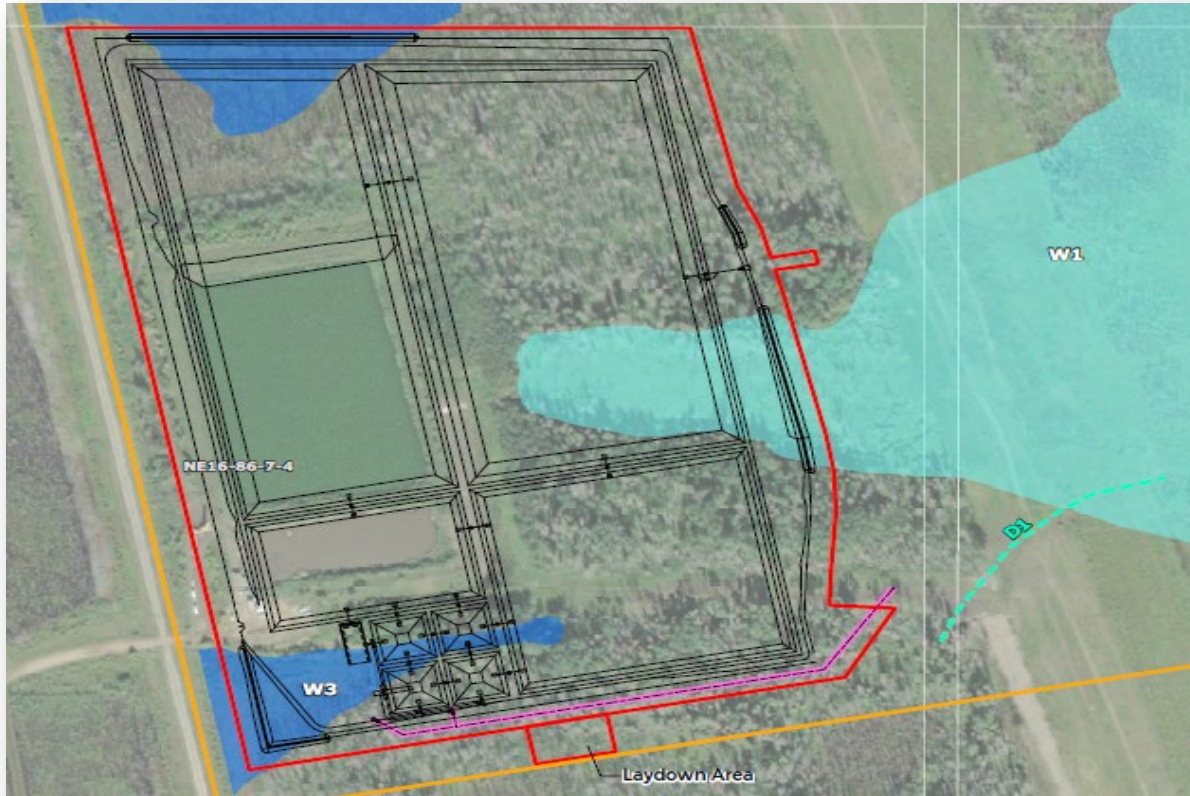


Fort McMurray Landfill
Closure Cells 1,2,3, Lateral
Expansion and Old Landfill

2022 Capital Project

Project Name:	Anzac Lagoon Expansion – Design & Construction			
Reference No:	022	Sponsoring Department: Environmental Services		
Description:	This project is to expand the existing lagoon to support Rural Water and Sewer Servicing in Anzac as the existing lagoon does not meet the capacity requirement. The lagoon expansion including the modifications of Lift Station(LSA1) and upgrades of the Forcemain will accommodate the current and future needs.			
Major Outcomes:	Support Rural Water and Sewer servicing in Anzac and enable the RMWB to operate the wastewater system in accordance with environmental regulations.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 3,500,000	\$ 1,000,000	\$ 12,000,000	\$ 16,500,000	

2022 Capital Project Features



Anzac Lagoon Expansion
– Design & Construction

2022 Capital Project

Project Name:	Fort McMurray WTP Process Improvement – Design & Construction			
Reference No:	027	Sponsoring Department: Environmental Services		
Description:	The project began in 2021 with an assessment of the river intake, raw water pumphouse & ponds, and the entire Water Treatment Plant. The assessment has identified several areas of improvement for operational, safety & compliance issues, emergency response, condition assessment, asset management, security, and process optimization. These areas have been prioritized based on the level of risk.			
Major Outcomes:	Maintenance of the level of service of the FMWTP and improvement of the reliability of drinking water for the region.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$2,100,000	\$ 0	\$12,600,000	\$14,700,000	

2022 Capital Project Features



Fort McMurray WTP
Process Improvement –
Design & Construction

2022 Capital Project

Project Name:	King Street Booster Rehabilitation - Construction			
Reference No:	032	Sponsoring Department: Environmental Services		
Description:	The King Street Booster Station is nearly at the end of its 50-year design life. A consulting engineering firm reviewed the current status of all aspects of the King Street Booster Station and determined the need for the replacement and repair of the process and control equipment.			
Major Outcomes:	Providing drinking water within the communities and extending the life of the facility.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 2,300,000	\$ 1,500,000	\$ 0	\$ 3,800,000	

2022 Capital Project Features

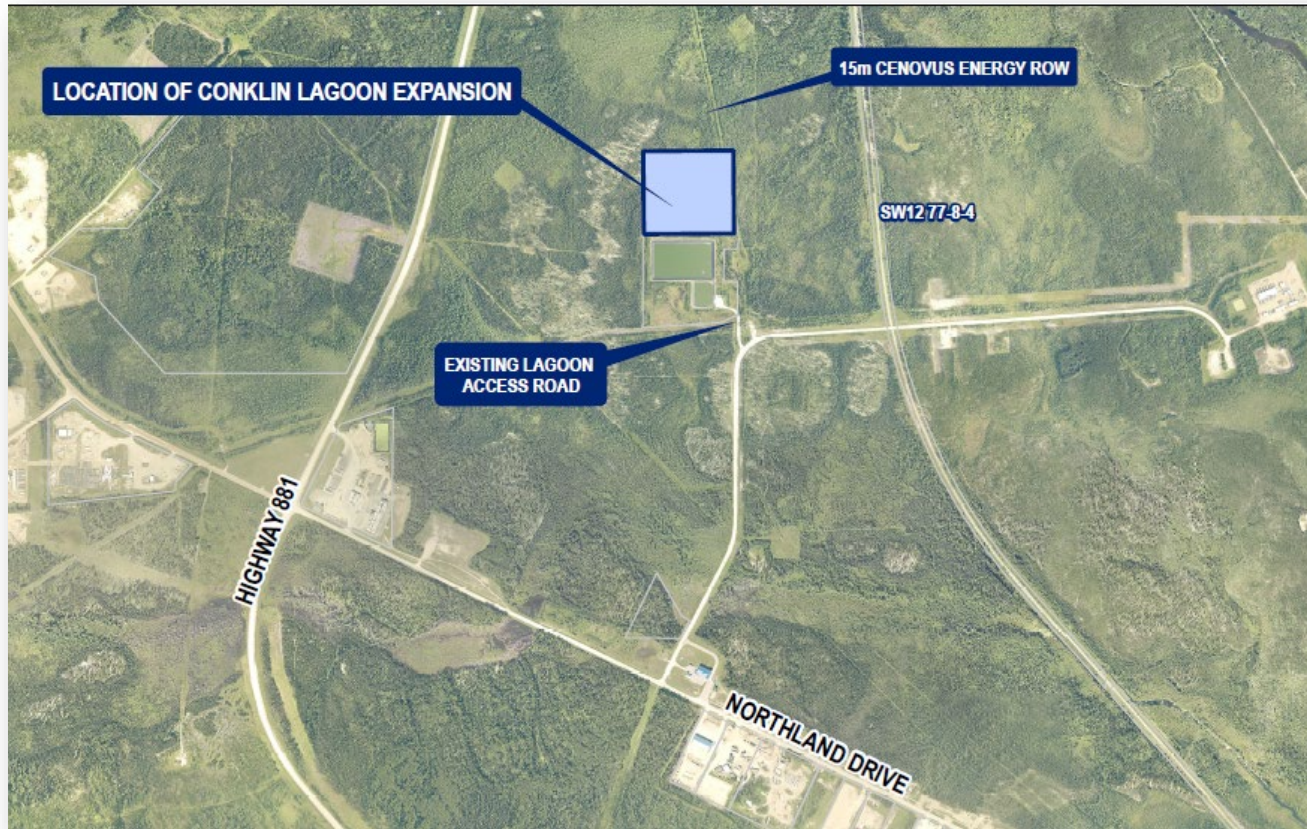


King Street Booster
Rehabilitation - Construction

2022 Capital Project

Project Name:	Conklin Sewage Lagoon - Construction			
Reference No:	035	Sponsoring Department: Environmental Services		
Description:	This project is to expand the existing Conklin lagoon to meet the expected flow increase in the community, resulting from the completion of the piped water and sewer system. It will also accommodate backwash water flows from the water treatment plant.			
Major Outcomes:	Support Rural Water and Sewer servicing in Conklin and enable the RMWB to operate the wastewater system in accordance with environmental regulations.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 200,000	\$ 7,000,000	\$ 6,700,000	\$ 13,900,000	

2022 Capital Project Features



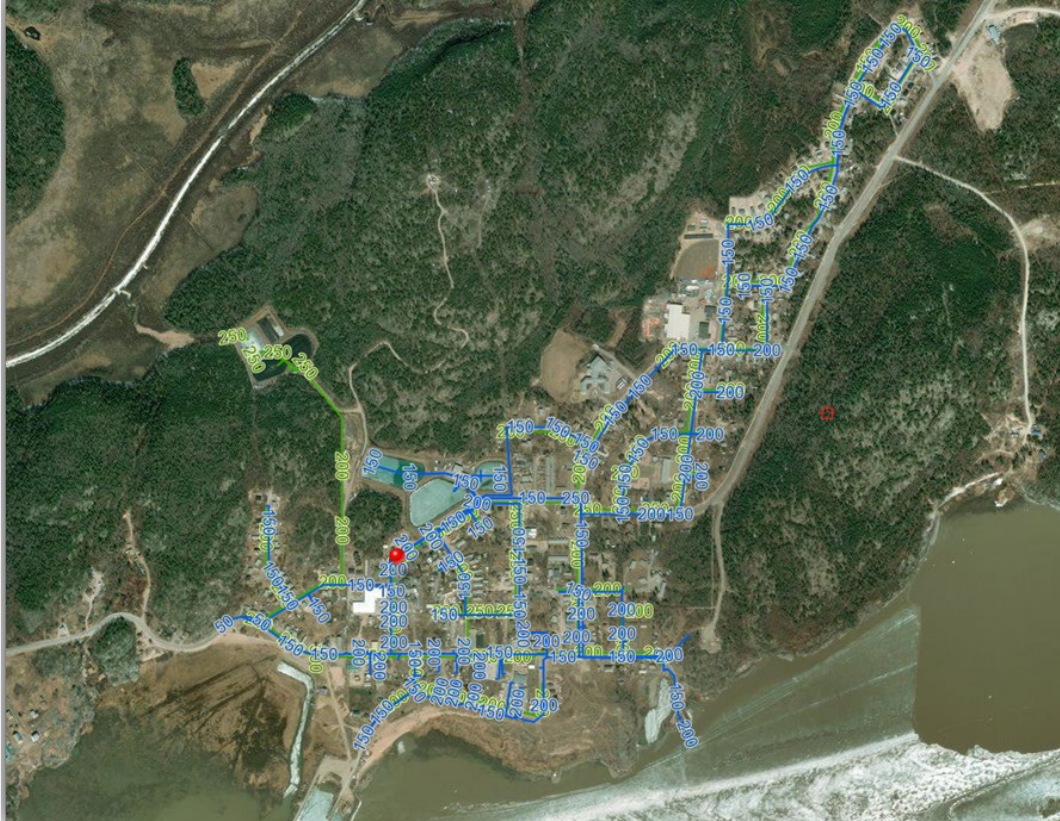
Conklin Sewage Lagoon -
Construction

2022 Capital Project

Project Name:	Fort Chipewyan Water & Sanitary Sewer - Construction			
Reference No:	037	Sponsoring Department: Environmental Services		
Description:	This project consists of the rehabilitation of the existing water and sewer mains in Fort Chipewyan. Several areas of the hamlet were identified for upgrades in the 2017 Fort Chipewyan Infrastructure needs assessment.			
Major Outcomes:	To rehabilitate the water and sewer mains for the hamlet.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 100,000	-	\$ 28,400,000	\$ 28,500,000	

2022 Capital Project Features

Fort Chipewyan Water &
Sanitary Sewer - Construction



2022 Capital Project

Project Name:	Fort McKay Water Supply Infrastructure Rehabilitation - Design			
Reference No:	038	Sponsoring Department: Environmental Services		
Description:	The proposed new system will have an increased supply capacity sized to meet the projected 25-year community growth needs, will include a modern intake and pipeline system that meets current Department of Fisheries and Oceans (DFO) standards and will be located near existing roads to improve year-round accessibility.			
Major Outcomes:	To rehabilitate the water infrastructure for the Fort McKay Metis and First Nations.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 500,000	\$ 0	\$ 1,500,000	\$ 2,000,000	

2022 Capital Project Features



Fort McKay Water Supply
Infrastructure Rehabilitation
- Design

2022 Capital Project

Project Name:	WWTP Process Improvement – Design & Construction			
Reference No:	039	Sponsoring Department: Environmental Services		
Description:	The Fort McMurray Wastewater Treatment Plant process improvements project is required to address critical equipment in the facility. The upgrades and replacements are required to improve safety, efficiency, lifecycle costs, maintainability and reliability, and in order to meet safety and regulatory compliance.			
Major Outcomes:	To ensure continued operation of the facility in order to meet Alberta Environment operational approval requirements.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 100,000	\$ 0	\$ 9,050,000	\$ 9,150,000	

2022 Capital Project Features



WWTP Process Improvement –
Design & Construction

2022 Capital Project

Project Name:	Janvier WTP Upgrade - Design			
Reference No:	041	Sponsoring Department: Environmental Services		
Description:	The Janvier Water Treatment Plant is a critical asset for the community of Janvier and Chipewyan Prairie First Nation. The current plant was built 25 years ago and needs several modifications.			
Major Outcomes:	To maintain a critical asset and maintain level of service.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request		2023-2027 Plan	Total Budget All Years
\$ 100,000	\$ 0		\$ 1,100,000	\$ 1,200,000

2022 Capital Project Features



Janvier WTP Upgrade -
Design

2022 Capital Project

Project Name:	Timberlea Reservoir & Pumphouse – Design & Construction			
Reference No:	042	Sponsoring Department: Environmental Services		
Description:	The Pumphouse and Reservoir are at the end of their lifecycle and need to be refurbished. This project is to design and construct the Pumphouse and Reservoir upgrade that will meet the current needs of the community, with capacity for future growth.			
Major Outcomes:	Enable the RMWB to continue to meet the current needs of the community with capacity for future growth.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 500,000	\$ 0	\$ 6,500,000	\$ 7,000,000	

2022 Capital Project Features



Timberlea Reservoir & Pumphouse
– Design & Construction

2022 Capital Project

Project Name:	Waterline Extension From Parsons Creek to Millennium - Construction			
Reference No:	043	Sponsoring Department: Environmental Service		
Description:	Construction of a new watermain from Parsons Creek Reservoir to Millennium Drive, which will provide supply redundancy, including fire flow, from the Parsons Creek Reservoir to the existing water network in Timberlea.			
Major Outcomes:	To provide redundancy and backup to the existing water network in Timberlea.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 1,725,000	\$ 4,050,000	\$ 0	\$ 5,775,000	

2022 Capital Project Features

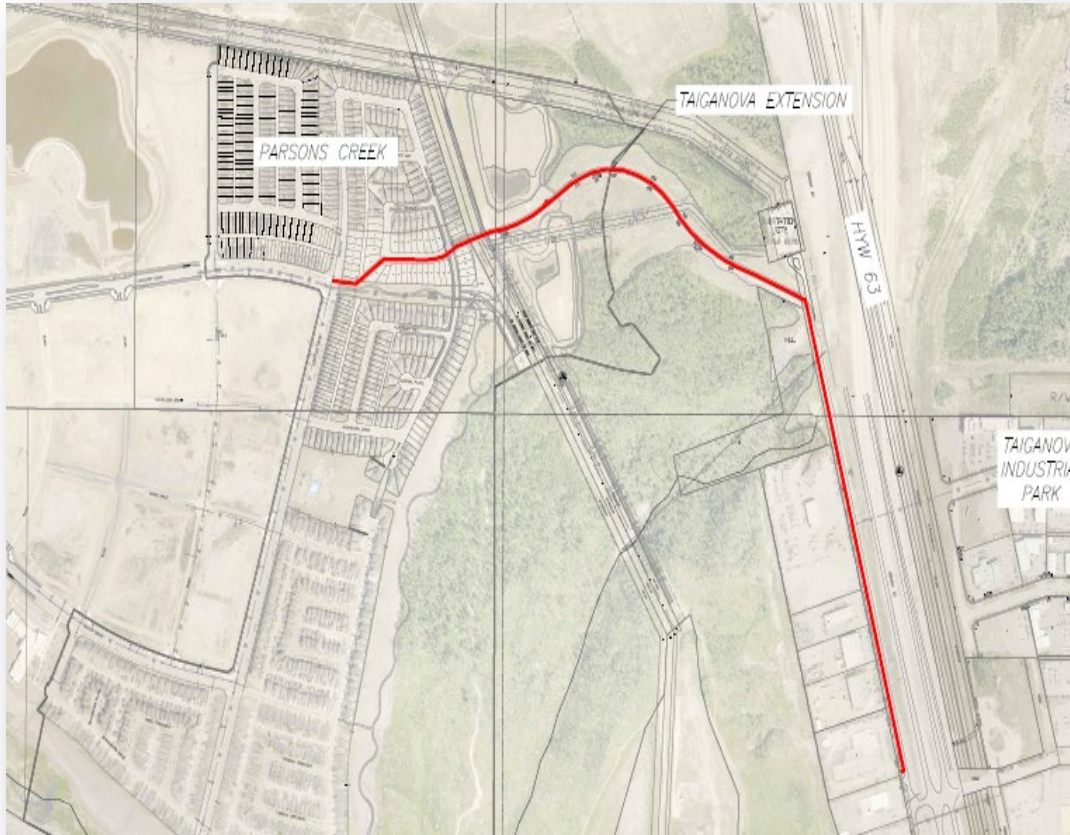


Waterline Extension From
Parsons Creek to
Millennium - Construction

2022 Capital Project

Project Name:	Waterline Extension From Parsons Creek to Taiganova - Construction			
Reference No:	044	Sponsoring Department: Environmental Services		
Description:	This project is for the Construction phase of a 400mm waterline extension from Parsons Creek to Taiganova. The proposed watermain will provide redundancy to the existing water network in Taiganova.			
Major Outcomes:	To provide redundancy and backup to the existing water network in Taiganova.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 1,750,000	\$ 3,200,000	\$ 0	\$ 4,950,000	

2022 Capital Project Features



Waterline Extension From
Parsons Creek to Taiganova
- Construction

2022 Capital Project

Project Name:	Ground Water Monitoring Wells Installation			
Reference No:	045	Sponsoring Department: Environmental Services		
Description:	This project is for the design and installation of ground water wells which have been identified in Urban and Rural areas. These wells are required to be installed as per Alberta Environment and Parks (AEP) regulatory requirements.			
Major Outcomes:	To monitor ground water for contamination from operation and meet requirements for environmental compliance.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 100,000	\$ 580,000	\$ 0	\$ 680,000	

2022 Capital Project Features



Ground Water Monitoring Wells
Installation

2022 Capital Project

Project Name:	WoodBuffalo Lift Station Replacement – Design & Construction			
Reference No:	103	Sponsoring Department: Environmental Services		
Description:	The Wood Buffalo Lift Station was constructed in 1999 and services the south end of the Wood Buffalo neighborhood. The Lift Station is at its end of life and maintenance and operation costs have increased to maintain this facility.			
Major Outcomes:	To ensure a continued level of service for residents and upgrade the facility to RMWB standards and industry best practice.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 0	\$ 100,000	\$ 4,750,000	\$ 4,850,000	

2022 Capital Project Features



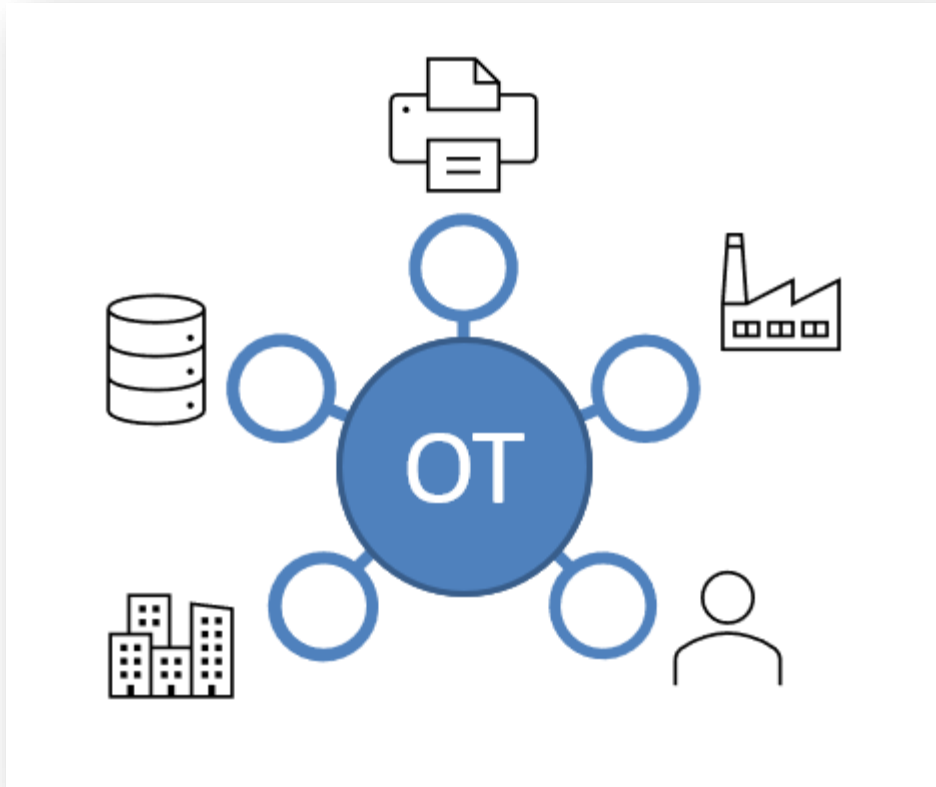
Wood Buffalo Lift Station
Replacement – Design &
Construction

2022 Capital Project

Project Name:	Rural Control System Replacements – Design & Construction			
Reference No:	108	Sponsoring Department: Environmental Services		
Description:	This project is required to ensure control system components related to the rural water supply are life cycled according to industry best practices. Current control systems are scheduled for obsolescence in 2026 and the proposed replacement components will be phased in over the next 3 years.			
Major Outcomes:	To maintain current service levels in the communities of Anzac, Gregoire Lake Estates, Fort McMurray #468 First Nation, Janvier, Chipewyan Prairie First Nation and Conklin.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 0	\$ 400,000	\$ 2,600,000	\$ 3,000,000	

2022 Capital Project Features

Rural Control System
Replacements – Design &
Construction



2022 Capital Project

Project Name:	Conklin Water Treatment Plant Upgrades - Construction			
Reference No:	116	Sponsoring Department: Environmental Services		
Description:	The Conklin WTP is a remote facility accessible by Highway 881, prone to severe winter conditions restricting safe access by operating staff. Currently the WTP operates on a single treatment train with no redundancy. This project will install the components necessary to operate a second treatment train and a sophisticated resilient control system for operations.			
Major Outcomes:	To maintain service to community during severe weather conditions and allow for safe operations in case of equipment failures in a treatment train.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 0	\$ 500,000	\$ 3,000,000	\$ 3,500,000	

2022 Capital Project Features



Conklin Water Treatment Plant
Upgrades - Construction

2022 Capital Project

Project Name:	Fort Chipewyan Reservoir Capacity Expansion - Design			
Reference No:	118	Sponsoring Department: Environmental Services		
Description:	During Construction of the Fort Chipewyan Water Treatment Plant the original potable water reservoirs were inspected and due to several structural issues were not put back in service, causing Fort Chipewyan to fall short of its required design capacity for potable water storage. Additional reservoir capacity is required for the Fort Chipewyan potable water supply and to meet legislated fire storage capacity needs for the community. It is anticipated that either a significant repair effort will be required to place an old reservoir back in service or other alternatives.			
Major Outcomes:	To increase capacity of potable water supply to meet the requirements of the community.			
Multi-Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 0	\$ 100,000	\$ 500,000	\$600,000	

2022 Capital Project Features

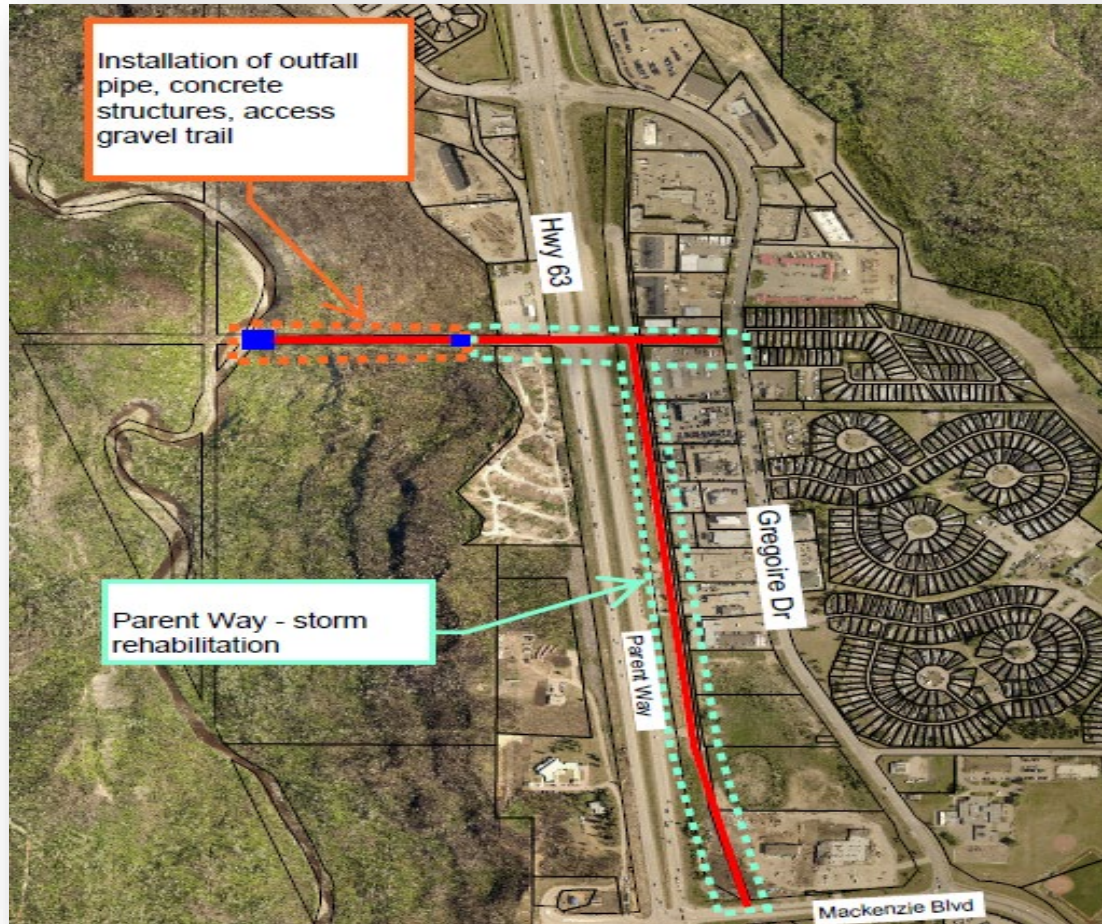


Fort Chipewyan Reservoir
Capacity Expansion - Design

2022 Capital Project

Project Name:	Gregoire Storm Outfall Structure - Construction		
Reference No:	132	Sponsoring Department: Environmental Services	
Description:	The Mackenzie and Gregoire areas experienced significant overland flooding during heavy rainfall events which includes flooding of major arterial roads. Upgrading the outfall structure and storm line would prevent flooding in these areas and eliminate surface drainage issues.		
Major Outcomes:	Improvements to the storm sewer system to avoid surface drainage issues during heavy rain events.		
Multi-Year Project			
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years
\$ 0	\$ 3,000,000	\$ 7,000,000	\$ 10,000,000

2022 Capital Project Features

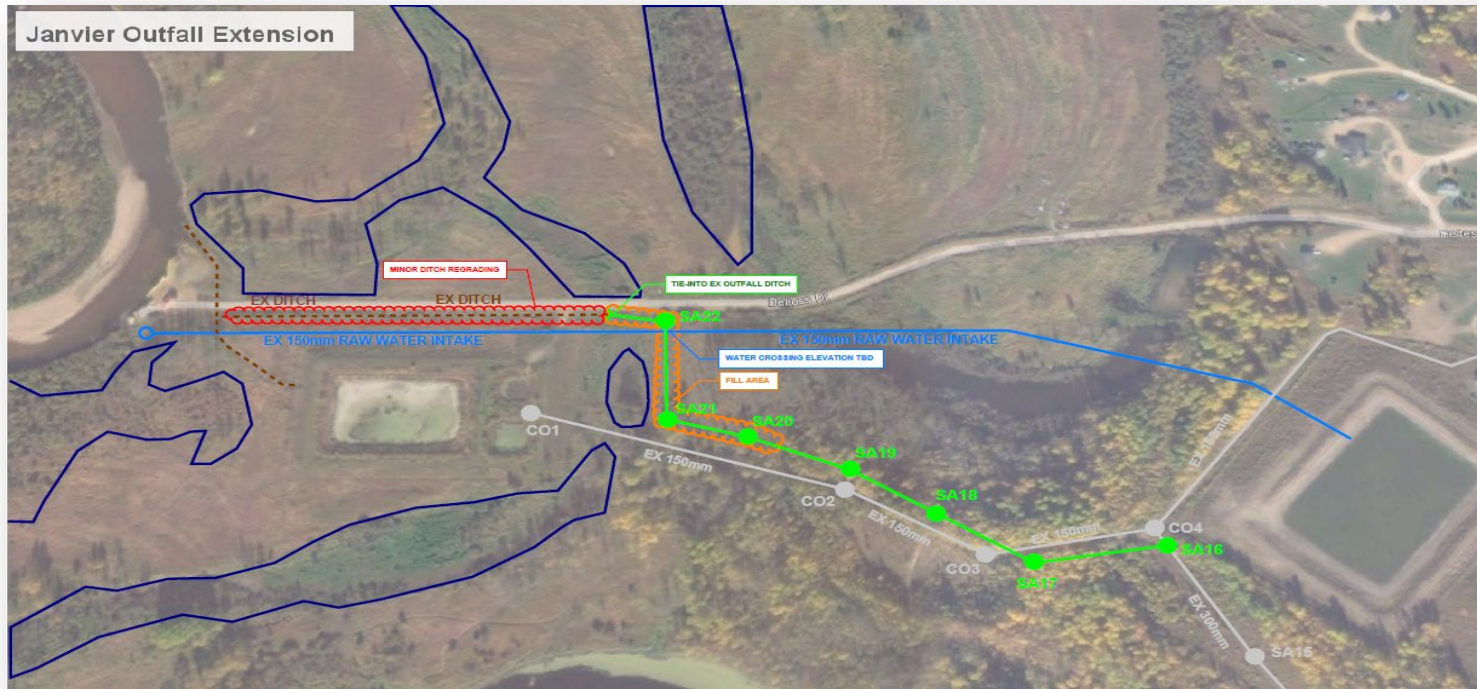


Gregoire Storm Outfall Structure - Construction

2022 Capital Project

Project Name:	Janvier Sewage Lagoon Outfall Extension - Construction			
Reference No:	243	Sponsoring Department: Environmental Services		
Description:	This project is for the construction of an extension of the Janvier Sewage Lagoon Outfall that currently reduces in size and discharges into the old lagoon. The extension will bypass the old lagoon and increase the flow rate to eliminate the bottleneck during the annual discharge of treated effluent.			
Major Outcomes:	Allow for the full capacity of the new lagoon to discharge within the required 21 days, as per the Alberta Environment & Parks Approval (AEP).			
Single Year Project				
2021 & Prior Budget	2022 Budget Request	2023-2027 Plan	Total Budget All Years	
\$ 0	\$ 2,000,000	\$ 0	\$ 2,000,000	

2022 Capital Project Features



Janvier Sewage Lagoon
Outfall Extension -
Construction

Questions?