THE VILLAGE OF LOREBURN

MUNICIPAL ASSET MANAGEMENT STRATEGY

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EXECUTIVE SUMMARY

BACKGROUND

The Asset Management Strategy provides an overview of asset management, its principles and expected benefits from adopting Asset Management.

RISK MANAGEMENT

Thee overall purpose of the Asset Management Strategy is to understand the cause, effect and likelihood of adverse events occurring, to manage such risks to an acceptable level and to provide an audit trail for the management of risks.

ASSET MANAGEMENT CAPABILITY

An Asset Management Strategy is a high level but very important document that guides the overall asset management activities within an organization. Being a strategy, it is meant to explore long-term issues and ensure the overall plan is limited to key "strategic" issues of the municipality.

STRATEGY OUTLOOK

An Asset Management strategy should be a strategy for identifying and implementing a more cost-effective way of providing and maintaining assets and a way to make the Village of Loreburn a better place to live.

IMPLEMENTATION PLAN

The Asset Management strategy is to be implemented after consultation between Council and administrative staff, ensuring that an appropriate level of service is provided for the rate payers of the Village of Loreburn.

1 INTRODUCTION

- Legislative Reform – The Government of Canada is serious about the infrastructure challenges that this nation faces, thus they provide the Gas Tax Fund. The Federation of Canadian Municipalities (FCM) and Infrastructure Canada have a funding program called the Municipal Asset Management Program (MAMP) designed to help municipalities make

informed infrastructure investment decisions based on sound asset management practices. The Government of Saskatchewan has made it mandatory that municipalities adopt an Asset Management Policy and Strategy.

- Asset Management Planning Process – The Village of Loreburn has adopted an Asset Management Policy and Plan. We are moving towards a proactive approach to future maintenance needs.

2 WHAT ASSETS DO WE HAVE

The Village of Loreburn has the following asset networks:

- Wastewater network: sewer mains, manholes, lagoon and lift station
- Water network: water mains, valves, water treatment plant and water meters
- Transportation network: gravelled roads, sidewalks, culverts, street signs

Other assets and service areas of the Village include:

- Buildings
- Equipment/vehicles
- Fire Equipment/vehicles
- Sports fields/sports infrastructure
- Employees
- Green Spaces/municipal trees

3 VILLAGE ASSETS AND THEIR MANAGEMENT

3.1 STATE OF THE ASSETS

- The bulk of the wastewater network was installed in 1963; this was also the year that the lift station was built.
- The bulk of the water network was installed in 1963; same year as the water treatment plant was built.
- The transportation network is gravelled annually depending on wear.

3.2 LIFE CYCLE COSTS

In the past, the Village of Loreburn guided asset management investments primarily by considering the condition and age of the asset. Now when new assets are considered for service improvements and growth, the Village looks at the suggested life cycle investment process that will include considerations for risks and level of service. The Asset Lifecycle Investment Process is as follows:

- Service Target = Asset Information, Data Management Tools, Level of Service
- Identify Needs = Condition, Risk, Level of Service
- Validate Projects = Evaluate a case for the project
- Prioritize & Implement = Make the investment

3.3 ASSET MANAGEMENT STRUCTURE

The Asset Management Structure is centered on an overall implementation approach supported by specific strategies such as:

- *Lifecycle Management Strategy* – manage assets on the principles of sustainability, continuous improvement and simplicity; minimize lifecycle cost and link capital budget needs to the municipal asset management planning process, quantify the outcome of decisions based on triple bottom line considerations (economical, environmental and social); provide comparable information for intelligent decision-making.
- *Level of Service Strategy* – maximize the return on investment and spend tax dollars wisely.
- *Risk Management Strategy* – reduce the risks of environmental violations or service interruptions due to failed or poorly performing assets
- *Data Management Strategy* – provide reliable data with the integrity to meet or surpass regulatory demands
- *Governance, Communication Strategy* – reduce knowledge losses as the experienced workforce retires

3.4 ASSET MANAGEMENT STEERING COMMITTEE

The Village of Loreburn Asset Management Steering Committee will consist of the Administrator, one Councillor and the Public Works Foreman.

3.5 STRATEGY OUTLOOK

The purpose of the strategy is to set out the approach to implementing the principles set out in the Asset Management Policy. The Asset Management Strategy is about advancing the Asset Management objectives.

4 WHERE DO WE WANT TO BE

4.1 MISSION, GOALS AND OBJECTIVES

Our mission in developing an Asset Management Plan is to align the Village's asset portfolio to better meet the service delivery needs of the community – now and into the future.

Long term plans will outline asset activities for each service and provide the business case for long term expenditure forecasts.

Objectives are:

- To maintain the Village of Loreburn's assets to agreed levels of service at the lowest cost possible for each year of useful life.
- To identify and implement more cost-effective ways of providing and maintaining assets and making the municipality a better place to live
- To explore emerging technologies that may give the right answer to asset management concerns or even to compel change

4.2 ASSOCIATED RISKS

Failure to deliver the Plan will ultimately impact the ability of the Village to deliver established levels of service.

POTENTIAL RISKS	POTENTIAL IMPACTS	MITIGATING ACTIONS
Plan is not followed	Wasted investments, potential to shorten useful life, failure to deliver service, prioritization process fails	Monitor and review, implement quality asset management processes
Failed Infrastructure	Failure to deliver service; damage to asset, neighboring equipment/assets and property; non compliance; litigation; asset loss	Repair or replace; increase investment/available funding; reduce or stop delivering service
Inadequate Funding	Increased risk of failure; service reductions; rising	Reduce or stop delivering service; find

	maintenance costs; prematurely shortens useful life if not maintained; shift burden to future	alternate sources of funding; increase investment/available funding; discard efforts on past planning
Poor Quality Asset Information	Inefficient maintenance program; poor prioritization/projections; poor decision making; improper investments; inability to provide service	Invest in computer software or data systems that can compile better quality asset information; determine appropriate level of service and risk ratings
Planning Assumptions Incorrect	Defeats planning efforts	Monitor plan, update and correct projections
Regulatory Requirements, Standards, Criteria Change or Do Not Exist	Non compliance; mandatory investments and schedule; investment due to regulation reduces available funding for others	Lobby against additional expenditures or for additional funding; reduce or stop delivering service; find additional sources of funding
Economic Fluctuations, inflation, downturns, revenue and use reduce/increases	Reduced/increased needs; wasted expense maintaining oversized/undersized infrastructure	Change, create or stop delivering service
Growth Projections Not As Planned	Infrastructure oversized or undersized; inefficient use or available service	Defer or advance capital projects related to growth and update plan
Service Provision Changes	Plan either does not address or contains redundancies	Amend plan

WATERWORKS SYSTEM

Non-Infrastructure Solutions

- Improvements to employee capabilities, communications, training, etc.
- Ongoing search for additional funding: user fees, rates, lobby for transfer funding
- Financial and planning strategies to control cost
- Invest in a computerized maintenance management system

Maintenance Activities

- Scheduled preventative maintenance programs
- Scheduled inspection programs for key assets – e.g. leak detection
- Reactive maintenance for significant portion or asset inventory

Renewal/Rehab Activities

- Watermain rehabilitation basaed on the current condition of the pipe
- Water facilities replaced based on facility inspection report e.g. replace pumps, valves, etc.

Asset Inventory and Condition

- It is not possible to inspect the condition of underground infrastructure with the same ease as a readily available surface asset. We can collect available data from various sources to rate the water infrastructure which is then used to prioritize renewal activities. This data is gathered from the age of the infrastructure, instances of infrastructure failure or breaks, customer complaints, water operator input and engineering reports.
- The water operator collects data manually regarding valve maintenance, hydrant maintenance and water quality testing.

Financial Planning

- Currently water infrastructure is based upon reactive repair. A waterworks assessment report was completed in early 2020. Water treatment plant repairs and cistern cleaning were undertaking in the spring of 2020.
- Approval of any current year projects and water rates are set annually through the budget process.

WASTEWATER SYSTEM

Non-Infrastructure Solutions

- Improvements to employee capabilities, communications, training, etc.
- Changes to level of service
- Operational improvements

Maintenance Activities

- Scheduled preventative maintenance programs for most assets
- Scheduled inspection for key assets, including lift stations, lagoon, manholes
- Routine flushing and cleaning of sewer mains
- Maintenance of lagoon dikes and banks, inspection of pipes, etc.

Renewal/Rehab Activities

- Wastewater rehabilitation is based on the current condition of the pipe, including spot repairs, manhole replacement and rebab, flushing and cleaning
- Lift station rehabilitation is based on inspection by the sewer operator/engineer. Pumps are replaced as necessitated and a spare pump is always kept on hand

Asset Inventory and Condition

- Wastewater systems face similar challenges for condition evaluation as water pipes but have the benefit of some better information using video inspection capability
- Results from a video inspection can be used to develop strategic replacement, lining and spot repair, and excavation repairs
- Performance indicators such as maintenance history, the number of failures and blockages and condition inspection during sewer main flushing can all be used in the assessment of the need to replace infrastructure
- Routine operator inspection and maintenance of the lift station and the lagoon are the best indicators of the need to replace infrastructure. Age of the infrastructure coupled with engineering reports are also used

Financial Planning

- The Village of Loreburn currently replaces wastewater lines on a reactive basis. An engineers report has been made which prioritizes replacement of wastewater lines throughout the Village.
- Approval of current year projects and setting the sewer rates are done annually in the budget process.

ROADS AND STRUCTURES

Non-Infrastructure Solutions

- Improvements to employee capabilities, communications, training, etc.
- Changes to level of service
- Financial and planning strategies to control costs
- Developing a computerized maintenance management system, prioritizing the replacement of underground infrastructure prior to road renewal

Maintenance Activities

- Routine maintenance such as pothole patching, grading, gravelling and sidewalk repair
- Snow removal maintenance
- Reactive maintenance for significant portion of asset inventory
- Maintenance is also triggered by the public who report a specific problem
- Maintenance of street lighting is done by SaskPower, however residents often contact administration to report the outage

Renewal/Rehab Activities

- Roadways should be maintained on a lifecycle basis, based on their current condition and projected deterioration. Many of the asphalted surfaces in Loreburn have exceeded their projected lifecycle.
- Asphalted surfaces should not be replaced or renewed until the aging underground infrastructure has been replaced

Asset Inventory and Condition

- Roadways are assessed by the age of the roadway, condition of the roadway, feasibility of incurring the cost for a new roadway over old infrastructure, foreman's advice and engineering reports
- Drainage is a large part of the roadway and improper drainage results in premature failure of the roadway. Drainage construction should be performed on the advice of an engineer
- Council works with contractors and engineers to establish priorities and coordinate construction to optimize project costs and reduce social impact

Financial Planning

- Budgetary constraints determine rehabilitation implementation strategies
- Acceptable levels of service as also a driving force. Residents may be willing to have a gravelled road rather than paying more in taxes or more in the form of local improvement levies.

FIRE

- Given the critical nature of the fire protection service, these assets are rigorously maintained to support the reliable delivery of front line service
- Funding for Fire/First Responder assets are derived through municipal taxes and agreements for service funds from the neighboring rural municipalities and urban municipalities.
- Fire vehicles and equipment replacement decisions should be based on age and expected useful life estimates for each unit, not on condition assessment and maintenance records. Replacement will be financially planned for during the budget process.
- Maintenance is performed by volunteer fire fighters and suggested capital purchases are dealt with during the budget process through Council.

BUILDINGS

- Condition of Village-owned buildings is evaluated by the Council or in the case of the Loreburn Rink, the Loreburn Recreation Board (buildings which have other groups holding stewardship over them)
- In cases where there is a village-owned building which has a group holding stewardship, that group is responsible for building maintenance and the overall condition of the facilities (mechanical and electrical systems, etc.)
- All other village-owned buildings are maintained by the public works staff.

EQUIPMENT/VEHICLES

- Public works employees perform maintenance and repair on all equipment and vehicles, or in some cases a mechanic is contracted to perform more complicated repairs
- Equipment is replaced when it is deemed that it no longer can perform the work it was intended for

SPORTSFIELDS, GREEN SPACES AND MUNICIPAL TREES

- Land does not have a lifecycle and is maintained into perpetuity. Asset management practices are focused on assets other than land such as baseball backstops, fencing, etc. These structures are maintained by public works and need for replacement or rehab are reported to administration and then to Council
- Problems that need to be addressed can also be triggered by public feedback
- Maintenance issues regarding routine grounds keeping are identified by staff and the public and are prioritized and addressed based on need
- All significant safety issues are addressed immediately

- The Village manages its boulevard trees through planning and maintenance activities including trimming, removals and plantings.
- Tree removal is often necessary in boulevard locations due to the ongoing replacement of aging infrastructure or environmental factors such as storms and old age

EMPLOYEES

- Acknowledgement that it is vital to reduce knowledge loss when experienced employees retire
- Develop human resources strategy to continually have new staff training under those more experienced who can also explain those idiosyncrasies specific to the Village

CONCLUSION

The Asset Management Strategy is the template for the Asset Management Plan. All documents regarding Asset Management are living documents and as such are pliable and should be reviewed and changed as necessitated.