ASSET MANAGEMENT PLAN

Municipality of Shuniah

Facilities - 2025

Document Control	**Asset Management Plan** – Asset Register Method				
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Contents

1.0 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

This Asset Management Plan (AM Plan) details information about infrastructure assets with actions required to provide an agreed level of service in the most cost-effective manner while outlining associated risks. The plan defines the services to be provided, how the services are provided and what funds are required to provide over the 2023-2032 year planning period. The AM Plan will link to a Long-Term Financial Plan which typically considers a 10 year planning period.

1.2 Asset Description

This plan covers the infrastructure assets that provide Facilities for all departments

The building network comprises:

- Municipal Office
- Public works Facilities
- Fire Department Facilities
- Recreation Facilities

The above infrastructure assets have replacement value estimated at $7,378,206.00

1.3 Levels of Service

The allocation in the planned budget is sufficient to continue providing existing services at current levels for the planning period.

The main service consequences of the Planned Budget are:

- Ensure Facilities are safe, operational, and accessible

1.4 Future Demand

The factors influencing future demand and the impacts they have on service delivery are created by:

- Increase in usage
- Inflationary costs

These demands will be approached using a combination of managing existing assets, upgrading existing assets and providing new assets to meet demand. Demand management practices may also include a combination of non-asset solutions, insuring against risks and managing failures.

- Seeking funds for new acquisitions
- Investing funds for future operations and maintenance

1.5 Lifecycle Management Plan

1.5.1 What does it Cost?

The forecast lifecycle costs necessary to provide the services covered by this AM Plan includes operation, maintenance, renewal, acquisition, and disposal of assets. Although the AM Plan may be prepared for a range of time periods, it typically informs a Long-Term Financial Planning period of 10 years. Therefore, a summary output from the AM Plan is the forecast of 10 year total outlays, which for the building assets are estimated as $12,131,872 or $1,213,187 on average per year.

1.6 Financial Summary

1.6.1 What we will do

Estimated available funding for the 10 year period is $2,666,892 or $266,689 on average per year as per the Long-Term Financial plan or Planned Budget. This is 21.98% of the cost to sustain the current level of service at the lowest lifecycle cost.

The infrastructure reality is that only what is funded in the long-term financial plan can be provided. The Informed decision making depends on the AM Plan emphasising the consequences of Planned Budgets on the service levels provided and risks.

The anticipated Planned Budget for Facilitiesleaves a shortfall of $946,498 on average per year of the forecast lifecycle costs required to provide services in the AM Plan compared with the Planned Budget currently included in the Long-Term Financial Plan. This is shown in the figure below.

Forecast Lifecycle Costs and Planned Budgets

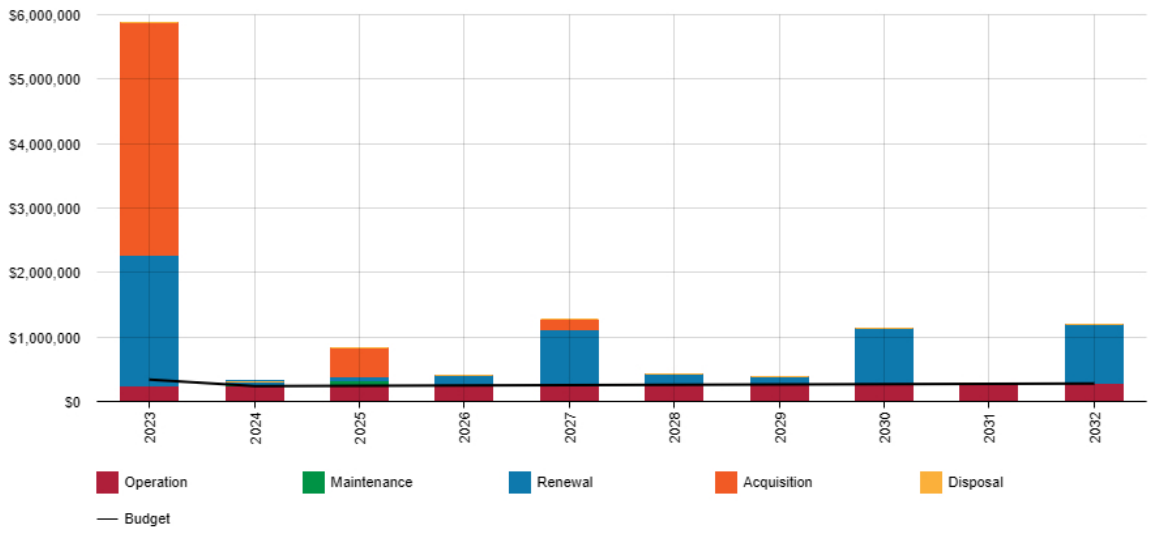


Figure Values are in current dollars.

We plan to provide facility services for the following:

- Operation, maintenance, renewal and acquisition of Facilities to meet service levels set by The Municipality of Shuniah in annual budgets.
- Within the 10 year planning period the following is planned:
  - New ambulance base
  - New multipurpose pavilion
  - Replace infrared heaters at fire hall
  - Addition to current rink shack
  - Addition of backup generators for fire halls and repeater shack
  - Replace roof on MacGregor Recreation Centre
  - New gazabo at Grann Landing
  - Various other building upgrades

1.6.2 What we cannot do

We currently allocate enough budget to sustain these services at the proposed standard or to provide all new services being sought with the help of various funding sources and donations.

1.6.3 Managing the Risks

Our present budget levels are sufficient to continue to manage risks in the medium term.

The main risk consequences are:

- Inflationary costs
- Lack of grants available

We will endeavour to manage these risks within available funding by:

- Investing in reserve funds
- Monitoring prices
- Continue to apply for grants when available

1.7 Asset Management Planning Practices

Key assumptions made in this AM Plan are:

- Increase in building usage
- Age and condition of building components
- Continue maintenance of components
- Increase in costs for repair and maintenance

Assets requiring renewal are identified from either the asset register or an alternative method.

- The timing of capital renewals based on the asset register is applied by adding the useful life to the year of acquisition or year of last renewal,
- Alternatively, an estimate of renewal lifecycle costs is projected from external condition modelling systems and may be supplemented with, or based on, expert knowledge.

The Asset Register was used to forecast the renewal lifecycle costs for this AM Plan.

This AM Plan is based on a reliable level of confident information.

1.8 Monitoring and Improvement Program

The next steps resulting from this AM Plan to improve asset management practices are:

- Current asset conditions – update for reliable data
- Long-term financial plan and budget – to ensure services are sustainable
- Continually update asset data – to ensure maintenance and renewal are performed when required

2.0 INTRODUCTION

2.1 Background

This AM Plan communicates the requirements for the sustainable delivery of services through management of assets, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over the planning period.

The AM Plan is to be read with the Facilities planning documents. This should include the Asset Management Policy and Asset Management Strategy, where developed, along with other key planning documents:

- Strategic Plan

Comment on the current status of Asset Management in the Organisation.

The infrastructure assets covered by this AM Plan include Facilities for all departments. For a detailed summary of the assets covered in this AM Plan refer to Table in Section 5.

These assets are used to provide municipal, public works, emergency and recreation services.

The infrastructure assets included in this plan have a total replacement value of $7,378,206

Key stakeholders in the preparation and implementation of this AM Plan are shown in Table 2.1.

Table 2.1: Key Stakeholders in the AM Plan

Key Stakeholder	Role in Asset Management Plan
Mayor/Councillors	■ Represent needs of community/shareholders, ■ Allocate resources to meet planning objectives in providing services while managing risks, ■ Ensure service sustainable.
CAO/Clerk/Treasurer	■ Provide financial expertise & oversight ■ Provide insights into community
Operations Manager	■ Provide insight for the required items Facilities require to maintain expected levels of service.
Fire Chief	■ Provide insight to the operations manager for required emergency Facilities to maintain expected levels of services

2.2 Goals and Objectives of Asset Ownership

Our goal for managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- A Long-Term Financial Plan which identifies required, affordable forecast costs and how it will be allocated.

Key elements of the planning framework are

- Levels of service – specifies the services and levels of service to be provided,
- Risk Management,
- Future demand – how this will impact on future service delivery and how this is to be met,
- Lifecycle management – how to manage its existing and future assets to provide defined levels of service,
- Financial summary – what funds are required to provide the defined services,
- Asset management practices – how we manage provision of the services,
- Monitoring – how the plan will be monitored to ensure objectives are met,
- Asset management improvement plan – how we increase asset management maturity.

Other references to the outcomes and benefits, principles and objectives of asset management can be found in:

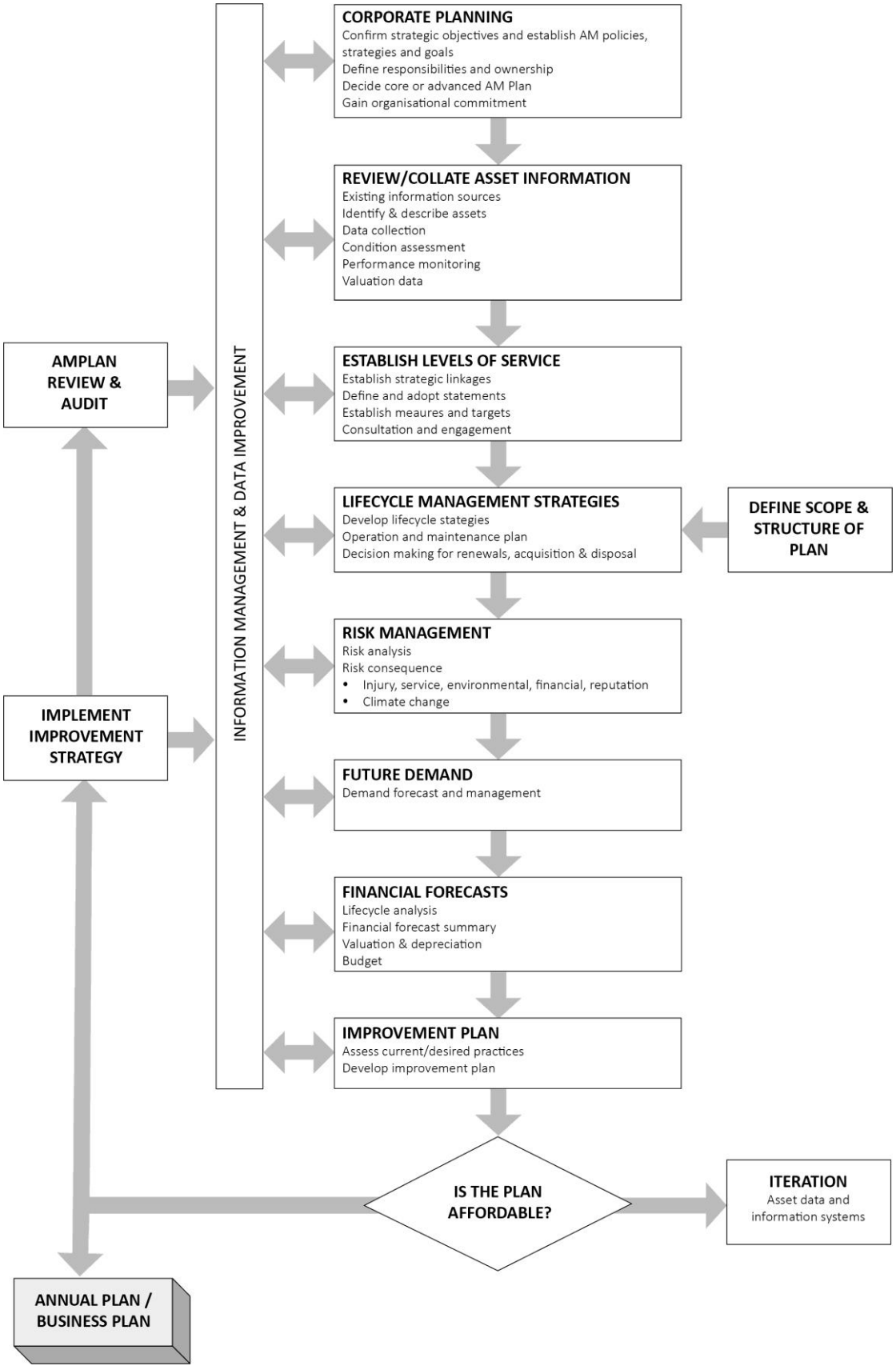
- ISO 55000:2024 Asset Management – Vocabulary, overview, and principles
- International Infrastructure Management Manual[1]

A road map for preparing an AM Plan is shown below.

[1] IPWEA International Infrastructure Management Manual (IIMM), Sec 2.1

Road Map for preparing an Asset Management Plan

Source: IPWEA, 2006, IIMM, Fig 1.5.1, p 1.11



3.0 LEVELS OF SERVICE

3.1 Customer Research and Expectations

This AM Plan is prepared to facilitate consultation prior to adoption of levels of service by the Council of the Municipality of Shuniah. Future revisions of the AM Plan will incorporate customer consultation on service levels and costs of providing the service. This will assist the Council and stakeholders in matching the level of service required, service risks and consequences with the customer's ability and willingness to pay for the service.

We currently have no research on customer expectations. This will be investigated for future updates of the AM Plan.

3.2 Strategic and Corporate Goals

This AM Plan is prepared under the direction of the Facilities vision, mission, goals and objectives.

Our vision is:

Shuniah's municipal leaders and staff will strive to ensure that our actions and initiative under the direction of our new Strategic Plan are inspiring, sustainable, pro-active, collaborative, and accessible to our community.

Our mission is:

Shuniah is committed to providing the highest quality of life by building a healthy rural community through the delivery of essential services provided by responsible leadership, planning and effective management of municipal resources.]

Strategic goals have been set by the Council of the Municipality of Shuniah. The relevant goals and objectives and how these are addressed in this AM Plan are summarised below:

- Manage the impact of growth through demand management and infrastructure investment
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term to meet the level of services.
- Identifying, assessing , and appropriately controlling risks and
- Linking to a long-term financial plan that identifies affordable forecast costs and how replacements are allocated.

3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of the Facilities service are outlined in Table 3.3.

Table 3.3: Legislative Requirements

Legislation	*Requirement*
Ontario Regulation 332/12 Building Code Act, 1992	***Follow all regulations when renewing, constructing Facilities***

3.4 Customer Values

Service levels are defined in three ways, customer values, customer levels of service and technical levels of service.

Customer Values indicate:

- what aspects of the service is important to the customer,
- whether they see value in what is currently provided and
- the likely trend over time based on the current budget provision

Customer Values will be provide in a future asset management revision.

3.5 Customer Levels of Service

The Customer Levels of Service are considered in terms of:

Condition How good is the service … what is the condition or quality of the service?

Function Is it suitable for its intended purpose …. Is it the right service?

Capacity/Use Is the service over or under used … do we need more or less of these assets?

In Table 3.5 under each of the service measures types (Condition, Function, Capacity/Use) there is a summary of the performance measure being used, the current performance, and the expected performance based on the current budget allocation.

These are measures of fact related to the service delivery outcome (e.g. number of occasions when service is not available or proportion of replacement value by condition %'s) to provide a balance in comparison to the customer perception that may be more subjective.

Table 3.5: Customer Level of Service Measures

Type of Measure	*Level of Service*	*Performance Measure*	*Current Performance*	*Expected Trend Based on Planned Budget*
Condition	All facilities operational all the time	Percentage of facilities in fair or better condition	97% fair or better condition	To maintain the facilities at this condition level.
	Confidence levels		Medium	Medium
Function	Description of services and level of accessibility	Complaints	Facilities that customers use are accessible. Each building the description of services	All facilities for customers will be accessible
	Confidence levels		High	High

3.6 Technical Levels of Service

Technical Levels of Service – To deliver the customer values, and impact the achieved Customer Levels of Service, are operational or technical measures of performance. These technical measures relate to the activities and allocation of resources to best achieve the desired customer outcomes and demonstrate effective performance.

Technical service measures are linked to the activities and annual budgets covering:

- **Acquisition** – the activities to provide a higher level of service (e.g. widening a road, sealing an unsealed road, replacing a pipeline with a larger size) or a new service that did not exist previously (e.g. a new library).

- **Operation** – the regular activities to provide services (e.g. opening hours, cleansing, mowing grass, energy, inspections, etc.
- **Maintenance** – the activities necessary to retain an asset as near as practicable to an appropriate service condition. Maintenance activities enable an asset to provide service for its planned life (e.g. road patching, unsealed road grading, building and structure repairs),
- **Renewal** – the activities that return the service capability of an asset up to that which it had originally provided (e.g. road resurfacing and pavement reconstruction, pipeline replacement and building component replacement),

Service and asset managers plan, implement and control technical service levels to influence the service outcomes.[2]

Table 3.6 shows the activities expected to be provided under the current 10 year Planned Budget allocation, and the Forecast activity requirements being recommended in this AM Plan.

Table 3.6: Technical Levels of Service

Lifecycle Activity	Purpose of Activity	Activity Measure	Current Performance*	Recommended Performance **
TECHNICAL LEVELS OF SERVICE				
Acquisition	Supply better service to customers	Increase or demand of usage	Construct new facilities to offer new/more services	New pavilion, ambulance base and renovate rink shack
Maintenance/ Operations	Percentage of planned maintenance and operations as opposed to reactive	Number of items that need to be done immediately	Buildings in good condition with minimal repairs	Continue with good to great condition
Disposal	Dispose of facilities not safe	Condition and lack of use.	One building to be disposed of	Removal of McTavish recreation centre

Note: * Current activities related to Planned Budget.

** Expected performance related to forecast lifecycle costs.

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on existing resource provision and work efficiencies. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

[2] IPWEA, 2015, IIMM, p 2|28.

4.0 FUTURE DEMAND

4.1 Demand Drivers

Drivers affecting demand include things such as population change, regulations, changes in demographics, seasonal factors, vehicle ownership rates, consumer preferences and expectations, technological changes, economic factors, agricultural practices, environmental awareness, etc.

4.2 Demand Forecasts

The present position and projections for demand drivers that may impact future service delivery and use of assets have been identified and documented.

4.3 Demand Impact and Demand Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.3.

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this AM Plan.

Table 4.3: Demand Management Plan

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Increase in usage	Stable	Increase	Possibly lower service	Continue to maintain and renew or acquire assets
Inflationary costs	Stable	Increase	Slow down the renewal or new assets	Look into investing, putting funds in reserves and apply for grants

4.4 Asset Programs to meet Demand

The new assets required to meet demand may be acquired, donated or constructed. Additional assets are discussed in Section 5.4.

Acquiring new assets will commit the Facilities to ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs for inclusion in the long-term financial plan (Refer to Section 5).

4.5 Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the Asset Management Planning process climate change can be considered as both a future demand and a risk.

How climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which we respond and manage those impacts.[3]

As a minimum we consider how to manage our existing assets given potential climate change impacts for our region.

[3] IPWEA Practice Note 12.1 Climate Change Impacts on the Useful Life of Infrastructure

Table 4.5.1 Managing the Impact of Climate Change on Assets and Services

Climate Change Description	Projected Change	Potential Impact on Assets and Services	Management
Droughts	Less water available	If no water will need to close facilities	Use water conservation system
Air Quality	Low	Potential to close facilities	Upgrade ventilation systems as required

Additionally, the way in which we construct new assets should recognise that there is opportunity to build in resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the impacts of climate change;
- Services can be sustained; and
- Assets that can endure may potentially lower the lifecycle cost and reduce their carbon footprint

Table 4.5.2 summarises some asset climate change resilience opportunities.

Table 4.5.2 Building Asset Resilience to Climate Change

New Asset Description	Climate Change impact These assets?	Build Resilience in New Works
Upgrade rink shack	Droughts & air quality	Install water saving sinks and toilets and new ventilation system
New Ambulance base	Droughts & air quality	Install water saving sinks and toilets and new ventilation system

The impact of climate change on assets is a new and complex discussion and further opportunities will be developed in future revisions of this AM Plan.

5.0 LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how the Facilities plans to manage and operate the assets at the agreed levels of service (Refer to Section 3) while managing life cycle costs.

5.1 Background Data

5.1.1 Physical parameters

The assets covered by this AM Plan are shown in Table 5.1.1.

The asset mix is facilities required for each department to provide the services through out the community. One recreation facility is scheduled to be demolished all other facilities are all operational. There is the plan for a few upgraded and new facilities to provide growing services.

Table 5.1.1: Assets covered by this Plan

Asset Category	Dimension	Replacement Value
Administration	1 building	$1,415,513.00
Public Works	3 buildings	1,349,046.00
Fire Department	3 buildings	1,320,782.00
Recreation	8 buildings	1,592,865.00
Ambulance	1 building	1,700,000.00
TOTAL		**$7,378,206.00**

5.1.2 Asset capacity and performance

Assets are generally provided to meet design standards where these are available. However, there is insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known are detailed in Table 5.1.2.

Table 5.1.2: Known Service Performance Deficiencies

Location	Service Deficiency
McTavish Recreation Hall	Scheduled for demolition - asbestos

The above service deficiencies were identified from building inspection survey.

5.1.3 Asset condition

Condition is currently monitored by building inspections, maintenance and staff monitoring.

Condition is measured using a 1 – 5 grading system[4] as detailed in Table 5.1.3. It is important that a consistent approach is used in reporting asset performance enabling effective decision support. A finer grading system may be used at a more specific level, however, for reporting in the AM plan results are translated to a 1 – 5 grading scale for ease of communication.

Table 5.1.3: Condition Grading System

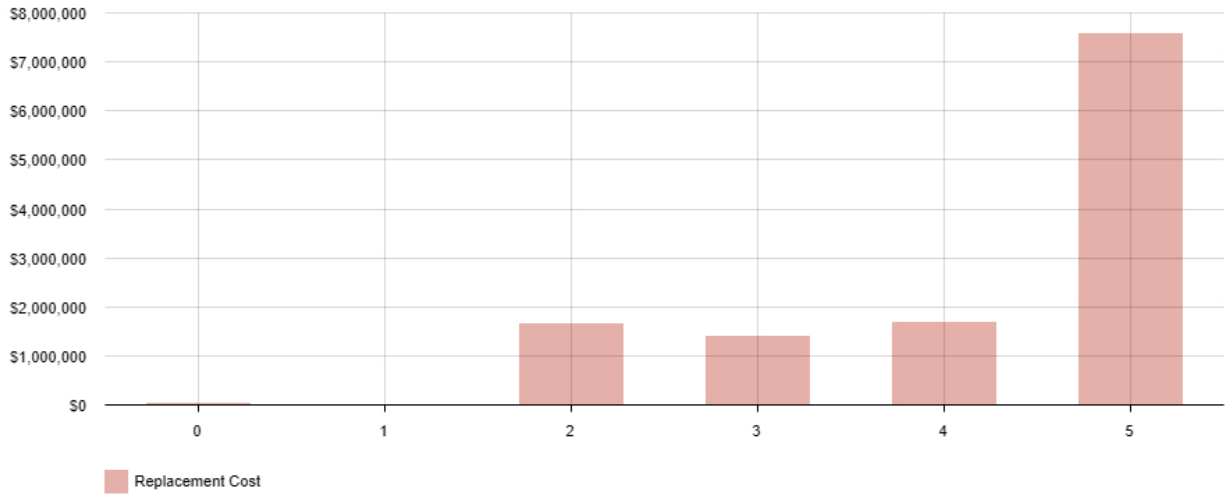
Condition Grading	Description of Condition
5	**Very Good**: free of defects, only planned and/or routine maintenance required

[4] IPWEA, 2015, IIMM, Sec 2.5.4, p 2|80.

4	**Good**: minor defects, increasing maintenance required plus planned maintenance
3	**Fair**: defects requiring regular and/or significant maintenance to reinstate service
2	**Poor**: significant defects, higher order cost intervention likely
1	**Very Poor**: physically unsound and/or beyond rehabilitation, immediate action required

The condition profile of our assets is shown in Figure 5.1.3.

Figure 5.1.3: Asset Condition Profile



The assets are all in fairly good condition .

All figure values are shown in current day dollars.

5.2 Operations and Maintenance Plan

Operations include regular activities to provide services. Examples of typical operational activities include cleaning, street sweeping, asset inspection, and utility costs.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating. Examples of typical maintenance activities include pipe repairs, asphalt patching, and equipment repairs.

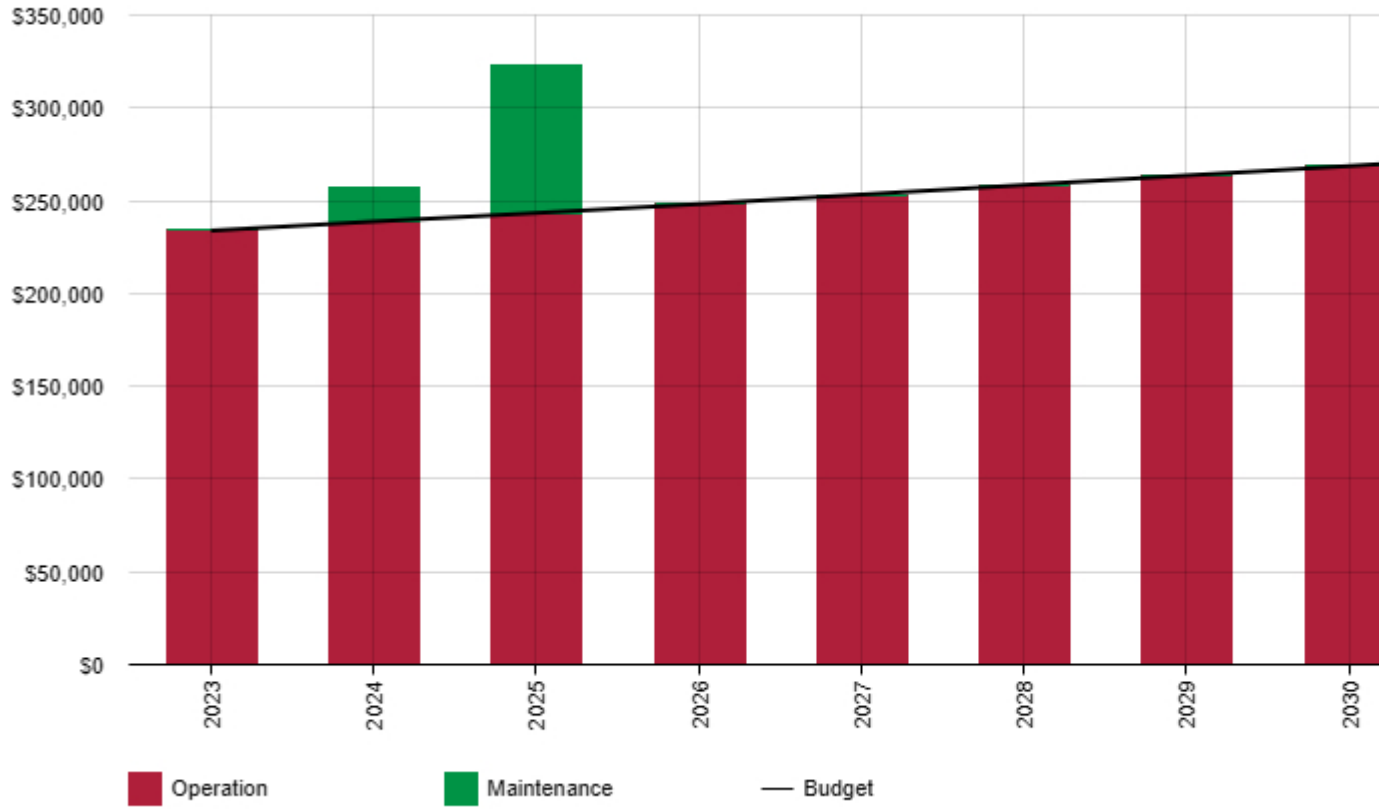
Maintenance budget levels are considered to be adequate to meet projected service levels, which may be less than or equal to current service levels. Where maintenance budget allocations are such that they will result in a lesser level of service, the service consequences and service risks have been identified and are highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Assessment and priority of reactive maintenance is undertaken by staff using experience and judgement.

Summary of forecast operations and maintenance costs

Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. Figure 5.2 shows the forecast operations and maintenance costs relative to the proposed operations and maintenance Planned Budget.

Figure 5.2: Operations and Maintenance Summary



All figure values are shown in current day dollars.

The forecast of operations for maintenance may change once a physical examination is completed. Some of the items in facilities is base on age of the item. Yearly the facilities are inspected to see if maintenance can be moved further into the future as the condition is still goo.

5.3 Renewal Plan

Renewal is major capital work which does not significantly alter the original service provided by the asset, but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered to be an acquisition resulting in additional future operations and maintenance costs.

Assets requiring renewal are identified from one of two approaches in the Lifecycle Model.

- The first method uses Asset Register data to project the renewal costs (replacement cost) and renewal timing (acquisition year plus updated useful life to determine the renewal year), or
- The second method uses an alternative approach to estimate the timing and cost of forecast renewal work (i.e. condition modelling system, staff judgement, average network renewals, or other).

Asset useful lives are reviewed yearly when inspecting for conditions. Building useful lives are between 25 to 50 years.

5.3.1 Renewal ranking criteria

Asset renewal is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a 5 t load limit), or
- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. condition of a playground).[5]

It is possible to prioritise renewals by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have high use and subsequent impact on users would be significant,
- Have higher than expected operational or maintenance costs, and
- Have potential to reduce life cycle costs by replacement with a modern equivalent asset that would provide the equivalent service.[6]

The ranking criteria used to determine priority of identified renewal proposals is detailed in Table 5.3.1.

Table 5.3.1: Renewal Priority Ranking Criteria

Criteria	Weighting
Health & Safety	60%
Usage	30%
Costs	10%
Total	**100%**

5.4 Summary of future renewal costs

Forecast renewal costs are projected to increase over time if the asset stock or inflationary cost increases. A detailed summary of the forecast renewal costs is shown in Appendix D.

5.5 Acquisition Plan

Acquisition reflects are new assets that did not previously exist or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, demand, social or environmental needs. Assets may also be donated to the Facilities.

5.5.1 Selection criteria

Proposed acquisition of new assets, and upgrade of existing assets, are identified from various sources such as community requests, proposals identified by strategic plans or partnerships with others. Potential upgrade and new works should be reviewed to verify that they are essential to the Entities needs. Proposed upgrade and new work analysis should also include the development of a preliminary renewal estimate to ensure that the services are sustainable over the longer term. Verified proposals can then be ranked by priority and available funds and scheduled in future works programmes. The priority ranking criteria is detailed in Table 5.5.1.

[5] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.
[6] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

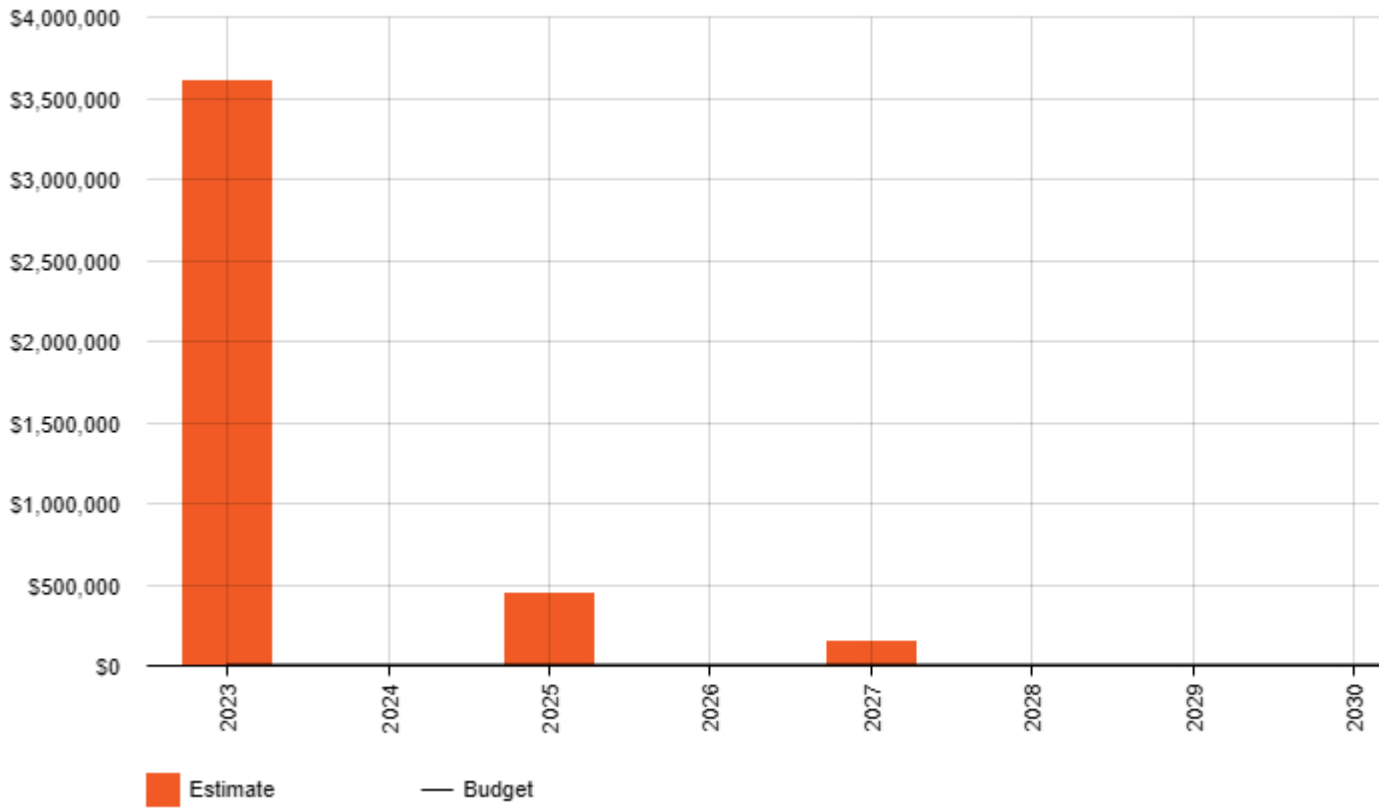
Table 5.5.1: Acquired Assets Priority Ranking Criteria

Criteria	Weighting
Need - to provide better services	60%
Cost	40%
Total	**100%**

Summary of future asset acquisition costs

Forecast acquisition asset costs are summarised / summarized in Figure 5.5.1 and shown relative to the proposed acquisition budget. The forecast acquisition capital works program is shown in Appendix A.

Figure 5.5.1: Acquisition (Constructed) Summary



All figure values are shown in current day dollars.

When an Entity commits to new assets, they must be prepared to fund future operations, maintenance and renewal costs. They must also account for future depreciation when reviewing long term sustainability. When reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by the Entity. The cumulative value of all acquisition work, including assets that are constructed and contributed shown in Figure 5.5.2.

Figure 5.5.2: Acquisition Summary

All figure values are shown in current dollars.

Expenditure on new assets and services in the capital works program will be accommodated in the long-term financial plan, but only to the extent that there is available funding.

The acquisitions budgeted for in the plan include a Multi-Purpose Pavilion, Ambulance Base, Upgrades to the Rink Shack, Backup Generators for fire halls and a gazebo. Funding has been applied for and successful for a couple of the projects.

5.6 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.6. A summary of the disposal costs and estimated reductions in annual operations and maintenance of disposing of the assets are also outlined in Table 5.6. Any costs or revenue gained from asset disposals is included in the long-term financial plan.

Table 5.6: Assets Identified for Disposal

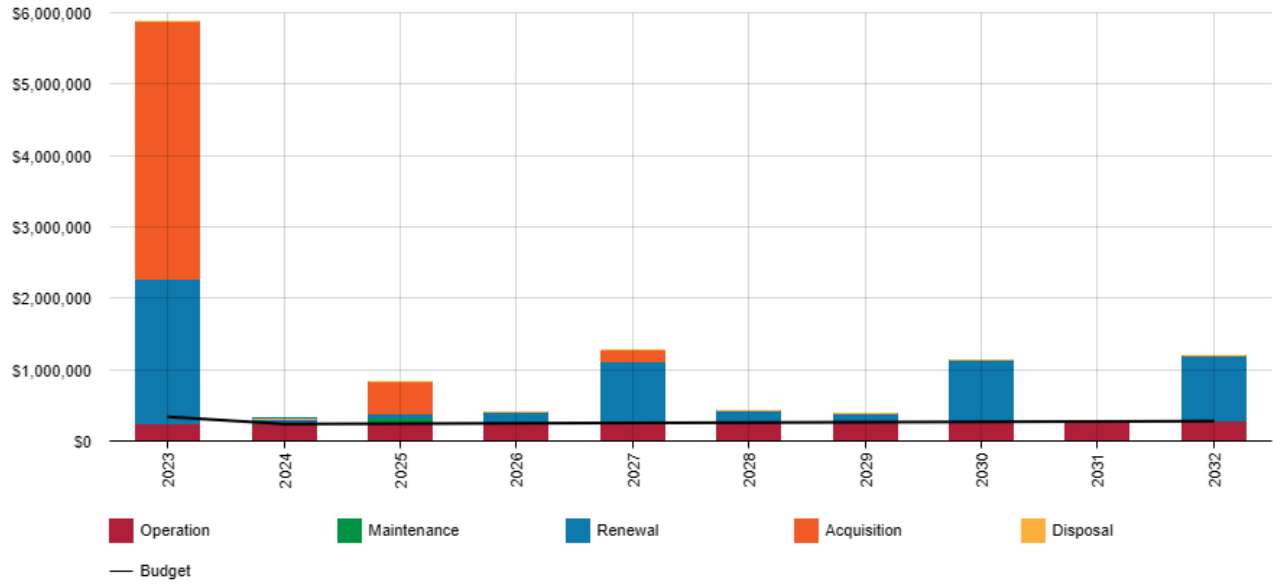
Asset	Reason for Disposal	Timing	Disposal Costs	Operations & Maintenance Annual Savings
McTavish Recreation Hall	Asbestos	2024	$85,000	$60,000

5.7 Summary of asset forecast costs

The financial projections from this asset plan are shown in Figure 5.7.1. These projections include forecast costs for acquisition, operation, maintenance, renewal, and disposal. These forecast costs are shown relative to the proposed budget.

The bars in the graphs represent the forecast costs needed to minimise the life cycle costs associated with the service provision. The proposed budget line indicates the estimate of available funding. The gap between the forecast work and the proposed budget is the basis of the discussion on achieving balance between costs, levels of service and risk to achieve the best value outcome.

Figure 5.7.1: Lifecycle Summary



All figure values are shown in current day dollars.

The previous graph shows a large dollar amount of acquisitions for 2023 which include the pavilion and ambulance base and 2025 is the upgrade to the rink shack to accommodate the pavilion.

6.0 RISK MANAGEMENT PLANNING

The purpose of infrastructure risk management is to document the findings and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2018 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2018 as: 'coordinated activities to direct and control with regard to risk'[7].

An assessment of risks[8] associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, and the consequences should the event occur. The risk assessment should also include the development of a risk rating, evaluation of the risks and development of a risk treatment plan for those risks that are deemed to be non-acceptable.

6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. A critical asset was identified and is scheduled for demolition in 2024.

6.2 Risk Assessment

The risk management process used is shown in Figure 6.2 below.

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of International Standard ISO 31000:2018.

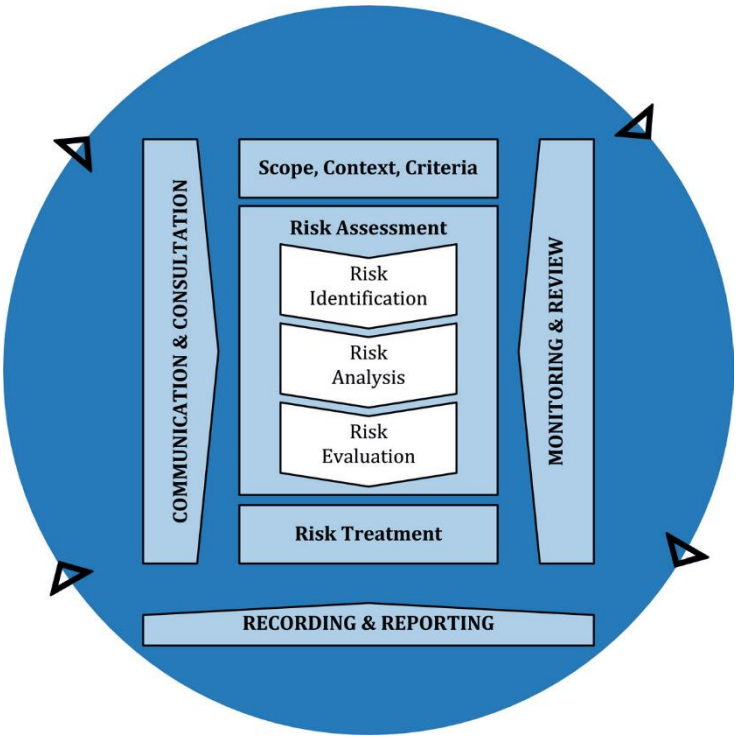


Fig 6.2 Risk Management Process – Abridged

[7] ISO 31000:2009, p 2
[8] REPLACE with Reference to the Corporate or Infrastructure Risk Management Plan as the footnote

Source: ISO 31000:2018, Figure 1, p9

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management and the Municipality of Shuniah Council.

Table 6.2: Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
McTavish Rec Centre	Injury	VH	Demolition building	None	$85,000

Note * The residual risk is the risk remaining after the selected risk treatment plan is implemented.

6.3 Infrastructure Resilience Approach

The resilience of our critical infrastructure is vital to the ongoing provision of services to customers. To adapt to changing conditions we need to understand our capacity to 'withstand a given level of stress or demand', and to respond to possible disruptions to ensure continuity of service.

Resilience recovery planning, financial capacity, climate change risk assessment and crisis leadership.

We do not currently measure our resilience in service delivery. This will be included in future iterations of the AM Plan.

6.4 Service and Risk Trade-Offs

The decisions made in adopting this AM Plan are based on the objective to achieve the optimum benefits from the available resources.

6.4.1 What we cannot do

At this point operations and maintenance activities and capital projects that are able to be undertaken within the next 10 years. Any new capital projects will need to be determined if they can be undertaken based on inflation and financial stability.

6.4.2 Service trade-off

At this point any forecast work (operations, maintenance, renewal, acquisition or disposal) can be undertaken with the available resources, which will not result in service consequences for users.

6.4.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. There are no risk consequences at this time.

These actions and expenditures are considered and included in the forecast costs, and where developed, the Risk Management Plan.

7.0 FINANCIAL SUMMARY

This section contains the financial requirements resulting from the information presented in the previous sections of this AM Plan. The financial projections will be improved as the discussion on desired levels of service and asset performance matures.

7.1 Financial Sustainability and Projections

7.1.1 Sustainability of service delivery

There are two key indicators of sustainable service delivery that are considered in the AM Plan for this service area. The two indicators are the:

- Asset Renewal Funding Ratio (proposed renewal budget for the next 10 years / proposed renewal costs for next 10 years), and
- Lifecycle Funding Ratio (proposed lifecycle budget for the next 10 years / proposed lifecycle outlays for the next 10 years shown in the AM Plan).

Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[9] 1.99%

The Asset Renewal Funding Ratio is an important indicator and illustrates that over the next 10 years we expect to have 1.99% of the funds required for the optimal renewal of assets.

The forecast renewal work along with the proposed renewal budget, and the cumulative shortfall where one exists, is illustrated in Appendix D.

Lifecycle Funding Ratio – 10 year financial planning period

This AM Plan identifies the forecast operations, maintenance and renewal costs required to provide an agreed, and affordable level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

This forecast work can be compared to the proposed budget over the first 10 years of the planning period to identify any funding shortfall.

The forecast operations, maintenance and renewal costs over the 10 year planning period is $793,187 average per year.

The proposed (budget) operations, maintenance and renewal funding is $266,689 on average per year giving a 10 year funding shortfall of $-526,498 per year. This indicates that 33.62% of the forecast costs needed to provide the services documented in this AM Plan are accommodated in the proposed budget. Note, these calculations exclude acquired assets.

Providing sustainable services from infrastructure requires the management of service levels, risks, forecast outlays and financing to achieve a financial indicator of approximately 1.0 for the first years of the AM Plan and ideally over the 10 year life of the Long-Term Financial Plan.

7.1.2 Forecast Costs (outlays) for the long-term financial plan

Table 7.1.3 shows the forecast costs (outlays) required for consideration in the 10 year long-term financial plan.

Providing services in a financially sustainable manner requires a balance between the forecast outlays required to deliver the agreed service levels with the planned budget allocations in the long-term financial plan.

A gap between the forecast outlays and the amounts allocated in the financial plan indicates further work is required on reviewing service levels in the AM Plan and/or financial projections in the LTFP.

We will manage any 'gap' by developing this AM Plan to provide guidance on future service levels and resources required to provide these services in consultation with the community.

[9] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

Forecast costs are shown in 2023 dollar values.

Table 7.1.2: Forecast Costs (Outlays) for the Long-Term Financial Plan

Year	Acquisition	Operation	Maintenance	Renewal	Disposal
2023	3,600,000	233,970	0	2,041,770	0
2024	0	238,649	18,000	56,100	0
2025	450,000	243,422	80,000	66,500	0
2026	0	248,290	0	152,500	0
2027	150,000	253,256	0	871,255	0
2028	0	258,321	0	166,550	0
2029	0	263,478	0	127,200	0
2030	0	268,758	0	872,605	0
2031	0	274,133	0	9,900	0
2032	0	279,615	0	907,600	0

7.2 Funding Strategy

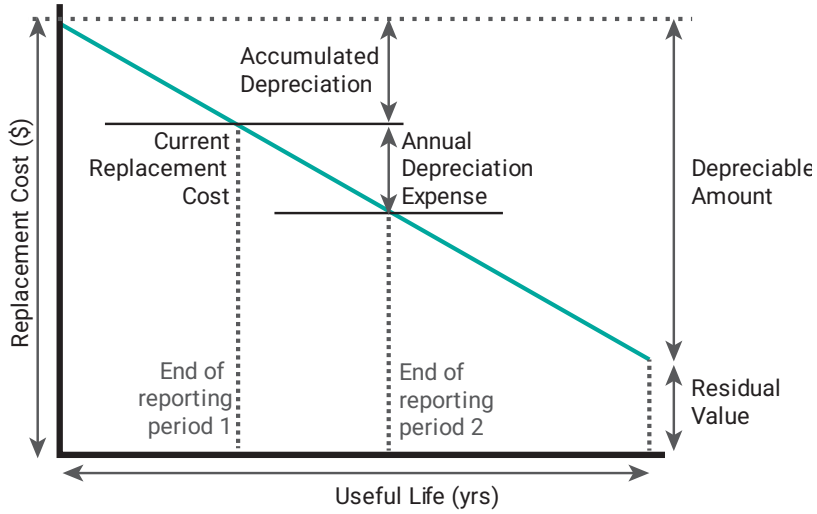
The proposed funding for assets is outlined in the Entity's budget and Long-Term financial plan.

The financial strategy of the entity determines how funding will be provided, whereas the AM Plan communicates how and when this will be spent, along with the service and risk consequences of various service alternatives.

7.3 Valuation Forecasts

7.3.1 Asset valuations

The best available estimate of the value of assets included in this AM Plan are shown below. The assets are valued at fair value for replacement cost.



Replacement Cost (Gross)	$4,255,933.0
Depreciable Amount	$256,212.0
Current Replacement Cost[10]	$7,378,206.0
Annual Depreciation Expense	$143,590.0

[10] Also reported as Written Down Value, Carrying or Net Book Value.

7.3.2 Valuation forecast

Asset values are forecast to increase as additional assets are added from service].

Additional assets will generally add to the operations and maintenance needs in the longer term. Additional assets will also require additional costs due to future renewals. Any additional assets will also add to future depreciation forecasts.

7.4 Key Assumptions Made in Financial Forecasts

In compiling this AM Plan, it was necessary to make some assumptions. This section details the key assumptions made in the development of this AM plan and should provide readers with an understanding of the level of confidence in the data behind the financial forecasts.

Key assumptions made in this AM Plan are:

- Inflation
- Condition of assets
- Service levels and usage

7.5 Forecast Reliability and Confidence

The forecast costs, proposed budgets, and valuation projections in this AM Plan are based on the best available data. For effective asset and financial management, it is critical that the information is current and accurate. Data confidence is classified on a A - E level scale[11] in accordance with Table 7.5.1.

Table 7.5.1: Data Confidence Grading System

Confidence Grade	Description
A. Very High	Data based on sound records, procedures, investigations and analysis, documented properly and agreed as the best method of assessment. Dataset is complete and estimated to be accurate ± 2%
B. High	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some of the data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate ± 10%
C. Medium	Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated ± 25%
D. Low	Data is based on unconfirmed verbal reports and/or cursory inspections and analysis. Dataset may not be fully complete, and most data is estimated or extrapolated. Accuracy ± 40%
E. Very Low	None or very little data held.

[11] IPWEA, 2015, IIMM, Table 2.4.6, p 2|71.

The estimated confidence level for and reliability of data used in this AM Plan is shown in Table 7.5.2.

Table 7.5.2: Data Confidence Assessment for Data used in AM Plan

Data	Confidence Assessment	Comment
Demand drivers	Medium	Analysis is difficult due to inflationary costs and actual usage
Growth projections	High	Recreation plan and strategic plan
Acquisition forecast	High	Funding and loans will make this possible
Operation forecast	High	Procedures and good records
Maintenance forecast	Very High	Building inspection report completed
Renewal forecast - Asset values	Medium	Difficult to predict due to inflation
- Asset useful lives	Very High	Building inspection completed
Disposal forecast	Very High	One building required to be demolished

The estimated confidence level for and reliability of data used in this AM Plan is considered to be High due to procedures, ongoing maintenance and updating individual assets as repairs are completed.

8.0 PLAN IMPROVEMENT AND MONITORING

8.1 Data and Information Sources

8.1.1 Accounting and financial data sources

This AM Plan utilises accounting and financial data. The source of the data is stored in our software provided by PSD and is updated yearly with current invoice pricing for projects or new acquisitions.

8.1.2 Asset management data sources

This AM Plan also utilises asset management data. The source of the data is current invoices, discussions with consultants and management.

8.2 Improvement Plan

It is important that an entity recognise areas of their AM Plan and planning process that require future improvements to ensure effective asset management and informed decision making. The improvement plan generated from this AM Plan is shown in Table 8.2.

Table 8.2: Improvement Plan

Task	Task	Responsibility	Resources Required	Timeline
1	Current asset conditions	Asset Manager/ Operation Manager	Completion of work invoice	Yearly
2	Long-term financial plan/budget numbers	Asset Manager	Reports/operation manager	Yearly
3	Continually update data	Asset Manager	Input from managers	On going

8.3 Monitoring and Review Procedures

This AM Plan will be reviewed during the annual budget planning process and revised to show any material changes in service levels, risks, forecast costs and proposed budgets as a result of budget decisions.

The AM Plan will be reviewed and updated annually to ensure it represents the current service level, asset values, forecast operations, maintenance, renewals, acquisition and asset disposal costs and planned budgets. These forecast costs and proposed budget are incorporated into the Long-Term Financial Plan or will be incorporated into the Long-Term Financial Plan once completed.

The AM Plan has a maximum life of 5 years and is due for complete revision and updating of with 1 year of a municipal election.

8.4 Performance Measures

The effectiveness of this AM Plan can be measured in the following ways:

- The degree to which the required forecast costs identified in this AM Plan are incorporated into the long-term financial plan,
- The degree to which the 1-5 year detailed works programs, budgets, business plans and corporate structures consider the 'global' works program trends provided by the AM Plan,
- The degree to which the existing and projected service levels and service consequences, risks and residual risks are incorporated into the Strategic Planning documents and associated plans,
- The Asset Renewal Funding Ratio achieving the Organisational target is 1.0.

9.0 REFERENCES

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- Annual Budget

10.0 APPENDICES

Appendix A Acquisition Forecast

A.1 – Acquisition Forecast Assumptions and Source
The assumptions were based on the needs of the community, strategic plan and recreation master plan.

A.2 – Acquisition Project Summary
The project titles included in the lifecycle forecast are included here:

New Ambulance Base	$2,200,000
New Multi-Purpose Pavilion	$1,400,000
Retrofit for concession rink shack	$ 450,000
Gazebo on lake	$ 150,000

A.3 – Acquisition Forecast Summary

Table A3 - Acquisition Forecast Summary

Year	Constructed	Donated	Growth
2023	3,600,000	0	0
2024	0	0	0
2025	450,000	0	0
2026	0	0	0
2027	150,000	0	0
2028	0	0	0
2029	0	0	0
2030	0	0	0
2031	0	0	0
2032	0	0	0

Appendix B Operation Forecast

B.1 – Operation Forecast Assumptions and Source

The assumptions for the operation forecast comes from the asset management software PSD which factors in the useful life, conditions, risks, and management input.

B.2 – Operation Forecast Summary

Table B2 - Operation Forecast Summary

Year	Operation Forecast	Additional Operation Forecast	Total Operation Forecast
2023	233,970	0	233,970
2024	238,649	0	238,649
2025	243,422	0	243,422
2026	248,290	0	248,290
2027	253,256	0	253,256
2028	258,321	0	258,321
2029	263,478	0	263,478
2030	268,758	0	268,758
2031	274,133	0	274,133
2032	279,615	0	279,615

Appendix C Maintenance Forecast

C.1 – Maintenance Forecast Assumptions and Source
The assumptions are based on data in the asset management software for useful life, conditions and management information may change when the maintenance will be required.

C.2 – Maintenance Forecast Summary

Table C2 - Maintenance Forecast Summary

Year	Maintenance Forecast	Additional Maintenance Forecast	Total Maintenance Forecast
2023	0	0	0
2024	18,000	0	18,000
2025	80,000	0	80,000
2026	0	0	0
2027	0	0	0
2028	0	0	0
2029	0	0	0
2030	0	0	0
2031	0	0	0
2032	0	0	0

Appendix D Renewal Forecast Summary

D.1 – Renewal Forecast Assumptions and Source
The renewal assumptions are from the asset management data which determines that buildings are to be renewed at the accounting useful life. These renewals are not completed at end of useful life as management considers condition, maintenance and repair to ensure the facility useful life is extended.

D.2 – Renewal Project Summary
The project titles included in the lifecycle forecast are included here:

Roof for Firehall #3
New HVAC for recreation facility
New shingles for skate shack

D.3 – Renewal Forecast Summary

Table D3 - Renewal Forecast Summary

Year	Renewal Forecast	Renewal Budget
2023	2,041,770	105,000
2024	56,100	0
2025	66,500	0
2026	152,500	0
2027	871,255	0
2028	166,550	0
2029	127,200	0
2030	872,605	0
2031	9,900	0
2032	907,600	0

Appendix E Budget Summary by Lifecycle Activity

Assumptions in the lifecycle summary include maintenance and renewal. The renewal is based on the accounting useful life, however actual renewal is determined using conditions, usage and management input.

Table F1 – Budget Summary by Lifecycle Activity

Year	Acquisition	Operation	Maintenance	Renewal	Disposal	Total
2023	0	233,970	0	105,000	0	338,970
2024	0	238,649	0	0	0	238,649
2025	0	243,422	0	0	0	243,422
2026	0	248,290	0	0	0	248,290
2027	0	253,256	0	0	0	253,256
2028	0	258,321	0	0	0	258,321
2029	0	263,478	0	0	0	263,478
2030	0	268,758	0	0	0	268,758
2031	0	274,133	0	0	0	274,133
2032	0	279,615	0	0	0	279,615