

# ASSET MANAGEMENT STRATEGY

## Village of Vibank

**Organization – Village of Vibank**

**Controller – Chief Administrative Officer**

**Doc No – Version 1, August 7, 2018**

**Approved by Council – August 28, 2018**

**Review Date**

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# **VILLAGE OF VIBANK 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.

**RISKS CRUCIAL TO COUNCIL'S OPERATIONS** - The 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** - As 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 Vibank a better place to live.

**ASSET MANAGEMENT IMPLEMENTATION** - 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 Vibank.

## 1 INTRODUCTION

1.1 Legislative Reform – The Government of Canada is serious about the infrastructure challenges that this nation faces. The Federal government has provided the Gas Tax Fund as a means of helping communities with the infrastructure challenges that they face. In 2017, Infrastructure Canada released a five-year \$50 million funding program with the FCM (Federation of Canadian Municipalities) called the Municipal Asset Management Program. This was designed to help Canadian municipalities make informed infrastructure investment decisions based on sound asset management practices.

The Government of Saskatchewan has made it mandatory that municipalities in Saskatchewan adopt an Asset Management Policy and Strategy by June 30, 2018. Those municipalities who do not comply risk losing their Gas Tax funding.

The Government of Saskatchewan has also formed Asset Management Saskatchewan (AM Sask) to assist in the planning and implementation of asset management in Saskatchewan.

1.2 Asset Management Planning Process – Although the Village of Vibank is already performing a form of asset management. We operate our assets, fix them when they break and try to plan for future maintenance needs. This, however, can be seen as taking a reactive approach to asset management rather than a proactive approach.

Asset Management helps bring together people and skills across the organization to solve service and infrastructure problems: engineers, planners, administration and elected officials.

The Village of Vibank must first adopt an Asset Management Policy, then develop an Asset Management Strategy. From these two documents the Asset Management Plan is formed, and lastly the planning culminates in a Long-Term Financial Plan.

## **2. WHAT ASSETS DO WE HAVE?**

We could say that the Village of Vibank has key asset networks such as:

- Sanitary Network, including sewer mains, manholes, lagoon and lift station
- Water Network, including water mains, valves, water plant and water meters
- Transportation Network, including gravelled roads, paved roads, curbs, sidewalks, culverts, street signs and street lighting

Other assets and service areas of the Village include:

- Buildings
- Road Equipment/vehicles
- Fire Emergency equipment/vehicles
- Sports fields/sports infrastructure
- Employees
- Green Spaces/Municipal Trees

## **3. COUNCIL'S ASSETS AND THEIR MANAGEMENT**

### **3.1 State of the Assets**

- The bulk of the sanitary network of sewer mains were installed in 19XX; with a secondary lift station built in 2012 and a lift station expansion at the main lift station in 2018.

- The bulk of the water network of water mains were installed in 19XX. The new water plant was built and operational as of 2010.
  - The transportation network has in gravel. All water and sewer infrastructure below is original.

### 3.2 Life Cycle Costs

In the past, the Village of Vibank guided asset management investments primarily by considering the condition and age of the asset. Where new assets were considered for service improvements and growth, the Village exercised little standardized methodology across the service areas. The suggested life cycle investment process would include considerations for risk and level of service. Once the asset management policy has been approved and the program strategies are finalized the Asset Life Cycle Investment Process should look like this:

- 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 the municipal 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, Communications Strategy* – Reduce knowledge losses as the experienced workforce retires

### 3.4 Asset Management Steering Committee

The Village of Vibank Asset Management Steering Committee will consist of administration, C.A.O (Dagmar Crumley) , Public Works Manager (Dan Eberle) and Council members (Councillors Ian Brimble, Roger Ecarnot, Cathy Mastel, Don McCarron, and Mayor Ryan Reiss )

### 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 Council's Mission, Goals and Objectives

Vibank Village Council's Mission in developing an Asset Management Plan is to align the Village's asset portfolio to better meet the service delivery needs of our 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 Village of Vibank'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 Risks Associated with the Asset Management Plan and Strategy

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

*Table 4.2*

<b>PLAN IS NOT FOLLOWED</b>	<b>POTENTIAL IMPACTS</b>	<b>MITIGATING ACTIONS</b>
<b>Plan is not followed</b>	Wasted Investments; Potential to Shorten Useful Life; Failure to deliver service; Prioritization process fails; Inefficient Investments	Monitor and review; Implement quality asset management processes
<b>Failed Infrastructure</b>	Failure to deliver service; Damage to asset, neighboring equipment/assets and property (private and public); Noncompliance; Litigation; Asset Loss	Repair or replace; Increase investment/available funding; Reduce or stop delivering service
<b>Inadequate Funding</b>	Increased risk of failure; service reductions; rising maintenance costs; Prematurely shortens useful life if not maintained; Asset Loss; Shift burden to future	Reduce or stop delivering service; Find alternate sources of funding; Increase investment/available funding; discard efforts on past planning
<b>Poor Quality Asset Information</b>	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
<b>Planning Assumptions Incorrect</b>	Defeats planning efforts	Monitor plan, update and correct projections
<b>Regulatory Requirements, Standards, Criteria Change or Do Not Exist</b>	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

<b>Economic Fluctuations, Inflation, Downturns, Revenue and Use Reduces/Increases</b>	Reduced/Increase needs; Wasted expense maintaining oversized/undersized infrastructure	Change, create or stop delivering service
<b>Growth Projections Not as Planned</b>	Infrastructure oversized or undersized; Inefficient use of available service	Defer or advance capital projects related to growth and update plan
<b>Service Provision Changes</b>	Plan either does not address or contains redundancies	Amend Plan

## 5. ASSET MANAGEMENT ACTIVITIES

### Water Services Area

#### 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 of asset inventory



#### Renewal/Rehab Activities

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

#### Asset Inventory & Condition

- It is not possible to inspect the condition of underground infrastructure with the same ease as a readily accessible surface asset. The Water Service Area collects 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, Public Works Manager's input and engineering reports
- The Public Works Manager collects data manually regarding valve maintenance, hydrant maintenance, water quality testing

#### Financial Planning

- Currently water infrastructure is based upon reactive repair. An engineering report is needed to prioritize replacement of water and sewer throughout the Village.
- Approval of any current year projects and water rates are set annually through the budget process

### **Wastewater – Sanitary**

#### Non-Infrastructure Solutions

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

#### Maintenance Activities

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

### Renewal/Rehab Activities

- Sanitary sewer rehabilitation is based on the current condition of the pipe, including spot repairs, manhole replacement and rehab, flushing and cleaning
- Lift station is rehabilitated based on inspection by the Public Work's Manager. Pumps are replaced as necessitated and a spare pump is always kept on hand

### Asset Inventory and Condition

- Sanitary sewers 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 indications of the need to replace infrastructure. Age of the infrastructure coupled with engineering reports are also used.

### Financial Planning

- The Village of Vibank currently replaces sanitary lines on a reactive basis. An engineer's report to prioritize replacement of sanitary lines throughout Village is required.
- Approval of any current year projects and setting the sewer rates are done annually in the budget process

### **Roads & Structures**

#### Non-Infrastructure Solutions

- Improvements to employee capabilities, communications, training, etc.
- Changes to levels 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 grading, pothole patching, utility cut repairs, sidewalk repair
- Snow and ice 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 Sask Power, 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.
- Road sections that are at an optimal time of replacement should be placed on a list for prioritization and constructed pending budget availability
- Potholes and utility cut repairs are done as an annual maintenance

#### 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, Public Works Manager'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 the Public Works Manager and engineer.
- Public Works Manager 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
- Along with budget driving the road rehabilitation strategy, acceptable levels of service are also a driving force.

#### 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 Village of Vibank municipal taxes and agreements for service funds from the neighboring rural 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 the long term once all agreements with local rural municipalities has been finalized.
- Maintenance is performed by volunteer fire fighters and suggested capital purchases are suggested to Village Council and dealt with during the budgetary process

### **Buildings**

- Condition of Village-owned buildings is evaluated by Public Works staff, or in the case of the Vibank Rink and the Vibank Seniors Center (buildings which have other groups holding stewardship over them) individuals from those groups evaluate condition of the buildings.
- In the 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 public works staff.

### **Road Equipment/Vehicles**

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

### **Sports Fields, Green Spaces, Municipal Trees**

- Land does not have a life cycle and is maintained into perpetuity. Asset management practices are focused on assets other than land such as baseball back stops, 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 trees through planning and maintenance activities including trimming, removals and plantings
- Tree removal is often necessary in 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 to the Village of Vibank

## **CONCLUSION**

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

