Asset Management Strategy

District of Saanich

June 2023

Land Acknowledgement

The District of Saanich lies within the territories of the lək̓ʷəŋən peoples represented by the Songhees and Esquimalt Nations and the W̱SÁNEĆ peoples represented by the W̱JOŁEŁP (Tsartlip), BOḴEĆEN (Pauquachin), STÁUTW (Tsawout), W̱SIḴEM (Tseycum) and MÁLEXEŁ (Malahat) Nations. The First Peoples have been here since time immemorial and their history in this area is long and rich.

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- *Working With Levels of Service*, Asset Management BC
- *Applied Climate Action Cohort: Operationalization of Climate Change through Asset Management*, Canadian Network of Asset Managers
- *Natural Asset Management Roadmap Project*, Natural Assets Initiative
- *Natural Asset Management Workshop Series*, Natural Assets Initiative
    - *Workshop 1: How to Integrate Climate Considerations into Natural Asset Management*
    - *Workshop 2: How to Develop Levels of Service for Natural Assets*
    - *Workshop 3: Implementing Natural Asset Management: Solutions to Consider*

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Executive Summary

Purpose

The District of Saanich (Saanich) Asset Management (AM) Strategy establishes the formal framework and system for implementing Saanich's AM Policy, defines the current state of Saanich's assets and AM practices, and sets out a road map for continuous improvement over the next five years.

This strategy fulfils an initiative in the District's Strategic Plan, and it fulfils an eligibility requirement for future provincial and federal grant applications.

By implementing the strategy, Saanich is taking care of its existing assets so that the people of Saanich receive the greatest possible value from their infrastructure investment to meet their service delivery needs, without compromising the ability of future generations to meet their own needs.

As shown in Figure E.1, the AM Strategy will be a guiding document as Saanich increases its AM maturity towards achieving the key principles set out in the AM Policy, which are:

- **Service Delivery to Customers** - The District will prioritize and direct resources and expenditures in order to deliver levels of service and other community benefits at an acceptable level of risk.
- **Long-Term Sustainability and Resilience** - The District will consider socio-cultural, environmental, and economic factors and implications when making and implementing asset management decisions.
- **Holistic Approach** - The District will ensure that decisions are made collaboratively and consider all life-cycle stages and the interrelationships between asset performance, operational performance, and overall performance.
- **Fiscal Responsibility and Asset Management Decision-Making** - The District will develop prioritized capital investment plans that reflect established levels of service and other strategic objectives.
- **Continual Improvement** - The District views continual improvement as a key part of our asset management approach.

Figure E.1 - Purpose of the AM Strategy

Saanich Assets

Saanich delivers services to the community using a portfolio of built assets with a current replacement value of approximately $4.7 billion ($2022), including drainage, facilities, information technology, park & trail structures, transportation, vehicles & equipment, wastewater, and water assets, as shown in Figure E.2. Saanich also owns and manages natural assets; however, these are not currently valued or included its financial statements.

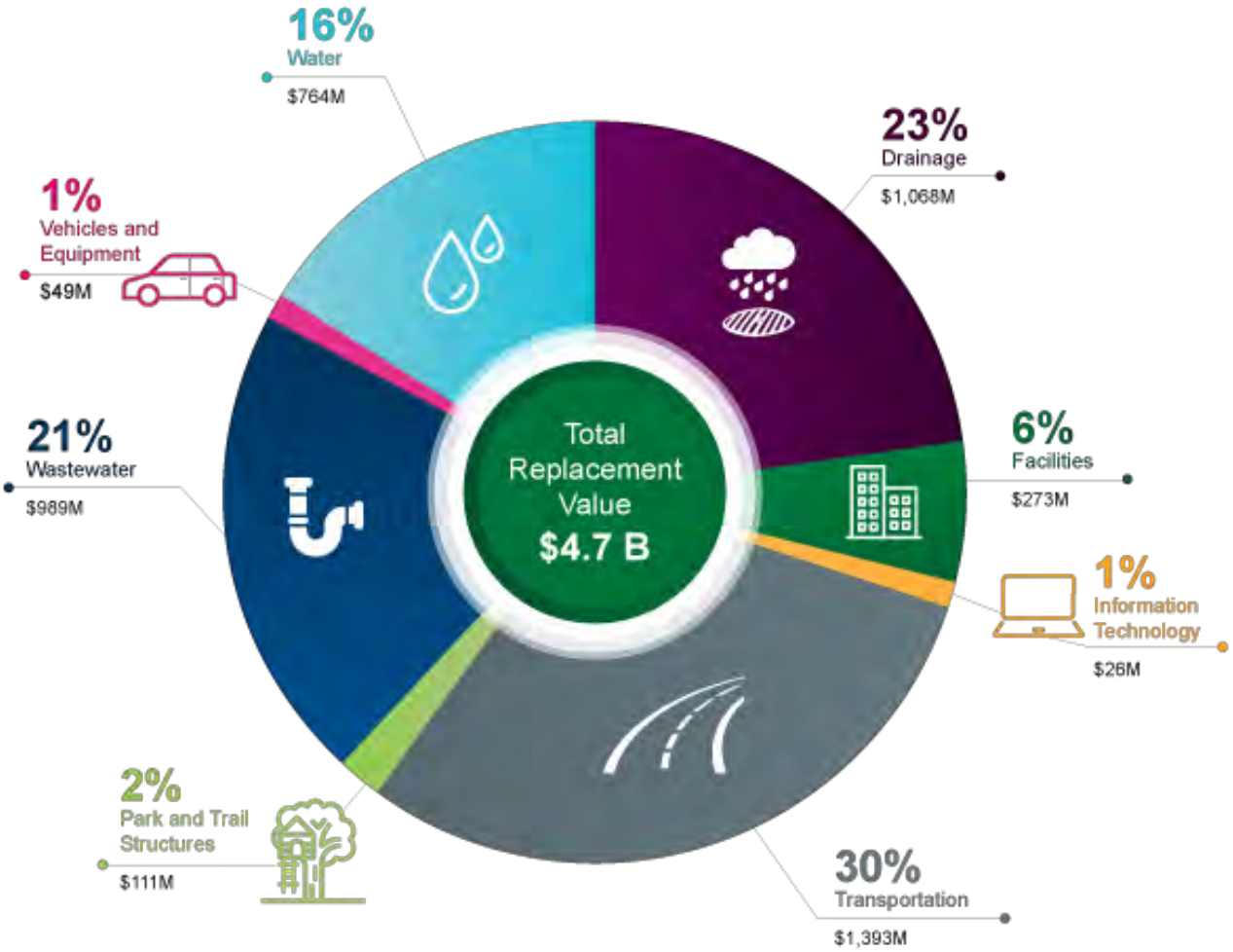

Figure E.2 – Asset Replacement Value ($2022)

Saanich Asset Management Practices

Assets

Currently, Saanich has partially complete asset inventories for most of its assets, except for its natural assets. Technical asset data is currently maintained in a variety of software programs, such as GIS and Excel spreadsheets, as well as some remaining paper-based systems. Financial information is currently maintained in a variety of software programs, such as JD Edwards and Excel spreadsheets. Currently, these systems are not linked, so there is no single source of truth for asset data, and not all assets have a unique identification number.

Information

Currently, Saanich has some information on the physical condition of most of its assets, either based on a condition assessment or estimated based on age, and there is an ongoing effort to gather additional condition data. However, Saanich needs to improve its AM practices in the areas of natural assets, levels of service, risk assessment, integration of climate change considerations, and AM plans.

Finances

The current replacement value of Saanich's assets was estimated at $4.7 billion ($2022), which is more than double the original estimate of $2.1 billion ($2007). This does not include valuation of our natural assets. As shown in Figure E.3, the main reason for the increase was inflation, particularly over the past six years. Based on the estimated useful life of Saanich's assets, the targeted average annual replacement funding is now $86 million, which is more than double the original target that was reached in 2019 of $41 million. Saanich's Infrastructure Replacement Funding Strategy will be updated to include the new estimates, and alternative financing scenarios will be developed for Council consideration.

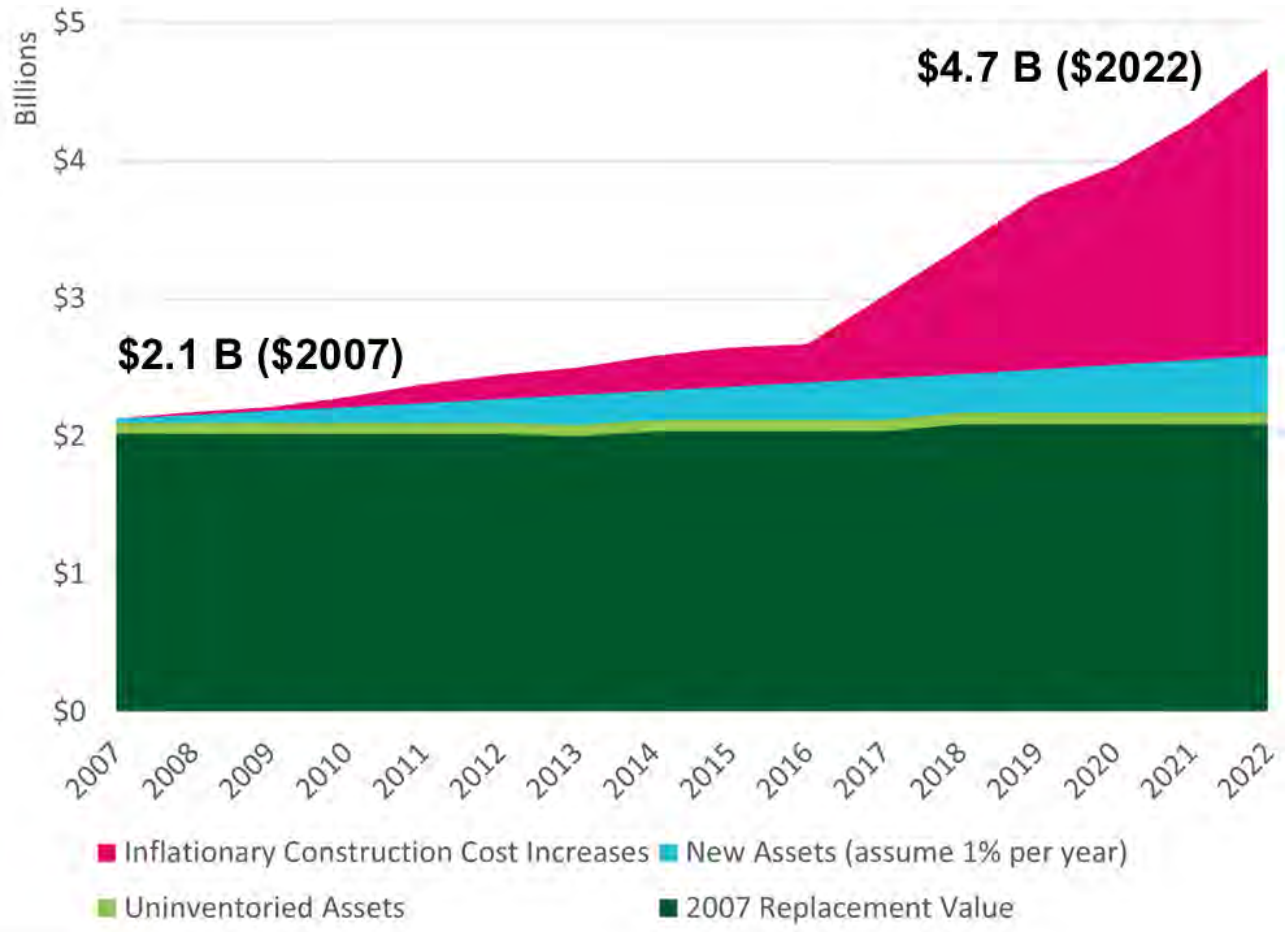

Figure E.3 – Change in Asset Replacement Value

People

Over the past 15 years, Saanich has built a very positive culture for AM within the organization, and there is a strong demand for the business improvements that can be realized through AM. Currently, knowledge, experience and resources vary across departments and there is no formalized program for managing assets in a consistent manner across the organization. Some Saanich staff understand the need for AM and the benefits of AM, as well as the need for continuous learning to develop their knowledge, experience, and capacity for AM. However, this needs to be extended to all staff. There is also a need to integrate AM practices across all departments.

Continuous Improvement

Based on the results of Saanich's AM maturity assessment, investments are needed in each of the four core elements of assets, information, finances, and people, in order to work towards achieving the AM Policy key principles. Saanich's implementation plan for continuous improvement in the short and medium term (over the next five years) has prioritized ten strategies, which are summarized in Figure E.4. Each strategy includes several projects for implementation. Additional resources required to support this initial workplan are identified and will be included for consideration through Saanich's annual Financial Plan process.

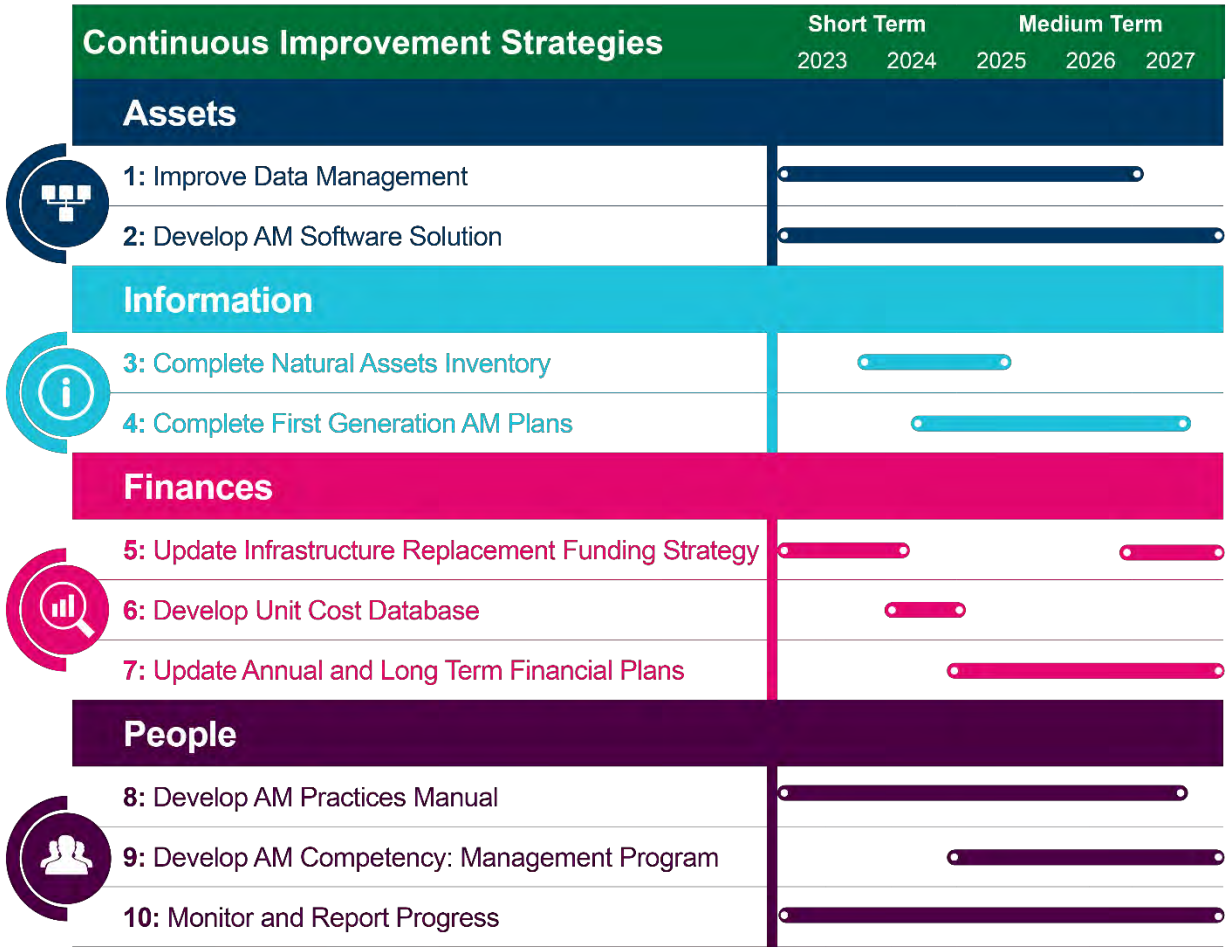

Figure E.4 - Implementation Plan 2023-2027

The AM Strategy will be formally reviewed and updated approximately every 5 years, and Council will receive annual reports on the progress of the AM Program. As shown in Figure E.5, Saanich has already made progress and will continue to improve its AM practices on the journey towards sustainable service delivery.

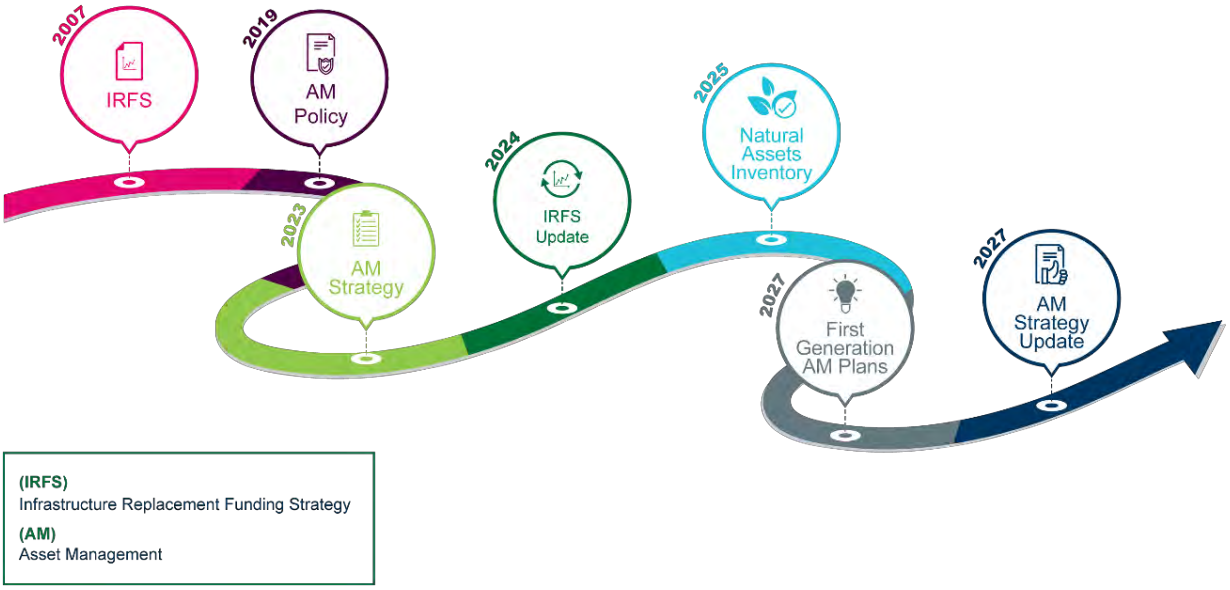

Figure E.5 – Saanich Asset Management Journey

Acronyms and Glossary

A list of acronyms used in this report is provided below. The AM Program Glossary is found Appendix A.

Acronym	Term
AARF	average annual replacement funding
AM	asset management
AMBC	Asset Management British Columbia
AMRS	Asset Management Readiness Scale
AMSC	Asset Management Steering Committee
AMWG	Asset Management Working Group
CCTV	closed-circuit television
CHGC	Cedar Hill Golf Course
CIRC	Canadian Infrastructure Report Card
CNAM	Canadian Network of Asset Managers
CMMS	computerized maintenance management system
CoP	community of practice
CRD	Capital Regional District
CSA	Canadian Standards Association
D&C	design and construction
DCC	development cost charges
DEI	diversity, equity and inclusion
EGBC	Engineers and Geoscientists BC
ERM	Enterprise Risk Management
GIS	geographic information system
FCI	facility condition index
FCM	Federation of Canadian Municipalities
FTE	full-time equivalent
IIMM	International Infrastructure Management Manual
IRFS	Infrastructure Replacement Funding Strategy
ISO	International Organization for Standardization
IT	information technology
LGDE	Local Government Data Entry
LoS	levels of service
LTFP	long term financial plan
NAI	Natural Assets Initiative
O&M	operations and maintenance
P&A	planning and analysis
RV	replacement value
SOAR	state of assets report
TCA	tangible capital assets
UBCM	Union of British Columbia Municipalities

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1. Purpose

1 Purpose

The purpose of the District of Saanich (Saanich) Asset Management (AM) Strategy is to establish a road map for the formalization and continuous improvement of Saanich's AM practices in order to achieve sustainable service delivery as set out in the key principles of the AM Policy.

The AM Strategy describes the current state of Saanich's assets and AM practices, and identifies priority improvements for implementation over the next five years. It addresses the questions:

- Where is Saanich now?
- Where does Saanich need to be?
- How will Saanich get there?

The AM Strategy is a component of Saanich's AM Program. As shown in Figure 1, the AM Strategy is the guiding document for Saanich staff to implement the AM Program, and for Council and the community to monitor continuous improvement towards achieving the AM Policy key principles. The AM Strategy supersedes the AM Program Charter, which was prepared in 2022 to guide the initial start-up of the AM Program. The AM Strategy will be updated regularly in a process of continuous improvement.

Figure 1 - Purpose of the AM Strategy

2. Saanich Asset Management Program

2 Saanich Asset Management Program

2.1 Goals and Benefits

Saanich delivers a wide range of services to the community that are paid for collectively through property taxes and user fees. Delivery of these services is supported by the physical assets, including built and natural assets, that the community owns and will continue to invest in over the asset lifecycle.

"Communities build and maintain infrastructure to provide services. Sustainable service delivery is the purpose and desired outcome of asset management" (AMBC, 2019)

Similar to other local governments, Saanich's physical assets are aging, costs are increasing, and risks need to be carefully managed in order to deliver services at agreed levels. As the owner of billions of dollars worth of physical assets, Saanich needs accurate information about its assets to ensure that service levels are appropriately balanced with risks and costs, as shown in Figure 2, and that there is a sustainable source of funding over the asset life cycle.

Therefore, the goal of Saanich's AM Program is to develop and implement a District-wide, systematic and consistent approach to managing Saanich's physical assets which ensures that decisions regarding levels of service (LoS), asset maintenance, renewal and replacement, and funding are sustainable over the long term, in accordance with the key principles set out in the AM Policy.

Figure 2 - Sustainable Service Delivery[1]

"Sustainable service delivery involves understanding and making informed decisions about trade-offs between delivering service, managing risk, and reducing cost throughout the lifecycle of the asset" (AMBC, 2019)

[1] Adapted from Asset Management British Columbia (AMBC) website.

The anticipated benefits of the AM Program include:

- Reduce risk of asset failure
- Optimize spending over the asset life cycle
- Provide sustainable funding for physical assets over long term
- Prioritize funding according to risks to service delivery
- Increase transparency and consistency in decision-making processes
- Increase communication and coordination between departments
- Increase public trust and confidence
- Achieve sustainable service delivery
- Maintain eligibility for provincial and federal grant funding

"Spending $1 on preventative road maintenance and regular repair during the first three quarters of a road's estimated service life can eliminate $6 to $10 in costs later in its life" (AMBC website)

2.2 Scope

The scope of the AM Program includes all the physical assets owned by Saanich that support service delivery and have an economic life of greater than one year. This includes both engineered and natural assets with the following asset types that align with Saanich's Tangible Capital Assets (TCA) policy and Saanich's annual Financial Plan:


Drainage


Transportation


Facilities


Vehicles and Equipment


Information Technology


Wastewater (Collection)

Natural Assets


Water (Distribution)


Park and Trail Structures

The AM Program encompasses the whole life cycle of the assets, including planning, design, construction, acquisition, operations, maintenance, repair, rehabilitation, and renewal, replacement, or disposal.

The scope of the AM Program aligns with the threshold asset values set out in the TCA Policy. In some cases, individual assets of lower value are treated as a group that meets the threshold value, and the group is included in the AM Program.

The scope of the AM Program does not include works of art.

2.3 Asset Management Policy

In 2019, Council approved Saanich's AM Policy, which outlines the fundamental AM principles that will be developed and implemented District-wide.

The AM Policy describes the AM Program as follows (Saanich, 2019):

> *"Asset management is a broad strategic framework that encompasses many disciplines and involves the entire organization. The District of Saanich owns a multitude of infrastructure assets which support the delivery of services and require responsible acquisition, operation, maintenance, rehabilitation, and eventual replacement and/or disposal. In some cases, our assets are interdependent with other municipalities' assets. This policy applies to all existing and new physical assets and also all District of Saanich departments, officers, employees and contractors."*

The AM Policy establishes the following key principles to define the high-level approach to AM Program implementation and guide decision making for all levels of the organization:

- **Service Delivery to Customers** - The District will prioritize and direct resources and expenditures in order to deliver levels of service and other community benefits at an acceptable level of risk.
- **Long-Term Sustainability and Resilience** - The District will consider socio-cultural, environmental and economic factors and implications when making and implementing asset management decisions.
- **Holistic Approach** - The District will ensure that decisions are made collaboratively and consider all life-cycle stages and the interrelationships between asset performance, operational performance and overall performance.
- **Fiscal Responsibility and Asset Management Decision-Making** - The District will develop prioritized capital investment plans that reflect established levels of service and other strategic objectives.
- **Continual Improvement** - The District views continual improvement as a key part of our asset management approach.

2.4 Governance

Governance of the AM Program is based on a centre of excellence model, where the AM Program provides guidance and support to the Operational Units, which do the day-to-day work of managing assets and delivering services to the community. The cross-departmental AM Steering Committee (AMSC) oversees the AM Program, and the AM Program Manager (AMPM) is dedicated to developing and implementing the AM Strategy with input from the cross-departmental AM Working Group (AMWG).

The intent is to implement the AM Program as much as possible in-house, using external consultants and specialists only as required, in order to maintain the learning, understanding and knowledge gained over time in the AM expertise of Saanich staff.

The governance structure for the AM Program is shown in Figure 3, including the relationship and reporting lines between Council, the AMSC, the AMPM and the Operational Units.

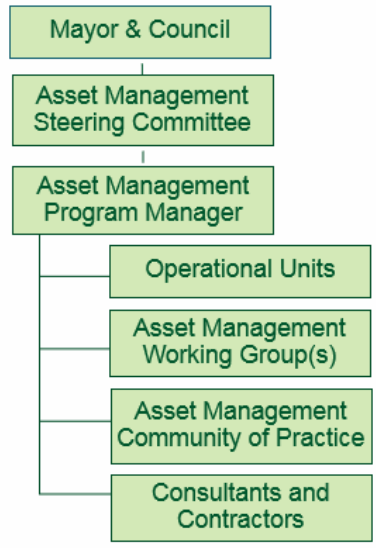


Figure 3 - AM Program Governance Structure

The roles and responsibilities for AM Program governance are described as follows:

- **Mayor & Council** - Set strategic direction and allocate resources based on information provided by staff about asset performance, risk and cost
- **AM Steering Committee** - Provide strategic oversight and guidance for the AM Program, with the following membership:
  - CAO
  - Chief Information Officer
  - Director of Engineering
  - Director of Finance
  - Director of Parks, Recreation and Community Services
  - AM Program Manager
- **AM Program Manager** - Develop and implement the AM Strategy, and provide guidance and support to the Operational Units
- **Operational Units** - Carry out the day-to-day work of managing assets and delivering services to the community
- **AM Working Group** - Provide a formal mechanism for technical input from each operational unit to the development and implementation of the AM Program, with the following membership:
  - AM Program Manager
  - Financial Services, Senior Manager
  - IT, Manager
  - Municipal Facilities, Manager
  - Park Planning & Development, Manager
  - Public Works, Senior Manager

- Recreation Services, Senior Manager
- Risk Management, Manager
- Sustainability, Manager
- Transportation, Senior Manager
- Urban Forestry, Natural Areas, and Community Stewardship, Manager
- Water Resources, Senior Manager

- **AM Sub-working Groups** - Provide input on specific asset types or AM practices
- **AM Community of Practice** – Support information sharing and the development of AM culture and competency (to be formed in future)
- **Consultants and Contractors** – Provide specialized expertise as required

2.5 Asset Management Framework

Saanich's AM Program follows the Asset Management British Columbia (AMBC) framework, *Asset Management for Sustainable Service Delivery – A BC Framework* (AMBC, 2019), which is focused on sustainable service delivery as shown in Figure 4.

Figure 4 - Asset Management Framework (AMBC, 2019)

The framework is based on current international best practices, including the *International Infrastructure Management Manual* (IIMM) and the International Organization for Standardization (ISO) standard for AM (ISO 55000). The framework includes the following sustainable service delivery primers:

- *Climate Change and Asset Management* (AMBC, 2019)
- *Integrating Natural Assets into Asset Management* (AMBC, 2019)
- *The Role of Operations and Maintenance in Asset Management* (AMBC, 2019)
- *Land Use Planning and Asset Management* (AMBC, 2019)

2.6 Strategic Alignment

2.6.1 Official Community Plan

As shown in Figure 5, there is strategic alignment between Saanich's vision established in the Official Community Plan (OCP) and the goals of the AM Program, with a common focus on sustainable service delivery.

Figure 5 - Sustainable Saanich Vision (Saanich, 2008)

2.6.2 Strategic Plan

The Saanich Strategic Plan is developed by Council following each municipal election to guide activities during their term in office and beyond in order to move Saanich towards the vision outlined in the OCP.

The *Saanich Strategic Plan 2019-2023* prioritized the development of an AM Strategy under the goal of Affordable Housing, Land Use and Infrastructure as follows (Saanich, 2019):

"*Asset management is critical to sustainable, effective service delivery:*

- *Implement an asset management strategy that promotes financial sustainability and integrates climate change in the provision, renewal and enhancement of services, facilities and assets*

- *Continue to provide stewardship of existing and future built and natural assets*
- *Initiative 2.7 - Develop an asset management road map - Develop a corporate asset management program which will include the creation of a Council policy, training of staff, analysis of all assets/categories, and the implementation of asset management software.*"

The next Strategic Plan is expected to continue to prioritize AM under the theme of Organizational Excellence.

2.6.3 Climate Plan

Saanich's *Climate Plan: 100% Renewable & Resilient Saanich* includes strategic goals that are directly aligned with AM (Saanich, 2020), as well as other strategic goals for climate mitigation and adaptation:

- Strategy B5: Increase the resilience of Saanich's infrastructure and assets
  - Climate Action B5.1: Include climate change considerations in the corporate asset management system
- Strategy E2: Protect and manage natural assets as critical infrastructure
  - Climate Action E2.1: Evaluate services provided by natural assets
  - Climate Action E2.2: Develop a strategy to maintain services provided by natural assets

2.6.4 Saanich Documents

A detailed list of Saanich strategies, plans and programs that inform the AM Program are provided in Appendix B.

2.7 Business Context

Saanich is a local municipality with the Capital Regional District (CRD), with a population of 117,735 (2021). The total land area is 104 square kilometers, including 51 square kilometers within the Urban Containment Boundary and 53 square kilometers in the rural area. The landscape has a varied topography ranging from sea level to 229 meters above sea level, including many freshwater lakes and watercourses and an extensive marine shoreline.

"Asset management is a process within the everyday business of local government; it is not a separate activity, software or plan" (AMBC, 2019)

Saanich was incorporated as a District municipality in 1906 and some of Saanich's existing underground infrastructure, roads and heritage buildings date back to the early 1900's. Following World War II, Saanich continued to increase in population, changing from a semi-rural community to a more densely populated suburban community within the Greater Victoria area. In 1966, Saanich became part of the CRD, which was established to co-ordinate and provide services to local municipalities, and during the next two decades much of the existing infrastructure was constructed with funding support from senior levels of government.

The community of Saanich exists in a social, environmental and financial environment that shape service delivery priorities and how services are delivered. In the most recent Saanich citizen and business survey, most Saanich residents said that quality of life is good, and most Saanich businesses said that Saanich is a good place to operate a business (BC Stats, 2023). Current organizational challenges for consideration through the AM Program include:

Assets: Aging infrastructure; Climate change impacts; Loss of biodiversity; Transportation safety

Finances: Affordability; Inflationary pressure; Construction cost increases

Information: Population growth resulting in changing demand for service; Paper-based asset data collection and storage

People: Communication silos between departments in some areas; Recruitment, retention and upcoming retirements

2.8 Asset Management System

Saanich's AM System is shown in Figure 6. This is a preliminary illustration of the line of sight and flow of information between the AM Program and Saanich's overall organizational strategic, financial and operational documents and processes. The AM System will be refined as needed in future revisions of the AM Strategy to reflect the continuous improvement of Saanich's AM practices.

Figure 6 – Saanich Asset Management System

3. Saanich Assets

3 Saanich Assets

3.1 Asset Hierarchy

Saanich's asset hierarchy was developed based on ISO standard ISO 14224:2016 and is shown in Figure 7. Saanich's nine asset types are Level 2 in the asset hierarchy:

- Drainage
- Facilities
- Information Technology
- Natural Assets
- Park and Trail Structures
- Transportation
- Vehicles and Equipment
- Wastewater (Collection)
- Water (Distribution)

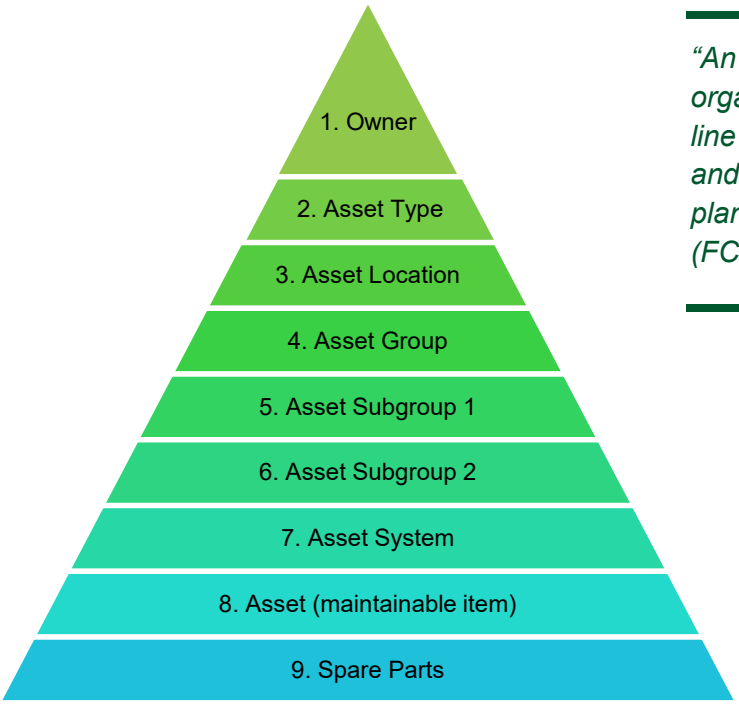


Figure 7 - Asset Hierarchy

"An asset hierarchy is "a systematic organization of assets that creates a line of sight between services, assets and accountabilities that facilitates planning and decision-making." (FCM, 2018)

3.2 Asset Inventory

Saanich delivers services to the community using a portfolio of built assets with a current replacement value (RV) of approximately $4.7 billion ($2022) as shown in Figure 8. This includes drainage, facilities, information technology, park & trail structures, transportation, vehicles & equipment, wastewater, and water assets, but excludes land costs and natural assets. Saanich owns and manages natural assets; however, these assets are not currently valued or included in financial statements.

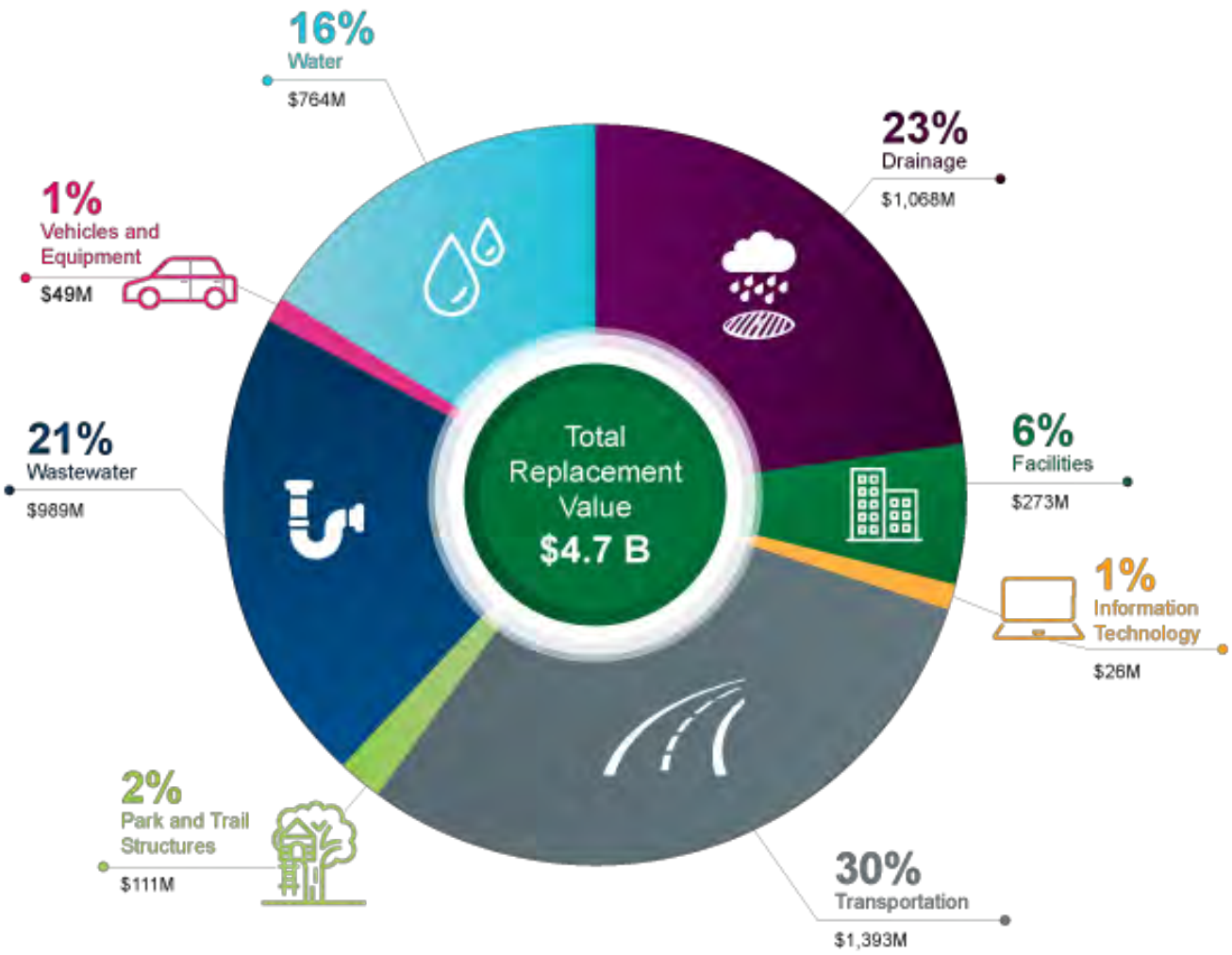


Figure 8 – Asset Replacement Value ($2022)

A summary of Saanich's built asset inventory is provided in Table 1, and information about Saanich's natural assets is provided in Section 3.3.

Further information about each asset type is found in Appendix C – Asset Dashboards.

Note that Table 1 does not identify all the assets that Saanich owns because there are data gaps for some assets. Asset groups that are currently missing from the asset inventory will be included in future reports as Saanich's AM practices are continuously improved.

Table 1: Saanich Asset Inventory (Excluding Natural Assets)

Asset Groups, Replacement Value, Quantity, Remaining Service Life and Average Condition

Drainage

RV
$1,068 M

5	km box culverts
11	km culverts
165	km laterals
559	km mains
1	pump station

Average Remaining Useful Life **50%**
Average Physical Condition **Fair**

Transportation

RV
$1,393 M

37	bridges
221	bus stops
104	controlled crosswalks
23	pedestrian signals
567	km roads
269	km sidewalks
9,093	streetlights
20,000	street signs
84	traffic signals

Average Remaining Useful Life **40%**
Average Physical Condition **Good**

Facilities

RV
$273 M

72	municipal facilities
81	park buildings

Average Remaining Useful Life **40%**
Average Physical Condition **Fair**

Vehicles & Equipment

RV
$49 M

35	fire vehicles
254	fleet vehicles
84	police vehicles
67	Cedar Hill Golf Course equipment
2	E-bikes
55	EV Charging Stations
155	fitness equipment

Average Remaining Useful Life **20%**
Average Physical Condition **Fair**

Information Technology

RV
$26 M

various	hardware
various	software

Average Remaining Useful Life **To Be Developed**
Average Physical Condition **To Be Developed**

Wastewater (Collection)

RV
$989 M

39	pump stations
19	km force mains
548	km gravity mains

Average Remaining Useful Life **40%**
Average Physical Condition **Good**

Park & Trail Structures

RV
$111 M

50	courts
97	foot bridges
1,559	irrigation zones
72	parking lots
3	km park roads
56	playgrounds
56	sports fields
124	km park trails

Average Remaining Useful Life **10%**
Average Physical Condition **Fair**

Water (Distribution)

RV
$764 M

5	reservoirs
18	pump stations
46	PRVs
549	km mains
29,275	meters

Average Remaining Useful Life **40%**
Average Physical Condition **Poor**

3.3 Natural Assets

Natural assets are part of Saanich's AM Program as one of the nine asset types in the AM hierarchy.

As defined in Saanich's AM Policy, municipal natural assets (natural assets) are the stocks of natural resources or ecosystems that contribute to the provision of one or more services required for the health, well-being and long-term sustainability of a community and its residents. Given that natural assets provide services to the community, just like other engineered assets but typically at a much lower cost, while also providing other valuable ecosystem services, it is critically important they are included in the AM Program and factored into decision-making.

As shown in Figure 9, natural assets are a component of the broader category of green infrastructure. In addition to natural assets, green infrastructure includes assets that have been designed and engineered to mimic natural functions and processes in the service of human interests. These other types of green infrastructure will be managed under one of Saanich's other asset types as appropriate (e.g., Drainage, Facilities, Park & Trail Structures, Transportation, etc.).

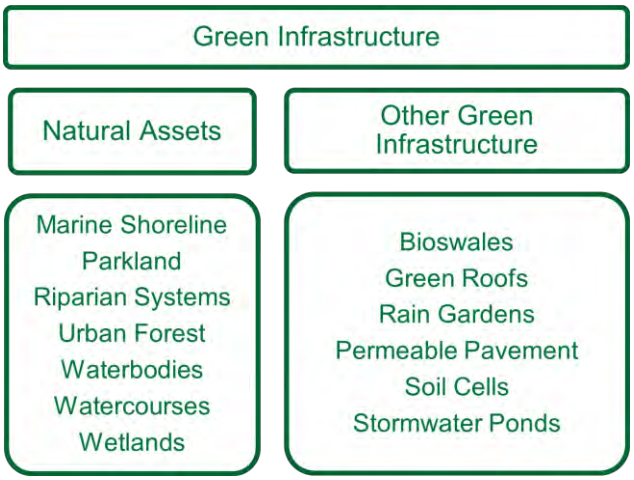


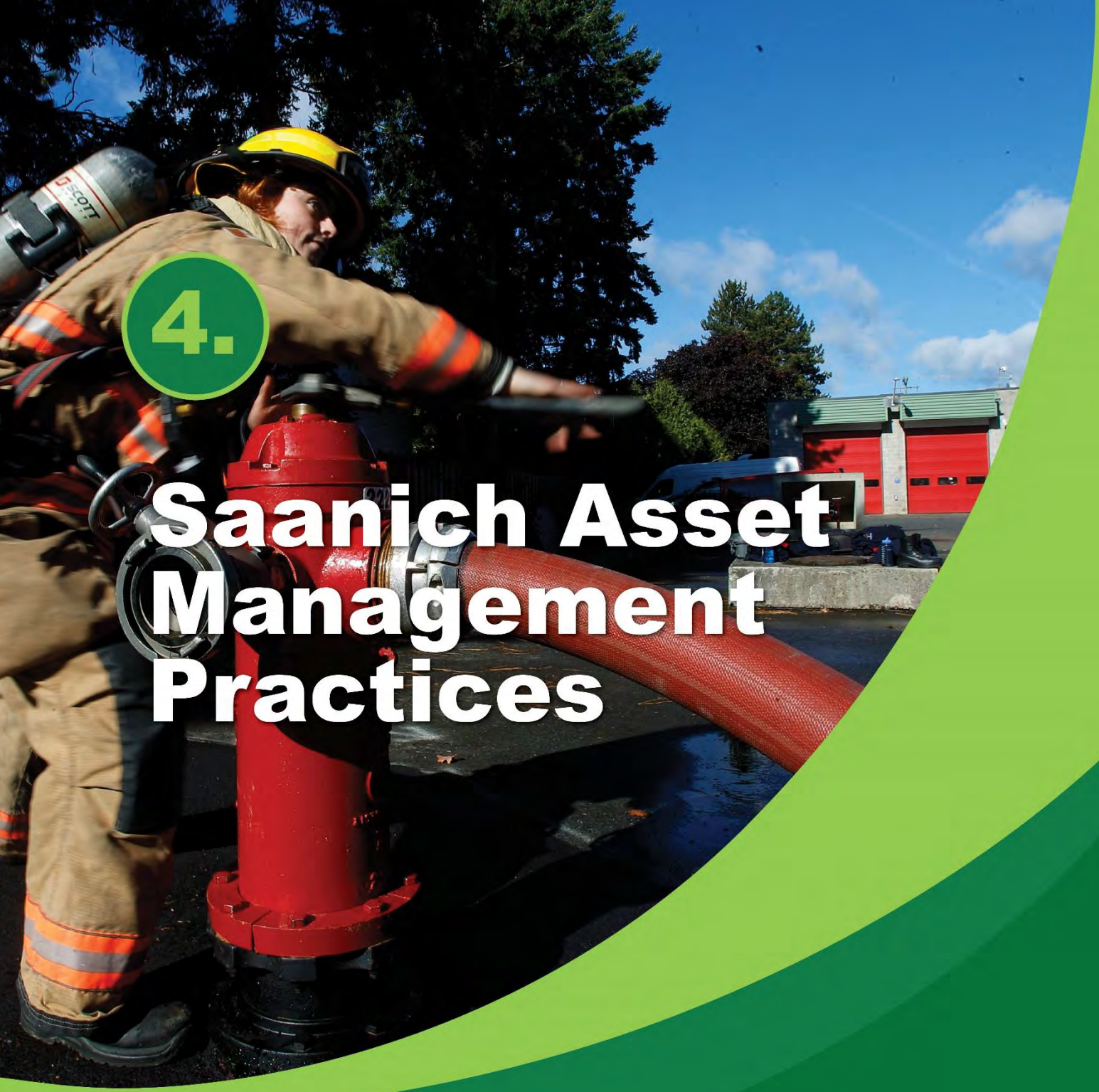
Figure 9 – Scope of Saanich's Natural Assets[2]

Saanich has not yet developed a natural assets inventory, however there is some information about its natural assets in the geographic information system (GIS) and in various reports, such as:

- State of the Urban Forest (Diamond Head, 2023)
- State of Biodiversity (Diamond Head, 2023)
- The Canadian City Parks Report (park people, 2022)

A preliminary dashboard of information about Saanich's natural assets is found in Appendix C.

[2] Adapted from *Defining and Scoping Municipal Natural Assets* (NAI, 2017)



4.

Saanich Asset Management Practices

4 Saanich Asset Management Practices

4.1 Maturity Assessment

4.1.1 Overview

Saanich AM maturity was assessed using the following approaches:

- AMBC's AssetSMART2.0
- FCM's Asset Management Readiness Scale (AMRS)

The AssetSMART2.0 scale provides greater detail related to asset data and information, so it was used to assess Saanich's maturity at the level of each asset type. The AMRS is a broader scale meant to assess overall corporate readiness for AM, so it was used to assess Saanich's District-wide AM maturity.

"Asset management fulfills the statutory responsibility of local governments to look after the community's assets. The Community Charter (sec 7) and the Local Government Act (sec 185) identify the purpose of local government as follows:

** Providing for good government of its community*
** Providing for services, laws and the matters for community benefit*
** Providing for stewardship of the public assets of its community*
** Fostering economic, social and environmental well-being of its community"*

(AMBC website)

4.1.2 AssetSMART2.0

AssetSMART2.0 is a tool for local governments to assess their capacity to manage their assets and the maturity of their AM practices. The tool is organized by the four core elements of assets, information, finances and people, and uses a progressive improvement scale of 1 to 4, where each Level is described as follows:

- Level 1 – Low maturity
- Level 2 – Fair maturity
- Level 3 – Good maturity
- Level 4 – High maturity

In 2016, Saanich completed a maturity assessment using AssetSMART2.0 that resulted in an average score between Levels 1 and 2. In 2023, the assessment was updated, and the resulting average score identified an increased maturity of Level 2. This reflects the improvements made to Saanich's AM practices over the past seven years, including:

- Recognition of the importance of natural assets in strategic documents
- Council approval of the AM Policy
- Starting work on an AM Strategy by creating a program charter
- Completion of an updated Climate Plan (2020) addressing mitigation and adaptation and including regional climate projections (2017) a climate risk assessment and sea level rise and flood inundation mapping

- Completion of a Long Term Financial Plan
- Establishing a cross-departmental steering committee
- Establishing a cross-departmental working group
- Developing a communications plan and starting to raise awareness with staff

The overall results are shown in Figure 10, and the detailed assessment is found in Appendix D. A radar graph for each asset type is found in the AM Dashboards in Appendix C.

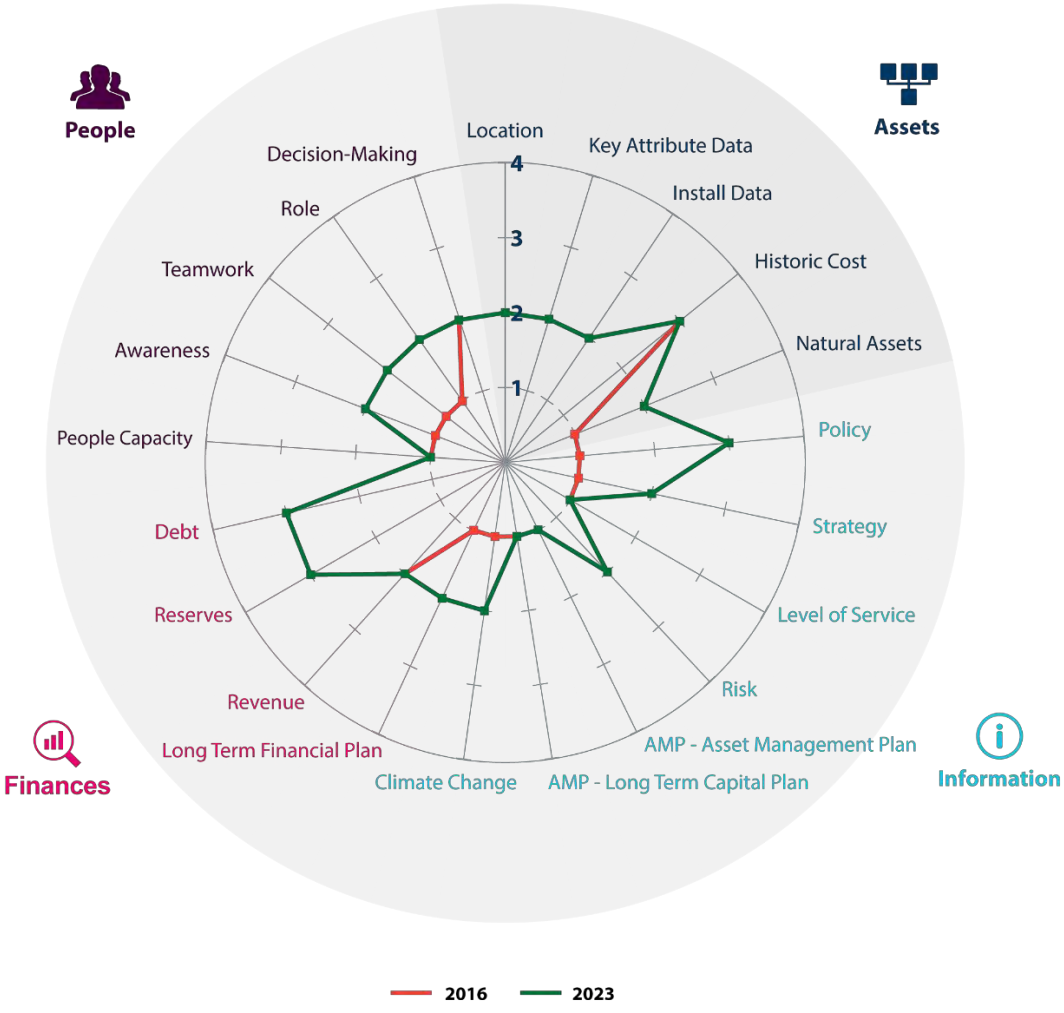


Figure 10 - Saanich District-Wide AM Maturity Using AssetSMART2.0

4.1.3 Asset Management Readiness Scale

FCM's AMRS is a tool developed to help local governments measure overall corporate progress in the practice of AM over five competency areas (FCM, 2018):

- Policy and governance
- People and leadership
- Data and information
- Planning and decision-making
- Contribution to asset management practice

Each competency area is measured on a progressive improvement scale from Pre-Level 1 through to Level 5 as follows:

- Pre-Level 1 – Working on Level 1
- Level 1 – Initial investigation into the competency area
- Level 2 – Beginning to integrate processes and systems into daily routines
- Level 3 – Integrating processes and systems into daily routines
- Level 4 – Regular monitoring and continuous improvement; this level is roughly aligned with the requirements of the ISO 55000 standard for AM
- Level 5 – Advanced maturity beyond the requirements of the ISO 55000 standard

Saanich's assessment of its current maturity using the AMRS scale is shown in Figure 11, and the detailed assessment is found in Appendix D.

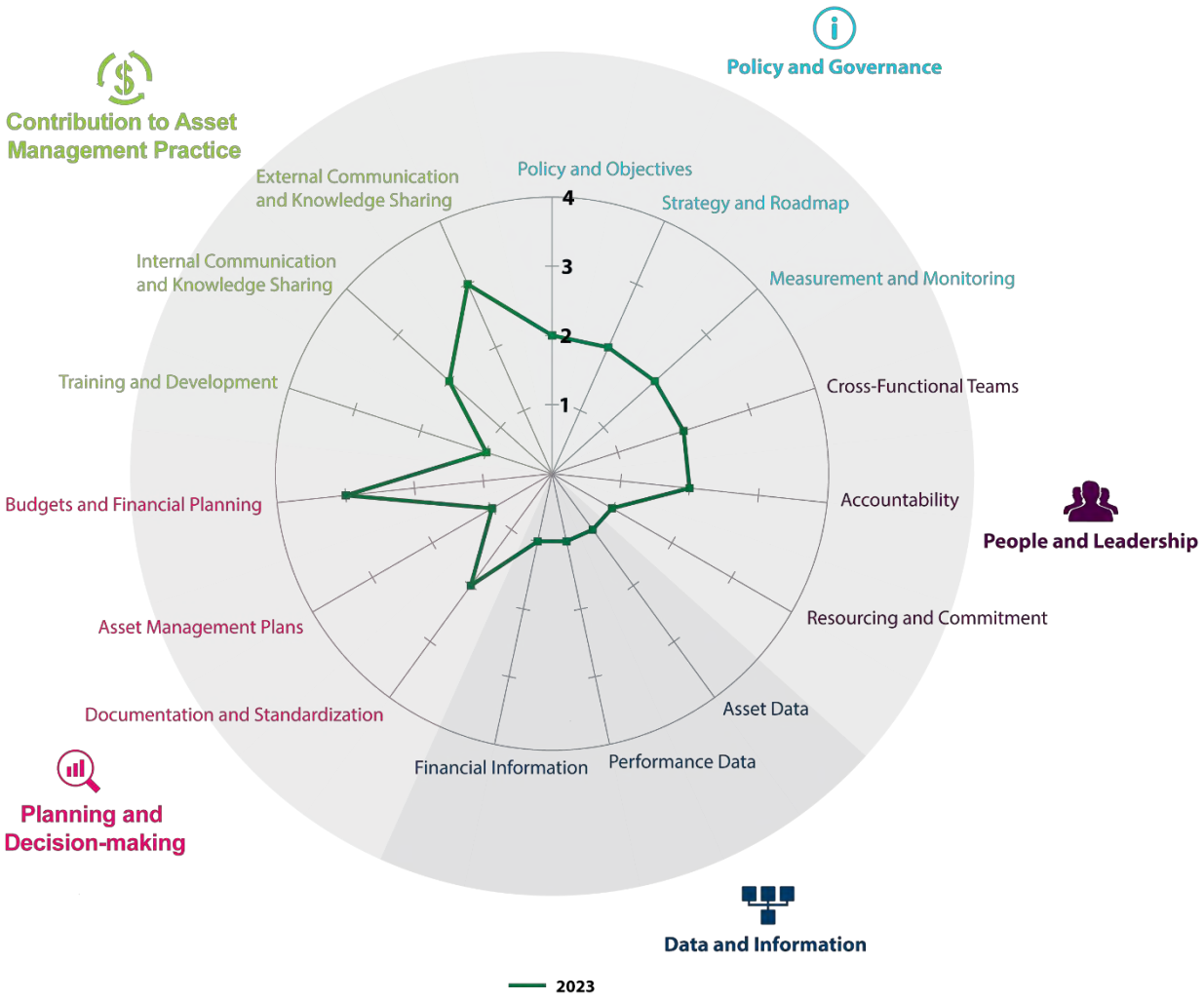


Figure 11 - Saanich District-wide AM Maturity Using Asset Management Readiness Scale

4.1.4 Summary of Maturity Gaps

Saanich's 2023 maturity assessment identified the following key gaps according to the two scales:

Assets (Data and Information)

- Asset data is not stored in a central location and accessible by all staff
- There is not a single source of truth for asset data
- Technical and financial asset data is not linked
- Location data is missing for some assets
- Key attribute data is missing for some assets
- Installation date is missing for some assets
- Condition information is missing for some assets
- Natural asset data is missing or not documented in a usable format

- Information (Policy and Governance)
  - There is no strategy for an AM Program
  - Performance measures for an AM Program have not been established
  - Current LoS have not been documented, and staff have not considered the trade offs between desired LoS, risks and costs
  - Some service level strategies and master plan have been developed, but AM Plans have not yet been developed
- Finances (Planning and Decision-Making)
  - Saanich's decision-making approach is currently informal, risk-based prioritization is not applied consistently across the organization
  - Saanich's Infrastructure Replacement Funding Strategy (IRFS) requires updating
  - Saanich's Long Term Financial Plan requires updating
- People (People and Leadership, and Contribution to Asset Management Practice)
  - The District has one position dedicated to developing and implementing a District-wide AM Program. Staff resources in the Operational Units are limited in terms of adopting new, formal AM practices
  - Roles and responsibilities for AM require clarification and documentation

4.2 Assets

4.2.1 Asset Inventory

Saanich has some information about most of its assets, including location, attributes (i.e., size, material, type), and physical condition. The historic cost for physical assets is also available through Saanich's TCA financial reporting.

As part of the development of this AM Strategy, current asset inventory data was compiled in a central location in a set of asset inventory spreadsheets, one for each asset group. The data was obtained from a variety of sources including GIS, TCA spreadsheets, and staff input. Currently, these spreadsheets are disconnected from existing business processes for updating asset data in GIS or other existing software, and this represents a challenge in Saanich's ability to keep accurate and current inventories.

Each spreadsheet has a common template and includes the following asset data:

- Location
- Key Attributes (i.e., material, size, type, etc.)
- Installation Date
- Useful Life
- Physical Condition
- Unit Costs
- Replacement Value

The main gap in Saanich's asset inventory is natural assets. Currently, information about the location of natural assets is found in a series of GIS datasets, however there is no formal inventory for natural assets.

Details of the current state of Saanich's asset information by asset type are provided in the Asset Dashboards found in Appendix C.

4.2.2 AM Software

Currently, Saanich's asset data is managed using a combination of enterprise systems, department specific software, Excel spreadsheets and paper-based processes. The following existing District-wide software systems provide support to Saanich's AM Program:

- **ArcGIS** (Esri) – Most spatial assets and attribute data is currently stored in Saanich's GIS system, which has been under development since the early 2000's. Currently, each asset has one unique identification number (Asset ID) that changes when the asset is replaced, and the IT Department is in the process of adding a second number (Facility ID) that will not change when the asset is replaced.
- **Citywide Budgeting** (PSD Citywide) – This is a new system that is currently being implemented for future development of an annual financial plan, including operating and capital budgets.
- **Enterprise Document Retention Management System (EDRMS)** (To Be Determined) – A project is underway to provide a District-wide EDRMS that will support the digital storage of records associated with physical assets.
- **JD Edwards EnterpriseOne** (Oracle) – This is Saanich's Enterprise Resource Planning (ERP) system for managing financial information, including tracking of historical and actual costs, and preparation of financial statements.
- **Tempest** (CentralSquare) – This system contains Calls for Service, Licensing and Permitting information.

Other department specific systems that support Saanich's AM Program include:

- **Bluebeam Revu** (Bluebeam) – Automates the sharing and review of civil engineering design drawings.
- **AutoCAD and Civil 3D** (Autodesk) – Automation of civil engineering design drawings.
- **FAMIS 360** (Accruent) – Computerized maintenance management system (CMMS) that is purpose built for Facility assets. Staff is in the process of populating this Cloud-based software for major Municipal Facilities and work is being done to ensure the system can be used and accessed cross-departmentally.
- **Fleet Management** (Fleet Complete) – Automates fleet tracking and improves vehicle utilization for Vehicle assets.
- **infraMAP (iWater)** – Manages operational activities and corrective maintenance work orders for Drainage, Wastewater and Water assets, but currently does not manage preventative maintenance activities. Currently, the data collected through this system is accessible only to a limited group of users and is not integrated with higher level

planning documents. The current version of the software is being phased out, and the upgraded version will be tested to assess its ability to meet Saanich's needs.

- **InfoSWM, InfoSewer, and InfoWater** (Innovyze) – Models the capacity of Saanich's drainage, wastewater and water systems, including linear and vertical assets.
- **IT Asset Management** (ServiceNOW) – Provides an asset inventory for IT assets, and automates lifecycle management for software, hardware and cloud assets.
- **SCADA (Supervisory Control and Data Acquisition)** – Provides automation and alarms for the operation and maintenance of Saanich's Drainage, Wastewater and Water assets.
- **VFA Facility** (Gordian) – Asset inventory, capital planning, forecasting, and decision-support software that is purpose built for Facility assets. The software uses condition information to assess the likelihood of failure, criticality information to assess the impact of failure, and then uses the resulting risk score to support prioritization of the capital plan. Currently, the software is populated with only the major Municipal Facilities that are included in Saanich's *Strategic Facilities Master Plan* (Saanich, 2018), and population of the balance of the Municipal Facilities assets is currently in-progress.

A summary of current AM software utilization by asset type is shown in Table 2, where green indicates current usage of a software system, yellow indicates current usage of a partial software solution, and red indicates that a software solution needs to be developed.

Table 2: Current AM Software Utilization

Asset Type	Location and Asset Inventory	Asset Management Decision-Support	Computerized Maintenance Management System (CMMS)
Drainage	ArcGIS	To Be Developed	infraMAP
Facilities	VFA Facility (Major Facilities)		FAMIS 360 (Major Facilities)
IT	IT Asset Management		
Natural Assets	ArcGIS	To Be Developed	To Be Developed
Park & Trail Structures	ArcGIS	To Be Developed	To Be Developed
Transportation	ArcGIS	To Be Developed	To Be Developed
Vehicles & Equipment	JD Edwards	To Be Developed	To Be Developed
Wastewater (Collection)	ArcGIS	To Be Developed	infraMAP
Water (Distribution)	ArcGIS	To Be Developed	infraMAP

Current AM software gaps include:

- Lack of an AM decision-support software for some asset types
- Lack of maintenance management (CMMS) software for some asset types
- Lack of unique identification numbers for some assets
- Lack of a single point of data entry for all assets (no single source of truth)
- Lack of integration between technical and financial systems

4.3 Information

4.3.1 Overview

Saanich has some information on the physical condition of its assets, either based on a condition assessment or estimated based on age, and staff are working on gathering additional condition data. However, Saanich needs to improve its AM practices in the areas of LoS, risk assessment, integration of climate change considerations, and AM Plans. Current information gaps are highlighted in Table 3, where green means there is information available for most assets, yellow means there is information available for some assets, and red means there is little or no information.

Table 3: Current State of Information

Asset Area	Levels of Service	Condition Assessment	Risk Assessment	Climate Change Integration	AM Plan
Drainage					
Facilities					
IT					
Natural Assets					
Park & Trail Structures					
Transportation					
Vehicles & Equipment					
Wastewater (Collection)					
Water (Distribution)					

4.3.2 Levels of Service

LoS are specific objectives that describe the extent and quality of services that the municipality provides to the community. The desire of Council or the public for a particular level of service will directly affect the cost of providing that service in terms of utility fees or taxation.

Saanich consults with the public regarding service delivery through the Citizen and Business Survey and the Annual Budget Simulation Tool, and provides updates on performance indicators in the *Annual Report* (Saanich, 2023). A summary of current Saanich performance indicators and the associated asset type is provided in Appendix E.

Currently, Saanich has not formally developed or documented its LoS (AM Objectives). In 2022, the AMWG started this process of developing LoS through participation in the AMBC LoS training program. As part of this training, the AMWG developed a list of the services that Saanich provides to the community and the types of assets that support the service delivery, as shown in Table 4.

Table 4: Alignment of Services and Assets

Services Provided to the Community	Asset Types Supporting Service Delivery
General Government Services	
Provide a wide variety of general administrative, communications and legislative services, including but not limited to climate change mitigation and adaptation	Facilities, Information Technology, Natural Assets, Vehicles & Equipment
Parks Services	
Provide parkland, structures, facilities and programming for outdoor recreation and community activities	Facilities, Information Technology, Natural Assets, Park & Trail Structures, Transportation, Vehicles & Equipment
Protect, restore and enhance natural areas, including the Urban Forest, watersheds, and other natural areas, which together provide a wide variety of stormwater management and ecosystem services	
Protective Services	
Provide police services	Facilities, Information Technology, Transportation, Vehicles & Equipment
Provide fire prevention and suppression services	
Provide emergency management services	
Recreation & Community Services	
Provide facilities and programming for recreation and community activities	Facilities, Information Technology, Natural Assets, Vehicles & Equipment
Provide public golf course	
Solid Waste Services	
Collect residential garbage and organics	Facilities, Information Technology, Transportation, Vehicles & Equipment
Collect fall leaves and compost	
Provide public yard-waste drop off site	
Collect litter from bus shelters	
Clean-up roadside dumping	
Stormwater Management Services	
Manage stormwater to protect buildings and transportation network from flooding	Drainage, Facilities, Information Technology, Natural Assets, Transportation, Vehicles & Equipment
Treat stormwater to protect the natural environment	
Provide emergency spill response	
Transportation Services	
Provide infrastructure to support the public transit system in Saanich	Facilities, Information Technology, Natural Assets, Transportation, Vehicles & Equipment
Provide transportation network for motor vehicles	
Provide active transportation network	
Wastewater Collection Services	
Collect wastewater and convey to CRD for treatment	Facilities, Information Technology, Transportation, Vehicles & Equipment, Wastewater (Collection)
Water Distribution Services	
Distribute potable water to the community	Facilities, Information Technology, Transportation, Vehicles & Equipment, Water (Distribution)
Provide water for fire suppression	

4.3.3 Condition Assessment

As shown in Table 5, current physical condition information is based on condition assessment study reports and/or physical inspections where available.

Table 5: Basis for Physical Condition Estimates

Asset Type	Asset Groups With Condition Assessment	Asset Groups Without Condition Assessment (Based on Age)	Asset Groups Without Condition Assessment and Without Age Data
Drainage	Mains (some CCTV data), Pump Stations	Mains (no CCTV data), Manholes	N/A
Facilities	Major Municipal Facilities	Minor Municipal Facilities, Park Buildings	N/A
IT	N/A	N/A	IT Assets
Natural Assets	N/A	N/A	Natural Assets
Park & Trail Structures	Playgrounds, Park Roads	Courts, Footbridges, Irrigation, Parking Lots, Sports Fields, Trails	N/A
Transportation	Bridges, Pedestrian Signals, Roads, Streetlights, Traffic Signals	Bus Stops, Sidewalks	Controlled Crosswalks, Street Signs
Vehicles & Equipment	Vehicles	Equipment	N/A
Wastewater (Collection)	Gravity Mains (some CCTV data), Pump Stations	Force Mains, Mains (no CCTV data)	N/A
Water (Distribution)	PRVs, Pump Stations, Reservoirs	Mains, Meters	N/A

N/A = Not Applicable

If there is no condition assessment information available, then the physical condition is estimated based on the age of the asset as compared to the useful life, using the following formula:

- Very Good (used 0-25% of useful life)
- Good (used 25-50% of useful life)
- Fair (used 50-75% of useful life)
- Poor (used 75-100% of useful life)
- Very Poor (used >100% of useful life)

If there is no condition assessment information and no age data, then the department responsible has identified collection of this information as an action for continuous improvement.

As noted in Table 5, Saanich has assessed the condition of some of drainage and wastewater mains through its closed-circuit television (CCTV) program. Based on current funding levels, the CCTV Program has a cycle of approximately 20-30 years. To date, Saanich has assessed approximately 40% of the wastewater system, and the current rate of assessment is approximately 15 km/year (3% of the total system per year). Approximately 15% of the drainage

system has been assessed to date, and the current rate of assessment is approximately 15 km/year (3% of the total system per year). Currently, Saanich has not completed a condition assessment of its water mains, so current condition has been estimated based on age; water mains are not accessible for condition assessment using CCTV technology, and instead require either destructive testing or submersible technology.

Currently, Saanich reports annually on the condition of its Major Municipal Facilities in the *Annual Report* (Saanich, 2023) using the facility condition index (FCI) as the indicator. The condition of these facilities was assessed as part of the development of the *Strategic Facilities Master Plan* (Saanich, 2018), which reported an overall corporate average FCI of 0.36, and set a target to meet an overall corporate average FCI of 0.25 within 10 years.

4.3.4 Risk Assessment

In 2022, Saanich's Enterprise Risk Management (ERM) Program completed a District-wide ERM Framework, and work is underway to develop a corporate risk register. The next step, planned for 2023-2024 is to develop departmental risk registers. Supporting this work is a Community Risk Assessment that was completed by the Fire Department's Emergency Program in 2022, and a Climate Hazard and Vulnerability Assessment that was completed in 2018 as part of the development of the Climate Plan.

To date, preliminary assessment of the risk of asset failure has been completed for major facilities assets as part of the *Strategic Facilities Master Plan* (Saanich, 2018), and for wastewater and water assets as part of recent updates to the *Water Master Plan* and *Sewer Master Plan*.

4.3.5 Climate Change Integration

Currently, Saanich has made some progress integrating climate change considerations with AM practices, particular in the work on climate change mitigation related to its Facilities, Transportation and Vehicles & Equipment asset types. Some progress has also been made on climate change adaptation, particularly in the review and update of engineering design standards, such as Saanich's stormwater Intensity-Duration-Frequency curves that are informed by future climate projections. The collection and analysis of various climate related data, for example, future climate projections, flood inundation and sea level rise mapping, heat vulnerability mapping, has been undertaken and further work is underway. This information is necessary to integrate climate change considerations into the AM Program. However more work is needed to formalize consideration of climate change into Saanich's business processes over the full lifecycle of its assets, and more work is needed on the protection and management of Saanich's natural assets.

A number of Climate Plan actions are underway or due to be initiated in 2023-2024 that will inform the development of Saanich's AM Plans, including:

- Development of a Biodiversity Conservation Strategy
- Update of the Urban Forest Strategy
- Updated climate projections, coordinated by the CRD

- Updated climate risk assessment based on updated climate projections and conducted at the more detailed service/asset level
- Development of actions (including asset/infrastructure upgrades) required to mitigate the identified risks and associated cost estimates (cost of doing nothing and funding gap to achieve climate recovery needs)

4.3.6 Asset Management Plans

Currently, Saanich has not completed AM Plans for any of the nine asset types. However, there are existing strategies and master plans, as shown in Table 6, that will inform Saanich's first-generation AM Plans.

Operational plans for each department are currently informally documented as part of the development of the annual Financial Plan, and there is one formal operational plan that was developed in 2021 for Saanich's EV Charging Stations.

Table 6: Current State of Departmental Strategies and Plans

Asset Type	Strategies and Master Plans	Operational Plans
Drainage	Integrated Stormwater Master Plans (first version in progress)	To Be Developed
Facilities	Strategic Facilities Master Plan 2018 (update in progress); 2019 Market Analysis Study Recreation, Wellness and Health Programs, Services, Activities and Experience	To Be Developed
IT	IT Master Plan (first version in progress)	To Be Developed
Natural Assets	Urban Forest Strategy 2010 (update in progress); Biodiversity Conservation Strategy (first version in progress)	To Be Developed
Park & Trail Structures	Parks, Recreation and Community Services Master Plan 2013 (update in progress - Parks, Recreation and Community Services Comprehensive Direction & Actions Plan)	To Be Developed
Transportation	Active Transportation Plan 2018 (update in progress)	To Be Developed
Vehicles & Equipment	Fire Services Review 2020	EV Charging Stations Operational Plan; Others To Be Developed
Wastewater (Collection)	Sewer Master Plan 2022	To Be Developed
Water (Distribution)	Water Master Plan 2022	To Be Developed

4.4 Finances

4.4.1 Replacement Value

The RV of an asset is the cost if the asset were to be replaced on a like-for-like basis in the current year.

Based on work completed in 2007, the original estimated RV for all Saanich's physical assets was $2.1 billion, excluding natural assets. In order to avoid a moving target for estimating Saanich's annual replacement funding needs, the RV estimate was not updated until 2022.

In 2022, as part of the development of the AM Strategy, the RV for each Asset Group was updated based on the best available inventory of Saanich's built assets and their current unit costs. As shown in Table 7, the updated RV estimate for Saanich's built assets is $4.7 billion, which excludes assets that are currently not documented in the asset inventory and also excludes valuation of natural assets. The unit costs that were used to update the RV estimate are provided in Appendix F, along with the sources of information and assumptions associated with each unit cost. A third-party review of Saanich's RV estimate was completed by Urban Systems Ltd., and the results are provided in Appendix F.

As shown in Figure 12, the increase between 2007 and 2022 is mainly due to inflation and local construction cost increases, as well as new assets added since 2007 and accounting for assets had not been included in the original calculations.

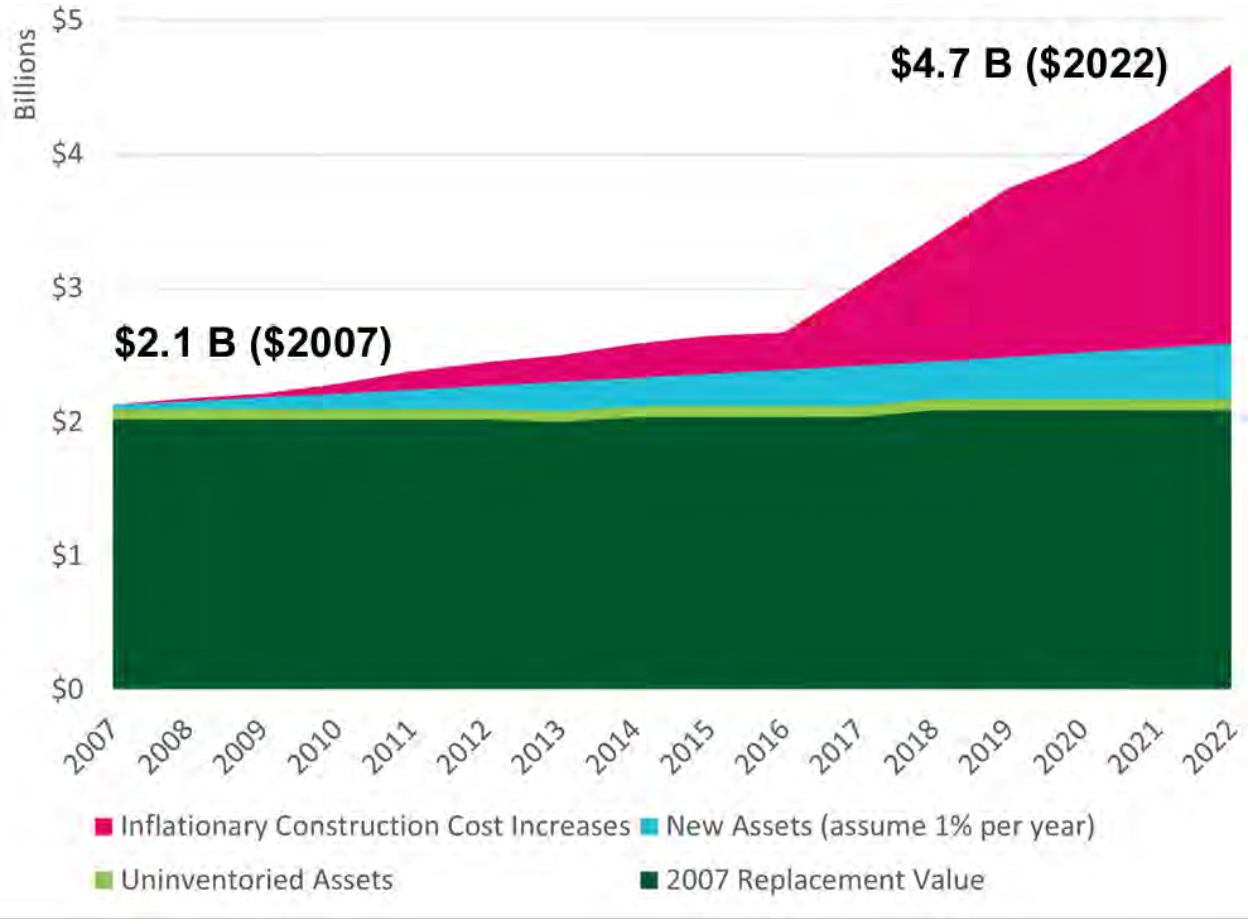


Figure 12 – Change in Replacement Value from 2007 to 2022

It is important to note that the RV is an order-of-magnitude estimate of the current value of Saanich's assets based on the best available information, and professional judgement in developing unit costs. The RV estimate is expected to increase as assets are added to the inventory and inflation pressure increases unit costs over time. There is currently no industry standard methodology for estimating RV, and there is a considerable variation in reporting by municipal governments in BC and across Canada. However, as more municipal governments start reporting their RV, it is expected that Saanich will be able to benchmark its RV estimate with other comparable municipalities.

It is also important to note that the actual cost of the project to replace an asset may be higher than the RV if the replacement is not simply like-for-like but also includes upgraded or new service levels. For example, the estimated project costs for the replacement of Fire Hall No. 2 and the Saanich Operations Centre are higher than the RV because the new facilities will

include new or upgraded features such as additional capacity, design features to meet building code requirements, and features to meet safety requirements.

4.4.2 Average Annual Replacement Funding

The average annual replacement funding (AARF) is calculated as the RV of an asset divided by its useful life. This is the target amount of funding to be spent each year, either on a capital project to replace the asset, or on a transfer to a reserve for future replacement.

As shown in Table 7, the original AARF target estimated in 2007 for all of Saanich's built assets, excluding natural assets, was $41 million. In 2022, the AARF target was updated using the updated RV and updated useful life estimates. A summary of the useful life estimates is provided in Appendix G. The new AARF target is more than double the original value at $86 million, resulting in a current AARF gap of approximately $45 million per year.

Table 7: Updated Replacement Value and Annual Funding Target

Asset Type	Original RV ($2007 M)	Original AARF ($2007 M)	RV ($2022 M)	AARF ($2022 M)	Annual Funding Gap ($2022 M)
Drainage	$502	$7.5	$1,068	$15.3	$7.8
Facilities	$168	$2.8	$273	$6.0	$3.2
Information Technology	$7	$1.1	$26	$3.9	$2.8
Park & Trail Structures	$63	$3.2	$111	$4.9	$1.7
Transportation	$468	$8.4	$1,393	$24.0	$15.6
Vehicles & Equipment	$28	$2.8	$49	$4.8	$2.0
Wastewater (Collection)	$451	$7.0	$989	$14.2	$7.2
Water (Distribution)	$400	$7.9	$764	$12.6	$4.7
Total	**$2,087**	**$40.7**	**$4,673**	**$85.7**	**$45.0**

4.4.3 Infrastructure Replacement Funding Strategy

Saanich's IRFS is a long-term financial strategy for funding the like-for-like replacement of physical assets at the end of their useful life. Figure 13 shows how the IRFS fits into Saanich's Financial Planning Framework.

The IRFS was developed in 2007 to align with the new legislated requirement for TCA financial reporting. As described above, the estimated RV and estimated useful life of Saanich's assets were used to estimate an AARF target of $41 million. Council then approved the IRFS, which established a goal to meet the AARF by 2019. In order to avoid a moving target, the target levels were maintained at the levels set in 2007 without any increase to account for inflation, uninventoried assets or new assets.

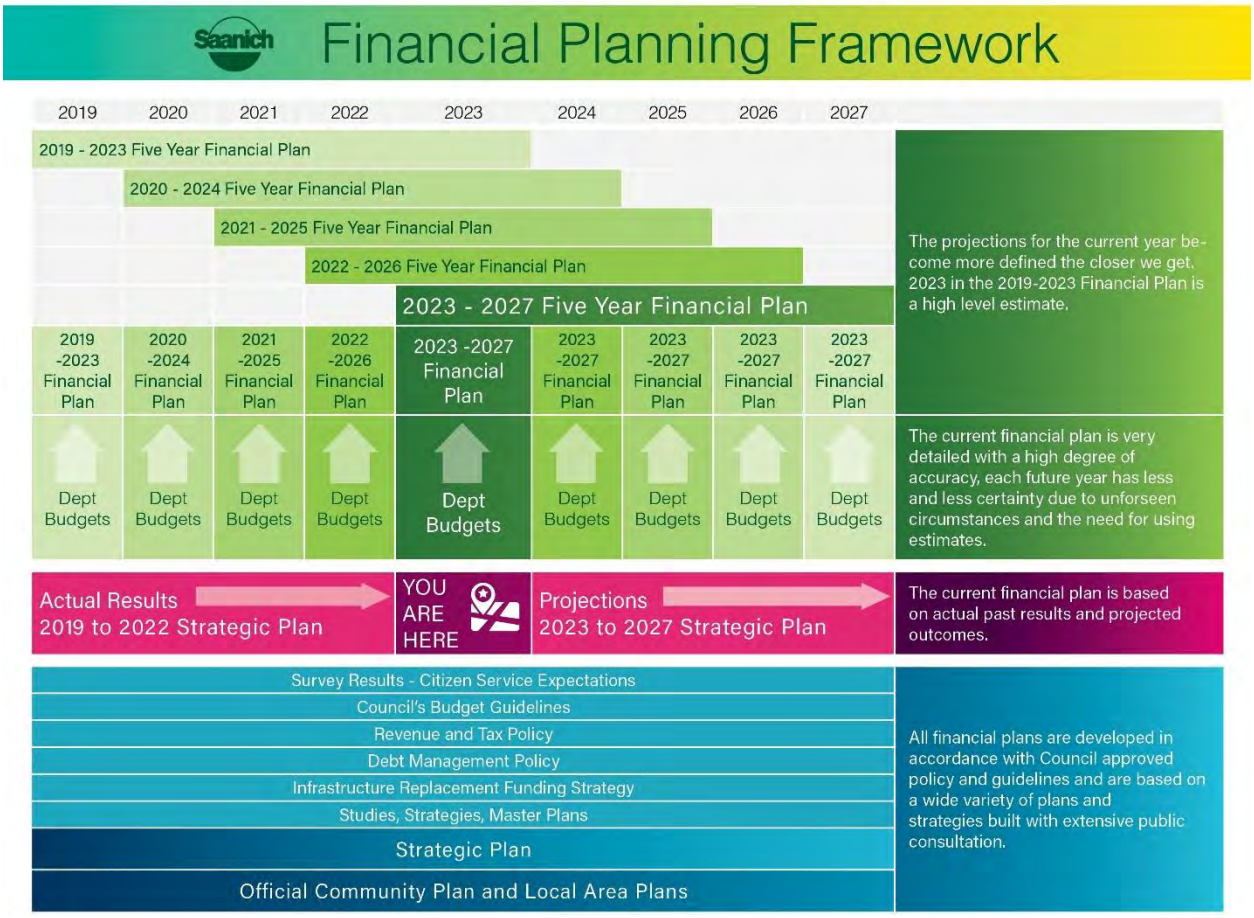


Figure 13 - Saanich Financial Planning Framework

As shown in Figure 14, from 2007 to 2019, Council gradually increased tax and utility rates, until the replacement funding target was met in 2019. Since 2019, infrastructure replacement funding has remained steady at the target level, with the understanding that an update to the target level was underway, and that the target level would need to be adjusted in the near future.

Figure 14 also shows the updated AARF target of $86 million. The gap between Saanich's current replacement funding levels and the updated AARF target is approximately $45 million per year. This indicates that Saanich is currently not investing sustainably in its assets. Each year that Saanich does not reinvest in its assets at the target level, the risk is increasing that community service levels will not be met. This also means that the financial burden on future generations is increasing.

"Asset management supports practical, evidence-based decision-making. Take the guess work out of decision-making and set priorities based on what needs to be fixed or replaced and when." (AMBC website)

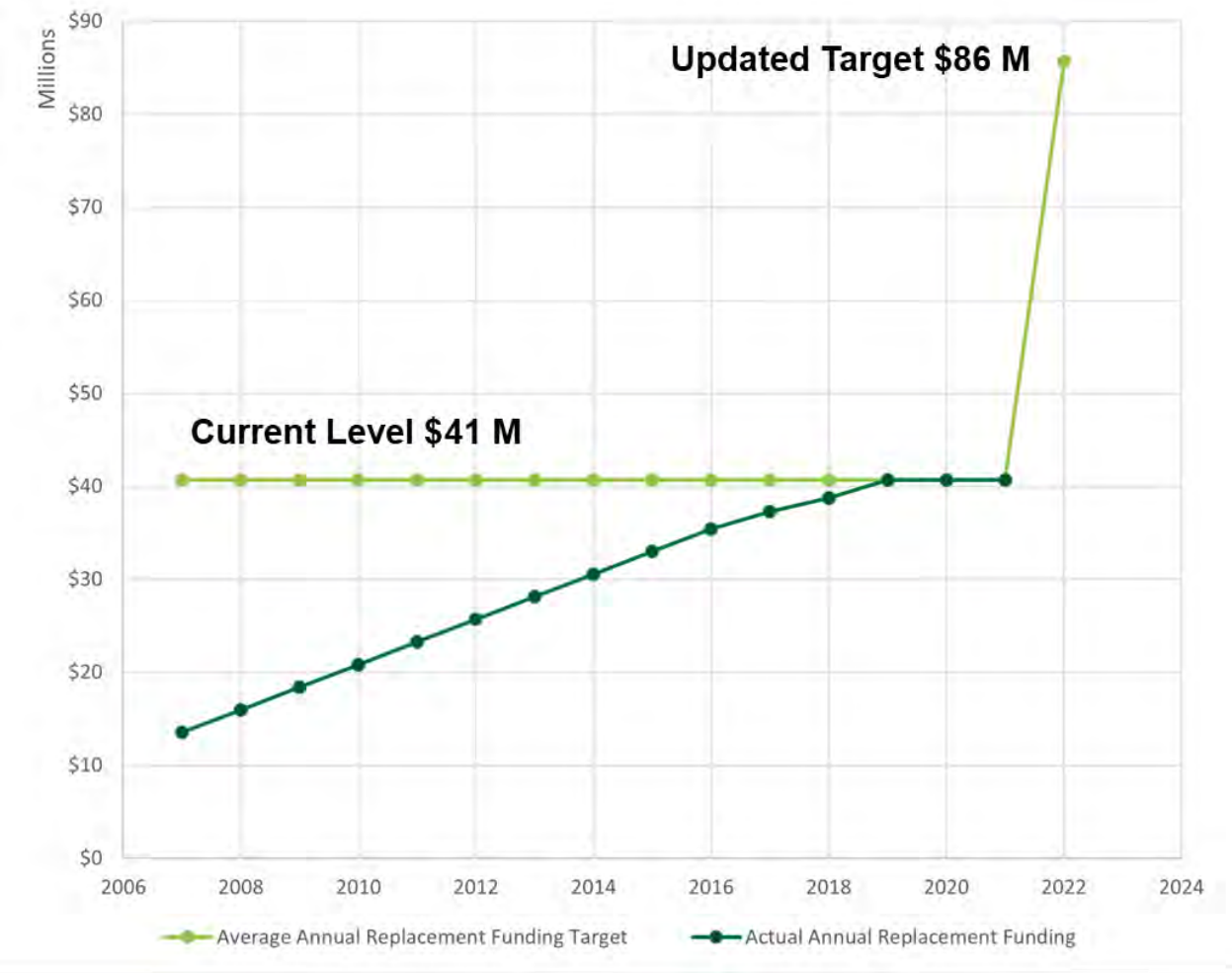


Figure 14 - Average Annual Replacement Funding Target Update

In addition to updating the RV and AARF, the following information has been developed for each asset group:

- **Replacement Backlog** – The replacement backlog represents the value of assets that are currently past the end of their estimated useful life.
- **Replacement Forecast** – A 100-year forecast of replacement funding needs has been developed based on the year installed and useful life for each asset group.

As shown in Table 8 and Figure 15, the replacement backlog is estimated to be approximately $0.7 billion, which represents approximately 15% of Saanich's total asset value of $4.7 billion. In theory, these assets are due for replacement in 2023, and represent an increased risk to service delivery. Replacement of these assets will be included in the capital program over time using a risk-based prioritization approach.

The overall 100-year replacement forecast is shown in Figure 15, and similar graphs for each asset type are shown in the preliminary asset dashboards found in Appendix C.

Table 8: Replacement Backlog Estimate

Asset Type	RV ($2022 M)	Backlog ($2022 M)	Backlog (% of RV)
Drainage	$1,068	$85	8%
Facilities	$273	$141	52%
Information Technology	$26	$0	0%
Park & Trail Structures	$111	$60	54%
Transportation	$1,393	$132	9%
Vehicles & Equipment	$49	$17	35%
Wastewater (Collection)	$989	$92	9%
Water (Distribution)	$764	$170	22%
Total	**$4,673**	**$697**	**15%**

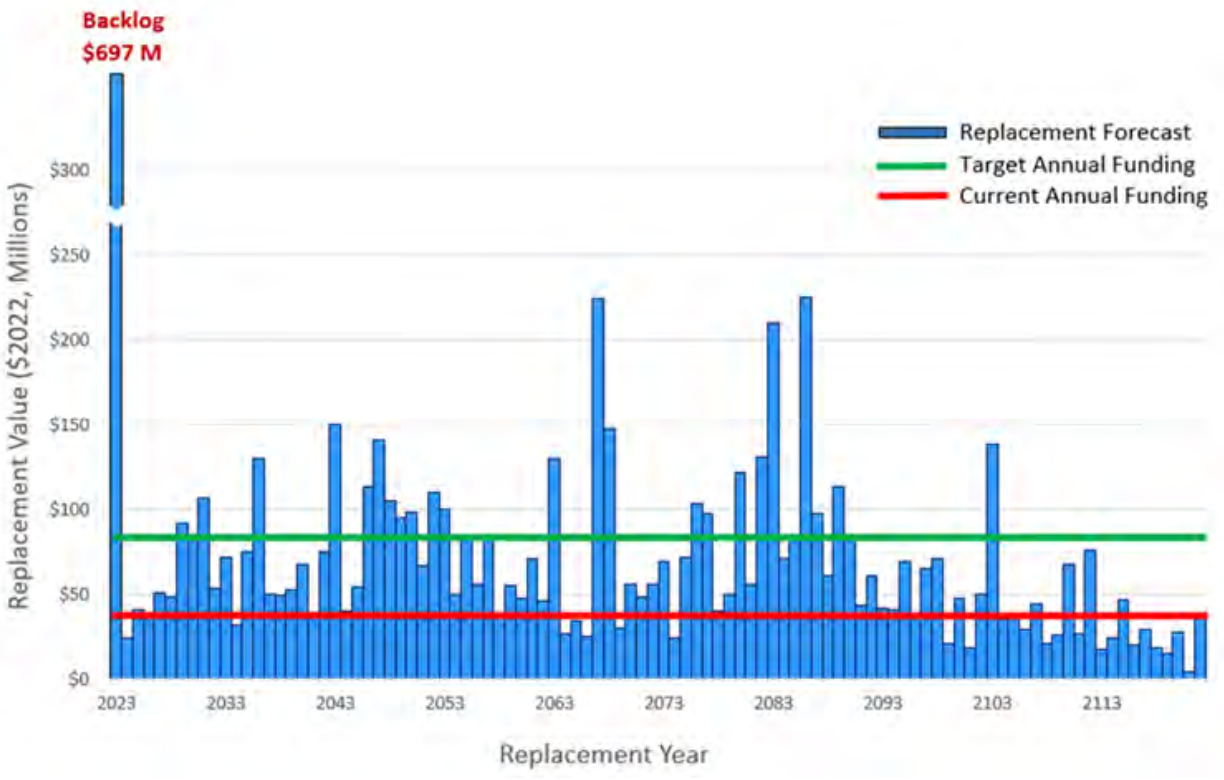


Figure 15 - Infrastructure Replacement Forecast vs Annual Replacement Funding

4.4.4 Annual Financial Plan

Each year, Saanich approves a five-year financial plan, including a balanced current year financial plan and a four-year forecast for operating and capital costs in each of three funds: general operating (tax), and sewer and water (utility).

The financial planning process is a year-round process, with each cycle beginning in June and ending in May as follows:

- Council develops budget guidelines (June - August)
- Departments prepare budget submissions (September – November)
- Finance prepares draft financial plan (November – January)
- Senior Management review (January – February)
- Public input and meetings (March – April)
- Council adopts plan and bylaws (May)

Every four years, Saanich conducts a Citizen and Business Survey to seek input from the public on service delivery. In other years, a shorter Citizen Pulse Online Survey is conducted to inform the budget process, and to capture current perceptions of residents to help identify key opportunities for maintaining or improving awareness and satisfaction of Saanich's services. In addition, Saanich engages the community through the development of various strategies and master plans, and public input through these processes also informs the annual budget process.

Departmental budget submissions are prepared to include the priority activities for the coming year, including core activities and initiatives contained in the Strategic Plan, within the budget guidelines established by Council.

The primary factor in determining capital requirements in Saanich is the replacement of aging infrastructure (Saanich, 2023) through core funding envelopes established through the IRFS, which are estimated based on like-for-like replacement. Each department prioritizes capital projects for asset replacement within the appropriate funding envelope using a variety of formal and informal approaches, such as business case analysis, capacity modeling, climate mitigation and/or adaptation, condition assessment, coordination with other projects, master plans, and risk assessment. The balance of the annual replacement funding envelope that is not allocated to capital projects in a given year, is placed in a capital reserve for future replacement.

Capital projects for new assets and upgrades to existing assets are identified through a variety of sources, such as the Active Transportation Plan, Council’s Strategic Plan, Climate Plan, Development Cost Charges (DCC) By-law, Master Plans, and other asset specific strategies and plans. This includes going beyond the like-for-like replacement funding in Saanich’s core funding envelopes, as is often required to align with growth, climate action and innovation. Currently, there is no formal, documented prioritization process for prioritization of capital projects for new/upgraded assets. These types of projects are funded from a variety of sources, such as the annual operating surplus, the Council Strategic Initiatives Contingency, and grant funding.

Operations and maintenance (O&M) funding includes the costs for operation of existing assets to deliver services to the community, and maintenance and minor repair to ensure assets reach their useful life. The current Operating Budget process starts with the core budget from the previous year, and increases are applied to account for inflation and rising costs. New requests are then prioritized within Council's budget guidelines. Once LoS are developed, a review of O&M budgets will be required to align funding with the service levels desired by the community.

4.4.5 Long Term Financial Plan

Saanich's long term financial plan (LTFP) was completed in 2022 and details are found in the *District of Saanich Long-Term Financial Plan Development* (KPMG, 2022). The LTFP includes a 10-year capital and operating cost forecast, and also includes:

- Projections for the ongoing costs of current service levels
- Long term financial impacts of major plans and strategies approved by Council
- Evaluation of sources and methods of funding for future operating and capital expenditures
- Financial sustainability policy/framework
- Long term financial planning model

The LTFP includes recommendations for continuous improvement in four categories which are aligned with AM Program objectives:

1. **Financial Principles**
    a. Adopt a Financial Principles document to guide financial decision-making.
2. **Financial Policies**
    a. Update the Debt Management Policy to incorporate Provincial requirements.
    b. Establish minimum and optimal reserve balances and update the Reserves and Surplus Policy accordingly.
    c. Schedule review of theses reserve balances annually during the budget season with recommendations to increase levels sent to Council for approval.
3. **Financial Plan**
    a. Adopt a policy which requires all master plans to contain financial projections for Council and the Finance department.
    b. Quantify expenditures for all master plans and incorporate them into the Long Term Financial Plan and model.
    c. Further refine and mature Asset Management Plan expenditures for inclusion in the District's Long -Term Financial Plan.
4. **Financial Model**
    a. Consolidate all the capital worksheets across the organization into one financial model (to be used as a single source of truth).

4.4.6 Natural Assets

Currently, natural asset valuation is not an accounting requirement and Saanich has not yet valued most of its natural assets. The exception is trees, where there is an assigned value for

replacement trees in the Saanich Tree Protection By-law for development purposes, and tree valuation is under review as part of the Urban Forest Strategy update.

Saanich's Financial Plan currently includes some funding for natural assets as follows:

- **Capital** – The Parks, Recreation and Community Services capital plan includes some capital funds for rehabilitation of natural areas, and there is funding for replacement trees in the Engineering capital plan.
- **Operating** – The operating budget includes annual funding for maintenance of waterways (Engineering), and annual funding for tree maintenance, horticulture maintenance, turf maintenance and natural areas (Parks, Recreation and Community Services).
- **Reserves** – Saanich has dedicated reserve funds for parkland acquisition and for the Urban Forest.

4.5 People

4.5.1 Culture

Over the past 15 years, Saanich has built a positive culture for AM within the organization, and there is a pent-up demand for the business improvements that can be realized through AM. Staff are committed to moving forward however capacity and resourcing realities will dictate the speed of program development. There is a range of AM maturity across the organization, and, in some cases, there is a lack of integration between departments.

4.5.2 Staff Competency

Currently, knowledge, experience and resources vary across departments and there is no formalized program for managing assets in a consistent manner across the organization. Some staff understand the need for AM and the benefits of AM, as well as the need for continuous learning to develop their knowledge, experience and capacity for AM. However, this needs to be extended to all staff. There is also a need to integrate AM practices across all departments.

A few staff have taken formal AM training courses; however, Saanich currently does not have a formalized AM training program.

As part of the development of the AM Strategy, AMWG members received in-house AM training, which was developed by the AMPM using a presentation tool provided by the Federation of Canadian Municipalities (FCM) and an online tool provided by the Canadian Network of Asset Managers (CNAM) (CNAM, 2018). Members of the AMWG also participated in several external training programs.

Saanich staff also participate in various external AM communities of practice (CoP), including the AMBC CoP and the South Vancouver Island AM CoP.

4.5.3 Communications Plan

In 2022, the AMSC approved the AM Program Communications Plan, which establishes communication objectives, and identifies key messages, stakeholders, communication methods, and communication activities. The latest version of the plan is found in Appendix H.

In order to start the process of developing awareness of AM across the organization, an internal AM webpage was established with general information about Saanich's AM Program, a link to Saanich's AM Policy, and links to external resources provided by AMBC, CNAM and FCM. An *Asset Management Introduction* presentation was created as an internal communications tool and is being shared to start conversations and help to foster a culture of AM.

In 2022, Saanich added a new page to its external website for sharing information and resources with the community about Saanich's AM Program.

4.5.4 Roles & Responsibilities

Saanich is responsible for all asset lifecycle activities for most of its assets, including:

- Planning & Analysis
- Design & Construction
- Operations & Maintenance

However, there are some exceptions, including:

- Saanich purchases some services (e.g., water supply, wastewater treatment and solid waste management from the CRD)
- Saanich has cost-sharing agreements with neighbouring municipalities for some assets (e.g., boundary roads and bridges)
- Saanich has commercial and residential lease agreements with community groups or individual community members for the rental of some Facilities assets
- Saanich has agreements with various community groups for the operations and/or maintenance of some assets (e.g., some community centres, park buildings, sports fields)

Figure 16 illustrates Saanich's corporate structure, and Table 9 provides a high-level summary of the roles and responsibilities for Saanich's asset types by department.

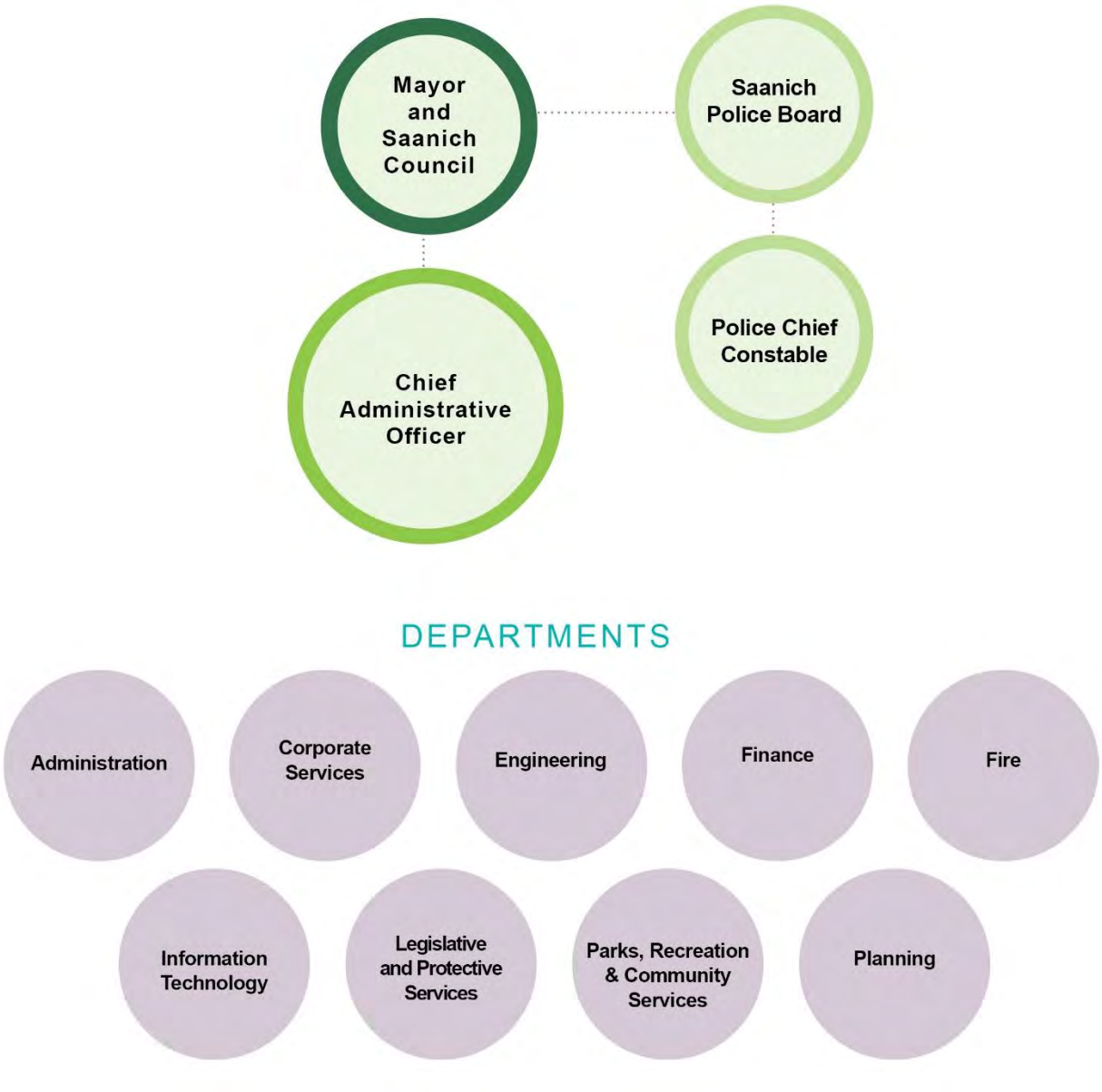


Figure 16. Saanich Organization Chart

Table 9: AM Roles & Responsibilities

Asset Type	Planning & Analysis	Design & Construction	Operations	Maintenance
Drainage	Engineering	Engineering	Engineering	Engineering
Facilities	Engineering; Parks Recreation & Community Services	Engineering; Parks Recreation & Community Services	Various	Engineering; Parks Recreation & Community Services
Information Technology	Information Technology	Information Technology	Various	Information Technology
Natural Assets	Engineering; Parks, Recreation and Community Services	Engineering; Parks, Recreation and Community Services	Engineering; Parks, Recreation and Community Services	Engineering; Parks, Recreation and Community Services
Park &Trail Structures	Parks, Recreation and Community Services	Parks, Recreation and Community Services	Parks, Recreation and Community Services	Parks, Recreation and Community Services
Transportation	Engineering	Engineering	Engineering	Engineering
Vehicles & Equipment	Engineering; Fire; Parks, Recreation and Community Services; Police	Engineering; Fire; Parks, Recreation and Community Services; Police	Engineering; Fire; Parks, Recreation and Community Services; Police	Engineering; Fire; Parks, Recreation and Community Services; Police
Wastewater (Collection)	Engineering	Engineering	Engineering	Engineering
Water (Distribution)	Engineering	Engineering	Engineering	Engineering

5. Continuous Improvement

5 Continuous Improvement

5.1 Overview

With input from the AMWG, the identified gaps were prioritized into short-term (1-2 years), medium-term (3-5 years) and long-term (over 5 years) strategies and projects. The short- and medium-term priorities were built into a five year implementation plan, and the longer term improvements are identified below for consideration in the next revision of the AM Strategy.

5.2 Implementation Plan 2023-2027

5.2.1 Summary

The AM Strategy Implementation Plan is organized around the four core elements of the AM Framework: assets, information, finances, and people. Over the next five years, the implementation plan includes ten strategies for continuous improvement as shown in Figure 17.

Each strategy will be delivered through a series of projects that are described in the detailed implementation plan found in Appendix I, including the lead department, other departments involved, and the estimated timeline. In total, forty-eight priority projects have been identified over the ten strategies. The implementation plan was developed to incorporate some buffer into the timelines, in recognition that there are many other important corporate initiatives happening at the same time. Saanich will only be able to advance the AM Program at a pace that the organization as a whole can support while also continuing to advance other strategic priorities.

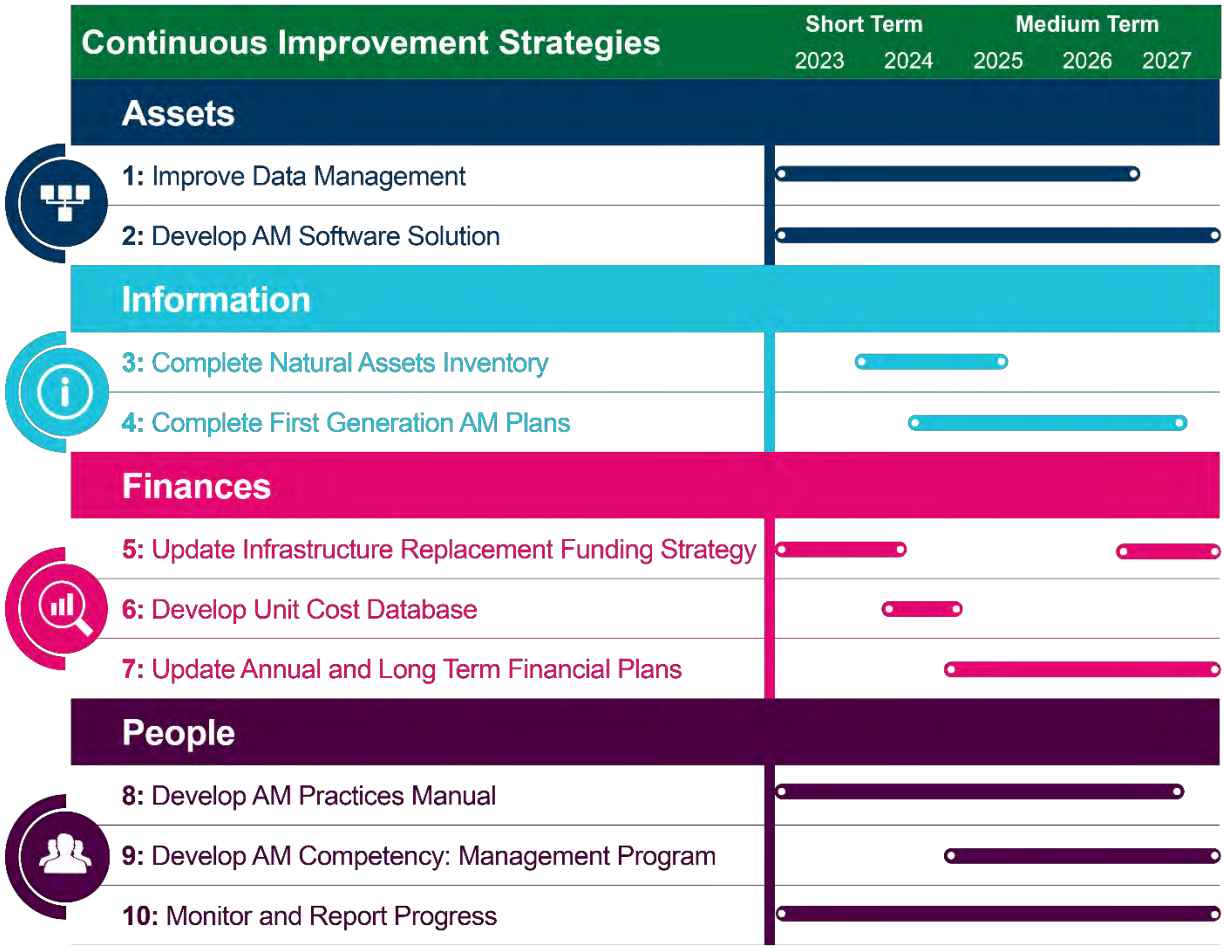


Figure 17. Implementation Plan 2023-2027

5.2.2 Alignment with AM Policy

Each of the priority strategies identified for implementation over the next five years will move us closer to achieving the key principles of the AM Policy, as shown in Table 10. A detailed checklist of alignment with the AM Policy is provided in Appendix J.

Table 10: Alignment of AM Policy and AM Strategy

#	Strategy	Service Delivery to Customers	Long-Term Sustainability and Resilience	Holistic Approach	Fiscal Responsibility and Asset Management Decision-Making	Continual Improvement
1	Improve Data Management	✓	✓	✓	✓	
2	Develop AM Software Solution	✓	✓	✓	✓	
3	Complete Natural Assets Inventory	✓	✓	✓	✓	
4	Complete First-Generation AM Plans	✓	✓	✓	✓	
5	Update IRFS	✓	✓		✓	
6	Develop Unit Cost Database	✓	✓		✓	
7	Update LTFP	✓	✓		✓	
8	Develop AM Practices Manual	✓	✓	✓		
9	Develop AM Competency Management Program			✓		✓
10	Monitor and Report Progress	✓				✓

5.2.3 Climate Change Integration

Several of the strategies in the 2023-2027 implementation plan will improve integration of climate change considerations and AM, including:

- **Strategy 3 – Complete Natural Assets Inventory**: This project will directly support the Climate Plan goal of 'Preparing for a Changing Climate' and multiple Climate Plan objectives and strategies, particularly within the Ecosystems key focus area. It will help deliver on the Climate Plan actions related to natural assets.
- **Strategy 4 – Develop First-Generation AM Plans**: The development of a first-generation Natural Assets AM Plan will directly support the Climate Plan goal of 'Preparing for a Changing Climate' and multiple Climate Plan objectives and strategies, particularly within the Ecosystems key focus area. In particular, it will help deliver the Climate Plan actions related to natural assets. In addition, all AM Plans will incorporate climate change considerations in the development of LoS, the risk assessments, and in the costing of lifecycle activities.

- **Strategy 8 – Develop AM Practices Manual:** The manual will include a guidance document for Saanich staff on why, what, who, when and how to consider climate change as part of the lifecycle management of Saanich's physical assets. The goal will be to develop a culture where it becomes second nature to have discussions and critical thinking around climate change mitigation and adaptation in the early stages of asset planning and throughout the asset lifecycle.

5.2.4 Strategy 1: Improve Data Management

This strategy will improve the way Saanich collects and maintains its asset data, so that it is in a form that can easily be leveraged to support decision-making. Data sets will be prepared for future migration into an AM software solution.

Saanich will work toward the following:

- Each asset in the AM Program will have a unique identification number
- Asset attribute data fields to be maintained will have a specific purpose and a single point of entry
- Asset data will be found in one location only, and data for an asset will be linked based on the unique identification number
- Asset data will be centralized, digitized and accessible to all staff
- Asset data will be regularly reviewed and updated
- Staff will have the ability to collect and update asset data in the field and in real-time
- Workflows will be documented and digitized

Saanich will complete the following projects:

- Transfer existing asset inventory data to a central database with unique asset ID numbers.
- Populate IT asset inventory using ServiceNOW.
- Create a digital and dynamic AM dashboard.
- Purchase new mobile devices and provide software configuration and training.
- Update data models and data standards across multiple systems for the AM Program.
- Develop asset data collection forms.
- Document maintenance management workflows.

5.2.5 Strategy 2: Develop AM Software Solution

This strategy will develop a solution for the identified gaps in current AM software:

- Central, accessible asset data management system for all assets
- Capital planning and decision support software for linear assets
- CMMS software for linear assets

Saanich will use the capability and functionality of existing software as much as possible, and complete pilot projects to assess existing software. Saanich will develop a business case that compares possible solutions and recommends a path forward for budget approval. Then, based

on the business case, Saanich will start to implement the approved solution. Saanich will complete the following projects:

- Prepare a needs assessment for AM software.
- Upgrade infraMAP to supported version.
- Pilot Existing Software: Esri FieldMAP for asset data collection.
- Pilot Existing Software: infraMAP for maintenance management.
- Pilot Existing Software: Esri Workforce Starter Solution for maintenance management.
- Pilot Existing Software: JD Edwards for maintenance management.
- Pilot Existing Software: VFA Facility/FAMIS360 for linkages to other systems.
- Pilot Existing Software: FAMIS360 for Recreation Services maintenance management.
- Pilot Existing Software: VFA Facility/FAMIS360 for Parks Services decision-support and maintenance management.
- Prepare a Business Case for providing AM software capacity.
- Provide AM software capacity in accordance with the approved Business Case.
- Begin to implement AM software using a phased approach.

5.2.6 Strategy 3: Complete Natural Assets Inventory

This strategy addresses the top priority project identified in Saanich's natural assets AM roadmap, which is to develop a natural asset inventory, and will help Saanich prepare for any future requirements related to natural assets AM. For example, a recent report on barriers and opportunities for natural AM in BC recommended to the Province that local governments be required to develop a natural assets inventory by 2024 (MNAI, 2023).

Saanich successfully applied for and received grant funding for this project from the Canada Community-Building Fund 2022 Strategic Priorities Fund. The scope of the project includes compiling information about Saanich's natural assets, the services they provided, their condition, the risks they face, and a preliminary valuation, as well as collaboration with neighbouring municipalities and First Nations. The inventory will be informed by Saanich's Urban Forest Strategy, Biodiversity Conservation Strategy, and work underway to develop Integrated Stormwater Management Plans. The inventory will then be an input to the development of an AM Plan for Saanich's natural assets, which will include lifecycle management activities and costs.

5.2.7 Strategy 4: Complete First-Generation AM Plans

A key objective of this AM Strategy is to develop a full set of nine first-generation AM Plans based on existing asset data. If the Operational Units have existing capacity to gather new asset data as part of the development of their AM Plan, then this will form part of the plan, but otherwise the plans will be based on the asset inventory data compiled as part of the development of this AM Strategy. The resulting nine AM Plans will not all be at the same level of detail, but they will all follow the same template and will all include a plan for continuous improvement.

Given that the departments have varying resource availability, the AM Plans will be developed in a staggered manner, so that the areas that are completed first will serve as examples for the other areas, until there is a completed set of nine, first-generation AM Plans by the end of this cycle of AM strategic planning.

This first-generation of Saanich's AM Plans will be an opportunity for training, learning and the development of internal AM competency.

AM Plans will tell the story of how the assets in each Asset Type are maintained over their useful life to deliver services at a defined level, and will answer the following key questions:

- What does Saanich own?
- How much is it worth?
- What service levels is it expected to provide?
- What condition is it in?
- What work does Saanich need to do over the lifecycle?
- How much will it cost?
- How can Saanich improve?

An AM Plan will be prepared for each of the nine Asset Types:


Drainage


Transportation


Facilities


Vehicles and Equipment


Information Technology


Wastewater (Collection)

Natural Assets


Water


Park and Trail Structures

The AM Plans will be living documents that will be updated by staff on an ongoing basis. Each plan will be broken down into sections for asset groups that have unique lifecycle management activities, and each AM Plan will be updated every 5 years. Operational Units may choose to develop a staggered, repeating cycle for updates of the various sections in order to balance the work of updating the AM Plans over time.

The AM Plans will be developed and owned by the Operational Units, with guidance and support provided by the AM Program Office. Table 11 shows the lead department(s) and integration with other Saanich documents.

Table 11: AM Plan Lead Department(s) and Linkages

AM Plan	Lead Department(s)	Integration with Other Saanich Documents
Drainage	Engineering	Biodiversity Conservation Strategy (under development); Climate Plan; Integrated Stormwater Management Plans (under development); Natural Assets AM Plan (to be developed)
Facilities	Engineering; and Parks, Recreation and Community Services	Climate Plan; Strategic Facilities Master Plan
Information Technology	Information Technology	Climate Plan
Natural Assets	Engineering; and Parks, Recreation and Community Services	Biodiversity Conservation Strategy (under development); Climate Plan; Drainage AM Plan (to be developed); Integrated Stormwater Management Plans (under development); Urban Forest Strategy; various individual park plans
Park & Trail Structures	Parks, Recreation and Community Services	Active Transportation Plan; Climate Plan Washroom Operations and Capital Plan; People, Pets and Parks Strategy (under development); PRCS Comprehensive Direction & Actions Plan (under development); various individual park plans
Transportation	Engineering; and Parks, Recreation and Community Services	Active Transportation Plan; Biodiversity Conservation Strategy (under development); Climate Plan; Urban Forest Strategy
Vehicles & Equipment	Engineering; Parks, Recreation and Community Services	Climate Plan; Fire Master Services Plan
Wastewater (Collection)	Engineering	Climate Plan; Sewer Master Plan
Water (Distribution)	Engineering	Climate Plan; Water Master Plan

The first-generation AM Plans will be developed based on existing information that has been compiled as part of the development of this AM Strategy. Gaps in asset information will be identified as part of the process of developing the AM Plans, and actions to fill these gaps will be included in the continuous improvement section of the plan.

Although staff will not need to spend time gathering new information, development of the first-generation AM plans will require an initial peak workload because staff will be using new business processes for the first time. Once the first-generation AM Plans are complete, it is expected that updating the AM Plans will become part of the regular business process for each Operational Unit.

5.2.8 Strategy 5: Update Infrastructure Replacement Funding Strategy

Now that the RV and AARF estimates have been updated, the IRFS requires updating with a new strategy for reaching the updated sustainable funding targets. Alternative strategies for

reaching the new targets will be developed and presented to Council for consideration by early 2024, so that Council direction may be incorporated into the 2024 Financial Plan.

A key message of the AM Strategy is that the estimated RV of the Saanich asset portfolio has increased significantly from the original estimate of $2.1 billion ($2007) to the current estimate of $4.7 billion ($2022), and therefore, that the target AARF has also increased significantly from $41 million in 2007 to the current estimate of $86 million ($2022). These are order-of-magnitude estimates that are based on assumptions regarding unit costs and useful life, and the actual values will fall within a range and will change over time. Therefore, the updated IRFS will include a sensitivity analysis and describe alternative strategies for reaching the updated target for Council consideration.

The IRFS will be updated again upon completion of the AM Plans, and then on a regular frequency of approximately every five years.

5.2.9 Strategy 6: Develop Unit Cost Database

This strategy will develop a District-wide unit cost database for all asset groups that is accessible by all staff for use for a variety of cost estimating purposes. The database will be updated annually to account for the average of recent tenders and/or annual inflation. The database will provide consistency for cost estimating for various purposes, such as calculating RV, capital project cost estimates, and development cost estimates. This strategy will provide the basis for updating Saanich's RV estimate annually, and for beginning to benchmark unit costs and RV estimates against other comparable municipalities.

5.2.10 Strategy 7: Update Long Term Financial Plan

This strategy will integrate the updated IRFS and the lifecycle costs from the first-generation AM Plans into Saanich's LTFP.

Saanich will complete the following projects:

- Develop breakdown of the capital plan into replacement and upgrades/new in capital budget software.
- Develop a capital project prioritization framework in capital budget software.
- Update the capital plan based on first-generation AM Plans.
- Update the Long Term Financial Plan.
- Update TCA records to align with updated asset inventory data.

5.2.11 Strategy 8: Develop AM Practices Manual

This strategy will develop a District-wide manual documenting Saanich's AM Practices that will foster consistency in implementing the AM Program across the organization.

The first draft of the manual will be developed in consultation with the AMWG and will consist of series of guidance documents and templates. The manual will then be reviewed and refined during the development of the AM Plans. The final versions will then be compiled into a manual that will be posted and shared on Saanich's internal E-link internet site.

Industry best practices will be incorporated into the Saanich AM Program with consideration for the Saanich business context. In order to align with provincial and national AM reporting, Saanich's AM Practices Manual ill focus on the following Canadian and international sources:

- Asset Management British Columbia (AMBC)
- Canadian Network of Asset Managers (CNAM)
- Canadian Standards Association (CSA)
- Engineers and Geoscientists BC (EGBC)
- Federation of Canadian Municipalities (FCM)
- International Infrastructure Management Manual (IIMM)
- Natural Assets Initiative (NAI)

Examples of the AM Practices to be developed include:

- Asset Management Plan
- Capital Project Prioritization
- Climate Change Integration
- Condition Assessment
- Data Management
- Land Use Planning Integration
- Levels of Service (AM Objectives)
- Replacement Value
- Risk Assessment
- Roles and Responsibilities
- Unit Costs
- Useful Life

5.2.12 Strategy 9: Develop AM Competency Management Program

The AM Policy sets out a clear vision for the AM Program to "Create a corporate environment where all employees take an integral part in overall management of Saanich assets by creating and sustaining AM awareness throughout the organization." In other words – asset management is everyone's job.

The purpose of the AM Competency Management Program will be to establish a clear path to achieve this vision and create sustainable change. The plan will be developed using the *Asset Management Competency Framework for Canadian Municipalities* (CNAM, 2018), and it will include:

- Clarify roles and responsibilities in the AM Program
- Assess current staff AM competency
- Refine AM Program staffing resource requirements
- Identify AM training requirements for Saanich staff
- Update job descriptions to align with AM requirements
- Create staff knowledge transfer and succession plans

The AM Competency Management Program will identify staff training needs according to the position roles & responsibilities for AM. Appropriate training courses will be identified that align with Saanich's AM Program.

Saanich will complete the following projects:

- Develop an AM Competency Management Program (AMCMP) based on the CNAM Framework.
- Update job descriptions based on the AMCMP.
- Implement staff training based on the AMCMP.
- Develop a staffing plan based on the AMCMP and AM Plans.
- Establish a Saanich AM Community of Practice.

5.2.13 Strategy 10: Monitor and Report Progress

This strategy will assess Saanich's progress in continuous improvement of its AM maturity and provide regular reports to Council on progress of the AM Program.

Saanich will complete the following projects:

- Meet regularly with AMSC and AMWG.
- Develop template for State of Assets Report.
- Provide Council with an annual update on the AM Program.
- Prepare a District-wide Levels of Service summary.

5.3 Asset Management Plan Guidance

A draft guidance document for developing the first-generation AM Plans is provided in Appendix K. This document will be reviewed and refined with input from the Operational Units during the development of the AM Plans, and a revised version of the guidance document will be included in the AM Practices Manual.

The following sections provide an outline of the following key steps in developing the AM Plans:

- Roles and Responsibilities
- Levels of Service
- Condition Assessment
- Risk Assessment
- Lifecycle Management Activities
- Lifecycle Costs and Financing
- Operational Plan

"Sustainable service delivery ensures that current community services are delivered in a social, economic and environmentally responsible manner that does not compromise the ability of future generations to meet their own needs." (AMBC website)

5.3.1 Roles and Responsibilities

This section of the first-generation AM Plans will clarify the roles and responsibilities for management of Saanich's assets over the asset lifecycle. Once roles and responsibilities are clarified, operational budgets will be reviewed to ensure that the group responsible has the appropriate funding, and any necessary changes will be made through the annual budget process.

5.3.2 Levels of Service

This section of the first-generation AM Plans will describe the following LoS (AM Objectives) for each service area:

- **Community LoS**: Define the level at which the customer receives the service, from an experiential perspective.
- **Technical LoS**: Define specific and quantifiable measures for service targets that are used by staff to meet legal requirements and achieve the Community LoS.

Using AMBC's LoS Tool as a guide, Saanich will develop SMART (Specific, Measurable, Achievable, Relevant, Timebound) objectives around one or more of the following characteristics:

- Capacity/Availability
- Quality
- Reliability
- Safety
- Sustainability (environmental, climate mitigation, and climate adaptation)

5.3.3 Condition Assessment

This section of the first-generation AM Plans will describe how the condition of the assets was assessed, including:

- **Physical Condition** will be assessed using completed condition assessment studies or estimated based on proxy data such as age. In order to allow comparison of physical condition across all asset types, all assets will be assessed using the Canadian Infrastructure Report Card (CIRC) scale: Very Good, Good, Fair, Poor, and Very Poor (FCM, 2019). Where there are asset-specific grading scales (e.g., Facility Condition Index, Pavement Condition Index, etc.), these scales will be mapped to the CIRC scale.
- **Capacity Condition** will be assessed using available information, such as modeling software and capacity studies.
- **Functionality Condition** will be assessed in a workshop format with the project team.

5.3.4 Risk Assessment

The risk assessment component of the first-generation AM Plans will include the following two approaches:

- **Service Level Risk Assessment** – The risks to service delivery will be assessed for each service supported by the asset type and documented in a risk register. The register will identify mitigation measures for reducing risk, for consideration in the financial plan.
- **Asset Level Risk Assessment** – The risk of failure of each asset will be assessed using a common scale to allow District-wide comparison, where risk is a product of the likelihood (condition) times the impact (criticality). The resulting risk scores will be used as input to prioritization of the capital budget.

5.3.5 Lifecycle Management Activities

This section of the first-generation AM Plans will document the planned activities for maintaining the asset over its useful life to meet agreed service levels including operations, maintenance and renewal/replacement activities.

5.3.6 Lifecycle Costs and Financing

This section of the first-generation AM Plans will identify the costs of the lifecycle management activities, and the plan for financing the costs so that there is sustainable funding of the capital plan and the O&M budgets. This will also include a review of staffing levels to ensure they are adequate to support the lifecycle activities and deliver the agreed LoS to the community.

5.3.7 Operational Plan

A first-generation operational plan will be developed and included as an Appendix to each AM Plan. This will allow us to capture organizational knowledge before upcoming retirements and create a starting point for more detailed operational plans in the future.

5.4 Resource Requirements

Although AM is not new to Saanich, formalization of its AM practices to reduce organizational risk will require a significant amount of time and organizational effort as well as additional staffing and funding resources. A preliminary assessment of resource requirements was completed as part of the development of the AM Strategy, and details are provided in Appendix L.

"Asset management helps local government to make cost-effective and efficient decisions proactively instead of waiting until something breaks down and frantically finding a costly fix." (AMBC website)

While the AM Program is a strategic priority for Council, Saanich has many other strategic priorities with resource needs that require prioritization across the organization. Therefore, while Saanich will continue to improve its AM maturity over time, the actual pace of progress will be dependent on the timing of approval of resource requirements.

Requests for additional resources will be refined, prioritized and submitted to Council for consideration through the annual Financial Plan process, with consideration for space allocation and impacts on support departments.

Resource requirements will be reviewed and refined through implementation of several of the strategies in the 2023-2027 Implementation Plan, such as:

- **Strategy 2: Develop AM Software Solution** – There may be requirements for additional resources, depending on the approved business case.
- **Strategy 4: Complete First-Generation AM Plans** – There may be requirements for additional resources based on the development of LoS, lifecycle activities and costs.
- **Strategy 5: Update Infrastructure Replacement Funding Strategy** - Additional staff resources will be required to support increases to the annual capital program.
- **Strategy 9: Develop AM Competency Management Program** – A detailed review of staffing resource requirements to support the AM Program will be completed using the *Asset Management Competency Framework for Canadian Communities* (CNAM, 2021).

5.4.1 Staffing Resources

Existing staffing resources to support the AM Program include the following:

- **General AM Functions** – Currently, there is one position dedicated to District-wide general AM functions, the AMPM.
- **Service Delivery Functions** – Although staffing levels vary between departments, there are currently staff performing various service delivery functions, including:
    - Planning and Analysis (P&A)
    - Design and Construction (D&C)
    - Operations and Maintenance (O&M)
- **Support Functions** - District-wide support is provided by existing staff in Finance, Human Resources, Information Technology, Planning, Risk Management and Sustainability.

A preliminary assessment was completed to identify additional staff resources required to implement the AM Strategy and support the AM Program, based on best professional judgement with information available at this time.

A core need for the future success of the AM Program is additional District-wide AM expertise to provide support and guidance to the Operational Units and to complete general AM functions. As shown in Table 12, the preliminary assessment identified a requirement for three additional full-time equivalent (FTE) staff to support general AM functions.

Table 12: Staff Resource Requirements for General AM Functions

Department/Area	Position	2024-2025
Engineering/AM Program Office	Asset Management Advisor	2 FTE
Finance	Finance Asset Management Coordinator	1 FTE
Total		**3 FTE**

In the service delivery areas, the preliminary analysis determined that existing staff are already stretched with no available capacity to support additional workload, and that additional staffing resources will be required to support the AM Program.

In particular, staffing resources to carry out asset P&A functions are currently deficient, as these areas have not been adequately staffed in the past to correspond with population growth and increases in Saanich's portfolio of assets. Currently, the staff who would normally carry out asset P&A functions have been focused on a number of new strategic priorities and initiatives that require infrastructure analysis, such as planning for growth, housing, BC Transit planning, Climate Plan and Active Transportation Plan implementation. Additional staffing resources will also be required to support D&C and O&M functions.

Requests for additional staffing resources required by the Operational Units to support the AM Program will be refined and identified in the coming years. It is important to note that many of these new positions will be funded through the capital program and will not impact taxation rates. New positions that will impact taxation rates will be prioritized and brought forward for consideration by Council through the annual Financial Plan process.

Given the current deficiency in Saanich's staffing resources, many of the functions for managing our assets are carried out by consultants, which is a more expensive funding model and does not support building of internal AM competency. Bringing these functions in-house and building Saanich's internal capacity will support achievement of the key principles of the AM Policy and move Saanich towards the goal of sustainable service delivery.

5.4.2 Funding Resources

As part of the development of the AM Strategy, a preliminary assessment was completed to identify additional funding required to implement the AM Strategy over the next five years, based on professional judgement using information available at this time. Requests for additional funding will be prioritized and submitted to Council for consideration through the annual Financial Plan process. A portion of these funding requests may be funded directly from the Water and Sewer Utility surplus.

Estimated one-time funding requirements are shown in Table 13, with a total estimate of approximately $2 to $4 million depending on the approved business case for development of an AM software solution. In addition, depending on the approved business case for development of an AM software solution, there may be ongoing costs for new software licensing starting in 2027, with a preliminary estimated cost of up to approximately $0.5 million per year.

Table 13: Estimated One-Time Funding Requirements

Strategy (Project Number)	Description	2024	2025	2026	2027	Total 2024-2027
Strategy 1 (Project 1.4)	Purchase new mobile devices for asset data collection.	$0.7M				**$0.7M**
Strategy 2 (Projects 2.3 to 2.9)	Specialized consulting services for software pilot projects.	$0.2M	$0.2M			**$0.4M**
Strategy 2 (Project 2.11)	Provide AM software capacity in accordance with approved Business Case.			$0-2 M		**$0-2 M**
Strategy 4 (Projects 4.1 to 4.9)	Specialized consulting services for AM Plans.	$0.1M	$0.1M	$0.1M	$0.1M	**$0.4M**
Strategy 9 (Projects 9.1 to 9.2)	Specialized consulting services for AM Competency Management Program.		$0.1M	$0.1M		**$0.2M**
Strategy 9 (Project 9.3)	Provide staff with AM Program training.				$0.2M	**$0.2M**
Total	**Total**	**$1.0M**	**$0.4M**	**$0.2-2.2M**	**$0.3M**	**$1.9-$3.9M**

5.5 Longer Term Improvements

During the development of this version of the AM Strategy, the following actions were identified for consideration in the longer term (greater than five years):

Assets

- Complete the process of implementing AM software.
- Develop a spare parts inventory for each operational area.
- Place barcodes on assets in the field, where appropriate, for tracking and maintenance purposes (once an AM software solution is in place and as resources allow).
- Develop an automatic process for uploading as-built drawing data to GIS for new assets.
- Consider use of GIS functionality to spatially map the linear components of Facilities assets (e.g., plumbing, ductwork).

Information

- Benchmark asset condition against comparator municipalities.
- Consider transitioning the AM Plans from an asset focus to a service area focus.
- Consider use of AMBC's Sustainable Service Assessment Tool.

Finances

- Upon completion of the first-generation AM Plans, review operations and maintenance resourcing and budgets to ensure there is sustainable funding in place to meet the LoS (AM Objectives).
- Consider extending the forecasts in the Financial Plan from 5 years to 10 years.
- Develop a funding strategy for the cost of incorporating climate change mitigation and adaptation features into project budgets.
- Align with future PSAB accounting requirements for natural assets.
- Explore opportunities to assess the return on investment of the AM Program using information from other jurisdictions.

People

- Engage the community in a conversation regarding balancing LoS (AM Objectives) with risk and cost.
- Compare Saanich's overall staffing resources to other local governments for comparable service delivery.
- Strengthen relationships with First Nations as part of the AM Program (Indigenous Relations, Saanich).
- Develop an approach for integrating diversity, equity, and inclusion (DEI) considerations in the AM Program, in accordance with Saanich's Diversity, Equity, and Inclusion Strategic Report and Action Framework (Saanich, 2023).

5.6 AM Program Risk Management

A preliminary assessment of the risks to the successful implementation of the AM Program is found in Table 14. This risk register will be reviewed and updated in future revisions of the AM Strategy.

Table 14: AM Program Risk Management

Risk Description	Likelihood	Impact	Risk Rating	Mitigation
Assets				
Assets at high risk of failure are not prioritized	Medium: Risk assessment is not complete	High: Asset failure can have social, environmental and financial impacts	High	Complete risk assessment for all asset types and consider risk scores when prioritizing the capital budget
AM Software solution is not properly planned and implemented	Low: The AM Strategy provides a workplan for this project	High: Implementation of new software can be expensive and require organizational effort to integrate into regular business practices	Medium	Assess needs, develop a business case, and ensure buy-in from all stakeholders before proceeding
Information				
Progress on improvement of AM practices is too slow	Medium: The AM Strategy provides a formalized approach, but the speed of progress will depend on resources	High: Funding programs and agreements are tied to AM progress	High	Continue to improve practices and identify resource needs
Finances				
Resources and funding requests are not approved	Medium: AM is only one of many strategic priorities that require resources	High: Without funding, it will be challenging to move the program forward	Medium	Clearly identify the needs and benefits of resource requests
Asset replacement funding is not sustainable	High: The updated annual funding target is more than double the current level	High: Increased risk of asset failure and/or deferring costs to future generations	High	Update the IRFS with options for reaching the new target
People				
Lack of Council and community support	Low: AM is a strategic priority	High: Impacts to service levels and deferral of costs to future generations	Medium	Implement the AM Program Communications Plan
Lack of staff buy-in	Low: Saanich leadership is strongly supportive of the AM Program	High: Without buy-in from staff, program implementation will be challenging	Medium	Take an inclusive and collaborative approach with staff
Roles and responsibilities are not clear	Low: The governance structure is clear, and AM Plans will document roles and responsibilities	Medium: Lack of coordination between programs and silos between departments results in inefficiencies	Medium	Clearly define roles and responsibilities in the AM Strategy and AM Plans
Staff do not have needed capacity and/or capability	High: Staff are already at full capacity on existing priorities	High: The Operational Units own the AM Plans and deliver services to the community	High	Develop and implement an AM Competency Management Program

5.7 AM Program Performance Measures

The progress of Saanich's AM Program towards achieving the AM key principles will be measured and reported annually using the following performance measures:

- Asset Management Readiness Scale
- Average Physical Condition
- Financial Sustainability Indicators
    - Operating Surplus Ratio
    - Asset Sustainability Ratio
- Saanich Financial Principles
    - #16: Life-Cycle Asset Management
    - #17: Asset Management Progress

5.7.1 Asset Management Readiness Scale

This performance measure will assess the overall maturity of Saanich's AM practices using FCM's AMRS (FCM, 2018). This scale is a requirement of federal grant programs and is often a requirement for participation in national AM collaboration programs.

5.7.2 Average Physical Condition

The average physical condition of Saanich's assets will be reported in an annual State of Assets Report, and tracked over time to assess progress in improving the overall physical condition of Saanich's assets.

5.7.3 Financial Sustainability Indicators

The Province of BC has identified the following two sustainability indicators as being the most important measures of local financial sustainability to sustain services and infrastructure, and has indicated that these will be a requirement of future LDGE reporting (Province of BC, 2022):

- **Operating Surplus Ratio –** This is a measure of the amount of money spent operating and maintaining infrastructure each year as a function of the amount of annual revenues. The goal is to bring in between 0% and 15% more in revenues each year than are spent on operating costs, because this indicates that there is flexibility in the annual operating budget to fund the renewal of aging infrastructure.
- **Asset Sustainability Ratio –** This is a measure of the progress being made on renewal of existing assets. It is the ratio of annual actual capital expenditures on renewal of assets as compared to the AM Plan requirement for annual capital renewal, with a goal to be spending between 90% to 110% of all AM Plans, reported on a 5-year moving average.

5.7.4 Long Term Financial Plan Indicators

The Saanich Long Term Financial Plan (KPMG, 2022) includes the following financial indicators directly related to the AM Program:

- **Financial Principle #16: Life-Cycle Asset Management – Indicator**: "Completed asset management plan using life-cycle costing tied to the long term financial plan."
- **Financial Principle #17: Asset Management Progress – Indicator**: "Total asset classes for which an Asset Management Plan exists divided by the total number of asset classes – provides an indication of the District's ability to manage its infrastructure gap in the near future."

5.8 Monitoring and Reporting Progress

5.8.1 AM Strategy Updates

The AM Strategy is a living document that will be formally reviewed and updated approximately every five years, or once the priority strategies and projects identified in the strategy are completed. As part of each strategy update, a formal review of the AM Policy will be undertaken, and it will be updated as needed.

5.8.2 Annual Progress Reports

Progress of the AM Program will be summarized in an annual report to Council, which will include:

- State of Assets Report
- Status of the implementation plan strategies and projects
- Status of the AM Program performance measures

5.8.3 External Reporting

Saanich provides asset data and information to several provincial and federal reporting programs as described below. In future, the data from these programs may be used to help assess Saanich's AM performance in comparison to provincial and national averages, and comparator municipalities.

5.8.3.1 BC Local Government Data Entry

Each year, local governments in BC are required to submit annual financial reporting, and the data is reviewed, compiled and made available to the public. In addition to TCA reporting, municipalities are asked to report on asset data, such as:

- Physical condition
- Capacity condition
- Functionality condition
- Useful life
- Average age
- Current replacement value

"In BC, improving asset management practices is a requirement in order to receive Gas Tax funding and improves access to other federal/provincial capital infrastructure grants." (AMBC website)

5.8.3.2 Canadian Infrastructure Report Card

Every two years starting in 2016, Saanich has participated in Canada's Core Public Infrastructure Survey undertaken by Statistics Canada. This survey collects information on the assets, condition, performance and AM strategies of various levels of government and Indigenous entities. The survey results are summarized in the CIRC (FCM, 2019).

5.8.3.3 Community Building Fund Agreement

The Union of British Columbia Municipalities (UBCM) provides reporting on the status of AM practice in BC, which is a requirement under the Canada Community Building Fund (CCBF) Agreement. Local governments, including Saanich, are required to implement and improve AM practices in order to receive funding under this agreement. Saanich provided responses to a baseline survey in 2016 and an update to the survey in 2022.

The 2022 State of Asset Management in BC report is expected to be issued in the near future, and will allow Saanich to compare its responses to those of its peers. Preliminary results presented by UBCM in the fall of 2022 indicate that most BC local governments are active and showing improvements in developing and implementing AM (UBCM, 2022). The preliminary results also indicate that Saanich is more advanced than many of its peers in having estimated RV and sustainable annual funding targets for its built assets, and similar to many of its peers in being at the preliminary stages of natural asset management.

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Appendices

Appendix A - AM Program Glossary

Appendix B - Saanich Documents Informing the AM Program

Appendix C - Asset Dashboards

Appendix D - Maturity Assessment

Appendix E - Strategic Plan Performance Indicators

Appendix F - Unit Cost Summary

Appendix G - Useful Life Summary

Appendix H - AM Program Communications Plan

Appendix I - Implementation Plan 2023-2027

Appendix J - AM Policy Checklist

Appendix K - AM Plan Guidance Document

Appendix L - AM Strategy Resource Requirements

Appendix A

AM Program Glossary

Glossary

Document History

Version	Summary of Changes	Document Status	Date
1	First-generation document for AM Strategy	Final	June 2023

Sources

AGLG: *Asset Management for Local Governments*, Auditor General for Local Government, British Columbia, Perspective Booklet – Audit Topic 3, July 2015

AMBC: Asset Management for Sustainable Service Delivery – A BC Framework, 2019, and Asset Management Roadmap, 2011; Levels of Service Tool

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EGBC: *Local Government Asset Management*, Professional Practice Guidelines, July 29, 2021

FCM: *How to develop an asset management policy, strategy and governance framework*, Federation of Canadian Municipalities, (2018)

Defined Terms

Term	Definition	Source
activity	The work undertaken on an asset or group of assets to achieve a desired outcome.	AMBC
adaptation	Actions taken to help our community cope with or adjust to a changing climate. Contrasted with mitigation.	DOS
asset	A physical component of a facility or network which has value, enables services to be provided, and has an economic life of greater than 12 months (i.e. has a future benefit or capacity to provide net cash flows beyond one fiscal year). Also “physical asset”.	AMBC
asset group	A classification of assets that are similar in nature and useful life; a subset of asset type. (edited version of AMBC definition)	AMBC
asset hierarchy	A systematic organization of assets that creates a line of sight between services, assets and accountabilities that facilitates planning and decision-making.	FCM
asset inventory	A record of assets that includes unique identifying information and key attribute data such as installation or construction date, size, material, location and any other relevant operational and technical information.	AMBC
asset management	An integrated, lifecycle approach to effective stewardship of assets to maximize benefits, manage risk and provide satisfactory Levels of Service to the public in a sustainable manner.	DOS

Term	Definition	Source
asset management framework	A basic structure underlying a system, concept or text (Oxford Dictionary, 2018). The LAMP municipalities used the term “AM framework” to refer to a high-level overview of their AM systems, often in the form of a graphic illustration, showing how the different components connected to each other.	FCM
asset management governance	Refers to how the municipality organizes itself to make decisions about its AM objectives, AM system and application of AM practices. Governance in general refers to how society, or groups within it, organize to make decisions. (Source: Institute of Governance, Canada, 2018)	FCM
asset management plan	A written document detailing the required management of infrastructure assets over the entire lifecycle of the asset in a manner to cost effectively and efficiently provide an identified level of service.	AMBC
asset management policy	Outlines a municipality’s commitment and mandated requirements for asset management. A policy is linked to the municipality’s strategic objectives and is shaped by its values and priorities.	FCM
asset management practice	A process of integrating management, financial, economic, engineering, operations and other practices applied to assets with the objective of providing the required level of service in the most cost-effective manner.	AMBC
asset management program	The set of policies, people, practices and processes that make up a municipality’s formal approach to asset management.	FCM
asset management roadmap	A step-by-step plan outlining the actions, responsibilities, resources and time scales needed to implement and deliver asset management objectives.	FCM
asset management steering committee	A group of individuals, including senior leadership, that decides on the priorities or order of business or an organization and manages the general course of its operation. The steering committee provides direction and support to the asset management team through the delivery of the asset management road map.	FCM
asset management strategy	Documentation that specifies how organizational objectives are to be translated into AM objectives; the approach for developing AM plans; and the role of the AM system in supporting achievement of the AM objectives. The approach to implementing the principles of from the AM policy should be documented in the AM strategy. An organizations AM strategy should be used to guide the setting of its AM objectives, and to describe the role of the AM system in meeting those objectives. This includes identifying the structures, roles and responsibilities necessary to establish the AM system and to operate it effectively; also referred to as a strategic asset management plan (SAMP)	FCM
asset management system	A set of interrelated and interacting elements of an organization, whose elements include the AM policy and AM objectives, and the processes needed to achieve those	FCM

Term	Definition	Source
	objectives. In this context, the elements of the AM system should be viewed as a set of tools, including policies, plans, business processes and information systems, which are integrated to ensure that the AM activities will be delivered.	
asset management team	A cross-functional team that works across departments or disciplines to ensure that decisions integrate all relevant perspectives and priorities.	FCM
asset portfolio	All the assets owned by a municipality.	FCM
asset type	A major classification of assets made up of various related asset groups. (edited version of AMBC definition)	AMBC
average annual replacement funding	The replacement value of an asset divided by its useful life. This is the target amount of capital funding to be spent each year, either on a replacement project or to be placed in reserve for a future replacement project.	DOS
backlog	The replacement value of assets that have reached the end of their useful life, but have not yet been replaced or rehabilitated. See also “infrastructure deficit”.	DOS
betterment	A cost incurred that either increases the capacity, extends the useful life, or reduces the operating cost of an asset. See also “upgrade”.	AMBC
built assets	See “engineered assets”.	DOS
capacity building	The process by which people, organizations and society develop their capacities over time to achieve social and economic goals, including through improvement of knowledge, skills, systems and institutions.	FCM
capital asset lifecycle	The life of a capital asset, from the point when a need for it is first established, through its design, construction, acquisition, operation and any maintenance or renewal, to its disposal.	AGLG
capital asset reserve fund	An account, or several accounts, that set aside financial resources to meet infrastructure requirements as articulated in an organization’s long term financial plan.	AGLG
components	An asset that forms part of a larger or wider asset. Components are individual (separable) parts of an asset having independent physical or functional identity and specific attributes.	AMBC
community level of service	The level at which the customer is receiving service, from an experiential perspective.	AMBC
condition assessment	The process of continuous or periodic inspection, data collection, measurement, assessment, and interpretation of data to indicate or grade the condition of a specific asset. The Condition Assessment is used to determine remaining useful life and the need for preventive or remedial action for an asset.	EGBC
condition monitoring	A program of periodic or regular inspection, measurement or assessment of the physical condition of an asset to determine any maintenance works required and to estimate the remaining useful life of the asset.	AMBC
critical asset	Assets that provide extremely important functions in service delivery, especially those for which there is no available redundancy or substitution. The consequences of failure of critical assets are serious.	FCM

Term	Definition	Source
current levels of service	The level at which services are delivered today (which may be more or less than the level of service commitment). Also “current performance”.	AMBC
current replacement value	The total estimated amount that it is would cost to replace the tangible capital asset today. The cost includes administration, survey, design and management costs as well as the construction costs. Same as Current Replacement Cost.	AMBC
depreciation	The expense in an accounting period from application of depreciation accounting; wherein the cost or other recorded value of an asset (less any value at disposal) is distributed over the useful life of the asset. It provides a measure of the rate of consumption of the asset and is typically expressed as a per annum amount.	AMBC
disposal	The activities necessary to dispose of decommissioned assets.	AMBC
ecosystem services	Aspects of ecosystems that provide benefits to people, which may be outcomes of a municipal service that protects the environment. For example, streams are natural assets that provide a stormwater management service of conveyance and flow control. Streams also provide benefits, known as ecosystem services, which may include processes such as climate regulation or nutrient cycling as well as recreational, aesthetic and cultural benefits.	FCM
efficiency	How municipalities use their resources. Efficient is often expressed as cost per unit of service or the volume of output per staff member. For example, the cost of transit per passenger trip or the number of criminal code incidents (non-traffic) per police officer.	AMBC
engineered assets	Assets that have been constructed and are owned by the District of Saanich (e.g., watermains, roads, streetlights, and buildings), land that is owned by the District of Saanich and support assets (e.g., land under roads or buildings), or land that is undeveloped and owned by the District of Saanich. These assets must be operated, maintained, managed, and, with the exception of land, ultimately replaced as they wear out. See also “built assets”.	DOS
exposure	The state of being in a place or situation where there is little to no protection from something harmful or unpleasant.	FCM
facility condition index (FCI)	Ratio of the cost of deficiencies of a facility to the current replacement value of the facility.	DOS
gap assessment	A method of assessing the gap between a business’s current asset management practices and the future desirable asset management practices. Also called needs analysis.	AMBC
governance	Governance determines who has power and accountability, who makes decisions, and how other players make their voices heard.	FCM
green infrastructure	A broad category that includes natural assets and designed and engineered elements that have been created to mimic natural functions and processes in the service of human interests.	DOS
impact	The strong effect on something or someone.	FCM

Term	Definition	Source
indicator	A specific property of service that can be objectively evaluated.	AMBC
infrastructure	The physical assets developed and used by a municipality to support its social, cultural and economic services.	FCM
infrastructure deficit	A cumulative shortfall of required asset renewal. Also “funding gap”.	AMBC
infrastructure replacement funding strategy	The District of Saanich strategy for financing the cost of replacing physical assets at the end of their useful life.	DOS
inspection	A checking or testing of an individual against established standards.	DOS
integrated	A state of alignment and communication between systems, sectors, and institutional processes that promotes consistency in decision-making and facilitates more rapid responses by enabling systems to function collectively and achieve common outcomes.	FCM
levels of service	The service level delivered to the public by the District. This can take the form of the selection of services that are provided (e.g., bike lanes, doggie bags, or recreation centres), the standard of infrastructure in place (e.g., concrete sidewalks versus gravel paths), or the standard to which an asset is maintained (e.g., the frequency of scheduled curb sweeping). The desire of Council or the public for a particular Level of Service will directly affect utility fees or taxation.	DOS
levels of service commitment	The level at which the municipality has formally agreed to deliver a service. This could be through a contract, legislation, or other written agreement.	AMBC
levels of service objective	The level at which the municipality aims to deliver service to its customers. This is usually subjective or descriptive for community levels of service, and may be quantitative for technical levels of service.	AMBC
life cycle cost	The sum of the acquisition cost and ownership cost of a product over its life cycle – it reflects the evolution of a system, product, service, project or other human-made entity from conception through retirement.	FCM
linear asset	An asset inventoried by length, typically as part of an interconnected system or network such as watermains or roads.	AMBC
long-term financial plan	A plan that balances the required costs and funding sources to meet infrastructure and service needs, over a minimum of 10 years.	FCM
maintenance and repairs	Maintain the predetermined service potential of a tangible capital asset for a given useful life. Such expenditures are charged in the accounting period in which they are made.	AMBC
mitigation	Actions taken to reduce climate change, primarily by reducing greenhouse gas emissions—contrasted with adaptation.	DOS
municipal natural assets	The stocks of natural resources or ecosystems that contribute to the provision of one or more services required for the health, well-being and long-term sustainability of a community and its residents. Also “natural assets”.	DOS
natural assets	See “municipal natural assets”.	DOS

Term	Definition	Source
operations	All actions necessary to keep the asset operating and which form part of the annual operating budget, but excluding physical repairs (maintenance), capital improvements.	AMBC
performance gap	The current gap, or difference, between the level of service being delivered (the current level of service) and the expected/intended level of service (the level of service objective).	AMBC
performance measure	The means used by the municipality to assess a level of service. (e.g. O&M data, complaints, expert assessment, service contract, OH&S records, program data, etc.). Also "key performance indicator (KPI)"	AMBC
performance monitoring	Continuous or periodic quantitative and qualitative assessments of the actual performance of an asset compared with specific objectives, targets or standards.	AMBC
rehabilitation	Work to rebuild or replace parts or components of an asset, to restore it to a functional condition and extend its life (may involve some modification).	AMBC
reinvestment rate	The annual renewal budget (for rehabilitation or reconstruction of infrastructure) expressed as a percentage of the asset's replacement value. The target reinvestment rate is when the annual renewal budget equals the annual replacement funding target.	DOS
renewal	Works to refurbish or replace existing assets with assets of equivalent capacity or performance capability. See also "replacement".	AMBC
repair	The action required to restore a component or asset to its previous condition after failure or damage. See also Maintenance.	AMBC
replacement	The complete replacement of an asset that has reached the end of its life, so as to provide a similar or agreed alternate level of service. See also "renewal".	AMBC
replacement value	The current replacement cost of an existing asset based on market research and adjusted for inflation.	AGLG
risk	Analysis of the 'likelihood' and the 'consequences' of a given event. Establishing the risk associated with lower infrastructure performance due to Levels of Service or postponement of asset replacement will identify system vulnerabilities and assist in prioritizing work. For example, puddles on a gravel walkway may have a high likelihood of occurring but the consequences are not significant. In comparison, an ageing sanitary main may have a high likelihood of failure and the consequences of a break may be significant.	DOS
risk analysis	The process of comparing the likelihood and consequence of asset failure to a community or organization's risk tolerance, with the goal of identifying unacceptable risks and developing measures to mitigate those risks.	EGBC
risk assessment	A methodology to determine the nature and extent of risk by analyzing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed	FCM

Term	Definition	Source
	people, property, services, livelihoods, and the environment on which they depend.	
service	Work done by the municipality to deliver a community need to the public or to the natural environment.	DOS
service area	A major division of municipal service delivery (e.g. waterworks, sanitary sewer, transportation).	AMBC
service characteristic	General property, or characteristic, of service delivered by an asset or group of assets (e.g. regulatory, capacity, safety, reliability, quality, and environmental).	AMBC
service potential	The output or service capacity of a tangible capital asset normally expressed in terms of (or with reference to) various attributes of the asset such as physical output capacity, quality of output or service, associated operating costs and useful life.	AMBC
strategic asset management plan	See “asset management strategy”.	FCM
sustainable	Meeting the needs of the present without compromising the ability of future generations to meet their own needs. In relation to Asset Management a sustainable approach takes into consideration the current and future benefits and costs of existing and new assets or services.	DOS
sustainability gap	The anticipated future gap between current level of service and the level of service objective. For example, there may not be a current capacity gap in a sewer service, however, based on growth projections and the ability of current infrastructure to delivery the service, a future gap is anticipated once a certain demand or growth rate has been achieved.	AMBC
technical levels of service	Specific and quantifiable measures for service targets that are used internally to meet legal requirements and achieve community LOS goals.	AMBC
triple bottom line	Expands on the traditional view of an organization’s financial bottom line by measuring 1) socio-cultural factors, 2) economic impact to the community, and 3) environmental factors, and committing to include all dimensions in decision-making.	FCM
upgrade	Additional physical assets, components or features that enable a higher level of service to be provided by an existing asset or that increase in size or capability the existing asset. See also “betterment”.	AMBC
useful life	Useful Life Is the estimate of the period over which the owner expects to use the asset. For a tangible capital asset it is the shortest of the physical, technological, commercial and legal life. The physical life of an asset may extend beyond its useful life.	AMBC
vertical asset	An asset inventoried by item (not by length), such as a treatment plant, community building or traffic light.	AMBC

Appendix B

Saanich Documents Informing the AM Program

Saanich Documents Informing the AM Program

Document History

Version	Summary of Changes	Document Status	Date
1	First-generation document for AM Strategy	Final	June 2023

Table of Documents

Asset Type(s)	Document	AM Program Alignment
District-wide	Official Community Plan	Establishes Saanich Vision, Mission and Values and guidance for levels of service delivery (update In-Progress)
District-wide	Local Area Plans	Direction for development in the various neighbourhoods of Saanich, which form part of the Official Community Plan
District-wide	Resilient Saanich	Environmental Policy Framework considering existing and potential future policies, plans, and programs to address gaps and integrate sustainability and the natural environment (In-Progress)
District-wide	Strategic Plan	Establishes community commitment to asset management and sets prioritizes for the current term of Council
District-wide	Climate Plan	Establishes the need to increase the resilience of Saanich's physical assets, and to protect and manage natural assets as critical infrastructure
District-wide	Diversity, Equity and Inclusion Strategic Report and Action Framework	Guidance for considering diversity, equity and inclusion in asset management planning
District-wide	Infrastructure Replacement Funding Strategy	Financing strategy for the like-for-like replacement of physical assets at end of useful life (update In-Progress)
District-wide	Long Term Financial Plan	Financial policies, principles, indicators, and 10-year financial plan

Asset Type(s)	Document	AM Program Alignment
District-wide	Purchasing Policy	Requires whole life cycle approach to procurement
District-wide	Asset Management Policy	Guiding document for asset management
District-wide	Tangible Capital Assets Policy	Compliance with legal requirements for financial reporting on physical assets
District-wide	Enterprise Risk Management Program	Framework and methodology for assessing organizational risk in support of corporate decision-making, including a District-wide risk register which is informed in part by the AM Program
District-wide	Annual Report	Reporting on service delivery performance
District-wide	Financial Planning Framework	Shows how the Infrastructure Replacement Funding Strategy aligns with the financial planning process
District-wide	Annual Financial Plan	Financing for capital and operating costs for the current fiscal year and 4 year forecast
District-wide	Long Term Financial Plan	Financial policies and 10-year financial strategy
District-wide	Staffing Plan	Long term plan for staff resource requirements
District-wide	Project Management Office	Standards and guidance for delivery of capital projects
District-wide	Saanich Information Management (SaanichIM) Project	Implementation of an Electronic Document and Records Management System (EDRMS) including records related to physical assets (In-Progress)
District-wide	Diversity, Equity and Inclusion (DEI) Strategic Plan	Saanich is developing a DEI strategy, which will be integrated with the AM Program through future updates of the AM Strategy (In-Progress)
Drainage, Park & Trail Structures, Transportation, Wastewater, Water	Public Works and Parks Inspection Policy	Guidance on inspection of community assets

Asset Type(s)	Document	AM Program Alignment
Drainage, Wastewater	Storm Drains and Sewer Lines – Maintenance Policy	Guidance on roles and responsibilities for maintenance of storm drains and sewer lines
Drainage, Natural Assets	Integrated Stormwater Management Plans	A set of five plans for the management of stormwater in the five Saanich watersheds; input to Drainage and Natural Assets AM Plans (In-Progress)
Drainage, Natural Assets, Transportation, Wastewater, Water	Subdivision By-law, Schedule H: Engineering Specifications	Standards for design and construction of physical assets, with consideration for climate change (update In-Progress)
Facilities	Strategic Facilities Master Plan	Long term master plan for major Municipal Facilities
Facilities	Recreation Market Analysis	Supports development of Levels of Service and input to Facilities Asset Management Plan
Facilities	Gordon Head Recreation Centre Feasibility Study	Input to Facilities AM Plan
Facilities	Parks, Recreation and Community Services Washroom Operations and Capital Plan	Plan for the management of park washrooms
Facilities, Natural Assets, Park & Trail Structures	Parks, Recreation and Community Services Actions and Directions Plan	Roadmap for the next 10 years for the Department, including assets, programs, policies and levels of service (In-Progress)
Facilities, Natural Assets, Park & Trail Structures	Lambert Park Master Plan	Input to Facilities, Natural Assets, and Park & Trail Structures AM Plans
Natural Assets	Tree Protection By-law	Natural asset management
Natural Assets	State of the Urban Forest Report	Summarizes current urban forest management programs and policies, identifies amount of urban forest and location; input to Natural Assets Inventory and Natural Assets AM Plan
Natural Assets	Urban Forest Strategy	Input to Natural Assets AM Plan (update In-Progress)

Asset Type(s)	Document	AM Program Alignment
Natural Assets	State of Biodiversity Report	Current state of the District's natural areas and biodiversity and the elements that threaten their integrity; input to Natural Assets Inventory and Natural Assets AM Plan
Natural Assets	Biodiversity Conservation Strategy	Roadmap to protect and enhance natural assets through policy, operations and public stewardship; input to Natural Assets AM Plan (In-Progress)
Natural Assets	Saanich Watercourse Maintenance Manual and Field Guide	Guidance on maintenance of watercourses; input to Natural Assets AM Plan (update In-Progress)
Park & Trail Structures	People, Pets and Parks Strategy	Strategy for shared use of parks, including infrastructure requirements
Transportation	Active Transportation Plan	Long term plan for the active transportation system
Transportation, Vehicles & Equipment	Electric Mobility Strategy	Strategy for transition to electric mobility
Vehicles & Equipment	Saanich Fire Department: Fire Services Review	Master plan for delivery of fire services
Wastewater	Sewer Master Plan	Long term master plan for the wastewater collection system
Water	Water Master Plan	Long term master plan for the water distribution system

Appendix C

Asset Dashboards

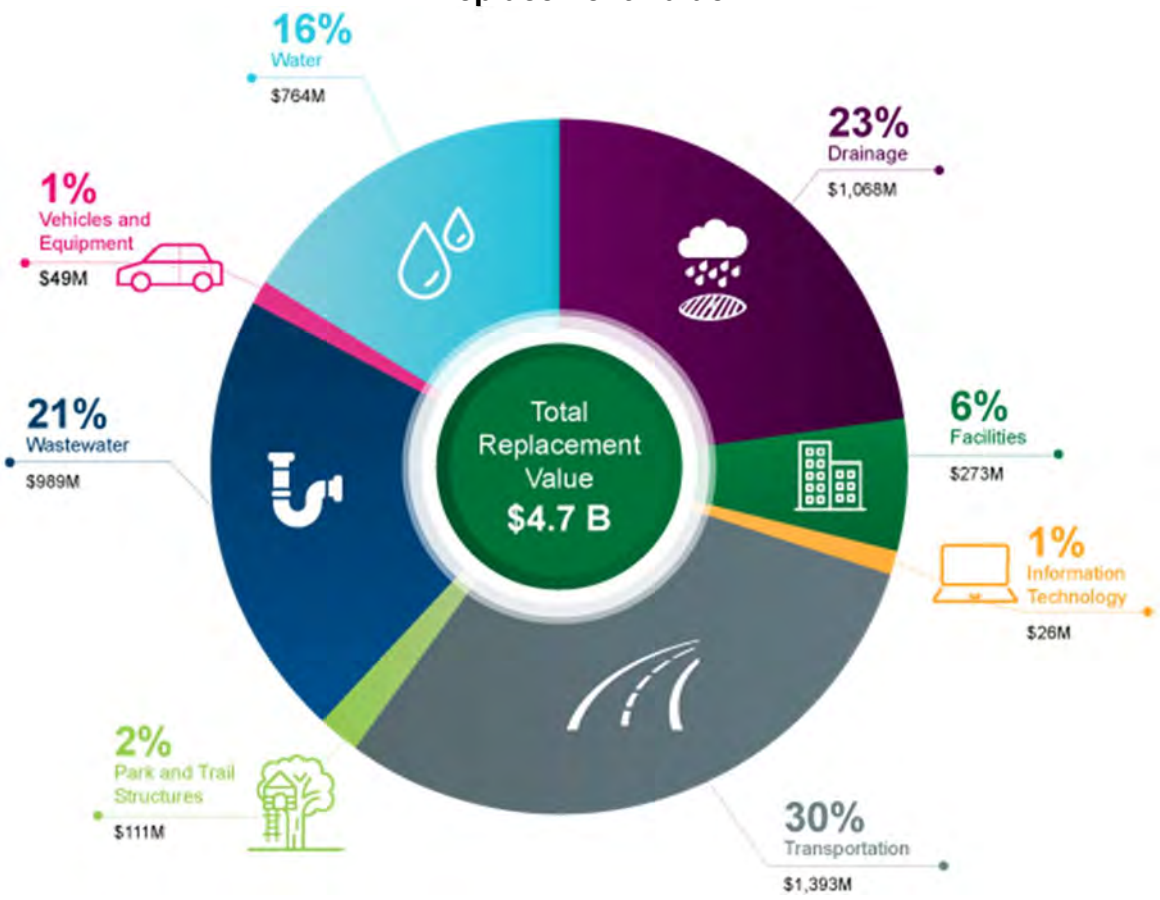
Overall Asset Dashboard (Preliminary)

Please note that the information presented in this dashboard is a preliminary snapshot of the asset data currently in Saanich's systems, and that it is expected to become more accurate over time.

Services

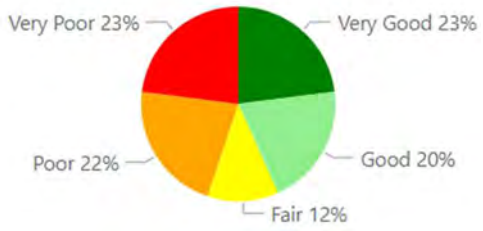
General Government Services, Parks Services, Protective Services, Recreation & Community Services, Solid Waste Services, Stormwater Management Services, Transportation Services, Wastewater Collection Services, Water Distribution Services

Replacement Value



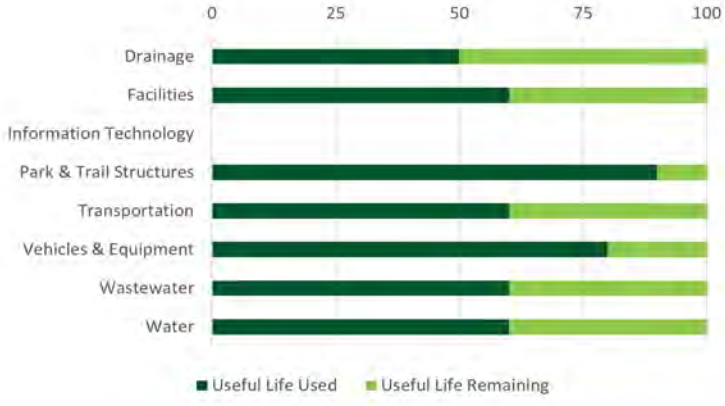
Physical Condition

Average: Fair



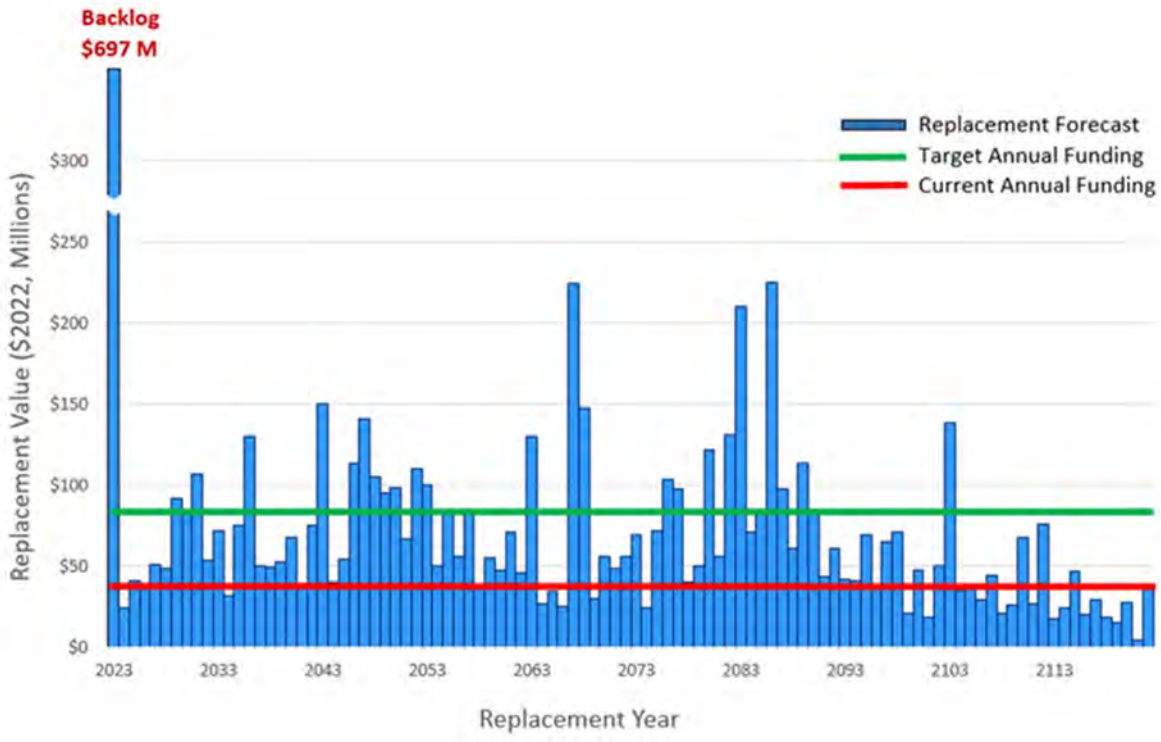
Remaining Useful Life

Average: 60% used, 40% remaining

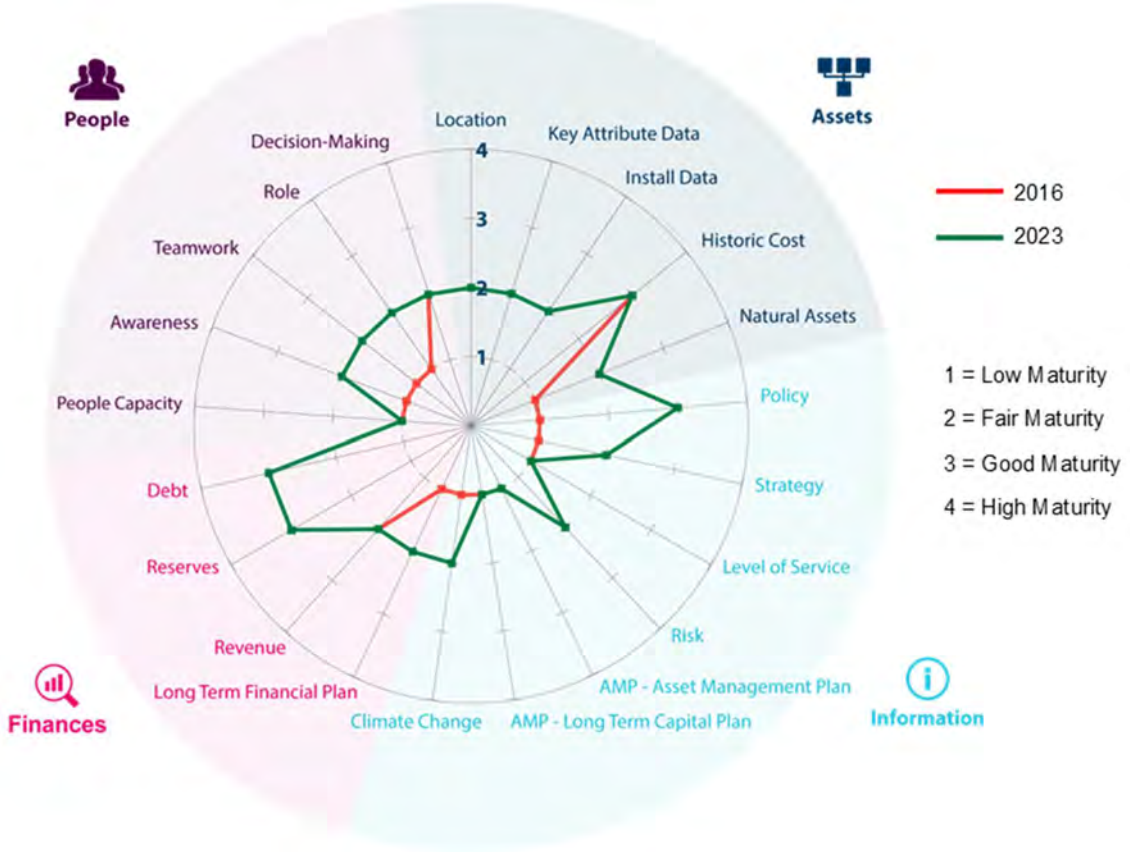


Overall Asset Dashboard (Preliminary)

Replacement Forecast vs Annual Replacement Funding



Overall Maturity Assessment AssetSMART2.0



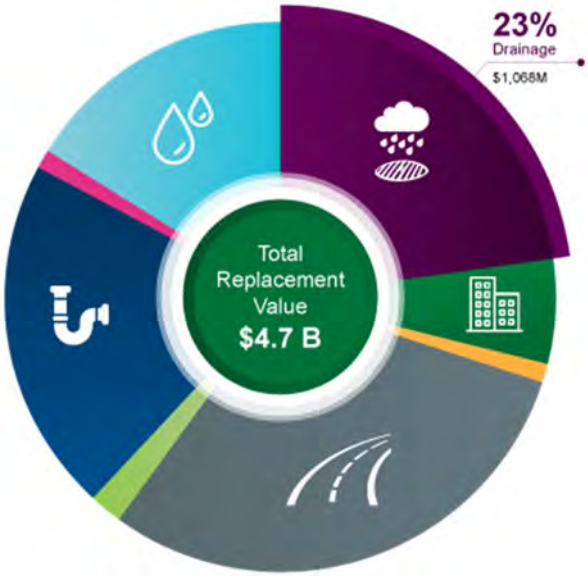
Drainage Asset Dashboard (Preliminary)

Please note that the information presented in this dashboard is a preliminary snapshot of the asset data currently in Saanich's systems, and that it is expected to become more accurate over time.

Services

Stormwater Management Services

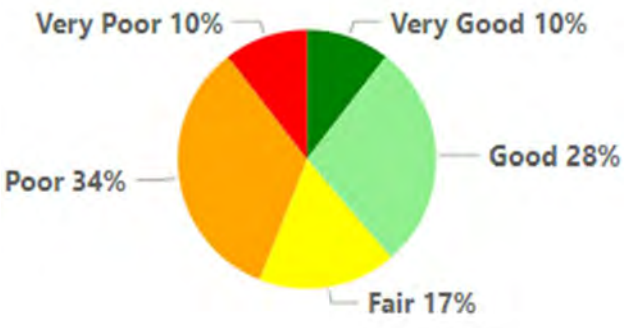
Replacement Value ($2022)



Asset Groups

Asset Group	Quantity	Quantity Units	Avg Age	Avg Useful Life	Replacement Value ($2022)	Current Annual Funding ($2022)	Target Annual Funding ($2022)	Backlog ($2022)
Box Culverts	5	km	41	90	$35M	$0.0M	$0.4M	$0M
Culverts	11	km	35	61	$16M	$0.0M	$0.3M	$1M
Laterals	165	km	37	51	$210M	$1.4M	$4.1M	$49M
Mains	559	km	37	77	$805M	$6.1M	$10.5M	$34M
Pump Stations	1	pump station	29	50	$1M	$0.0M	$0.0M	$1M
Total			**37**	**72**	**$1068M**	**$7.5M**	**$15.3M**	**$85M**

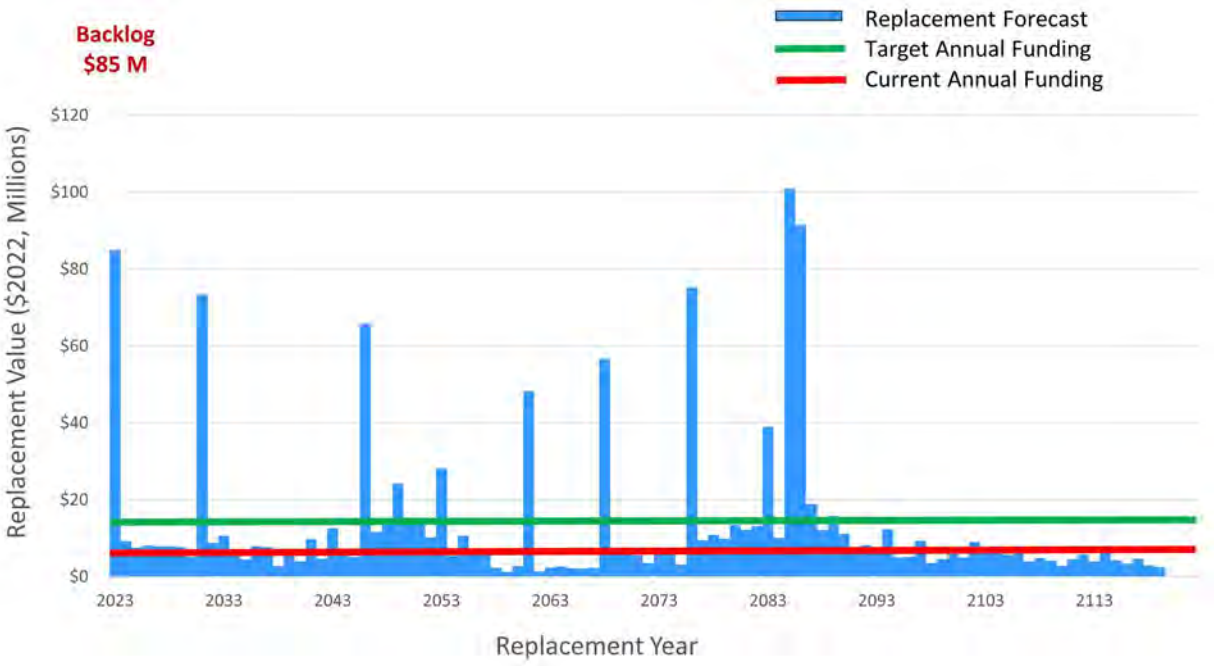
Physical Condition



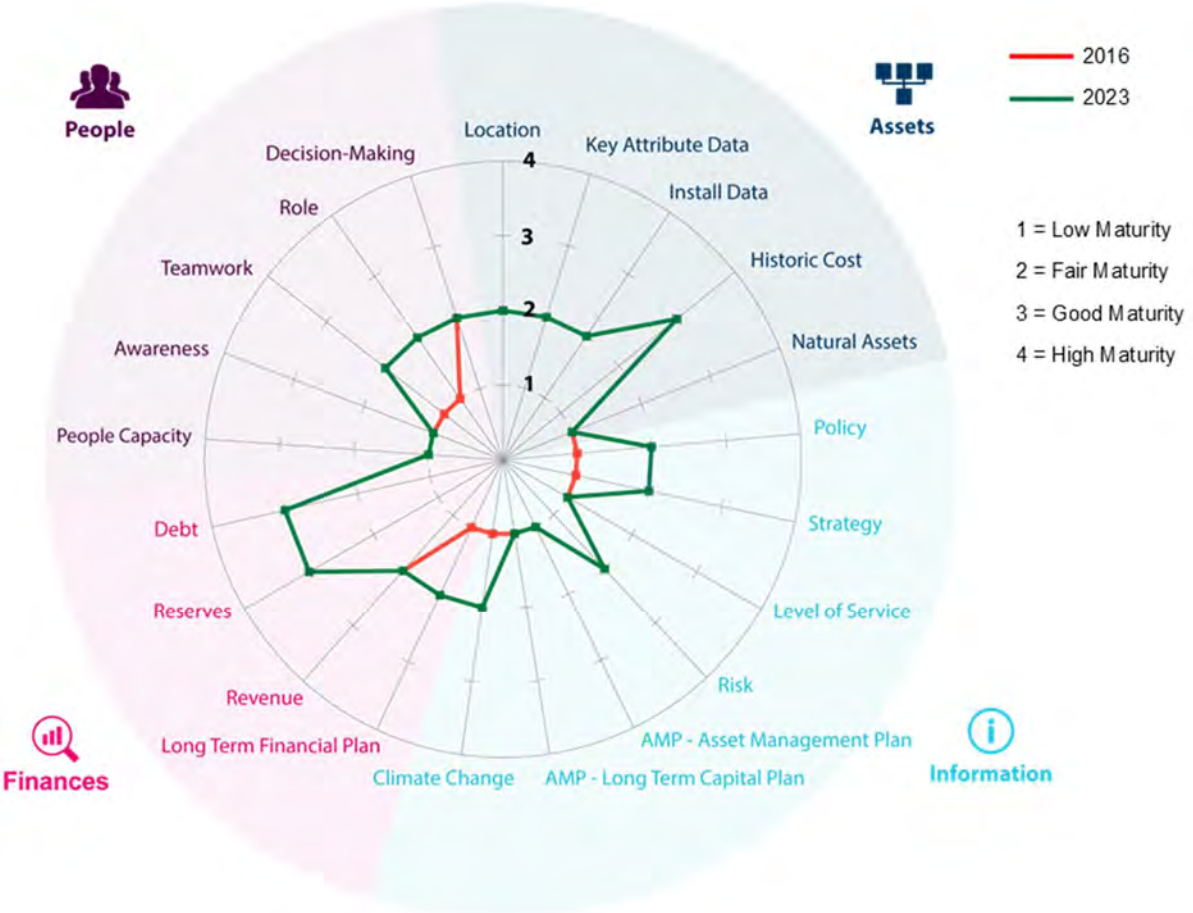
Risk to Service Delivery

Drainage culvert replacements are prioritized based on road type, size of catchment, and slope. Risk assessment to be developed.

Replacement Forecast vs Asset Replacement Funding



Maturity Assessment AssetSMART2.0



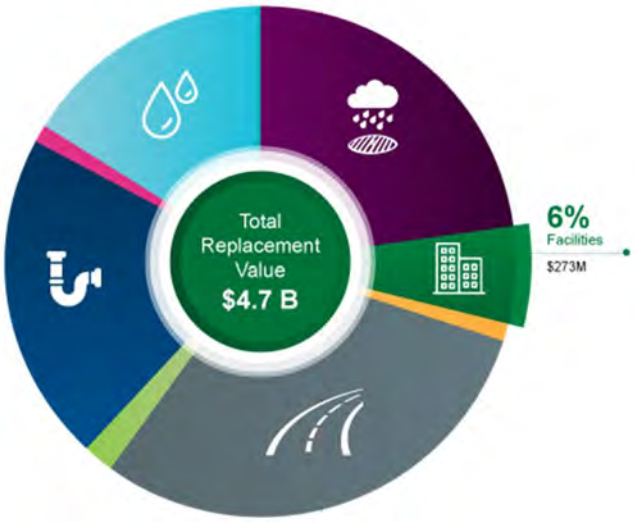
Facilities Asset Dashboard (Preliminary)

Please note that the information presented in this dashboard is a preliminary snapshot of the asset data currently in Saanich's systems, and that it is expected to become more accurate over time.

Services

General Government Services
Parks Services
Protective Services
Recreation & Community Services
Solid Waste Services
Stormwater Management Services
Transportation Services
Wastewater Collection Services
Water Distribution Services

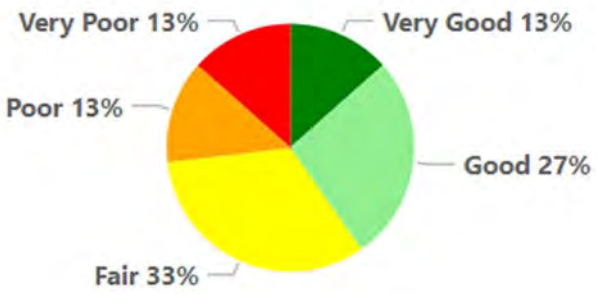
Replacement Value ($2022)



Asset Groups

Asset Group	Quantity	Quantity Units	Avg Age	Avg Useful Life	Replacement Value ($2022)	Current Annual Funding ($2022)	Annual Funding Target ($2022)	Backlog ($2022)
Municipal Facilities	72	municipal facilities	43	71	$244M	$2.6M	$5.6M	$134M
Park Buildings	81	park buildings	48	66	$29M	$0.2M	$0.4M	$7M
Total			**44**	**70**	**$273M**	**$2.8M**	**$6.0M**	**$141M**

Physical Condition



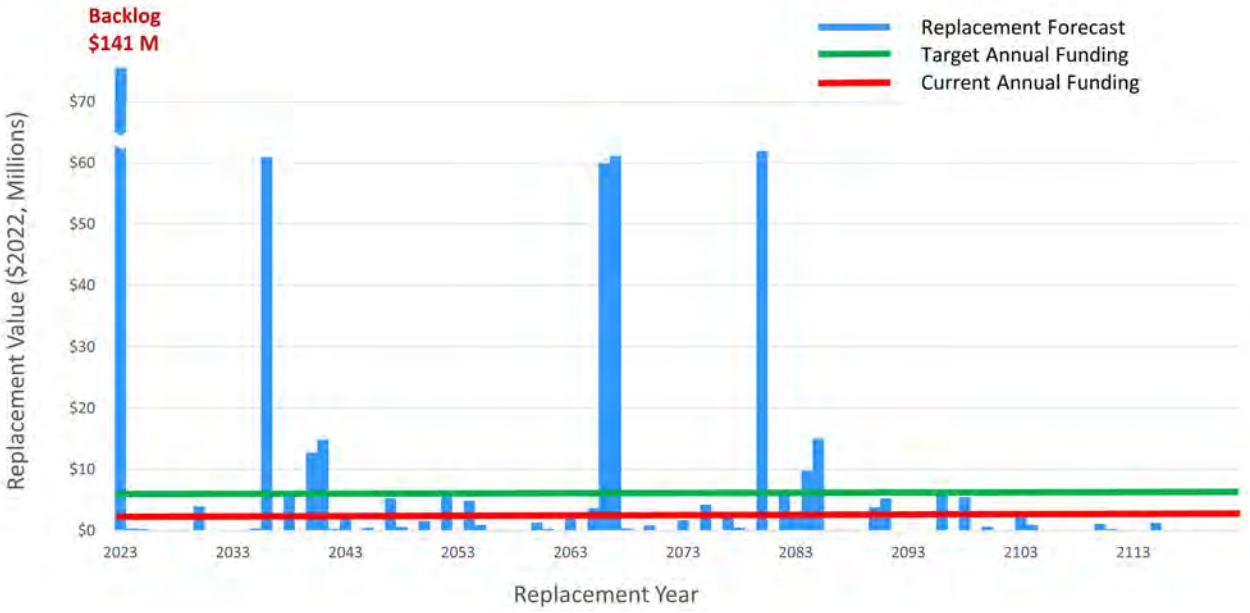
The 2022 average Facilities Condition Index (FCI) for the Major Facilities in the Strategic Facilities Master Plan is 0.41 (Fair).

Risk to Service Delivery

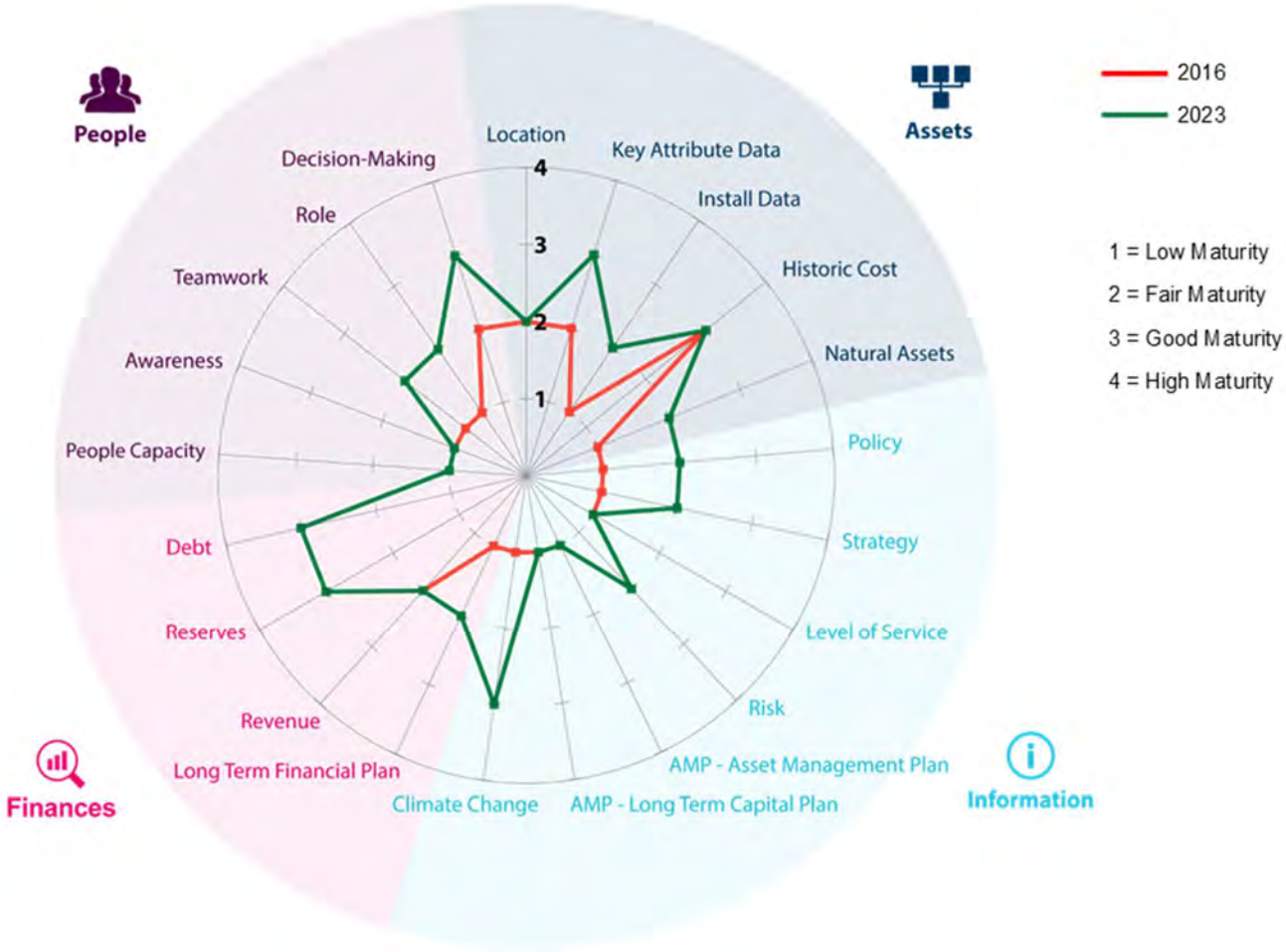
The Strategic Facilities Master Plan assessed the risks to service delivery of the major Municipal Facilities and the resulting priority ranking is shown here:

Facilities Asset Dashboard (Preliminary)

Replacement Forecast vs Asset Replacement Funding



Maturity Assessment AssetSMART2.0



Information Technology Asset Dashboard (Preliminary)

Please note that the information presented in this dashboard is a preliminary snapshot of the asset data currently in Saanich's systems, and that it is expected to become more accurate over time.

Services

General Government Services
Parks Services
Protective Services
Recreation & Community Services
Solid Waste Services
Stormwater Management Services
Transportation Services
Wastewater Collection Services
Water Distribution Services

Replacement Value ($2022)

Asset Groups

Asset Group	Quantity	Quantity Units	Avg Age	Avg Useful Life	Replacement Value ($2022)	Current Annual Funding ($2022)	Target Annual Funding ($2022)	Backlog ($2022)
Hardware				5	$15M	$0.7M	$2.9M	$0M
Software				11	$11M	$0.3M	$1.0M	$0M
Total				**7**	**$26M**	**$1.1M**	**$3.9M**	**$0M**

Physical Condition

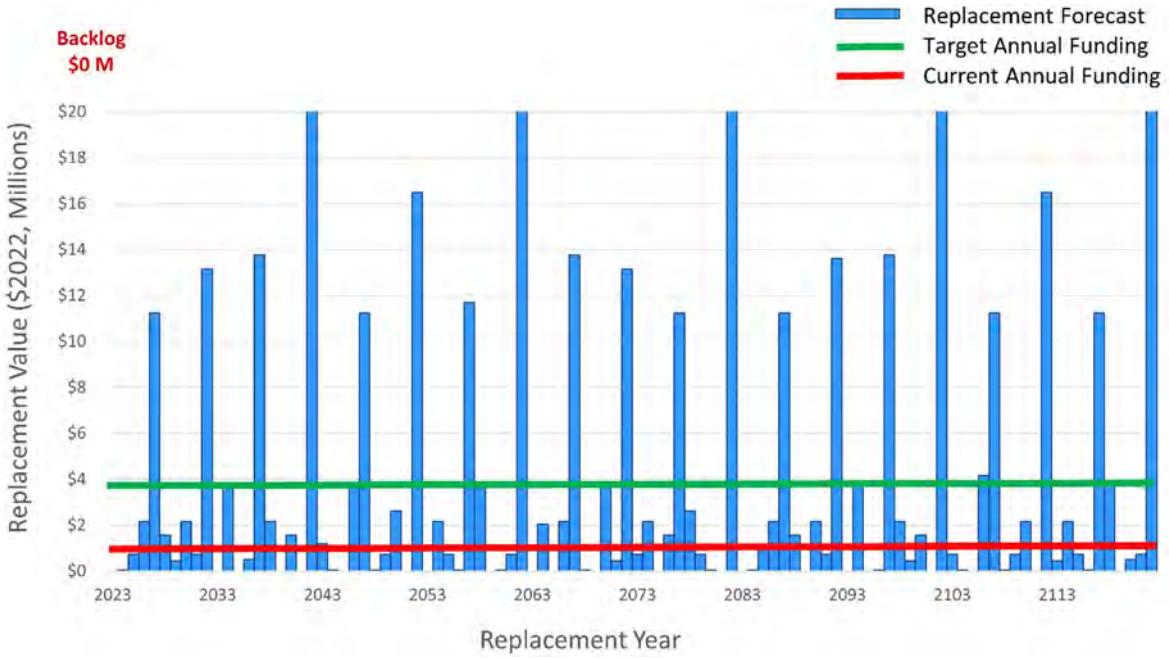
To Be Developed

Risk to Service Delivery

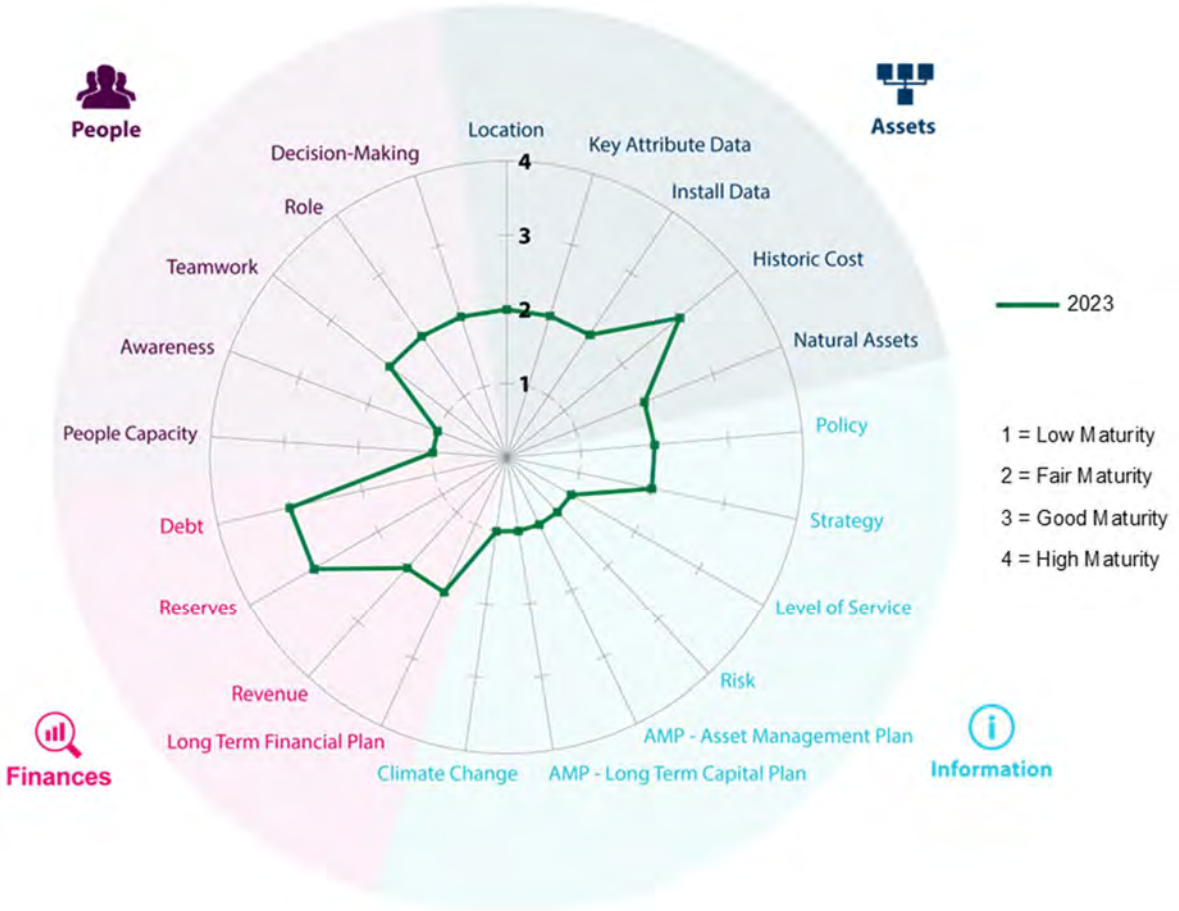
To Be Developed

Information Technology Asset Dashboard (Preliminary)

Replacement Forecast vs Annual Replacement Funding



Maturity Assessment AssetSMART2.0



Natural Assets Dashboard (Preliminary)

Please note that the information presented in this dashboard is a preliminary snapshot of the asset data currently in Saanich's systems, and that it is expected to become more accurate over time.

Services

General Government Services
Parks Services
Recreation & Community Services
Stormwater Management Services
Transportation Services

Natural Assets Valuation

To Be Developed

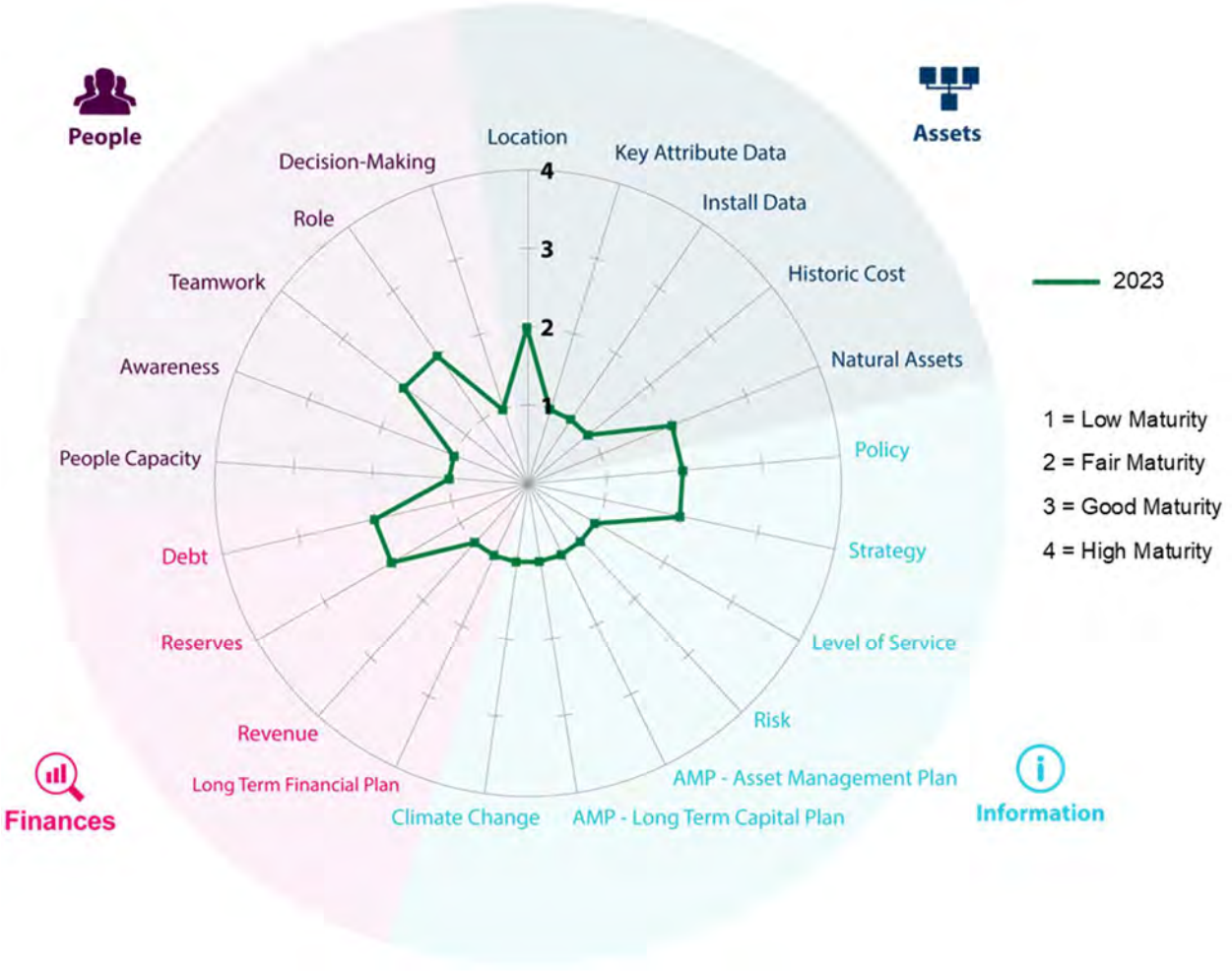
Preliminary Natural Assets Data

Natural Assets	Quantity
Herb	308 ha
Marine Shoreline	47 km
Protected Land (i.e. municipal and regional parks and conservation areas, as well as privately owned lands with natural state covenants)	1,758 ha (including 800 ha of parks, of which about 500 ha or 62% is in a natural state)
Riparian (i.e. interface zone that links aquatic and terrestrial ecosystems)	667 ha (assumes 30 m width from streams, lakes, wetlands and the marine backshore, and 5 m width from urban ditches)
Shrub	979 ha
Urban Forest	Forested Stands: 3,408 ha, including: - Garry Oak ecosystems: 250 ha - Coastal Douglas-fir forests: 2,729 ha - Old growth trees > 250 years old: 2% of forests still contain trees that are old growth (the majority of forests are less than 150 years old) Urban Trees: 1,613 ha (over 742,000 trees)
Waterbodies (i.e. lake, pond, reservoir)	318 ha
Watercourses (i.e. natural length of brooks, creeks, rivers, and streams)	229 km
Wetlands	31 ha

Notes:

1. Preliminary information to be refined as part of the *Natural Assets Inventory* project.
2. Source of information is *State of Biodiversity – District of Saanich* (Diamond Head, 2023).
3. Saanich total land area is 10,344 ha, and natural areas cover 38.5%. Note that there is likely some overlap in the various types of natural areas shown in the table.
4. Ditches are addressed in the Drainage Assets dashboard (to be confirmed as part of the *Natural Assets Inventory* project).

Maturity Assessment AssetSMART2.0



Current State of Natural Assets Data

Category	Level	Description of Current State
Location	Level 2	Accurate location data for most assets in GIS.
Key Attribute Data	Level 1	Information to be developed through Biodiversity Conservation Strategy and Urban Forest Strategy.
Install Data	Level 1	Not applicable.
Historic Cost	Level 1	Valuation to be developed.
Level of Service	Level 1	To be developed.
Risk	Level 1	Climate Plan includes a risk assessment report that includes natural assets.
AM Plan	Level 1	To be developed.
Climate Change	Level 1	Climate Plan includes several actions related to natural assets.

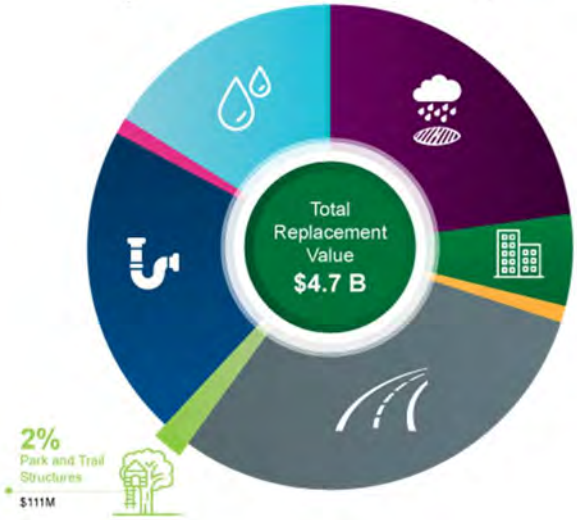
Park & Trail Structures Asset Dashboard (Preliminary)

Please note that the information presented in this dashboard is a preliminary snapshot of the asset data currently in Saanich's systems, and that it is expected to become more accurate over time.

Services

Parks Services

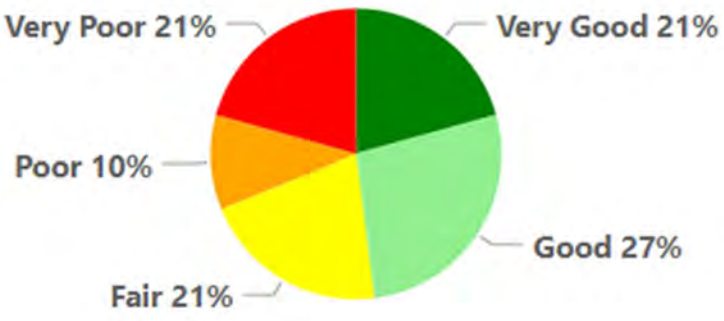
Replacement Value ($2022)



Asset Groups

Asset Group	Quantity	Quantity Units	Avg Age	Avg Useful Life	Replacement Value ($2022)	Current Annual Funding ($2022)	Target Annual Funding ($2022)	Backlog ($2022)
Footbridges	97	footbridges	21	18	$15M	$0.2M	$0.8M	$9M
Irrigation Systems	1559	zones	10	20	$4M	$0.3M	$0.2M	$0M
Parking Lots	72	parking lots	30	32	$10M	$0.3M	$0.3M	$4M
Playgrounds	56	playgrounds	12	20	$11M	$0.3M	$0.5M	$2M
Roads	3	km	52	160	$4M	$0.0M	$0.0M	$0M
Sports Courts	50	courts	29	20	$15M	$0.2M	$0.8M	$15M
Sports Fields	56	sports fields	29	27	$44M	$0.8M	$1.6M	$24M
Trails	124	km	19	13	$8M	$1.0M	$0.6M	$6M
Total			**26**	**28**	**$111M**	**$3.2M**	**$4.9M**	**$60M**

Physical Condition

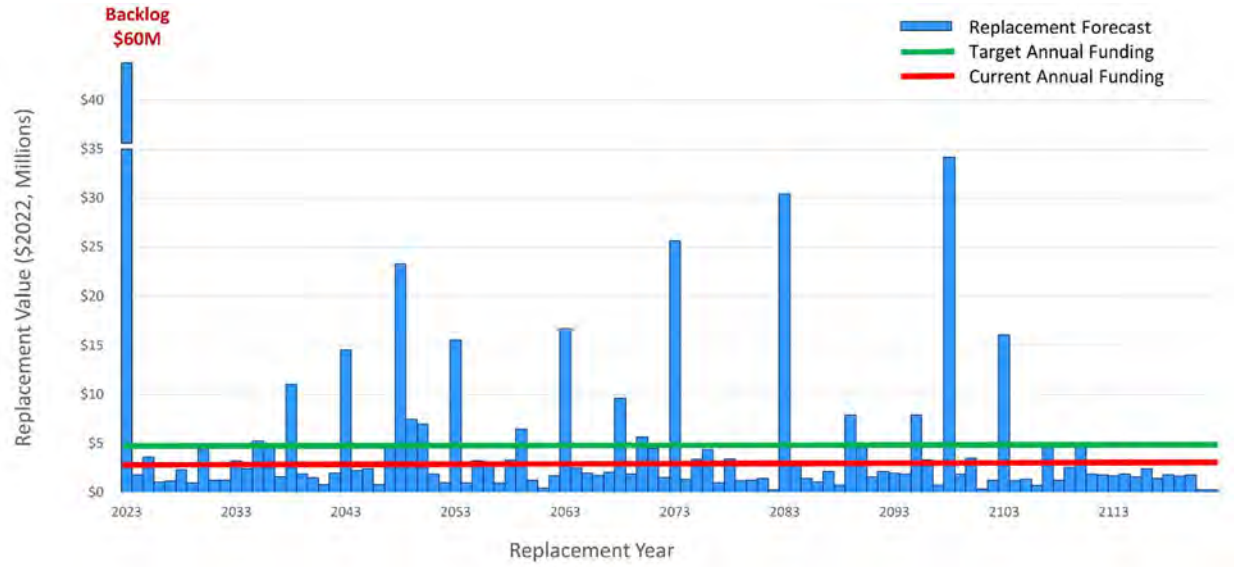


Risk to Service Delivery

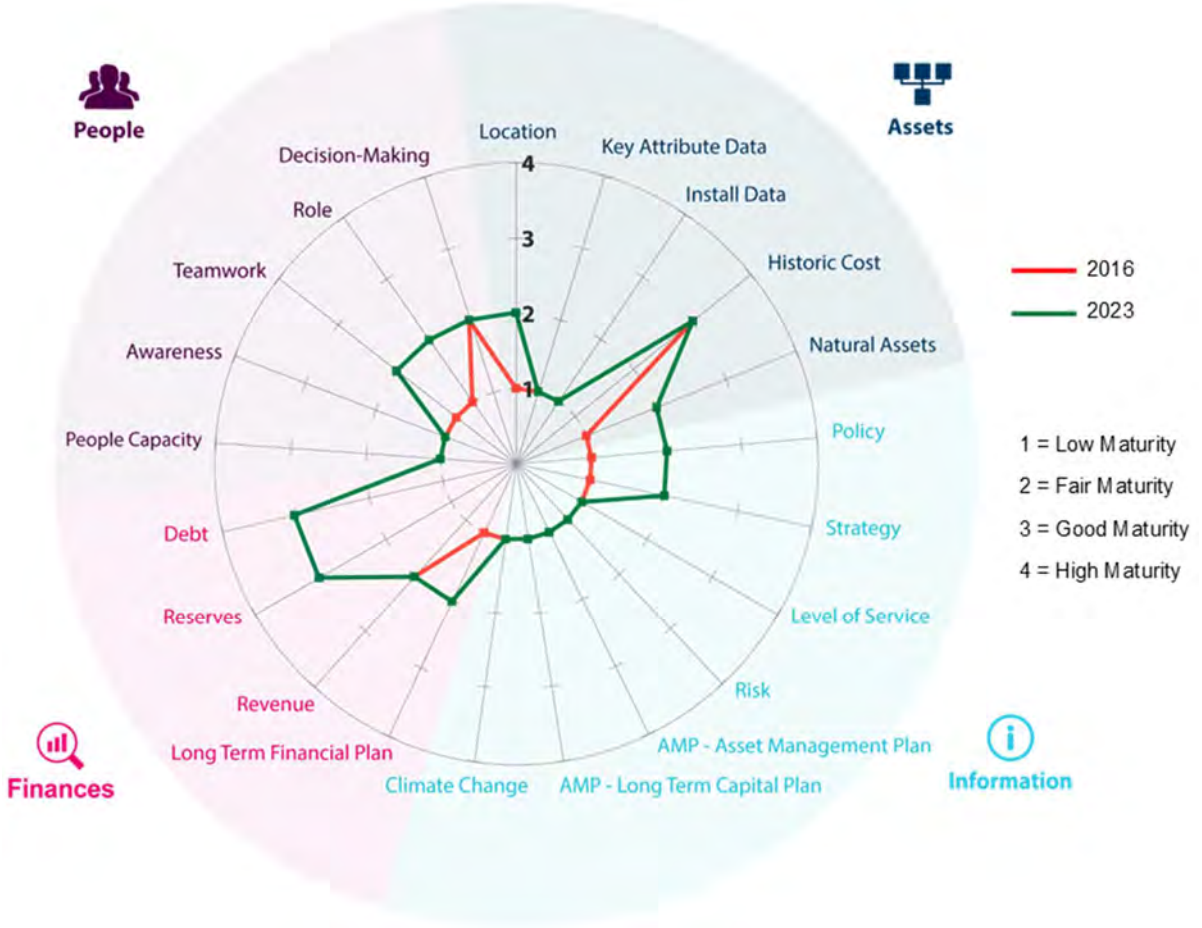
To Be Developed

Park & Trail Structures Asset Dashboard (Preliminary)

Replacement Forecast vs Asset Replacement Funding



Maturity Assessment AssetSMART2.0



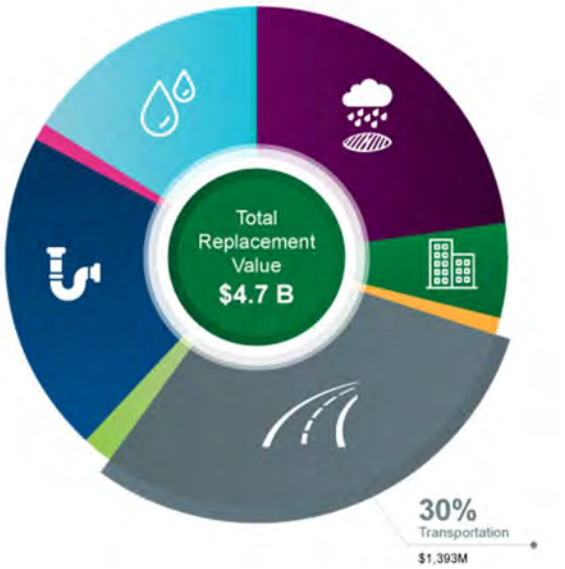
Transportation Asset Dashboard (Preliminary)

Please note that the information presented in this dashboard is a preliminary snapshot of the asset data currently in Saanich's systems, and that it is expected to become more accurate over time.

Services

Parks Services
Protective Services
Solid Waste Services
Stormwater Management Services
Transportation Services
Wastewater Collection Services
Water Distribution Services

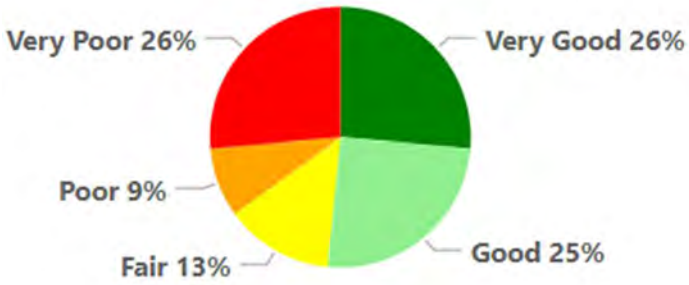
Replacement Value ($2022)



Asset Groups

Asset Group	Quantity	Quantity Units	Avg Age	Avg Useful Life	Replacement Value ($2022)	Current Annual Funding ($2022)	Target Annual Funding ($2022)	Backlog ($2022)
Bridges	37	bridges	34	75	$81M	$0.2M	$1.1M	$0M
Bus Stops	221	bus stops	8	20	$4M	$0.0M	$0.2M	$0M
Crosswalks	104	crosswalks		30	$1M	$0.0M	$0.0M	$0M
Ped Signals	23	signals		25	$1M	$0.0M	$0.0M	$0M
Road Base	567	centre-km	77	121	$652M	$3.6M	$5.4M	$110M
Pavement	567	centre-km	17	33	$408M	$2.2M	$12.5M	$22M
Sidewalks	269	km	27	68	$182M	$1.7M	$2.7M	$0M
Street Signs	20000	signs		34	$14M	$0.0M	$0.4M	$0M
Streetlights	9093	streetlights		30	$38M	$0.2M	$1.3M	$0M
Traf Signals	84	signals		25	$12M	$0.4M	$0.5M	$0M
Total			**47**	**81**	**$1,393M**	**$8.4M**	**$24.0M**	**$132M**

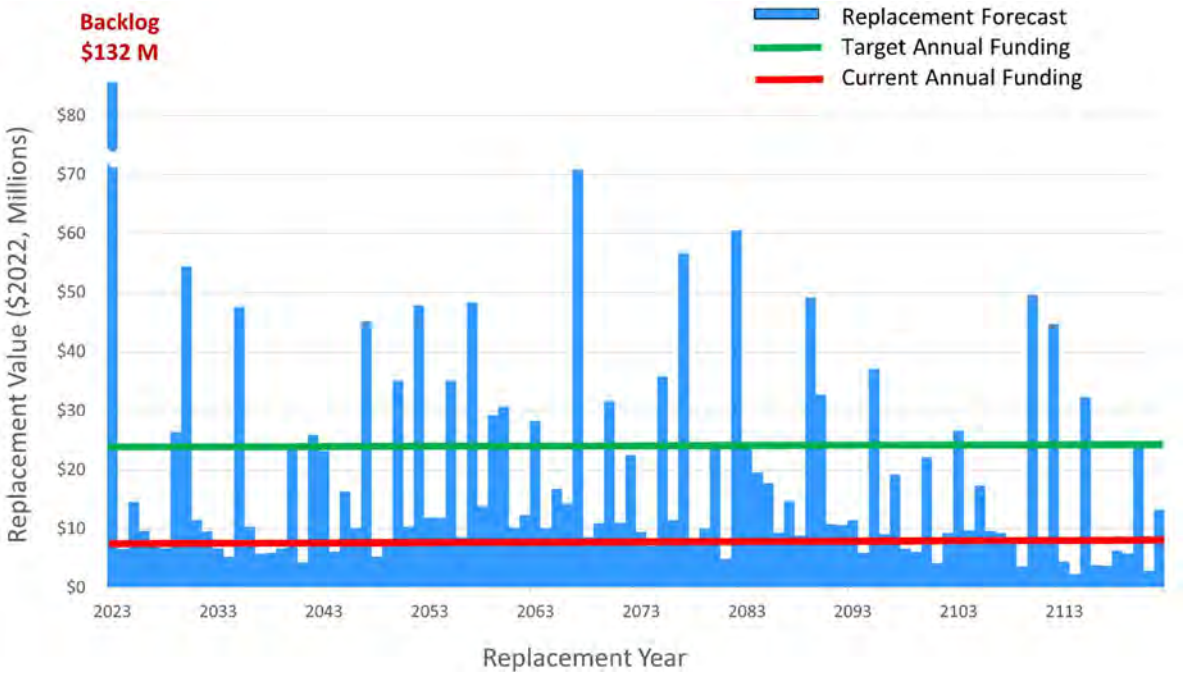
Physical Condition



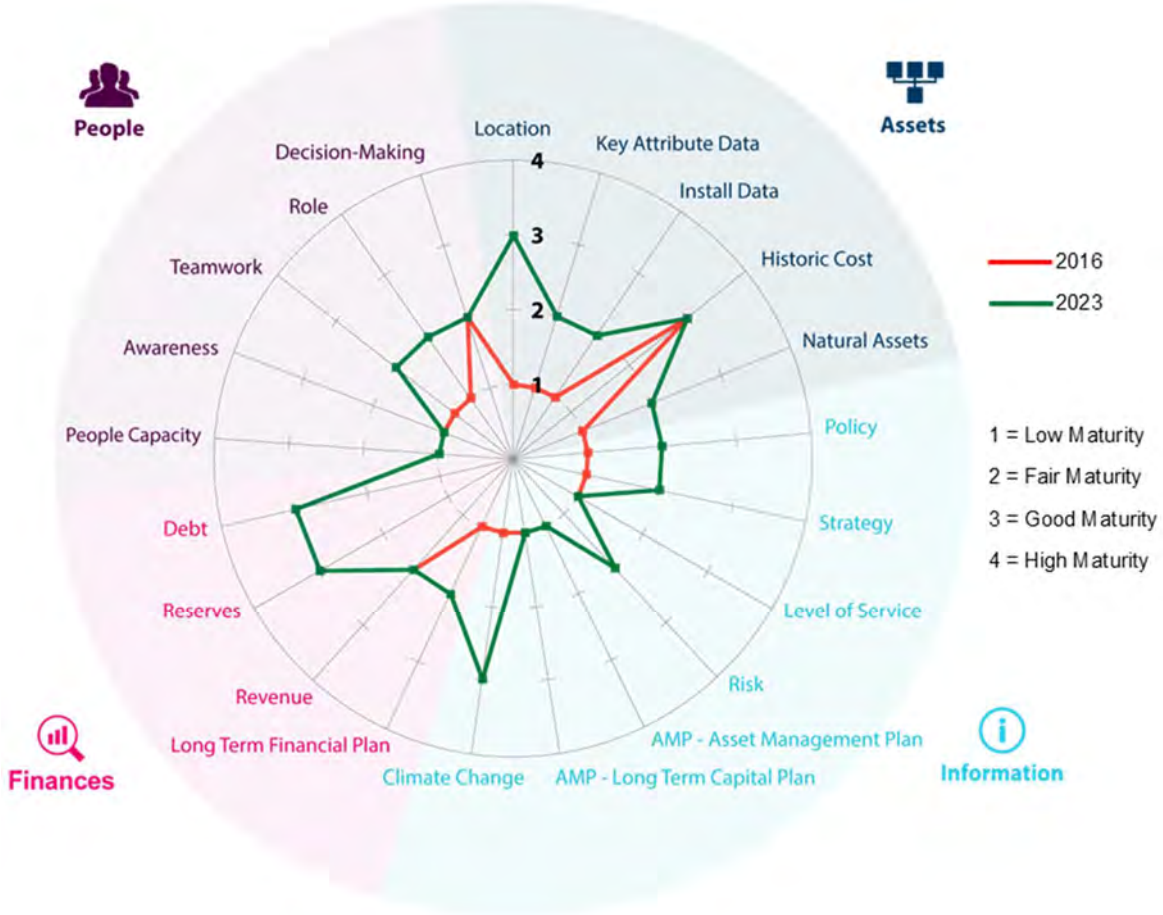
Risk to Service Delivery

Preliminary risk assessment completed for pavement. Risk assessment to be completed for all asset groups using consistent District-wide approach.

Replacement Forecast vs Asset Replacement Funding



Maturity Assessment AssetSMART2.0



Vehicles & Equipment Asset Dashboard (Preliminary)

Please note that the information presented in this dashboard is a preliminary snapshot of the asset data currently in Saanich's systems, and that it is expected to become more accurate over time.

Services

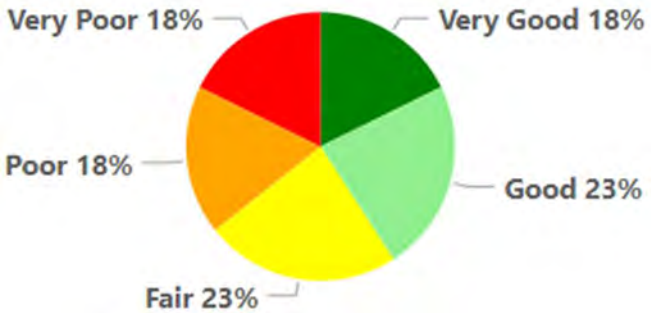
General Government Services
Parks Services
Protective Services
Recreation & Community Services
Solid Waste Services
Stormwater Management Services
Transportation Services
Wastewater Collection Services
Water Distribution Services

Replacement Value ($2022)

Asset Groups

Asset Group	Quantity	Quantity Units	Avg Age	Avg Useful Life	Replacement Value ($2022)	Current Annual Funding ($2022)	Target Annual Funding ($2022)	Backlog ($2022)
E-bikes	2	E-bikes	1	5	$0M	$0.0M	$0.0M	$0M
CHGC Equipment	67	equipment	10	10	$2M	$0.4M	$0.2M	$1M
Fitness Equipment	155	equipment	3	6	$1M	$0.2M	$0.2M	$0M
EV Charging	55	stations	3	10	$0M	$0.1M	$0.0M	$0M
Fire Vehicles	35	vehicles	12	15	$12M	$0.5M	$0.8M	$3M
Fleet Vehicles	254	vehicles	8	10	$31M	$1.4M	$3.0M	$12M
Police Vehicles	84	vehicles	5	6	$4M	$0.2M	$0.6M	$2M
Total			**9**	**11**	**$49M**	**$2.8M**	**$4.8M**	**$17M**

Physical Condition

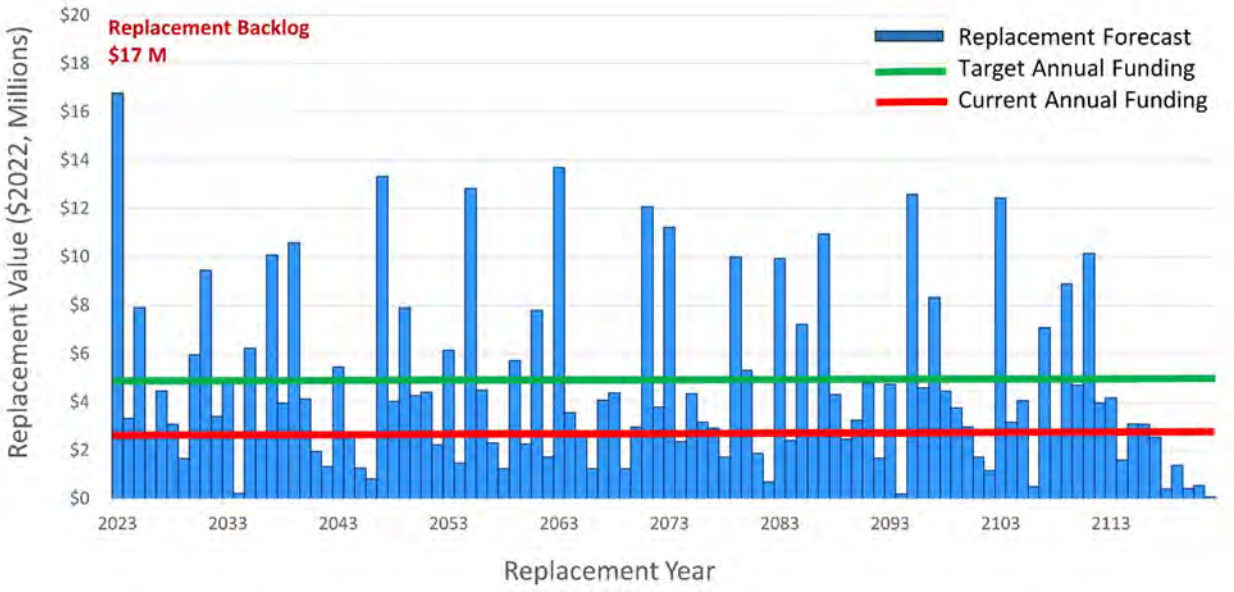


Risk to Service Delivery

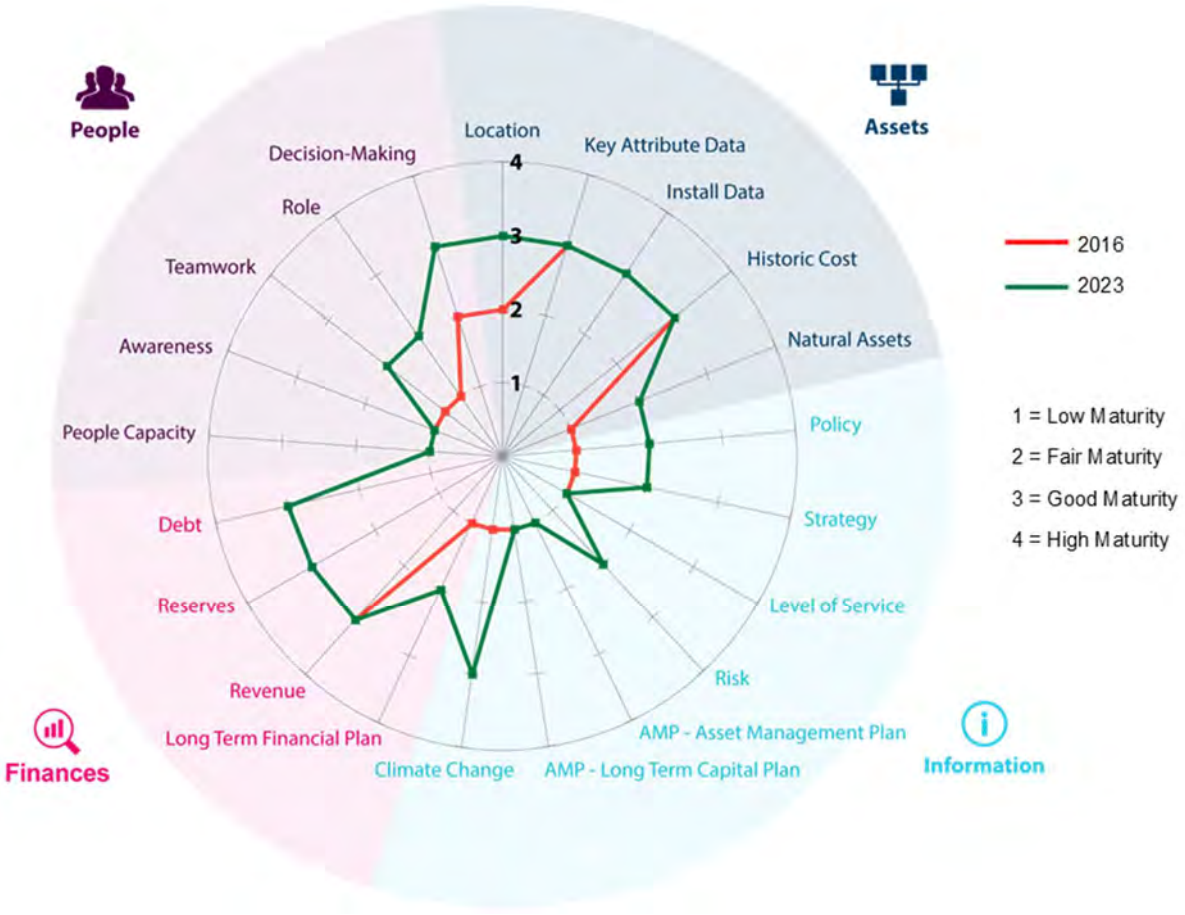
To Be Developed

Vehicles & Equipment Asset Dashboard (Preliminary)

Replacement Forecast vs Asset Replacement Funding



Maturity Assessment AssetSMART2.0



Wastewater Asset Dashboard (Preliminary)

Please note that the information presented in this dashboard is a preliminary snapshot of the asset data currently in Saanich's systems, and that it is expected to become more accurate over time.

Services

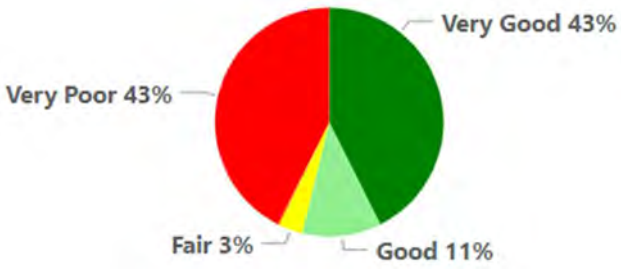
Wastewater Collection Services

Replacement Value ($2022)

Asset Groups

Asset Group	Quantity	Quantity Units	Avg Age	Avg Useful Life	Replacement Value ($2022)	Current Annual Funding ($2022)	Target Annual Funding ($2022)	Backlog ($2022)
Force Mains	19	km	34	87	$19M	$0.1M	$0.2M	$0M
Gravity Mains	548	km	46	79	$926M	$6.1M	$11.8M	$54M
Pump Stations	39	pump stations	34	50	$44M	$0.7M	$2.2M	$37M
Total			**45**	**78**	**$989M**	**$7.0M**	**$14.2M**	**$92M**

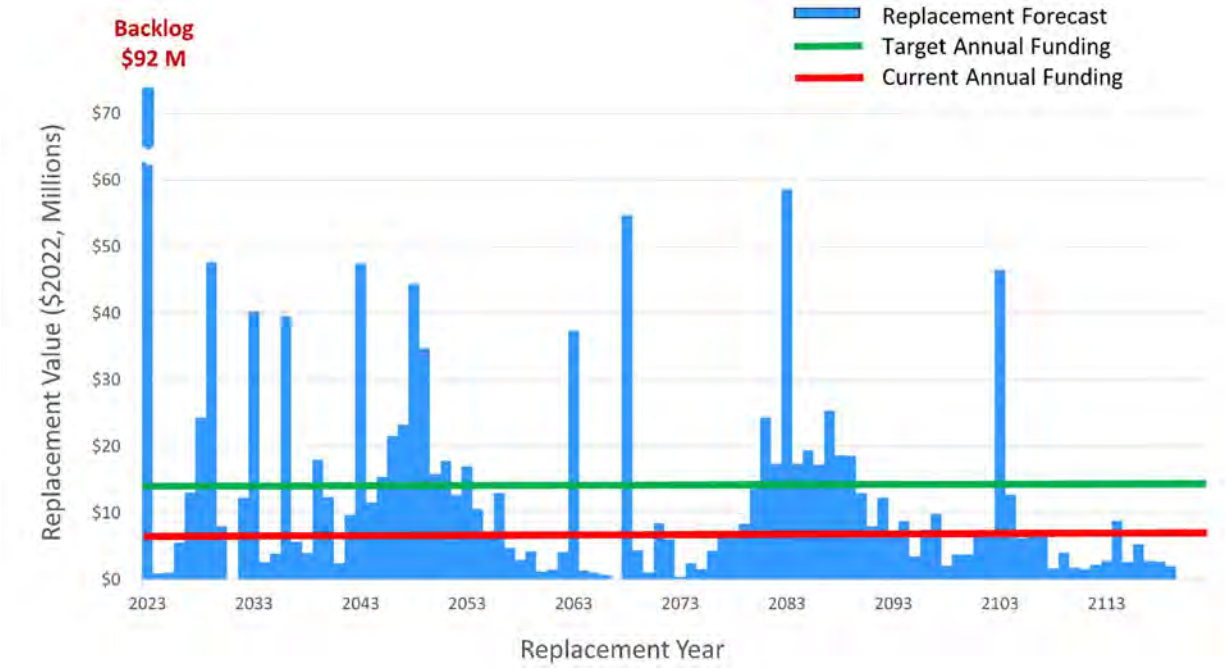
Physical Condition



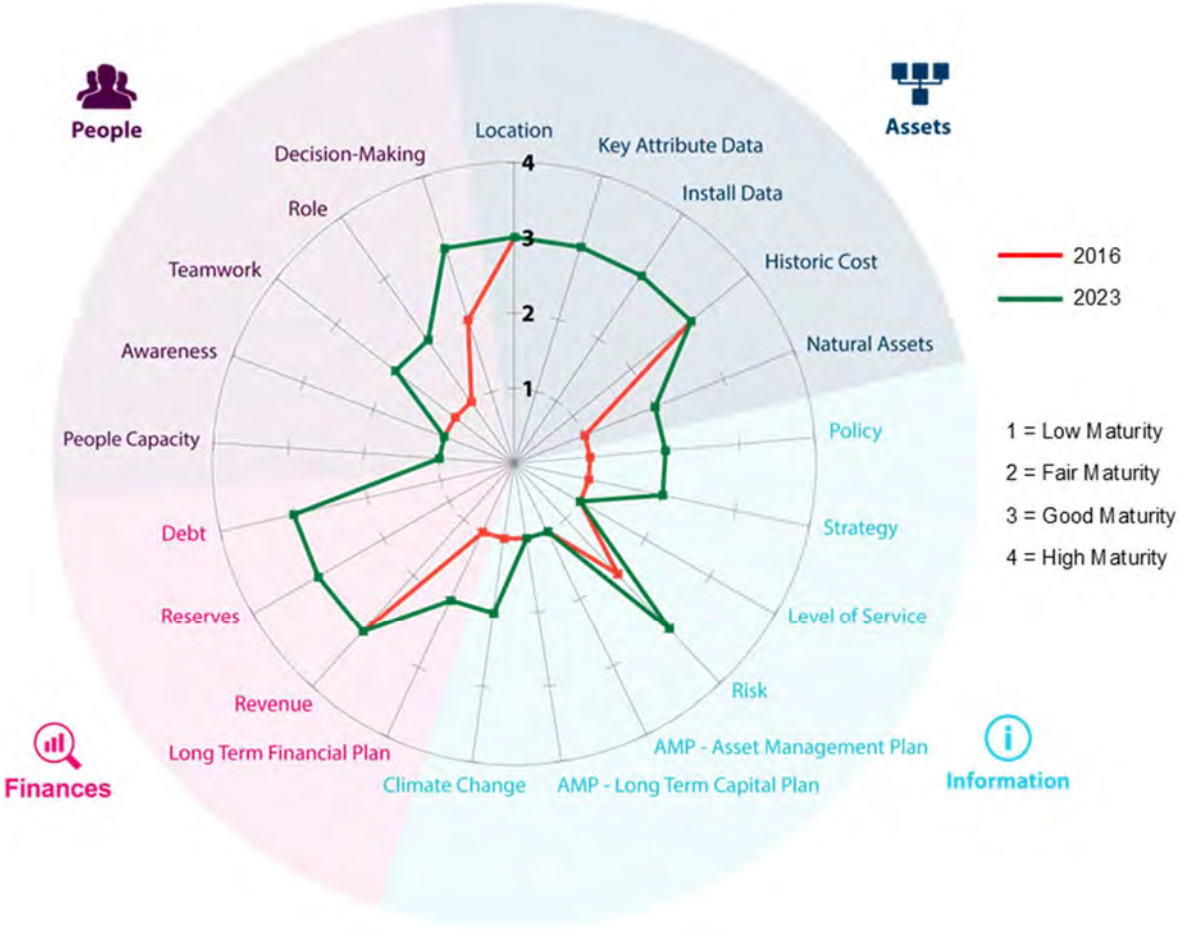
Risk to Service Delivery

Preliminary risk assessment completed for Sewer Master Plan Update in 2022 (to be updated using consistent, District-wide approach).

Replacement Forecast vs Asset Replacement Funding



Maturity Assessment AssetSMART2.0



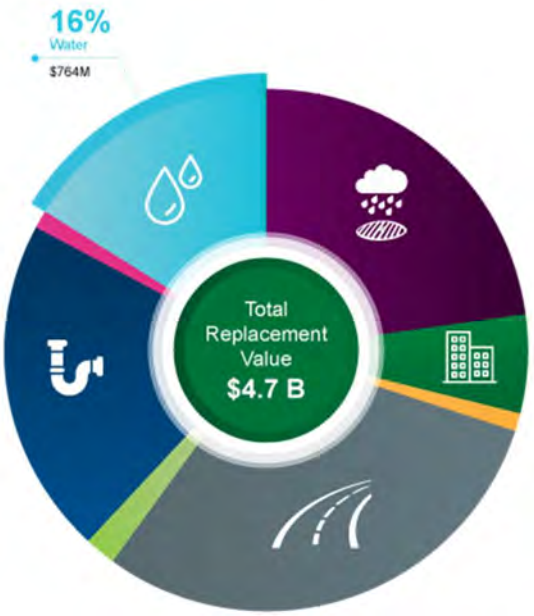
Water Asset Dashboard (Preliminary)

Please note that the information presented in this dashboard is a preliminary snapshot of the asset data currently in Saanich's systems, and that it is expected to become more accurate over time.

Services

Protective Services
Water Distribution Services

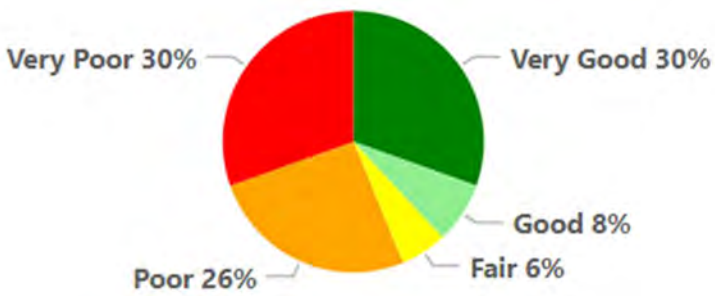
Replacement Value ($2022)



Asset Groups

Asset Group	Quantity	Quantity Units	Avg Age	Avg Useful Life	Replacement Value ($2022)	Current Annual Funding ($2022)	Target Annual Funding ($2022)	Backlog ($2022)
Mains	549	km	45	73	$652M	$5.0M	$9.0M	$126M
Meters	29275	meters	29	17	$23M	$1.1M	$1.3M	$17M
PRV Chambers	46	PRV chambers	36	50	$41M	$0.2M	$0.8M	$9M
Pump Stations	18	pump stations	33	50	$20M	$0.3M	$1.0M	$18M
Reservoirs	5	reservoirs	24	60	$28M	$1.3M	$0.5M	$0M
Total			**43**	**69**	**$764M**	**$7.9M**	**$12.6M**	**$170M**

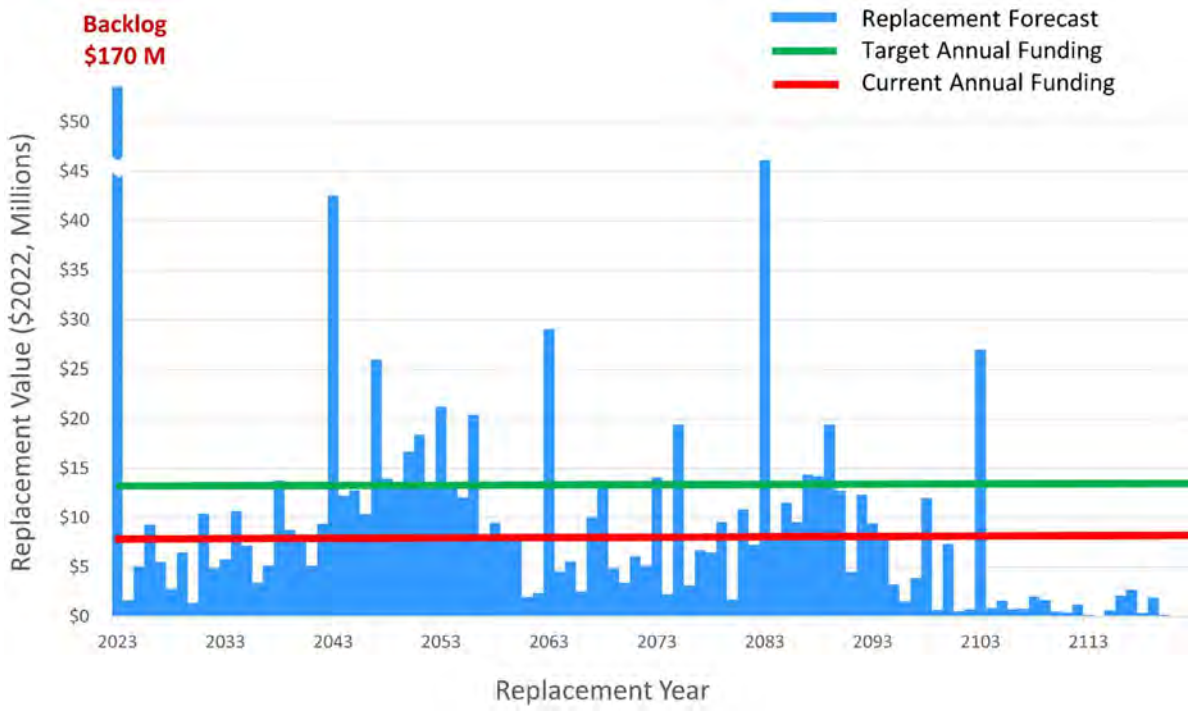
Physical Condition



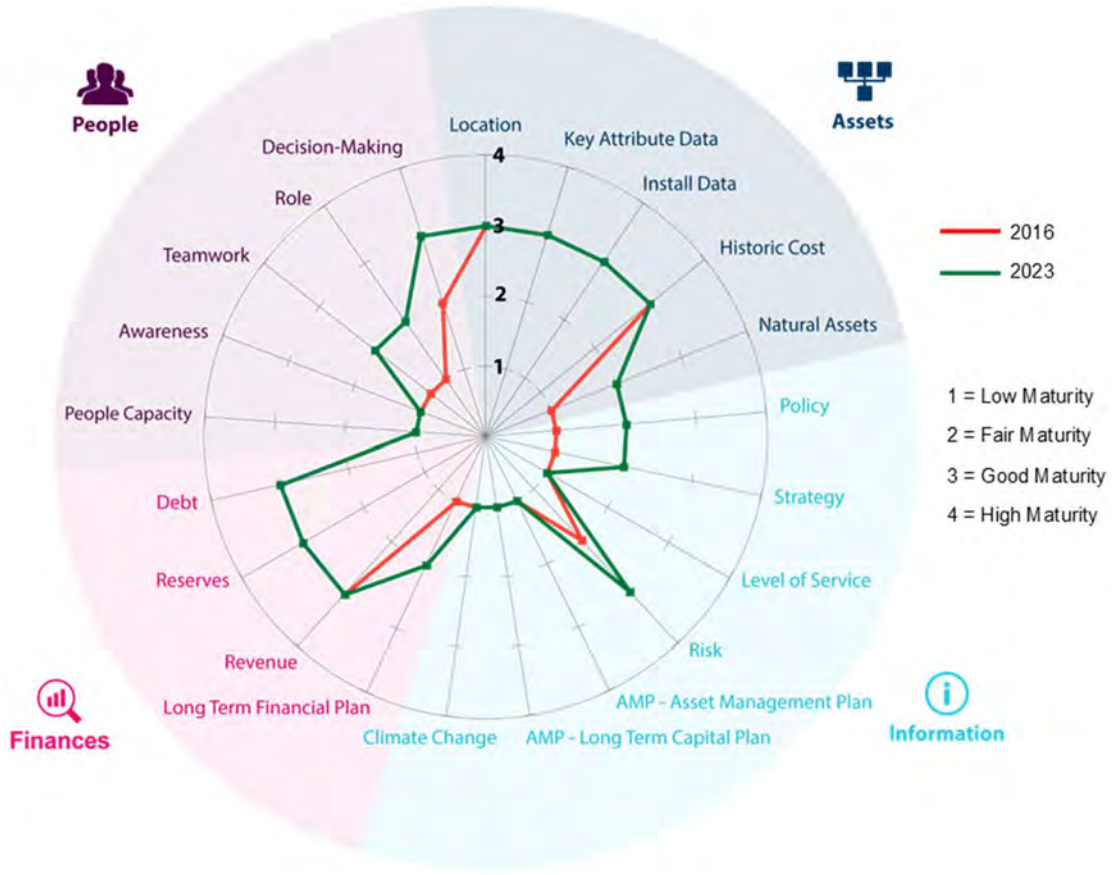
Risk to Service Delivery

Preliminary risk assessment completed for Water Master Plan Update 2022. Risk assessment to be updated using consistent District-wide approach.

Replacement Forecast vs Asset Replacement Funding



Maturity Assessment AssetSMART2.0



Appendix D

Maturity Assessment

AssetSMART 2.0

A Tool to Assess Your Community's Asset Management Practices

What is AssetSMART?

AssetSMART is a tool that local governments can use to assess their capacity to manage their assets. This tool has been designed to help local governments:

- ◊ Evaluate their asset management practices in a comprehensive way
- ◊ Identify particular areas of strength and areas for improvement
- ◊ Establish priorities
- ◊ Build awareness of the many dimensions of asset management
- ◊ Generate productive discussion across departments
- ◊ Measure progress over time
- ◊ Benchmark against other communities
- ◊ Set short-, mid-, and long-term objectives in specific areas

Which communities should use AssetSMART?

AssetSMART has been specifically designed to reflect the unique challenges that local governments face in managing their assets. This tool is intended to be used by any local government, of any size, and at any stage of implementing an asset management program. Whether your community is in the initial or advanced stages of asset management, AssetSMART can help your organization take stock of where it is today and plan for the future.

DATE Original Assessment 2016; Updated 2023

NAME Developed with input from a cross-departmental team

ORGANIZATION The Corporation of the District of Saanich

The Framework

AssetSMART uses Asset Management for Sustainable Service Delivery: A BC Framework (the Framework) as a foundation. The Framework establishes a high-level, systematic approach that supports local governments in moving toward service, asset and financial sustainability through an asset management process.

The Core Elements of Asset Management

People, Information, Assets, and Finances are considered the core elements of asset management. Each of these elements are necessary for sustainable service delivery. Success requires the integration of these four elements throughout the process of asset management. The four core elements form the AssetSMART assessment categories.

ASSETS

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	EVIDENCE / NOTES
1 Location	Accurate location data is available for fewer than half of the assets and is in a format or location that is generally inaccessible to those who need it. ☐	Accurate location data is available for at least 50% of the assets. ☒	Complete and accurate data is available for most assets, including all critical assets. Data is easily accessible to all who require it. ☐	Complete and accurate data is available for all assets, including new assets. Data is easily accessible to all who require it. ☐	Accurate location data exists in GIS for most of our Asset Types: Drainage, Facilities, Transportation, Wastewater, Water. For the Park & Trail Structures Asset Type, some location data exists in GIS and the rest exists in spreadsheets or needs to be developed. For the IT and Vehicles & Equipment Asset Types, location data exists in spreadsheets or needs to be developed. Natural Assets location data currently only exists in Planimetric GIS layers (2007 geometry).
2 Key Attribute Data	Accurate attribute data is available for fewer than half of the assets and is in a format or location that is generally inaccessible to those who need it. ☐	Accurate attribute data is available for at least 50% of the assets. ☒	Complete and accurate data is available for most assets, including all critical assets. Data is easily accessible to all who require it. ☐	Complete and accurate data is available for all assets, including new assets. Data is easily accessible to all who require it. ☐	Accurate attribute data is available in GIS for most of our Asset Types: Drainage, Transportation, Wastewater, Water, although the completeness of data varies by Asset Type. Attribute data for Facilities Asset Type is available in VFA Facility for Municipal Facilities, and in spreadsheets for Park Buildings. Attribute data for Vehicles & Equipment assets exists in spreadsheets. Attribute data for IT assets is currently being populated in ServiceNOW software. Attribute data for Natural Assets currently does not exist.
3 Install Data	The installation date is available for fewer than half of the assets and is in a format or location that is generally inaccessible to those who need it. ☐	Asset installation date is available for at least 50% of the assets. ☒	Accurate install date is available for most assets, including all critical assets. Data is easily accessible to all who require it. ☐	Complete and accurate data is available for all assets, including new assets. Data is easily accessible to all who require it. ☐	Accurate installation date is available for most of our Asset Types, although the completeness of data varies by asset type. The biggest gap is with our Transportation Asset Type, where installation date is not available for assets older than about 15 years. In cases where installation date is not available, age has been estimated based on condition.
4 Historic Cost	Accurate historic cost data is available for fewer than half of the assets and is in a format or location that is generally inaccessible to those who need it. ☐	Accurate historic cost data is available for at least 50% of the assets. ☐	Complete and accurate historic cost data is available for most assets, including all critical assets. Data is easily accessible to all who require it. ☒	Complete and accurate historic cost data is available for all assets, including new assets. Data is easily accessible to all who require it. ☐	Historical cost is available for financial reporting purposes for all infrastructure. Current replacement value (RV) was originally estimated in 2007 for setting a sustainable funding level goal for 2019. As part of the development of the AM Strategy, current RV was updated to 2022, and the sustainable funding level goal needs to be updated.
5 Natural Assets	No consideration is given to natural assets in planning for sustainable service delivery. ☐	There is general awareness of the services provided by natural assets, but natural assets are not included in planning or decision making. ☒	Some natural assets have been identified and the value of service is partially understood. ☐	All significant natural assets have been identified and the value of service they provide is understood. This value is considered in decision making and planning. ☐	The importance of natural assets is acknowledged in Saanich strategic documents, and there is a general awareness of the services provided by natural assets. Several initiatives are underway related to natural assets, including the Biodiversity Conservation Strategy, the Urban Forest Strategy, and the Integrated Stormwater Management Plans. Currently, natural assets are not included formally in decision-making.

INFORMATION

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	EVIDENCE / NOTES
6 Policy	No policies are in place related to sustainable service delivery. ☐	Some policies related to sustainable service delivery are in place, but there are significant gaps or policies are not actionable. ☐	Good policies are in place related to sustainable service delivery, but they are not all referenced for decision making. ☒	Policy(ies) adopted by council that are understood and provide clear direction on how the community will achieve sustainable service delivery. Policies are a regular reference for guiding decisions. ☐	Saanich's Official Community Plan "Sustainable Saanich" sets out the vision for sustainable service delivery. Council approved the AM Policy in 2019. Council approved the Climate Plan in 2020. Saanich's Purchasing Policy requires life cycle costing.
7 Strategy	No strategy is in place. ☐	Components of a strategy or framework are in place, but there are significant gaps in providing direction for sustainable service delivery and the linkage of plans and initiatives. ☒	A strategy / framework is in place that identifies specific sustainable service delivery goals, the approach to achieving them, and identifies how organizational plans or initiatives fit together to inform decision making and achieving the goals. The strategy is not being widely implemented. ☐	A strategy / framework is in place that identifies specific sustainable service delivery goals, the approach to achieving them, and identifies how organizational plans or initiatives fit together to inform decision making and achieving the goals. The strategy is being implemented. ☐	There is currently no AM Strategy. However, in 2022 an AM Program Charter was approved by the AM Steering Committee, which includes a high level road map for developing the AM Program.
8 Level of Service	The levels of service currently delivered are not consistently understood by the public or documented. ☒	In some of the core service areas, the current level of service is understood and documented, and the desired level of service has been defined. ☐	In all service areas, the current level of service is understood and documented, and service targets have been set. ☐	Current and desired levels of service, and trade offs between costs and services are well understood by both staff and the public. ☐	Levels of Service (AM Objectives) are not currently formally documented, discussed with Council or understood by the public. The Annual Report does include some service performance metrics that are linked to the Strategic Plan. At the department level, some technical levels of service have been discussed and established for operational purposes, however this is not currently part of a formal decision-making process.

INFORMATION

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	EVIDENCE / NOTES
9 Risk	Risks to assets and service levels are not understood or documented ☐	Asset risk is estimated according to asset remaining life only, condition assessment information is not available. Broader service delivery risks have not been considered. ☒	Estimated remaining life is known for all assets and is supported by a condition assessment for critical assets or assets nearing replacement. Risk assessments consider the consequence of failure. Some 'big-picture' risks to service delivery for the organization are understood at a corporate level. ☐	Asset risks are well understood and documented based on evidence of the probability and the consequence of failure. High-level organizational risks to service delivery are well understood throughout the corporation. ☐	There is a District-wide Enterprise Risk Management Framework, and a District-wide risk matrix is currently being developed. In 2022, a Community Risk Assessment was completed for emergency management purposes. In 2018, a Climate Hazard and Vulnerability Assessment was completed as part of developing the Climate Plan. Currently, service level risk assessment has not been completed for for any Asset Types. Asset level risk assessment has been completed only for our Wastewater and Water Asset Types. Condition assessment studies have been completed for Drainage, some Facilities (Municipal Facilities but not Park Buildings), some Park & Trail Structures (playgrounds), some Vehicles & Equipment (fleet vehicles), Transportation, Wastewater and Water Asset Types, but there is currently no condition assessment data for IT and Natural Asset Types.
10 AMP - Asset Replacement Plans	No Asset Replacement Plan exists to show the theoretical timing for asset replacement. ☒	Parts of an Asset Replacement Plan exist (e.g. for some asset categories, for a duration <20 years, etc.) but it is not consolidated into an organizational long term view. ☐	An Asset Replacement Plan has been developed, but it is either <20 years in scope or does not include all assets. ☐	A long term (75+ year) plan is in place that illustrates the timing of expenditure to replace all existing assets, the current infrastructure deficit, and the average annual sustainable funding level. ☐	There are currently no Asset Management Plans (AM Plans) developed for the District. However, there are District-wide and departmental strategies and plans that will inform the development of AM Plans.
11 AMP - Long Term Capital Plan	No long term (10 year) capital plan is in place. ☒	A ten year capital plan is in place but it is limited to new projects and it does not reflect anticipated asset renewal. ☐	A ten year capital plan is in place that reflects new capital projects for growth or regulatory compliance, and the replacement of existing assets to manage risk and deliver an appropriate level of service. ☐	A ten year capital plan is in place that is current, informed by level of service targets, risk to service delivery. The capital plan is integrated with the long term financial plan, and is being followed and tracked. ☐	The annual Financial Plan currently includes a 5 year capital forecast, which is informed by departmental strategies and plans related to each Asset Type. These departmental documents include information on upcoming renewal/replacement projects as well as planned upgrades/new infrastructure.

12 Climate Change

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	EVIDENCE / NOTES
Climate change is not considered in service delivery risk or long term asset replacements. ☐	Probable local impacts of climate change have been identified and are considered in some organizational plans. ☒	An assessment of risk to some critical existing infrastructure has been conducted. Design and construction of new assets consider climate change. ☐	An assessment of risk to existing infrastructure has been conducted, and plans are in place to manage this risk. Design and construction of new assets consider climate change. ☐	Climate change is considered in various ways within the organization. The Official Community Plan has a significant commitment to climate action. The Climate Plan sets District-wide goals for climate mitigation and adaptation, including specific goals for our Facilities, Transportation and Vehicles & Equipment Asset Types. The Active Transportation Plan sets out how the Transportation climate targets will be met.

FINANCES

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	EVIDENCE / NOTES
13 Long Term Financial Plan	No long term financial plan is in place. ☐	A financial plan is in place but it covers <10 years or does not reflect the future costs of replacing existing assets. ☒	A long term (10+ years) financial plan is in place that reflects the revenue required and funding sources to fund new assets and asset replacements, but the plan is not being followed or updated. ☐	A comprehensive long term financial plan exists and is based on up to date information. The plan looks forward 10 years or more and is integrated with long term capital plan. The plan is being tracked and followed. ☐	Currently, there is a 5 year Financial Plan that is updated annually, and which currently includes the sustainable funding level targets for infrastructure replacement that were establshed in 2007; the sustainable funding targets were met in 2019 but they have not been revised to reflect changing costs or to include new assets. The District completed a Long Term Financial Plan in 2022 that includes a 10 year capital and operating forecast, and establishes financial policy measures and targets.
14 Revenue	Revenue is year to year and there is no linkage between revenues and long term requirements. Revenues are not sufficient to meet needs without reliance on grants or subsidies. ☐	Revenue is sufficient and reliable to fund the requirements for the next 5 years, but there is a significant gap between revenues and sustainable funding levels for later years. ☒	Revenue is sufficient and reliable to fund the requirements in the 10 year capital plan, but there is still a gap between revenues and sustainable funding levels for the long term. ☐	Revenues are sufficient, predictable, and stable to fund long term sustainable service delivery in alignment with the long term financial plan and the asset replacement plan. ☐	Currently, tax and utility rates for are considered to have sufficient revenue per the annual Financial Plan. However, the long term requires assessment once the sustainable funding levels are updated.
15 Reserves	No reserves are in place. ☐	Minimal reserves are in place that can buffer short term fluctuations in revenue (e.g. 6 weeks operating expenses). ☐	Reserves are in place to buffer short term revenue fluctuations. There are dedicated reserves for future capital renewal, but do not meet the levels required as identified in the financial plan. ☒	Reserves are held at levels established in accordance with the financial plan in order to meet long term requirements. ☐	The District has a reserve strategy to ensure that all Asset Types have established reserves. The reserve levels will need to be reviewed once the sustainable funding levels are updated.
16 Debt	Debt levels are high (at or very near the maximum), limiting capacity for additional borrowing and no plan is in place to reduce debt. ☐	Debt levels higher than desired and debt management strategy is being considered. ☐	Debt levels are reasonable but is trending upward and are not aligned with the long term financial plan. ☒	Debt levels are prudent and reasonable. Debt levels are in line with the long term financial plan and relatively stable. ☐	Debt levels are currently very low for the District.

PEOPLE

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	EVIDENCE / NOTES
17 **People Capacity**	Staff have no time for asset management. [x]	Some staff time could be made available for asset management, but staff have limited or no knowledge of the tasks and processes required to meet asset management outcomes. [ ]	Staff are investing some time in asset management and are working to build the capacities, knowledge, and systems needed. [ ]	Staff have the necessary time, knowledge, skills, and capacities to achieve asset management outcomes and are implementing asset management as part of their jobs. [ ]	There is no staff capacity for additional asset management work. Currently, departmental staff who carry out the day-to-day work of service delivery and management of physical assets are working at capacity. Additional AM work will require additional resources and staff training. In 2021, a new, dedicated resource was approved by Council to develop and implement a formal, District-wide AM Program.
18 **Awareness**	There is no awareness of the needs to manage assets and sustainably deliver services among staff, elected officials, or members of the public. [ ]	Staff are generally aware of the major issues related to Asset Management and service sustainability in the community, and what is needed to address these issues. [x]	Staff members and elected officials are aware of community issues and future risks related to sustainable service delivery. [ ]	Members of the public are aware of the issues related to sustainable service delivery, and there is evidence these issues are considered in public decision making. [ ]	District staff currently have a general awareness of the concepts of asset management, and have been provided with access to information through the District's internal and external AM Program webpages. Formal training has been provided to the AM Working Group. Members of Council are aware of the issues related to sustainable service delivery, and have been provided with information through emails, reports and presentations.
19 **Teamwork**	No cross functional team is in place to manage assets. There are significant siloes in the organization that prevent information from being shared and used in decision making. [ ]	A cross functional team is in place, but siloes among departments or staff positions (e.g. between operations and management) still prevent information from being shared. [x]	A cross functional team is in place that is effectively bridging siloes in the organization. [ ]	There is no perception of siloes across departments at all levels of the organization. There is a strong culture of teamwork and information is readily and consistently shared through formal and informal channels. [ ]	A cross-functional AM Steering Committee has been in place since 2018, and a cross-functional AM Working Group was established in 2022. There is a need to continue to improve communication between departments.
20 **Role**	People do not understand their role in asset management or sustainable service delivery which hinders the ability to manage assets. [ ]	A small group of people understand their role as it relates to sustainable service delivery, but there are some significant gaps causing things to fall through the cracks. [x]	Most people in the organization understand their role as it relates to sustainable service delivery. [ ]	Roles are clearly understood by everyone, including council, resulting in nothing ‘falling through the cracks’. [ ]	AM is recognized as a priority of the organization. Currently, there is no formal documentation of roles & responsibilities for management of assets, and there are some grey areas that require further discussion. Job descriptions currently do not reference asset management.

PEOPLE

21 Decision Making

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	EVIDENCE / NOTES
Decisions are made based on a short term frame or reactive in nature and in isolation of appropriate information. ☐	Decision making based on a long term frame, but are informed only by incomplete or anecdotal information. ☒	Decision making is based on the long term and incorporates appropriate information. ☐	Decision making about assets and service delivery is informed with appropriate and timely information, is transparent, and is aligned with community priorities and long-term sustainable service delivery. ☐	There is currently no formal, documented process for District-wide decision-making. TSome departments have internal metrics and processes for decision-making, however there is a need for consistency in what is being communicated to decision-makers.

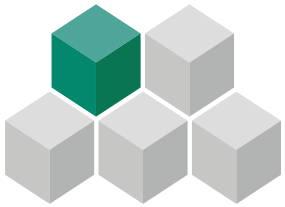
FCM FEDERATION OF CANADIAN MUNICIPALITIES FÉDÉRATION CANADIENNE DES MUNICIPALITÉS

Saanich District-wide Assessment 2023

Asset Management Readiness Scale

Municipal Asset Management Program

Policy and governance



By developing this competency, your organization is putting in place policies and objectives related to asset management (AM), bringing those policies to life through a strategy and roadmap, and then measuring progress and monitoring implementation over time.

	Outcomes: Select the outcomes that your organization has achieved.				
Outcome areas	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Policy and objectives	☒ Senior management is committed to formalizing an **AM program**.	☒ We have drafted an **AM policy**. ☒ Senior management and council have endorsed the **AM policy**.	☐ We are starting to use our **AM policy** to guide our actions.	☐ We manage assets and services in accordance with our **AM policy** and organizational objectives.	☐ We continue to validate and refine our corporate, service and AM objectives based on the evolving needs of our community.
Strategy and roadmap	☒ We have identified the benefits that we want AM to deliver, and the benefits support organizational objectives.	☒ We have a strategy for our **AM program**. ☒ We have a draft **roadmap** that outlines our approach for the next 1 to 3 years.	☐ We have a **roadmap** that details the actions for implementing our **AM strategy** over the next 3 to 5 years.	☐ We are achieving our **AM policy** objectives. The necessary workflows, documents, and reporting tools are in place. ☐ We update our **roadmap** to address evolving needs.	☐ We follow our **roadmap** and continually improve our AM practices. ☐ We document improvements to our AM practices.
Measurement and monitoring	☒ We have identified short-term actions that will demonstrate early progress on AM.	☒ We are collecting baseline data on our current AM practices.	☐ We have established performance measures to monitor our asset management progress, outcomes, and the benefits to our community.	☐ We use performance measures to monitor AM progress, outcomes, and benefits.	☐ We monitor performance and use the feedback to prioritize and make ongoing refinements and improvements to AM practices.

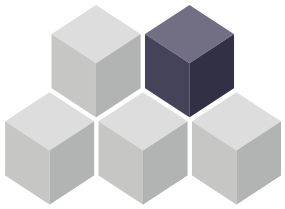
x

Readiness level: You have achieved a readiness scale level when your organization can demonstrate achievement of all outcomes for that level.

Readiness level	Working on Level 1	Completed Level 1	Completed Level 2	Completed Level 3	Completed Level 4	Completed Level 5
	☐	☒	☒	☐	☐	☐

People and leadership

Saanich District-wide Assessment 2023



By developing this competency, your organization is setting up cross-functional teams with clear accountability and ensuring adequate resourcing and commitment from senior management and elected officials to advance asset management.

Outcomes: Select the outcomes that your organization has achieved.

Outcome areas	Level 1	Level 2	Level 3	Level 4	Level 5
A **Cross-functional teams**	☒ We have identified the representation we need on our cross-functional **AM team**.	☒ We have a cross-functional **AM team*** that guides the planning and implementation of our **AM program**.	☐ Our **AM team*** works within our organization to lead, communicate, and support AM improvements and organizational changes.	☐ Our **AM team*** is permanent and tasked with guiding and supporting AM across the organization on an ongoing basis.	☐ Our **AM team*** guides and supports the ongoing improvement of AM within the organization.
B **Accountability**	☒ We have a champion who has been tasked with planning for our **AM program**.	☒ Our **AM team*** has a documented mandate to develop our **AM program**, which is outlined in a terms of reference and a one- to three-year **roadmap**. ☒ Our **AM team** is accountable to senior management and council.	☐ Our **AM team*** is accountable for implementing our **AM program**. ☐ AM roles and responsibilities are included in staff job descriptions.	☐ We have operationalized AM roles and responsibilities across our organization.	☐ We document changes to AM roles and responsibilities as needed to support our evolving requirements.
C **Resourcing and commitment**	☒ Council knows that resources must be dedicated to exploring the requirements for **AM** and for drafting an **AM roadmap**.	☐ Council demonstrates buy-in and support for AM and allocates resources (funding or staff time) to further develop the **AM program**.	☐ Council champions AM as a core business function and has approved funding to continue **AM roadmap** activities.	☐ Council funds ongoing AM monitoring and enhancement.	☐ The **AM team** measures and monitors progress. ☐ Council demonstrates commitment to ongoing improvement of AM practices.

Readiness level: You have achieved a readiness scale level when your organization can demonstrate achievement of all outcomes for that level.

Readiness level	Working on Level 1 ☐	Completed Level 1 ☒	Completed Level 2 ☐	Completed Level 3 ☐	Completed Level 4 ☐	Completed Level 5 ☐

* Note: Larger organizations may have both an AM team responsible for implementation and an AM steering committee to provide direction and oversee the work. Smaller organizations may group these functions together. This outcome may be better suited to an AM team or an AM steering committee, depending on the organization. In some small communities the AM team may be as few as two people.

Data and information

Saanich District-wide Assessment 2023

By developing this competency, your organization is collecting and using asset data, performance data and financial information to support effective asset management planning and decision-making.

	Outcomes: Select the outcomes that your organization has achieved.				
Outcome areas	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Asset data	☒ We have **asset inventory data**, including approximate quantities of assets within most asset groups. ☒ We have some anecdotal information on asset condition. Some age information exists.	☒ We have a **basic inventory** of most **critical assets**, including information on general asset properties such as size, material, location and installation date. ☐ We are moving our data to a centralized location for use by the **AM team** (note: this does not require AM software). ☐ We have defined **critical assets** and have some information on asset condition for these assets.	☐ We have a consolidated, **basic inventory** of all assets. ☐ We have defined life cycle investment requirements for **critical assets**. ☐ We have standardized condition rating systems defined for most asset groups. ☐ We have asset condition information on all **critical assets**.	☐ We have expanded **inventory** data for some assets ☐ We have evaluated the life cycle investment requirements associated with **critical assets**. ☐ We update data according to cycles defined in our **AM plans** or **strategy**.	☐ We have expanded **inventory data** for most assets. ☐ We have evaluated the life cycle investment requirements associated with most assets.
Performance data	☒ We have informal or anecdotal approaches for measuring asset or service performance.	☐ We have some information on performance of **critical assets**, collected from a variety of sources.	☐ We have defined **level of service** measurements for some service areas. ☐ We have captured data on current **level of service** performance for some service areas. ☐ We have reviewed service levels and asset performance with council.	☐ We have defined **level of service** measurements for critical service areas. ☐ We communicate the results from our **level of service** measurement program to staff and council regularly.	☐ We have defined **level of service** measurements for most or all service areas. ☐ We continually improve how we collect data on **level of service** performance.

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	Outcomes: Select the outcomes that your organization has achieved.				
Outcome areas	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Financial information	☒ We have **financial information** on our assets, supporting minimum PS-3150 reporting requirements.*	☒ We have major capital renewal and operating & maintenance (O&M) expenditure data for some assets. ☐ We have a strategy to link AM and **financial information**.	☐ We have capital (new and renewal) and O&M expenditure data for most assets. ☐ We have linked AM and **financial information** for all **critical assets**. ☐ We can demonstrate the gaps between forecasted infrastructure needs and current spending levels.	☐ We understand the cost of sustaining current **levels of service** for all **critical assets**.	☐ We understand the trade-offs between investment and the **level of service** we deliver and use this to optimize our financial plans.

Readiness level: You have achieved a readiness scale level when your organization can demonstrate achievement of all outcomes for that level.

Readiness level	**Working on Level 1** ☐	**Completed Level 1** ☒	**Completed Level 2** ☐	**Completed Level 3** ☐	**Completed Level 4** ☐	**Completed Level 5** ☐

* PS-3150 is the Public Sector Accounting Board's standard guiding the treatment of tangible capital assets.

Planning and decision-making

Saanich District-wide Assessment 2023

By developing this competency, your organization is documenting and standardizing how the organization sets asset management priorities, conducts capital and operations and maintenance (O&M) planning, and decides on budgets.

	Outcomes: Select the outcomes that your organization has achieved.				
Outcome areas	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
A **Documentation and standardization**	☒ Our asset planning approaches vary across the organization.	☒ Our departments follow a similar but informal asset planning approach. ☒ We evaluate investment needs and priorities based on a mix of structured and ad-hoc practices and criteria.	☐ We have a structured asset planning approach, but application is inconsistent. ☐ We set priorities using criteria based on organizational goals and objectives.	☐ We employ a consistent structured asset planning approach for each of our **critical services**. ☐ We set priorities using criteria that are fully aligned with our organizational goals and objectives.	☐ We employ a consistent structured asset planning approach for all services. ☐ We adapt our planning approach and criteria to align with evolving organizational goals and objectives.
B **Asset management plans**	☒ Our approach to asset renewal focuses on reacting to basic needs (e.g. growth, regulations and known problems). ☒ We evaluate priorities based on available information, staff experience, and input from council and management.	☐ We have draft **AM plans** for some asset classes, with forecasted financial needs based on estimated data.	☐ We have **AM plans** for **critical services**, based on a mix of estimated and actual data. ☐ Our **AM plans** include available information about **level of service** (current and target) and **risk** management. ☐ Our **AM plans** identify short-term issues and priorities.	☐ We have **AM plans** for most services based on actual data. ☐ Our **AM plans** include basic needs forecasting and **risk** management strategies for **critical assets**. ☐ Our **AM plans** are based on both short- and long-term issues and priorities. They balance short-term service objectives with longer-term goals and **risks**. ☐ We keep our **AM plans** up to date through normal business.	☐ We have **AM plans** for all services based on actual data. ☐ Our individual **AM plans** are integrated across services. ☐ Our **AM plans** include needs forecasts and **risk** management strategies for most assets. Plans address **risks** to both service and business goals.

Saanich District-wide Assessment 2023

	Outcomes: Select the outcomes that your organization has achieved.				
Outcome areas	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
Budgets and financial planning	☒ We prepare annual capital and operating budgets based on historical values. ☒ We deal with new needs reactively, as they occur.	☒ We prepare annual capital and operating budgets based on a mix of historical values and new priorities.	☒ We prepare an annual capital budget based on an annual assessment of current needs. ☒ We have a 3-year **capital plan** that addresses short-term issues and priorities.	☐ We prepare annual needs-based capital and operating budgets that are based on an annual assessment of **risks** and current needs. ☒ We have a 5-year **capital plan*** and update it annually. ☐ We update our **long-term financial plan** (at least 10-year) annually and understand the risks associated with our investment gap.	☐ We prepare multi-year needs-based capital and operating budgets that are based on our short- and mid-term needs. ☐ We take a structured approach to address in-cycle changes.

Readiness level: You have achieved a readiness scale level when your organization can demonstrate achievement of all outcomes for that level.

Readiness level	Working on Level 1	Completed Level 1	Completed Level 2	Completed Level 3	Completed Level 4	Completed Level 5
	☐	☒	☐	☐	☐	☐

* Communities may benefit from long-term capital plans that extend beyond five years to ten years or more.

Contribution to asset management practice

By developing this competency, your organization is supporting staff in asset management training, sharing knowledge internally to communicate the benefits of asset management, and participating in external knowledge sharing.

	Outcomes: Select the outcomes that your organization has achieved.				
Outcome areas	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
A **Training and development**	☒ Our AM training and development approach is informal and largely driven by the personal initiative of staff. ☒ Some staff conduct targeted research, seeking out basic information on AM concepts and techniques.	☐ Our AM training and development requirements are defined by management based on short-term needs. ☒ Selected staff are trained on basic AM concepts. ☐ Council has opportunities to increase their understanding of AM concepts.	☐ We provide all staff with basic AM awareness training. ☐ Some staff undergo training on advanced AM concepts specific to their roles and responsibilities. ☐ Staff and council are able to communicate the value of AM in their own words.	☐ We define AM knowledge and skill requirements. A training plan is in place for all positions. ☐ Council, management and staff receive role-appropriate AM training to establish needed capacity across the organization.	☐ We train select staff members as internal experts to support the ongoing development of organizational capacity. ☐ Proactive, role-based training serves as a support for career development and succession planning.
B **Internal communication and knowledge sharing**	☒ We are aware of the need to mitigate the risk of losing information held in the minds of long-term staff.	☒ We mitigate the risk of losing information held in the minds of long-term staff, through improved record keeping.	☐ A culture of knowledge sharing is emerging internally, supported by official initiatives. ☐ We collect and maintain AM knowledge resources. ☐ We communicate the benefits of AM internally to staff and council.	☐ A culture of knowledge sharing exists and is supported by a mix of formal and informal initiatives. ☐ We disseminate AM knowledge resources within the organization.	☐ We capture AM knowledge and it flows freely throughout the organization. ☐ Staff leverage internal and industry knowledge and leading practice resources.

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	Outcomes: Select the outcomes that your organization has achieved.				
Outcome areas	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**
External communication and knowledge sharing	☒ We are investigating AM-related organizations and resources.	☒ Staff or elected officials attend AM-related events. ☒ We share basic information on current capital projects with the public.	☒ We are members of one or more AM organizations and actively share our AM experience. ☒ We share basic information on our assets, the services we provide, and future needs with the public.	☐ We are actively involved in AM organizations and present at AM events. ☐ We share information with our peers on our experience, innovations and lessons learned. ☐ We rely on the data from our **AM program** to explain decisions to the public.	☐ We are a thought leader on AM within the municipal sector. ☐ We are active in coaching others to improve the overall body of AM knowledge. ☐ We communicate the benefits of AM to the public.

Readiness level: You have achieved a readiness scale level when your organization can demonstrate achievement of all outcomes for that level.

Readiness level	Working on Level 1	Completed Level 1	Completed Level 2	Completed Level 3	Completed Level 4	Completed Level 5
	☐	☒	☐	☐	☐	☐

Source: Government of Nunavut

Assessment

Saanich District-wide Assessment 2023

Use this section to record your level for each outcome and competency, as well as to describe your current actions and documents and potential actions for improvements. Examples of completed assessments can be found at the end of this document.

Policy and governance

Outcome areas	Readiness level	Notes: Describe current actions and documents	Potential actions for improvements
 **Policy and objectives**	2	We have a Council approved AM Policy that establishes the key principles (AM Objectives) for our AM Program.	• Develop and implement an AM Strategy and five year implementation plan • Establish AM Program performance measures
 **Strategy and roadmap**	2	We have an AM Program Charter that establishes the goals and objectives for our AM Program, and a high-level roadmap.	
 **Measurement and monitoring**	2	We have assessed the maturity of our current District-wide AM practices using the FCM AMRS, and we have assessed our maturity on a department level using AMBC's AssetSMART2.0.	
Overall	Completed Level 2		

People and leadership

Outcome areas	Readiness level	Notes: Describe current actions and documents	Potential actions for improvements
 Cross-functional teams	2	The AM Steering Committee is a cross-functional team that provides oversight and direction to the AM Program. The AM Working Group is a cross-functional team that provides input to program development and implementation.	• Confirm roles and responsibilities for specific components of the asset lifecycle in AM Plans. • Include AM roles and responsibilities in staff job descriptions. • Bring the AM strategy to Council for approval. • Bring the updated Infrastructure Replacement Funding Strategy to Council for approval.
 Accountability	2	We have an AM Program Charter that establishes the governance structure, and roles and responsibilities for the AM Program.	
 Resourcing and commitment	1	Council's Strategic Plan direct staff to improve our AM practices, and Council has allocated resources to the AM Program.	
Overall	Completed Level 1		

Data and information

Outcome areas	Readiness level	Notes: Describe current actions and documents	Potential actions for improvements
 Asset data	1	Most of our assets are in our GIS system, including key attribute data (e.g. size, material, installation date). Other asset information (e.g. condition, ownership, useful life, replacement value) is not in a centralized location.	• Move asset data to a central location with and create an asset dashboard that is accessible by all staff. • Gather condition assessment information for all assets. • Establish lifecycle activities and costs. • Define and document our AM Objectives (Levels of Service). • Link our technical and financial asset data.
 Performance data	1	The District-wide Annual Plan includes service performance objectives, and some of our departmental strategies and plans include information on service performance.	
 Financial information	1	Our annual Financial Plan includes a five year capital and operating expenditure forecast. We have an Infrastructure Replacement Funding Strategy that establishes an annual replacement funding target, but it requires updating.	
Overall	Completed Level 1		

Planning and decision-making

Outcome areas	Readiness level	Notes: Describe current actions and documents	Potential actions for improvements
 Documentation and standardization	2	Our departments follow a similar approach for reporting on our Tangible Capital Assets, and for developing capital and operating budget forecasts for input to the annual Financial Plan.	• Develop asset management plans for each asset type, that assess service and asset level risk, define lifecycle activities and prioritize capital and operating plans based on risk. • Update financial plans to incorporate risk-based prioritization of forecasted spending.
 Asset management plans	1	Our departments vary in maturity in the approach to developing prioritized capital plans for renewal of existing assets; some are based on risk-based master plans, and others are based on available information and staff experience.	
 Budgets and financial planning	3	We have a five-year capital plan that is updated annually.	
Overall	Completed Level 1		

Contribution to asset management practice

Outcome areas	Readiness level	Notes: Describe current actions and documents	Potential actions for improvements
 Training and development	1	Selected staff have received AM training in the past, and the AMWG received in-house and external AM training in 2022.	• Create an AM Competency Development Plan, including update of job descriptions to include asset management responsibilities and a staff training plan. • Create operational plans for each department or service area to capture and share internal knowledge. • Continue to share information and collaborate with our peers.
 Internal communication and knowledge sharing	2	Through our EGBC License to Practice, we improved our record-keeping and data capture processes. Most departments are starting to capture information from long-term staff by documenting processes and procedures.	
 External communication and knowledge sharing	3	We are an active member of several external AM organizations (e.g. AMBC Community of Practice, South Vancouver Island AM Community of Practice, and CNAM).	
Overall	Completed Level 1		

Appendix E

Strategic Plan Performance Indicators

Strategic Plan Performance Indicators

Document History

Version	Summary of Changes	Document Status	Date
1	First-generation document for AM Strategy	Final	June 2023

Strategic Plan Performance Indicators (2022 Annual Report)

Strategic Goals and Performance Indicators	Source of Data	2022 Annual Report	Alignment With Service Type	Alignment with Asset Type
Community Well-Being				
Diversity, respect and inclusion is vital				
Citizens who feel the services offered by Saanich reflect our diversity (age, gender and ethnicity)	Citizen Pulse Survey	2022: 62%	General Government Services	n/a
Residents who have a sense of belonging in their community	Citizen Pulse Survey	2022: 64%	General Government Services	n/a
Public safety is critical to livability in our community				
Citizens who agree that Saanich neighbourhoods are safe	Citizen Survey	2022: 77%	Protective Services	Facilities; Information Technology; Vehicles & Equipment
Citizens who agree roads in Saanich are safe for cars	Citizen Pulse Survey	2022: 81%	Transportation Services	Transportation
Households prepared for a seven-day emergency disaster event	Citizen Survey	2022: 42%	Protective Services	n/a
A healthy community is a worthy investment				
Citizens who rate the quality of life in Saanich as good or very good	Citizen Survey	2022: 89%	General Government Services	n/a
Citizens who participated in physical activity 3 or more days per week	Citizen Survey	2022: 85%	Parks Services; Recreation & Community Services	Facilities; Park & Trail Structures; Transportation
Citizens who have a vegetable garden or keep poultry	Citizen Survey	2022: 47% vegetable, 0% poultry%	General Government Services	n/a
Citizens who spend 1 to 5 hours per week in activities or events involving heritage and arts	Citizen Survey	2022: 30%	Recreation & Community Services	Facilities
Residents who have access to a Saanich park within 0.5 km (5-10 minute walk)	Planning Department	2022: 97%	Parks Services	Natural Assets; Park & Trail Structures

Strategic Goals and Performance Indicators	Source of Data	2022 Annual Report	Alignment With Service Type	Alignment with Asset Type
Residents who have access to a Saanich park, regional park or publically accessible greenspace within 0.5 km (5-10 minute walk)	Planning Department	2022: 100%	Parks Services	Natural Assets; Park & Trail Structures
Affordable Housing, Land Use and Infrastructure Management				
Affordable and diverse housing that meets our residents' needs now and in the future				
30% or more of family income required for housing - renters	Stats Canada Census data	2022: 39.1%	General Government Services	n/a
30% or more of family income required for housing - owners	Stats Canada Census data	2022: 16.6%	General Government Services	n/a
Saanich social and affordable housing units	BC Housing	2021: 5,962	General Government Services	n/a
People on regional wait-list for supportive housing	Greater Victoria Coalition to End Homelessness Mission/CRD	2022: 1,033	General Government Services	n/a
Residential units in Saanich	Planning Department	2022: 50,064	General Government Services	n/a
Saanich residents in core housing need and extreme housing need for both owners and renters	Planning Department	2022: 10.3%	General Government Services	n/a
Land use decisions are consistent with our community-supported plans				
Citizens living inside centres, villages and corridors	Planning Department	2022: 40%	All Service Types	All Asset Types
Asset management is critical to sustainable, effective service delivery				
Asset management - Average Facility Condition Index (FCI) for all major District facilities	Engineering Department	2022: 0.5	All Service Types	Facilities
Active Transportation networks help our residents commute and connect				
Combined modal share, all trips made by walking, cycling and transit	Stats Canada Census	2017: 23%	Transportation Services	Transportation
Modal share - all trips made by: Walking	Stats Canada Census	2017: 8%	Transportation Services	Transportation
Modal share - all trips made by: Cycling	Stats Canada Census	2017: 5%	Transportation Services	Transportation
Modal share - all trips made by: Transit	Stats Canada Census	2017: 10%	Transportation Services	Transportation
Organizational Excellence				
Good governance balances speed, transparency and engagement				
Citizens who agree that Saanich welcomes citizen involvement	Citizen Survey	2022: 50%	General Government Services	n/a
Citizens who agree that Saanich is doing a good job in general	Citizen Survey	2022: 58%	All Service Types	All Asset Types

Strategic Goals and Performance Indicators	Source of Data	2022 Annual Report	Alignment With Service Type	Alignment with Asset Type
Financial decisions are based in stability, prudence and long-term sustainability				
Citizens who agree they receive good value for the municipal taxes they pay	Citizen Pulse Survey	2022: 45%	All Service Types	All Asset Types
Strong internal processes support service excellence				
Businesses who are satisfied with the services provided by Saanich	Business Survey	2022: 61%	All Service Types	All Asset Types
Citizens who are satisfied with the quality of public services provided by Saanich	Citizen Survey	2022: 68%	All Service Types	All Asset Types
A high-performing workforce is our greatest asset				
Employees who participated in the Saanich Employee Survey	YES Employee Survey 2021	2021: 59%	All Service Types	All Asset Types
Full-time employees who participated in the Saanich Employee Survey	YES Employee Survey 2021	2021: 72%	All Service Types	All Asset Types
Economic Diversification				
A diversified economic base is foundational to community vibrancy				
Business generated property tax revenue	Finance Department	2022: 23.15%	All Service Types	All Asset Types
Business licences issued	BBLL Department	2022: 4,936	General Government Services	Facilities; Information Technology
Permits issued for new commercial / industrial buildings	BBLL Department	2022: 3	General Government Services	Facilities; Information Technology
Permits issued for tenant improvements to existing commercial space	BBLL Department	2022: 90	General Government Services	Facilities; Information Technology
Economic development is a key focus area				
Percentage of commercial, industrial and institutional area to residential property area in Saanich	Planning Department	2022: 19.5%	All Service Types	All Asset Types
Climate Action and Environmental Leadership				
Steward the natural environment				
Urban forest coverage - total land cover	Parks, Recreation and Community Services Department	2022: 43%	Parks Services	Natural Assets
Parks with natural areas that have stewardship programs	Parks, Recreation and Community Services Department	2022: 45	Parks Services	Natural Assets
Volunteers' hours for the natural environment	Parks, Recreation and Community Services Department	2022: 16,313+	Parks Services	Natural Assets

Strategic Goals and Performance Indicators	Source of Data	2022 Annual Report	Alignment With Service Type	Alignment with Asset Type
Properties in ALR and A+ zoned lands claiming farm status	Finance Department	2022: 281	General Government Services	Natural Assets
Reduction in community GHG emissions	Planning Department	2021: 19%	General Government Services	Facilities; Information Technology
Reduction in corporate GHG emissions by (all municipal levels)	Planning Department	2022: 21%	All Service Types	All Asset Types
Preserve Saanich's natural areas and greenspaces – natural areas in parks	Parks, Recreation and Community Services Department	2022: 62%	Parks Services	Natural Assets
Balanced transportation initiatives are supported to reduce our environmental impact				
Saanich vehicles that are EV: Electric personal vehicles	Planning Department	2021: 2.9%	All Service Types	Vehicles & Equipment
Saanich vehicles that are EV: Electric commercial vehicles	Planning Department	2021: 5.9%	All Service Types	Vehicles & Equipment
Modal share infrastructure: New sidewalks	Engineering Department	2022: 2,770 m	Transportation Services	Transportation
Modal share infrastructure: New curb ramps	Engineering Department	2022: 16	Transportation Services	Transportation
Modal share infrastructure: New cycling facilities suitable for all ages and all abilities	Engineering Department	2022: 5,998 m	Transportation Services	Transportation
Modal share infrastructure: Enhanced transit stops	Engineering Department	2022: 8	Transportation Services	Transportation

n/a = not applicable

Appendix F

Unit Cost Summary

Unit Cost Summary

Document History

Version	Summary of Changes	Document Status	Date
1	First-generation document for AM Strategy	Final	June 2023

General Assumptions

1. Unit costs assume like-for-like replacement.
2. Unit costs were inflated to $2022 based on the Statistics Canada Consumer Price Index (annual average, not seasonally adjusted, all items).
3. Unit costs include engineering and contingency as noted.

Asset Type/Group	Unit Cost ($2022)	Units	Sources	Assumptions
Drainage				
Box Culverts	$6,800	m	Saanich Engineering Department, Water Resources ($2022)	Based on competitive tender pricing; Includes 15% engineering and 25% contingency
Culverts	$1,300 to $2,500	m	Drainage Asset Management - Preliminary Asset Replacement Forecast Results (Final), Urban Systems (December 7, 2021)	Based on competitive tender pricing; Includes 15% engineering and 25% contingency; Inflated from $2020 to $2022.
Laterals	$1,300 to $2,500	m	Drainage Asset Management - Preliminary Asset Replacement Forecast Results (Final), Urban Systems (December 7, 2021)	Based on competitive tender pricing; Includes 15% engineering and 25% contingency; Inflated from $2020 to $2022.
Mains	$1,300 to $2,500	m	Drainage Asset Management - Preliminary Asset Replacement Forecast Results (Final), Urban Systems (December 7, 2021)	Unit Costs for Mains include manholes, catchbasins and catchbasin leads. Based on competitive tender pricing; Includes 15% engineering and 25% contingency; Inflated from $2020 to $2022.
Pump Stations	$870,000	pump station	Lift Station Condition Assessment Report, Urban Systems (December 2, 2020)	Class D cost estimate for pump station less than 5 HP; Based on competitive tender pricing; Includes 15% engineering and 30% contingency; Inflated from $2020 to $2022.
Facilities				
Municipal Facilities	Based on insurance valuation	facility	Appraisal Report of Specified Property of the Corporation of the District of Saanich, Suncorp Valuations, (June 10, 2020)	"Cost of Reproduction New (CRN)" represents the cost of replacement at current market prices; Includes architect or engineering fees; Does not include contingency; Inflated from $2020 to $2022.
Park Buildings	$1,000 to $5,000	m2	District of Saanich Park & Trail Structures - Hampton Park Buildings, Advicas Group Consultants Inc., (January 27, 2023)	Class D cost estimates in $2022; Based on Advicas' historical cost data and/or R.S. Means Company publications; Includes 0% engineering and 10% contingency.

Unit Cost Summary

General Assumptions

1. Unit costs assume like-for-like replacement.
2. Unit costs were inflated to $2022 based on the Statistics Canada Consumer Price Index (annual average, not seasonally adjusted, all items).
3. Unit costs include engineering and contingency as noted.

Asset Type/Group	Unit Cost ($2022)	Units	Sources	Assumptions
Information Technology				
IT assets (hardware and software)	$10,000 to $5 million	various	Finance, District of Saanich	Based on TCA 2021 spreadsheet; Inflated from $2021 to $2022.
Park & Trail Structures				
Courts	$200 to $500	m2	District of Saanich Park & Trail Structures - Unit Cost Categories, Advicas Group Consultants Inc., (January 27, 2023)	Class D cost estimates in $2022; Based on Advicas' historical cost data and/or R.S. Means Company publications; Includes 0% engineering and 10% contingency.
Foot Bridges	$1,300 to $13,700	m2	District of Saanich Park & Trail Structures - Cuthbert Park Footbridges, Advicas Group Consultants Inc., (January 27, 2023)	Class D cost estimates in $2022; Based on Advicas' historical cost data and/or R.S. Means Company publications; Includes 0% engineering and 10% contingency.
Irrigation Systems	$2,300 to $4,000	zone	Parks, District of Saanich	Based on recent project costs in $2022; Includes 0% engineering and 0% contingency.
Parking Lots	$90 to $100	m2	District of Saanich Park & Trail Structures - Unit Cost Categories, Advicas Group Consultants Inc., (January 27, 2023)	Class D cost estimates in $2022; Based on Advicas' historical cost data and/or R.S. Means Company publications; Includes 0% engineering and 10% contingency.
Playgrounds	$50,000 to $300,000	playground	Finance, District of Saanich	Based on recent project costs; Includes 0% engineering and 0% contingency; Inflated from year of construction to $2022.
Roads	$240	m2	Transportation, District of Saanich	Unit cost includes road surface and base. Based on recent project costs in $2022; Includes 15% engineering/contingency.
Sports Fields	$60 to $210	m2	District of Saanich Park & Trail Structures - Unit Cost Categories, Advicas Group Consultants Inc., (January 27, 2023)	Class D cost estimates in $2022; Based on Advicas' historical cost data and/or R.S. Means Company publications; Includes 0% engineering and 10% contingency.
Trails	$40 to $700	m	District of Saanich Park & Trail Structures - Unit Cost Categories, Advicas Group Consultants Inc., (January 27, 2023)	Class D cost estimates in $2022; Based on Advicas' historical cost data and/or R.S. Means Company publications; Includes 0% engineering and 10% contingency.

Unit Cost Summary

General Assumptions

1. Unit costs assume like-for-like replacement.
2. Unit costs were inflated to $2022 based on the Statistics Canada Consumer Price Index (annual average, not seasonally adjusted, all items).
3. Unit costs include engineering and contingency as noted.

Asset Type/Group	Unit Cost ($2022)	Units	Sources	Assumptions
Transportation				
Bridges	$6,000 to $13,000	m2	Replacement Cost & Design Life Esimates (Bridges), McElhanney Ltd., (April 29, 2022)	Based on recent construction costs for 5 types of bridges of varying complexity; Includes 15-25% engineering and 40-50% contingency.
Bus Stops	$3,300 to $35,000	bus shelter	Transportation, District of Saanich	Based on recent project costs; Includes 15% engineering/contingency; Inflated to $2022.
Controlled Crosswalks	$10,000 to $40,000	controlled crosswalk	Transportation, District of Saanich	Based on recent project costs in $2022; Includes 15% engineering/contingency.
Pedestrian Signals	$40,000	pedestrian signal	Transportation, District of Saanich	Based on recent project costs in $2022; Includes 15% engineering/contingency.
Roads - Surface	$90 to $100	m2	Transportation, District of Saanich	Based on recent project costs in $2022; Includes 15% engineering/ contingency.
Roads - Base	$150	m2	Transportation, District of Saanich	Based on recent project costs in $2022; Includes 15% engineering/contingency.
Sidewalks	$400 to $1000	m	Transportation, District of Saanich	Based on recent project costs in $2022; Includes 15% engineering/contingency.
Street Lights	$4,000	streetlight	Transportation, District of Saanich	Based on recent project costs in $2022; Includes 15% engineering/contingency.
Street Signs	$700	street sign	Transportation, District of Saanich	Based on recent project costs in $2022; Includes 15% engineering/contingency.
Traffic Signals	$146,000	intersection	Transportation, District of Saanich	Based on recent project costs in $2022; Includes 15% engineering/contingency.

Unit Cost Summary

General Assumptions

1. Unit costs assume like-for-like replacement.
2. Unit costs were inflated to $2022 based on the Statistics Canada Consumer Price Index (annual average, not seasonally adjusted, all items).
3. Unit costs include engineering and contingency as noted.

Asset Type/Group	Unit Cost ($2022)	Units	Sources	Assumptions
Vehicles & Equipment				
Vehicles and Equipment - Fire	$15,000 to $2,100,000	vehicles and equipment	Finance, District of Saanich	Based TCA 2021 spreadsheet; Inflated from year of purchase to $2022.
Vehicles and Equipment - Fleet	$10,000 to $1,800,000	vehicles and equipment	Public Works, District of Saanich	Based on recent purchases; Inflated from year of purchase to $2022.
Vehicles - Police	$12,000 to $100,000	vehicles and equipment	Finance, District of Saanich	Based on TCA 2021 spreadsheet; Inflated from year of purchase to $2022.
Equipment - Cedar Hill Golf Course	$400 to $120,000	equipment	Finance, District of Saanich	Based on TCA 2021 spreadsheet; Inflated from year of purchase to $2022.
Equipment - E-bikes	$4,040	E-bike	Sustainability, District of Saanich	Based on recent purchases; Inflated from year of purchase to $2022.
Equipment - EV Charging Stations	$5,030	EV charging station	Sustainability, District of Saanich	Based on recent purchases; Inflated from year of purchase to $2022.
Equipment - Fitness	$2,000 to $17,000	equipment	Finance, District of Saanich	Based on TCA 2021 spreadsheet; Inflated from year of purchase to $2022.
Wastewater				
Force Mains	$720 to $2,200	m	Sewer Master Plan 2022, Sanitary Project Unit Cost Estimating, Urban Systems (April 28, 2021)	Class D cost estimate based on competitive tender pricing; Includes mains and appurtenances; Includes 10% engineering and 40% contingency; Inflated from $2020 to $2022.
Gravity Mains	$1,200 to $5,000	m	Sewer Master Plan 2022, Sanitary Project Unit Cost Estimating, Urban Systems (April 28, 2021)	Class D cost estimate based on competitive tender pricing; Includes mains, manholes, tie-ins, laterals (does not include clean-outs); Includes 10% engineering and 40% contingency; Inflated from $2020 to $2022.
Pump Stations	$100,000 to $2,800,000	pump station	Sewer Master Plan 2022, Sanitary Project Unit Cost Estimating, Urban Systems (April 28, 2021)	Class D cost estimate based on competitive tender pricing; Includes 15% engineering and 40% contingency; Inflated from $2020 to $2022.

Unit Cost Summary

General Assumptions

1. Unit costs assume like-for-like replacement.
2. Unit costs were inflated to $2022 based on the Statistics Canada Consumer Price Index (annual average, not seasonally adjusted, all items).
3. Unit costs include engineering and contingency as noted.

Asset Type/Group	Unit Cost ($2022)	Units	Sources	Assumptions
Water				
Mains	$920 to $3,800	m	Water Master Plan 2022, Water Project Unit Cost Estimating, Urban Systems, (April 28, 2021)	Class D cost estimate based on competitive tender pricing; Includes mains, appurtenances, tie-ins, service connections, hydrants; Includes 10% engineering and 40% contingency; Inflated from $2020 to $2022.
Pump Stations	$9,000 to $28,000	HP	Water Master Plan 2022, Water Project Unit Cost Estimating, Urban Systems, (April 28, 2021)	Class D cost estimate based on competitive tender pricing; Includes 10% engineering and 40% contingency; Inflated from $2020 to $2022.
Pressure Reducing Valve Chambers	$270,000 to $890,000	PRV chamber	Water Master Plan 2022, Water Project Unit Cost Estimating, Urban Systems, (April 28, 2021)	Class D cost estimate based on competitive tender pricing; Includes 10% engineering and 40% contingency; Inflated from $2020 to $2022.
Reservoirs	$1,000 to $2,600	m3 of storage capacity	Water Master Plan 2022, Water Project Unit Cost Estimating, Urban Systems, (April 28, 2021)	Class D cost estimate based on competitive tender pricing; Includes 10% engineering and 40% contingency; Inflated from $2020 to $2022.
Water Meters	$400 to $25,000	meter	Water Metering Strategy - Final, Urban Systems (August 13, 2020)	Meter replacement unit costs include supply and installation (installation cost of 30% of meter for <=50 mm and 15% for >50 mm); District of Saanich actual costs for sizes 19 mm to 150 mm; City of Surry tender cost for 200 mm; Urban Systems estimate for 250 mm.

URBAN SYSTEMS MEMORANDUM

DATE: May 31, 2023
TO: Jaqueline Weston
CC: Brittney Dawney
FROM: Laura Bernier
FILE: 1862.0090.01
SUBJECT: Saanich Replacement Value Memo

PURPOSE

Over the past year, the District of Saanich developed the 2023 Asset Management (AM) Strategy, which identifies the District's total infrastructure replacement value and the annual average replacement funding target (in 2022 dollars). In 2007, the District completed an Infrastructure Replacement Strategy (IRFS); an update has been identified in the fall of 2023.

During the period between 2007 and 2022, the estimated total replacement value of infrastructure in Saanich has significantly increased from $2.1 billion (in 2007 dollars) to $4.7 billion (in 2022 dollars).

The District engaged Urban Systems to conduct a third-party review of the District's replacement values, with the aim of helping to ensure that the values are suitable for their intended use. This memorandum summarizes the scope and outcomes of the review.

The review addresses the following questions:

1. What are some of the drivers for the increase in estimated replacement value observed by the District?
2. To what extent is the District's increase in total replacement value experienced by other communities?
3. How do the District's replacement values compare to other communities?
4. Is the District's methodology for estimating replacement values appropriate for the intended use of the information?

1. WHAT ARE SOME OF THE DRIVERS FOR THE INCREASE IN ESTIMATED REPLACEMENT VALUE OBSERVED BY THE DISTRICT?

Since the District's last IRFS in 2007, the costs of the District's infrastructure have increased due to factors such as inflation, the addition of new assets, and improved asset management practices, such as improvements to data and information. In recent years, inflation and market disruptions have had a particularly significant impact, leading to higher costs for construction materials, labor, and equipment.

2. TO WHAT EXTENT IS THE DISTRICT'S INCREASE IN TOTAL REPLACEMENT VALUE EXPERIENCED IN OTHER COMMUNITIES?

The change in the District's total estimated replacement value was compared to recent total replacement value estimates by the City of Kelowna, the District of Oak Bay, and the District of Squamish. These communities were selected based on their proximity, similar provincial context, and because they have estimated two cycles of total replacement value within a comparable time frame as the District of Saanich. The comparison relied on replacement values reported in infrastructure plans/asset management plans developed by each community, or in the absence of this, values reported by each community per the Local Government Data Entry (LGDE) forms.

These communities reported on replacement costs in different years, and so the average annual increase (expressed as a percent of Year A replacement value) is used as the primary comparison metric.

It is important to note that there is no standardized methodology for estimating municipal asset replacement values. Each municipality uses different approaches, reflecting their varying degrees of maturity in asset management practices. Therefore, replacement values across communities should not be directly compared without fully considering the assumptions, methodology, and scope of asset inventory on which the total replacement value is based. Such a detailed review was beyond the scope of this analysis. The findings in Table 1 aim to provide a *high-level* indication of how replacement values have changed for other communities over time and how they compare to the District.

Table 1. Comparison of Change in Replacement Values Over Time.

	Year A Replacement Value ($)	**Year B Replacement Value ($)**	**Average Annual Increase from Year A to Year B (%)**	**Notes**
Kelowna	$2,520,000,000 ($2016) [1]	$4,583,586,487 ($2021) [2]	**16%**	No updated Infrastructure Plan was available to provide context on the difference in replacement costs. Therefore, LGDE replacement costs (2021 dollars) were used for comparison.
Squamish	$420,000,000 ($2011) [3]	$883,000,000 ($2021) [3]	**11%**	Difference can be attributed to more assets being included in the 2021 estimates and due to asset acquisition, that has occurred over the past 10 years.
Oak Bay	$204,855,268 ($2016) [4]	$653,000,000 ($2021) [5]	**44%**	Difference can be attributed to more assets being included in the 2021 estimates.
Saanich	$2,100,000,000 ($2007) [6]	$4,673,000,000 ($2022) [6]	**8%**	Difference can be attributed to inflationary construction cost increases, new assets, and assets that existed but were not included in the 2007 estimate.

[1] City of Kelowna, 2030 Infrastructure Plan (2016)
[2] 2023 LGDE Statement of Tangible Capital Assets for 2021
[3] District of Squamish, 2022 Asset Management Plan
[4] District of Oak Bay, 2016 Asset Management Report
[5] District of Oak Bay, Sustainable Infrastructure Replacement Plan (2021)
[6] District of Saanich, Asset Management Strategy (2023)

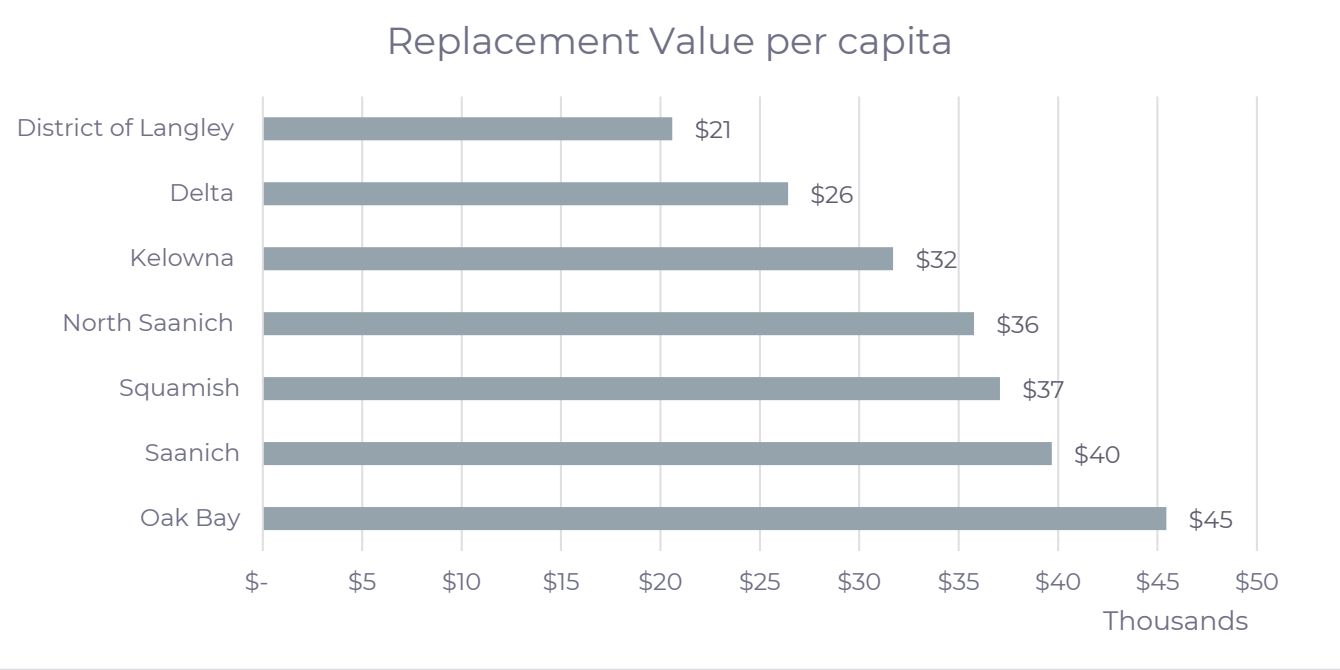
Key observations:

- Significant increases in estimated total replacement value have been experienced by the other communities included in the review.
- Although the timing of updates varies among the communities, the average annual increase observed between Year A and Year B for all communities was greater than that observed by the District.

3. HOW DO THE DISTRICT'S TOTAL REPLACEMENT VALUES COMPARE TO OTHER COMMUNITIES?

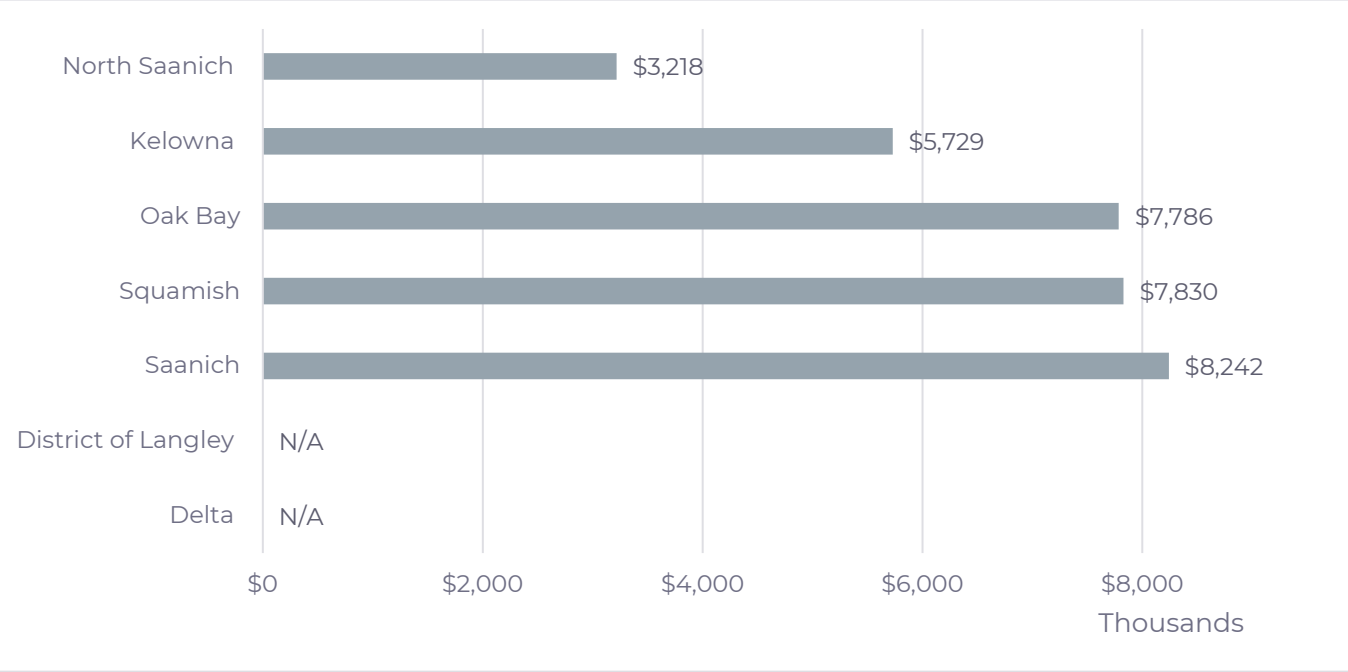
As previously noted, the methodology for estimating municipal asset replacement values is not standardized, and a detailed review of the methodology and assumptions on which other municipalities' estimates are based was beyond the scope of this assignment. Therefore, this question was explored by conducting a high-level comparison of the District's replacement values to nine other communities, selected due to similar population size, geographic proximity, and/or recently estimated total replacement values. Total replacement value for each community normalized by (a) population ($/capita) and (b) length of road in kilometers ($/km) were the primary comparison metrics.

Figure 1. Total Replacement Value (per capita)



Note: See section 4.0 Sources for data sources

Figure 2. Total Replacement Value (per road km)



Note: See section 4.0 Sources for data sources

Key takeaways:

- The District's per capita replacement values ($39,691 per capita) are higher than in many of the other communities (range from $20,600 to $37,071 per capita), except for Oak Bay ($45,443 per capita), where they are approximately the same. Similarly, the replacement values per road kilometer in Saanich ($8,242 per km) are higher compared to other communities (range from $3,218 to $7,830 per km).
- The extent to which these cost differences are due to differences in asset sizes and materials, level of service, other aspects of the asset inventory, or due to differences in unit costs, is not clear.

4. IS THE DISTRICT'S METHODOLOGY FOR ESTIMATING REPLACEMENT VALUES APPROPRIATE FOR THE INTENDED USE OF THE INFORMATION?

The methodology and assumptions on which the District's replacement costs are based, and any existing gaps in asset attribute data that could impact costs, are very well documented in the appendix of the District's AM Strategy, including:

- Sources of cost data and information (such as tender, project costs, historical costs, and appraisals)
- The application of inflation
- Engineering and contingency allowances (ranging from 0% to 75%)
- The level of cost estimation (e.g., Class D)
- The year of cost estimation (specified)
- The units and unit costs (identified)

This level of documentation is a good practice and one the District should engage in moving forward, as it will allow for continuous improvement over time. Opportunities for improvement to methodology are provided in Section 5.

Key takeaways:

Based on a review of the documented methodology, assumptions, and gaps, it is Urban Systems' assessment that the costs are suitable for the purpose of the information, which is to raise awareness among staff, Council and the community about the scope of the assets the District manages, and to inform decisions about long-term infrastructure funding (and not for estimating project costs).

5. OPPORTUNITIES FOR IMPROVEMENT

Asset management is a continuous improvement process; opportunities for improvement are summarized below. These opportunities are outlined to guide investments the District makes in refining its replacement value estimates over time; the replacement values currently reported are suitable for the intended purpose.

1. Variability exists in the application of engineering and contingency values across different asset classes. While variability is common, and the assumptions have been thoroughly documented, increasing consistency is a potential objective as the District continues to refine its AM program.
2. A number of assets are earmarked for inclusion in future cost updates. The inclusion of new unit costs will impact the reported total replacement value. Understanding the extent to which the future unit costs will impact replacement value and filling these gaps is an important next step to ensure funding levels are appropriate.
3. Unit costs per lineal meter of water, sanitary, and drainage assets included embedded costs of appurtenances. This is an acceptable practice for the purpose of this information, as previously discussed. To inform more detailed operations budgeting, maintenance management, or project-level costing, the District should develop more detailed cost estimates by asset component.

By addressing these areas of improvement, the District can enhance its asset management practices and facilitate greater consistency in the estimation of replacement values for informed decision-making.

SOURCES

The intended purpose of estimating replacement value is to update the AARF target as an input to updating the Infrastructure Replacement Funding Strategy.

	Year A Replacement Value ($) (Table 1)	Year B Replacement Value ($) (Table 1)	Population (Figure 1)	Road Network (no. of km) (Figure 2)
Kelowna	City of Kelowna, 2030 Infrastructure Plan (2016) Year for dollars RV: **$2016**	2023 LGDE Statement of Tangible Capital Assets for 2021 (see **source** and **notes** below) Year for dollars RV: **$2021**	Statistics Canada 2021 Census data	https://www.kelowna.ca/our-community/planning-projects/2040-transportation-master-plan
Squamish	District of Squamish, 2022 Asset Management Plan Year for dollars RV: **$2011**	District of Squamish, 2022 Asset Management Plan Year for dollars RV: **$2021**	Statistics Canada 2021 Census data	District of Squamish, 2022 Asset Management Plan
Oak Bay	District of Oak Bay, 2016 Asset Management Report Year for dollars RV: **$2016**	District of Oak Bay, Sustainable Infrastructure Replacement Plan (2021) Year for dollars RV: **$2021**	Statistics Canada 2021 Census data	District of Oak Bay, Sustainable Infrastructure Replacement Plan (2021)
Saanich	District of Saanich, Asset Management Strategy (2023) Year for dollars RV: **$2007**	District of Saanich, Asset Management Strategy (2023) Year for dollars RV: **$2022**	Statistics Canada 2021 Census data	District of Saanich, Asset Management Strategy (2023)
North Saanich	N/A	2023 LGDE Statement of Tangible Capital Assets for 2021 Year for dollars RV: **N/A**	Statistics Canada 2021 Census data	https://northsaanich.ca/your-community/transportation/
District of Langley	N/A	2023 LGDE Statement of Tangible Capital Assets for 2021 Year for dollars RV: **N/A**	Statistics Canada 2021 Census data	N/A
Delta	N/A	2023 LGDE Statement of Tangible Capital Assets for 2021 Year for dollars RV: **N/A**	Statistics Canada 2021 Census data	N/A

Source: Local government financial reporting - Province of British Columbia; "Estimated Current Replacement Value" statistics are found in Schedule 503 – Statement of Tangible Capital Assets
Note: Local governments are required to submit an annual Local Government Data Entry (LGDE) form, which presents a standardized account of assets, liabilities, revenue, expenditures, and other financial indicators to the Ministry of Municipal Affairs and Housing. Note that Replacement Value is a non-mandatory field provided by some municipalities in 2021, in addition to the mandatory TCA statistics.

Sincerely,

URBAN SYSTEMS LTD.

Laura Bernier, MUP
Community Consultant

cc: Brittney Dawney, P.Eng., Strategic Consultant

/lb
Enclosure

Appendix G

Useful Life Summary

Useful Life Summary

Document History

Version	Summary of Changes	Document Status	Date
1	First-generation document for AM Strategy	Final	June 2023

Asset Type	Asset Group	Useful Life (Years)	Sources	Notes
Drainage	Box Culvert	30-100	Drainage Asset Management - Preliminary Asset Replacement Forecast Results (Final), Urban Systems (December 7, 2021)	Depends on material (see below)
	Culverts			
	Laterals (from house)			
	Mains			
	Asbestos Cement	75		
	Cast Iron	60		
	Concrete Liner	45		
	Corrugated Metal Pipe	30		
	Corrugated Metal Pipe Smooth Flow	45		
	Corrugated Steel Pipe	60		
	Ductile Iron	60		
	Flex Lox	45		
	High Density Polyethylene	100		
	Hyperscon	50		
	Non-Reinforced Concrete	60		
	Perforated	60		
	Permalock	100		
	Polypropylene	45		
	Polyvinyl Chloride	100		
	Reinforced Concrete	100		
	Resin Impregnated Liner	45		
	Sclairpipe	100		
	Steel	75		
	Vitrified	100		
	Wood Stave	30		
	Weholite Polyethylene	100		
	Pump Stations	50	See Wastewater Pump Stations	Average useful life of all pump station components is 20 years (Sewer Master Plan)
Facilities	Municipal Facilities	20 to 75	VFA Facility software for Major Facilities, and Saanich TCA Policy for other Facilities	Depends on type; for Major Facilities used an average useful life of all components of 44 years estimated based on Municipal Hall (see below for components based on Uniformat II)
	Park Buildings	20 to 75	Saanich TCA Policy	Depends on type

Useful Life Summary

Asset Type	Asset Group	Useful Life (Years)	Sources	Notes
	Concrete Slab-On-Grade	75	VFA Facility software	A - Substructure
	Foundation Wall and Footings - No Basement	75		A - Substructure
	Multi-Story - Concrete	75		B10 - Superstructure
	Exterior Stairs - Concrete	50		B1015 - Exterior Stairs and Fire Escapes
	Concrete Walls - (CIP)	75		B2010 - Exterior Walls
	Precast Concrete Panels	75		B2010 - Exterior Walls
	Exterior Soffits	20		B2016 - Exterior Soffits
	Curtain Wall System	40		B2020 - Exterior Windows
	Windows - Aluminum	30		B2020 - Exterior Windows
	Door Assembly - 3 x 7 HM	30		B2030 - Exterior Doors
	Door Assembly - 3 x 7 Storefront	30		B2030 - Exterior Doors
	Door Assembly - 6 x 7 HM	30		B2030 - Exterior Doors
	Door Assembly - 6 x 7 Storefront	30		B2030 - Exterior Doors
	Overhead Rolling Doors	30		B2030 - Exterior Doors
	SBS Modified Bitumen Membrane	20		B30 - Roofing
	Skylights - Metal Frame	30		B3021 - Glazed Roof Openings
	Skylights - Metal Frame Atrium	30		B3021 - Glazed Roof Openings
	Roof Hatches	40		B3022 - Roof Hatches
	CMU Block Walls - Plain	50		C1010 - Partitions
	GWB on Metal Stud	75		C1010 - Partitions
	Windows/Glazed Partitions	50		C1010 - Partitions
	Swinging Doors Wood and Metal	50		C1020 - Interior Doors
	Swinging Doors Wood and Metal - Original	50		C1020 - Interior Doors
	Metal Partitions Washrooms	40		C1030 - Fittings
	Washroom Accessories	25		C1030 - Fittings
	Signage Room Numbering and Identification)	10		C1035 - Identifying Devices
	Stairs Typical	75		C20 - Stairs
	Ceramic Wall Tile	25		C3010 - Wall Finishes
	Painted Finish - Average	10		C3010 - Wall Finishes
	Carpeting - Broadloom	10		C3020 - Floor Finishes
	Carpeting - Broadloom - Original	10		C3020 - Floor Finishes
	Ceramic Floor Tile	25		C3020 - Floor Finishes
	Concrete - Painted or Sealed	15		C3020 - Floor Finishes
	Terrazzo - Cast-in-Place	50		C3020 - Floor Finishes
	VCT - Average	10		C3020 - Floor Finishes
	GWB Taped and Finished	30		C3030 - Ceiling Finishes
	Suspended ACT	20		C3030 - Ceiling Finishes
	Traction Geared Passenger Elevator	35		D1010 - Elevators and Lifts
	Custodial/Utility Sinks	30		D2010 - Plumbing Fixtures
	Drinking Fountain	20		D2010 - Plumbing Fixtures

Useful Life Summary

Asset Type	Asset Group	Useful Life (Years)	Sources	Notes
	Kitchen Sinks	30		D2010 - Plumbing Fixtures
	Restroom Fixtures	30		D2010 - Plumbing Fixtures
	Water Distribution	30		D2020 - Domestic Water Distribution
	Water Heater - Elec - 284 L	15		D2020 - Domestic Water Distribution
	Sanitary Waste - Gravity Disch - Average	50		D2030 - Sanitary Waste
	Roof Drainage - Gravity - Average	50		D2040 - Rain Water Drainage
	Natural Gas Supply for Bldg	40		D2090 - Other Plumbing Systems
	Pump System - Water Feature	25		D2090 - Other Plumbing Systems
	Trench Drain - Covered Parking	30		D2090 - Other Plumbing Systems
	Boiler HW - Gas-Fired - Cleaver Brooks	30		D3020 - Heat Generating Systems
	Air Handling Unit - Mezzanine	25		D3040 - Distribution Systems
	Air Handling Unit - Trane - Main Supply	25		D3040 - Distribution Systems
	Ceiling Fans - Council Chambers	15		D3040 - Distribution Systems
	Distribution Ductwork	30		D3040 - Distribution Systems
	Exhaust System - General Building	25		D3040 - Distribution Systems
	Exhaust System - Restroom	20		D3040 - Distribution Systems
	Heating Water Distribuition	30		D3040 - Distribution Systems
	Perimeter Heat System - Hydronic Fin Tube	18		D3040 - Distribution Systems
	Return Air Ductwork and Fan	20		D3040 - Distribution Systems
	Force Flow Heater - Hot Water	25		D3050 - Terminal and Package Units
	Pneumatic Controls - Average	20		D3060 - Controls and Instrumentation
	Fire Extinguishers	30		D40 - Fire Protection
	Electrical Distribution System	30		D5010 - Electrical Service and Distribution
	Main Electrical Service - 1200A 208Y/120V	30		D5012 - Low Tension Service and Dist.
	Lighting - Exterior - Front and Back Entrance	20		D5020 - Lighting and Branch Wiring
	Lighting - Exterior - LED	20		D5020 - Lighting and Branch Wiring
	Branch Wiring - Equipment & Devices	30		D5021 - Branch Wiring Devices
	Lighting Fixtures - Interior	20		D5022 - Lighting Equipment
	Telephone System	10		D5033 - Telephone Systems
	Clock System	10		D5036 - Clock and Program Systems
	Fire Alarm System	10		D5037 - Fire Alarm Systems
	Security System	10		D5038 - Security and Detection Systems
	Security System - Card Access System	10		D5038 - Security and Detection Systems
	LAN System	15		D5039 - Local Area Networks
	Emergency Battery Pack Lights	10		D5092 - Emergency Light and Power Systems
	Exit Signs	10		D5092 - Emergency Light and Power Systems
	Casework	30		E - Equipment and Furnishings
	Access Ladders	30		E10 - Equipment

Useful Life Summary

Asset Type	Asset Group	Useful Life (Years)	Sources	Notes
Information Technology	IT assets (hardware and software)	4 to 20	Saanich TCA Policy	Depends on type
Park & Trail Structures	Courts	10 to 20	Saanich TCA Policy	Depends on type
	Foot Bridges	15-100	Saanich TCA Policy	Depends on material
	Irrigation Systems	20	Saanich experience	
	Parking Lots	20-40	Saanich TCA Policy	Depends on material
	Playgrounds	20	Saanich experience	
	Roads	60 (surface),160 (base)	Saanich experience	
	Sports Fields	15 to 40	Saanich TCA Policy	Depends on material
	Trails	12 to 50	Saanich TCA Policy	Depends on material
Transportation	Bridges	15 to 75	Saanich experience	Depends on type and material
	Bus Stops	20 (bus shelters), 30 to 80 (bus pads)	Saanich experience	Depends on material
	Controlled Crosswalks	30	Saanich experience	
	Pedestrian Signals	25	Saanich experience	
	Roads - Residential	60 (surface), 160 (base)	Saanich experience	
	Roads - Collector	20 (surface), 100 (base)	Saanich experience	
	Roads - Major	20 (surface), 80 (base)	Saanich experience	
	Sidewalks	30 to 80 (surface), 80-160 (base)	Saanich experience	Depends on type and material
	Street Lights	5 (light), 30 (pole/base)	Saanich experience	
	Street Signs	7 to 50	Saanich experience	Depends on type and material
	Traffic Signals	25 to 50	Saanich experience	Depends on type (primary or seconary)
Vehicles & Equipment	Vehicles and Equipment - Fire	7 to 25	Saanich experience	Depends on type
	Vehicles and Equipment - Fleet	5 to 25	Saanich experience	Depends on type
	Vehicles - Police	4 to 15	Saanich experience	Depends on type
	Equipment - Cedar Hill Golf Course	10	Saanich experience	
	Equipment - E-bikes	5	Saanich estimate	
	Equipment - EV Charging Stations	10	Saanich estimate	
	Equipment - Fitness	4-8	Saanich experience	Depends on type
Wastewater	Force Mains	45 to 100	Sewer Master Plan 2022 (raw data	Depends on material (see below)
	Asbestos Cement (AC)	75		
	Ductile Iron (DI)	75		
	Polyvinyl Chloride (PVC)	100		
	Reinforced Concrete (RC)	100		
	Resin Impregnated Liner (RIP)	45		
	Gravity Mains	45 to 100		Depends on material (see below)
	Non-Reinforced Concrete (NRC)	45		
	Resin Impregnated Liner (RIL)	45		

Useful Life Summary

Asset Type	Asset Group	Useful Life (Years)	Sources	Notes
	Sclairpipe (SCL)	45		
	Unknown (UNK)	45		
	Ductile Iron (DI)	75		
	Asbestos Cement (AC)	75		
	High Density Polyethylene (HDPE)	100		
	Polyvinyl Chloride (PVC)	100		
	Reinforced Concrete (RC)	100		
	Vitrified Clay Pipe (VIT) (VCP)	100		
	Pump Stations	50	Sewer Master Plan - Final, Urban Systems, (November 7, 2022)	Average useful life of all pump station components is 20 years (Sewer Master Plan)
Water	Mains	40 to 100	Water Master Plan 2022 (raw data spreadsheets), Urban Systems (July 27, 2022)	Depends on material (see below)
	Cement Mortar Liner	45		
	Copper	45		
	Epoxy Liner	45		
	Galvanized	45		
	Polyethylene	45		
	Cast Iron	60		
	Ductile Iron	75		
	Asbestos Cement	75		
	HDPE	100		
	PVC	100		
	Pump Stations	50	Water Master Plan - Final, Urban Systems, (September 8, 2022)	Average useful life of all pump station components is 20 years (Water Master Plan)
	Pressure Reducing Valve Chambers	50		
	Reservoirs	60		
	Water Meters	15 (<=25 mm) to 20 (>25 mm)	Water Metering Strategy - Final, Urban Systems (August 13, 2020)	Depends on size

Appendix H

AM Program Communications Plan

Asset Management Program

Communications Plan

Created by: Jacqueline Weston

RCRS File Number: 1250-20

ASSET MANAGEMENT PROGRAM COMMUNICATIONS PLAN

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Attachment 1 – External Resources

Document History

Version	Summary of Changes	Document Status	Date
1	Approved by AMSC	Final	April 13, 2022
2	Updated with input from AMWG	Final	Sep 21, 2022
3	Added public website and Council report dates	Final	Jan 16, 2023
4	Updated for AM Strategy	Final	June 2023

ASSET MANAGEMENT PROGRAM COMMUNICATIONS PLAN

1.0 Purpose

The purpose of the Asset Management (AM) Program Communications Plan is to establish communication objectives, and to identify key messages, stakeholders, communication methods, and communication activities.

2.0 Objectives

The objectives of the Communication Plan are to:

- Support the success of the program by engaging with stakeholders at the appropriate level, generating timely and accurate information and directing it to where it is needed and can be utilized by stakeholders
- Communicate the benefits of the AM Program to internal and external stakeholders, to ensure acceptance and buy-in of both the process and outcomes
- Create and maintain awareness and acceptance of the program's objectives and scope
- Ensure that all potential stakeholders are identified and contacted
- Ensure that communications are effective by documenting the processes to deliver the plan

3.0 Vulnerabilities/Potential Issues

The table below identifies potential communication issues and how these may be responded to or mitigated.

Potential Communication Issues	Response/Mitigation
Communication starts too soon	Be clear about purpose of the communication
Communication starts too late	Provide regular updates to staff and Council
Broad project scope that crosses numerous program areas	Clarify and communicate roles and responsibilities
Stakeholder buy-in and acceptance	Regular communication with stakeholders and adjust program as needed
Challenges managing the various expectations, goals, objectives and priorities of stakeholders	Regular communication with stakeholders and adjust program as needed
Other communication initiatives being undertaken in Saanich which should be coordinated	Coordinate with annual Financial Plan process

4.0 Key Messages

- **Why does Saanich have an Asset Management Program?**
  - Asset management helps to provide sustainable service delivery in Saanich by making the best possible decisions about our assets (e.g. buildings, pipes, parks, trails, roads, signals, street lights, fleet, IT and many more)and managing risk in a cost-effective manner.
  - Many of our assets were built in the 1950's and 1960's and are reaching the end of their useful life
  - Our community is growing, and there is a demand for new and improved services

  - We need to upgrade our assets to comply with new environmental and safety standards
  - Climate change is impacting our infrastructure since it was not designed to the new climate conditions
  - There are gaps in the information we have regarding our assets
  - Uncertainty regarding ability to fund asset replacements in future
  - Ensure the sustainability of infrastructure for our residents and businesses
  - Manage our risks and support corporate insurance requirements
  - Meet competing priorities (e.g. service levels, climate impacts, costs, etc.)
  - Improve the information available to Council for better decision making
- **What are the benefits of asset management?**
  - Long term sustainability of services for future generations
  - Evidence-based decision making
  - Cost-effective planning
  - Access to infrastructure grants
- **Is there a regulatory/legal requirement to have an Asset Management Program?**
  - Under the Canada Community-Building Fund Agreement 2014-2024, Saanich is committed to strengthen asset management practices
  - Many other federal and provincial grant programs include demonstration of continuous improvement in asset management as a criteria for funding
  - The Canadian Public Sector Accounting Board (PSAB), Regulation 3150, requires all municipal governments in Canada to include all tangible capital assets in annual financial statements
- **What is the framework for our Asset Management Program?**
  - In British Columbia, guidance for municipalities is provided by Asset Management BC through the Asset Management BC Framework: *Asset Management for Sustainable Service Delivery*. The framework is in the form of a wheel representing a process of continual improvement.
- **What is sustainable service delivery?**
  - Saanich delivers a wide range of services to our residents, using the physical assets that we own, operate and maintain (e.g. buildings, pipes, parks, roads, fleet, IT and many more). We are developing a District-wide, systematic and sustainable approach to delivering these services. Sustainable means meeting the needs of the present without compromising the ability of future generations to meet their own needs. Another way to think about asset management is to “Do the right thing, at the right time, for the right cost”.
- **What is the scope of the AM program?**
  - District-wide
  - Physical assets that are used to provide services to the community
- **What challenges does Saanich face related to asset management?**
  - Aging infrastructure
  - Inflationary pressures
  - Capital cost increases
  - Access to services and materials given our location on an island
  - Changes in demand related to growth, legislative changes, climate change impacts, and stakeholder expectations
- **What opportunities does Saanich have for continuous improvement?**
  - Be more strategic in the way we manage our assets and spending
  - Review our assets across all departments in a holistic and integrated way

- Evaluate the full life cycle costs to ensure we're choosing the best long-term option
- Integrate climate considerations in our asset planning
- Recognize the value of the services provided by natural assets
- Innovation in the way we deliver service and manage our assets
- Sharing infrastructure capacity where possible
- Lifecycle analysis
- Leveraging grant funding

- **What options does Saanich have to ensure sustainable service delivery?**
  - Reductions in levels of service
  - Delay new projects in favour of renewal of existing infrastructure
  - Prioritize the highest risks first
  - Accept the risk of delays to maintenance and repair work
  - Adjustments to tax and utility rates
  - Adjustments to reserve balances
  - Other financing options

5.0 Stakeholder Identification

In the context of asset management, stakeholders are "the people and organizations that can be directly impacted by, or can directly influence, the services provided by municipalities and whom municipalities must consider when making decisions about services and infrastructure planning" (FCM, 2018). The table below identifies stakeholders for the Saanich AM Program.

Stakeholder	Interests and Role in AM Program	Engagement Opportunities
Internal to the Organization		
Mayor & Council	Services; Strategic Objectives; Levels of Service; Risks; Costs; Financial Strategy	Annual Reports; Financial Plans; Saanich Budget Simulation Tool; District-wide and Departmental Strategies and Plans
CAO and Leadership Team	Services; Strategic Objectives; Levels of Service; Risks; Costs; Financial Strategy	Regular Meetings; Reports
AM Steering Committee (AMSC)	Oversight of AM Program Development	Regular meetings
AM Working Group (AMWG)	Input to AM Program Development	Regular meetings
Administration Department	Climate Plan; Integration of Climate Change and AM; Sustainability	AMWG
Building, By-law, Licensing and Legal Services Department (BBLL)	Integration of Risk Management and AM	AMSC; AMWG
Corporate Services Department	AM Competency Development; Occupational Health & Safety	Meetings
Engineering Department	General Government Services (Municipal Facilities), Solid Waste Services, Stormwater Management	AMSC; AMWG

ASSET MANAGEMENT PROGRAM COMMUNICATIONS PLAN

Stakeholder	Interests and Role in AM Program	Engagement Opportunities
	Services, Transportation Services, Wastewater Services, Water Services	
Finance Department	Annual Financial Plan; Infrastructure Replacement Funding Strategy; Long-term Financial Plan	AMSC; AMWG
Fire Department	Protective Services	Meetings
Information Technology Department (IT)	Saanich Service Delivery	AMSC; AMWG
Parks, Recreation and Community Services Department (PRCS)	Parks Services; Recreation and Community Services	AMSC; AMWG
Planning Department	OCP; Local Area Plans (LAP)	Meetings
Police Department	Protective Services	Meetings
Sustainability & Strategic Initiatives Department	Climate Plan	AMWG
External to the Organization		
Community Tax and Rate Payers	Services; Strategic Objectives; Levels of Service; Risks; Costs; Financial Strategy	District-wide and Departmental Strategies and Plans
Community Associations (independent groups of local area residents that are guided under the BC *Societies Act*)	OCP; Local Area Plans	District-wide and Departmental Strategies and Plans
Community Groups and Organizations	Use of Saanich Parks and/or Park Assets	Community User Group Agreements
First Peoples, including the lək̓ʷəŋən peoples represented by the Songhees and Esquimalt Nations and the W̱SÁNEĆ peoples represented by the W̱JOŁEŁP (Tsartlip), BOḴEĆEN (Pauquachin), SȾÁUTW (Tsawout), W̱SIḴEM (Tseycum) and MÁLEXEŁ (Malahat) Nations	Opportunities for Reconciliation and Collaboration with First Nations, particularly with respect to Natural Asset Management	See information on Saanich Website at Indigenous Relations | District of Saanich
Federal Government	AM Progress	Statistics Canada Survey
Provincial Government	AM Progress; Shared Service Delivery: Transportation Services	AMBC Community of Practice (CoP); Local Government Data Entry
Capital Regional District	Shared Service Delivery: Solid Waste Services, Wastewater Services, Water Services	South Vancouver Island CoP
BC Transit	Shared Service Delivery: Transportation Services	Service Agreements
BC Hydro	Utility Provision	Utility Agreements

Stakeholder	Interests and Role in AM Program	Engagement Opportunities
Fortis BC	Utility Provision	Utility Agreements
Internet Service Providers	Utility Provision	Utility Agreements
Consultants	Provision of Consulting Services	Contracts
Contractors	Provision of Maintenance and Construction Services	Contracts

6.0 Key Communication Methods

The key groups that require communication are:

- Staff – to educate, to train on use of AM practices
- Council – to educate, to provide information for decision-making
- Public – to inform, to explain how AM relates to Council decision-making
- External Stakeholders – to collaborate and share knowledge

Potential communication methods are listed below.

Staff:

- Buzz Newsletter
- E-Link page
- AM Program Introduction presentation at staff meetings
- AM awareness materials for Managers to share with their teams
- FCM Videos
- CNAM AM 101 Online

Council:

- AMBC Asset Management Council Presentation & Workbook
- Annual Report
- Financial Plan
- Reports to Finance & Governance Standing Committee (as needed)
- Reports to Council
- Weekly Council Bulletin

Public

- Saanich website page
- Factsheets
- Brochures with tax notices
- News releases
- Social media posts

External Stakeholders

- AMBC Community of Practice
- AMBC Newsletter articles

- AMBC Conference presentations
- AMBC Community of Practice
- South Vancouver Island AM Community of Practice
- CNAM membership and participation in collaboration webinars

7.0 Communication Plan Matrix

Activity	Intended Outcome	Responsibility	Audience	Method	Timing
Staff awareness training	Inform	AM Program Manager	Staff	Presentation	2022-2023
AMWG AM introduction training	Inform	AM Program Manager	AMWG	Presentation	June 2022
Verbal update on progress of AM Program	Inform	AM Program Manager	Finance & Governance Standing Committee	Presentation	Apr 11, 2022
Memo with slides from presentation to F&G	Inform	Director of Engineering	Council	Memo	April 13, 2022
Overview of AM Program	Inform	AM Program Manager	Council	New Council Orientation Presentation	Nov 9, 2022
Inform public of AM Program	Inform	AM Program Manager	Public	Public Website	Jan 24, 2023
Background Information and Training Materials	Inform	Director of Engineering	Council	Email	April 20, 2023
AM Program Update	Inform	AM Program Manager	Committee of the Whole	Report	May 1, 2023
AM Strategy	Approval	AM Program Manager	Council	Report	Q3 2023
Infrastructure Replacement Funding Strategy	Approval	Director of Finance	Council	Report	Q1 2024
AM Program Update	Inform	AM Program Manager	Council	Report	Q1 2024

8.0 Resources

Assistance will be provided by the Saanich Communications team with development and formatting of various communication materials. External consultants and contractors support will be provided as needed. Refer to Attachment 1 for a listing of external AM communications resources.

ASSET MANAGEMENT PROGRAM COMMUNICATIONS PLAN

Attachment 1: External Resources

Asset Management BC (AMBC)

- Communication Materials (Social Media Shareables, Posters, Key Messages):
  - Communicating Asset Management - Asset Management BC
- Information for members of municipal Council:
  - Presentation: What will your legacy be? Asset Management for Elected Officials
  - Workbook: Your Assets Matter: What Will Your Legacy Be?
- Newsletter Feature, *Why BC's local government elected officials need to be leading Asset Management for Sustainable Service Delivery in their Communities*, and *Asset Management and Sustainable Service Delivery: Why should Council care?:*
  - AMBC Newsletter Winter 2023

Canadian Network of Asset Managers (CNAM)

- Canadian Network of Asset Managers, AM101 Online Training:
  - Online Training Guide, AM101 - Introduction - Canadian Network of Asset Managers (cnam.ca)
  - Booklet and Primer, New to AM - Canadian Network of Asset Managers (cnam.ca)

Federation of Canadian Municipalities (FCM)

- FCM Video, *Why Invest in Asset Management?*, Video: Why invest in asset management | Federation of Canadian Municipalities (fcm.ca)
- FCM Video, *Climate Resilience and Asset Management* , Video series: Climate resilience and asset management | Federation of Canadian Municipalities (fcm.ca)
- FCM Webinar and Guide, *Getting Started With Asset Management in Your Municipality*, Guide: Getting started with asset management in your municipality | Federation of Canadian Municipalities (fcm.ca)
- FCM Webinar, *Practical Advice for Common Asset Management Challenges*, Practical advice for common asset management challenges | Federation of Canadian Municipalities (fcm.ca)
- FCM, Asset Management Ontario, Asset Management Webinar Series, Municipal Asset Management Webinar Series - AMONTario
  - Developing Asset Management Governance Structure
  - Establishing Asset Hierarchy & Performing Data Gap Analysis
  - Understanding Levels of Service
  - Using Risk Assessments to Identify Local Priorities
- FCM, Nova Scotia Federation of Municipalities, The Basics of Asset Management for Elected Officials Online Course, $175 per person, Catalog (skillbuilder.co)

Government of Canada

- Canada's Infrastructure Report Card The 2019 Canada Infrastructure Report Card (canadianinfrastructure.ca)

Appendix I

Implementation Plan 2023-2027

Asset Management Strategy Implementation Plan 2023-2027

AMBC Framework	Continuous Improvement Strategies	Project Number	Project Description	Asset Type	Lead Departments	Other Departments Involved	Short Term (1-2 y)						Medium Term (3-5 y)											
							2023		2024				2025				2026				2027			
							Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Assets	Strategy 1: Improve Data Management	1.1	Transfer existing asset inventory data to a central database with unique asset ID numbers.	District-wide	Engineering, IT, Finance	AM Program																		
		1.2	Populate IT asset inventory using ServiceNOW.	IT	IT																			
		1.3	Create a digital and dynamic AM dashboard.	District-wide	IT	AM Program																			
		1.4	Purchase new mobile devices, and provide software configuration and training.	District-wide	IT	Engineering																			
		1.5	Update data models and data standards across multiple systems for the AM Program.	District-wide	AM Program	Engineering, Finance, IT, PRCS																			
		1.6	Develop asset data collection forms.	District-wide	Engineering, PRCS	AM Program																		
		1.7	Document maintenance management workflows.	District-wide	Engineering, PRCS	AM Program																		
	Strategy 2: Develop AM Software Solution	2.1	Prepare a needs assessment for asset management software.	District-wide	AM Program	AMWG																		
		2.2	Upgrade infraMAP to supported version.	Drainage, Wastewater, Water	Engineering	AM Program, IT																		
		2.3	Pilot Existing Software: Esri FieldMAP for asset data collection.	Transportation	IT	AM Program, Engineering																		
		2.4	Pilot Existing Software: infraMAP for maintenance management.	Drainage, Wastewater, Water	Engineering	AM Program, IT																		
		2.5	Pilot Existing Software: Esri Workforce Starter Solution for maintenance management.	Transportation	Engineering	AM Program, IT																		
		2.6	Pilot Existing Software: JD Edwards for maintenance management.	Vehicles & Equipment	Engineering	AM Program, Finance																		
		2.7	Pilot Existing Software: VFA Facility/FAMIS360 for linkages to other systems.	Facilities	Engineering, PRCS	AM Program, Finance, IT																		
		2.8	Pilot Existing Software: FAMIS360 for Recreation Services maintenance management.	Facilities	Engineering, PRCS	AM Program																		
		2.9	Pilot Existing Software: VFA Facility/FAMIS360 for Parks Services decision-support and maintenance management.	Facilities, Park & Trail Structures	Engineering, PRCS	AM Program																		
		2.10	Prepare a Business Case for providing AM software capacity.	District-wide	AM Program	AMWG																		
		2.11	Provide AM software capacity in accordance with the approved Business Case.	District-wide	AM Progam	Engineering, Finance, IT, PRCS																		
		2.12	Begin to implement asset management software using a phased approach.	District-wide	AM Program	Engineering, Finance, IT, PRCS																		
Information	Strategy 3: Complete Natural Assets Inventory	3.1	Complete a Natural Assets Inventory.	Natural Assets	Engineering, PRCS	AM Program, Sustainability																		
	Strategy 4: Complete First-Generation AM Plans	4.1	Develop a Vehicles & Equipment AM Plan based on existing information.	Vehicles & Equipment	Engineering, Fire, Police, PRCS	AM Program, Finance, Sustainability																		
		4.2	Develop a Wastewater AM Plan based on existing information.	Wastewater	Engineering	AM Program, Finance, Sustainability																		
		4.3	Develop a Water AM Plan based on existing information.	Water	Engineering	AM Program, Finance, Fire, Sustainability																		
		4.4	Develop a Drainage AM Plan based on existing information.	Drainage	Engineering	AM Program, Finance, Sustainability																		
		4.5	Develop a Facilities AM Plan based on existing information.	Facilities	Engineering, PRCS	AM Program, Finance, Sustainability																		

Asset Management Strategy Implementation Plan 2023-2027

AMBC Framework	Continuous Improvement Strategies	Project Number	Project Description	Asset Type	Lead Departments	Other Departments Involved	Short Term (1-2 y)						Medium Term (3-5 y)											
							2023		2024				2025				2026				2027			
							Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		4.6	Develop an Information Technology AM Plan based on existing information.	Information Technology	IT	AM Program, Finance, Sustainability																		
		4.7	Develop a Natural Assets AM Plan based on existing information.	Natural Assets	Engineering, PRCS	AM Program, Finance, Sustainability																		
		4.8	Develop a Park & Trail Structures AM Plan based on existing information.	Park & Trail Structures	PRCS	AM Program, Finance, Sustainability																		
		4.9	Develop a Transportation AM Plan based on existing information.	Transportation	Engineering	AM Program, Finance, Sustainability																		
Finances	Strategy 5: Update Infrastructure Replacement Funding Strategy	5.1	Update the Infrastructure Replacement Funding Strategy.	District-wide	Finance	AMWG																		
	Strategy 6: Develop Unit Cost Database	6.1	Develop a District-wide unit cost database.	District-wide	AM Program	AMWG, Finance																		
	Strategy 7: Update Annual and Long Term Financial Plans	7.1	Develop breakdown of the capital plan into replacement and upgrades/new in capital budget software.	District-wide	Finance	AMWG																		
		7.2	Develop a capital project prioritization framework in capital budget software.	District-wide	Finance	AMWG																		
		7.3	Update the capital plan based on first generation AM Plans.	District-wide	Finance	AMWG																		
		7.4	Update the Long Term Financial Plan.	District-wide	Finance	AMWG																		
		7.5	Update Tangible Capital Asset (TCA) records to align with updated asset inventory data.	District-wide	Finance	AMWG																		
People	Strategy 8: Develop AM Practices Manual	8.1	Develop draft guidance documents.	District-wide	AM Program	AMWG																		
		8.2	Refine guidance documents during development of AM Plans.	District-wide	AM Program	AMWG																		
		8.3	Finalize first generation AM Guidance Manual.	District-wide	AM Program	AMWG																		
	Strategy 9: Develop AM Competency Management Program	9.1	Develop an AM Competency Management Program (AMCMP) based on the CNAM Framework.	District-wide	AM Program	AMWG, Human Resources																		
		9.2	Update job descriptions based on the AMCMP.	District-wide	AM Program	AMWG, Human Resources																		
		9.3	Implement staff training based on the AMCMP.	District-wide	AM Program	Engineering, IT, PRCS																		
		9.4	Develop a staffing plan based on the AMCMP and AM Plans.	District-wide	AM Program	Engineering, Human Resources, IT, PRCS																		
		9.5	Establish a Saanich AM Community of Practice.	District-wide	AM Program	AMWG																		
	Strategy 10: Monitor and Report Progress	10.1	Meet regularly with AMSC and AMWG.	District-wide	AM Program	AMSC, AMWG																		
		10.2	Develop template for State of Assets Report.	District-wide	AM Program	AMWG																		
		10.3	Provide Council with an annual update on the AM Program.	District-wide	AM Program	AMSC, AMWG																		
		10.4	Prepare a District-wide Levels of Service summary.	District-wide	AM Program	AMSC, AMWG																		

Appendix J

AM Policy Checklist

AM Policy Checklist

Document History

Version	Summary of Changes	Document Status	Date
1	First-generation document for AM Strategy	Final	June 2023

AM Policy Alignment With AM Strategy Implementation Plan 2023-2027

AM Policy Key Principles/Strategies	Data Management	AM Software Solution	Natural Assets Inventory	AM Plans	IRFS	Unit Cost Database	LTFP	AM Practices Manual	AM Competency Development	Report Progress
Service Delivery to Customers - The District of Saanich will prioritize and direct resources and expenditures in order to deliver levels of service and other community benefits at an acceptable level of risk and will do the following:										
Maintain and manage infrastructure assets at defined levels to support the themes from the Official Community Plan and goals included in the Strategic Plan;				✓	✓		✓			✓
Plan financially for the appropriate level of maintenance of assets to deliver service levels and extend the useful life of assets;				✓	✓	✓	✓			
Report to Council and citizens regularly on the status and performance of work related to the implementation of this asset management policy;				✓	✓		✓			✓
Demonstrate transparent and responsible asset management processes that align with demonstrable best practice;	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Consult with stakeholders when appropriate;				✓	✓		✓			✓
Consider the criticality of the services provided and minimize the risks of disruption and failure.				✓			✓	✓	✓	
Long-Term Sustainability and Resilience - The District of Saanich will consider socio-cultural, environmental and economic factors and implications when making and implementing asset management decisions, and will do the following:										
Ensure capacity and operational capabilities are identified and responsibility for asset management is allocated;				✓					✓	

AM Policy Key Principles/Strategies	Data Management	AM Software Solution	Natural Assets Inventory	AM Plans	IRFS	Unit Cost Database	LTFP	AM Practices Manual	AM Competency Development	Report Progress
Define and articulate asset performance, maintenance and replacement standards and outcomes;				✓						
Manage assets sustainably considering the life cycle costs of assets;				✓	✓		✓	✓	✓	
Consider the effects of climate change in the design, renewal, maintenance and replacement of assets;				✓			✓	✓	✓	
Determine and maintain the replacement value of assets;				✓	✓	✓	✓			
Establish optimum asset renewal and replacement strategies that are informed through the use of life cycle costing and risk analysis.				✓						
Holistic Approach - The District of Saanich will ensure that decisions are made collaboratively and consider all life-cycle stages and the interrelationships between asset performance, operational performance and overall performance, and will do the following:										
Where appropriate, consider and incorporate asset management in other corporate plans;				✓				✓		
Establish and maintain organizational accountability and responsibility for asset inventory condition, use and performance;	✓	✓		✓				✓		
Create a corporate environment where all employees take an integral part in overall management of District assets by creating and sustaining asset management awareness throughout the organization;								✓	✓	
Implement and sustain asset management principles and practices across all departments and service areas by adopting a formal, consistent, repeatable approach to the management of its assets;								✓	✓	
Consider the planning and coordination with other governments within the region.				✓						
Fiscal Responsibility and Asset Management Decision-Making - The District of Saanich will develop prioritized capital investment plans that reflect established levels of service and other strategic objectives, and will do the following:										
Establish infrastructure replacement strategies through the use of full life cycle costing principles;				✓						

AM Policy Key Principles/Strategies	Data Management	AM Software Solution	Natural Assets Inventory	AM Plans	IRFS	Unit Cost Database	LTFP	AM Practices Manual	AM Competency Development	Report Progress
Plan for and provide stable long term funding to replace and/or renew and/or decommission infrastructure assets;					✓		✓			
Make informed decisions, identifying all revenues and expenses (including operations, maintenance, renewal, replacement, and decommissioning) associated with asset decisions, including additions and deletions;				✓	✓	✓	✓			
Integrate corporate, financial, business, and technical planning for assets;	✓	✓		✓				✓	✓	
Optimize the use of available resources;	✓	✓		✓				✓	✓	
Determine and maintain the condition of assets and their expected service life;	✓	✓		✓						
Meet legislative and regulatory requirements for asset management:				✓						
Ensure consideration of equity between current and future rate and tax payers.				✓	✓		✓			
Continual Improvement - The District of Saanich views continual improvement as a key part of our asset management approach, and will do the following:										
Monitor and periodically review the effectiveness of the asset management processes and systems in supporting the delivery of strategic objectives, and will make adjustments as required;										✓
Assess the asset management competencies required and provide the necessary support, education and training to staff;									✓	
Periodically review this asset management policy.										✓

Appendix K

AM Plan Guidance Document

Asset Management Plan Guidance Document (Draft)

Document History

Version	Summary of Changes	Document Status	Date
0.1	Preliminary draft for preparation of pilot Water AM Plan	Draft	2022-06-10
0.2	Draft to Asset Management Working Group for review	Draft	2023-01-11
0.3	Revised with AMWG Comments	Draft	2023-03-14
0.4	Revised with input from pilot Water AMP	Draft	2023-03-27
0.5	Revised based on review of draft AM Strategy	Draft for AM Strategy	2023-05-25

General

The Asset Management Plan (AM Plan) is a long term plan for the technical and financial management of the physical assets that support the provision of one or more services to the community, which answers the following questions:

- What assets are managed?
- What service delivery do the assets support?
- What are the levels of service?
- How are the assets performing?
- What are the future demands?
- What is the risk of asset failure?
- What are the required lifecycle activities and costs?
- What is the operational plan?
- How is climate change integrated?
- Is the current funding level sustainable?
- What is needed to improve the plan?

Saanich will develop first-generation AM Plans for each of the following nine asset types:

1. Drainage
2. Facilities
3. Information Technology
4. Natural Assets
5. Park & Trail Structures
6. Transportation
7. Vehicles & Equipment
8. Wastewater
9. Water

In the longer term, Saanich will consider transitioning its AM Plans from asset level plans to service level plans.

Business Process for Developing the AM Plan

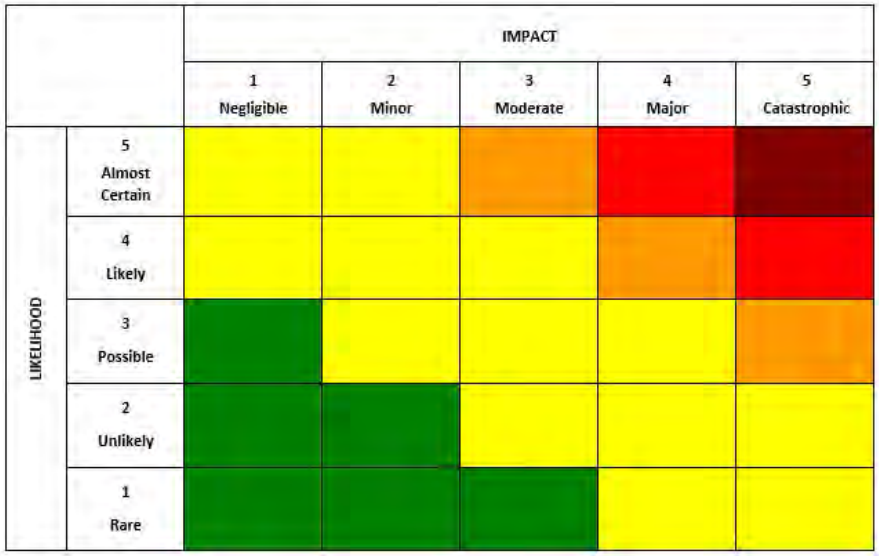
Step	Description
1	Assign Project Manager
2	Develop Project Charter
3	Review asset inventory and update based on existing information
4	Workshop 1 - Roles and responsibilities
5	Workshop 2 - Community Levels of Service
6	Workshop 3 - Technical Levels of Service
7	Workshop 4 - Service level risk matrix
8	Workshop 5 - Asset level risk - likelihood of failure (condition)
9	Workshop 6 - Asset level risk - impact of failure (criticality)
10	Workshop 7 - Asset level risk – likelihood x impact
11	Workshop 8 - Develop life cycle activities
12	Develop lifecycle costs
13	Write draft report
14	Review draft report
15	Write final report
16	Approval of final report

Table of Contents

Each Saanich AM Plan will have the same structure and contents for District-wide consistency, as described below:

Section	Title	Description of Contents
	Executive Summary	High level summary for posting on Saanich external website.
1	**Introduction**	
1.1	Purpose	Describe the purpose of the plan and how it is linked to the AM Policy and AM Strategy.
1.2	Scope	Describe the assets included in the plan, and identify asset groups that share common lifecycle management activities and will have separate sections in the plan.
1.3	Roles & Responsibilities	Describe the Operational Units involved in managing this Asset Type, and the breakdown of roles & responsibilities.
1.4	Service Delivery Overview	Describe the vision, goals and approach of the Operational Unit(s) to delivery of the services supported by the assets included in the plan.
2	**Levels of Service**	
2.1	Services	Describe the community services supported by this asset type, and describe any internal service provision (i.e. services provided by one Operational Unit to another Operational Unit).
2.2	Service Delivery Objectives	Describe the service delivery objectives as set out in the District's OCP, Strategic Plan, or other strategic documents or plans.
2.3	Asset Management Objectives (Levels of Service)	Describe the Legal Requirements, Community Levels of Service, and Technical Levels of Service using the AMBC Levels of Service Tool, where: • Legal Requirements: Define the requirements to comply with applicable laws. • Community LoS: Define the level at which the customer receives the service, from an experiential perspective. • Technical LoS: Define specific and quantifiable measures for service targets that are used by staff to meet legal requirements and achieve the Community LoS. Use one or more of the following characteristics to develop SMART (Specific, Measureable, Achievable, Relevant, Timebound) asset management objectives (levels of service): • Capacity/Availability • Quality • Reliability • Safety • Sustainability (environmental, climate mitigation and adaptation)
3	**State of the Infrastructure**	
3.1	Inventory	List the asset groups and provide summary graphics for the asset attributes (i.e. location, quantity, size, material, installation date, and remaining life).
3.2	Condition	Describe the condition of the assets using the following types of condition and the scoring provided in Attachment 1: • **Physical condition** – Assess physical condition using the applicable asset specific condition scale (e.g. Bridge Condition Index, Facility Condition Index, Pavement Condition Index, etc.) and then map the score to the Canadian Infrastructure Report Card (CRIC) scale, as

Section	Title	Description of Contents
		follows, or assess the physical condition directly using the CIRC scale. • **Capacity Condition –** Assess the capacity condition (also known as Capacity Versus Demand Utilization), which is the ability for the existing capacity to meet current and future demand within the planning horizon. • **Functionality Condition** – Assess the functionality condition, which is the ability to meet current and future service needs (e.g. health, safety, security, legislative etc.).
3.3	Criticality	Describe asset criticality in terms of environmental, social, and financial criteria and scoring provided in Attachment 2. Criticality is assessed using the asset hierarchy, starting at the highest level of the hierarchy, and then individual assets are assigned the same criticality as the system they belong to or lower. After assessing all the criteria, the combined criticality score is the highest score from any of the criteria.
3.4	Replacement Value	Summary of unit costs, replacement value, useful life and annual average replacement funding.
3.3	Roles & Responsibilities	Identify and party responsible for various lifecycle activities.
4	**Future Demand**	
4.1	Climate Change	Describe potential impacts of climate change.
4.2	Population Growth	Describe potential impacts of population growth.
4.3	Industry Trends	Describe potential industry trends that may impact demand.
5	**Risk Management**	
5.1	Service Level Risk	Develop a risk matrix for each service supported by the asset type, including: • Identify risk events • Assess likelihood of the event (scale of 1 to 5) • Assess impact of the event (scale of 1 to 5) • Calculate risk score as likelihood x impact (score from 0 to 25) • Identify methods to reduce risks (e.g. policy, inspection, maintenance, replacement, etc.) • Prioritize risk reduction methods for inclusion in the Financial Plan • Monitor and update risk management measures over time Identify and assess mitigation measures for reducing risk and assess the residual risk. Include mitigation measures to reduce risks in the capital and/or operating budgets (e.g. routine condition assessment programs, asset replacement at end of useful life, adding redundancy measures, developing emergency response plans, etc.).
5.2	Asset Level Risk	Determine Risk of Asset Failure, where: Asset Level Risk = Likelihood of Asset Failure (Condition Score) x Impact of Asset Failure (Criticality Score) Use the resulting Asset Level Risk score for prioritization of the capital budget.

Section	Title	Description of Contents
		Map risks using the Saanich Enterprise Risk Management Risk Priority Heat Map and ERM Risk Priority Scale shown below: **Risk Priority Matrix (Heat Map)**  **Risk Management Priorities** **Priority Level** / **Description** EXTREME • Exposure to this level of risk would normally be immediately discontinued except only in extreme circumstances • The City Manager / Chief Administrative Officer must be informed and take control of the management of this risk VERY HIGH • Exposure to this level of risk would normally be immediately discontinued unless strategic imperatives dictate otherwise • Improving the risk mitigation is required • Senior management must be kept informed HIGH • Exposure to this level of risk should be discontinued as soon as practicable • Improving the risk mitigation (if possible) is recommended • Relevant management attention and action needed MODERATE • Unnecessary exposure to this level of risk must be discontinued as soon as practicable • Improving the risk mitigation is not required at this stage • Mitigation control and responsibility must be specified LOW • Exposure to this level of risk is acceptable without additional risk treatments and be subject to periodic review to ensure the risk does not increase • Improving the risk mitigation is not required • Can be managed by routine controls and procedures
6	**Lifecycle Management**	
6.1	Existing Assets	Describe the lifecycle activities required over a 10-year period to maintain the current levels of service.
6.1.1	Planning & Analysis	Describe planning and analysis activities.
6.1.2	Design & Construction	Describe design and construction activities.
6.1.3	Operations & Maintenance	Describe operations and maintenance activities, including any required system or staff certifications, planned preventative maintenance and

Section	Title	Description of Contents
		processes for corrective maintenance, automated systems and alarms in place to notify operators of problems, reference to O&M manuals, list of authorized service agents, reference to emergency plans, and list of spare parts. Attach the detailed Operational Plan as Appendix D.
6.2	New Requirements for Future Demand	Describe new lifecycle activities required to support future demand.
7	**Funding Implications**	
7.1	Capital Costs	Provide the 10-year capital plan.
7.2	Operations & Maintenance Costs	Provide the 10-year operations and maintenance costs.
7.3	Financing Strategy	Describe how the 10-year funding needs will be financed.
8	**Plan Monitoring and Improvement**	
8.1	Improvement Plan	Describe actions for improving the AMP.
8.2	Monitoring and Review Procedures	Review timing and procedures.
	Appendices	
	Appendix A	Prioritized Capital Project List
	Appendix B	Location and Condition Maps
	Appendix C	Condition Photos
	Appendix D	Operational Plan (see Attachment 3)

Attachments

1. Likelihood of Asset Failure (Condition) Criteria
2. Impact of Asset Failure (Criticality) Criteria
3. Operational Plan Content

Attachment 1 – Likelihood of Asset Failure (Condition) Criteria

Likelihood (Condition) Score	Saanich Enterprise Risk Management Framework	Physical Condition (Canadian Infrastructure Report Card Scale)	Capacity Condition "Capacity Versus Demand Utilization" *	Functionality Condition *
1	Rare - May occur in the next 3 years only in exceptional circumstances. Exceptionally unlikely even in the long-term future.	Very Good - The asset is fit for the future. It is well maintained, in good condition, new or recently rehabilitated.	Demand corresponds well with actual capacity and no operational problems experienced. Meets current and future capacity needs within planning horizon. No potential for climate change impacts.	The infrastructure in the system or network meets all program/service delivery needs in a fully efficient and effective manner (i.e. health, safety, security, legislative etc.). Redundancy available is more than 100%.
2	Unlikely - Could occur if circumstances change but not anticipated in the next 3 years. Could occur in 5-10 years.	Good - The asset is adequate. It is acceptable and generally within the mid-stage of its expected service life.	Demand is within actual capacity and occasional operational problems experienced. Low potential for climate change impacts.	The infrastructure in the system or network meets program/service delivery needs in an acceptable manner (i.e. health, safety, security, legislative etc.). Redundancy available is 100%.
3	Possible - Might occur in next 3 years under current circumstances but a distinct possibility that it won't occur. Could occur with the next 3-5 years.	Fair - The asset requires attention. The asset shows signs of deterioration and some elements exhibit deficiencies.	Demand is approaching actual capacity and/or operational problems occur frequently. Meets current capacity needs but not future without modifications. Some potential for climate change impacts.	The infrastructure in the system or network meets program/service delivery needs with some inefficiencies and ineffectiveness present (i.e. health, safety, security, legislative etc.). Redundancy available is between 25% and 99%.
4	Likely - Will probably occur within the next 3 years in most circumstances. Could occur within months to years.	Poor - There is an increasing potential for its condition to affect the service it provides. The asset is approaching the end of its service life, the condition is below the standard and a large portion of the system exhibits significant deterioration.	Demand exceeds actual capacity and/or significant operational problems are evident. High potential for climate change impacts.	The infrastructure in the system or network has a limited ability to meet program/service delivery needs (i.e. health, safety, security, legislative etc.). Redundancy available is less than 25%.
5	Almost Certain - Is expected to occur in the next 3 years unless circumstances change. Could occur within days to months.	Very Poor - The asset is unfit for sustained service. It is near or beyond its expected service life and shows widespread signs of advanced deterioration. Some assets may be unusable.	Demand exceeds actual capacity and/or operational problems are serious and ongoing. Does not meet current capacity requirements. Existing and ongoing climate change impacts.	The infrastructure in the system or network is seriously deficient and does not meet program/service delivery needs and is neither efficient nor effective (i.e. health, safety, security, legislative etc.). Redundancy available is 0%.

*Based on *Connecting LOS, Risk and Cost – From Strategic to Tactical*, Town of Halton Hills, CNAM Conference 2022; added climate change impact criteria under Capacity Condition; added redundancy criteria under Functionality Condition.

Attachment 2 – Impact of Asset Failure (Criticality) Criteria *

Impact (Criticality) Rating	Impact (Criticality) Level	Financial	Social				Environmental
			People	Business Operational Effectiveness	Legal and Regulatory	Reputation	
1	Insignificant (Not Critical)	The NET financial impact to Saanich is likely to be less than 0.5% of the annual operating budget.	Single or multiple staff unable to perform work for one day. Injury (to staff or public) requiring no medical treatment.	Minor, but noticeable, change in service from the public's perspective.	No regulatory impact. Minor complaint / incident resolved by management.	No impact on reputation. No media coverage	Minor leak, non-contaminating.
2	Minor (Low Criticality)	The NET financial impact to Saanich is likely to be between 0.5 - 2% of the annual operating budget.	Single or multiple staff unable to perform work for a period of one week. Minor injury (to staff or public) requiring first aid only.	Intermittent loss of services to the public of less then 3 hours. Intermittent interruption of IT systems / email less than once per month.	Activity does not follow relevant established industry / provincial / national guidelines. Isolated complaint / incident where there is a threat of legal action, resolved by management.	Minimal customer sensitivity and damage to reputation. Limited local community coverage.	On site release contained immediately.
3	Moderate (Moderate Criticality)	The NET financial impact to Saanich is likely to be between 2 - 10% of the annual operating budget.	One staff member with serious long-term injury / illness connected with Saanich endeavours. Injury (to staff or public) requiring hospitalization to one or more persons.	Frequent loss of services to the public of between 3 hours and a week. Routine interruptions of IT systems / email each week. A noticeable change in normal service quality to the public.	Activity does not meet the requirements of relevant industry / provincial / national standards exposing Saanich to possible litigation risks. Significant level of complaints / incidents where there is a high threat of legal action, resolved by management.	Moderate customer sensitivity and damage to reputation impacting noticeably on business activities. Significant local community coverage	On site release contained with outside assistance. No damage to flora / fauna and short-term effects on soil, water and air.

Impact (Criticality) Rating	Impact (Criticality) Level	Financial	Social				Environmental
			People	Business Operational Effectiveness	Legal and Regulatory	Reputation	
4	Major (High Criticality)	The NET financial impact to Saanich is likely to be between 10-50% of the annual operating budget.	Multiple staff with serious long-term injury / illness connected with Saanich endeavours. Serious injury to one or more persons (to staff or public) resulting in a permanent disability.	Loss of basic services to the public for a period longer than a week. A very noticeable change in normal service quality.	Non-compliance with legislation/regulations trigger material fines, penalties and restrictions on operations. Contract dispute results in significant loss of productivity and legal action. Senior employees charged for breaches / fraud.	Significant customer sensitivity and damage to reputation. Province wide Media coverage.	Off-site release with no long-term effects. Limited damage to flora/fauna, soil /water.
5	Catastrophic (Extreme Criticality)	The NET financial impact to Saanich is likely to be greater than 50% of the annual operating budget.	Substantial permanent loss of Saanich staff resources. Deaths (to staff or public).	Total inability to provide basic services to public for an extended period. Complete operational failure of a critical system for a sustained amount of time.	Total failure to meet relevant legislation and regulations leading to dismissal of Council or Board	Very high customer sensitivity and irreparable damage to reputation. National / International media coverage.	Toxic release off site with long term effects. Substantial / long term damage to flora / fauna, soil / water.

*Based on *Enterprise Risk Management Framework, Step 2 – Ranking Risk Impacts*, District of Saanich, 2022.

Attachment 3 - Operational Plan Content

Section	Subsection	Description
Purpose		Purpose of the document
Vision		Describe the operations and maintenance team vision
Services	External	Identify the services provided to the community, and refer to the AM Plan for Levels of Service
	Internal	Identify the services provided to internal departments
Organization Chart		Describe the Operations & Maintenance team.
Certifications	System	Describe any system certifications
	Operators and Trades	Describe any operator or trades certifications
Operations & Maintenance	Operations	Describe operational activities
	Maintenance	Describe the planned preventative maintenance program, and processes for corrective maintenance
	Workflows	Develop business process workflows for each maintenance activity
	Inspection Forms	Describe and provide templates for data collection and inspection forms.
	Automated Systems and Alarms	Describe automated system and alarms in place to notify operators of problems
	Manuals	List reference O&M manuals
	Service Agents	List authorized service agents
	Spare Parts Inventory	Inventory of assets and authorized replacement parts
Monitoring & Reporting		Describe processes and procedures for data collection, analysis, review and reporting. Describe calibration procedures for monitoring equipment. Describe alarm conditions and process for response to alarms.
Emergency Procedures		Refer to or describe emergency plans
Staff Competency		Describe a training plan for all staff, and the resources in place to provide ongoing training and development
Improvement Plan		Identify actions for continuous improvement

Appendix L

AM Strategy
Resource Requirements

AM Strategy Resource Requirements

Document History

Version	Summary of Changes	Document Status	Date
1	First-generation document for AM Strategy	Final	June 2023

Purpose

The purpose of this memo is to identify the additional resources that are anticipated to be required to implement the Asset Management (AM) Strategy, including:

- **Staff Resources**: Estimated additional staff required in the short term to complete the 2023-2027 Implementation Plan, and required on an ongoing basis to support continuous improvement of Saanich's AM practices
- **Funding Resources**: Estimated additional one-time and ongoing funding requirements to complete the 2023-2027 Implementation Plan

The details and timing of requests for additional resources will be refined, prioritized, and submitted for Council consideration as part of the annual Financial Plan process over the next several years.

Although AM is not new to Saanich, the implementation of a formalized approach to AM will require additional staffing and funding resources as new business processes are developed over time. The phased approach to AM resource planning is illustrated in Figure 1, including:

- **Preliminary Review:** This memo outlines the results of a preliminary review of resources required to complete the 2023-2027 Implementation Plan.
- **Updates:** Resource requirements will be reviewed and refined through implementation of several of the strategies in the 2023-2027 Implementation Plan, including:
    - *Strategy 2: Develop AM Software Solution* - Depending on the recommended solution, there may be requirements for additional resources, which will be identified in the business case.
    - *Strategy 4: Complete First-Generation AM Plans* - After developing and documenting levels of service and the resulting lifecycle activities and costs, the capacity of existing staff and funding to complete the required activities will be assessed and any additional resource requirements identified.
    - Strategy 5: *Update Infrastructure Replacement Funding Strategy* - If the value of the annual capital program increases as a result of the increased sustainable annual replacement funding target, then additional staff resources will be required to deliver the capital program.
    - *Strategy 9: Develop AM Competency Management Program* - As part of the development of this program, a detailed review of staffing resource requirements will be completed using the guidance document *Asset Management Competency Framework for Canadian Communities* (CNAM, 2021).

- **Longer Term**: It is anticipated that as Saanich's AM practices continue to improve over time, and as Saanich's population increases, additional staff and resources may be required.

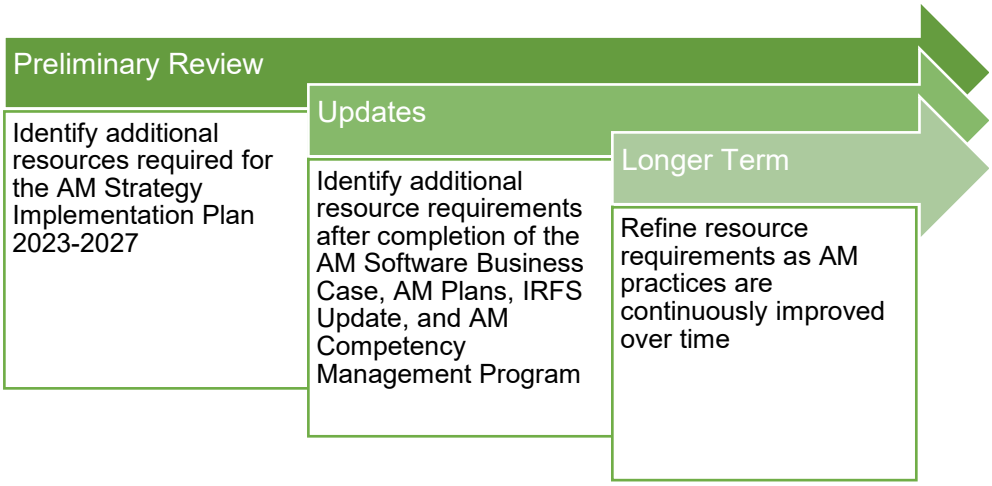


Figure 1 - Phased Approach to AM Program Resource Planning

Return on Investment in Asset Management

Saanich's investment in additional resources to support implementation of the AM Strategy is expected to result in a significant return on that investment through cost savings resulting from improved operational efficiency. For example, there is a significant opportunity for cost savings by extending useful life and reducing the risk of failure of Saanich's $4.7 billion portfolio of engineered assets.

Asset Management Program Roles and Responsibilities

Saanich's AM Program governance structure follows a centre of excellence model, where centralized AM Program staff provide guidance and support to staff to the Operational Units, which carry-out the day-to-day work of managing assets and delivering services to the community. Saanich intends to implement the AM Program using in-house staff as much as possible, in order to develop internal AM competency and foster a culture of asset management.

As shown in Figure 2, AM Program functions include general AM functions, service delivery functions and support functions:

- **General AM Functions:** District-wide AM activities are carried out by the AM Program Office staff.
- **Service Delivery Functions:** In the Operational Units, staff manage assets to deliver services to the community, and are responsible for developing and implementing the AM Plans applicable to the applicable service areas. Operational Unit functions are broken down into three key areas:
    - Planning & analysis (P&A)
    - Design & construction (D&C)
    - Operations & maintenance (O&M)

- **Support Functions:** District-wide support is provided to the AM Program Office and the Operational Units by several departments, including Finance, Human Resources, Information Technology, Planning, Risk Management and Sustainability.

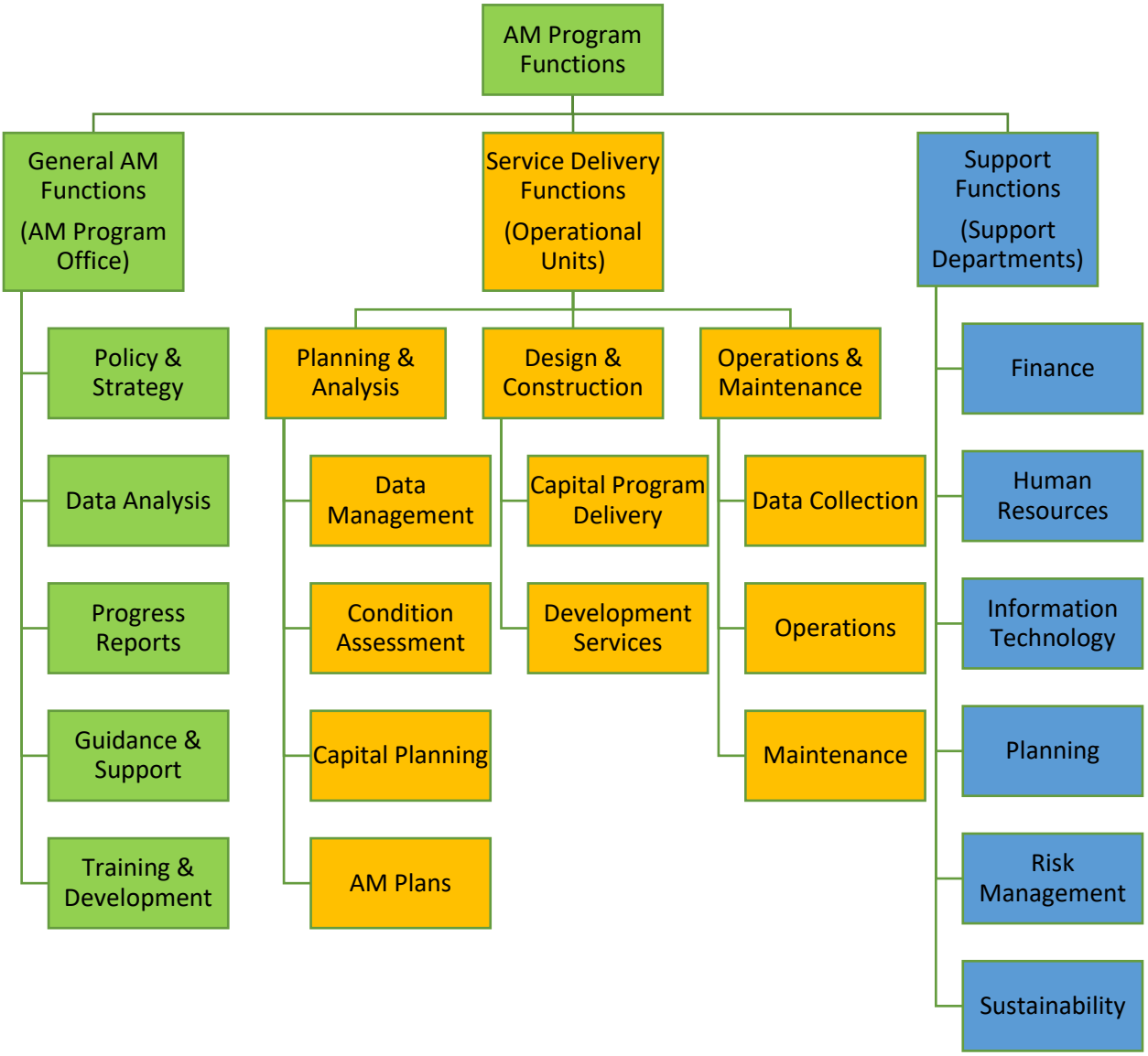


Figure 2 - AM Program Roles and Responsibilities

Saanich Staffing Plan

Saanich's current staffing plan[1] was completed in February 2022. It includes recommended staffing needs for 2022, 2023, 2024, and identifies additional positions for consideration beyond 2024. In general, the plan indicates that the District has been under-resourced in terms of staff for many years, and that there is a need to catch up with additional staffing resources.

The plan also includes a framework for new position approval as shown in Figure 3.

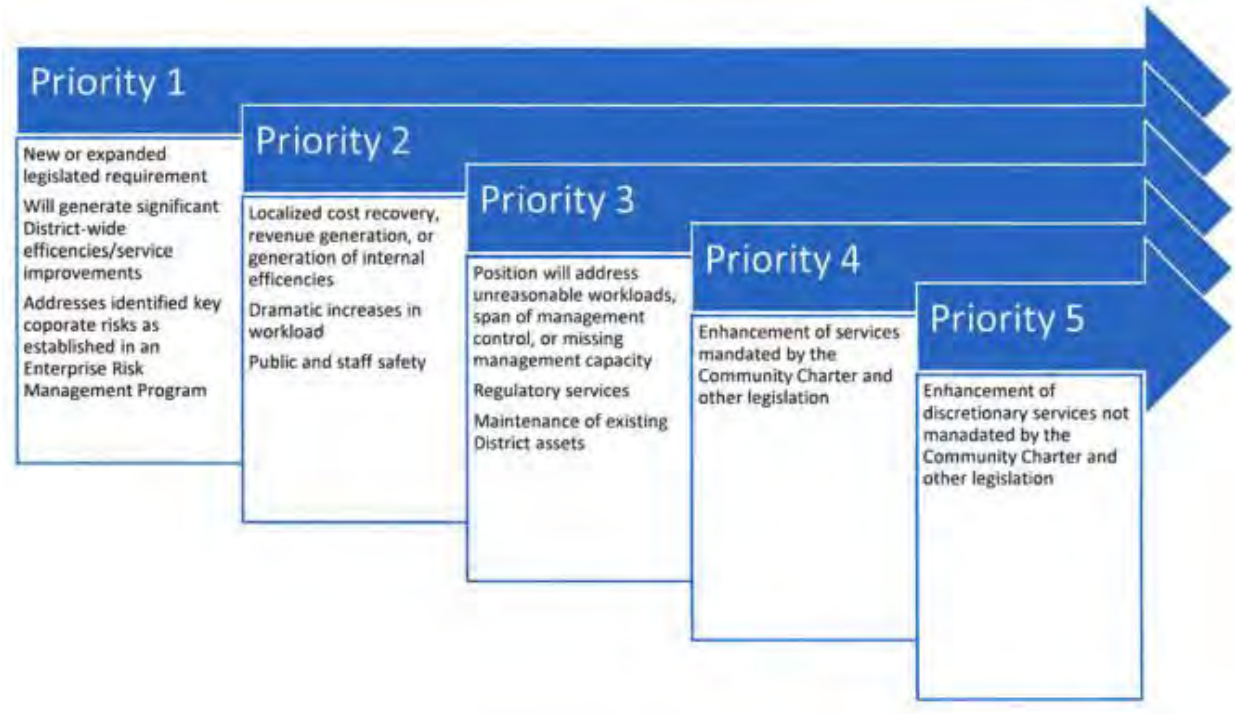


Figure 3 - Framework for New Position Approval (James Ridge, 2022)

Although the plan was developed prior to the start of work on the AM Strategy, it includes the following references related to the AM Program:

- **Priority One**
  - **New or expanded legislated requirement:** The current staffing plan does not identify any District-wide general asset management positions, however it does identify asset management as an example of an area where there may be legislated requirements in future. There are provincial reporting requirements related to asset management. In addition, strengthening AM practices in

[1] Staffing Plan – District of Saanich, James Ridge Consulting (February 2022), Staffing Plan - District of Saanich (granicus.com)

accordance with the provincial AM framework is a requirement of Saanich's 2014-2024 Community Works Fund Agreement (formerly Gas Tax Fund Agreement), and the province has signaled that there will be additional requirements regarding continuous improvement of AM practices when this agreement is renewed in 2024.
    - **Significant District-wide efficiencies or service improvements:** The current staffing plan identifies two new Financial Analyst positions with 2022-2023 timing.
- **Priority Two**
    - **Localized cost recovery or revenue generation:** An example of this would be opportunities identified in the AM Plans.
    - **Dramatic increases in workload:** An example of this would be an increase in the capital program.
- **Priority Three**
    - **Workload:** Staff capacity increases may be required to maintain levels of service.
    - **Maintenance of existing District assets:** The current staffing plan indicates that asset maintenance positions are "necessary to properly maintain existing assets, in doing so prolongs their life, or ensure their proper functioning to end of expected life", and identifies one new position in the Engineering Department (Fleet Services) and four new positions in the Parks, Recreation and Community Services Department.
- **Priority Four**
    - **Incremental enhancement to Provincially mandated services:** Staff capacity increases may be required to address increases to levels of service for mandatory services.
- **Priority Five**
    - **Incremental enhancement to discretionary services:** Staff capacity increases may be required to address increases to levels of service for discretionary services.

Existing Resources

General AM Functions

Currently, there is one full-time equivalent (FTE) position dedicated to District-wide AM functions, the Asset Management Program Manager (AMPM), which was a new position approved by Council in 2021.

Service Delivery Functions

Although staffing levels vary between departments, each of the Operational Units has some existing staff performing asset management functions in each of the three key areas:

- P&A
- D&C
- O&M

However, each of the Operational Units has identified that there is limited ability within the existing staff complement to implement the strategies identified in the AM Strategy 2023-2027 Implementation Plan or to take on new, formalized AM functions over the longer term.

The Operational Units have also identified the need for new mobile technology devices and software that will allow field staff to update asset inventory data to a central database, use asset data to support decision-making, and streamline maintenance management processes.

Support Functions

With the exception of Finance, the support departments do not require additional staff resources to support implementation of the AM Strategy, although additional resources may be identified in future as the program matures.

The Finance Department currently has limited ability within the existing staff complement for additional financial analysis in support of the AM Strategy in the short and medium term, or in support of general AM functions in the longer term.

Additional Staff Resource Requirements

Overview

A preliminary assessment was completed to identify new staff resources required to implement the AM Strategy and continue to improve Saanich's AM practices. This assessment was based on best professional judgement with information available at this time.

It is important to note that the formalization of AM practices is new to Saanich and also relatively new to many of our comparator municipalities across Canada. Therefore, this preliminary assessment will be refined over time, as Saanich's AM practices mature and new information becomes available. New information will be communicated to Council through annual update reports on progress of the AM Program.

Staff requests will be prioritized and submitted to Council for consideration through the annual Financial Plan process, with consideration for space allocation and impacts on support departments.

General AM Functions

A core need for the future success of the AM Program is additional District-wide AM expertise, in order to provide support and guidance to the Operational Units and for ongoing completion of general AM functions.

A review of the staffing models for the general AM functions of several comparator municipalities was undertaken, and the results are shown in Attachment 1. The review revealed the following:

- Many municipal comparators have a similar governance structure to Saanich, with a centralized team performing the general AM functions across the organization
- Typically, the centralized team includes a Manager, and several supporting staff

Based on this review, it is recommended that Saanich request two new "AM Advisor" positions, which would report to the AMPM and provide ongoing support to the Operational Units.

In the short term, the first "AM Advisor" position would focus on supporting the Operational Units in the development of their first-generation AM Plans (*Strategy 4: Complete First-Generation AM Plans*) and the AM guidance documents (*Strategy 8: Develop AM Practices Manual*), and

the second “AM Advisor” position would focus on improving Saanich’s asset data management (*Strategy 1: Improve Data Management*) and software development (*Strategy 2: Develop AM Software Solution*). In the longer term, both “AM Advisor” positions would provide ongoing guidance and support to the Operational Units for the continuous improvement of Saanich’s AM practices, as well as general AM functions such as data analysis, reporting, and staff training and development.

The Finance Department requires one new “Finance Asset Management Coordinator” position to support implementation of the AM Strategy (in addition to the two positions identified in Saanich’s current Staffing Plan). In the short to medium term, the new position would provide financial input to *Strategy 1: Improve Data Management*, *Strategy 2: Develop AM Software Solution, Strategy 4: Complete First-Generation AM Plans*, *Strategy 5: Update Infrastructure Replacement Funding Strategy, Strategy 6: Develop Unit Cost Database*, and *Strategy 7: Update Annual and Long Term Financial Plans*, and would then provide ongoing support for the AM Program over the longer term.

In summary, as shown in Table 1, a total of three additional FTE are required to support general AM functions.

Table 1: Staff Resource Requirements for General AM Functions

Department/Area	Position	2024-2025
Engineering/AM Program Office	Asset Management Advisor	2 FTE
Finance	Finance Asset Management Coordinator	1 FTE
Total		**3 FTE**

Service Delivery Functions

Through a series of workshops with the Asset Management Working Group (AMWG), a preliminary assessment was undertaken to of the staffing resources needed in the Operational Units to support formalization of Saanich’s AM practices.

In general, it was determined that existing staff are already stretched with no available capacity to support additional workload, and that additional staffing resources will be required to support the AM Program.

In particular, staffing resources to carry out asset P&A functions are currently deficient, as these areas have not been adequately staffed in the past to correspond with population growth and increases to Saanich’s portfolio of assets. Currently, the staff who would normally carry out asset P&A functions have been focused on a number of new strategic priorities and initiatives that require infrastructure analysis, such as planning for growth, housing, BC Transit planning, Climate Plan and Active Transportation Plan implementation. Additional staffing resources will also be required to support D&C and O&M functions.

Requests for additional staffing resources required by the Operational Units to support the AM Program will be refined and identified in the coming years. It is important to note that many of these new positions will be funded through the capital program and will not impact taxation rates. New positions that will impact taxation rates will be prioritized and brought forward for consideration by Council through the annual Financial Plan process.

Given the current deficiency in Saanich's staffing resources, many of the functions for managing our assets are carried out by consultants, which is a more expensive funding model and does not support building of internal AM competency. Bringing these functions in-house and building Saanich's internal capacity will support achievement of the key principles of the AM Policy and move Saanich towards the goal of sustainable service delivery.

Support Functions

At this time, besides the Finance Department, the support departments have not identified the need for additional resources beyond those identified in the current Saanich Staffing Plan:

- **Human Resources:** It is not anticipated that Human Resources will require additional resources to support the AM Strategy.
- **Information Technology (IT):** At this time, the IT Department has not identified any additional staff resource requirements to support the AM Strategy, as it is anticipated that IT Subject Matter Experts can be made available for the initial project work. However, resource planning in IT is ongoing and assesses a broad picture of all demand from all departments, and additional resource requirements may be identified as more information becomes available.
- **Planning:** It is not anticipated that Planning will require additional resources to support the AM Strategy.
- **Risk Management:** It is not anticipated that Risk Management will require additional resources to support the AM Strategy.
- **Sustainability**: A significant among of Sustainability staff time will be required to support the integration of climate change considerations with the implementation of the AM Strategy. Assessment of staff needs will be undertaken as part of the Annual Climate Report Card and submitted for consideration through the annual budget process.

Additional Funding Requirements

Preliminary estimates of one-time funding requirements for implementing the AM Strategy are shown in Table 3. These funding requests will be refined and submitted to Council for consideration through the annual Financial Plan process. A portion of these funding requests may be funded directly from the Water and Sewer Utility surplus.

In addition, depending on the approved Business Case for development of an AM software solution, there may be ongoing costs for new software licensing starting in 2027, with a preliminary estimated cost of up to approximately $0.5 million per year.

Table 3: Estimated One-Time Funding Requirements

Strategy (Project Number)	Description	2024	2025	2026	2027	Total 2024-2027
Strategy 1 (Project 1.4)	Purchase new mobile devices for asset data collection.	$0.7M				**$0.7M**
Strategy 2 (Projects 2.3 to 2.9)	Specialized consulting services for software pilot projects.	$0.2M	$0.2M			**$0.4M**
Strategy 2 (Project 2.11)	Provide AM software capacity in accordance with approved Business Case.			$0-2M		**$0-2 M**
Strategy 4 (Projects 4.1 to 4.9)	Specialized consulting services for AM Plans.	$0.1M	$0.1M	$0.1M	$0.1M	**$0.4M**
Strategy 9 (Projects 9.1 to 9.2)	Specialized consulting services for AM Competency Management Program.		$0.1M	$0.1M		**$0.2M**
Strategy 9 (Project 9.3)	Provide staff with AM Program training.				$0.2M	**$0.2M**
Total	**Total**	**$1.0M**	**$0.4M**	**$0.2-2.2M**	**$0.3M**	**$1.9-$3.9M**

The rationale for the estimated one-time funding requirements identified in Table 3 is as follows:

- **Mobile Devices for Asset Data Collection:** Purchase of new mobile devices for staff to support field data collection. A preliminary estimate of $0.7 million is included for forecasting purposes (based on $5,000 per tablet with 106 tablets, and $3,000 per truck-mounting cradle with 55 cradles).
- **Specialized Consulting Services for Software Pilot Projects:** Specialized IT consultant support for pilot projects to assess the use of Saanich's existing software for AM. A preliminary estimate of $0.4 million is included for forecasting purposes.
- **Provide AM Software Capacity:** Procurement of AM Software may be required, depending on the results of the business case. A preliminary estimate of $0-2 million is included as a placeholder for forecasting purposes.
- **Specialized Consulting Services for AM Plans:** Specialized consultant advisory services may be required to support the development of the first generation AM Plans and AM Practices Manual. A preliminary estimate of $0.1 million per year for a total of $0.4 million is included for forecasting purposes.
- **Specialized Consulting Services for AM Competency Management Program**: Specialized consultant advisory services may be required to support the development of the AM Competency Management Program. A preliminary estimate of $0.2 million is included for forecasting purposes.
- **Staff Training:** For forecasting purposes, a placeholder of $0.2 million is included for provision of AM training to staff based on the AM Competency Management Program.

Attachment 1: Municipal Comparators for General AM Functions

Municipality	Population (2021)	General AM Staff (# FTE)	General AM Positions
City of Port Coquitlam, BC*	61,000	3	• Manager of Infrastructure Planning (1) • Project Engineer (1) • Engineering Technician (1)
District of North Vancouver, BC**	88,000	3	• Manager, Asset Management & Capital Planning (1) • Account Officer (1) • Financial Analyst (1)
City of Prince George, BC*	89,000	3	• Asset Manager (1) • Engineering Technologist (1) • Financial Analyst (1)
City of Victoria, BC**	94,000	2	• Asset Management Specialist (1) • Asset Systems Coordinator (1)
City of Kelowna, BC*	143,000	3	• Manager, Infrastructure Engineering (1) • Asset Manager (1) • Project Manager (1)
City of Burlington, ON**	187,000	5	• Manager of Asset Planning (1) • Asset Planning Coordinator (1) • Manager of Finance, Asset Management (1) • Financial Analyst (2)
Town of Oakville, ON**	214,000	7	• Manager of Asset Management (1) • Fixed Asset Analyst (4) • AM System Integrity Analyst (1) • AM Data Scientist (1)
Capital Regional District, BC**	415,000	4	• Manager, Asset Management (1) • Asset Management Advisor (1) • Project Engineer, Asset Management (1) • Senior Program Analyst, Grants and Asset Management (1)
City of Vancouver, BC**	662,000	~13	• Manager, Engineering Strategy and Standards (part of 1 FTE) • Senior Project Manager (part of 1 FTE) • Project Manager (part of 1 FTE) • Operational Branches each have 2 FTE dedicated to AM (total 10)

Sources: * This information was gathered in 2019 by Saanich staff. ** This information was gathered in 2022-2023 by Saanich staff.