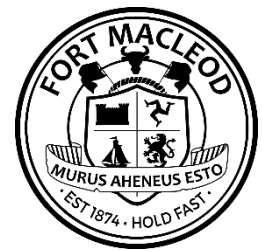




Town of Fort Macleod
Asset Management Strategy



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Vision & Mission

Vision Statement

“We want to advance planning to facilitate responsible future growth and rehabilitation.”

Mission Statement

“We will establish a framework and procedure for a successful and cohesive Asset Management Program.”

Intent and Scope

Intent

The Asset Management Strategy is intended to administer asset management initiatives which were established in the Town of Fort Macleod’s Asset Management Policy. For an Asset Management Program to be successful, it must reflect the community’s unique needs and values while being practical and adaptive. Figure 1 represents the relationship, i.e. “line of sight”, between a community’s vision, mission, and values to the operational activities and deliverables outlined in the Asset Management Plan(s). The “line of sight” refers to the idea that through the implementation of the Asset Management Policy, Strategy, and Plan an approver or stakeholder can see how each action item relates to the mission and values of a community. Understanding the relationship between the needs of the community and the purpose/deliverables of asset management documents is critical for organizational integration and community and council buy-in.



Figure 1: Asset Management Line of Sight (Federation of Canadian Municipalities, 2018)



The **Asset Management Policy** provides overarching principles that will be used to guide decision-making processes to deliver services to the community. It signifies Council and senior management’s commitment to the development and continuous improvement of asset management practices. Through the principles laid out in the policy, the framework for funding and financing asset acquisitions, operations, maintenance, renewal, and disposal can be implemented through the Asset Management Strategy and Asset Management Plan(s).

The **Asset Management Strategy** builds off the Asset Management Policy and the communities’ strategic goals and objectives to identify strategies to improve asset management practices and achieve overarching asset management objectives. It provides an overview of the current decision-making processes, assets, and funding sources for a Town. This document will provide strategic objectives and relevant initiatives to achieve the overarching objectives of the Town and is guided by the Asset Management Policy principles.

Scope

The Town of Fort Macleod owns and operates various infrastructure assets that provide services to their ratepayers. The Asset Management Strategy applies to all assets owned by the Town, as well as assets owned by the Town and operated by others, including:

Asset Categories								
Road Network	Water Network	Waste Water Sewer Network	Storm Water Sewer Network	Buildings	Bridges & Culverts	Parks & Recreation	Fleet	Airport & Signage
Road Base	Mains	Mains	Mains	Offices	Bridges	Sports Facilities	Vehicles	Signs
Road Surface	Treatment Plants	Valves	Catch Basins	Public Works	Culverts	Trails	Equipment	Etc.
Guardrails	Hydrants	Manholes	Manholes	Etc.		Parks	Etc.	
Signage	Valves	Lagoons	Etc.			Etc.		
Etc.	Etc.	Etc.						

Table 1: Asset Categories

These infrastructure assets require ongoing acquisition, operation, maintenance, renewal, and disposal throughout the asset lifecycle.



Definitions

Asset: a physical component of a system that has value, enables services to be provided, and has an economic life of greater than 12 months.

Asset Management: the process of making decisions about the use and care of assets to deliver services in a way that considers current and future needs, manages risks and opportunities, and makes the best use of resources.

Asset Replacement Forecast: an overview of all assets with their attributes, replacement costs, and timing of the replacement based on their theoretical useful life.

GIS: Geographic Information System designed to capture, store, manipulate, analyze, manage, and present all types of spatial data.

Level of Service: the defined standard for the provision of a particular service. The levels are defined with consideration of quality, quantity, reliability, responsiveness, environmental acceptability, regulatory requirements, and life-cycle costs.

Life-cycle cost: the cost of designing, building, operating, maintaining, and disposing of an asset to deliver the defined level of service.

Long-term Capital Plan: a multi-year plan that identifies the capital infrastructure projects and their cost to address the current and future service objectives.

Long-term Financial Plan: a plan that documents the process of aligning financial capacity with long-term service objectives.

Long-term Operation Plan: a multi-year plan that identifies the cost of operating and maintaining assets to address the current and future service objectives.

Maintenance Management: an administrative, financial, and technical framework for assessing and planning maintenance operations on a scheduled basis.

Risk: events or occurrences that negatively impact the ability to deliver the defined levels of service.



Decision-Making Approach

Current Approach

Fort Macleod is in the preliminary phase of incorporating asset management into its municipal functions. Although there were no prior formally published asset management policies by the Council, a broad vision for asset management exists as the Town understands the importance and relationships between infrastructure performance and municipal strategic priorities. Asset management practices have been established in the AM Policy and intend to guide the Town along their desired path. The location of assets are being stored and tracked in MuniSight's Webmap, and maintenance reports are stored as a mix of paper and digital copies. Initiatives such as condition assessments and inspections are done by the Public Works department, or consultants are hired to perform these assessments. Some critical infrastructure includes roads, bridges, drainage, and utilities. There are currently minimal service issues/gaps, but there are varying levels of communication between staff, elected officials, and the public regarding the state of infrastructure assets. Looking ahead the Town wants to develop a proactive planning and budgeting program that consolidates their asset condition and performance data.

Target Approach

Fort Macleod's targeted approach to asset management decision making will incorporate the following principles:

- Transparency and accountability with defined levels of service and asset service performance
- Consider changing demographics and economic climates by incorporating strategic risks assessments
- Integrate appropriate departments for multi-disciplinary input and buy-in
- Triple bottom line approach considering socio-cultural, environmental, and economic – outcomes
 - Socio-cultural – Reduce risk, provide better value to customers, conduct succession planning, and increase reliability
 - Environmental – Extend asset life, reducing waste and use of virgin materials
 - Economic – Minimize full life-cycle costs of assets
- Consider long-term financial sustainability through understanding full life-cycle costs
- Prioritize infrastructure renewal work based on potential impact to levels of service

The Town of Fort Macleod will use the Asset Management Policy, Strategy, and Plan(s) to prioritize asset maintenance and renewal strategies, prove progress in asset management processes, understand full life-cycle costs, enhance data retention, and understand financial commitments required to maintain assets over the long-term.



Renewals & Roadblocks

Based on the Asset Management Survey, the following Asset Types are up for renewal:

- Roads
- Water
- Sanitary Sewer
- Storm Sewer

To be able to replace assets, many different factors must be considered. Sufficient information is required to be able to assess critical assets from attributes of the asset such as length, diameter, material, etc. Furthermore, conditional assessments play a role. General condition of the assets based on criteria pre-determined and standardized organization-wide will be applied to assess the assets and then replacement costs can be determined.

Currently, there are some service gaps and issues. The Town of Fort MacLeod feels there is insufficient expertise and staffing levels in some departments to deliver desired level of service. There are also some major assets in poor/failed condition such as the underground water and sewer network, roadways and select town-owned buildings. Some barriers that exist are that current priorities are resource heavy and there is a lack of time; these reasons among others are hindering the current Asset Management Program.

FCM endorses the S.W.O.T. model for assessing current Asset Management Systems. This stands for:

1. Strengths (Internal)
2. Weaknesses (Internal)
3. Opportunities (External)
4. Threats (External)

According to interviews with select staff, some examples that pertain to the Town of Fort MacLeod are as follows:

1. TCA information is robust, comprehensive, and maintained.
2. Current asset data is limited. Only have significant asset data from period engineering reports such as the Infrastructure Master Plan from 2018.
3. Potential grant funding.
4. Increased community needs with insufficient funds to capture them all.



Town of Fort Macleod – Strategic Alignment

This AM Strategy incorporates information from the Town of Fort Macleod Asset Management Policy, interviews from select municipal staff, and recommendations from the Federation of Canadian Municipalities (Federation of Canadian Municipalities, 2018).

Strategic View

The Town of Fort Macleod has a population of 3297 (Statistic Canada, 2016) with land area of 22.54 sq. km. Fort Macleod is a community poised for growth strategically located to benefit from growth in Calgary and Lethbridge. With 60 acres of light-industry ready land, it is a hub primed for economic development.

The Town aims to maintain infrastructure to provide sustainable services to ratepayers. To achieve long-term sustainability, along with managing municipal growth, the Town of Fort Macleod is developing this Asset Management Strategy as part of a larger asset management system. Through the principles laid out in the AM Policy, and the framework and initiatives laid out in this strategy, Fort Macleod will ensure long-term sustainable service delivery to support municipal growth over the long-term.

Asset Management Policy Principles

The Town of Fort Macleod's Asset Management Policy principles guided the development of the asset management strategic objectives. These principles are listed below:

Sustainability and Environmental Adaptability

"Services and infrastructure assets will be socio-culturally, environmentally and economically sustainable in the long-term and consider the needs of both, current and future generations."

The Town shall:

- a) Consider risk, life-cycle-costs and defined levels of service when investing in infrastructure assets.
- b) Undertake a comprehensive approach to Asset Management Planning considering socio-cultural, environmental, and economic factors.
- c) Utilize available information to forecast changes in demographics' service demand.
- d) Consider how increased frequency and severity of climatic events may directly affect the delivery of levels of service.



Holistic “Big Picture” Approach

“Improve collaboration between departments and to create efficiencies in operations.”

The Town shall:

- a) Develop cross-departmental communication processes and functional groups to support asset management planning.
- b) Consider the state of infrastructure assets owned or managed by the county in a system wide context, as well as an individual asset.
- c) Maximize efficiency of existing infrastructure by managing the condition, risk, and delivered level of service.
- d) Implement asset evaluation methods to continually monitor and improve the overall state of infrastructure assets and service delivery.

Service Delivery to Customers and Information Management

“Provide defined levels of service that balance ratepayer expectations with related cost and risk following community priorities.”

The Town shall:

- a) Define levels of service targets considering stakeholder quality of life, minimizing long-term costs, and asset management strategic risks.
- b) Deliver target levels of service by effectively and efficiently managing all infrastructure networks.
- c) Maintain transparency with stakeholders regarding level of service targets and asset performance.
- d) Ensure alignment of levels of service with strategic objectives, as well as legislative, statutory, and regulatory requirements.
- e) Monitor and periodically review the defined levels of service and update accordingly.
- f) Maintain a comprehensive infrastructure asset inventory, updated continually.

Fiscal Responsibility & Decision Making

“Demonstrate fiscal responsibility in decision making and develop a repeatable process to make defensible decisions in capital transactions.”

The Town shall:

- a) Consider the inter-generational effects of infrastructure investment throughout the asset management decision-making process.
- b) Conduct ongoing asset management research to develop best practices.
- c) Consider full life-cycle costs including acquisition, operation, maintenance, and disposal when making infrastructure planning decisions to minimize the long-term cost of ownership.
- d) Implement infrastructure maintenance strategies which sustain defined levels of service and maximize asset value.
- e) Implement maintenance strategies that consider sustaining the defined levels of service and maximize asset value.
- f) Comply with all statutory financial tracking and reporting requirements.



Continuous Improvement

“Develop a culture of continual improvement to progress asset management processes and ensure delivery of services effectively and efficiently”

The Town shall:

- a) Continually seek improvement in asset management processes by incorporating innovative tools, techniques, and solutions.
- b) Monitor and review asset management processes for progress and effectiveness. Make revisions where applicable to improve the process.
- c) Promote long-term cross-departmental efficiency and effectiveness in service delivery and asset management decision making.
- d) Assess progress and provide support, education, and training to further develop the asset management program.



Asset Management Objectives and Performance Targets

Asset Management Strategic Objectives were developed using the AM Policy principles, strategic objectives of the Town of Fort Macleod, and internal asset management expertise. Utilizing these sources, six Asset Management Strategic Objectives and associated AM initiatives were developed and are described below.



Figure 2: Asset Management Strategic Objectives



These initiatives shall be measured periodically using performance targets. These performance targets may include:

- Ability to predict realistic projections of costs beyond the current 10-year capital plan.
- Number of Levels of Service infractions per annum, broken down by service type (road network, water network, etc.).
- Effectiveness and applicability of strategic objectives in meeting community values/needs.

Performance targets will be added and/or adjusted in subsequent iterations of this AM Strategy.

Town of Fort Macleod Asset Management Framework

The following diagram serves to outline the relationship between asset management documents and resources within Fort Macleod:



Figure 3: Asset Management for Sustainable Delivery

Core practices and processes within the Asset Management System can assist staff in realizing the most efficient and effect way to deliver services and manage assets. All the above shown archetypes are an ongoing activity.



Below the archetypes can be broken down into further sub-categories:

Archetype	Process or Practice	Scope/Intended Outcome
Assess	Assess Asset Management Practices	Identify the strengths and weaknesses that currently exist within the asset management system. Maneuver the training, standardization of analysis, apply current and gained knowledge of asset management into a tangible outcome.
	Assess the Current State of Assets	Apply knowledge of asset management to gathering data on current assets. Identify critical assets and define conditional assessments for each respective asset category. Project the lack-there-of data and create a plan to move forward.
Plan	Asset Management Policy	The Asset Management Policy provides overarching principles that will be used to guide decision-making processes to deliver services to the community. It signifies the council and senior management’s commitment to the development and continuous improvement of asset management practices. Through the principles laid out in the policy, the framework for funding asset acquisitions, operations, maintenance, renewal, and disposal can be implemented through the Asset Management Strategy and Asset Management Plan.
	Asset Management Plan	Asset Management is an integrated approach involving all aspects of a municipality’s strategy and operations. The role of the Asset Management Plan is to lay out the current snapshot of asset management in the municipality. It outlines in-depth all attributes of current assets as well as the projected recommended next steps on any asset management journey.
	Asset Management Strategy	The Asset Management Strategy builds off the Asset management Policy and the County’s strategic goals to define overarching asset management objectives. It provides an overview of the current decision-making processes, initiatives procuring to the strategic alignment, and applying policy principles to supplement long term asset management goals. Built around the strategy is a framework of asset management which outlines the direction of each asset management resource. The goal of the framework is to outline all required pieces for a robust asset management plan to achieve all goals laid out by the County. The goal is to link the County’s decision-making regarding assets with the County’s vision, mission, goals, and other aspirations.
	Integrate into Long-Term Financial Plan	Develop plans for meeting future demand and infrastructure needs. Understanding risk and developing risk assessment strategies to deliver and maintain LOS, without a further financial burden.



Implement	Implement Asset Management Practices	Continuous improvement on asset management practices that can be standardized with FCM or unique to your own municipality as well as continuous improvements to LOS and QOL.
	Measure & Report	Determine whether new assets are required, or old assets can be repaired. Create or update reporting on O&M procedures when operating assets.

Table 2: Asset Management Processes



Now this all exists within the framework that exists for Town of Fort Macleod’s asset management journey. The below figure was built specifically for Fort Macleod’s strategic asset management framework:



Figure 4: Conceptual Asset Management Framework

As Fort Macleod is still beginning their asset management journey, the focus within the framework will be in the Asset Management Strategy and Planning section as well as Organizational Strategic Plan. When these sections become robust, all the following sections will be exponentially improved. A solid foundation of asset management knowledge, an engaging strategy and a SMART plan will be the key factors regarding success in Asset Management.



Key Asset Management Improvement Initiatives

The following initiatives are to be implemented to improve Asset Management Processes and decision making throughout the organization. The improvement initiatives are broken down into their relevant strategic asset management objective. Timelines for Initiatives below are described in the Asset Management Roadmap. This roadmap is a timeline of both fiscal goals as well as level of service goals with measures of success in all asset types. Utilizing timelines and other quantifiable goals define what success will mean to Fort Macleod.

Sustainable Service Delivery

Defining the Level of Service for all relevant asset types and networks will allow Fort Macleod to standardize and measure quality of life metrics for stakeholders. Once standardized, these Levels of Service targets can be measured, tracked, and benchmarked. This information can be used by Fort Macleod to re-allocate resources, seek additional funding, or alter the defined Levels of Service required. Council and community feedback is crucial in determining and measuring Levels of Service throughout the municipality.

- Determine Levels of Service for all services:
 - Define and document Levels of Service:
 - Consider current needs and trends in service delivery to prepare for the future
 - Option: Refer to “Getting Started – Toolkit User Guide (Municipal Affairs Alberta, 2015) and the Federal Municipalities of Canada (FCM) “Asset Management Readiness Scale”
 - Establish Level of Service measurable gaps that impact service quality
 - Monitor, review, and update annually
 - Engage the community periodically to understand service needs

Environmental Considerations and Risk Management

A risk mitigation plan is built upon the concept that various levels of risk are applied to different assets. Risk management quantifies risk with respect to assets in the form of likelihood vs consequence. Using these two variables, a risk matrix is utilized to estimate an overall associated risk. Environmental factors have been increasingly influential in risk management and are now an integral part of assessing risk. Once key risks are understood, mitigation plans can be developed. Once a risk management plan is in place, being able to determine life of assets and associated risk of failure will be substantially more accurate. It allows the municipality to shift from a reactive asset management style to a proactive asset management style.

- Prepare Risk Management and Mitigation Plan for all services
 - Implement a Risk Mitigation plan with climate change/environmental factors within the criteria
 - Compare Asset Risks vs Strategic Risks
 - Asset Risks are defined as risks to the physical asset
 - Strategic Risks are defined as risks to the asset management plan and practice
 - Identify risk likelihood and impacts specific to specific assets or asset networks
 - Engage council and community to determine acceptable level of risk
 - Review and update annually



Operational Efficiency

Operational efficiency is practiced by managing resource's, such as people, time, equipment, and budget, in an optimized way to best serve the municipality. With the goal of operational efficiency in mind, standard of practices are created. This standardizes the procedures to operate on, maintain, and replace assets. Standardization pushes for a consistent and easily predictable asset management journey, rather than an erratic, reactive asset management plan that changes based on current emergency. Once Operation and Maintenance (O&M) procedures are created, all staff that they pertain to will be able to have equitable practices which in turn, provides stable levels of service to the ratepayer.

- Develop Operation and Maintenance (O&M) Management Procedures for all services based on the determined levels of service
 - Option: Refer to "Getting Started – Toolkit User Guide" (Municipal Affairs Alberta, 2015)
- Track, monitor, and document O&M activities
 - Develop a system to track, monitor, and document activities
- Prepare 3-year Operation Plan
 - Financial projections based on the procedures and determined levels of service
 - Update annually

Lifecycle Financial Planning

- Prepare Asset Replacement Forecast (A.R.F)
 - Based on age, condition, current replacement value and year installed or renewed
 - Option: Refer to "Getting Started – Toolkit User Guide" (Municipal Affairs Alberta, 2015)
- Meet PSAB 3150 requirements for depreciating assets.
 - Tangible Capital Assets will be depreciated over their estimated useful life using the straight-line method
- Prepare a Long-term Financial Plan based on Levels of Service, Risk, and A.R.F. This plan will incorporate information from the 10-year capital plan, 3-year operation plan, and 5-year revenue projection plan. The purpose of this is to pull all relevant financial information together to best forecast spending needs and funding sources over the next 10 years.
 - Update annually
 - Determine/forecast lifecycle cost components for assets, including the acquisition, operating, maintenance, disposal, and replacement costs
- Identify and research funding sources to align with infrastructure projects
 - Assess the current and forecasted funding from ratepayers
 - Research available grants and funding program opportunities
- Prepare the annual budget based on the Long-term Financial Plan
 - Assess service needs based on determined levels of service
 - Determine required operational and capital needs based on the service needs
 - Document trade-offs between risks, service, and long-term costs for each decision



Knowledge Sharing and Capacity Building

- Form an Interdisciplinary Asset Management team
 - Strive for representation from all departments
- Prepare and maintain an Asset Inventory. An asset inventory is a record of all assets owned and managed by the municipality. Asset inventories typically come in two formats: a basic asset inventory and an advanced asset inventory. A basic asset inventory includes basic inventory information such as location, quantity, material, and size, whereas an advanced asset inventory includes this information as well as asset management specific criteria such as condition, level of service, replacement cost, and risk.
 - Incorporate GIS spatial data into asset planning
 - Maintain and update GIS according to your Data and Information Management Plan
 - Keep all asset data as up to date as reasonably possible
- Prepare the Data and Information Management Plan
 - Refer to “Getting Started – Toolkit User Guide” (Municipal Affairs Alberta, 2015) and FCM – Asset Management Readiness Scale (Federation of Canadian Municipalities, 2018)
 - Comply with financial reporting and documentation requirements of PSAB
- Cohort learning and regional collaboration. Municipalities are encouraged to share their knowledge and experience with other local governments. This allows the municipalities to share resources, roadblocks, and successes in both physical and intellectual aspects
 - Stay connected with asset management organizations. Infrastructure Asset Management Alberta (IAMA), Rural Municipalities of Alberta (RMA), Canadian Network of Asset Managers (CNAM), and Federation of Canadian Municipalities (FCM) to keep up to date on the best, most efficient way to engage in asset management
 - Sharing resources and experiences can reduce both fiscal and operational strain on municipalities and staff
- Succession Planning to plan for future retirement and turnover within staff and council. This will position the municipality to ensure that key asset management information is not lost, initiatives are pushed forward, and that levels of service can continue to be met.
 - Consider this in your strategic risk mitigation
 - Provide asset management training for staff
 - Providing this high-level training and integration with the accepted asset management strategy will relocate dependency of asset management from individuals to your organization



Transparent Decision-Making

- Develop a Communication Plan. A communication plan allows for transitional ease when feedback is given. To reach higher levels of asset management, stakeholder feedback is required. This can include feedback for Level of Service targets, measures of Level of Service, and future regional development. With regular communication established, it allows for both public acceptance of asset management as well as organizational transparency.
 - Consider all stakeholders and multiple tools to share the information with
 - Include the cost of implementing the Communication Plan in your annual budget
 - Consider an ongoing campaign of Educating, Engaging, and Communicating with the public. An educated public who is aware of the service topics and community issues could provide better input and feedback for your operations and decisions
- Include operational, financial, and risk updates as part of the regular reporting to council and Community (as opposed to only reporting when there is an issue):
 - Communicate the trade-offs between levels of service, risk, and costs with your community

Asset Management Roles And Responsibilities

Fort Macleod's AM Policy outlined the roles and responsibilities for Council, Chief Administrative Officer (CAO), and Department Managers. It is important for the CAO to set a high-level vision (with Council's objectives in perspective) and ensure that all the roles involved in asset management are achieving set deadlines. Due to Town's smaller population and staff, some members may play multiple roles within the governance structure. Knowing this, it is important to set realistic deadlines and expectations for staff. For more information on the roles and responsibilities for the key asset management personnel refer to the Town of Fort Macleod's approved Asset Management Policy.

How To Monitor And Improve Asset Management

Asset management is a continuous process and as such the strategic objectives, initiatives, and performance targets will have to be re-visited as the strategic priorities or community values of Fort Macleod change over time. To continuously improve it is necessary for the Town to review the Asset Management Strategy and adjust as appropriate. The Asset Management Strategy and its outcomes will be evaluated by management and council every 4 years, to align with council elections. Evaluations will review performance indicators to assess the effectiveness of the Asset Management Strategy. If required, a roadmap will be developed to prioritize short-term, mid-term, and long-term asset management initiatives. Revisions to this document will be made and tracked by the CAO and approved by Council.



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