Asset Management for Municipal Staff: The Technical Basics

Participant Workbook

This initiative is offered through the Municipal Asset Management Program which is delivered by the Federation of Canadian Municipalities and funded by the Government of Canada.

About Rural Municipalities of Alberta

Rural Municipalities of Alberta (RMA) is an independent association comprising Alberta's 69 counties and municipal districts. Since 1909, RMA has helped rural municipalities achieve strong, effective local government. RMA provides advocacy and business services, including RMA Trade, RMA Fuel, and RMA Insurance.

About Alberta Urban Municipalities Association

Founded in 1905, the Alberta Urban Municipalities Association (AUMA) represents 269 urban municipalities including cities, towns, villages, summer villages, and specialized municipalities. AUMA works to engage its members and has developed strategic partnerships with the federal and provincial governments and business and community stakeholders on a broad range of issues to strengthen the economic, social, cultural, and environmental vitality of its member municipalities.

About Infrastructure Asset Management Alberta

Infrastructure Asset Management Alberta (IAMA) represents the greater community of any person, organization, or agency with an interest in infrastructure asset management in Alberta. As part of meeting its mission and vision, IAMA coordinates three workshops per year to discuss current and emerging trends in asset management. In 2018, workshops will be held in Red Deer, Edmonton area, and Calgary area. The next workshop is in Nisku on June 13, 2018. For more information and to register, visit assetmanagementab.ca.

FCM EN: fcm.ca/assetmanagementprogram
FCM FR: fcm.ca/programmegestiondesactifs
IAMA: http://www.assetmanagementab.ca

Table of Contents

Welcome

Welcome to *Asset Management for Municipal Staff: The Technical Basics.* This course was designed to help you, as municipal staff, complete the asset management process for your municipality.

This course is intended to equip you with a basic understanding of asset management and to help your municipality chart a path towards level 2 of the Federation of Canadian Municipalities (FCM) Municipal Asset Management Program (MAMP) Readiness Scale (hereafter referred to as the MAMP Readiness Scale). As you progress through the course, you will see that the MAMP Readiness Scale is a great resource to support municipalities in improving their asset management practice. After this course, not all municipalities will be ready to reach level 2; however, all participants should take away the skills and knowledge required to progress on the scale.

Some participants may already be familiar with asset management, while others may be new to the subject. This course will allow all participants to build their knowledge and skills, and share their experiences with their colleagues. The agenda includes opportunities for group discussions and exercises, as well as assignments that can be completed after the course to help you build your municipality's asset management plan.

As municipal staff, your role is to help support your council, make effective decisions, plan for the long-term sustainability of your community, and support effective service delivery by undertaking the day-to-day operations and maintenance of municipal assets.

Your participation in the course is invaluable to you and your colleagues. Over the next two days, you will share your thoughts, insights, and experiences. We will also be asking for your feedback through an evaluation at the end of day 2. Your responses will help us continually improve this material for future deliveries.

Using the Workbook

Various icons have been inserted throughout the presentation and workbook. Refer to the table below to see what they mean.

Icon	Purpose
	Indicates a **learning objective**
	Refers the participant to a **resource in Section 9** of this workbook
	Indicates a **group exercise**
	Indicates a **group discussion** question
	Indicates a **next steps assignment**

Definitions

Asset: A physical component of a system that enables a service, or services, to be provided.

Asset life: The period from asset creation to asset end-of-life.

Asset life cycle: The stages involved in the management of an asset.

Asset management: A process of making decisions about how infrastructure is used and cared for in a way that manages current and future needs, considers risks and opportunities, and makes the best use of resources.

Asset management lens: Integrating asset management practices into decision-making. Specifically, thinking about what information is available, what additional information is needed, what trade-offs are being made, and what are the community's long-term goals and needs.

Asset management plan: Documented information that specifies the activities, resources, and timescales required for an individual asset, or a grouping of assets, to achieve the organization's asset management objectives.

Asset management policy: Outlines an organization's commitment and mandated requirements for asset management.

Asset management roadmap: Step-by-step plan guiding the actions, responsibilities, resources, and timescales to implement the asset management strategy and deliver asset management objectives.

Asset management strategy: Outlines an organization's approach for implementing the asset management policy.

Asset management implementation plan: Direction, framework, and approach for implementing the asset management policy to support strategic objectives and sustainable and effective service delivery.

Asset management system: The set of policies, people, practices, and processes that are used in asset management. An asset management system is not a software program.

Asset portfolio: Assets that are within the scope of the asset management system.

Asset register: A database or document containing specific information about the assets owned or controlled by an organization.

Asset risk: The risk of an asset failing to perform the way you need it to (e.g. a pipe bursts).

Average annual life cycle investment (AALCI): The average annual investment needed to sustain an existing asset over its service life and replace or renew the asset once it reaches the end of its service life.

Level of service: Levels of service statements describe the outputs the organization intends to deliver to customers and other stakeholders. Levels of service typically relate to service attributes such as quality, reliability, responsiveness, sustainability, timeliness, accessibility and cost.

Life cycle costs: The total cost of an asset over its life, including capital, operation, maintenance, renewal, and decommissioning costs.

Likelihood: The probability that an event might happen.

Maintenance: Any activity performed on an asset to ensure it continues to deliver an expected level of service until it is scheduled to be renewed, replaced, or disposed of.

MAMP Readiness Scale: A tool developed by the Federation of Canadian Municipalities that guides the assessment of a municipality's current asset management practices and can serve as a structure for evaluating your progress as you develop a strong asset management program and approach.

National Round Table for Sustainable Infrastructure: The NRTSI was formed in 2015 as an expert resource on infrastructure; a non-partisan body that facilitates the understanding of infrastructure needs and helps to define issues of national priority as well as identify and/or develop and disseminate tools to address these issues.

Operation: The act of utilizing an asset. Typically consumes materials and energy.

Renewal (or asset renewal): The replacement or refurbishment of an existing asset (or component) with a new asset (or component) capable of delivering the same level of service as the existing asset.

Renewal investment: The total investment needed to replace or renew existing assets that have reached the end of their service life.

Risk: The chance that conditions or events may occur to cause an asset to fail.

Risk tolerance: The capacity to accept a level of risk, dependent on the likelihood and severity of consequences, and the existence of other priorities that require more immediate investment.

Strategic risk: The risk of a change occurring that impedes your ability to achieve your overarching strategic goals (e.g. hot, dry conditions put pressure on your ability to provide water service).

Sustainable service delivery: Ensuring that municipal services are delivered in a socially, economically, and environmentally responsible way, and that decisions today do not compromise the ability of future generations to meet their own service needs.

Agenda

Over the next two days, this course will take you through three modules, covering the basics of asset management. The course will explore risk and levels of service, what makes for good policy and governance in relation to asset management, and how you — as a leader — can be a champion of asset management within your municipality.

Together, we will identify what information you already have for your municipality, and how you can use that knowledge to advance your journey. We will walk you through the key components and the purpose of an asset management plan. We will conclude by giving everyone the chance to work together to develop a basic outline of an asset management plan.

At the end of this course, you will have the knowledge and tools you need to advance asset management within your municipality.

Day 1 Agenda

Section	Time	Title
1	8:30 – 8:45	Introduction
2	8:45 – 9:15	Module 1: What is Asset Management? Background Facilitated Discussion
3	9:15 – 10:15	MAMP Readiness Scale – How to assess where you are
4	10:15 – 10:30	Break
5	10:30 – 11:45	Module 1: What is Asset Management? Policy and Governance Facilitated Discussion
6	11:45 – 12:00	Session Summary
7	12:00 – 13:00	Lunch
8	13:00 – 14:30	Module 1: What is Asset Management? Policy and Governance Facilitated Discussion (Continued)
9	14:30 – 14:45	Break
10	14:45 – 16:15	Module 1: What is Asset Management? People Matter Facilitated Discussion
11	16:15 – 16:30	Conclusion - Discussion

Day 2 Agenda

Section	Time	Title
1	8:30 – 8:45	Introduction
2	8:45 – 10:15	Module 2: Asset Management Data Requirements Facilitated Discussion
3	10:15 – 10:30	Break
4	10:30 – 11:45	Module 3: Asset Management Plans Facilitated Discussion
5	11:45 – 12:00	Session Summary
6	12:00 – 13:00	Lunch
7	13:00 – 14:30	Module 3: Asset Management Plans – Build Your Own Facilitated Discussion
8	14:30 – 14:45	Break
9	14:45 – 16:00	Module 3: Asset Management Plans – Build Your Own Exercise
10	16:00 – 16:30	Conclusion - Discussion and Evaluation

Module 1

Module 1: What is Asset Management?

After completing this module, participants will achieve the following learning objectives:

- Define **asset management** and the **MAMP Readiness Scale**
- Identify where your municipality sits on the five competencies of the MAMP Readiness Scale
- List key asset management questions
- List the key components in an asset management council policy
- Describe the components of a strong asset management strategy
- Explain the concepts surrounding **levels of service** and the differences between strategic, tactical, and **operational levels of service**
- Evaluate risk in the context of asset management and service delivery
- List the key steps to lead an organization through asset management implementation
- Describe how to support council in adopting asset management principles
- Explain how you can be an asset management champion in your community

Background

LEARNING OBJECTIVES FOR THIS SECTION:

- **Define asset management and the MAMP Readiness Scale**
- **Identify where your municipality sits on the five competencies of the MAMP Readiness Scale**
- **List key asset management questions**

Asset management is a way of thinking about how assets are used to deliver services to a community and its citizens. Asset management helps a community make sure that its physical assets can deliver the levels of service that councils have committed to. Asset management allows a community to examine the services it delivers, understand and manage the risks it faces, and take a holistic view of its assets. Asset management is about making sure communities are sustainable into the future.

The term "asset management" was first coined by an Australian economist, Dr. Penny Burns, and has been in the Canadian municipal lexicon for over 20 years.

Municipal asset management can include all physical infrastructure assets managed by a municipality, such as roads, bridges, water, wastewater, buildings, fleet, recreational facilities and equipment, natural assets, and public safety assets.

In 2009, the Canadian National Asset Management Working Group of the National Round Table on Sustainable Infrastructure developed *An Asset Management Governance Framework for Canada*[1] as a foundation for a sustainable infrastructure management practice. The framework defines asset management as:

> *An integrated business approach involving planning, finance, engineering and operations to effectively manage existing and new infrastructure to maximize benefits, reduce risk and provide satisfactory levels of service to community users in a socially, environmentally and economically sustainable manner.*

The framework identifies community sustainability as the core objective of asset management: building environmental, financial, and social resiliency in communities, and adapting to face a changing world.

Just as every community is unique, no two communities will have the same asset management plan. Each community has unique priorities and challenges. Depending on a community's needs, some services are more important than others and there is no single solution that will work for everyone. However, to find a unique solution that fits its needs. every community can develop answers to the following key asset management questions.

Key Asset Management Questions

1. What do you have and where is it? Inventory
2. What is it worth? Costs/replacement rates
3. What is its condition and expected remaining service life? Condition and capability analysis
4. What is the level of service expectation, and what needs to be done? Capital and operating plans
5. When do you need to do it? Capital and operating plans
6. How much will it cost and what is the acceptable level of risk(s)? Short- and long-term financial plan
7. How do you ensure long-term affordability? Short- and long-term financial plan

Asset Management in Canada

Asset management takes many forms across Canada and around the world. Many frameworks, guides, and approaches are available, including:

- *International Infrastructure Management Manual (IIMM)*
  - Published by the Institute of Public Works Engineering Australasia (IPWEA), this guide provides direction on how to implement the ISO 55000 standards for asset management.

1 http://nrtsi.ca/e/doc_documents.cfm

- *An Asset Management Governance Framework for Canada*
    - The National Round Table for Sustainable Infrastructure (NRTSI) was formed as an expert resource on infrastructure which included over 50 groups including all orders of government, First Nations, industry, and academia. The NRTSI published An Asset Management Governance Framework for Canada.
- *National Asset Management Strategy Canada (NAMS Canada)*
    - NAMS Canada is a not-for-profit service arm of IPWEA, collaborating with existing associations/organizations in Canada to provide access to IPWEA's asset management tools, publications, and training.
- *Asset Management 101 (Canadian Network of Asset Managers [CNAM])*
    - CNAM has developed an Asset Management 101 Booklet, with the "what, why, and wow" on infrastructure asset management for your community.
- *British Columbia Asset Management Framework (Asset Management BC)*
    - This high level systemic approach developed by Asset Management BC helps local governments move towards implementation of asset management.
- *Asset Management Handbook and Toolkit (Alberta Municipal Affairs)*
    - Produced by Alberta Municipal Affairs in cooperation with the Consulting Engineers of Alberta, the Asset Management Handbook and Toolkit is a reference guide for municipalities starting their asset management journey, complete with tools and resources.
- *ISO 55000*
    - ISO 55000 is the first set of international standards for asset management.

Regardless of which approach you take, it is the **process** of asset management that is important: using a set of practices to support effective decision-making and integrating perspectives across functions like finance, public works, and planning.

Asset Management Tools

As part of this process, specific tools will help guide, direct, and control asset management. These include plans, policies, and strategies, as well as clear roles and responsibilities within the organization. While all of these may be found in a fully developed asset management system, they do not need to be in place before you start your journey. **Beginning is the most important step**, and every municipality will progress at an order and a pace that fits its own needs.

An **asset management plan** describes how a municipality will actively manage its assets to meet its level of service objectives.

An **asset management policy** outlines a municipality's commitment and mandated requirements for asset management. The policy is linked to the municipality's strategic objectives and is shaped by the organization's values and priorities.

An asset management strategy outlines the approach for implementing the asset management policy. This framework is the conceptual structure for the asset management system. It describes the system's internal makeup and its interactions with external practices or functions. The asset management strategy also identifies SMART objectives (i.e. specific, measurable, attainable, relevant, and timely outcomes required of assets and asset management) and reporting requirements. These include service objectives, which are the desired levels of service to the community.

Canadian Infrastructure Report Card: How Sustainable Are Our Assets?

In 2012, several Canadian organizations commissioned the Canadian Infrastructure Report Card (CIRC). It was a first attempt to quantify the state of local infrastructure across Canada and draw a national comparison on the physical state of our communities.

The CIRC found that Canadian municipalities were not investing enough into sustaining their infrastructure, and as a result, much of it was in poor condition. Across the country, practitioners and politicians took notice. The data was clear and apparent: Canadian assets were deteriorating.

Through the hard work of municipal practitioners like you, the CIRC started a national conversation about the sustainability of our communities. This hard work ultimately encouraged the Government of Canada to invest $180 billion over 12 years into Canada's infrastructure. A good portion of these funds was directed to enhancing the skills and capabilities of municipalities to use the principles of asset management effectively. Enter the Municipal Asset Management Program (MAMP).

MAMP is a five-year, $50 million federal program delivered through the Federation of Canadian Municipalities (FCM) that supports Canadian municipalities in making informed decisions about infrastructure, such as the planning and construction of roads, recreational facilities, and water and wastewater systems.

One of the ways to help support municipalities and staff in this effort was to create a common national benchmark and a common language that municipalities could use to set an end goal. That language is in the MAMP Readiness Scale, developed by the FCM.

Did you know?

The Municipal Asset Management Program is a $50 million program designed to help municipalities make informed decisions about infrastructure investment. The program is offered by the Federation of Canadian Municipalities (FCM) and funded by the Government of Canada.

What is the MAMP Readiness Scale?

The MAMP Readiness Scale measures progress of local governments as asset management practices are adopted. It provides a common method for assessing progress—or level of adoption—across many groups, and it allows municipalities to assess their current state against a progressive scale.

The MAMP Readiness Scale includes five competencies: policy and governance, people and leadership, data and information, planning and decision-making, and contribution to asset management practice. As municipalities build their asset management skills and capacity, they implement components of asset management that are farther along the scale.

MAMP Readiness Scale Competencies:

- **Policy and governance:** Putting in place policies and objectives related to asset management, bringing those policies to life through a strategy or framework, and then measuring and monitoring implementation over time.
- **People and leadership:** Setting up cross-functional groups with clear accountability and ensuring adequate resourcing and commitment from senior management and elected officials to advance asset management.
- **Data and information:** Using asset data, performance data, and financial data to support effective asset management planning and decision-making.
- **Planning and decision-making:** Documenting and standardizing how the organization sets priorities, conducts capital and operations and maintenance planning, and decides on budgets.
- **Contribution to asset management practice:** Training and staff development, sharing knowledge internally and participating in external knowledge sharing.

Each asset management competency includes five levels of maturity (e.g. levels 1–5). The five levels form a progressive scale, from initial investigation to adoption and, eventually, full integration of asset management practices into daily routines. The outcomes described at each level show, in practical terms, what it means to be at that level.

It is common for municipalities who are new to asset management to be at a level 1 or pre-level 1 point for all competencies. This information can help you set goals and objectives, and design initiatives for MAMP funding, as well as longer-term priorities for improving your municipality's asset management practices.

RESOURCES

FCM Municipal Asset Management Program – Asset Management Readiness Scale

Canadian Infrastructure Report Card – Asset Management Primer

Exercise 1.1: Assess Where You Are on the MAMP Readiness Scale

Understanding where you are today is an important part of moving forward. This individual exercise will help you assess where your municipality is at in relation to the MAMP Readiness Scale. Refer to the MAMP Readiness Scale in **Section 2.5** of the reference material in this workbook and identify the readiness level for each competency that best describes your municipality today.

In the table on the next page, add the readiness level in the second column and use the notes column to document why you chose this level.

What specific actions has your municipality taken that correspond with this level? Remember that many municipalities begin at level 1 or pre-level 1 on the scale, and that many of Canada's largest cities have not yet reached the upper levels of the scale.

Once everyone has completed this self-assessment, share your observations and learnings with the group.

Assessment Management Readiness Scale		
Competency	**Readiness Level**	**Notes**
Policy and governance Putting in place policies and objectives related to asset management, bringing those policies to life through a strategy and framework, and then measuring and monitoring implementation over time.		
People and leadership Setting up cross-functional groups with clear accountability and ensuring adequate resourcing and commitment from elected officials to advance asset management.		
Data and information Using asset data, performance data and financial data to support effective asset management planning and decision-making.		
Planning and decision-making Documenting and standardizing how the organization sets priorities, conducts capital and operations and maintenance planning, and decides on budgets.		
Contribution to asset management practice Training and developing staff, sharing knowledge internally and participating in external knowledge sharing.		

Policy and Governance

LEARNING OBJECTIVES FOR THIS SECTION:

- **List the key components in an asset management council policy**
- **Describe the components of a strong asset management strategy**

To allow for the effective and long-term implementation of asset management in your municipality and to allow for its integration into day-to-day operations, asset management must also be integrated into your municipality's governance framework. We will get into the details of building asset management plans later in the course. We first want everyone to understand the importance of asset management as a governance tool.

A key component of asset management is the policy and governance framework supporting the creation and use of actual asset management plans. The big picture includes many different parts: effective linkages between a council's broad strategic plan for the community, a clear policy outlining the organization's commitment to asset management, an organizational strategy outlining how asset management will be implemented, and defined roles and responsibilities for staff.

This section of the workbook focuses on implementing asset management in your municipality.

As municipal staff working in local government, you know the role that council plays as elected representatives of the community. They determine the annual operating and capital budgets and the taxes that citizens will pay. Council also determines the policies behind taxation, fees, and services, and how the assets that deliver those services will be managed. Council is the final authority in determining the policy framework that the municipality will work within to ensure it achieves council's strategic intent.

Council also has the ability and authority to approve an asset management policy that outlines its commitment to asset management. The policy is linked to the organization's strategic objectives and is shaped by the organization's values and priorities.

The asset management policy is the bridge between a council's intentions and priorities and the municipal staff's actions. It is a formal and lasting statement of what is important to that council and outlines what is expected of municipal staff. It provides a backdrop from which municipal staff can prepare budgets, programs, and activities—all with the goal of meeting the community's expectations.

And just as every community is unique, asset management policies are unique. Although they may have similar elements, a municipality's asset management policy reflects the council's intent and direction and the communities it serves. Generally, effective policies begin with input from the public and councils. What do they want to achieve? What is important to them?

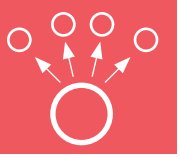
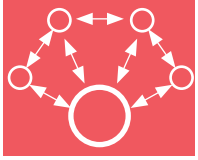
Why is this important? Because public policy must be supported by the constituents it is intended to serve. It must achieve a benefit for the community—one that is widely recognized. A public policy without support from constituents typically does not enjoy a long shelf life. Additionally, communities and citizens increasingly want to participate in making decisions that affect them.

The *International Association for Public Participation (IAP2)* is an international association whose mission is to advance and extend the practice of public participation. IAP2 has a wealth of resources and training opportunities available to help organizations effectively engage the public in many ways. That does not mean that citizens get to decide in all cases, but they at least get to participate. This participation is best described as a spectrum, as illustrated in Figure 1.

Figure 1: Spectrum of Public Participation (adapted from IAP2)

Once the public and council has had an opportunity to participate in the development of a policy framework, it is the municipal staff's role to author and table the policy document for council's approval.

INCREASING LEVEL OF PUBLIC IMPACT

	INFORM	CONSULT	INVOLVE	COLLABLORATE	EMPOWER
					
GOAL	To provide balanced objective information in timely manner.	To obtain feedback on analysis, issues, alternatives and decisions.	To work with the public to make sure that concerns and aspirations are considered and understood.	To partner with the public in each aspect of the decision-making.	To place final decision making in the hands of the public.
PROMISE	"We will keep you informed".	"We will listen to and acknowledge your concerns".	"We will work with you to ensure your concerns and aspirations are directly reflected in the decisions made ".	"We will look to you for advice and Innovation and incorporate this in decisions as much as possible".	"We will implement what you decide".

RESOURCES

International Association of Public Participation Spectrum

(www.iap2.org)

Asset Management Policy Structure

Purpose

An asset management policy clearly sets out a council's commitment to asset management and provides high-level guidance to staff in carrying out the municipality's strategies, plans, and activities. While council policies are typically general, they should clearly identify:

- Who is responsible for what aspects of asset management?
- How asset management fits within the municipal structure?
- How and when staff will report to council on the implementation of the policy?
- How and when staff and council will evaluate and review the effectiveness of the policy?

Once council adopts an asset management policy, it is the responsibility of the chief administrative officer (CAO) and staff to implement it by developing guidelines and practices and assigning roles and responsibilities.

Although an exercise and samples are provided in this workbook, every municipality is unique and likely different from the example we have created, Albertaville. Remember: one size does not fit all. Every policy needs to reflect the culture of the community, the organization, and council. The process to recommend an asset management policy to council should be holistic and inclusive. Input should be sought from the organization, staff, council, and the community itself.

Structure

Asset management policies are all different, but typically follow the same structure and contain similar elements, such as:

- *Policy statement:* describes what the policy sets out to achieve
- *Scope:* defines what is and is not covered by the policy
- *Principles:* identifies the core principles that the organization believes are required to give life to the policy
- *Roles and responsibilities:* describes who in the organization is responsible for what
- *Review frequency:* specifies how often this policy will be reviewed

Engaging Your Council

By design, council's approval and endorsement are required to create corporate policy. These policies are typically created with the input and advice of staff, education and discussion with council, and then, finally, formal approval. As with all new initiatives, council education is essential to completing a successful approval. Holding workshops, information sessions, and council debates are all important parts of the approval process.

Engaging Your Community

Municipal governments exist to provide services to citizens. Citizens are the ultimate stakeholder in the activities of municipalities. However, citizens are often unaware of the costs associated with operating a municipality, or the variety of services that municipalities deliver. Municipalities can engage their community in the asset management and service discussions in many ways, including:

- Open houses
- Municipality website
- Post your asset management plan online
- Table an annual report with your council on the state of your assets
- Public meetings
- Public presentations
- Newspaper articles or editorials
- Public advertising
- Speaking engagements at service clubs

Additionally, when engaging your community, be sure to describe the benefits of asset management in language that is meaningful to citizens, such as:

- Cost savings
- Better control over life cycle of assets
- Reduced risks (e.g. unplanned repairs, costs)
- Well defined levels of service to citizens
- Efficiently prioritized maintenance
- Improved decision-making
- Responsible spending

Exercise 1.2: Create an Asset Management Policy

This individual exercise is designed to help you start thinking about developing an asset management policy for your community. It is broken down into five questions. Take some time to read each question, reflect on your answer then write down your ideas. You can share your answers with the group in about 20 minutes.

A. How can you engage your council in helping them develop an asset management policy? What are some ways that you could engage your community to gain their input into an asset management policy?

B. Using the sample asset management policy and the examples below, create what you think would be an appropriate policy statement for your municipality.

Sample Policy Statements
Albertaville shall adopt and apply asset management practices to provide for the effective management of current and future assets to ensure safe, reliable, and sustainable services to its customers.
The purpose of this policy is to provide leadership and commitment to asset management and provide a set of principles that guide Albertaville's development and implementation of an **asset management system** which is consistent across the organization.
This report outlines the asset management policy to provide program principles and a framework for asset management practices that enables a coordinated, cost-effective and organizationally sustainable approach for Albertaville.
Albertaville shall adopt and apply asset management practices in support of delivering quality, cost-effective services to its customers. Albertaville will adopt a sustainable approach to asset management, ensuring that the asset base is not increased without considering the impact on the ability of Albertaville to fund future maintenance and rehabilitation.

Create your policy statement in the space below.

C. While there are many assets within a municipality, they do not all fall under the direct responsibility and control of the local government. Circle the assets in the table below that fall under your municipality's responsibility and could be included as part of your asset management policy. Feel free to list additional assets in your municipality that may not be on the list.

Watermain	Sewer	Roads	Sidewalks
Recreation centres	Town halls	Curling rinks	Cemeteries
Fire halls	Water treatment plants	Hospitals	Forests
Parks	Schools	Highways	Light standards
Municipal garages	Arenas	Pools	Lift stations
Power lines	Rivers	Environmental reserves	

D. Principles are the foundation for making operational decisions and provide guidance to municipal staff in how to design programs. Below is a list of several principles that might be found in a municipal asset management plan. Identify with a checkmark the principles that you feel would be best included in your municipal asset management policy.

_____ **Corporate Alignment:** Alignment with corporate vision and goals will be enabled through this policy and the asset management framework.

_____ **Life Cycle Management:** Assets will be managed recognizing the whole of life ownership costs.

_____ **Build Organizational Resiliency:** The municipality will document policies and procedures to ensure that knowledge and learnings are retained.

_____ **Community Input:** The municipality will endeavour to incorporate public input into the development of asset management plans and level of service targets.

_____ **Service Levels Define Investment:** Service levels will be the primary means to plan programs and set budgets.

_____ **Responsibility and Accountability:** The roles, responsibility, and accountability for the management and use of each asset will be clearly defined.

_____ **Transparency:** The municipality will openly report on our progress and the state of the community's assets.

_____ **Evidence-Based Decision-Making:** The municipality will maintain effective records of data required to support decision-making through the assets lifecycle including; inventory, condition, and performance.

_____ **Complaints Define Service:** Public complaints are important measures of the quality of service. Services and assets with the most complaints should get the most money in a budget.

_____ **Department Alignment:** Asset management and budgeting decisions will be made in alignment with department vision and goals.

E. Responsibilities for asset management vary between groups within an organization. To work well, each group must fulfil their own specific role. Below is a sample list of roles and responsibilities that might be found in a municipal government. Review the list and, in the space beside the statement, indicate which group would have which responsibilities. [1-Council; 2-CAO; 3-Staff].

_____Develop and review the asset management policy

_____Regularly review the status of the municipality's assets and asset management program as part of the annual budget process

_____Act as stewards for assets while considering current and future users

_____Ensure services are both affordable and sustainable

_____Set levels of service, risk, financial and environmental cost standards that align with the community vision and goals

_____Make decisions regarding assets in accordance with council's corporate and community strategic directions and asset management policy and strategy.

_____Approve asset management plans

_____Ensure the community receives value for money from the expenditure of funds.

_____Ensure that timely, accurate, and reliable information is presented to council to support decision-making

_____Create and maintain a governance structure to lead the development of asset management practice throughout the organization

_____Establish and maintain asset management planning and business processes, linked to the strategy, resources, delivery, and operational plan for consideration by council

_____Ensure the view of the community and key stakeholders are integrated into the asset management plans

_____Ensure all program actions are both effective and efficient

_____Implement the details of the plans and asset management systems

_____Establish clear requirements for external suppliers providing program planning and delivery support consistent with this policy and supporting strategy and plans

NEXT STEPS:

Now that you have completed Exercise 1.2, you have all the information you need to create an asset management policy for your municipality and to work with your council to have it approved. Use the Reference Policy and Sample Council Report and work with your team to have this implemented.

RESOURCES

A guide to Developing a Municipal Asset Management Policy

Sample Asset Management Policy

Sample Albertaville Council Report

Remember!

Your council may be going through a similar workshop designed for elected officials in the spring of 2018. They will learn about similar topics, with information applicable to them in their council role. Aim to create the policy and get it ready for council approval while all this information is fresh in their minds!

Asset Management Strategy

A strategic plan is a guiding document that organizations use to focus their actions towards a long-term goal or objective. Most organizations and municipalities have a corporate strategic plan that is approved by their council which sets out long-term goals and objectives for the community. You can apply the same principles to developing your asset management strategy: envision the long-term goals for your asset management system and turn them into a multi-year strategy.

Not all strategic plans are created equal. The strongest strategic plans (and statements) typically have core elements that set them apart from others. These elements are: vision, mission, objectives, and measures.

Perhaps one of the most recognizable strategic statements in the world is the one that President John F. Kennedy delivered to the US Congress in 1961:

> *"I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the earth."*

This speech galvanized the nation and aligned the United States government towards achieving President Kennedy's goal. The core elements in the statement are:

- **Vision:** Commit to landing on the moon by the end of the decade
- **Mission:** Commit the nation
- **Objectives:** "Landing a man on the moon"; "Returning him safely"
- **Measures:** "Before this decade is out"

On July 21, 1969, Neil Armstrong was the first person to set foot on the moon and return safely to Earth.

In an era of commercial satellite launches, reusable rockets, and space tourism, it is difficult to imagine the impact that the President's words had. What if his words had been different? What if those words were not as clear? Would a statement like *"Hey guys, let's build some kind of rocket, put a guy in it, and when it is finished, we'll send it into space and see what happens next"* have had the same impact? Likely not. President Kennedy's language was precise, and that helped guide the nation to achieve his vision.

For municipal leaders, the challenge is no different. Whether you are advising your council on the appropriate policy and strategy or leading your teams to best supports your council's goals, **language matters**.

As leaders, you can influence in multiple directions: you influence your council upwards and you influence your organization inwards. The language you use to communicate will vary your degree of influence. See Table 1 for example of vague vs. strong language choices.

Table 1: Examples of Vague vs. Strong Language Choices

Plan Element	Vague	Strong
Vision	Be the preeminent nation in space Commit to sustainably managing our assets	Commit to landing on the moon. Commit to implementing an asset management plan.
Objectives	Improve our space program Improve our asset management program	Land a man on the moon and return him safely. Start developing an asset management plan by the end of 2018. Implement our asset management plan and use it to make decisions by the 2020 budget.
Measures	Over time Continually improve	Before this decade is out. Reach MAMP Level 2 Asset Management Readiness by 2020.

Beyond vision and strategy, concrete steps and actions are required to bring asset management to life. As staff, you are responsible to align resources, assign responsibilities, and create activities that achieve council's stated polices. Just like NASA did not just *"build some kind of rocket"*, **you need a plan** to achieve your municipality's goals for implementing asset management. Several possible steps* may be taken:

- Have senior management commit to developing an asset management policy.
- Educate council on the benefits of an asset management policy.
- Have council approve an asset management policy.
- Define expected benefits of an asset management policy and plan.

- Define responsibilities for the development and implementation of an asset management plan.
- Assign specific responsibilities to staff as part of an asset management plan.
- Assign a cross functional team to oversee the corporate development of an asset management plan.
- Verify that council is aware of the benefits of an asset management system and that required funds are allocated.
- Obtain basic inventory data for most assets (e.g. size, material, installation date, location)
- Incorporate asset management data into budget presentations to council.
- Use asset management approaches consistently across the organization.
- Train staff with the knowledge they need to effectively implement an asset management plan.
- Maintain records for assets and document methods to keep those records updated.
- Use asset management processes to inform operating and capital budgets.

*From the MAMP Readiness Scale

Exercise 1.3: What is Your Asset Management Strategy?

We have covered a lot of material on asset management strategies. This individual exercise is designed to help you start thinking about developing an asset management strategy for your community. It includes two questions, A and B. Take some time to reflect on the concepts that were presented, read the questions then write down your thoughts. You can share your answers with the group in about 15 minutes.

A. What should be your municipality's asset management vision?

B. What steps does your municipality need to take over the next four years to implement an asset management plan?

2018	2019	2020	2021

HINT: Remember to review the asset management framework slides and the FCM MAMP Readiness Scale to see where you may need to focus your efforts.

Levels of Service and Risk

LEARNING OBJECTIVES FOR THIS SECTION:

- **Explain the concepts surrounding levels of service and the differences between strategic, tactical, and operational levels of service**
- **Evaluate risk in the context of asset management and service delivery**

When asset management was first introduced in Canada, there was a significant focus on the inventory and condition of assets. As the state of the practice has progressed, the role of policy and governance of local assets (i.e. the policy decisions made around the management of assets and the services delivered to communities) became clearer and more important.

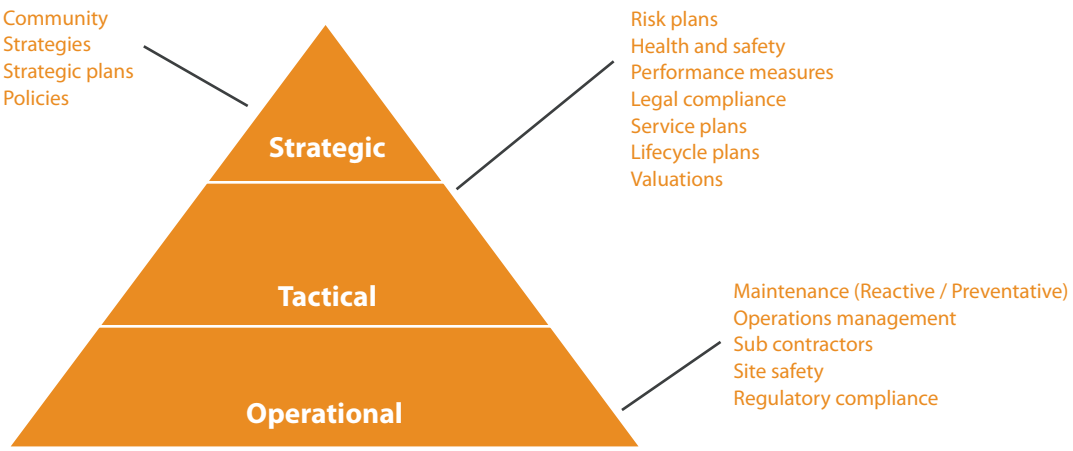
Clear levels of service are the cornerstone of service delivery in government. Service levels set the targets that municipal officials strive to meet. They have a significant impact on the cost to provide services to communities and define requirements for equipment, personnel, and capital budgets. The higher the service level, the higher the cost.

Another dimension of effective governance is risk management. Good governance—in both the private and public sectors—always considers risk, and local government is no different. Risk is the combination of the likelihood that an event will occur and the impact if it does. Calculating risk is not an exact science and it is unique to every community and council.

The good news is that we can take steps and actions to minimize risk. We can create a level of service that will reduce the risk to our communities to a level that our councils endorse. By doing so, we establish what is important to our communities, what services we will deliver, and the cost to deliver those services.

In municipal government, defining the level of service is an early step in delivering effective and sustainable services. However, not all measures of level of service are created equally. They are broadly grouped into one of three categories: strategic, tactical, and operational. Terminology varies for these descriptors across Canada and the world, but the principles remain the same. Figure 2 demonstrates the linkages between all three categories.

Figure 2. Three Categories of Levels of Service



Strategic Level of Service

A strategic level of service describes broad outcomes that have significant impacts on the community and citizens. These are typically approved by council and could include the goals of significant documents, like the municipal development plan or transportation master plan. Examples of these levels of service are:

- Percentage of roads in good/fair/poor condition
- Percentage availability of potable water from the municipal system
- Hours to clear roads after a snowstorm
- Recreation centre has capacity to meet demand 85% of the time

Tactical Level of Service

A tactical service level is linked to the operation of an asset. Typically, it would be described as what needs to be done to achieve the strategic level of service. Examples of these levels of service are:

- Percentage of roads renewed/repaved per year
- Number of watermain breaks per year
- Kilometres of roads plowed per shift after a snowstorm
- The percentage utilization of ice time during evening hours

Operational Level of Service

An operational level of service typically describes the operational measures and can be used for trending and analysis, and to improve program delivery. Examples of these levels of service are:

- $/m^2 for road renewal/repaving
- $/repair for watermain breaks
- $/km to plow snow from roads
- $/hr operating cost for recreation facilities

Consumers make choices about **levels of service** all the time. When you book a hotel room, you choose your room based on the hotel's rating and the associated cost. You expect a higher level of service from a five-star hotel than a one-star hotel and you understand that a higher quality hotel room will likely come at an increased cost. Based on your priorities as a consumer, you balance between an acceptable level of service and a cost that is affordable.

Municipalities face essentially similar situations. Programs are developed and implemented to deliver services to citizens. Those services have a cost, and that cost is translated into taxation. Ultimately, every property owner pays for every service you deliver.

While every community deliberately chooses the levels of service it delivers to its constituents, these levels of service are not always static and are subject to change, based on the evolving needs and desires of the community.

Example: Roads

How would you apply levels of service to graveled roads?

In your municipality, you are responsible for managing the gravel roads. The program you've put in place (e.g. your current level of service) to keep them in reasonable condition is to grade them once per month in the summer. The current level of service can be either increased or decreased: this will change the condition of the roads and will have a corresponding change on the costs.

When levels of service change, so do costs. In almost every case, a higher level of service results in increased costs of delivery. Whether the higher level of service is more hours at a recreation centre, faster time to clear roads after a snowfall, or improved road conditions, service equals cost.

Frequency of Grading	Effect on Level of Service	Effect on Costs
Every two weeks	↑	↑
Monthly	--------	--------
Every tow months	↓	↓

Exercise 1.4: Working with Levels of Service

This exercise is designed to make you think about different levels of service. Working with a partner, review the sample levels of service listed on the next page and link the sample level of service to the appropriate category (e.g. strategic, tactical, operational). Note any additional key levels of service goals in the table below.

Category	Level of Service
Strategic	
Tactical	
Operational	

Reminder!

Even though assets have a level of service for today, that can change over time. If your community is not happy with the state of the roads, the desired state could be improved condition ratings. If your community priorities are sport and recreation, perhaps a second sheet of ice is the desired state. Or, if taxes are felt to be too high, costs could be lowered by reducing some levels of service. It can go both ways!

Recreation Centres and Facilities

_____Recreation centres achieve 40% cost recovery

_____Recreation centres have no more than two unplanned closures per year

_____Facility condition index for recreation centres is below 0.10

_____Daily janitorial cleaning

_____Quarterly pool / arena equipment service

_____Annual roof cleaning and inspection

Water

_____Maintain adequate fire flow volumes in 100% of the network

_____No more than five breaks/km on a segment of waterline

_____Household potable water services available 99% of the time

_____100% of water quality tests meeting or exceeding Regulations

Sample levels of service:

Roads

_____Target paved road: 15% poor, 55% good, 30% very good

_____Potholes patched within 48 hours of notification

_____Snow plowed from main streets 48 hours after a snowstorm

_____$/km target for snow plowing costs

_____$/$m^2$ target for repaving costs

_____Graveled roads graded every week

Sidewalks

_____Sidewalks on all urban cross section streets

_____Annual sidewalk inspection program for trip and fall concerns

_____Accessible curb ramps are installed at all intersections and crosswalks

Sewer and Drainage

_____Storm sewer and sewer system is designed to accommodate a 1:100- year storm event

_____Sewer backups occur less once per 50 km of sewer main per year

_____Trunk sewer lines are flushed 2x/ year; residential sewer lines are flushed 1/year

Environment

_____Tonnes/capita of refuse entering the landfill

_____% of material diverted from the landfill through recycling initiatives

_____$/household to collect and dispose of refuse

Risk

Effective governance—in both the private and public sectors—always considers risk. Local government is no different.

Risk is all around us and is always present. Risk is uncertainty. Risk can be quantified by combining the likelihood that an event will occur and the impact if it does. However, risk is not an exact science and is unique to every community and council.

Although risk is ever-present, steps and actions can be taken to minimize it. A structured risk assessment will allow you to think through all the things that might go wrong, look at them through the lenses of **likelihood** and **impact**, then determine what to do about it.

Likelihood is the probability that an event might happen. For example, while it is unlikely that your municipality may be the epicenter of an earthquake, it is somewhat more likely to be affected by a significant summer storm. Similarly, it is highly likely you will experience at least one significant snow storm this winter that will create transportation challenges in your community. Risk can also materialize through the failure of infrastructure (e.g. culverts being washed out or sewers collapsing). Likelihood is a measure of how probable it is that an event will occur, and can be broken into three categories:

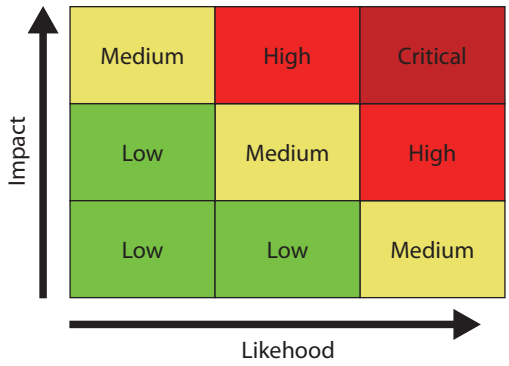
- Low: Highly unlikely to improbable
- Medium: Somewhat likely
- High: Highly probable

Impact is the consequence if an event occurs. If an earthquake occurred in your community, it might be catastrophic, especially if it is a large magnitude earthquake. If a significant summer storm hits your community, blowing down trees and power lines, flooding streets and washing out culverts, the consequence might be moderate. Impact is therefore a measure of how severe the event might be. It can also be broken down into three categories:

- Low: Measurable
- Medium: Moderate
- High: Catastrophic

Figure 3 shows a sample risk matrix that uses the two dimensions of likelihood and impact to quantify risk.

Figure 3. Sample Risk Matrix



Exercise 1.5: Assessing and Managing Risk

This exercise is designed to make you think about potential events that pose a risk to your municipality. Work with a partner to complete the two parts of this exercise.

A. Document potential events in the table below. What events might occur that you need to consider? What could cause harm and negatively impact your community? Discuss the event, the likelihood that it might happen, and the impact if it did. Use the sample risk matrix to rate the risk as low, medium, high, or critical.

Item No.	What can go wrong?	How does this affect the level of service?	Impact	Likelihood	Risk rating
0	*Bridge Collapse*	*Safety, environment, loss of public trust, road closure*	*High*	*Moderate*	*High*
1					
2					
3					

B. Now that you have identified several events that could occur in your community, think about what you could do to lessen their impact on the community. Take the risk and the rating from the table above and transcribe them in the table below. From there, work with your partner to think about steps that your municipality could take to reduce the impact on your community.

Consider the bridge example: could you increase the frequency of inspections to catch problems earlier? For summer storms, could you have a well-exercised emergency plan, or ensure that your stormwater systems are well maintained? For winter storms, could you use an Environment Canada early warning service, or have contract resources on standby?

Item No.	What can go wrong?	Risk rating	Action to lower risk	New risk rating after taking action to lower risk
0	*Bridge collapse*	*High*	*Inspect every bridge annually*	*Medium*
1				
2				
3				

Asset Management Leadership

LEARNING OBJECTIVES FOR THIS SECTION:

- **List the key steps to lead an organization through asset management implementation**
- **Describe how to support council in adopting asset management principles**
- **Explain how you can be an asset management champion in your community**

When your municipality chooses to initiate an asset management approach, the ultimate goal is to ensure that you invest your resources well, meet citizen service level expectations, and achieve the organization's strategic plan effectively and efficiently.

Asset management also provides a means for councilors and municipal staff to demonstrate the value of infrastructure planning and maintenance while balancing social, environmental, and economic factors. Once your plan is in place, you will be able to say:

> *Our organization uses a formalized and holistic approach to ensure that our resources are invested wisely over the long term, continually balancing operations, risks, and costs in a way that provides our community with the right service at the optimal cost—not just today, but with our community's future needs in mind.*

To create that future, it takes leadership. That leadership will come from each of you: you will be asset management champions in your **organization**, for your **council**, and for your **community**.

Organization

Effectively moving your organization forward takes both strategy and action. As a leader in your organization, you need to look at the work required and ensure that it is assigned to the right position, that the people have the right skills, and that they have the right authority and resources to do their jobs well. It takes more than simply saying it to make it happen.

"Strategy without action is hallucination. Action without strategy is chaos."

Organizations work because they are designed to work, and that design typically follows the sequence of "Strategy > Structure > People > Process."

The design starts with strategy. The strategy (developed in **Exercise 1.3**) sets out the broad direction, outlines the tangible goals and objectives, puts firm dates on deliverables, and outlines how to measure your success. It defines what it is the organization needs to achieve, and when it needs to achieve it.

Structure follows strategy. The structure of an organization defines who reports to whom, and which positions have which responsibilities. When you have a clear strategy, it is much easier to create a structure to support it.

Organizations succeed because of people. People create success when they are passionate about what they do and are engaged in their organization. **It's all about people**. Ensuring that the people in your organization have the right skills, training, and resources to succeed is critical. Set out clear expectations for your staff so they know what they need to do to succeed.

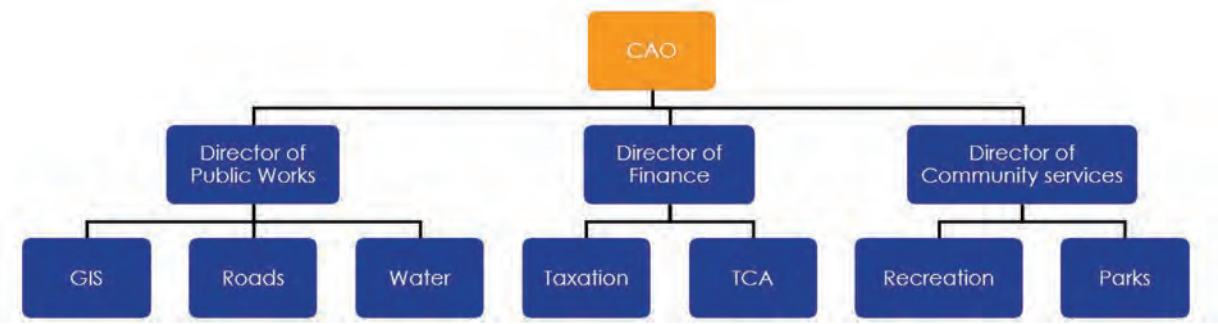
Process helps people. Without processes in place, everything is a new adventure every time you do it—maybe not in a good way. Processes make sure that repeating activities are repeatable. Process makes sure that people know who does what, and what to expect when. Good process is the grease in the wheels of the organization.

In large organizations, each person may have only one specific job. In small organizations, one person may wear many hats, and have many responsibilities. There is no one size fits all model, and the answer to who does what is specific to your organization.

In some cases, you may have a single position in your organization that is dedicated to supporting your asset management program. In other cases, you may split those duties across multiple positions to achieve the same results. In either case, the duties and responsibilities stay the same, but they may reside with different people.

The sample organizational chart shown in Figure 4 shows a sample outline of responsibilities and duties that may be found in a typical organization. Remember, while your organization may look different, the responsibilities may still be the same.

Figure 4. Sample Organizational Chart



Exercise 1.6: Organizational Roles and Responsibilities

This individual exercise is designed to help you think about asset management roles and responsibilities for your municipality. In the box below, sketch an organizational chart for your municipality and identify where you think some of the asset management roles and responsibilities should reside.

Some of the key asset management roles and responsibilities that you may want to consider include:

- Asset accounting/reporting (TCA), GIS and data storage, work order, and job cost reporting
- Financial planning, long-term financial forecasting
- Capital planning and budgeting
- Operational service delivery and reporting
- Inventory evaluation and condition assessment, service life evaluation, replacement cost valuation
- Policy and program development
- Level of service determination
- Asset inventory and condition ownership
- Corporate planning
- Asset management training and education

Organizational Chart

Reminder!

Creating change in organizations can be difficult. Organizations have inertia and can be resistant to change.

As an asset management champion, your efforts to raise the bar are critical.

Refer to the following resources in the *Reference Material* section of this workbook to get started.

RESOURCES

Cross functional team memo and terms of reference

Here are some tips to help you accomplish this change:

- Ensure early and regular discussions with the senior leadership team about why asset management is important.
- Ensure that the benefits of implementing asset management are well understood across the organization.
- Communicate plans and intentions widely in the organization.
- Make sure that your people have the skills, resources, and capacity to be successful. Set them up for success!
- Be clear with the assignment of responsibilities and expectations for deliverables.

Council

Your council members may have attended a course similar to this one, specifically designed for elected officials. They will have learned some of the same concepts that you are learning over these two days, but targeted towards their role as decision-makers. This is your opportunity to help them capitalize on the similar learnings that you have experienced. They may be waiting for your leadership.

What can you do? You can help your council move forward in many ways, such as:

- Raise council's awareness of asset management since they may not all have taken the elected officials course. Educate them on what you have learned and how the two courses (e.g. elected officials and municipal staff) complement one another.
- Hold briefing sessions with your council to share general information on asset management and engage them in discussions about the state of the community's services and assets.

- Encourage your council to consider level of service and risk when making decisions on planning, service, and financial matters. Continue to link levels of service to cost, ensuring that they fully appreciate that higher service increases cost—and vice versa.
- Discuss the needs of the organization to start implementing an asset management policy and asset management strategy. Ensure that they are aware of the need for a cross-functional team: although this may require resources, it will ultimately lead to better and more sustainable outcomes.
- Engage your council in a discussion over the significant risks that face your community, and what you are doing to manage them. Ensure that they are aware of the role they play in risk management.
- Report annually on the state of your assets: ensure council knows their condition and what long-term investment may be required.

Remember!

Council is the elected body, but they rely on your professional leadership to advise them and help move the municipality forward. They are probably waiting for you to show them the path forward!

RESOURCES

Sample Albertaville council report

Community

Although the community is represented through the organization, their support and trust in the municipality and its policies are critical. A council requires the broad support of the community to be effective. As a leader, you can help engage the community in the asset management discussion by being a strong and visible champion. By creating opportunities for public engagement and dialogue, you invite the community to participate in the decisions affecting them. By being transparent about the services you provide and their long-term costs, you can help build understanding and support for the actions you are taking.

What can you do? You can take many actions to engage the community in the asset management planning process and express the challenges your municipality faces, such as:

- Ensure your municipal web page has up to date information on your asset management plan.

- Post links on your municipal web page to relevant infrastructure information (e.g. the Canadian Infrastructure Report Card) so it is easily accessible by curious citizens.
- Be interviewed with your mayor/reeve by the local news organization: use it as an opportunity to talk about asset management in the public domain and what the municipality is doing to ensure sustainability.
- Hold open houses during your annual budget process and ensure that asset management and levels of service are part of the conversation.

Remember!

You are not alone!

There are many municipal professionals just like you who are going through the same steps. They are building awareness with their council, changing how the organization works, and engaging their community. Your peers are a powerful and deep resource for you to access.

Use the reference material in the back of this workbook. Become involved with your peers in the asset management field.

Attend an IAMA workshop and become a member!

Module 2

Module 2: Asset Management Data Requirements

After completing this module, participants will achieve the following learning objectives:

- Identify what data may already be available to begin the asset management journey.
- In the context of Tangible Capital Asset, explain the difference between anticipated asset life and functional asset life.
- Recognize what data is already available and what may be missing (and how to get it).
- Know how to evaluate assets as they age and their condition changes over time, and how to best capture that information to make decisions.

Asset Management Data Requirements

LEARNING OBJECTIVES FOR THIS SECTION:

- **Identify what data may already be available to begin the asset management journey.**

While risk and level of service are important components of an asset management plan, knowing where and how to access information about your assets is also key. You must know what you own and what condition it is in. The *National Guide for Sustainable Municipal Infrastructure* outlines seven key questions that practitioners need to ask about their infrastructure to create a framework for their asset management plan. These are:

1. What do you have and where is it? Inventory
2. What is it worth? Costs/replacement rates
3. What is its condition and expected remaining service life? Condition and capability analysis
4. What is the level of service expectation, and what needs to be done? Capital and operating plans
5. When do you need to do it? Capital and operating plans
6. How much will it cost and what is the acceptable level of risk(s)? Short- and long-term financial plan
7. How do you ensure long-term affordability? Short- and long-term financial plan

Although answering some of these questions may be beyond the scope of this course, many municipalities may already have this information close at hand, such as:

- Tangible capital asset registry
- Municipal profiles
- Financial indicator profiles
- Insurance registries
- Building valuation report
- Construction records

Tangible Capital Asset (TCA) Registry: Since 2009, municipalities have been required to report on TCA following the guidance of the Public Standards Accounting Board (PSAB) section 3150. PSAB 3150 requires municipalities to account for the present value of the non-financial assets they own based on the original acquisition date, cost, depreciation, and capital reinvestment. Your municipality has a TCA registry, and it is the first place to consult when starting to create an inventory for your asset management plan. The TCA registry typically uses a straight-line depreciation method (i.e. a fixed annual depreciation rate) which may or may not be representative of the remaining useful life.

Municipal Profiles: The Government of Alberta maintains an online database with information organized into profiles for every municipality in the province. Municipal profiles contain infrastructure statistics, financial status, and assessment information. This can be a good place to start when looking for basic information on your municipality or when comparing your municipality's statistics with those of similar municipalities.

Financial Indicator Profiles: The Government of Alberta data and statistics on municipal financial information can be used to view trends in your municipality over time or be used to compare similar municipalities. This may help give you a point of reference for your financial status, compared to others.

Insurance Registries: Insurance registry have a wealth of asset information, including a list of current estimated values for your significant equipment and other assets. This will help you estimate the cost to replace or renew these assets.

Building Valuation Report: Some buildings in your municipality may have a valuation report that is used for insurance and other purposes. Consult those reports if you need to think about replacement costs.

Construction Records: Construction records are kept for almost anything that is built for a municipality. Use these to determine the original construction cost or investment. From there, determine a remaining or estimated replacement value.

Engineering Reports: Municipalities often have reports completed on various infrastructure and facilities. These reports can provide valuable insight into key information for your asset management system.

When you are starting out on your journey, recognize that the information you collect does not need to be perfectly accurate. Using information that you have on hand, even

if you may not have the highest confidence in it, will immediately begin to help you plan for the future. You will also have a better idea of where your data collection efforts need to be focused, moving forward.

Exercise 2.1: Asset Management Data – Using What You Have

This group exercise is designed to introduce you to data like what you will use to develop your asset management plan. As part of the Albertaville asset management team, you have been tasked to start populating an inventory table for your asset management plan. You have gone through the TCA Register: it has lots of data and you are not sure if it is giving you what you need.

Asset Name	Department	Acq. Year	Cost	Max Useful Life Years
Parking Lot-Arena	Parks And Recreation	2000	$ 107,000.00	25
Playground Eq.-Little Green	Parks And Recreation	1980	$ 20,000.00	15
Playground Eq.-Edna Topp	Parks And Recreation	2008	$ 53,689.32	15
Playground Land Scapping	Parks And Recreation	2008	$ 10,608.75	25
Fence-Little Green	Parks And Recreation	1980	$ 3,028.39	20
Rink Boards/shelter/boxes	Parks And Recreation	2009	$ 73,585.22	20
Rink Asphalt	Parks And Recreation	2008	$ 62,192.50	20
Skateboard Park-Surface	Parks And Recreation	2009	$ 20,938.93	20
Administration Office	Administration	1992	$ 240,000.00	50
Fire Hall	Administration	1986	$ 195,000.00	50
Library	Administration	1984	$ 140,000.00	50
Arena-Original Build	Buildings	1965	$ 41,037.00	50
Arena Community Rec Cente	Buildings	1981	$ 800,000.00	50
Water Mains	Public Works	1962	$ 386,837.7	75
Hydrants	Public Works	1962	$ 6,514.11	75
Wastewater Mains	Public Works	1962	$ 1,493,679.01	75
Wastewater Services	Public Works	1980	$ 139,394.88	50
Lift Station	Public Works	1987	$ 100,965.82	45
Massey Tractor	Public Works	1987	$ 2,850.00	40
Backhoe	Public Works	2001	$ 78,184.00	40
Gravel Truck	Public Works	2006	$ 38,015.00	10
Garbage Truck	Public Works	2005	$ 19,000.00	10
Dodge Truck (1)	Public Works	2003	$ 4,000.00	10

Discuss this data with your table for about 10 minutes: does it look like the TCA register from your municipality? Can you use this data to answer the seven key questions at the beginning of this section? Note your thoughts and be prepared to share your perspectives.

Moving Beyond Existing Data

LEARNING OBJECTIVES FOR THIS SECTION:

- **Recognize what data is already available and what may be missing (and how to get it).**
- **Know how to evaluate assets as they age and their condition changes over time, and how to best capture that information to make decisions.**

Some of the information that exists in municipalities (e.g. TCA registry, insurance registries, construction records, etc.) will get you started along your asset management path. In fact, much of the data you have on hand will be a very good start!

To move beyond the starting point of asset management, you to need to take a closer look at the available data, what information you might need to make informed decisions about the asset's condition, and what future investment may be required to meet your desired levels of service.

Some of the information that you probably already have includes:

- Acquisition/construction/installation year
- Construction cost/replacement cost
- Expected life
- Remaining life

Some of the information that you may not yet have or may not have readily available includes:

- Condition and performance data for assets
- Location data
- Capacity
- Functionality
- Inspection records

Hint! Your front-line staff deal with your assets every day. Remember to engage them in helping you understand the current condition of your assets!

Evaluating Asset Conditions

While some of the information previously mentioned may not be readily available or part of a central repository, it is highly likely that someone in your municipality has some operational knowledge about those assets' condition. That knowledge can cover all types of assets, like what areas are prone to watermain breaks or sewer main blockages, the ice plant always seems to be on its last legs, or the community centre is always at capacity on Friday nights. Your staff probably have a great understanding of what is working and what is not working so well.

Asset conditions change over time. As assets age, they typically deteriorate. It might be **physical** deterioration (e.g. roads, buildings, and sewers age and start to fail), **functional**

deterioration (e.g. the intersection that used to handle 100 vehicles per day must now handle 1,000 vehicles because of the new shopping centre), or **obsolescence** (e.g. it is getting difficult to find parts for the grader you bought 30 years ago).

So how do you assess an asset's condition? Apply your judgement and knowledge about the asset, inspect it regularly, and track its condition over time. There are many ways to do this for different types of assets, but the principle is the same.

Here are some examples of inspection and condition assessment techniques:

- Watermains: Break records
- Sewer mains: Video inspections
- Sidewalks: Visual inspections
- Roads: Visual inspections, radar inspections, deflectometer inspections
- Buildings: Facility condition inspections
- Recreation centres: Usage records

Exercise 2.2: Asset Management Data – Sourcing More

This exercise is designed to help you reflect on assets you have in your community and what methods you use (or could use) to evaluate their condition. List assets in the left column and think about the various types of records or methods that you could use to assess their condition. Do you keep records of maintenance? How often would you inspect the asset? Justify the inspection frequency: would inspecting the watermain quarterly help prevent catastrophic breaks? Or is an annual inspection sufficient, given the level of effort required to conduct the inspection?

Asset	What methods could you use to inspect this asset and assess its condition?	How often should this be done? Why?
Watermain	*Inspect break records. Look for patterns. Look for trends. Look for hotspots.*	*Annually*

Tangible Capital Asset Data

While your TCA register is a great place to start to identify what you own and your long-term replacement costs, you should consider a few other factors. A TCA registry is required by PSAB 3150. Although it includes general guidance on how to account for the useful life of assets, the TCA registry still requires you to regularly review the method of amortization and the asset's useful life.

Many factors need to be considered while estimating an asset's useful life, including:

- Expected future usage: will the asset require investment before the end of its natural life to continue to deliver acceptable service?
- Effects of technological obsolescence: an asset may become obsolete and unsuitable for use due to technology changes rather than life expectancy.
- Expected wear and tear from use of over time: regular deterioration from use or age.
- The maintenance program directed to the asset: is an asset adequately maintained to extend its life? Or is it intended to 'run to failure'?
- Geological or ground conditions: frost heaving, high water table, and expansive soils can all affect an asset's life.
- Capacity and function vs. actual age: is an asset able to meet the needs of the service level is supports? Is a sewer undersized for what it needs to carry?
- Changes in demand for service: a new development with significant new traffic may require upgrades to an intersection before its life is up.

While using an estimated useful life value is a good place to start, remember that you may need to revisit your TCA estimated life values as you collect more information on assets' condition and performance.

Question: What should you do if you find that your actual asset performance is different than the TCA estimated life?

Module 3

Module 3: Asset Management Plans

After completing this module, participants will achieve the following learning objectives:

- Describe an asset management plan, what it contains, and how it can be used.
- Explain how investment decisions may change when considering numerous input factors.
- Describe how the previous parts of this course fit into the framework of an asset management plan, and how participants can start using the information they have to develop one for their municipality.

Asset Management Plans: Bringing It All Together

LEARNING OBJECTIVES FOR THIS SECTION:

- **Describe an asset management plan, what it contains, and how it can be used.**

Like municipalities, asset management plans are unique, based on the specific circumstances of the community. Although asset management plans may have similar structure and information, the final content and decisions they lead to will differ. Every community has a different tolerance for risk or a different priority for service delivery.

Asset management plans can, however, follow a similar approach and layout. In general, most asset management plans will follow the structure outlined below.

- **Executive Summary:** Provide a summary of the plan content. Highlight specific trends, findings, and implications.
- **Introduction:** Present an overview of asset management within the municipality and overall context and expectations for the document.
- **State of Local Infrastructure:** Present an overview of the asset portfolio, including information on inventory, condition, cost, etc., accompanied by supporting data.
- **Levels of Service (Current and Desired):** Describe how service links to infrastructure investment, define how performance is measured, and explain how goals and expectations are identified and set.
- **Goals and Approach:** Define planned actions that will enable the assets to provide the desired level of service in a sustainable way, while managing risk, at the lowest lifecycle cost (e.g. through preventative action).
- **Financial Plan:** Identify lifecycle investment requirements and appropriate funding strategies.
- **Improvement and Monitoring Plan:** Describe how asset management will be monitored and improved across the municipality over time.

Executive Summary

The *executive summary* is a high-level summary of the plan content, written in a plain language to highlight key information for readers, whether they are decision-makers or citizens. This the opportunity for you to tell the story of the municipality's services and assets, what it takes to maintain those services over the long-term, and what the impact of the plan is. It allows you to discuss next steps for your asset management plans and lay out key issues that need to be monitored.

Introduction

The *introduction* allows you to set the stage and context for the plan. It is an opportunity for you to describe your community and how local context influences your asset usage and service delivery (e.g. are you a mining-based community? Or agricultural? Are you a relatively new community, or well established?). You can outline the goals and objectives for your asset management program and how you intend to implement it.

State of Local Infrastructure

This section is the summary of your inventory and condition assessment work. It is the place where you can lay out what the municipality owns and its state: is it stable, declining, or improving? This is where you compile the TCA data and your assessment of lifecycle costing. It is also where you start to show the long-term vision of your community's assets. You can include your assessments of risk and describe the current level of service.

Levels of Service (Current and Desired)

Ultimately, your work around defining current and desired levels of service will be important to share with council and the community. This is an opportunity to be transparent about what the municipality does and does not deliver for service levels. It is also an opportunity to begin a conversation about what is needed in the future for adjustments to service levels. Either maintaining service levels that are meeting expectations and needs; increasing service levels that are not meeting expectations or needs; or decreasing service levels that may exceed willingness to pay.

Goals and Approach

Once you have articulated where you are (i.e. in the *State of Local Infrastructure*) and charted out your future path (i.e. in the *Desired Levels of Service*), you can describe and define measurable goals. Be sure to also describe how you plan on getting there. Have you evaluated whether the overall condition of your roads is improving, declining, or staying the same each year? Will you need to increase your paving and maintenance program by five percent per year to get your road condition to where your level of service requires it to be? What other strategies can you implement to maintain an acceptable condition? Will you redirect funds from other areas? Have you thought about how reducing funding in one area may affect levels of service in another area?

Financial Plan

To put the plan into place, council will ultimately need to see a financing strategy that will enable the municipality to afford the short-term costs of the asset management journey, which may be incurred before any long-term benefits are seen. There are numerous funding and financing approaches, but when providing options to council, remember to apply the mindset "there is only one taxpayer". Council will always be weighing the need to raise more funds to invest in services and assets against the affordability for the community. To help council make difficult funding choices, here are some options you could explore.

- **Pay as you go:** Save funds into a reserve until a project or investment can be made without the need for borrowing.
- **Debenture:** Borrow funds with a long-term repayment to be able to afford larger expenditures and spread the costs out to future users/citizens.
- **User pay:** Pass along the costs of a service to a defined and identifiable group of users of the service.
- **Fees/rates:** Identify a fee or rate that can be charged so that the costs of providing the service are transparent.
- **Benefit test:** Test which groups of users or citizens benefit from a particular asset or service and allocate the costs proportionally to benefiting groups.

Improvement and Monitoring Plan

Nothing is static, and asset management plans are no exception. Especially when starting the plan's development, it is important to keep your eye on the long-term goals. Refer to **Exercise 1.3** where you mapped out a longer-term strategy and objectives to continue developing your asset management system. This is a good place to record and track those objectives.

Exercise 3.1: Through an Asset Management Lens/Breaking Down the Silos (Part One)

This group exercise helps you explain how investment decisions may change once input factors are considered. It consists of three roles to be played by two participants. In this first part of the exercise, each participant will choose one role (e.g. either the Director of Public Works or the Director of Finance for the Municipality of Albertaville). Using the information supplied for that role, review the data and answer the questions at the bottom of the exercise. That should take you about 10-15 minutes.

Once you have reviewed the information and answered the questions for your role, pair up with another participant who had taken the opposite role (e.g. if you were Director of Public Works, find someone who was Director of Finance). Together, you are now the CAO of Albertaville who is preparing your capital budget presentation. Compare your data, conclusions, assumptions, and recommendations from your

two roles. Did the directors of Public Works and Finance reach the same conclusions? Did you have the same recommendations to the CAO? Were they different? Did you notice anything about one another's information that may change your perspective?

Part One: Scenario for Director of Public Works and Director of Finance

You are one of the department heads in the Municipality of Albertaville, a small municipality in rural Alberta. The municipality has a modest operating and capital budget, and although your residents enjoy the services that you provide, the mill rate and taxation levels are becoming issues for your citizens. You may be able to gradually continue to increase taxes and fees to maintain services, but large increases will likely be opposed.

Your council recognizes the need to invest in new areas to grow the community and increase economic activity and quality of life for their citizens. The council, however, is also concerned with the amount of infrastructure debt and capital project backlog that Albertaville faces. There are growing calls for a new community recreation centre, although the council feels the existing centre could still be used.

You are getting ready for your capital budget planning session, and you have been thinking a lot about the state of your water distribution system. You know that the system is getting older, and that it is going to need significant reinvestment soon, but you do not want to spend the money earlier than necessary as that will increase water rates and decrease the affordability of living in Albertaville.

Use information that might be available to you as a department head (e.g. Director of Public Works or Director of Finance) and start making some decisions about what to include in your next capital budget.

Scenario for Director of Public Works

You are about to prepare your capital budget for the new CAO who joined last year. Everything seems to be in order, as you are going through your construction records, break records, and customer complaints. However, you are concerned about one of your subdivisions, built in the 1950s and 1960s. The mains have been breaking more often in recent years, and you are not sure whether it is the ductile iron used in the older mains, the clay soil in that area of town, or the recent colder winters the town has experienced. Your main replacement budget has been steady at around $70,000 for the last few years, which you believe will still be sufficient for the near future. The capital budget you put forward seems reasonable to you and it will help keep water rates low, too.

The data you've compiled for your water distribution is shown in the table. You have been carefully tracking information about your assets, such as material, size, the number of breaks, the severity of complaints that you get for a segment (e.g. water quality, pressure, etc.) and the capacity to meet volumes for firefighting. You have also started thinking about how the number of breaks in a section translates into a break rate (e.g. break rate per km, and break rate per km per year) and asked your staff to investigate. You know that this data is meaningful, but you are not sure how to best apply it yet. Your records are shown in the table.

Asset ID	Install Date	Material	Size	Breaks	Breaks/km	Breaks/km/year	Trend
1	1920	Cast Iron	6	4	2.00	0.02	^
2	1925	Cast Iron	6	9	2.25	0.02	^
3	1926	Cast Iron	6	2	2.00	0.02	>
4	1927	Cast Iron	6	5	5.00	0.06	^
5	1928	Cast Iron	6	3	3.00	0.03	^
6	1929	Cast Iron	6	1	1.00	0.01	>
7	1930	Cast Iron	6	0	0.00	0.00	>
8	1931	Cast Iron	6	2	2.00	0.02	>
9	1932	Cast Iron	6	2	2.00	0.02	^
10	1933	Cast Iron	6	1	1.00	0.01	>
11	1934	Cast Iron	6	1	1.00	0.01	^
12	1935	Cast Iron	6	0	0.00	0.00	>
13	1936	Cast Iron	6	1	0.50	0.01	>
14	1937	Cast Iron	6	2	1.00	0.01	>
15	1938	Cast Iron	6	0	0.00	0.00	>
16	1939	Cast Iron	6	1	0.33	0.00	>
17	1940	Cast Iron	6	4	1.00	0.01	^
18	1945	Cast Iron	8	3	1.00	0.01	^
19	1950	Cast Iron	8	1	0.50	0.01	>
20	1950	Cast Iron	8	0	0.00	0.00	>
21	1955	Ductile Iron	8	3	3.00	0.05	^
22	1956	Ductile Iron	8	2	2.00	0.03	^
23	1957	Ductile Iron	8	5	5.00	0.08	^
24	1958	Ductile Iron	8	6	2.00	0.03	^
25	1959	Ductile Iron	8	5	1.67	0.03	^
26	1960	Ductile Iron	8	3	0.75	0.01	^
27	1961	Ductile Iron	8	4	4.00	0.07	^
28	1962	Ductile Iron	8	4	4.00	0.07	^
29	1963	Ductile Iron	8	1	1.00	0.02	^
30	1964	Ductile Iron	8	8	8.00	0.15	^
31	1965	Ductile Iron	8	2	0.40	0.01	^
32	1970	Ductile Iron	8	7	0.70	0.01	^
33	1975	Steel	8	0	0.00	0.00	>
34	1975	Steel	8	1	0.20	0.00	>
35	1980	PVC	8	0	0.00	0.00	>
36	1985	PVC	8	0	0.00	0.00	>
37	1990	PVC	8	0	0.00	0.00	>
38	1995	PVC	8	1	0.50	0.02	>
39	1995	PVC	8	0	0.00	0.00	>
40	2000	PVC	8	1	0.50	0.03	>
41	2005	PVC	8	0	0.00	0.00	>
42	2010	PVC	8	0	0.00	0.00	>

You have prepared a few graphs to present to the CAO and the Director of Finance. Figure 1 shows your historical and projected watermain replacement program funding, while Figure 2 shows break rate per km for ductile iron. Will this information change your advice to the CAO and the Director of Finance regarding the 2019-2023 capital budget?

Figure 1. Watermain – Public Works Capital Program Funding (Historical and Future)

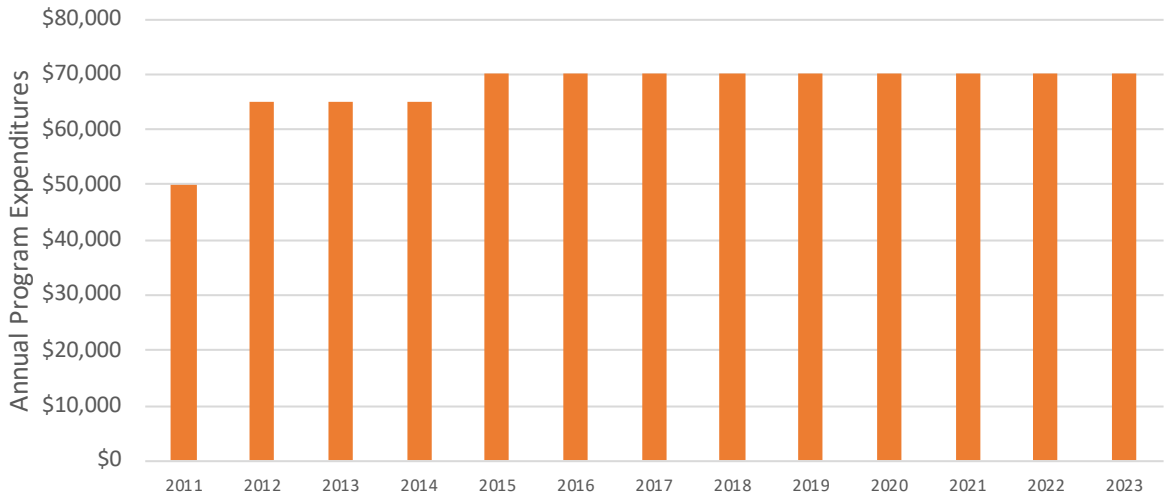
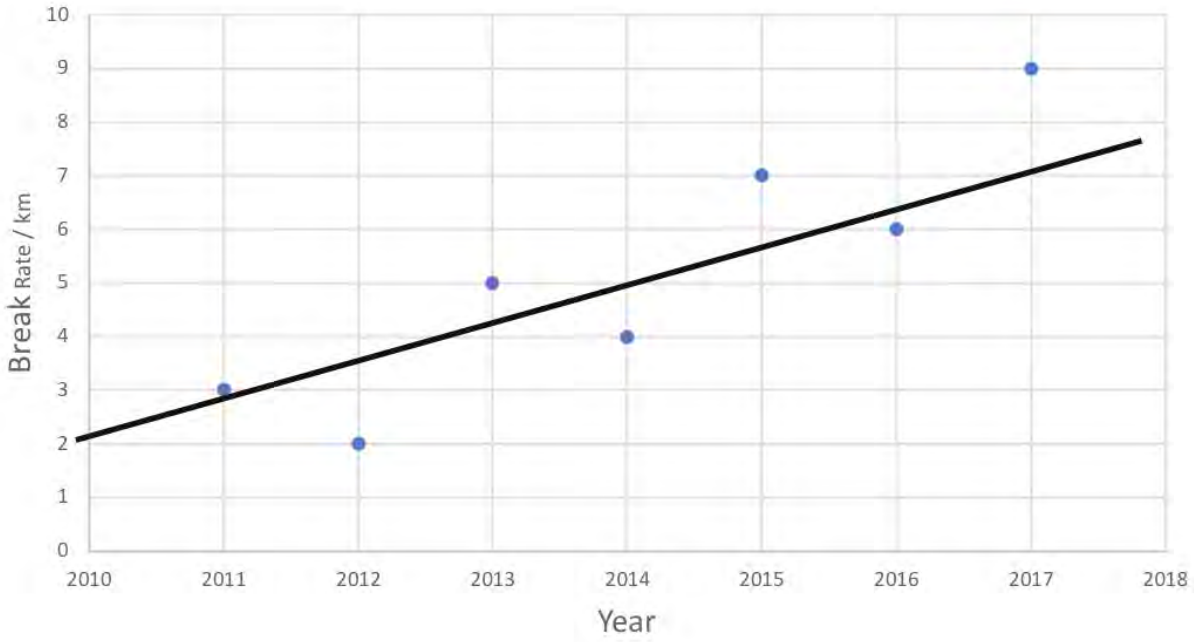


Figure 2. Watermain Break Rate: Breaks/km (Ductile Iron)



1. What are your initial observations about the capital budget forecast and why?

2. Would you be confident in your budget projection knowing what your break rate data (Figure 2) is telling you? Why or why not?

3. What does Figure 2 chart indicate to you? What do you infer from it?

4. What would you say to your CAO about your capital budget projection? Why would you say that?

Scenario for Director of Finance

You have just joined the municipality of Albertaville, having served as the Director of Finance in the neighbouring municipality for several years. You are eager to dive right into the budget process. You were on the provincial committee to implement PSAB 3150 when it was first implemented, and you love talking tangible capital assets. You are relatively happy with Albertaville's water utility reserve position. The municipality has diligently put money away and has a healthy balance of around $130,000.

In your first budget presentation to the new CAO, you will be covering what you are most familiar with: money and data. You start to pour over the TCA data to get a sense of what the municipality owns. As you dive in, you start to see something strange in the data. You are concerned about a hidden liability that no one has mentioned, but you are not sure. Here is the data that you have been able to pull together from the TCA register.

Asset ID	Install Date	Build Material	Qty (m)	Expected Life	Replacement Unit Cost	Replacement Cost	Replacement Year
1	1920	Cast Iron	200	85	300	$60,000	2005
2	1925	Cast Iron	400	85	300	$120,000	2010
3	1926	Cast Iron	100	85	300	$30,000	2011
4	1927	Cast Iron	100	85	300	$30,000	2012
5	1928	Cast Iron	100	85	300	$30,000	2013
6	1929	Cast Iron	100	85	300	$30,000	2014
7	1930	Cast Iron	100	85	300	$30,000	2015
8	1931	Cast Iron	100	85	300	$30,000	2016
9	1932	Cast Iron	100	85	300	$30,000	2017
10	1933	Cast Iron	100	85	300	$30,000	2018
11	1934	Cast Iron	100	85	300	$30,000	2019
12	1935	Cast Iron	100	85	300	$30,000	2020
13	1936	Cast Iron	200	85	300	$60,000	2021
14	1937	Cast Iron	200	85	300	$60,000	2022
15	1938	Cast Iron	200	85	300	$60,000	2023
16	1939	Cast Iron	300	85	300	$90,000	2024
17	1940	Cast Iron	400	85	300	$120,000	2025
18	1945	Cast Iron	300	85	300	$90,000	2030
19	1950	Cast Iron	200	85	300	$60,000	2035
20	1950	Cast Iron	100	85	300	$30,000	2035
21	1955	Ductile Iron	100	65	300	$30,000	2020
22	1956	Ductile Iron	100	65	300	$30,000	2021
23	1957	Ductile Iron	100	65	300	$30,000	2022
24	1958	Ductile Iron	300	65	300	$90,000	2023
25	1959	Ductile Iron	300	65	300	$90,000	2044
26	1960	Ductile Iron	400	65	300	$120,000	2025
27	1961	Ductile Iron	100	65	300	$30,000	2026
28	1962	Ductile Iron	100	65	300	$30,000	2027
29	1963	Ductile Iron	100	65	300	$30,000	2028
30	1964	Ductile Iron	100	65	300	$30,000	2029
31	1965	Ductile Iron	500	65	300	$150,000	2030
32	1970	Ductile Iron	1000	65	300	$300,000	2035
33	1975	Steel	1000	85	300	$300,000	2060
34	1975	Steel	500	85	300	$150,000	2060
35	1980	PVC	300	100	300	$90,000	2080
36	1985	PVC	200	100	300	$60,000	2085
37	1990	PVC	200	100	300	$60,000	2090
38	1995	PVC	200	100	300	$60,000	2095
39	1995	PVC	100	100	300	$30,000	2095
40	2000	PVC	200	100	300	$60,000	2100
41	2005	PVC	200	100	300	$60,000	2105
42	2010	PVC	200	100	200	$40,000	2110

You have prepared a few graphs to help see trends. Figure 1 shows your past and forecast water utility reserve balance, while Figure 2 shows a profile of your end of life costs for the municipality's watermain inventory, based on TCA data.

Figure 1. Forecast Water Utility Reserve Balance

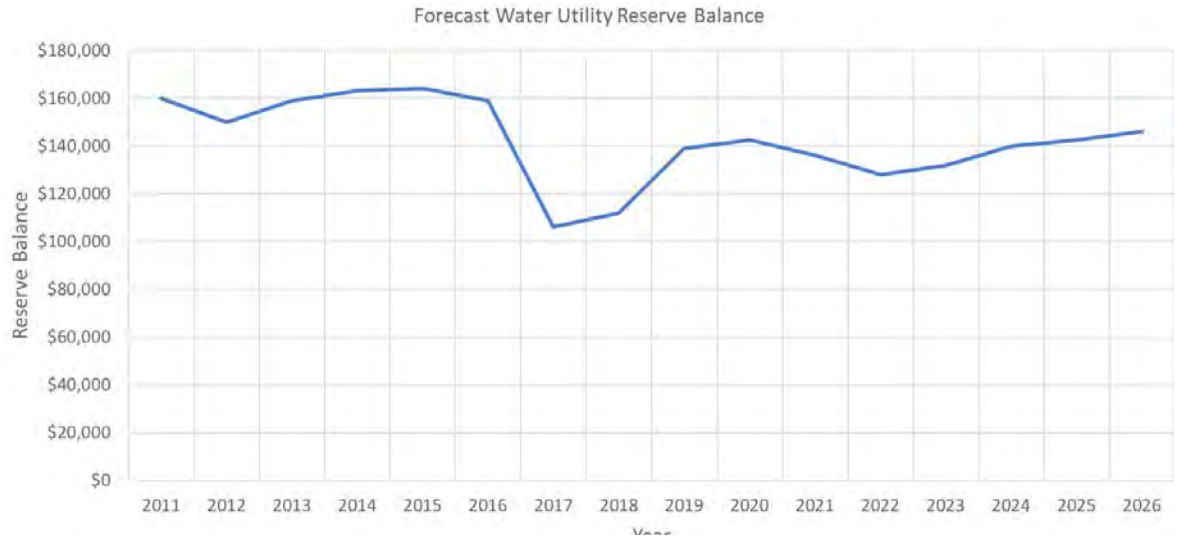


Figure 2. Tangible Capital Asset (TCA) Watermain Replacement Profile

1. What are your initial observations about the capital budget forecast. Why?

2. Are you confident in your reserve forecast based on what you observe in Figure 2? Why or why not?

3. What do you infer from the 'bulge' in Figure 2?

4. What would you say to your CAO about your budget?

Exercise 3.2: Decision-Making Through an Asset Management Lens (Part Two)

You are now the CAO of Albertaville, a small municipality in rural Alberta. You have a modest operating and capital budget and, although your residents enjoy the services that you provide, the mill rate and taxation are becoming issues. You may be able to continue to increase taxes to maintain services, but large increases will likely be opposed.

Your council recognizes the need to invest in new areas to grow the community and increase economic activity and quality of life for their citizens, but they are also concerned with the amount of infrastructure debt and capital project backlog Albertaville faces. There are growing calls for a new community recreation centre, although the council feels the existing centre could still be used.

You are starting to prepare next year's budget for council, and you are planning to meet with two of your department heads, Public Works and Finance, to hear their recommendations with respect to capital spending.

Pair up with someone who played the opposite role to you in **Exercise 3.1** (i.e. if you were the Director of Public Works, work with someone who was the Director of Finance). Compare your data, assumptions, and recommendations. Did you have the same recommendations to the CAO? Were they different? Did you notice anything about each other's information that would have changed your perspective?

Asset Management Plans: Build Your Own

LEARNING OBJECTIVES FOR THIS SECTION:

- **Describe how the previous parts of this course fit into the framework of an asset management plan, and how participants can start using the information they have to develop one for their municipality.**

This course covered the basics of an asset management plan. You saw how strategy is important and how to set a strategy within the context of a framework. You drafted a sample policy that can serve as a starting point to discuss with your community and council regarding your organization's expectations. You learned about risk and what steps you can take to identify, manage, and mitigate risk. Finally, you learned about level of service, including the varying levels of service and what they each mean.

You just saw what you need to set your organization moving forward: how to define responsibilities, assign accountabilities, and how to make it sure it is part of someone's job.

As you start to think about creating your own asset management plan for your municipality, remember that your plan should follow a basic structure. Although this structure is not written in stone, it will make your plan easy for the reader to follow and understand. In general, this format is:

1. Introduction
2. Levels of Service (current and desired)
3. State of Local Infrastructure
4. Asset Management Strategy
5. Financing Strategy
6. Improvement and Monitoring Plan

In this course, you have worked through many of these sections, include the supporting information (e.g. strategic plan, asset management policy, risk, level of service, organizational leadership, additional data, and useful life). The next step is to bring this information together into a cohesive plan for your municipality.

Exercise 3.3: Building Your Plan

This group exercise will help you sketch out an outline of your asset management plan. Your facilitator will lead you through the exercise. Use the space below to start making notes about what should be in your plan for your municipality, using the above sample as a starting point.

HINT: Use the exercises you completed earlier in the course!

Introduction

Context is a critical component of your asset management plan. It sets the stage for the information it contains and answers questions such as:

- What is the historical and geographical context of the municipality?
- What is the historical and projected growth for the municipality?
- How is asset management being implemented?

Here is a sample of what your introduction could look like.

SAMPLE INTRODUCTION

The municipality of Albertaville was incorporated in 1905, and currently has a population of 4,496. From its beginnings in 1888 as a railway town, Albertaville has thrived over the years and weathered many economic swings and natural disasters.

Albertaville experienced its most significant population growth in the post war era (1948-1956) which is when most of its current infrastructure was built. The population grew from 893 in 1941 to 2,950 in 1956, almost tripling in size. From 1956 to 1979, the population increased gradually until it reached 3,900, and it has grown steadily until today at an average rate of 16 new residents per year.

While Albertaville has experienced relatively stable growth, the municipality has acquired several assets that are part of its inventory which need to be sustainably managed to continue delivering service to the community. Some of these assets are:

Civic Facilities: Town hall, fire hall, pool, arena, municipal garage.

Water and Sewer: Water treatment plant, 54 km of watermains, 43 km of sewer mains, wastewater treatment plant and lagoons.

Roads: 58 km of roads, 49 km of sidewalks, and one bridge.

To effectively manage our infrastructure assets, council has adopted an asset management plan and staff has implemented an asset management team comprised of staff experts to start advancing the plan.

Add ideas for your introduction in this box

State of Local Infrastructure

The course has so far covered how to start with your Tangible Capital Asset data to populate an inventory register. We have also covered how to use other sources of data to fill in gaps that will not be in your Tangible Capital Asset data.

Although we do not have data from your municipality to use in this course, we showed you some sample data from Albertaville in the exercises. Using the space below, start to make notes about the state of your municipality's infrastructure based on your existing knowledge. Think about assets like municipal buildings, recreation centres, vehicle and equipment fleet, and road and underground infrastructure. What condition is it in? Is it performing as well as you think it should?

To help you organize your thoughts, start by listing the assets you would like to focus on then ask yourself these questions:

- What condition is it in? Poor/fair/good?
- Is the condition changing? Getting better? Worse? Staying the same?
- Does the condition need to change? Think about your comments regarding desired levels of service.
- Is the community satisfied with the service these assets provide?
- Do these assets function as intended? Are they meeting the needs of the community? Do they allow for future community growth? Or are they already stretched to the limit?
- Is there a pattern in your notes?

Notes:

Levels of Service (current and desired)

As we covered earlier in the course, level of service is a key component of asset management. A defined level of service (at the strategic level) describes what services and outcomes your municipality intends to deliver to the community. It defines the services and what citizens can expect their local government to deliver to them.

The tables below show samples of what level of service descriptors could look like for various types of assets. More are covered in **Exercise 1.4**. Use these examples for civic facilities, water and sewer, and roads as a guide, then use the blank tables to start thinking about the types of assets in your municipality. What do you think the level of service descriptors should be?

Additionally, based on your knowledge of your municipality and its infrastructure, make a note of where you think the level of service targets should be in the last column. From your experience, should the targets be maintained? Increased? Decreased? Remember, level of service and cost are very closely related, so as service increases, cost likely does too.

SAMPLE – Civic Facilities

Level of Service Category	Level of Service Objective	Level of Service Target
Strategic	Provide quality recreation experiences within the facilities	70% utilized 80% user satisfaction with condition of facilities
Tactical	Provide safe and sustainable buildings and civic facilities	Maintain a facility condition index (FCI) of "fair" or better on all civic facilities
Operational	Maintain cost effective building operations	Annual cost escalations under the rate of inflation

SAMPLE – Water and Sewer

Level of Service Category	Level of Service Objective	Level of Service Target
Strategic	Provide safe, aesthetic potable water	100% of water quality tests exceeding guidelines
Tactical	Minimize service interruptions for water breaks	No more than 24 hours between a service interruption and restoration of service
Operational	Provide adequate pressure and volume to sufficiently respond to firefighting demands	Ensure that the Town's distribution system operates at 45 psi to 75 psi with an average of approximately 55 psi

SAMPLE – Roads

Level of Service Category	Level of Service Objective	Level of Service Target
Strategic	Citizens are satisfied with the condition of the roads	Citizen surveys indicate an 80% satisfaction rate with the quality of the roads
Tactical	Ensure that roads are maintained in a safe and reasonable state than effectively manages the costs of maintenance for the town	Roads in good condition – 30% Roads in average condition - 50% Roads in fair condition – 15%
Operational	Intersections are safe and pose no undue risk for motorists	Accident rate at key intersections < 1.5 accidents / 100,000 vehicles

Exercise 3.3 LOS Table

Asset Type _____			
Level of Service Category	Level of Service Objective	Level of Service Target	Future Level of Service (increase, maintain, decrease)
Strategic			
Tactical			
Operational			
Asset Type _____			
Level of Service Category	Level of Service Objective	Level of Service Target	Future Level of Service (Increase, maintain, decrease)
Strategic			
Tactical			
Operational			
Asset Type _____			
Level of Service Category	Level of Service Objective	Level of Service Target	Future Level of Service (Increase, maintain, decrease)
Strategic			
Tactical			
Operational			

Goals and Approach

Now that you have identified some potential levels of service and have considered the state of your local infrastructure, you can begin to think about your goals and approach.

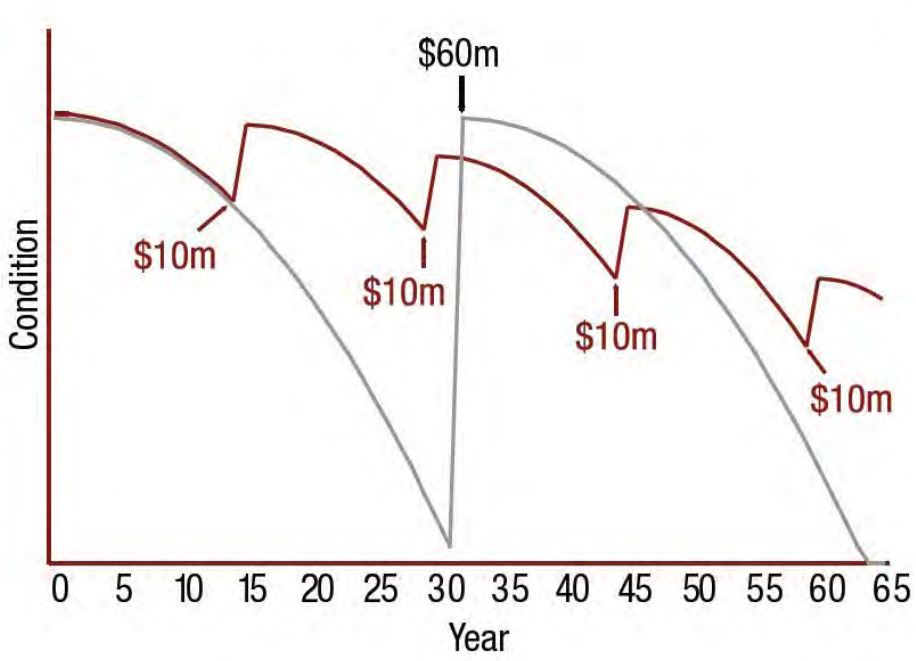
There are many ways for municipalities to manage assets to meet the desired levels of service. Showing you how to make investment decisions is beyond the scope of this course. However, you can generally manage your assets based on your municipality's individual circumstances.

For example, if you have a high value asset (e.g. roads) for which you want to improve your level of service, it might make sense to look at an aggressive preventative maintenance program to make sure that the asset does not deteriorate past the point of no return—where you need to make an expensive capital renewal. Alternatively, if the asset and desired level of service do not require early inspection or are not easily accessible for preventative maintenance (e.g. watermains), the strategy might be to run them to failure and replace them when they reach a certain state of deterioration. However, watermain valves benefit from regular maintenance and exercising to keep them operating and to avoid an expensive repair if they seize at the wrong time.

A preventative maintenance strategy is typically a sound strategy to follow, but depending on the specifics of your municipality, other options may be worth considering.

Figure 5 illustrates how a typical preventative maintenance program and regular reinvestment program can increase the condition and life of the asset, at typically a lower cost.

Figure 5. Effect of Preventative Maintenance on Condition and Life of an Asset



While this course does not specifically show how to select the best approach for your municipality, you can start to capture your thoughts about how you currently manage some of your assets, and what activities you take to keep them maintained.

The table below lists several activities that you could take over an asset's lifecycle, such as:

- **Regular Inspections:** Do you regularly inspect these assets on a programmed cycle? Are the records easily accessible?
- **Preventative Maintenance:** Do you currently conduct preventative maintenance on these assets? Based on your thoughts on level of service and condition, do you feel it is enough or should you adjust it?
- **Reactive Maintenance:** Do you conduct maintenance on these assets after they have failed (e.g. like in the case of potholes or watermain breaks)? Or do you conduct preventative maintenance regularly (e.g. like crack-filling for paved roads or exercising watermain valves?)
- **Life Extension:** Do you undertake more significant maintenance to extend the life of an asset by many years (e.g. resurfacing a paved road before it needs reconstruction)?
- **Replace at Failure:** Do you have any assets that you replace at failure? Sidewalks come to mind for many municipalities. While you may be able to maintain them to minimize the trip and fall hazards, there is very little you can do to extend the life of the concrete.

Review the assets for which you have developed levels of service in previous exercises, and make some notes for yourself regarding your current strategy for their maintenance and what you might want to do differently in the future. The four examples below are there to get you started: complete the table with your own thoughts.

Asset	Regular Inspections	Preventative Maintenance	Reactive Maintenance	Life Extension	Replace at failure
Roads	Yes	Yes	Yes	Yes	Yes
Sidewalk	Yes	No	Yes	No	Yes
Watermains	No	No	Yes	No	Yes
Valves	No	Yes	Yes	No	Yes

Financial Plan

The financial plan is a critical element of your asset management plan. However, as it would likely represent Level 4 on the MAMP Readiness Scale, it is beyond the scope of this course.

This does not stop us from considering what it could look like in the future. The financial plan is the municipality's way of thinking about how to pay for needed investments in infrastructure over the long term. There are many alternatives to fund infrastructure:

- **Pay as you go:** Setting aside money into dedicated reserves for future investments. Capital expenditures are cash funded with no requirement for borrowing or debt.
- **Debenture borrowing:** Borrowing money is a valid way of funding significant capital investments with a long useful life. However, exercise caution that your municipality does not overextend its debt ratio.
- **User pay:** Identifying specific users of an asset, like customers for a water utility, who benefit from the specific service.
- **Fees/rates:** Charging fees or rates for services is a valid method to pay for infrastructure or services. Think of rental rates for ice rinks, bag tags or stickers for garbage collection, or fees for building permits.
- **Benefit test for financing:** Applying a benefit test to determine who benefits most from particular infrastructure and assigning a percentage of costs to that type of user. For example, when a new subdivision is opened in a municipality, who should pay for the infrastructure to service it?

Reflecting on the work you have done so far in this course, do you think that your municipality will need to invest more money into maintaining its assets? Will it have to spend more money to keep the conditions from deteriorating? Or will it have to spend more money to meet the community's desire for increased service?

In the space below, make some notes about what methods you might be able to use to fund some of the service enhancements that might be needed in your municipality. Which ones do you think might be the most successful and why?

Improvement and Monitoring Plan

In **Exercise 1.3**, you created your vision and objectives to progress through the MAMP Readiness Scale. You listed what you would have to do and what year it might be best done. You essentially created an asset management strategy, complete with a timeline!

Now that we are nearing the end of this course, it is a good time for you to think about what you will do when you return to your municipality to advance your asset management system and progress farther up the MAMP Readiness Scale. This section is typically used to list and itemize how you will continually improve your plan—just like you did in **Exercise 1.3**. In this instance, it would be a good idea to jot down what immediate steps you can take to start moving forward.

Will you investigate the FCM MAMP grant? Will you join IAMA? Will you meet with your council to share what you learned and decide how you want to move your municipality forward?

Take some time and make some notes in the space below to record the first three things that you think you need to do to start implementing asset management in your municipality, or to move your municipality farther along on its asset management journey.

To Do:

Great Start!

While this is not a complete asset management plan, you have worked through all the key elements of what goes into one. Through a mix of exercises, you have worked through the concepts and applied them to what you know about your own municipality. You have a great start on all the key components you need to advance your own asset management plan for your municipality.

Well done!

NEXT STEPS

Assignment #	Task Description	Status
1	Apply for FCM's Grant Program.	
2	Prepare Cross Functional Team Memo.	
3	Prepare an Asset Management Policy Council Report.	
4	Subscribe for membership to IAMA.	
5	Attend IAMA's workshops.	
6	Pull your municipal profile and review.	
7	Request your Financial Indicator Profile.	
8	Compile and review insurance information from financial department.	
9	Research TCA Data, GIS data, understand what's there and compare to the International Infrastructure Management Manual (IIMM). Note what you don't have that you may need.	
10	Compile and review all existing condition data (e.g. break records, customer complaints, building inspections, sewer backup, annual inspection data on roads and sidewalk).	
11	Attend workshop for "Asset Management for Municipal Staff: The Technical Basics".	Complete

Reference Material

1.1 Roles and Responsabilities

Council	• Act as custodians for the community's assets. • Set levels of service, risk, and cost standards. • Approve the asset management plans and align with the corporate plan. • Approve the asset management program. • Ensure appropriate resources and funding are made available to support the asset management program.
Chief Administrative Officer and Management Group	• Provide strategic advice and leadership in the management of infrastructure assets. • Ensure outcomes support the corporate plan. • Validate and challenge proposals to ensure they meet the corporate plan objectives and community service needs. • Ensure the community and key stakeholder inputs are integrated into asset management plans.
Managers and staff	• Establish current levels of service for assets, compare to benchmarks and community needs and identify gaps or challenges. • Draft asset management plans. • Implement the asset management program with agreed resources. • Develop, implement, and review the asset management program using the International Infrastructure Management Manual as a guide, documenting required allocation of funding and improvement plans for individual asset groups, using the principles of life cycle costing. • Develop and implement maintenance, and capital works programs in accordance with the asset management plans and strategy, the corporate plan and the five-year financial plan. • Deliver council approved 'levels of service' to agreed risk and cost standards. • Manage infrastructure assets in consideration of their long-term sustainability. • Develop and implement maintenance and capital works programs in accordance with asset management plans and report to the management group and to council.

1.2 Approaches and Resources

1.2.1 Public Sector Accounting Board (PSAB 3150)

http://www.municipalaffairs.gov.ab.ca/documents/ms/PSAB_3150_4_toolkit_full_document.pdf

1.2.2 IPWEA's International Infrastructure Management Manual (IIMM)

https://www.ipwea.org/publications/bookshop-old/ipweabookshop/iimm

1.2.3 Municipal Affairs Tool Kit User Guide

http://www.municipalaffairs.alberta.ca/documents/ms/2015-11-18_Toolkit_-_FINAL.pdf

1.2.4 National Asset Management System (NAMS) Canada Template

http://www.namscanada.org/home

Note* Subscription is required to gain access to this template.

1.2.5 BC Framework - Asset Management for Sustainable Service Delivery:

https://www.assetmanagementbc.ca/framework/

1.2.6 ISO 55000 – Asset Management Standards

https://www.assetmanagementstandards.com/

1.3 Canadian Infrastructure Report Card - Asset Management Primer

Federation of Canadian Municipalities, Canadian Construction Association, Canadian Public Works Association, Canadian Society of Civil Engineers

http://www.canadainfrastructure.ca/downloads/circ_asset_management_primer_EN.pdf

CANADIAN INFRASTRUCTURE REPORT CARD

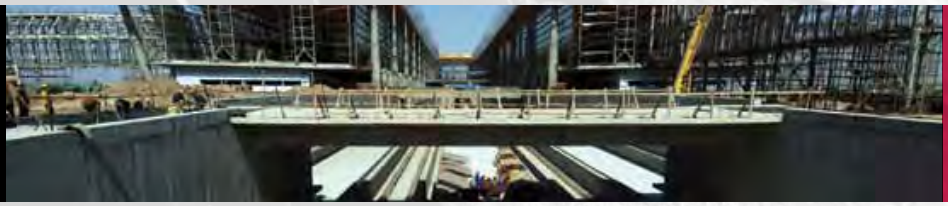
Asset Management Primer

THE CANADIAN INFRASTRUCTURE REPORT CARD

For more information on this Report Card, or the project, please contact info@canadainfrastructure.ca.

September 2014

www.canadainfrastructure.ca



ASSET MANAGEMENT PRIMER

In 2012, the inaugural Canadian Infrastructure Report Card (CIRC) was released. This report was the first objective assessment of our country's municipally owned water, wastewater, stormwater, and road infrastructure. It also examined the state of infrastructure asset management across Canada.

The 2012 CIRC attracted much needed attention to the deteriorating state of Canada's core public infrastructure. While the condition ratings garnered much of the attention reinforcing the need for sustained funding efforts, what is less prominent but equally important is the need for development of the state of asset management in Canadian municipalities.

What is Municipal Asset Management?

Asset management is the coordinated activities of an organization to realize value from its assets in the achievement of its organizational objectives. From a practical perspective, asset management is based on a set of 4 key fundamentals:

- Value: Assets exist to provide value to the organization and its stakeholders.
- Alignment: Asset management aligns the organizational objectives with technical and financial decisions, plans, and activities.
- Leadership: Leadership and workplace culture are crucial to realize value.
- Assurance: Asset management gives assurance that assets will fulfill their required purpose.

Is Data Provided Through the Opinion of Municipal Representatives Relevant?

The 2012 Canadian Infrastructure Report Card was focused on providing a summary of the facts that were reported by municipalities across Canada. This data was obtained by soliciting information through a survey that was distributed to all municipalities. 123 municipalities, representing a population of approximately 20 million, provided information that could be used for reporting purposes.

Municipalities were asked to identify the source of the information being reported – either the opinion of a municipal representative or derived from established asset management processes (such as physical condition assessments of the infrastructure).

>2

The majority of the 123 responses to the survey that were used to generate the 2012 CIRC were based on the opinion of a municipal representative. In fact, less than 15% of municipalities who responded were able to provide asset condition information that was derived from an established asset management process. Why is this relevant? Figures 1 and 2 below show the comparison between the reported condition information based on data derived from asset management processes and the condition information based on all of the responses, which is primarily from the opinion of a municipal representative.

For visible above ground assets– like pumps and buildings (Figure 1) – the understanding of condition is virtually identical for data derived from asset management processes compared to the opinion of the municipal representatives. However, for assets that are not as visible – buried water mains – we see some discrepancy in the understanding of the condition of the assets (Figure 2).

What did the 2012 CIRC say about the state of asset management in Canada?

"…when assessing the state of municipal infrastructure management, the report card finds that many municipalities lack the internal capacity to assess the state of their infrastructure accurately on their own. This is not to say that the municipal sector lacks the wherewithal to undertake rigorous internal reviews of their assets; rather, that finite financial resources, staff and time preclude a much more thorough, real-time evaluation of the state and performance of their physical infrastructure."

Figure 1 – Comparison of Condition Data for Water Facilities

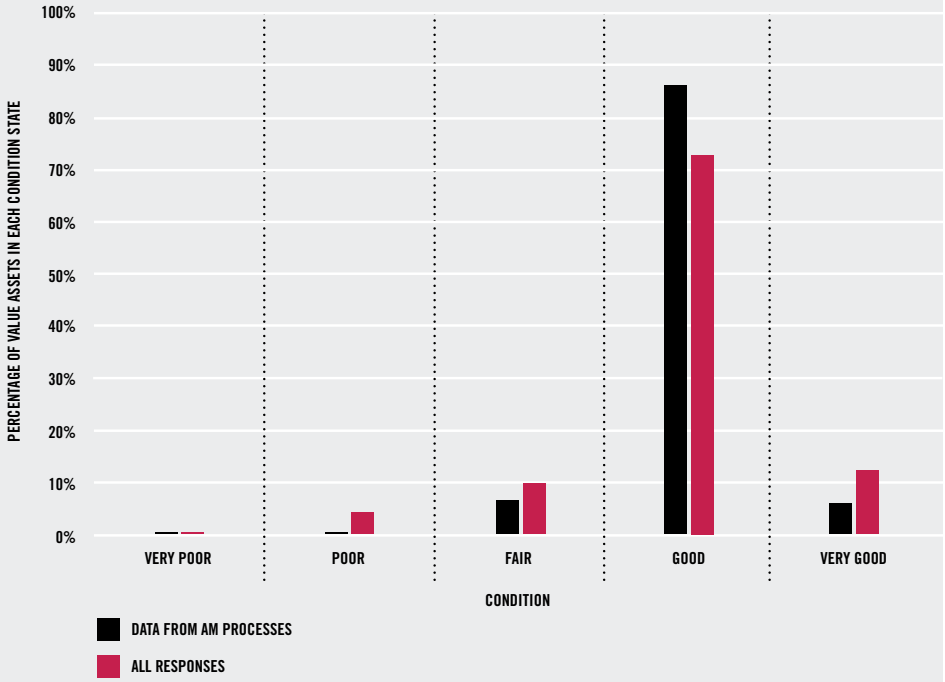
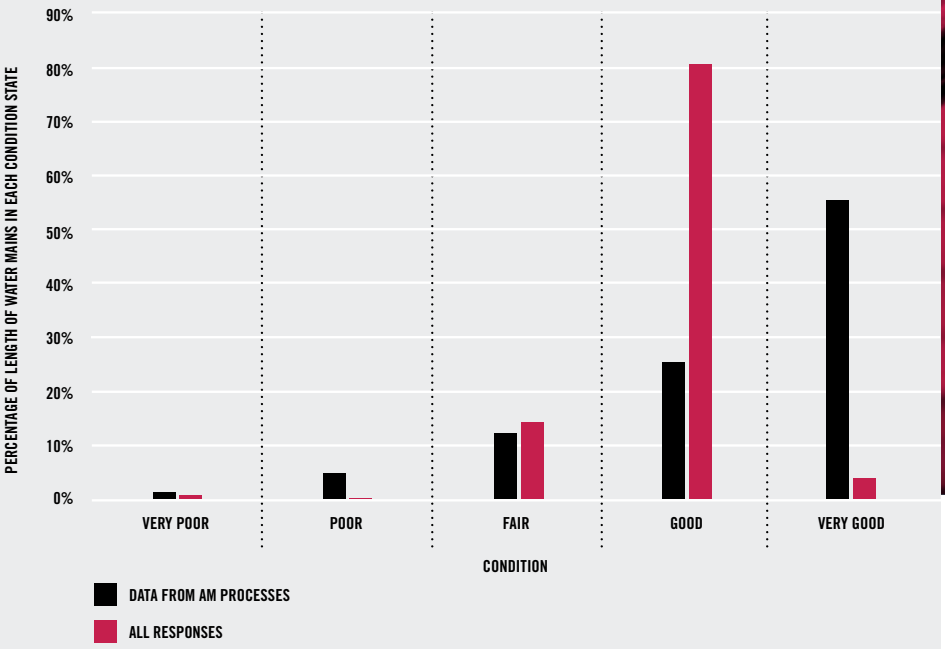


Figure 2 – Comparison of Condition Data for Water Mains



Knowledge management is a component of asset management

Those involved with municipal infrastructure feel that the opinion of individuals working closely with the assets is often the best way to evaluate the condition of the assets; however, there is a need to document this knowledge so it can be passed on to others. Otherwise, what happens when these knowledgeable individuals retire, or when new employees enter an organization?

RECOMMENDATION 1:

When identifying opportunities to improve asset management processes and knowledge within municipalities, it is a necessary to document and store the information that is currently retained by experienced staff in some type of management system (spreadsheet, GIS/stand-alone database, or software application).

RECOMMENDATION 2:

Municipalities should develop governance structures as well as competencies and training strategies that support their asset management practices.

Speaking a Common Language

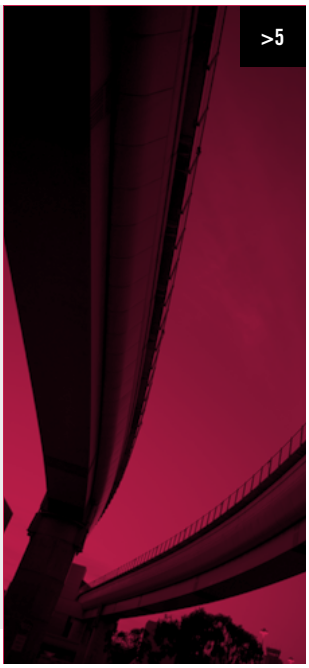
One of the biggest challenges many municipalities experienced in completing the survey for the 2012 CIRC was reporting asset condition in a consistent manner. Consistency is important to promote an accurate understanding of the state of Canada's municipal infrastructure. When all municipalities are on the same page about how to grade the condition of their infrastructure, comparisons become more realistic. In addition, a standardized condition grading system across Canadian municipalities is easily repeatable, enabling comparison of the status of infrastructure condition over time.

2014 marked the release of ISO 55000 – an international standard for asset management established to foster a consistent understanding and approach to asset management (www.iso.org). There are also excellent resources available through the work that has been done in Australia and New Zealand over the past two decades. Resources, such as the International Infrastructure Management Manual (IIMM), are available through the Institute of Public Works Engineering Australasia (http://www.ipwea.org/home).

Condition grading system terms

The condition grading system should align with the following definitions:

- **Very Good - Fit for the future.**
  Well maintained, good condition, new or recently rehabilitated.
- **Good - Adequate for now.**
  Acceptable, generally approaching mid stage of expected service life.
- **Fair - Requires attention.**
  Signs of deterioration, some elements exhibit deficiencies.
- **Poor - At risk of affecting service.**
  Approaching end of service life, condition below standard, large portion of system exhibits significant deterioration.
- **Very Poor/Critical - Unfit for sustained service.**
  Near or beyond expected service life, widespread signs of advanced deterioration, some assets may be unusable.



Don't have condition information? Using the amount of the estimated service life (ESL) remaining is a good starting point. Here is a guide that you can use:

CONDITION GRADE	% OF ESL REMAINING ON ASSET
Very Good	80-100%
Good	60-79%
Fair	40-59%
Poor	20-40%
Very Poor	<20%

Asset Report Cards - a Component of Asset Management

The past year has seen a notable increase in the pace at which asset management processes have been promoted in all three levels of government in Canada. For example:

- The Federal Government has highlighted the importance of capital asset management plans to improve infrastructure systems that are targeted in the New Building Canada Fund.
- The Province of Ontario has made the development of Asset Management Plans a requirement to be eligible for some specific provincial funding, and has committed funding to assist smaller municipalities to develop their asset management capacity and plans.
- Many municipalities across the country have developed their own asset management plans.

Asset Management Plans

To be effective, asset report cards need to be part of an asset management system and be referenced as part of an Asset Management Plan (AMP). An AMP documents how a group of assets is to be managed over a period of time. The AMP describes the characteristics and condition of infrastructure assets, the levels of service expected from them, planned actions to ensure the assets are providing the expected level of service, and financing strategies to implement the planned actions (see page 9 for an AMP outline). The initial focus should be on the development of a general AMP that discusses all of the assets owned by the municipality. Over time the focus may shift to developing more detailed AMPs for each service area, however this will depend on the size of the municipality and asset management maturity.

In addition to other business drivers, an AMP forms part of a municipality's long term planning requirements. An AMP should be updated periodically to coincide with other processes in the municipality. At the end of this document there is a brief outline of what an AMP could look like.

RECOMMENDATION 3:

Municipalities should develop an Asset Management Plan for the portfolio of assets required to support the delivery of services (see page 9 for an AMP outline).

Managing Services by Managing Assets

The predominant asset management strategy for municipalities across Canada is to manage the condition and capacity of the physical infrastructure. However, many across the country are rethinking their asset management practice by asking a very basic question: Why do municipalities exist?

At the most basic level, municipalities exist to provide services to their residents. The concept of service levels can be difficult for many asset managers to describe and define because we manage the physical assets, and not the services provided by the assets. This changing mindset will shift the focus of asset management to the level of service delivered by our infrastructure systems.

Risk Management

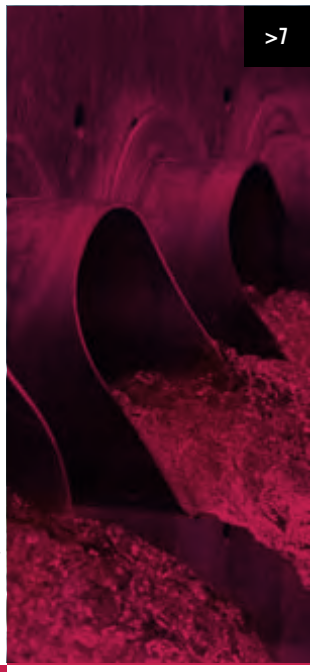
Understanding and managing the risks associated with the failure of an asset is a key element in many AMPs. The risks in municipal infrastructure are impacted by the physical condition of the asset and the social, economic and environmental consequences that would occur if the asset fails to provide the service for which it was designed.

As a municipality develops an understanding of the physical condition of their assets, they will inevitably begin to understand how this condition impacts the service that the assets provide. This will lead to asset management processes that focus on managing services and how investment decisions may be used to best support the delivery of these services.

RECOMMENDATION 4:

Municipalities should strive to understand the levels of service provided to their community and focus on managing assets, risks, and investment decisions to support service delivery.

The Future of Asset Management in Canada



Asset management is not something that is done once – it is an ongoing process to improve and refine the management of infrastructure and the services it supports. Municipalities across Canada are identifying infrastructure requirements and deficits that may greatly outweigh the available resources. This leads to some core questions:

- Do we always need to spend more money and what happens if we don't?
- Can we adjust our service levels?
- How do we maintain service levels while decreasing the cost to provide the services?
- How do we engage the community in these discussions?

These and other questions will help to define the future of managing our infrastructure systems and the related programs they support.

The Canadian Infrastructure Report Card intends to document asset management practices in Canadian municipalities and report on opportunities for creating a consistent national approach. This will ensure that it is relevant and adds context to the changing landscape of the state of our infrastructure and the state of asset management across Canada.

RECOMMENDATION 5:

It is essential for Municipalities to participate in various country wide initiatives and forums such as the Canadian Infrastructure Report Card in order to improve their asset management practices. Sharing leading practices and enabling comparisons across jurisdictions is essential to the success of asset management programs in Canadian municipalities to lower the total cost of development and to accelerate its adoption.

>8

Has an Asset Management Plan already been prepared for your community? Your work is not finished…municipalities should have the following elements in place as part of their asset management program, as a minimum:

- An **Asset Management Plan** providing the current state of the infrastructure assets, the levels of service expected from them, planned actions to ensure the assets are providing the expected level of service, and financing strategies to implement the planned actions. Asset management plans should be updated on a periodic basis.
- An **Asset Management Policy** confirming the organization's commitments and expectations for decisions, activities and behaviour concerning asset management and the support for the municipality's objectives. Ideally the Policy should be approved by Council.
- An **Asset Management Strategy** defining the municipality's asset management objectives and strategies on achieving the Policy requirements. The Strategy is focused on improving the municipality's asset management practices.

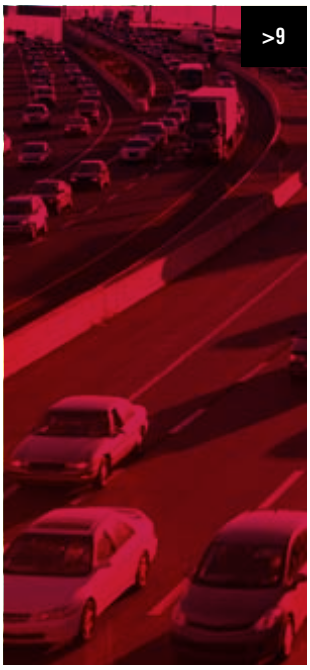
For more information

If you have any questions related to the 2015 CIRC and the upcoming survey, please contact: info@canadainfrastructure.ca

For questions about Asset Management or for help in advancing this practice in your organization, please visit the CNAM Website (www.cnam.ca.)
www.cnam.ca

CNAM Canadian Network of Asset Managers

An Outline of an Asset Management Plan



Asset Management Plans (AMP) lay out how a group of assets is to be managed over a period of time. The AMP describes the characteristics and condition of infrastructure assets, the levels of service expected from them, planned actions to ensure the assets are providing the expected level of service, and financing strategies to implement the planned actions. Below is an outline of what an AMP could look like, in part based on the Province of Ontario's recommended template:

1. **Introduction**
   - Documents the assets that are in the scope of the AMP.
   - Explains how the goals of the municipality are dependent on infrastructure.
   - Clarifies the relationship between the AMP and other corporate planning documents.

2. **State of Infrastructure**
   - Documents the inventory and replacement value of the assets owned by the municipality
   - Summarizes the physical condition of each asset type.
   - When ready, will also document the state of the services that are provided through the infrastructure systems.

3. **Levels of Service**
   - Documents the current level at which each service is being provided.
   - Describes what the municipality is measuring to determine how well the current service levels are meeting the target levels established by staff, council or the public.
   - Considers level of service from a customer and a technical perspective

4. **Plan Monitoring and Improvements**
   - Summarizes the key asset renewal projects undertaken over the preceding period and highlights specific benefits.
   - Outline any changes that will impact the next round of AMP goals and initiatives.

5. **Asset Strategies**
   - Establishes 10 year and longer term (50 to 100 year) renewal plans that are based on achieving the target service levels.
   - Includes the infrastructure needs to address future demands, meet new regulatory requirements, and fund the ongoing operation and maintenance activities of the infrastructure systems.
   - Provides a list of asset strategies that the municipality is considering to reduce the cost of renewing infrastructure, reduce the cost to operate & maintain the assets or reduce the risk exposure of the municipality.
   - Discusses procurement methods.

6. **Financing Strategy**
   - Compares the short term and long term renewal needs of the assets to the available revenues.
   - Provides a strategy to reach a point where the available revenues equal the renewal needs of the assets, such as a long term financial plan.

1.4 FCM's Municipal Asset Management Program Application Form

Application instructions are at the following link:

https://fcm.ca/home/programs/municipal-asset-management-program/funding-mamp.htm

FCM's Municipal Asset Management Program Application Form

IMPORTANT: Before filling out this application form, please read the Municipal Asset Management Program (MAMP) application guide, available on the FCM website.

We encourage you to contact FCM before you submit your application. FCM advisors can help determine if your project is eligible, answer questions and help you prepare a successful application. Contact us at:

programs@fcm.ca
Tel.: 613-907-6208 or 1-877-997-9926

Part A: Applicant information

There are two eligible lead applicant categories:

- Municipal governments (e.g. towns, cities, regions, districts, etc., and local boards thereof)
- Municipal partners applying in association with a municipal government

A municipal partner is one of the following entities:

a. a municipally owned corporation
b. a regional, provincial or territorial organization delivering municipal services
c. an indigenous community
   - *Certain indigenous communities require a shared service agreement with a municipal government related to infrastructure to be eligible. Contact FCM for additional details.*
d. a not-for-profit organization with a focus on municipal services

Please note that private-sector entities are not eligible as municipal partners.

FCM FEDERATION OF CANADIAN MUNICIPALITIES | FÉDÉRATION CANADIENNE DES MUNICIPALITÉS

Municipal Asset Management Program
Application Form

1. Lead applicant information

Please select your organization type from the list below. If you are unsure, please review the application guide, or contact FCM: email programs@fcm.ca or call 613-907-6208 or 1-877-997-9926.

- ◯ Municipal government (e.g. towns, cities, regions, districts, etc., and local boards thereof)

Municipal partner

- ◯ a municipally owned corporation
- ◯ a regional, provincial or territorial organization delivering municipal services
- ◯ an indigenous community
  - » *Certain indigenous communities require a shared service agreement with a municipal government related to infrastructure to be eligible. Contact FCM for additional details.*
- ◯ a not-for-profit organization with a focus on municipal services
- ◯ Other Describe:

2. Lead applicant contact information

Organization name

Please indicate the legal name of your organization

Mailing address

Address

City | Province/territory | Postal code (A9A 9A9)

Tel. (area) number | Fax (optional) (area) number

Lead applicant primary contact information

Salutation (optional) | First name | Last name | Middle initial (optional)

Title | Email

Tel. (work) (area) number | Ext. | Cell (optional) (area) number

fcm.ca/assetmanagementfunding

24 Clarence St., Ottawa, ON K1N 5P3
1-877-997-9926 | programs@fcm.ca

3. Additional lead applicant information

The following demographic information will help FCM understand the reach and results of the Municipal Asset Management Program:

Lead applicant annual operating budget	
Number of administrative staff that manage the municipality or lead organization (e.g. senior administrators, finance, public works, planners and other administrative staff)	

4. Partnership information (for municipal partner applicants ONLY)

If your organization is not a municipal government, the initiative must be undertaken with support from a municipal government. Please provide the name and contact information of the municipality you are collaborating with on this initiative.

If you have questions, please either email programs@fcm.ca or call 613-907-6208 or 1-877-997-9926.

Municipal government name

Please indicate the legal name of the municipality

Mailing address

Address

City | Province/territory | Postal code (A9A 9A9)

Tel. (area) number | Fax (optional) (area) number

Primary contact information at the municipality

Salutation (optional) | First name | Last name | Middle initial (optional)

Title | Email

Tel. (work) (area) number | Ext. | Cell (optional) (area) number

Please describe the nature of the partnership between the lead applicant (municipal partner) and the municipal government.

100 – 250 words

Part B: Self-assessment

Please complete a self-assessment using the Asset Management Readiness Scale, available for download. Using the results of the self-assessment, fill in the Current State column in the table below.

5. Self-assessment summary – Current State

Competency	Current State *What are your **current** readiness levels?*	Notes *Provide rationale for assigning each readiness level. What specifically have you done that puts you at the readiness level you have selected?*
Policy and governance		
People and leadership		
Data and information		
Planning and decision making		
Contribution to asset management practice		

Part C: Project description

6. Working title

What is the project's working title? This title will be used publically to identify the project.

20 words or less

7. Description

Provide a high-level description of your project. Summarize what you will do and what the project will achieve in 100 words or less. If your application is accepted, this section will be used as the public description of your project.

50 – 100 words

8. Activities and deliverables

What are the proposed activities that you want FCM to fund? Please identify one to three activities.

What deliverables do you plan to submit to FCM at the end of this project that will demonstrate you have completed the activities? Please identify **at least one** deliverable per activity.

Please see the application guide for additional guidance on the level of detail expected.

Activity	Deliverable
Examples: » conduct a needs assessment » collect data on the condition of 200 km of roads » set up a cross-functional asset management committee » training for cross-functional team of managers » update job descriptions to include asset management responsibilities Add	Examples: » needs assessment report » condition assessment report for 200 km of roads » asset management committee terms of reference and minutes from first two meetings » training attendance record and copy of training materials » updated job descriptions, and minutes from job description workshop with cross-functional team
Remove 1.	

Note: Please use these same activities to complete the workplan and budget template. In the workplan and budget template, you will be required to break each of these activities down into tasks.

9. Outcomes

Describe how your proposed activities will improve your asset management capacity. What impact will these activities have on attitudes, behaviours, relationships, actions, policies or practices in your organization?

What impact will these activities ultimately have on your municipality or community?

Why are these activities a priority for you at this time?

250 – 500 words

Use the Asset Management Readiness Scale to identify your desired future state. Complete the Desired Future State column below to indicate your intended readiness levels at the end of the funded project. **Note: A project will be considered successful if you advance at least one readiness level in at least one competency on the readiness scale.**

Competency	Current State *This column will auto populate based on the readiness levels you identify in Part B.*	Desired Future State *What are your **intended** readiness levels at the end of this project?*
Policy and governance		No change
People and leadership		No change
Data and information		No change
Planning and decision making		No change
Contribution to asset management practice		No change

10. Human resources

Describe the internal and external human resources who will complete the proposed activities.

- Who will lead the project? Who will carry out project activities?
- If you plan to hire external individuals or organizations to carry out project activities, please describe and, if possible, specifically identify them below.
- Summarize the relevant experience of your proposed project team.

100 – 250 words

11. Fit with provincial or territorial approach

Describe how this project fits within the asset management approach being implemented within your province or territory.

100 – 250 words

12. Challenges and mitigations

What are the one to three most important risks or challenges that could impede the delivery of this project? How will you mitigate these challenges?

Add	Challenge	Mitigation
Remove	1. 100 words or less	

Part D: Required attachments

Please submit the following with your application

Supporting document	Comments and reference pages
A resolution from council, band council or board of directors, using the sample provided	
Attach File / Remove	
A completed workplan and budget template	
Attach File / Remove	
For municipal partners: A letter of support from your partner municipal government, using the template provided	
Attach File / Remove	

Part E: Declaration and signature

Please review this declaration and have it executed by an authorized signatory of the applicant. This declaration confirms that: a) the Applicant understands and will abide by the Federation of Canadian Municipalities' ("FCM") requirements, including those related to funding; and b) the information provided in and appended to the application is accurate and complete.

I, name , title of name of organization (herein called the "**Applicant**"), hereby declare, without personal liability and in my capacity as title of the Applicant, as follows:

1. That the Applicant will not be able to receive funding from FCM prior to entering into a legally binding agreement with FCM (the "**Agreement**") in respect of the project being applied for (the "**Initiative**") and that the said Agreement will contain pre-conditions to funding, all of which the Applicant must comply with, including without limitation:
   a. the Applicant having obtained all authorizations required to enter into the Agreement and carry out the Initiative;
   b. the Applicant having obtained assignments of copyright and waivers of moral rights from any consultants or third-parties who have contributed or will contribute to reports prepared on the Applicant's behalf, such that the Applicant will hold the copyright in all reports related to the Initiative;
   c. the Applicant providing reports and consenting to FCM sharing the lessons learned and experience gained from the Initiative with other communities across Canada by allowing FCM to publish reports, such as project completion and final reports, on the FCM website;
   d. the Applicant having incurred costs in connection with the Initiative, which costs must be invoiced to and paid for by the Lead Applicant; and
   e. the Applicant claiming reimbursement for in-kind costs only, all in accordance with FCM's restrictions regarding such claims.
2. That the Applicant will carry out the Initiative in compliance with all applicable laws and regulations.

3. That the Applicant will confirm to FCM all sources of funding prior to executing the Agreement.
4. That all of the information contained in this application and in the accompanying documents is true, accurate and complete as of the date of submission.
5. That if any of the information contained in this application and in the accompanying documents becomes inaccurate, incomplete or incorrect, the Applicant will provide updated information and/or accompanying documents.
6. That the Applicant acknowledges and agrees that changes in scope to the Initiative after this date of application may not be accepted by FCM.
7. If the Applicant has engaged or intends to engage (a) consultant(s) who will communicate with FCM on behalf of the Applicant, that the Applicant hereby confirms that the consultant(s) are authorized to do so.

Name of authorized agent: _____

Organization: _____

By typing my name above and submitting this application, I am providing my signature for the declaration above.

1.5 MAMP Readiness Scale

FCM FEDERATION OF CANADIAN MUNICIPALITIES FÉDÉRATION CANADIENNE DES MUNICIPALITÉS

Municipal **Asset Management** Program

Asset Management Readiness Scale






Table of Contents

The Municipal Asset Management Program is a new five-year, $50-million program designed to help municipalities make informed decisions about infrastructure investment. The program is offered by the Federation of Canadian Municipalities and funded by the Government of Canada.

Canada

The Asset Management Readiness Scale

What is a readiness scale?

Readiness scales are widely accepted for a number of different uses. This readiness scale measures progress of local governments as they adopt asset management practices. Readiness scales provide a common method for assessing progress, or level of adoption, across diverse groups. They allow individuals or organizations to assess their current state against a progressive scale.

How can you use the Asset Management Readiness Scale?

The needs of municipalities vary widely, and the approaches to implementing asset management differ in communities across the country. The Asset Management Readiness Scale will allow you to measure your progress along a common scale regardless of the implementation framework you choose. This document is meant to complement any asset management approach being implemented in any jurisdiction across Canada. It is applicable to any municipality or local government organization.

The scale shows that creating and implementing an asset management system is a step-by-step process that takes time and resources and does not happen overnight. It is meant to structure the asset management journey and provide an objective means of evaluating progress.

How does this readiness scale work?

This scale describes five asset management "competencies":

- **Policy and governance:** Putting in place policies and objectives related to asset management, bringing those policies to life through a strategy or framework, and then measuring and monitoring implementation over time.
- **People and leadership:** Setting up cross-functional groups with clear accountability, and ensuring adequate resourcing and commitment from senior management and elected officials to advance asset management.
- **Data and information:** Using asset data, performance data, and financial data to support effective asset management planning and decision-making.
- **Planning and decision-making:** Documenting and standardizing how the organization sets priorities, conducts capital and operations and maintenance (O&M) planning, and decides on budgets.
- **Contribution to asset management practice:** Training and staff development, sharing knowledge internally and participating in external knowledge sharing.

For each asset management competency, there are five levels. The five levels form a progressive scale, from initial investigation to adoption and, eventually, full integration of asset management practices into daily routines. The "outcomes" described at each level show, in practical terms, what it means to be at that level. This information can help you set goals and objectives, and design initiatives that you may wish to have funded through the Municipal Asset Management Program.

If you are new to asset management, or need an introduction to key asset management terms, read the "Introduction to Asset Management" section on the next page before using the readiness scale to conduct a self-assessment.

Self-assessment instructions

1. Bring a group of cross-functional staff together to conduct the self-assessment — this should not be done by one person in isolation.
2. For each asset management competency, read through the descriptions and outcomes for each level.
3. Discuss and evaluate your organization's current state.
4. Assign your organization the level for which it has completed the corresponding outcomes.
5. On the "notes" page, document why you chose this level. What specific actions has your municipality taken that correspond with this level?

Tips

- When self-assessing, choose the level that describes your achieved outcome. (The exception would be Level 1, at which point you may be in the process of getting started.) If you are still working on a specific level, assign yourself the previous level.
- You need not progress through the five competencies in any particular order. Where you focus your efforts is entirely up to you and will depend on your local needs and priorities.

Introduction to asset management and key terms

What is asset management?

Any organization that owns physical assets (such as property, equipment or technology) engages in some form of **asset management** when caring and planning for those assets. Municipalities and local governments must manage publicly owned assets as part of their mandate to provide services to communities. In some cases, natural assets such as aquifers also provide critical municipal services and should be considered when managing assets.

> *... Assessing the health of municipal infrastructure is necessary if Canada is to ensure that the services, quality of life and economic growth provided by this infrastructure can be sustained over the long term.*
>
> — Canadian Infrastructure Report Card, 2016

Municipalities and local governments with an asset management **program** have chosen a structured approach to asset management — a specific way of doing business that continually balances expenditure with performance and risk. The ultimate aim is to ensure that they invest resources well, meet customer service levels and achieve the **organizational strategic plan** effectively and efficiently.

Asset management also provides a means for elected officials and municipal administrators to demonstrate the value of infrastructure planning and maintenance while balancing social, environmental and economic factors.

To support effective asset management planning and decision-making, an organization must establish an **asset management system** — a set of interrelated elements including governance, people, processes, data and technology. Once your asset management system is established, you will be able to say the following:

> *Our organization uses a **formalized and holistic approach** to ensure that our resources are invested wisely over the **long term**, continually balancing operations, risks and costs in a way that provides our community with the **right service** at the **optimal cost** — not just today but with our **community's future needs in mind**.*

How are asset management systems governed and implemented?

Municipalities and local governments use specific governance tools to control and direct asset management. These include a **policy, strategy, framework, roadmap** and **plans**, as well as clear roles and responsibilities.[1]

An organization's asset management **policy** outlines its commitment and mandated requirements for asset management. The policy is linked to the organization's strategic objectives and is shaped by the organization's values and priorities.

An asset management **strategy** outlines the **framework** and approach for implementing the asset management policy. This framework is the conceptual structure for the asset management system. It defines the system's internal makeup and its interactions with external practices or functions.

The asset management strategy also identifies **objectives** (specific, measurable outcomes required of assets and asset management) and reporting requirements. These include **service objectives** (the desired level of service to the community).

[1] The figure above is adapted from The Institute of Asset Management's diagram from BSi, PAS 55-1:2008, Figure 5, Page 10. www.theIAM.org

The step-by-step plan for implementing the strategy is the asset management **roadmap**. It identifies actions, responsibilities, resources and timescales. An organization will also have one or more **asset management plans** that outline more specifically how the asset management system will create, maintain and renew infrastructure and other assets. To create an asset management plan, an organization first does a needs assessment (looking at the current and future gaps in asset service and performance). This needs assessment forms the justification for an asset investment plan, which outlines how and where money will be spent to address the gaps. The asset investment plan is accompanied by a **financial plan** that identifies the source of funds.

For example, the **capital plan** outlines the scope, cost and schedule of investments in new infrastructure or infrastructure renewal (financed from a capital budget). The **operations and maintenance (O&M) plan** describes the scope, frequency and cost of operation and maintenance activities (financed from an operating budget).

What kind of data and information is used in asset management?

Assets are generally grouped together based on the service function they provide. Major **asset groups** contribute to the delivery of essential municipal services, such as water, wastewater and transportation. Minor asset groups contribute to non-essential services, such as recreation. Effective asset management relies on information about specific assets and asset groups, including the following types of data:

- Basic inventory data includes general asset properties such as size, material, location and installation date.
- Pooled inventory data is basic inventory data organized by asset group.
- Expanded inventory data includes additional, supplementary information on the asset (e.g. design criteria, installation method), its location (coordinates, connectivity) or its role in service delivery (e.g. function, relative importance).
- Financial data includes tangible capital asset inventories and valuations, lifecycle costs, and budgets related to operation and maintenance and capital expenditures.
- Service adequacy or effectiveness is measured as a level of service. Levels of service are evaluated from various perspectives: corporate, end-user and asset or operational.

How can training, development and knowledge sharing support asset management?

Introductory training on asset management includes asset management **awareness training**, which may focus on the concepts, organizational context and value of asset management, as well as its impact on people and processes. Advanced asset management training includes additional concepts specific to one's roles and responsibilities. Asset management requires both hard skills (such as the analysis of financial, demand, geospatial and asset data) and soft skills (such as stakeholder engagement, communicating horizontally and vertically across silos, and teamwork).

Part of having an effective asset management program is the ongoing development of **organizational capacity**. This includes participation in **asset management organizations** — industry groups and communities of practice that promote and support effective asset management through training, networking and knowledge sharing amongst leaders and practitioners. Asset management organizations can be global, national or regional. Examples include Asset Management British Columbia (AMBC), the Canadian Network of Asset Managers (CNAM) and the Institute of Asset Management (IAM).

ASSET MANAGEMENT READINESS SCALE

Competency: POLICY AND GOVERNANCE

This competency involves putting in place policies and objectives related to asset management (AM), bringing those policies to life through a strategy and framework, and then measuring and monitoring implementation over time.

	1		2	3	4	5
	Working on Level 1 ☐	**Completed Level 1** ☐	**Completed Level 2** ☐	**Completed Level 3** ☐	**Completed Level 4** ☐	**Completed Level 5** ☐
Readiness Level	We have set expectations for our AM program. We have the support we need to begin work on an AM policy.		We have drafted an AM policy and strategy and have developed a framework for our AM system.	We are using our AM policy to guide our actions. We have created a roadmap and have established performance measures.	We have a fully functional AM system. We are using performance measures to track progress and outcomes.	We are continually improving the AM system. Our AM objectives and roadmap are refined based on the evolving needs of our community.
Outcomes	**You have achieved a specific readiness level when you can demonstrate the corresponding outcomes below.**					
Policy and Objectives	• Senior management has 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 AM policy objectives to guide our actions.	• We are managing assets and services in accordance with AM policy and organizational objectives.	• We are validating and refining corporate, service and AM objectives based on the evolving needs of our community.
Strategy and Framework	• We have drafted a basic set of objectives that will guide the development of our AM system.		• We have completed the strategy and framework for our AM system.	• We have established a roadmap to guide the detailed actions surrounding our AM strategy deployment.	• We are achieving our AM policy objectives through a fully functional AM system. Necessary workflows, documents and reporting tools are in place. We are updating our roadmap to address evolving needs.	• We are following our roadmap in continually improving the AM system and in documenting the improvements.
Measurement and Monitoring	• We have defined the expected AM system benefits and outcomes.		• We have documented our AM system plans and our objectives for the coming year.	• We have established performance measures to monitor AM system progress and its outcomes and benefits to our community.	• We are using performance measures to monitor progress and AM system outcomes and benefits.	• We are monitoring performance and using the feedback to prioritize and make ongoing refinements and improvements.

ASSET MANAGEMENT READINESS SCALE

Competency: PEOPLE AND LEADERSHIP

*This competency involves setting up **cross-functional groups** with clear **accountability**, and ensuring adequate **resourcing and commitment** from senior management and elected officials to advance asset management (AM).*

	1		2	3	4	5
	Working on Level 1 ☐	**Completed Level 1** ☐	**Completed Level 2** ☐	**Completed Level 3** ☐	**Completed Level 4** ☐	**Completed Level 5** ☐
Readiness Level	We have council support to establish a cross-functional AM team to explore AM needs and develop a plan for improving our AM system.		We have a clear mandate for our AM team, and council has approved funding for priority improvements to our AM system.	Our AM team has clear responsibility for improving our AM system. Council champions AM as a core business function.	Our AM team is responsible for guiding and supporting AM on an ongoing basis. AM system roles and responsibilities are operationalized.	Our council's commitment drives continuous improvement of the AM system. Roles and responsibilities evolve to meet ongoing needs.
Outcomes	**You have achieved a specific readiness level when you can demonstrate the corresponding outcomes below.**					
Cross-Functional Groups	• We have appointed resources to investigate our community's AM requirements and to define and introduce an appropriate AM system.		• We have formed a cross-functional AM team* to guide and oversee AM system planning and deployment.	• The AM team* works within our organization to lead, communicate and support AM improvement and change management.	• Our AM team* has been made permanent and tasked with guiding and supporting the AM function across the organization on an ongoing basis.	• The AM team* guides and supports the ongoing improvement of the AM system within the organization.
Accountability	• Appointed resources have been mandated to investigate and assess our AM needs planning, documented by a draft terms of reference.		• Our AM team* has been made accountable for guiding AM development, with a documented mandate and terms of reference.	• Our AM team* has been made accountable for AM implementation and we have added AM system roles and responsibilities to staff job descriptions.	• We have operationalized AM system roles and responsibilities across our organization.	• We are documenting changes to AM system roles and responsibilities as needed to support our evolving requirements.
Resourcing and Commitment	• Council is aware of the resourcing and funding dedicated to exploring AM system requirements and to proposing an AM roadmap.		• Council demonstrates buy-in and support for AM and has approved funding for priority improvements.	• Council champions AM as a core business function and has approved funding to continue AM roadmap activities.	• Council has approved funding for ongoing AM system monitoring and enhancement.	• The AM team measures and monitors progress. Council is committed to ongoing improvement of the AM system.

* *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.*

ASSET MANAGEMENT READINESS SCALE

Competency: DATA AND INFORMATION

*This competency involves using **asset data**, **performance data** and **financial data** to support effective asset management (AM) planning and decision-making.*

	1		2	3	4	5
	Working on Level 1 ☐	**Completed Level 1** ☐	**Completed Level 2** ☐	**Completed Level 3** ☐	**Completed Level 4** ☐	**Completed Level 5** ☐
Readiness Level	We have inventory data and financial data, aligned with minimum reporting requirements for tangible capital assets.		We have basic inventory data for major assets, including some condition and performance data. We have detailed financial data for some of our assets.	We have basic inventory data for all our assets, with some level of service information and standardized condition ratings. We have linked AM and financial information for our major assets.	We have expanded inventory data on major assets, including condition and performance information. We have basic forecasts and risk assessments for some assets. We have a long-term community financial plan in place.	We have expanded inventory data on all assets. We have performance forecasts and risk assessments in place for most assets.
Outcomes	**You have achieved a specific readiness level when you can demonstrate the corresponding outcomes below.**					
Asset Data	• We have pooled inventory data, including approximate quantities of assets within most asset groups.		• We have basic inventory data for most major assets, including information on general asset properties such as size, material, location and installation date.	• We have basic inventory data for all assets. We have defined life cycle investment requirements for some assets.	• We have expanded inventory data, and have evaluated the relative risks and life cycle investment requirements associated with major assets.	• We have expanded inventory data and have evaluated the relative risks and life cycle investment requirements associated with most assets.
Performance Data	• We have informal or anecdotal approaches for measuring asset condition or performance. Some age information exists.		• We have some information on asset condition and performance for major assets, collected from a variety of sources.	• We use standardized condition rating systems for most asset groups. Some level of service measures have been defined and data has been captured.	• We have defined and measured levels of service for most assets. We have introduced basic needs forecasting and risk management strategies for most assets.	• We have completed needs forecasts and risk management strategies for most assets.
Financial Data	• We have financial data on our assets, supporting minimum PS-3150 reporting requirements.[2]		• We have captured capital and operating expenditure data for some assets. We have developed a strategy to link AM and financial information.	• We have captured capital and operating expenditure data for most assets. We have linked AM and financial information for all major assets.	• We have calculated the cost of service delivery for all major assets. We have developed a long-term (at least 10-year) financial plan.	• We understand the trade-offs between investment and the quality of the front-line services we deliver and we use this to refine our financial plans.

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

ASSET MANAGEMENT READINESS SCALE

Competency: PLANNING AND DECISION-MAKING

*This competency involves **documenting and standardizing** how the organization sets asset management (AM) priorities, conducts **capital and operations and maintenance (O&M) planning**, and decides on **budgets**.*

	1		2	3	4	5
	Working on Level 1 ☐	**Completed Level 1** ☐	**Completed Level 2** ☐	**Completed Level 3** ☐	**Completed Level 4** ☐	**Completed Level 5** ☐
Readiness Level	Our asset investment plans address basic needs and respond to known problems. We evaluate priorities based on experience, council and management input and available information.		Our asset investment plans address observed short-term issues. We evaluate each need individually, and teams set priorities independently of each other, based on objectives and criteria representing the needs of their departments.	Our asset investment plans manage short-term risks and service impacts. We set priorities based on common organizational goals and objectives. We have drafted preliminary AM plans.	Our asset investment plans balance short-term service objectives (our desired level of service) with longer-term goals and risks. Planning is carried out using our AM system and kept up to date via normal business.	Our asset investment plans are integrated to address risks to both service and business goals. We have detailed AM plans for all services. We are continually improving our approach.
Outcomes	**You have achieved a specific readiness level when you can demonstrate the corresponding outcomes below.**					
Documentation and Standardization	• Our approach to asset investment planning varies across the organization.		• Our departments follow a similar but informal asset investment planning approach. • We evaluate investment needs and priorities based on a mix of structured and ad-hoc practices and criteria.	• We have developed a structured asset investment planning approach but application is inconsistent. • We set priorities using similar criteria based on organizational goals and objectives.	• We employ our structured asset investment planning approach across our core services. • We set priorities using criteria which are fully aligned with our organizational goals and objectives.	• We employ our structured asset investment planning approach across all services. • We adapt our planning approach and criteria to align with evolving organizational goals and objectives.
Asset Investment Plans	• Our asset investment plans are typically reactive and focus on addressing basic needs (e.g. growth, regulations and known problems).		• Our asset investment plans are largely based on short-term asset, organizational and environmental issues. We do not have an AM plan.	• Our asset investment plans are based on short-term issues and priorities. We have drafted preliminary AM plans for priority services.	• Our asset investment plans are based on both short- and long-term issues and priorities. We have developed detailed AM plans for core services	• We have integrated and optimized asset investment plans. We have developed detailed AM plans for all services.
Budgets	• We prepare annual capital and operating budgets which are based on historical values. We deal with new needs reactively, as they occur.		• We prepare annual capital and operating budgets which are based on a mix of historical values and new priorities.	• We prepare an annual capital budget which is based on a fresh reassessment of current needs. Our operating budget is based on a mix of historical values and new priorities.	• We prepare annual needs-based capital and operating budgets which are based on a fresh reassessment of risks and current needs.	• We prepare multi-year needs-based capital and operating budgets which are based on our short- and mid-term needs. We take a structured approach to addressing in-cycle changes.

ASSET MANAGEMENT READINESS SCALE

Competency: CONTRIBUTION TO ASSET MANAGEMENT PRACTICE

This competency involves asset management (AM) ***training and developing*** *staff,* ***sharing knowledge internally*** *and participating in* ***external knowledge sharing****.*

	1		2	3	4	5
Readiness Level	**Working on Level 1** ☐	**Completed Level 1** ☐	**Completed Level 2** ☐	**Completed Level 3** ☐	**Completed Level 4** ☐	**Completed Level 5** ☐
	AM development is informal and largely driven by the personal initiative of team members.		Our organization has membership in one or more AM organizations and selected staff are trained on basic AM concepts.	Our organization is an active participant in industry events. All staff receive basic AM awareness training.	Our organization contributes to industry events and shares experience with peers. An AM training plan is in place for all positions	Our organization is viewed as a thought leader and coach. Select staff are trained as internal AM experts.
Outcomes	**You have achieved a specific readiness level when you can demonstrate the corresponding outcomes below.**					
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.	• We provide all our staff with basic AM awareness training. • Some staff undergo training on advanced AM concepts specific to their roles and responsibilities.	• We have defined AM knowledge and skill requirements, and a training plan is in place for all positions. • 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.
Knowledge Sharing — Internal	• We are mitigating the risk of losing information held in the minds of long-term staff, through improved record keeping.		• We have mitigated the risk of losing information held in the minds of long-term staff, through improved record keeping.	• A culture of knowledge sharing is taking root internally, supported by official initiatives. Our organization maintains AM knowledge resources (e.g. manuals, training, software). • We communicate the benefits of AM internally.	• There is a culture of knowledge sharing supported by official and informal initiatives. We maintain and disseminate AM knowledge resources (e.g. manuals, training, software).	• Knowledge is captured and flows freely throughout the organization. Staff are leveraging internal and industry knowledge and leading practice resources.
Knowledge Sharing — External	• We are in the process of investigating industry groups and resources.		• Staff or elected officials have attended AM-related events.	• We are members of one or more AM organizations and actively participate in industry events.	• We are actively involved in AM organizations and present at industry events. We have shared information with our peers on our experience, innovations and lessons learned.	• We are a thought leader within the industry. We are active in coaching others to improve the overall body of knowledge. • We communicate the benefits of our AM program to the public.

ASSET MANAGEMENT READINESS SCALE

NOTES:

Provide rationale for assigning each readiness level. What specifically have you done that puts you at the readiness level you have selected?

Competency	Readiness Level	Notes
Policy and governance Putting in place policies and objectives related to asset management, bringing those policies to life through a strategy and framework, and then measuring and monitoring implementation over time.		
People and leadership Setting up cross-functional groups with clear accountability, and ensuring adequate resourcing and commitment from elected officials to advance asset management.		
Data and information Using asset data, performance data and financial data to support effective asset management planning and decision-making.		
Planning and decision-making Documenting and standardizing how the organization sets priorities, conducts capital and operations and maintenance planning, and decides on budgets.		
Contribution to asset management practice Training and developing staff, sharing knowledge internally and participating in external knowledge sharing.		

FCM FEDERATION OF CANADIAN MUNICIPALITIES FÉDÉRATION CANADIENNE DES MUNICIPALITÉS

Subscribe to our e-bulletin to receive up-to-date information on FCM programs:

fcm.ca/fcmgreen

or visit our website:

fcm.ca/assetmanagementfunding

1.6 A Guide to Developing a Municipal Asset Management Policy

https://www.civicinfo.bc.ca/Library/Asset_Management/Tools_and_Resources/Guide_to_Developing_a_Municipal_Asset_Management_Policy_DRAFT--LGAMWG--October_2009.pdf

A GUIDE TO DEVELOPING A MUNICIPAL ASSET MANAGEMENT POLICY

The Local Government
Asset Management
Working Group
of
British Columbia

Asset Management
Policy Sub-committee

Introduction and background

All municipalities in British Columbia own, operate and maintain a wide array of infrastructure assets. These assets include, but are not limited to transportation networks, water distribution networks, sewage collection systems, reliable information technology systems, vehicle and equipment fleets, parks, and civic facilities. These assets are expected to function efficiently and effectively for many years.

All of these infrastructures have a defined service life. As these assets age and deteriorate the issue that municipalities are grappling with is how to manage them in such a way to ensure that the full service life is reached and to have in place a mechanism to enable their replacement.

The term asset management, as used in this guide, is defined as "the application of sound technical, social and economic principles that considers present and future needs of users, and the service from the asset".

To move municipal asset management forward in British Columbia, in 2009, the Local Government Asset Management Working Group of BC identified the need for an asset management policy that can be adopted by municipal councils, and used to guide the development and use of organizational asset management.

This guide outlines the principles and components of an asset management policy and contains an example policy that can be easily adapted and used by municipalities.

What is an Asset Management Policy?

An asset management policy articulates a council's commitment to asset management and provides policy statements to guide staff in carrying out the organization's business strategies, plans and activities.

While asset management policies usually are general in nature and contain broad principles, they should identify the parts of the organization that will implement the policy. The policy also should clearly outline how asset management is to be integrated within the organization in order that it is coordinated, cost effective and organizationally sustainable.

Once an asset management policy is adopted by a council, it is expected that staff implements the policy through the development and use of guidelines and practices

An asset management policy should establish that the organization:

- Maintain and manage infrastructure assets at defined levels
- Monitor standards and service levels to ensure that they meet/support community and the council's goals and objectives.
- Develop and maintain asset inventories of all its infrastructures.
- Establish infrastructure replacement strategies through the use of full life cycle costing principles.
- Plan financially for the appropriate level of maintenance of assets to deliver service levels and extend the useful life of assets.
- Plan for and provide stable long term funding to replace and/or renew and/or decommission infrastructure assets.
- Consider and incorporate asset management in its other corporate plans.
- Report to citizens regularly on the status and performance of work related to the implementation of this asset management policy.

<u>Key principles for an asset management policy</u>

The key principles contained in any asset management policy should include as a minimum, directing the organization to:

- make informed decisions, identifying all revenues and costs (including operation, maintenance, replacement and decommission) associated with infrastructure asset decisions, including additions and deletions. Tradeoffs should be articulated and evaluated, and the basis for the decision recorded.
- integrate corporate, financial, business, technical and budgetary planning for infrastructure assets.
- establish organizational accountability and responsibility for asset inventory, condition, use and performance.
- consult with stakeholders where appropriate.
- define and articulate service, maintenance and replacement levels and outcomes.
- manage assets to be sustainable.
- minimize total life cycle costs of assets.
- consider environmental goals.
- consider social and sustainability goals.
- minimize risks to users and risks associated with failure.
- pursue best practices where available.
- report the performance of its asset management program.

<u>Guidelines and practices</u>

Since the performance of asset management is organization specific, reflective of knowledge, technologies and available tools, and will evolve over time, it is

An asset management policy should also include some direction for staff to develop guidelines and practices in managing, financing, operating current assets and planning for future assets and the delivery of services. The development of these asset management strategies and plans are essential to accomplishing the long-term goals.

Finally, the policy should require operational plans to reflect the asset management plans.

Context and integration of asset management within organization
An asset management policy should outline the context and how asset management is to be integrated throughout the organization's lines of business. This is typically formalized through references and linkages between corporate documents and activities listed in the policy.

Key roles for managing the asset management policy
Finally, an asset management policy should identify the key roles for managing the policy. For example, Council's role and authority for approving, updating, amending or rescinding the policy should be established, and the staff functional units (and their implementation responsibilities) clearly identified in the policy.

Why adopt an asset management policy?

Municipal policies are meant to express Council's direction for guiding staff in decision making when carrying out the organization's business strategies, plans and activities. Good policies articulate clear directions, identifies accountabilities and can be consistently applied. These enhance public confidence and improves customer service and the organization's efficiency and effectiveness.

When a municipality adopts an asset management policy, it also demonstrates to the community that it is exercising good stewardship, and is delivering affordable services while considering its legacy to future residents.

What are the consequences of not adopting a proactive asset management policy?
As a municipality's assets deteriorate, meeting performance levels becomes more difficult. When this happens, organizations may make short-term financial and technical decisions in an effort to curb this trend or ignore the deterioration. By not setting aside sufficient funds to operate, maintain and replace their assets, this deterioration will accelerate and ultimately result in asset failure. This will erode public confidence, threaten community values and goals and impact the community's economic development.

approaches a municipality can take to develop and adopt an asset management policy.

One process is for municipal staff to identify the organization's asset management issues. Then, together with its council and community, they should explore, develop and evaluate alternatives that can be used to acheive acceptable or desired solutions. Staff can then recommend the appropriate policy to their Council for adoption and then implement it.

It is important to maintain dialogue with between staff and Council and to consult with the public and those with interests in the issue throughout any policy development process.

Example asset management policy

Another approach for municipalities to develop an asset management policy is to adapt and use the example specific corporate asset management policy as presented in Appendix A. An electronic version of the example policy is also available.

Adapting the policy can be done simply by:

- inserting the municipality's community vision,
- selecting the corporate documents to be linked with the policy, and
- identifying the functional responsibilities for the organization.

With this approach, the municipality has a specific corporate asset management policy that captures the importance of asset management to the organization and is easily referenced. However, it is important that consultation still occur when this approach is used.

Another approach for municipalities to use is to not have a stand alone asset management policy but rather include asset management principles (or portions of policy principles or guidelines) into other corporate policies (such as an Official Community Plan, Budget or Financial Plan). While this approach is not recommended because it may not adequately emphasize the importance or integration of asset management, the policy statements contained in section 1.0 of the example policy can be separated and inserted into those corporate policies.

Each municipality is different

The approach taken by every municipality has to reflect its organization, community and council uniqueness, and consideration should be given to these dynamics.

Regardless of the approach, the process to recommend an asset management policy to a council should always incorporate input from staff, the council, community

One opportunity for municipalities to incorporate public consultation and education is to advance and adopt an asset management policy as part of its annual financial planning and budgeting process.

What does a municipality do after it adopts an asset management policy?

After an asset management policy is adopted, the real work begins in the development of an asset management strategy. Because asset management affects everything a municipality does, the development of this strategy and the practice of asset management is a team effort.

The strategy should examine and document the status of asset management in the organization, and identify a future vision and the key objectives for the organization. The formulation of the strategy should include the review of processes, systems, and available data; and based on these findings, determine the required resources and develop a schedule to address the gaps.

After an asset management strategy is developed, municipalities should then develop asset management plans. Asset management plans should be based on current inventories and condition (acquired or derived), projected performance and remaining service life and consequences of losses (e.g., vulnerability assessments, Emergency Management BC Critical Infrastructure assessments). These should be for specific assets and should also consider: levels of service, demand forecasts, asset portfolios, asset management activities (including operations, maintenance, renewal/replacement, and disposals). The plans should also include long term financial forecasts and consider alternative scenarios and risks. It is recommended that public be consulted during the development of the plans.

Once asset management plans are developed, the organization's operation plans should be adjusted for the asset management work, such as data collection, rehabilitation priorities, deterioration forecasts, resourcing requirements to reflect greater maintenance, and monitoring performance indicators.

There are many tools, guidelines and practices for organizations to use to implement an asset management policy. The Federation of Canadian Municipalities has resources such as InfraGuide: The National Guide to Sustainable Infrastructure that are useful. Some of the useful best practice report from InfraGuide include: Planning and Defining Municipal Infrastructure Needs, Developing Levels of Service, Investment Parameters for Municipal Infrastructure, Managing Infrastructure Assets, Public Consultation for Infrastructure Renewal, and Managing Risk (see http://gmf.fcm.ca/Infraguide/ Best_Practice_Reports.asp for more information).

a council should review the policy and its implementation at the mid-point of their term.

When should a municipality develop and adopt an asset management policy?

The need for an asset management policy has been identified as a priority by the Local Government Asset Management Working Group of BC. There are currently no such policies in British Columbia but there is strong desire by a number of municipalities to have such a policy.

Because the process of developing and adopting a municipal policy may take time, municipalities are encouraged to start their process as soon as possible and look for opportunities to discuss the replacement or rehabilitation of assets among staff, the council and the public. As noted previously, for many municipalities, a great time to advance an asset management policy is during the annual budgeting process.

Conclusion

An asset management policy is a useful tool to institutionalize asset management within a municipality. A good policy can clearly articulate a council's commitment to asset management and be used to guide staff in integrating and coordinating the work of asset management to improve its effectiveness.

More importantly, by using sound asset management practices that results from a good asset management policy, councils and communities can be assured that the assets meet performance levels, are used to deliver the desired service in the long term and are managed for present and future users.

Acknowledgements

This guide and the example policy were prepared in support of the Local Government Asset Management Working Group of BC - Asset Management Policy Sub-committee by Andrew Wood. Members of the Sub-Committee are Gordon Brown (Chair), Brian Bedford, Frank Blues, Kim Fowler, Neil Nyberg, Sid Smith, and Wally Wells.

APPENDIX A

EXAMPLE MUNICIPAL ASSET MANAGEMENT POLICY

MUNICIPALITY OF _____

MUNICIPAL ASSET MANAGEMENT POLICY

Policy Number: Supercedes Numbers:

Authority: Council

Approval date:

Effective date:

1.0 COUNCIL ASSET MANAGEMENT POLICY STATEMENTS

Asset management is a broad strategic framework that encompasses many disciplines and involves the entire organization. The term asset management, as used in this document, is defined as "the application of sound technical, social and economic principles that considers present and future needs of users, and the service from the asset". To guide the organization, the following policy statements have been developed:

a) _____ will maintain and manage infrastructure assets at defined levels to support public safety, community well-being and community goals.

b) _____ will monitor standards and service levels to ensure that they meet/support community and Council goals and objectives.

c) _____ will develop and maintain asset inventories of all its infrastructures.

d) _____ will establish infrastructure replacement strategies through the use of full life cycle costing principles.

e) _____ will plan financially for the appropriate level of maintenance of assets to deliver service levels and extend the useful life of assets.

f) _____ will plan for and provide stable long term funding to replace and/or renew and/or decommission infrastructure assets.

g) Where appropriate, _____ will consider and incorporate asset management in its other corporate plans.

2.0 BACKGROUND AND PURPOSE OF COUNCIL POLICY

Council has a mandate to provide a wide range of services. In order to guide staff with the effective implementation of those services, Council typically adopts policies for important issues that can be used by staff to support Council's vision, goals and objectives.

Council vision and goals for infrastructure assets

Council's vision and goal for the community is a safe, livable, sustainable and economically vibrant community underpinned by well managed and maintained infrastructure assets. [*insert community specific vision*] These assets include but are not limited to efficient transportation networks, economical and reliable water distribution networks, safe and reliable sewage collection systems, reliable information technology systems, productive fleets, and accessible parks, recreation and civic facilities.

Though these assets age and deteriorate, by using sound asset management practices, Council and the community can be assured that the assets meet performance levels, are used to deliver the desired service in the long term and are managed for present and future users.

This policy is to articulate Council's commitment to asset management, and guides staff using the policy statements. In doing so, this policy also outlines how it is to be integrated within the organization in such a way that it is coordinated, cost effective and organizationally sustainable. This policy also demonstrates to the community that Council is exercising good stewardship, and is delivering affordable services while considering its legacy to future residents.

Staff will implement the policy through the development and use of asset management guidelines and practices. Since the performance of asset management is organization specific, reflective of knowledge, technologies and available tools, and will evolve over time, the responsibility for guidelines and practices are delegated to staff.

3.0 POLICY PRINCIPLES, GUIDELINES AND INTEGRATION

The key principles of the asset management policy are outlined in the following list.

The organization shall:

- make informed decisions, identifying all revenues and costs (including

- integrate corporate, financial, business, technical and budgetary planning for infrastructure assets.
- establish organizational accountability and responsibility for asset inventory, condition, use and performance.
- consult with stakeholders where appropriate.
- define and articulate service, maintenance and replacement levels and outcomes.
- use available resources effectively.
- manage assets to be sustainable.
- minimize total life cycle costs of assets.
- consider environmental goals.
- consider social and sustainability goals.
- minimize risks to users and risks associated with failure.
- pursue best practices where available.
- report the performance of its asset management program.

Guidelines and practices

This policy shall be implemented by staff using accepted industry guidelines and practices (such as those recommended by the Federation of Canadian Municipalities, e.g., InfraGuide) and staff shall consider the use of an asset management strategy and asset management plans.

The organization will also comply with required capital asset reporting requirements, and integrate the asset management program into operational plans throughout the organization.

Strategic asset management plans may be developed for a specific class of assets, or be generic for all assets, and should outline long term goals, processes and steps toward how they will be achieved. The asset management plans should be based on current inventories and condition (acquired or derived), projected performance and remaining service life and consequences of losses (e.g., vulnerability assessments, Emergency Management BC Critical Infrastructure Consequence of Loss Assessment). Operational plans should reflect these details. Replacement portfolios and associated financial plans should consider alternative scenarios and risks, as well as include public consultation.

Context and integration of Asset Management within organization (organization specific)

The context and integration of asset management throughout the organization's lines of business is typically formalized through references and linkages between corporate documents. Where possible and appropriate, Council and staff will consider this policy

- Corporate strategic plan
- Corporate financial plan
- Capital Budget plan
- Operational plans and budgets (including vehicle and fleet plans and budgets)
- Neighbourhood plans
- Annual reports
- Design criteria and specifications
- Infrastructure servicing, management and replacement plans, e.g., transportation plans
- Community social plans
- Parks and recreation plans
- Facility plans

4.0 KEY ROLES FOR MANAGING THE ASSET MANAGEMENT POLICY

City policies are approved by Council. While staff, public and other agencies may provide input on the nature and text of the policy, Council retains the authority to approve, update, amend or rescind policies.

Role	**Responsibility**
Identification of issues, and development of policy updates	Council and staff
Establish levels of service	Council, staff and public
Exercise stewardship of assets, adopt policy and budgets	Council
Implementation of policy	Chief Administrative Officer and staff
Development of guidelines and practices	Chief Administrative Officer and staff
On-going review of policies	Council and staff

Implementation, review and reporting of asset management work

The implementation, review and reporting back regarding this policy shall be integrated within the organization. Due to the importance of this policy, the organization's asset management program shall be reported annually to the community, and implementation of this policy reviewed by Council at the mid-point of its term.

Actions	**Responsibility** ***(suggested functions only– organizations to use those specific to their organization)***

intervals	
Develop and maintain infrastructure strategies including development and service plans	Planning, Public Works, other asset operation and maintenance departments, Finance
Develop and maintain asset inventories	Public Works, other asset operation and maintenance departments, Finance
Assess infrastructure condition and service levels	Public Works and other asset operation and maintenance departments
Establish and monitor infrastructure replacement levels through the use of full life cycle costing principles	Public Works and other asset operation and maintenance departments
Develop and maintain financial plans for the appropriate level of maintenance, rehabilitation, extension and decommission of assets	Public Works, other asset operation and maintenance departments, Finance
Report to citizens on status of the community's infrastructure assets and asset management program. The channels may include annual citizen reports, business plans, etc.	Council, Chief Administrative Officer, Corporate Communications

1.7 Sample Asset Management Policies

ALBERTAVILLE

COUNCIL POLICY

ASSET MANAGEMENT POLICY

Policy Statement

The Town shall adopt and apply asset management (AM) practices to provide for the effective fiscal and physical management of current and future assets to ensure safe, reliable and sustainable services to its customers.

1. **Purpose**
   The objective of this policy is to lay out the Asset Management Program (AMP) principles with the aim of:

   - Enabling informed decision-making by Council, staff and community;
   - Improving decision-making accountability and transparency;
   - Support a culture where all employees take part in incorporating the Asset Management Framework into the management of the community assets;
   - Ensuring that the Town's services and infrastructure are provided:
     - In a safe, reliable and sustainable manner;
     - Within approved levels of service;
     - That will support residents, visitors and the environment; and,
     - In alignment with the corporate vision and goals.
   - Ensuring that risk, level of service, condition, and inventory are considered to inform and prioritize programming decisions at all levels of decision making.

2. **Assets Covered by the Policy**
   This policy applies to all physical and financial assets under the control of the Town in categories including Transportation, Water, Wastewater, Storm, Facilities and Equipment.

3. **Definition**
   Asset Management is an integrated approach involving planning, finance, engineering, maintenance and operations to maximize benefits, reduce risk and provide safe and reliable levels of service to community users.

4. **Our Principles**

   - **Corporate Alignment:** Alignment with corporate vision and goals will be enabled through this policy the asset management framework.

- **Life Cycle Management:** Assets will be managed recognizing the whole of life ownership costs.
- **Build Organizational Resiliency:** Document policies and procedures to mitigate business risks and ensure core business processes can sustain staff and resource changes.
- **Community Input:** Incorporate relevant and appropriate community input into the development of asset management plans for levels of service targets.

5. **Responsibilities and Relationships**

Town Council:

- Review and Adopt the Asset Management Policy:
- Approve levels of service incorporating risk, financial, community input that align with the community vision and goals:

CAO and Executive Team:

- Implement the Council Asset Management Policy;
- Develop an Asset Management Framework which includes Plans and Procedures that implements the Council Asset Management Policy; and,
- Annually Report to Town Council on the status of the Asset Management Framework.

Managers and staff:

- Incorporate the Asset Management Framework into the management of the community assets;
- Operationalize the details of the plans and asset management systems.

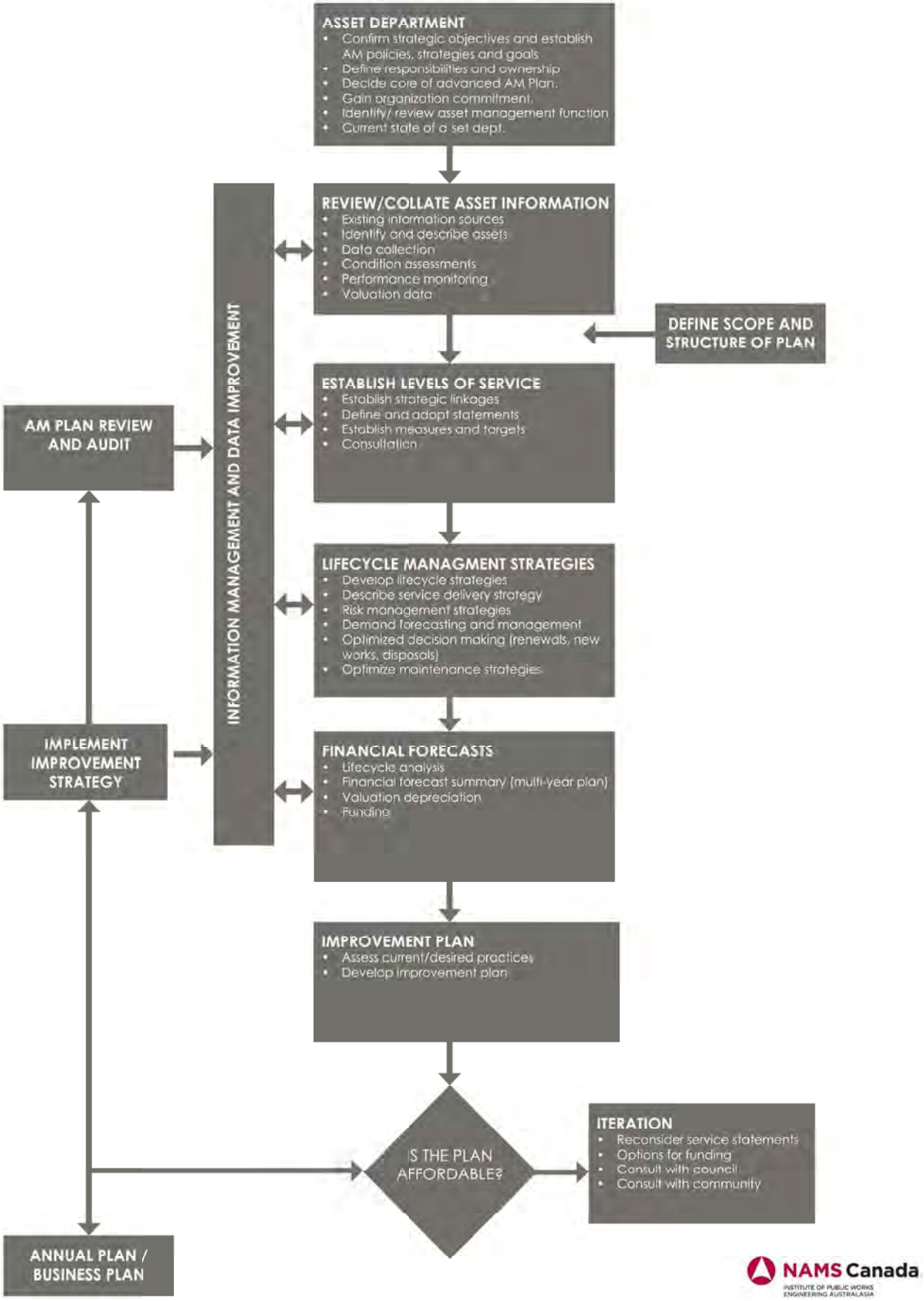
Attachment

- Asset Management Framework

Date: September 18, 2017

Chief Administrative Officer

Mayor


ASSET DEPARTMENT
• Confirm strategic objectives and establish AM policies, strategies and goals
• Define responsibilities and ownership
• Decide core of advanced AM Plan.
• Gain organization commitment.
• Identify/ review asset management function
• Current state of a set dept.
REVIEW/COLLATE ASSET INFORMATION
• Existing information sources
• Identify and describe assets
• Data collection
• Condition assessments
• Performance monitoring
• Valuation data
DEFINE SCOPE AND STRUCTURE OF PLAN
ESTABLISH LEVELS OF SERVICE
• Establish strategic linkages
• Define and adopt statements
• Establish measures and targets
• Consultation
LIFECYCLE MANAGMENT STRATEGIES
• Develop lifecycle strategies
• Describe service delivery strategy
• Risk management strategies
• Demand forecasting and management
• Optimized decision making (renewals, new works, disposals)
• Optimize maintenance strategies
FINANCIAL FORECASTS
• Lifecycle analysis
• Financial forecast summary (multi-year plan)
• Valuation depreciation
• Funding
IMPROVEMENT PLAN
• Assess current/desired practices
• Develop improvement plan
IS THE PLAN AFFORDABLE?
ITERATION
• Reconsider service statements
• Options for funding
• Consult with council
• Consult with community
ANNUAL PLAN / BUSINESS PLAN
AM PLAN REVIEW AND AUDIT
IMPLEMENT IMPROVEMENT STRATEGY
INFORMATION MANAGEMENT AND DATA IMPROVEMENT
NAMS Canada
INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALASIA

	Town of Elk Point MUNICIPAL ASSET MANAGEMENT POLICY	
ELK POINT The Right Place To Be.	Policy Number:	1-2-17
	Approval Date:	October 10, 2017
	Effective By:	
	Supersedes:	New
	Revision Date:	N/a
	Review Date:	
	Department:	Council
	Reference:	Motion #17-497

1.0 Council Asset Management Policy Statements

Asset Management is a broad strategic framework that encompasses many disciplines and invovles the entire orgnaization. The term Asset Management , as iused in this document, defined as "the application of sound technical, social and economic principles that considers present and future needs of users, and the serivce from the asset". To guide this organization, the following policy statements have been developed.

a. Town of Elk Point will maintain and manage infrastructure assets at defined levels to support public safety, community well-beinging and community goals.
b. Town of Elk Point will monitor standards and service levels to ensure that they meet/support community and Council goals and objectives.
c. Town of Elk Point will develop and maintain assets inventories of all its infrastructures.
d. Town of Elk Point will establish infrastructure replacement strategies through the use of fill life cycle costing principles.
e. Town of Elk Point will plan financially for the appropriate level of maintenance of assets to deliver service levels and extend the useful life of assets.
f. Town of Elk Point will plan for and priovide stable long term funding to replace and/or renew and/or decommission infrastructure assets.
g. Where appropriate, Town of Elk Point will consider and incorporate Asset Management in its other corporate plans.

2.0 Background and Purpose of Council Policy

Council has a mandate to provide a wide range of services. In order to guide staff with the effective Implementation of those services, Council typically adopts policies for important issues that can be used by staff to support Council's vision, goals and objectives.

Council vision and goes for infrastructure assets

Council vision and goals for the community is a safe, livable, sustainable and economically vibrant community underpinned by well managed and maintained

infrastructure assets. *Elk Point is a proud, vibrant and environmentally friendly community enjoying the benefits of a diversified economy.* These assets include but are not limited to efficinent transportation networks, safe and reliablesewafe collection systems, reliable infomration technology systems, productiuve fleets and accessible parks, recreation and civic facilities.

Thoug these assets age and deteriorate, by using sounds Asset Management practicies Council and the community can be assured that the assets meet performance levels, are used to deliver the desired service in the log term and are managed for present and future users.

This policy is to articulate Council's commitment to Asset Management , and guides staff using the policy statements. In doing so, this policy also outlines how it is to be integrated within the organization in such a way that it is coordinated, cost effictive and orgnanizationally sustainable. This Policy also demonstrates to the community that Council is excerising good stewardship, and is delviering addorable services while evolve over time, the responsibility for guidelines and practives are delegated to staff.

3.0 Policy Principles, Guidelines and Integration

The key principles of the Asset Management policy are outlined in the following list.

The Orgnaization shall:

- Make informed decision, identifying all revenues and costs (including operation, maintenance, replaceement and decommissioning) associated with budget process.
- Integrate corporate, financial, business ,technical and budgetary planning for infrastructure assets.
- Establish organizational accountablility and responsibility for asset inventory condition, use and performance.
- Consult with stakeholders where appropriate.
- Define and articulate service, maintenance and replacement levels and outcomes. Use available resources effectively.
- Manage assets to be sustainable.
- Minimize total life cycle costs of assets.
- Consider environmental goals.
- Consider social and sistainablility gals.
- Minimize risks to users and risk associated with failure.
- Pursue best practices where available.
- Report the performance of its Asset Management program.

Guidelines and Practices

Policy shall be implemented by staff using accepted industry guidelines and practices (such as those recommended by the Federation of Canada Municipalities, e.x.

2017-10-11

InfraGuide) and staff shall consider the use of an Asset Management strategy and Asset Management plans.

The Organization will also comply with requried capital asset reporting requirements and integrate the asset manageement program into operational plans troughout the orgnaization.

Strategic Asset Management plans may be develped for a specific class of assets, or be generic for all assets, and should outline long term goals, processes and steps toward how they will be achieved. The Asset Management plans should be based on current inventories and condition (acquired or derived), projected performance and remaining service life and consequences of losses (e.g., vulnerablility assessments). Operational plans should reflect these details. Replacement portfolios and associated financial plans should consider alternative scenarios and risks, as well as include public consultation.

Context and Integration of Asset Management within organization (organization specific)

The context and integration of Asset Management throughout the orgnaization's lines of business is typically formalized through references and linkages between corporate documents. Where possible and appropriate, Council and staff will consider this policy and integrate it in the development of corporate documents such as:

- Municipal Development Plan
- Business Plans
- Corporate Strategic Plan
- Corporate Financial Plan
- Capital Budget Plan
- Operational Plans and Budgets (including vehicle and fleet plans and budgets)
- Neighbourhood plans
- Annual reports
- Design criteria and specifications
- Infrastructure servicing, management and replacement plans, e.g., transportation plans
- Community social plans
- Parks and recreation plans
- Facility plans

2017-10-11

4.0 Key Roles For managing The Asset Management Policy

Town policies are approved by Council. While staff, public and other agencies may procide input on the nature and text of the policy, Council retains the authority to approve, update, amend or rescind policies.

Role	Responsibility
Identification of issues, and development of policy updates	Council and Staff
Establish levels of service	Council, Staff and Public
Excersise stewardship of asses, adopt policy and budgets	Council
Implementation of policy	Chief Administrative Officer and Staff
Development of guidelines and practices	Chief Administrative Officer and Staff
On-going review of policies	Council and staff

Implementing, review and reporting of Asset Management work

The implementation, review and reporting back regarding this policy shall be integrated within the organization. Due to importance of this policy, the orgnaization's Asset Management program shall be reported annually to the community, and implementation of this policy reviewed by Council at the mid-point of its term.

ACTIONS	**Responsibility (*suggested fucntions only- organizations to use those specific to their organzation)***
Adopt Asset Management Policy	Council and Chief Administrative Officer
Monitor and review infrastructrue standards and service levels at established	Council and Chief Administrative Officer
Intervals	
Development and maintain infrastructure strategies including developpment and service plans	Planning, Public Works, other asset operation and maintenance departments, Finance
Develop and maintain asset inventories	Public Works, other asset operation and maintenacne departments, Finance
Access infrastructure condition and service levels	Public Works and other asset operation and maintenance departments

2017-10-11

Develop and maintain financial plans for the appropriate level of maintenance, rehabilitiation, extension and decommission of assets	Public Works, other asset operation and maintenance departments, Finance
Report to citizens on status of the community's infrastructure assets and Asset Management program. The channesl may include annual citizen reports, business plans, etc.	Council, Chief Administrative Officer, Corporate Communications

Oct. 11/17
DATE

MAYOR

CHIEF ADMINISTRATIVE OFFICER

2017-10-11

1.8 Sample Albertaville Council Report

Date: September 30, 2018

To: Mayor & Council

From: CAO

Subject: Asset Management Policy

Recommendation: THAT Council approve the Asset Management Policy 2018-1.

Background:

Over the course of 2017 a number of training and education sessions have been made available and delivered to Municipal Councils and Municipal staff across Alberta to grow the understanding and awareness of Asset Management principles and practices. Attendance from Albertaville included the Mayor, all of Council, the CAO, Director of Public works, and Treasurer.

Asset Management practices are recognized nationally as important by the Federal Government (through Grants made available by the Federation of Canadian Municipalities), and multiple partner organizations Alberta are actively delivering training to municipalities. As part of the Canada-Alberta agreement for Infrastructure funding, the Province has committed to elevate the state of Asset Management Practice across municipalities.

Discussion:

As part of the education sessions, it was identified that an early step in the adoption and implementation of an Asset Management Plan is the adoption of an Asset Management Policy by local Councils. An adopted Asset Management Policy articulates Councils overall policy objectives when managing local assets and gives guidance to Administration in developing programs, setting budgets and delivering services.

To develop this Policy, the Administration reviewed best practices across Alberta as well as ensured that there was alignment with Council's Strategic Plan. The Policy as presented represents a holistic view of Asset Management, outlines key roles and responsibilities of Council and staff, as well as articulates the Principles supporting the Policy and subsequent plan.

Additionally, an Open House was held September 15 with the public invited to attend a presentation on the Asset Management Policy, the services and assets that are delivered and owned by Albertaville, and incorporate any comments. The Policy was reviewed and revised incorporating comments received at the Open House.

Alternatives:

1) Approve the Policy as presented
2) Refer the Policy to Administration with specific comments for further review
3) Receive and File

Implications:

The adoption of the Asset Management Policy will set the direction for the Municipality for the next several years, and Administration will begin developing an Asset Management Strategy and Plan. There may be financial implications and additional resources required to implement the Policy, Strategy and Plans, however doing so will ultimately lead to better understanding how assets can be effectively managed to meet desired service levels and ultimately better control over costs.

1.9 Cross Functional Team Memo & Terms of Reference

Date: September 1, 2018
From: CAO
To: Director of Public Works, Director of Finance, Director of Human Resources, Director of Community Services

RE: Asset Management Implementation – Organizational Assignments

As we've been discussing since we attended the IAMA Course *"Asset Management for Municipal Staff: The Technical Basics"* we will be moving forward with our plans to begin implementing our Asset Management program. While this at first seems like additional work, I'm confident that by working smart, we can integrate many of the things that we already do into our program.

I'm pleased that to date we've all agreed as a Leadership Team that this is important and that we are committed to it. I'm also pleased that we've drafted the basic set of objectives that will guide our plan and that we have begin to think about our strategy. Much of this came out of the *Technical Basics* Course, and I'm glad that we were able to apply what we learned so quickly.

As we learned, to make this real, we need to clearly set expectations for ourselves to continue progressing forward. I would like the 4 of you to lead our Cross Functional Team to oversee the implementation of Asset Management. The 4 of you will be able to provide a balanced perspective as we move this forward, and ensure that we are moving consistently across the organization. As always, I will be available to provide advice and input, but I would like all of you to take the lead.

Attached is a Sample Terms of Reference that you can use as a starting point at your first meeting. The Sample is likely much broader that we would need at this stage, so please review it at your first meeting to refine it and we can discuss it further when you've finalized it at an upcoming Leadership team meeting.

Thank you again for being such strong champions of implementing Asset Management in Albertaville, as I know that it will help us continue to delivery exceptional services to to Council and the Community.

Yours Truly,

CAO.

Asset Management Team (AMT) Terms of Reference

September 2018

Purpose of the Group

The Asset Management Leadership Team (AMLT) has been established to increase awareness of asset management across the organization and ensure Council has an integrated approach to continuous improvement in its asset management practices and capabilities.

The Federation of Canadian Municipalities Municipal Asset Management Program recognizes the importance of having an asset management team with representatives from a cross section of departments to ensure that asset management is an integrated part of the corporate process rather than an isolated activity. AMT will embed, integrate, monitor, support and report on the development and implementation of asset management practices at Albertaville City Council.

Anticipated Benefits

Establishment of a proactive AMT will achieve the following benefits for Council:

- Demonstration of Senior Management support for sustainable service delivery and asset management;
- Championing of asset management practices and processes;
- Wider accountability for achieving and reviewing asset management goals and objectives;
- Improved coordination of strategic service planning, information technology, financial and asset management activities;
- Promotion of uniform asset management practices and programs across the organization;
- Improved information sharing; and
- Pooling of corporate expertise.

Objectives

- Increase awareness of the importance of integrated service planning and asset management across the organization;
- Facilitate the successful implementation of Council's Asset Management Strategy and Asset Management Plan Improvement Actions;
- Facilitate the successful implementation of Council's Asset Management Information System (FAMIS);
- Establish an Asset Management Performance Reporting Framework that communicates the status of asset management to all levels of the organization;
- Audit and report progress on a regular basis to EMT, Council's Audit & Risk Committee and Council; and

Standards for Asset Management and the NAMS Plus initiative of the Institute of Public Works Engineering Australasia (IPWEA).
- Reviewing and recommending appropriate staff training and education opportunities.

Composition of the Group

The Asset Management Team shall consist of the Directors of Public Works, Community Services, Finance and Human Resources.

Role of the Chairperson

The Chairperson for the AMT shall be determined annually by the Team. The Chairperson's role is to advise, steer and work cooperatively with the many diverse parts of the organization to provide guidance towards achieving the overall corporate strategic goal of moving towards best practice asset management to support sustainable service provision.

The Chairperson will have authority to request inputs from staff across the organization.
AMT Roles and Responsibilities

AMT members will demonstrate enthusiasm for the benefits of improved asset management practices and proactively seek to reinforce its relevance to all staff.

The Chairperson and the AMT are facilitators to ensure the whole organization is moving towards best practice in asset management to efficiently support service delivery.
Key roles and responsibilities for all AMT members include:
- Implement key strategic actions set out in Council's AM Strategy and AM Plans;
- Monitor and assess progress and determine responsibility for implementation of projects arising from Council's Asset Management Policy, Strategy and Asset Management Plans;
- Realize integration opportunities for sustainable asset management and service planning;
- Ensure Council's asset management practices are guided by the principles set out in Council's Asset Management (AM) Policy;
- Actively participate in the development and implementation of Service Plans and Asset Management Plans;
- Ensure the principles, standards set out in Council's Sustainable Asset Management documents (including the AM Plans) are applied;
- Identify opportunities for improvements to the lifecycle management of Albertaville's assets;
- Support the development and implementation of specific processes and practices to support improved planning, development and management of Albertaville's assets;

of Officers across the organization;
- Ensure that accurate and reliable information is presented to the Executive and Council for decision-making;
- Participate in appropriate training to develop the skill sets required to undertake asset management tasks;
- Ensure that Councillors and staff are adequately trained and skilled in sustainable financial, environmental and asset management practices;
- Actively increase awareness of asset management within the organization and promote the benefits of adopting a formal approach;
- Ensure the principles and standards of 'Best Practice' asset management are applied appropriately and in a uniform manner;
- Ensure corporate governance and risk management policies, procedures and guidelines are applied consistently to the management of Councils assets;
- Assist in the self-assessment of Council's asset management improvement program as part of the National Asset Management Assessment Framework or similar assessment framework (Compliance with ISO 55000 Standards for Asset Management and the NAMS Plus initiative of the Institute of Public Works Engineering Australasia (IPWEA);
- Assist in the preparation of progress reports for the Audit & Risk Committee and Council;
- Develop KPI's on AM performance (including delivery of service levels); and
- Review and implement, where possible, external audit recommendations relating to asset management.

Delegated Authority and Decision Making
AMT has authority to present options for EMT and Council's consideration and endorsement.
Meetings of the Group

Frequency
The group shall have a minimum of six (6) meetings (bi monthly) per year of which shall be integrated with the monthly Management Team meetings.
In the event there is a need for a special meeting the Manager Sustainable Assets shall convene with the Corporate Planner to make the necessary arrangements.

Agenda
The meeting agenda and supporting papers will be prepared and distributed prior to the meeting.

Minutes
Formal minutes shall be taken of the proceedings of the AMT.

Minutes from the AMT will be sent to the Senior Management Team for inclusion on a meeting agenda for discussion and update on progress.

1.10 Sample Career Opportunity – Red Deer County Asset Management Coordinator

http://www.rdcounty.ca/DocumentCenter/View/1951

ASSET MANAGEMENT COORDINATOR

Full Time – 1 Year Term

Located in the heart of Central Alberta, Red Deer County provides a wonderful mix of rural and urban amenities. Over 97% of County residents report high satisfaction with their quality of life, making Red Deer County a great destination for both living and working.

Red Deer County is a great place to work! It is much more than just a job to go to. It is a place where everyone plays an important role. At Red Deer County, we believe that mutual trust and respect, shared responsibility, and open communication are essential characteristics for creating personal success within a first class working environment.

Red Deer County has a full-time, term position for a dynamic and highly motivated **Asset Management Coordinator** to supplement our ongoing focus in the delivery of customer service excellence.

Key Responsibilities

Reporting to the Construction Manager, this position will provide a lead role in the development and maintenance of a corporate wide asset management registry for Red Deer County. This position is responsible for life cycle cost analysis and asset risk management to prioritize expenditures related to the replacement/rehabilitation of County assets and infrastructure. This includes, but is not limited to, the establishing of service levels and risk management practices for roads, bridges, sidewalks, water mains, sewers, buildings, and facilities. This position will also provide project management and support in the planning, development, and implementation of the Red Deer County Capital/Major Projects Program.

Additional related duties of the Asset Management Coordinator position include, but are not limited to:

- Develop life-cycle management programs for infrastructure assets, including roads, bridges, sanitary collection and treatment systems, water distribution systems, storm water management systems, solid waste transfer sites, buildings and building systems, and other tangible capital assets (TCA's).
- Incorporate existing asset management processes, tools, and initiatives into a single corporate reporting structure and inventory system to be used in conjunction with the existing Red Deer County GIS system.
- Coordinate and/or perform condition assessments of all Red Deer County infrastructure assets on an ongoing basis.
- Work with various departments to estimate future costs for replacement, rehabilitation, or general maintenance requirements for all assets using industry standard practices.
- Review impacts of continued growth of existing assets with consideration to resources required to maintain service levels, as well as identifying future service expansion and required resources.
- Collaborate with the Finance Department to provide technical information for the Long Term Financial Planning, Tangible Capital Assets, and Full Cost Accounting function.
- Review, research, and report on technical specifications and standards related to infrastructure construction and maintenance in an effort to improve current programs and systems.
- Perform cost/benefit analysis and risk management analysis related to asset management.

All resumes, and personal information provided therein, will be handled in accordance with the Province of Alberta *Freedom of Information and Protection of Privacy* (FOIPP) legislation. The personal information that you provide to Red Deer County is being collected solely for the purpose of applying for employment. Any questions or concerns should be directed to our FOIPP Coordinator at 403-357-5394.

- Undertake other tasks, projects, and responsibilities as required or assigned within the scope of the position.

Qualifications

- Completion of a post-secondary diploma or degree program in Engineering Technology, Asset Management, or an equivalent field, with a recognized designation.
- A minimum of three (3) to five (5) years' experience in a municipal and/or civil related field.
- An equivalent combination of experience and education may be considered.
- Knowledge and experience in Asset Management Plan Development, and the use of Asset Management software.
- Excellent written, communication, and interpersonal skills.
- Strong organizational and customer service skills.
- Ability to work independently with minimal supervision.
- Working knowledge of municipal infrastructure design, as well as contract administration of projects and Asset Management.
- High degree of accuracy with Microsoft Office Suite software.
- Familiarity with Work Tech Software, ESRI Suite of products, or varied GIS tools are considered an asset.
- Valid Class 5 drivers' license with acceptable drivers' abstract.
- Acceptable criminal records check.

Additional Information

This is a 1 year term, full-time position (35 hours/week).

Qualified parties are requested to submit a detailed resume, cover letter to the Human Resources Department no later than **12:00 p.m., Wednesday, February 8th 2017** to:

Jennifer Dennis - Human Resources Coordinator
Red Deer County Centre
38106 Range Road. 275
Red Deer County, AB T4S 2L9
jdennis@rdcounty.ca | Fax: 403-350-2164

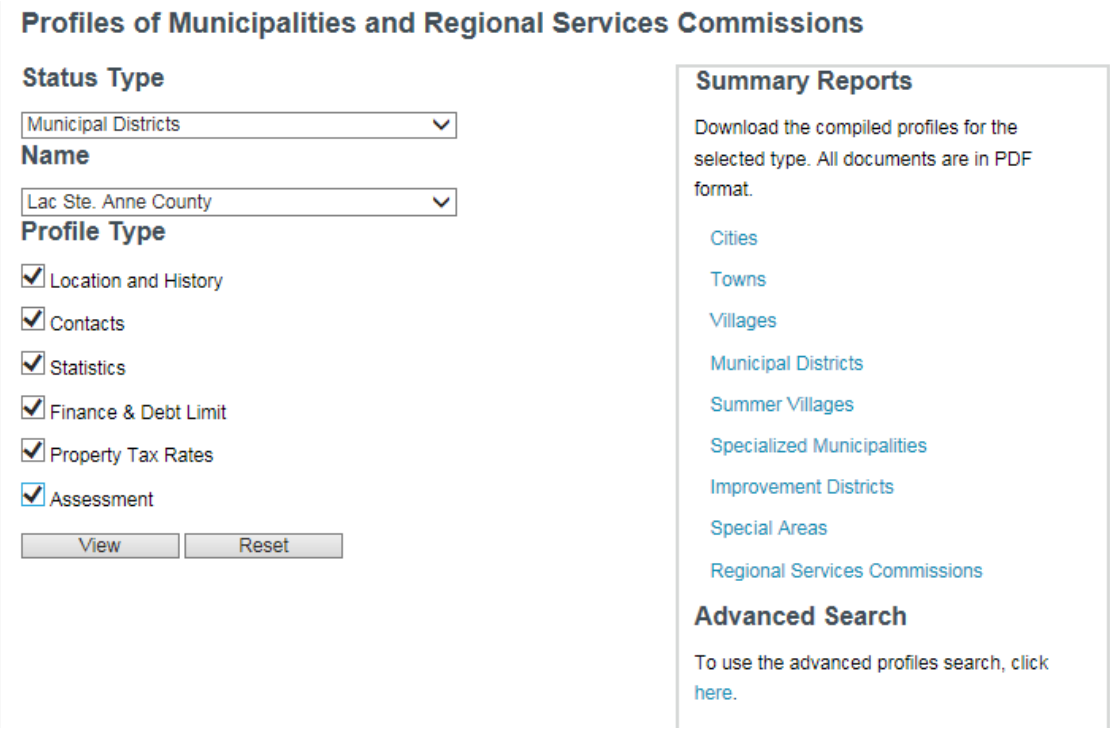
We thank all applicants for their interest; however, only those invited for an interview will be contacted.

All resumes, and personal information provided therein, will be handled in accordance with the Province of Alberta *Freedom of Information and Protection of Privacy* (FOIPP) legislation. The personal information that you provide to Red Deer County is being collected solely for the purpose of applying for employment. Any questions or concerns should be directed to our FOIPP Coordinator at 403-357-5394.

1.11 How to Access a municipal profile

1. Click this link: http://municipalaffairs.alberta.ca/mc_municipal_profiles

2. Choose the status, name, and profile type.



3. Click **View** to download your municipal profile.

1.12 Sample Municipal Profile

Alberta Government

Statistics Profile

Created on 3/28/2018 12:00:00AM

Albertville

Membership in regional services commissions

Darwell Lagoon Commission

Highway 43 East Waste Commission

North 43 Lagoon Commission

West Inter Lake District Regional Water Services Commission

	2016	2015	2014	2013	2012
Population	10,260	10,260	10,260	10,260	10,260
Total Full-Time Municipal Positions	65	67	62	62	62
Total Area of Municipality (Hectares)	304,500.0	304,500.0	300,422.0	300,422.0	300,422.0
Number of Hamlets (Specialized Municipalities & Municipal Districts Only)	7	7	7	7	7
Length of all Open Roads Maintained (Kilometers)	2,072.00	2,072.00	2,072.00	2,072.00	2,072.00
Water Mains Length (Kilometers) *	9.20	6.70	6.70	6.70	6.70
Wastewater Mains Length (Kilometers) *	18.00	18.00	18.00	18.00	18.00
Storm Drainage Mains Length (Kilometers)	0.05	0.05	0.05	0.05	0.05
Number of Residences (Summer Villages Only)					
Number of Dwelling Units	5,639	5,559	5,747	5,704	5,142

* Effective in 2008, reporting for water mains and wastewater mains includes: municipality owned systems, service providers, co-ops, regional systems and other types of service delivery.

Alberta Government

Finance and Debt Limit Profile

Created on 3/28/2018 12:00:00AM

Albertville

	2016	2015	2014
Assets			
Cash and Temporary Investments	$10,965,554	$11,264,240	$9,461,677
Taxes & Grants in Place of Taxes Receivable			
Current	827,291	715,820	626,926
Arrears	677,493	500,523	443,199
Allowance	(183,956)	(113,956)	(20,734)
Receivable From Other Governments	2,292,205	835,628	1,837,057
Loans Receivable	2,447,801	2,538,234	2,648,682
Trade and Other Receivables	799,391	655,886	782,150
Debt Charges Recoverable	0	0	0
Inventories Held for Resale			
Land	0	0	0
Other	0	0	0
Long Term Investments	1,065,896	1,058,409	1,053,578
Other Current Assets	0	0	0
Other Long Term Assets	0	0	0
Total Financial Assets	**$18,891,675**	**$17,454,784**	**$16,832,535**
Liabilities			
Temporary Loans Payable	$0	$0	$0
Payable to Other Governments	0	0	0
Accounts Payable & Accrued Liabilities	2,125,267	1,212,685	1,207,656
Deposit Liabilities	1,473,106	1,414,606	1,300,570
Deferred Revenue	4,388,828	2,150,931	1,098,160
Long Term Debt	3,751,107	4,843,323	5,944,712
Other Current Liabilities	0	0	0
Other Long Term Liabilities	0	0	0
Total Liabilities	**$11,738,308**	**$9,621,545**	**$9,551,098**
Net Financial Assets (Net Debt)	**$7,153,367**	**$7,833,239**	**$7,281,437**
Non-Financial Assets			
Tangible Capital Assets	$53,167,610	$47,049,701	$48,069,640
Inventory for Consumption	1,701,393	1,916,919	3,498,608
Prepaid Expenses	862,097	908,762	826,285
Total Non-Financial Assets	**$55,731,100**	**$49,875,382**	**$52,394,533**
Accumulated Surplus	**$62,884,467**	**$57,708,621**	**$59,675,970**

The Municipal Profiles are a compilation of statistical, financial, and other information about municipalities in the Province of Alberta . The information is based on reports submitted and data made available to Alberta Municipal Affairs as of today . The Ministry is not responsible for the accuracy of the information. Users are encouraged to verify the accuracy of the information contained in the Municipal Profiles before

Finance and Debt Limit Profile

Created on 3/28/2018 12:00:00AM

Albertville

Accumulated Surplus	2016	2015	2014
Unrestricted Surplus	1,563,823	2,875,145	3,388,781
Restricted Surplus	8,822,393	8,888,136	9,780,096
Equity in Tangible Capital Assets	52,498,251	45,945,340	46,507,093

Debt Limit Information	2016	2015	2014
Debt limit	28,937,673	30,897,725	30,760,764
Actual debt	3,751,107	4,843,323	5,944,712
Debt servicing limit	4,822,946	5,149,621	5,126,794
Actual servicing	1,150,607	1,264,604	1,302,309

Education Taxes	5,012,310	4,791,972	4,631,366

The Municipal Profiles are a compilation of statistical, financial, and other information about municipalities in the Province of Alberta. The information is based on reports submitted and data made available to Alberta Municipal Affairs as of today. The Ministry is not responsible for the accuracy of the information. Users are encouraged to verify the accuracy of the information contained in the Municipal Profiles before

Property Tax Rates Profile

Created on 3/28/2018 12:00:00AM

Albertville

Property Tax Rates (expressed in mills)

2016	Residential/ Farmland	Non-Residential
Municipal Tax Rate	4.3890	18.6910
Education - Alberta School Foundation Fund Tax Rate	2.5080	4.1330
Education Opted Out Tax Rate	0	0
Allowance For Non-Collection of Requisitioned Taxes	0	0
Seniors Lodge Accommodation Tax Rate	0.2180	0.2180

2015	Residential/ Farmland	Non-Residential
Municipal Tax Rate	4.5720	19.4710
Education - Alberta School Foundation Fund Tax Rate	2.4250	3.6330
Education Opted Out Tax Rate	0	0
Allowance For Non-Collection of Requisitioned Taxes	0	0
Seniors Lodge Accommodation Tax Rate	0.2200	0.2200

2014	Residential/ Farmland	Non-Residential
Municipal Tax Rate	4.5720	19.4710
Education - Alberta School Foundation Fund Tax Rate	2.5350	3.6010
Education Opted Out Tax Rate	0	0
Allowance For Non-Collection of Requisitioned Taxes	0	0
Seniors Lodge Accommodation Tax Rate	0.2290	0.2290

Alberta Government

Assessment Profile

Created on 3/28/2018 12:00:00AM

	2016	2015	2014
Equalized Assessment			
Residential	$1,446,241,944	$1,352,485,674	$1,283,724,749
Farmland	57,851,590	58,914,850	59,023,620
Non-residential	47,454,924	46,932,000	36,545,246
Non-residential linear	300,190,230	295,787,690	293,694,690
Non-residential railway	1,613,340	1,550,320	1,537,710
Non-res. co-generating M&E	0	0	0
Machinery and equipment	75,594,310	77,597,880	72,031,910
Total	**$1,928,946,338**	**$1,833,268,414**	**$1,746,557,925**
Equalized municipal tax rates*	0.0082	0.0082	0.0081

** The formula is to divide prior year's Municipal Property Taxes by current year's Total Equalized Assessment*

Assessment Statistics			
Total assessment services cost	$356,797	$312,806	$310,546
Number of Asst. Complaints Heard by Assessment Review Board	0	3	5

1.13 How to Access a Financial Indicator Profile

Website link

http://www.municipalaffairs.alberta.ca/financial-reporting-requirements

Contact information to request a profile

For guidance on completing and remitting the forms, email a Financial Advisor at lgsmail@gov.ab.ca or call 780-427-2225. Toll free calls can be made in Alberta by dialing 310-0000 first.

1.14 Sample Financial Indicator Profile

2015 Financial Indicator Graphs

Alberta

Generated for:
Albertville

The financial indicator graphs are intended to serve as a tool that may assist council and administration with operational decisions. The comparative measures may be useful in assessing past performance and for budget planning. Each municipality is compared to a group of similar size urban municipalities, or to rural municipalities with similar tax base. The comparison group is shown on the last slide.

Custom graphs can be created comparing your municipality to other Alberta municipalities.

Financial Advisory Services is available to assist you in interpreting the information contained in the graphs. Please be aware that advisors will not have access to any of the custom graphs you create, but would still be able to assist with the underlying formulas and data used to create all graphs.

It should be noted that that the financial indicator graphs are point-in-time documents. The system is updated daily as new information is added to the municipal financial database. As such graphs will reflect the current data set and the results will be subject to change as the database is updated and verified. However, most information from the previous reporting year will have been posted by the fall of the subsequent year.

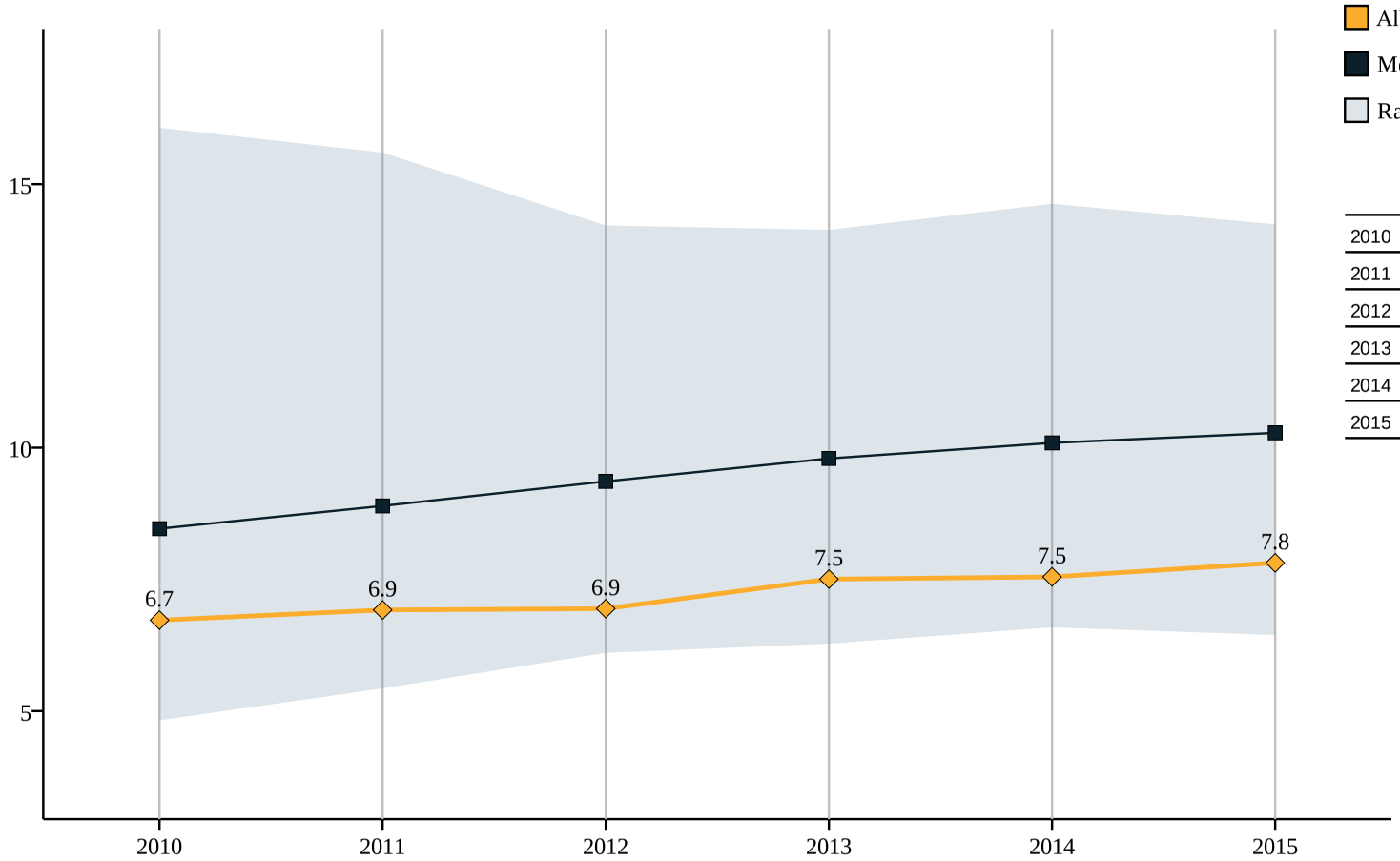
Other points to note are:

- The range for most of the graphs is 2010 to 2015.
- Caution should be used when interpreting results as each municipality has unique characteristics affecting how it compares to the group. Also, circumstances may have changed since the December 31, 2015 reporting date.

Financial Indicator Graphs include:

- Equalized Tax Rates - Municipal/Residential/Non-Residential
- Equalized Assessment Per Capita
- Non-Residential Equalized Assessment as % of Total
- Tax Collection Rate
- Debt & Debt Service as % of the Limits
- Long Term Debt Per Capita
- Major Revenue Sources Per Capita
- Major Revenue Sources As % of Total Revenue (only 2015)
- Broad Function Expenses Per Capita (only 2015)
- Per Capita Expenses by Major Type:
  - Salaries, Wages & Benefits
  - Contracted & General Services
  - Materials, Goods, Supplies & Utilities
  - Bank Charges & Interest
  - Amortization
- Net Book Value As % of Capital Costs
- Accumulated Surplus Categories, As % (only 2015)
- Accumulated Surplus Categories, Per Capita (only 2015)
- Ratio of Current Assets to Current Liabilities

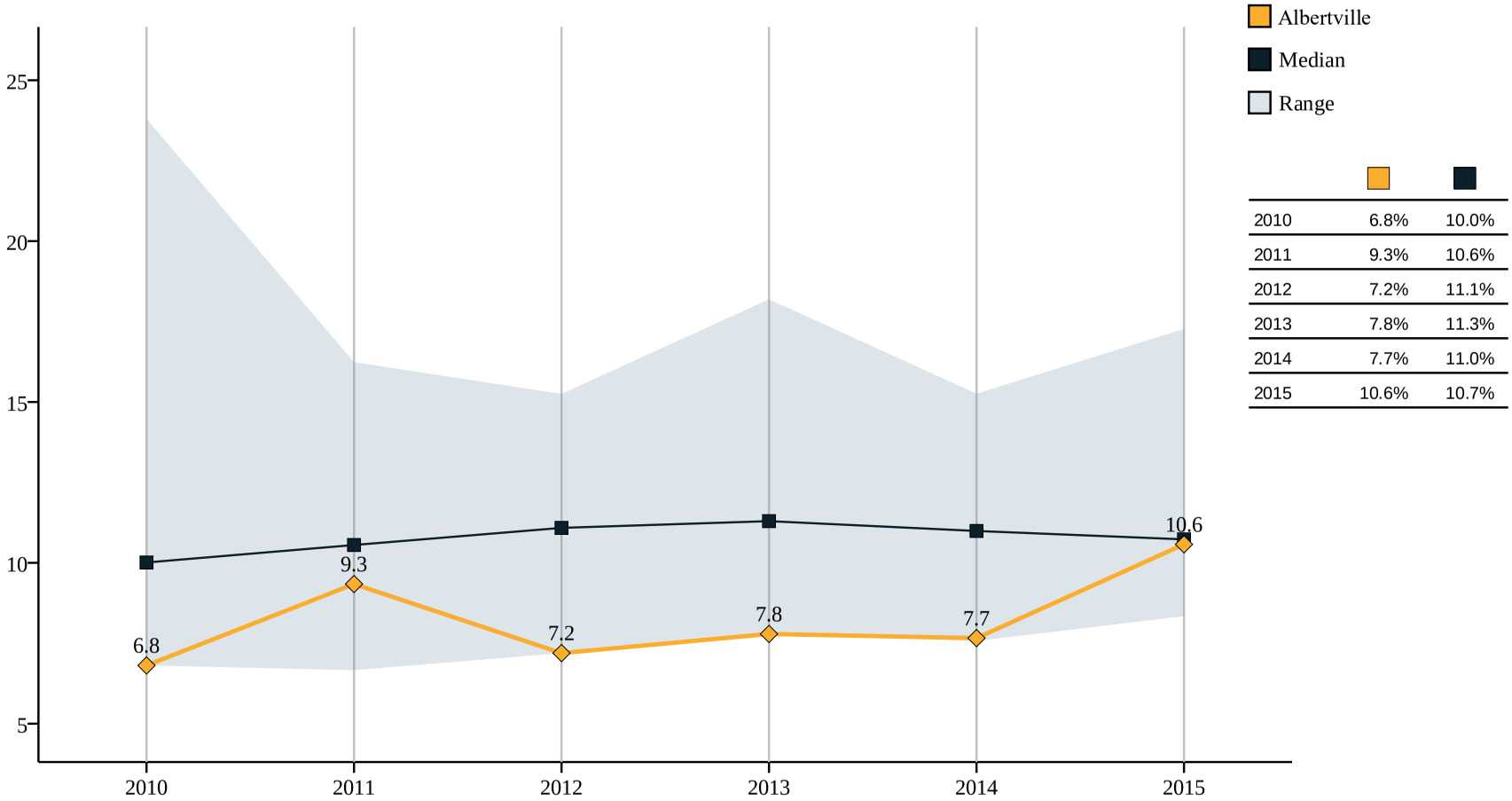
Equalized Tax Rates: Net Municipal



2010	6.7%	8.5%
2011	6.9%	8.9%
2012	6.9%	9.4%
2013	7.5%	9.8%
2014	7.5%	10.1%
2015	7.8%	10.3%

Note: Municipal Equalized Tax Rate is calculated based on total equalized assessment and net municipal property tax.

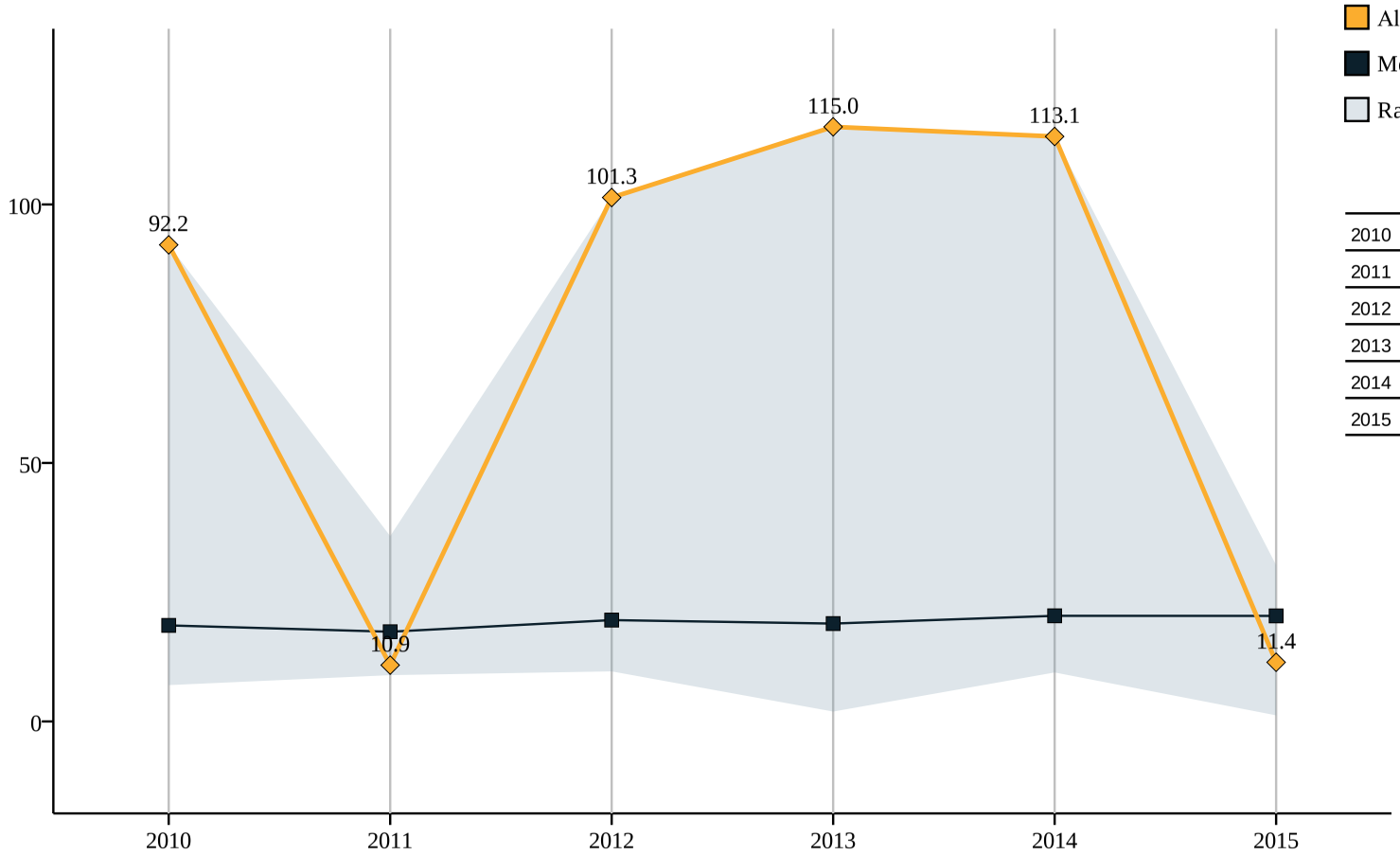
Equalized Tax Rates: Residential



2010	6.8%	10.0%
2011	9.3%	10.6%
2012	7.2%	11.1%
2013	7.8%	11.3%
2014	7.7%	11.0%
2015	10.6%	10.7%

Note: Residential Equalized Tax Rate is calculated based on gross residential property taxes and residential equalized assessment.

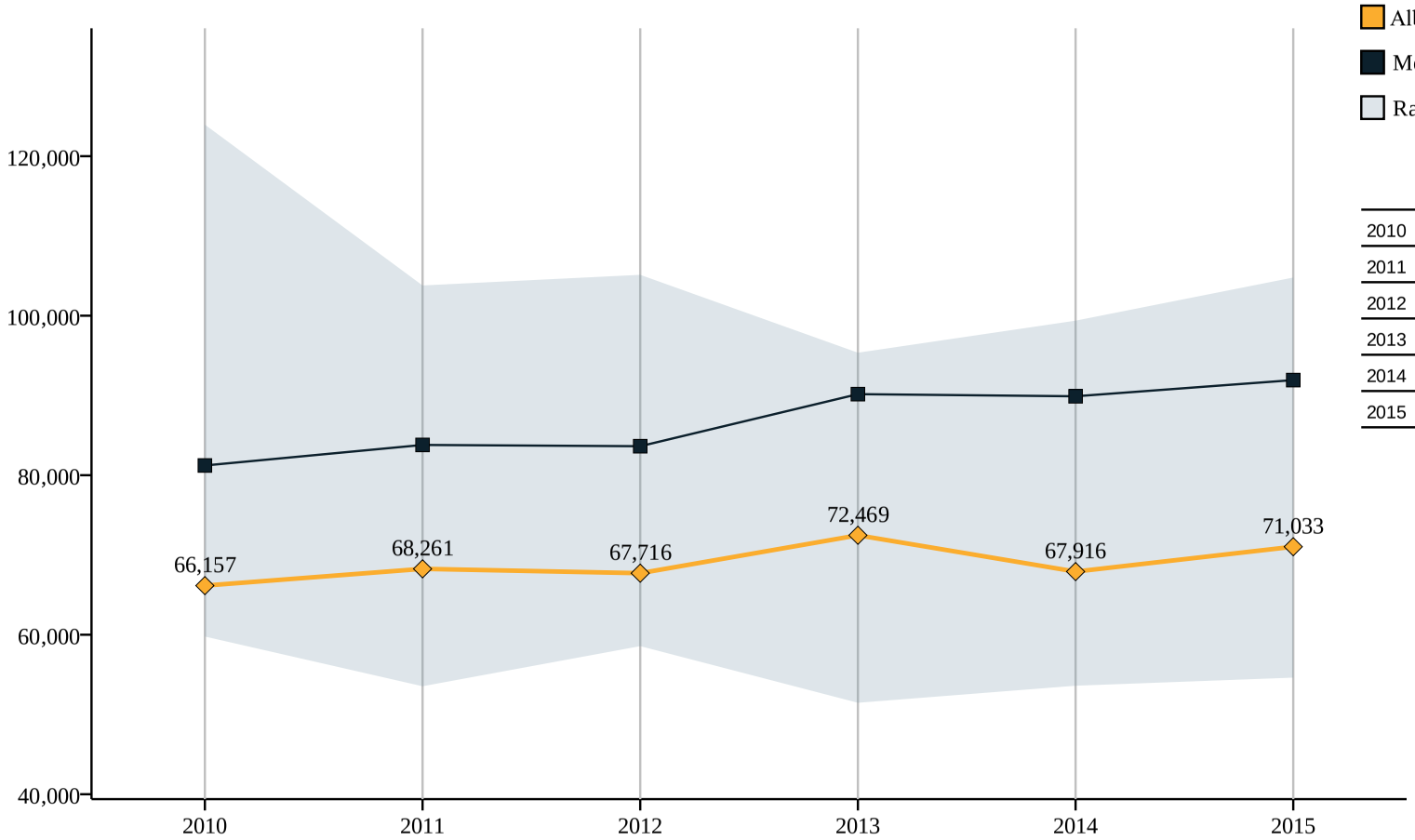
Equalized Tax Rates: Non-Residential



2010	92.2%	18.6%
2011	10.9%	17.4%
2012	101.3%	19.6%
2013	115.0%	18.9%
2014	113.1%	20.4%
2015	11.4%	20.4%

Note: Non-Residential Equalized Tax Rate is calculated based on gross non-residential property taxes and non-residential equalized assessment

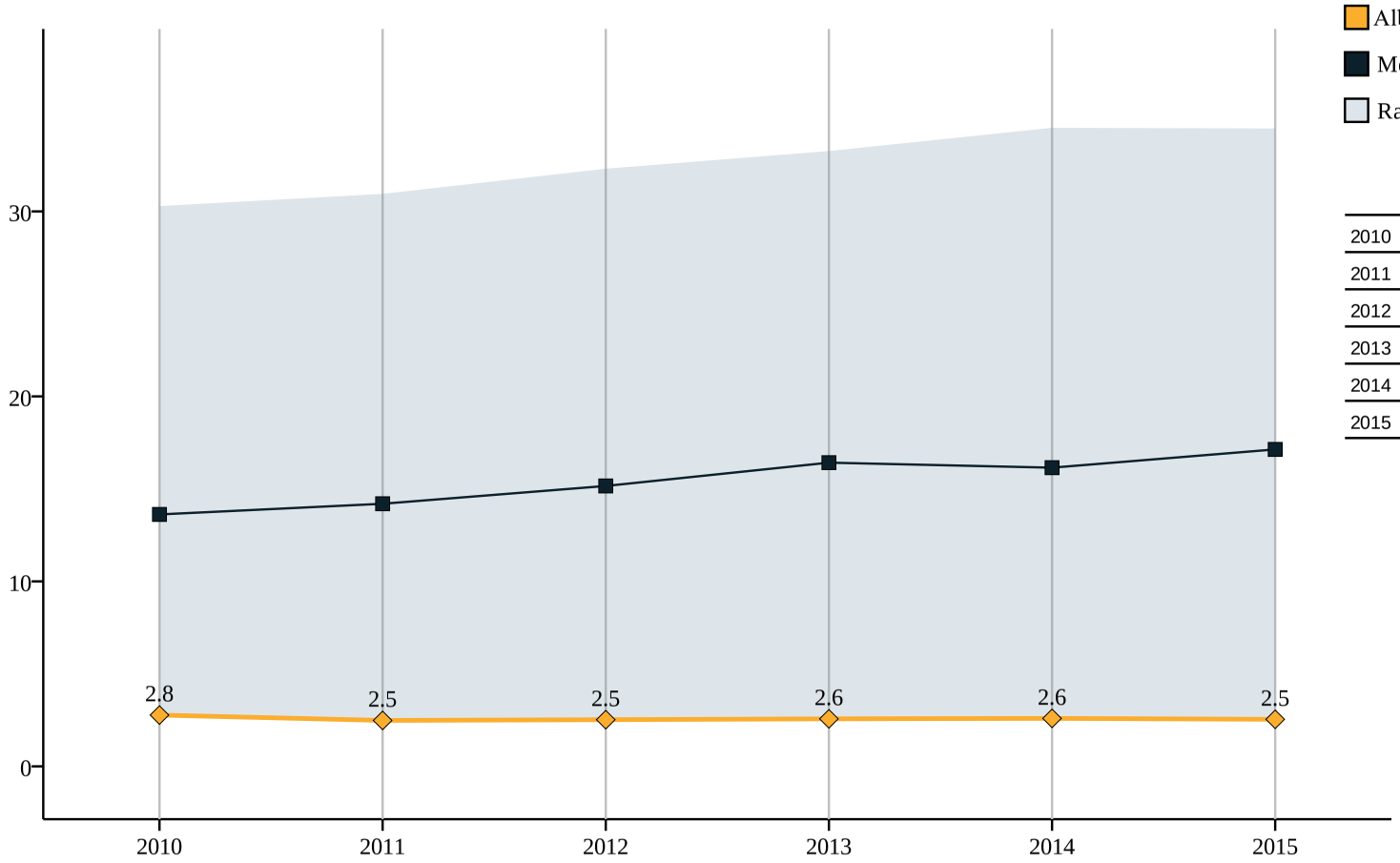
Total Equalized Assessment Per Capita



2010	66,157	81,219
2011	68,261	83,796
2012	67,716	83,636
2013	72,469	90,165
2014	67,916	89,897
2015	71,033	91,926

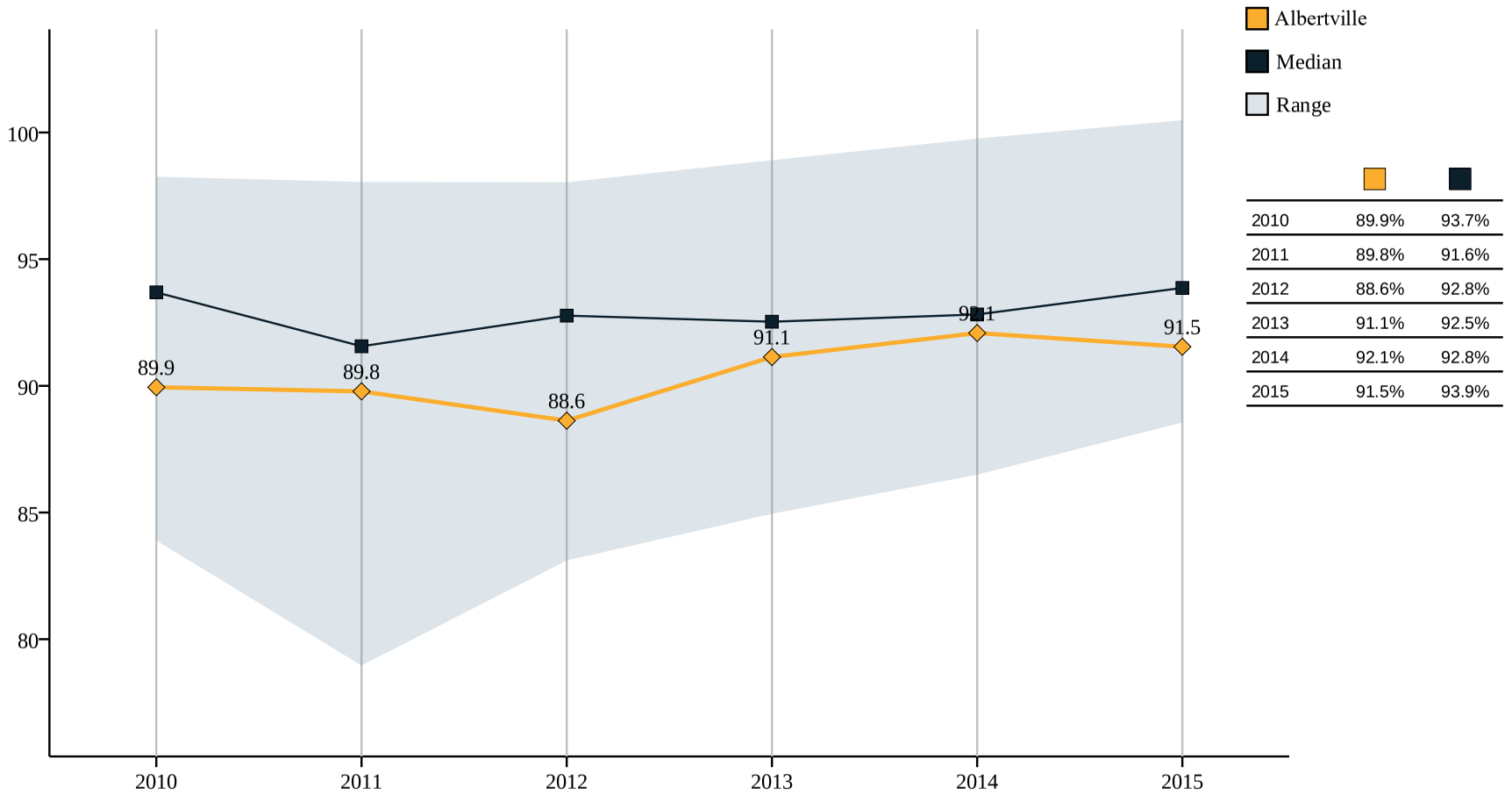
Note: Equalized Assessment Per Capita approximates a municipality's ability to generate property tax revenue in comparison to similar municipalities

Non-Residential Assessment as % of Total Equalized Assessment



2010	2.8%	13.6%
2011	2.5%	14.2%
2012	2.5%	15.2%
2013	2.6%	16.4%
2014	2.6%	16.1%
2015	2.5%	17.1%

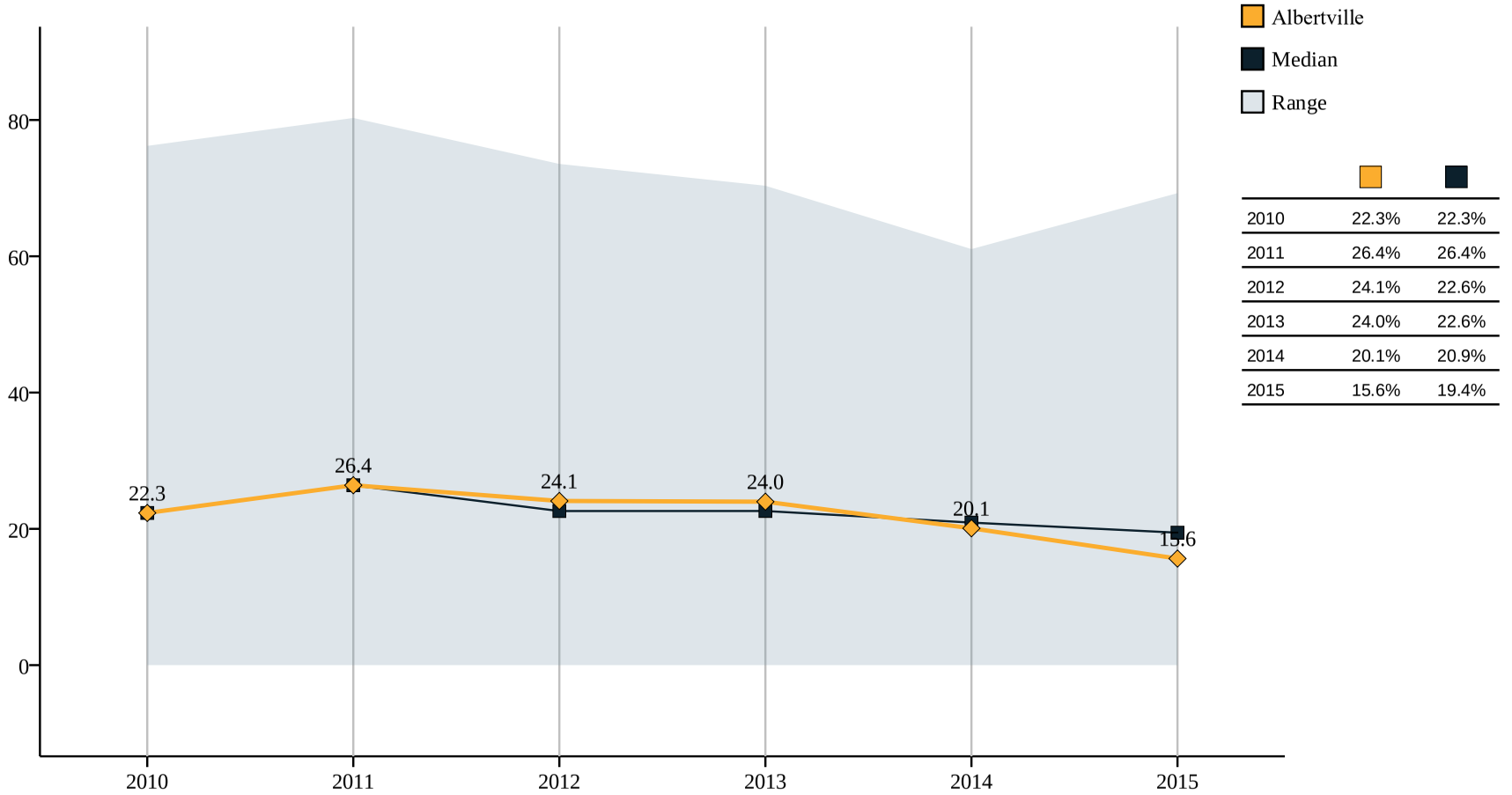
Tax Collection Rates



2010	89.9%	93.7%
2011	89.8%	91.6%
2012	88.6%	92.8%
2013	91.1%	92.5%
2014	92.1%	92.8%
2015	91.5%	93.9%

Note: This indicator reflects the percentage of taxes and grants in place of taxes which are collected by the municipality in the year in which they are levied.

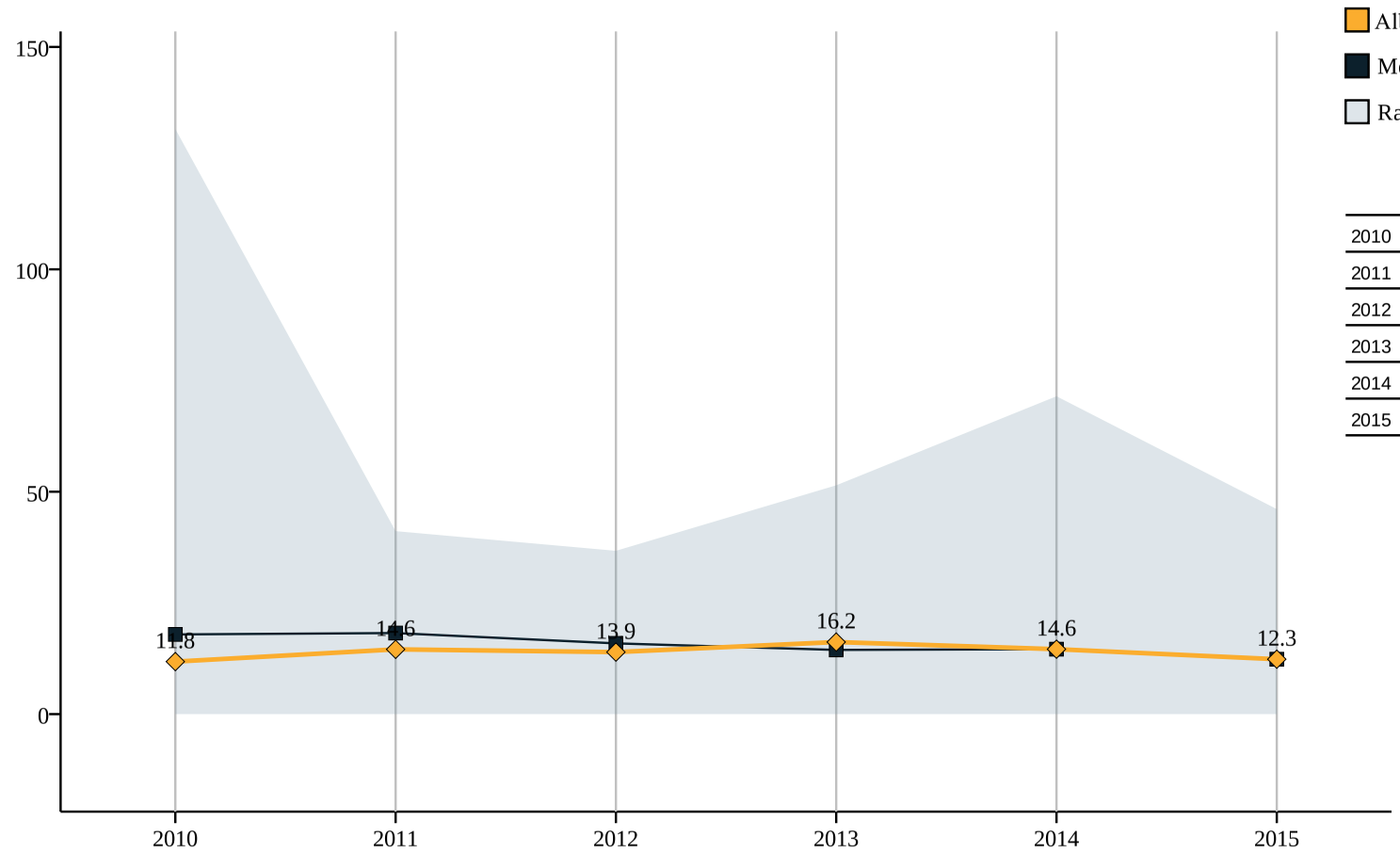
Percent of Debt Limit Used



2010	22.3%	22.3%
2011	26.4%	26.4%
2012	24.1%	22.6%
2013	24.0%	22.6%
2014	20.1%	20.9%
2015	15.6%	19.4%

Note: This graph shows, in percentage terms, the municipality's debt as a percentage of the regulated limit. This is compared to the median for the group of similar municipalities.

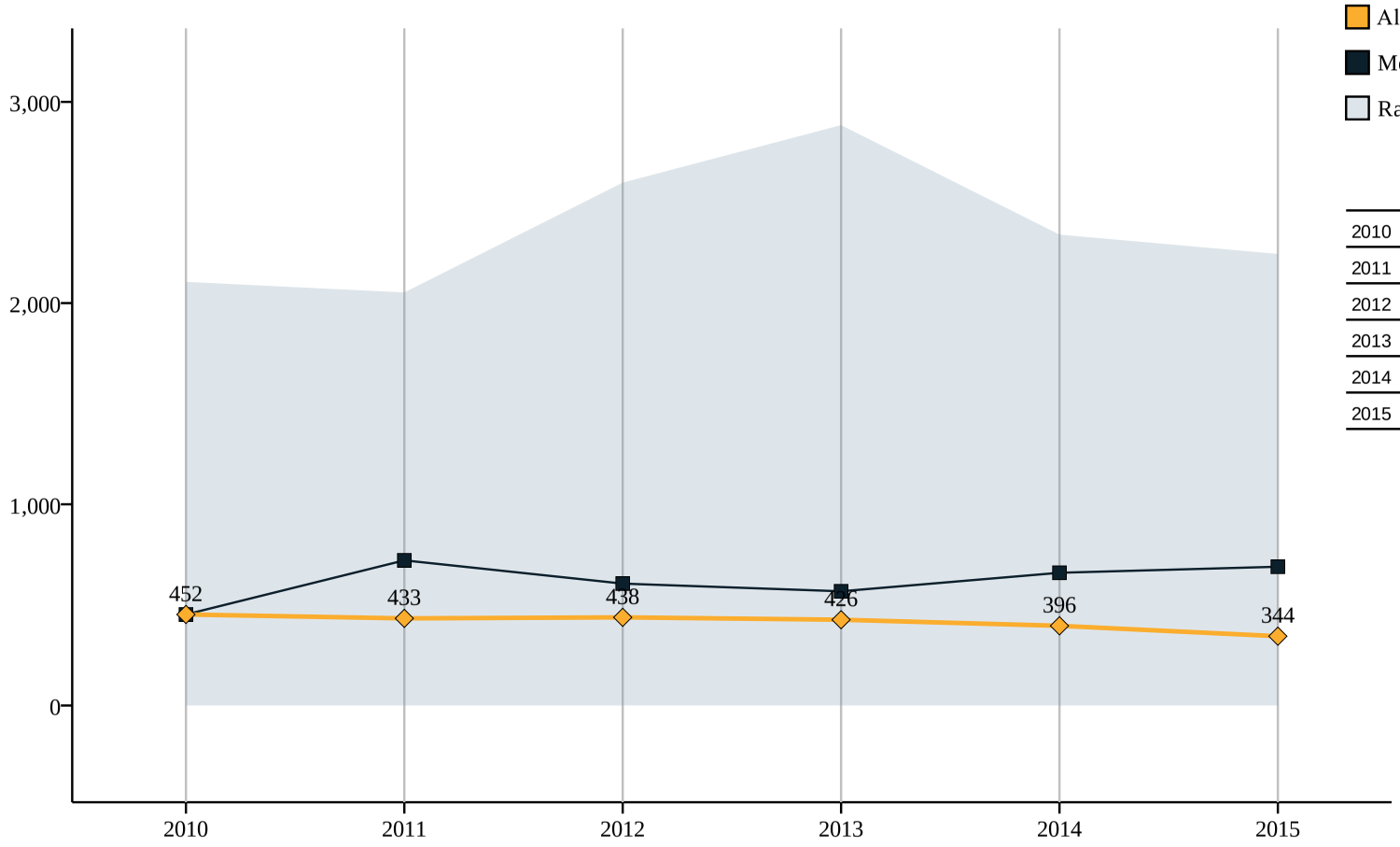
Percent of Debt Service Limit Used



2010	11.8%	17.9%
2011	14.6%	18.2%
2012	13.9%	15.9%
2013	16.2%	14.4%
2014	14.6%	14.6%
2015	12.3%	12.3%

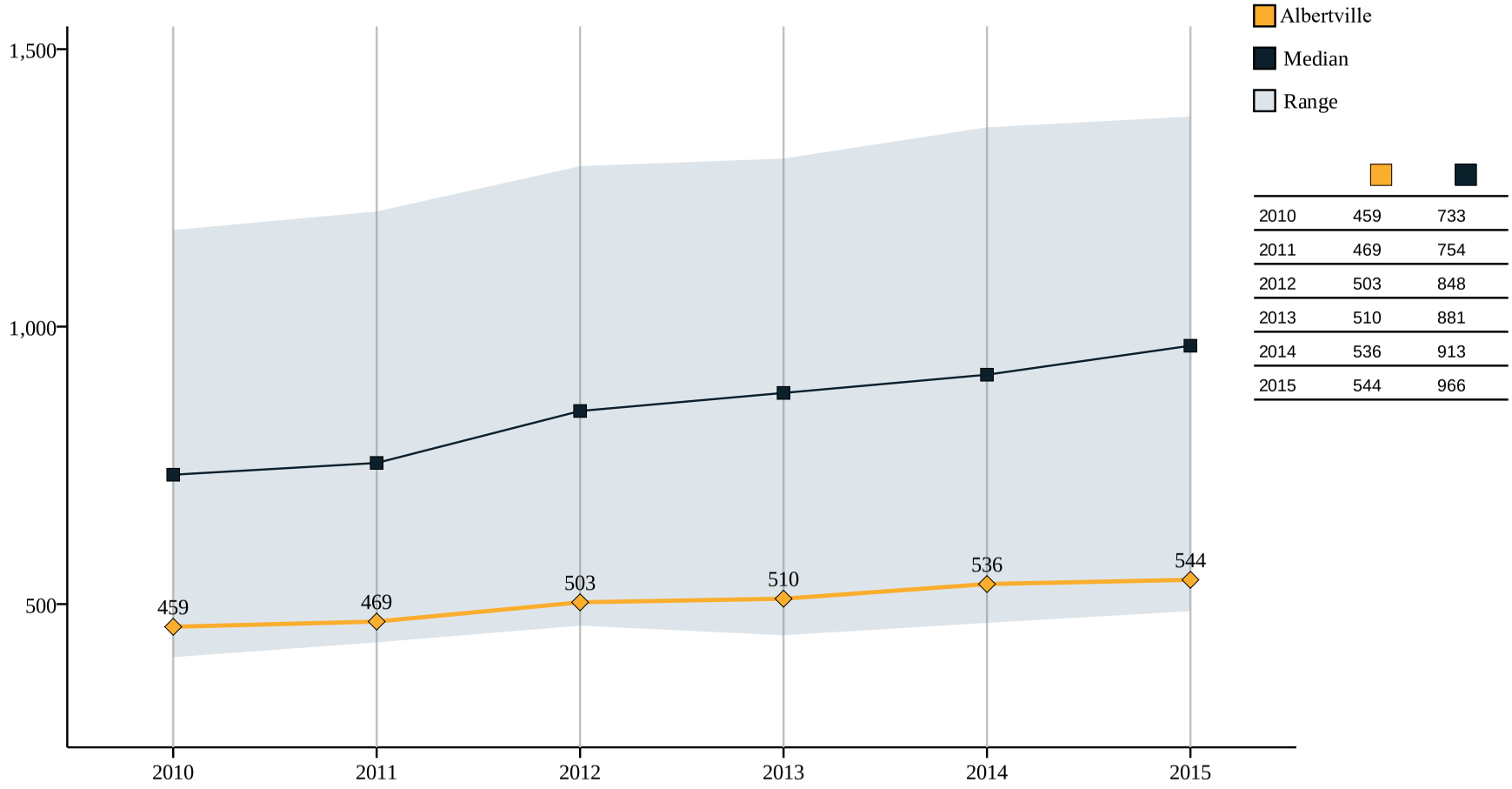
Note: This graph shows, in percentage terms, the municipality's current debt servicing requirement relative to the regulated limit. This is compared to the median for the group of similar municipalities.

Long Term Municipal Debt Per Capita



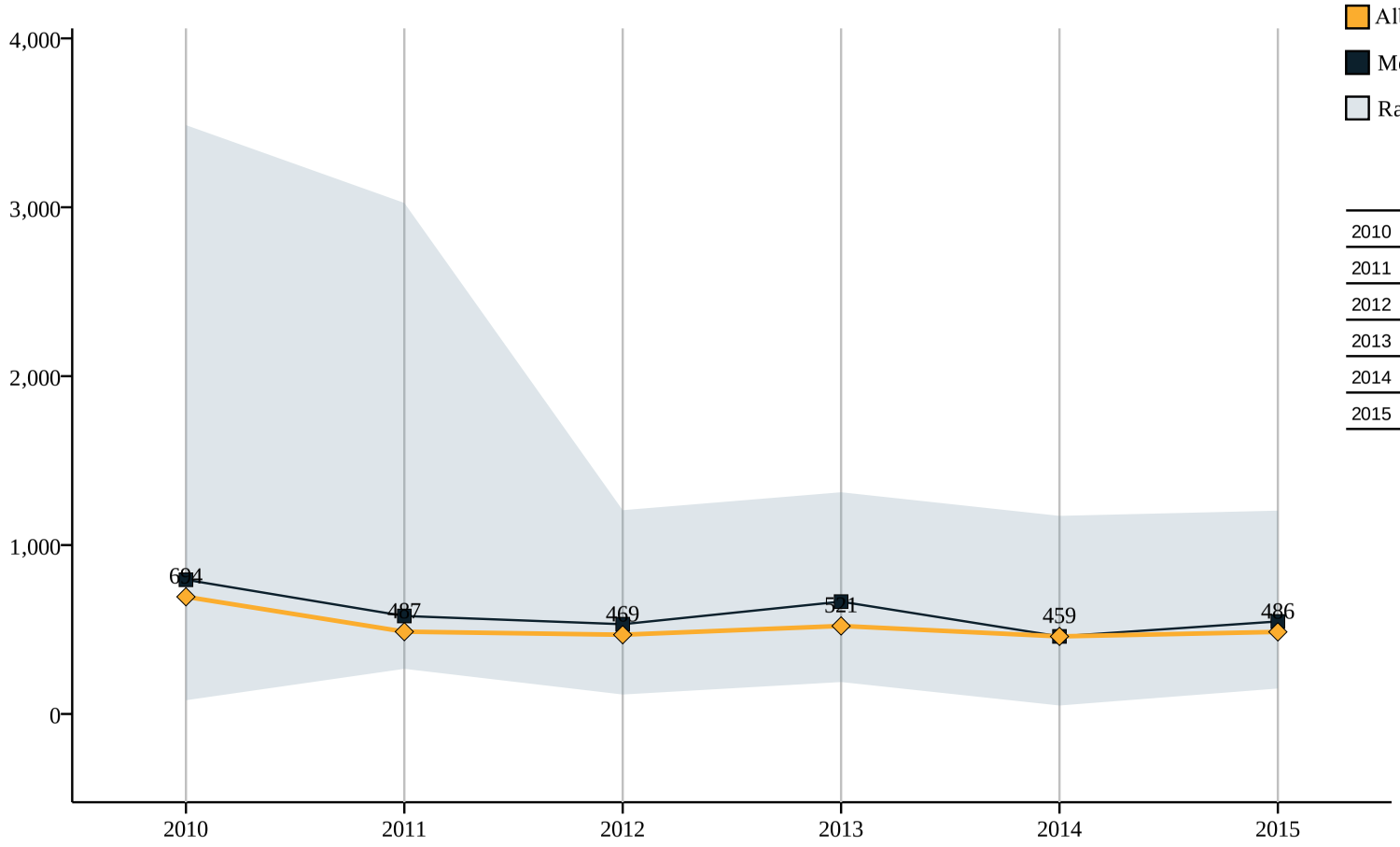
2010	452	452
2011	433	721
2012	438	606
2013	426	568
2014	396	660
2015	344	690

Revenue Sources Per Capita: Net Municipal Property Taxes



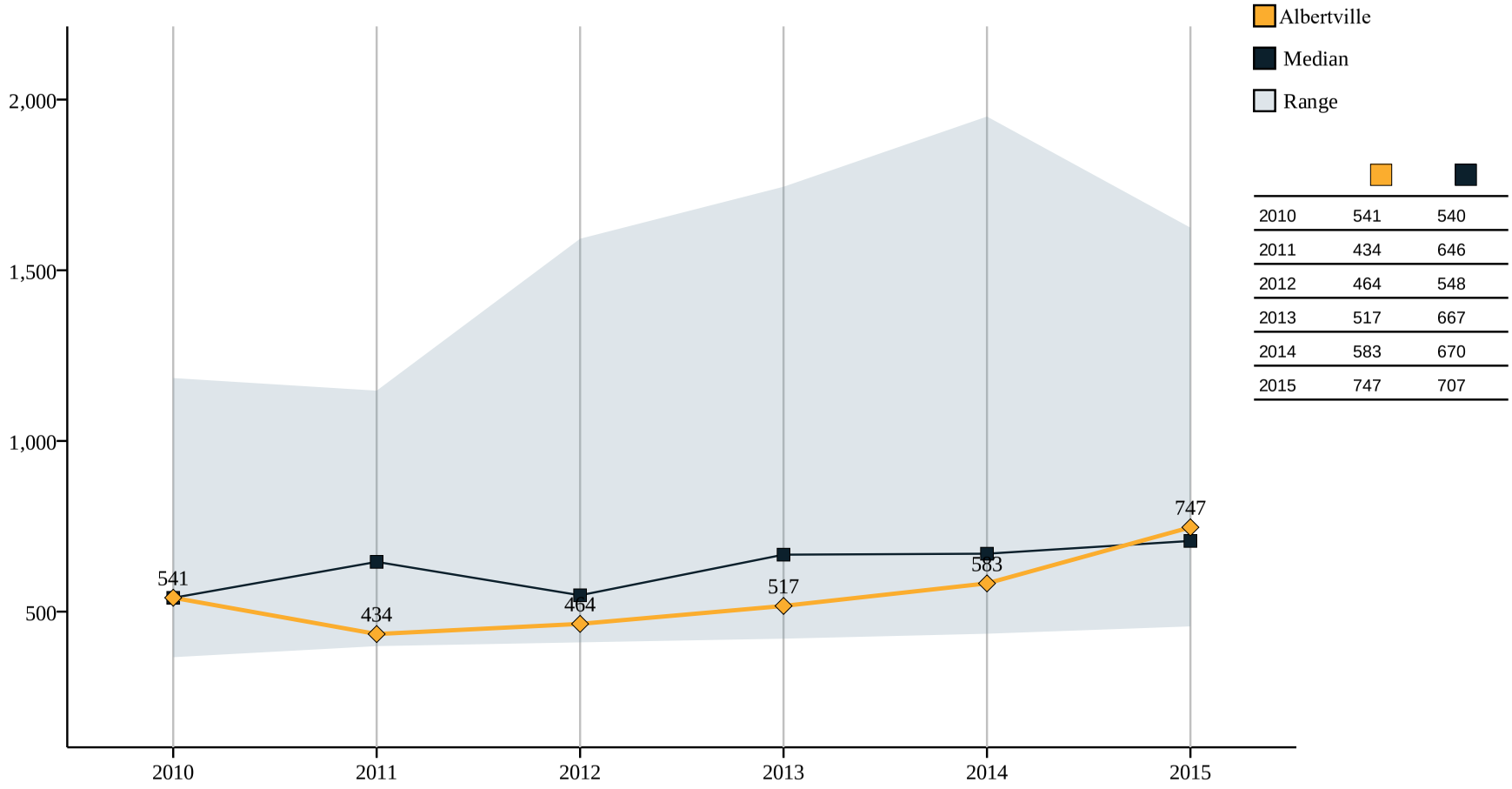
2010	459	733
2011	469	754
2012	503	848
2013	510	881
2014	536	913
2015	544	966

Revenue Sources Per Capita: Total Grants



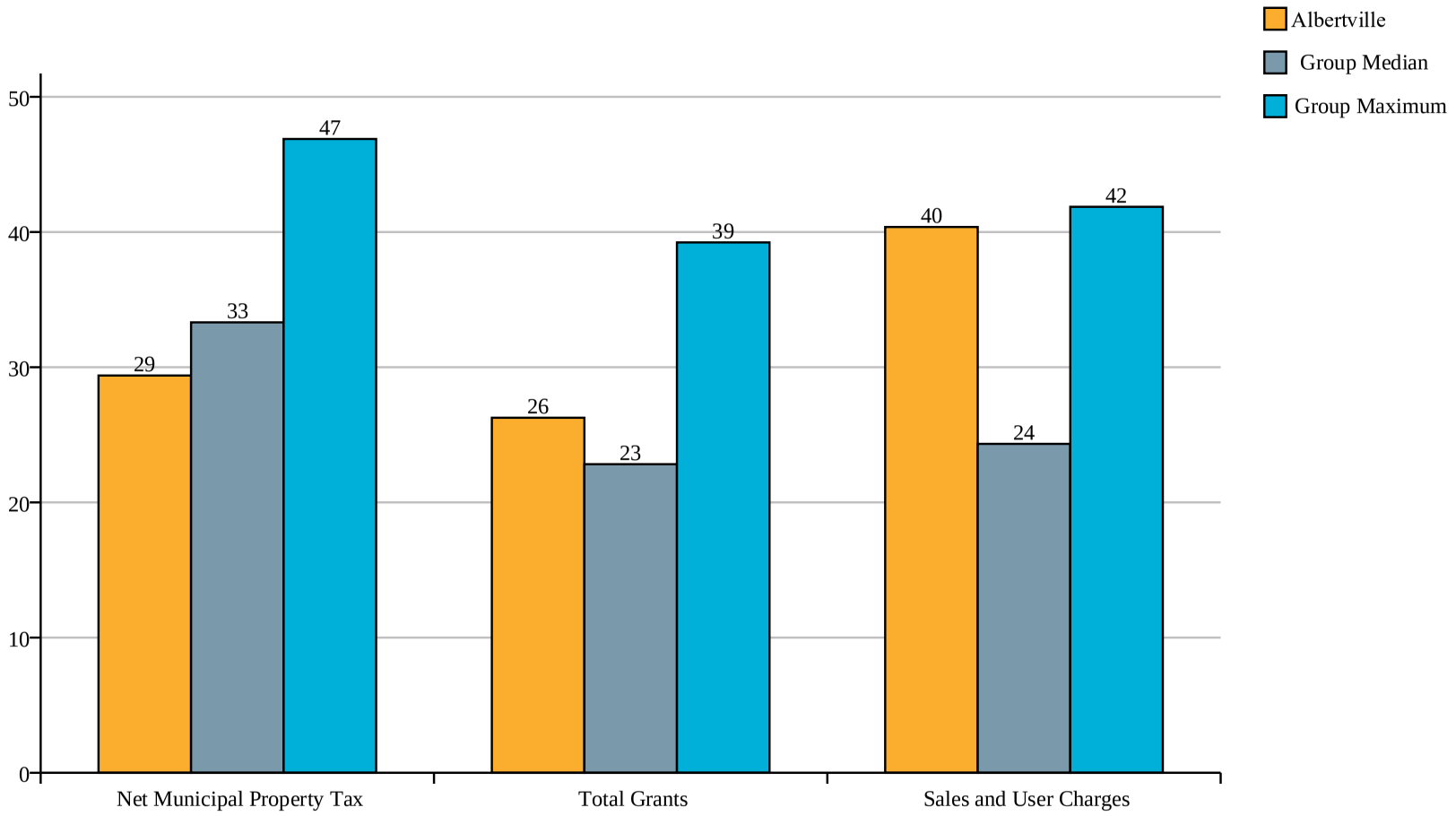
2010	694	795
2011	487	580
2012	469	531
2013	521	665
2014	459	459
2015	486	548

Revenue Sources Per Capita: Sales and User Charges



2010	541	540
2011	434	646
2012	464	548
2013	517	667
2014	583	670
2015	747	707

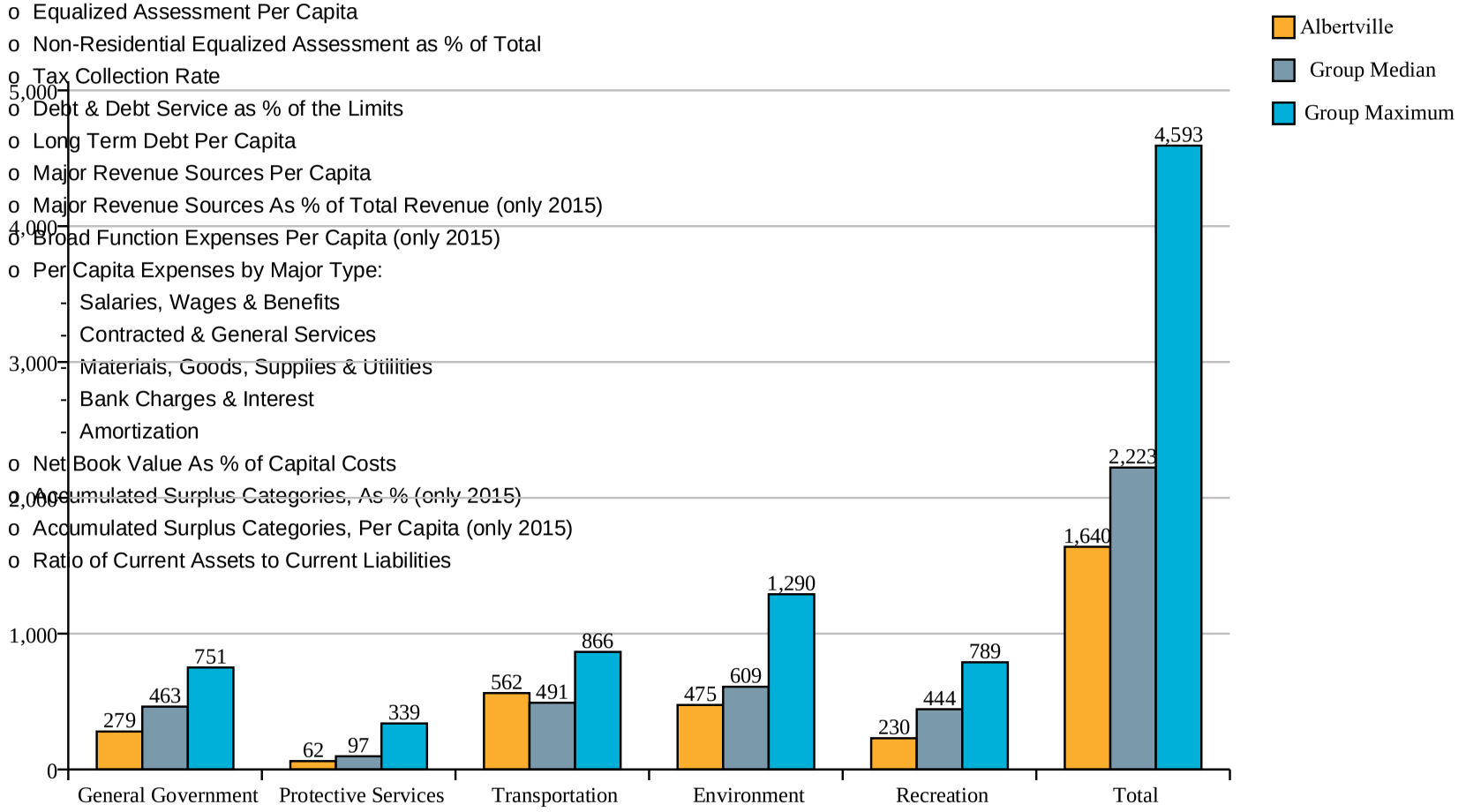
Major Revenue Sources As % of Total Revenue, 2015



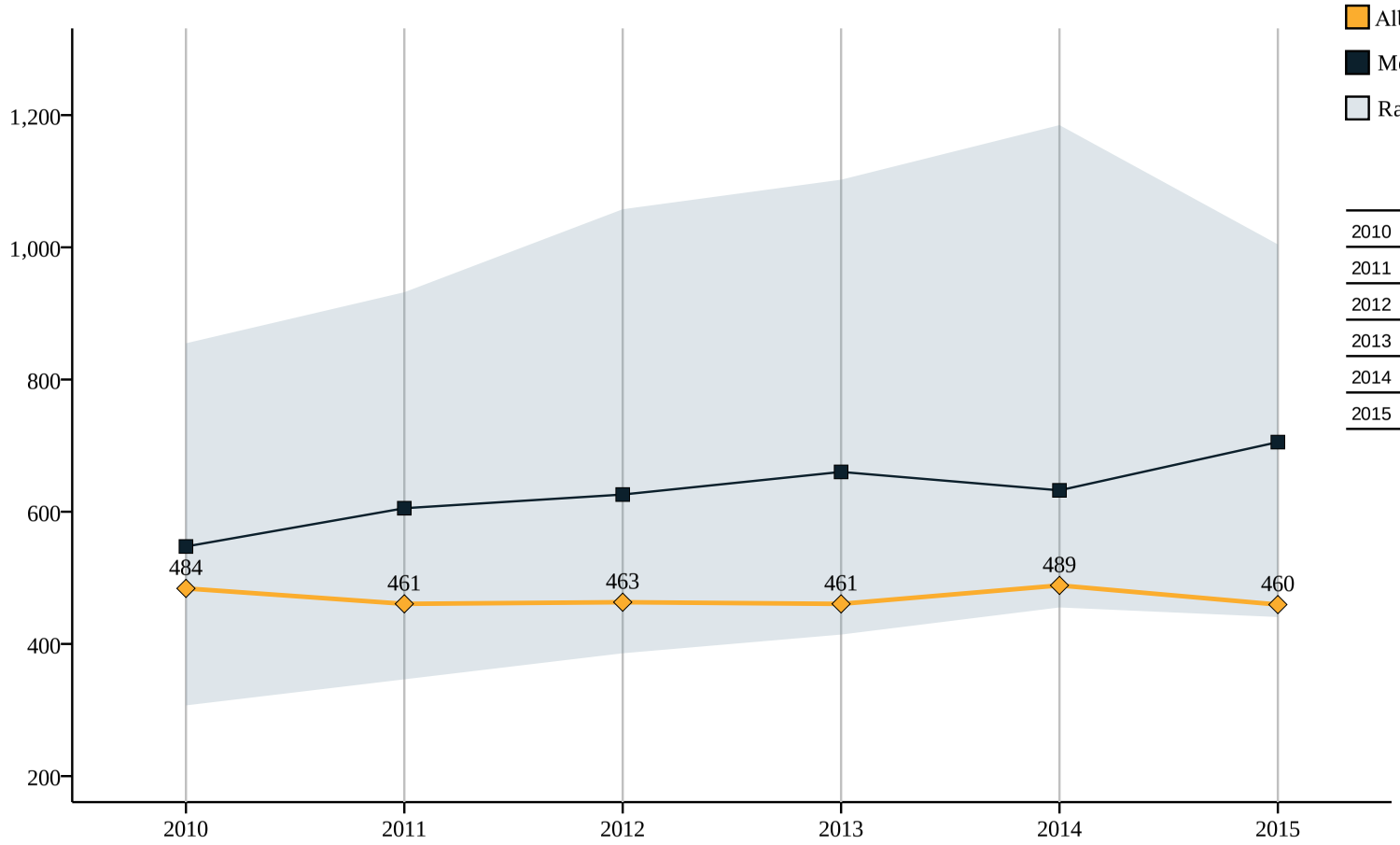
Major Expenditures Per Capita by Broad Function, 2015

Financial Indicator Graphs Include:

- Equalized Tax Rates - Municipal/Residential/Non-Residential
- Equalized Assessment Per Capita
- Non-Residential Equalized Assessment as % of Total
- Tax Collection Rate
- Debt & Debt Service as % of the Limits
- Long Term Debt Per Capita
- Major Revenue Sources Per Capita
- Major Revenue Sources As % of Total Revenue (only 2015)
- Broad Function Expenses Per Capita (only 2015)
- Per Capita Expenses by Major Type:
  - Salaries, Wages & Benefits
  - Contracted & General Services
  - Materials, Goods, Supplies & Utilities
  - Bank Charges & Interest
  - Amortization
- Net Book Value As % of Capital Costs
- Accumulated Surplus Categories, As % (only 2015)
- Accumulated Surplus Categories, Per Capita (only 2015)
- Ratio of Current Assets to Current Liabilities

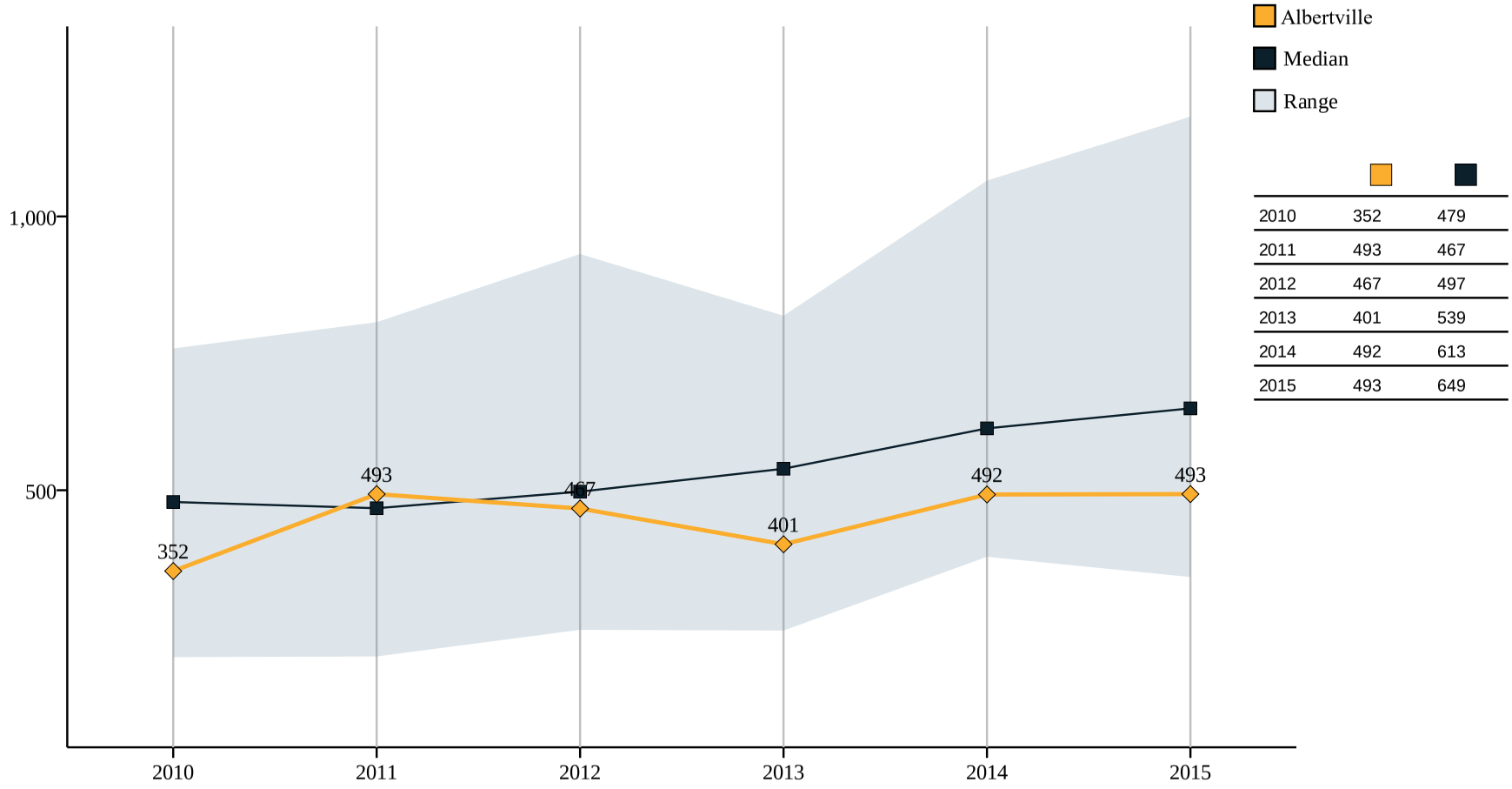


Major Expenditures Per Capita by Type: Salaries, Wages and Benefits



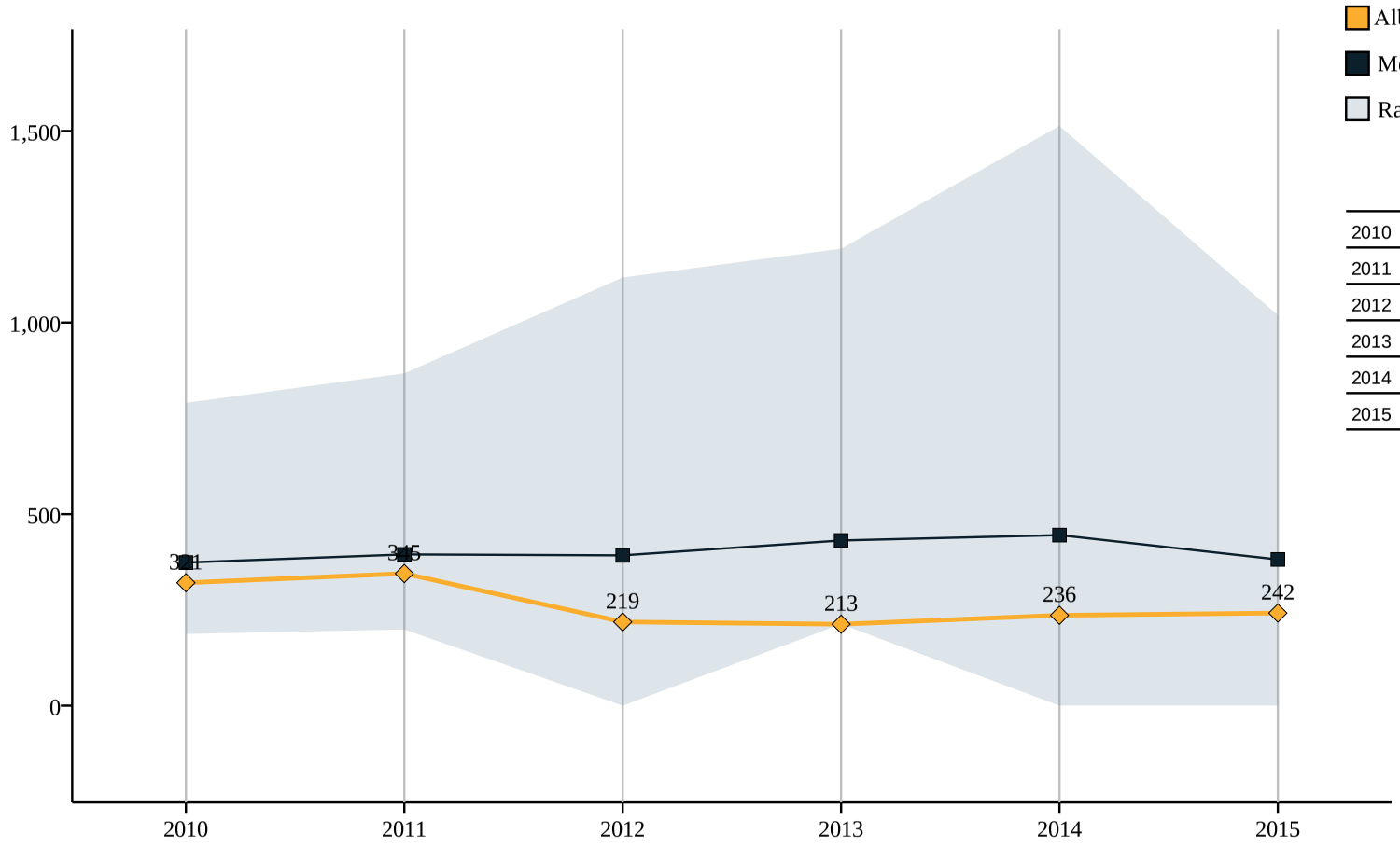
2010	484	547
2011	461	605
2012	463	626
2013	461	660
2014	489	632
2015	460	705

Major Expenditures Per Capita by Type: Contracted and General Services



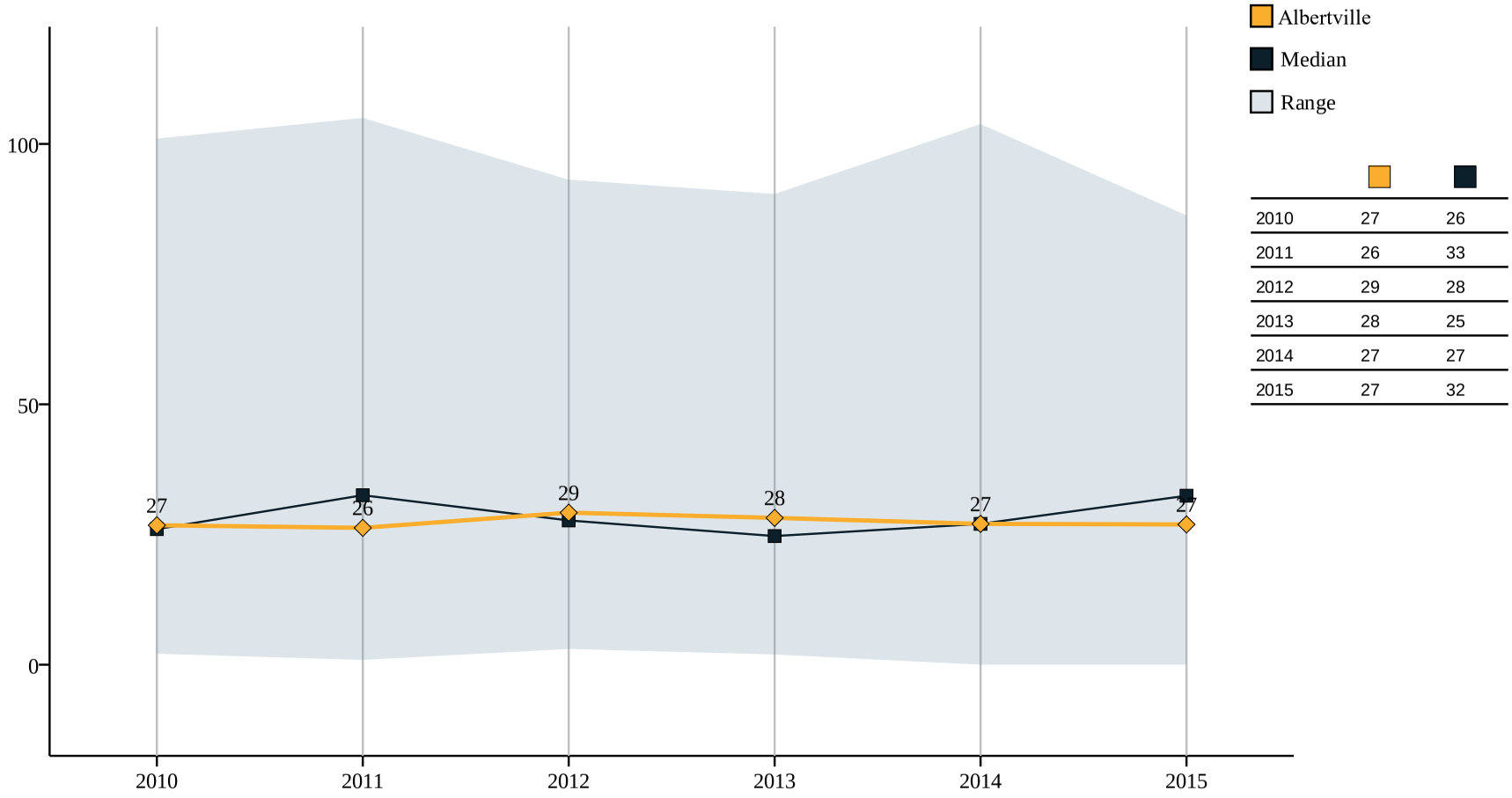
2010	352	479
2011	493	467
2012	467	497
2013	401	539
2014	492	613
2015	493	649

Major Expenditures Per Capita by Type: Materials, Goods, Supplies and Utilities



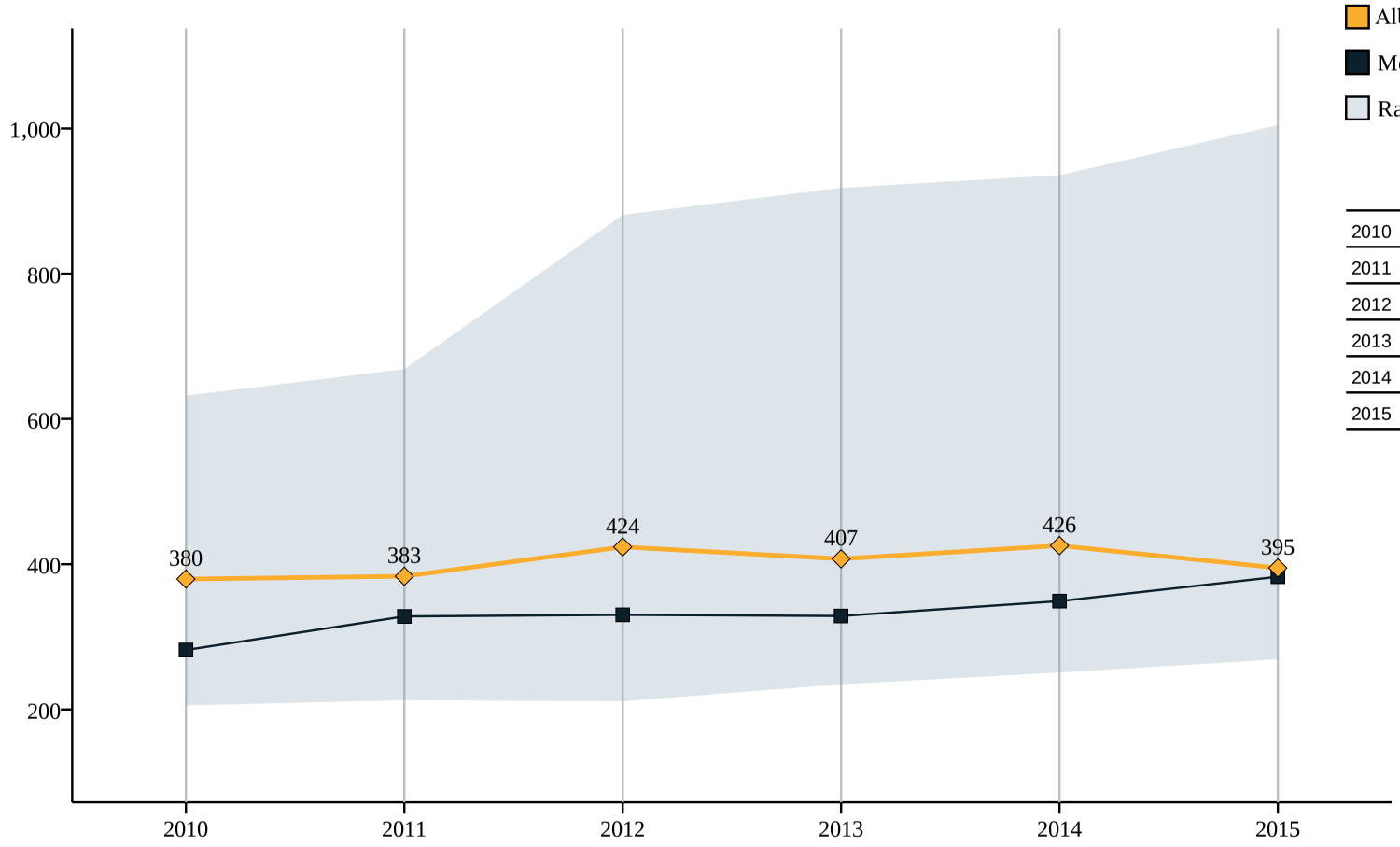
2010	321	374
2011	345	395
2012	219	392
2013	213	431
2014	236	445
2015	242	382

Major Expenditures Per Capita by Type: Interest and Banking



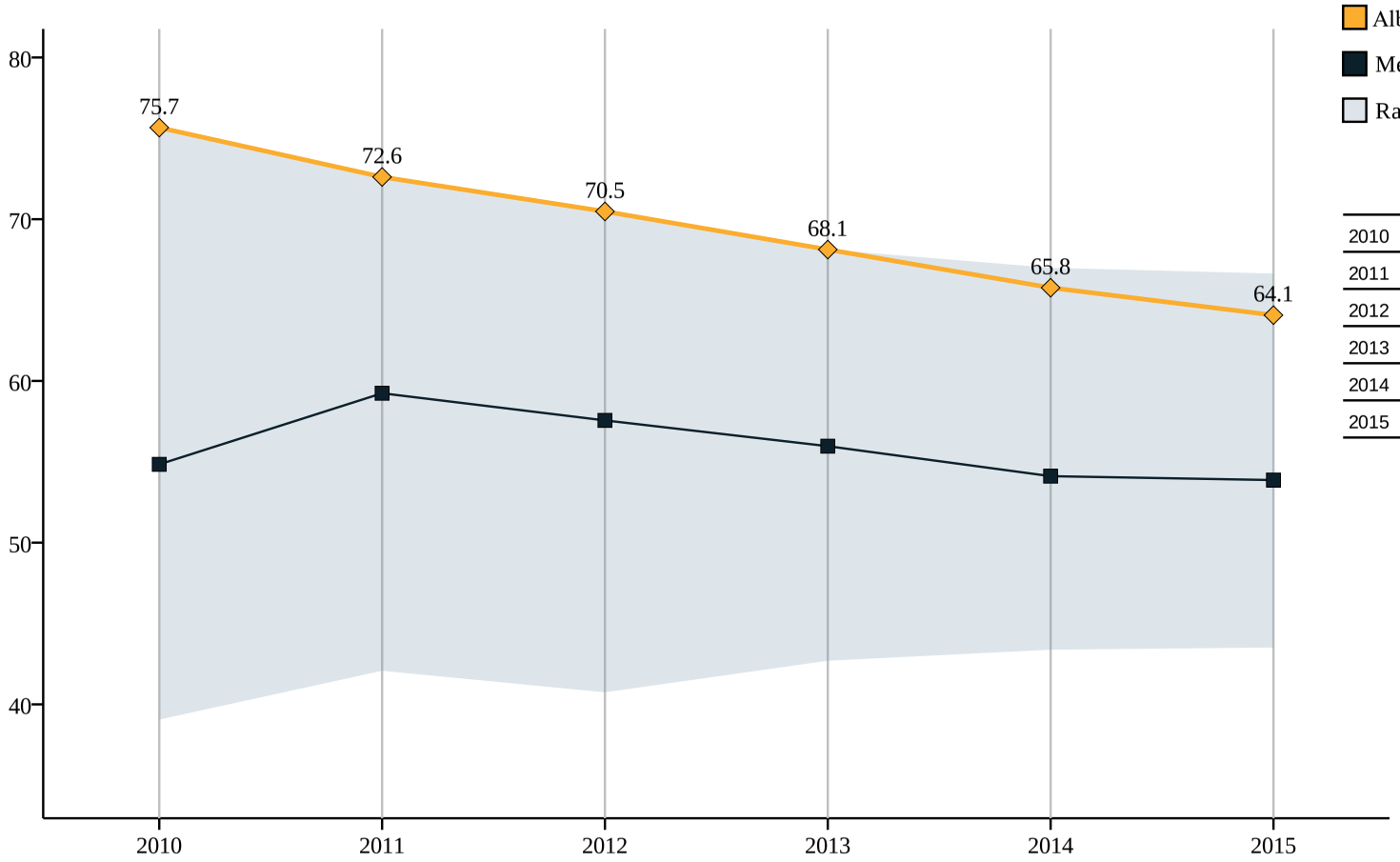
2010	27	26
2011	26	33
2012	29	28
2013	28	25
2014	27	27
2015	27	32

Major Expenditures Per Capita by Type: Amortization of Tangible Capital Assets



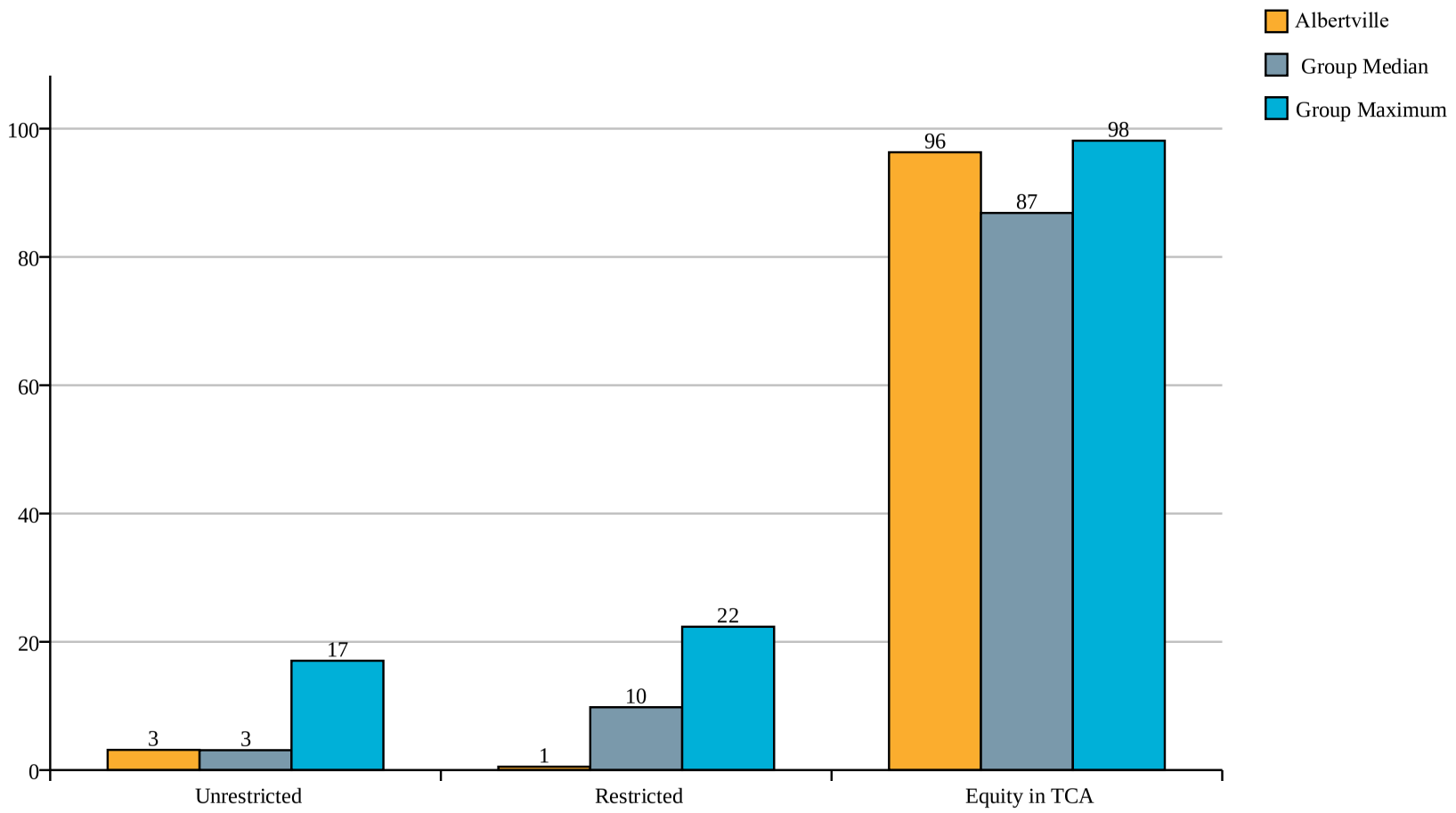
2010	380	282
2011	383	328
2012	424	330
2013	407	329
2014	426	349
2015	395	383

Net Book Value as % of Total Capital Property Costs

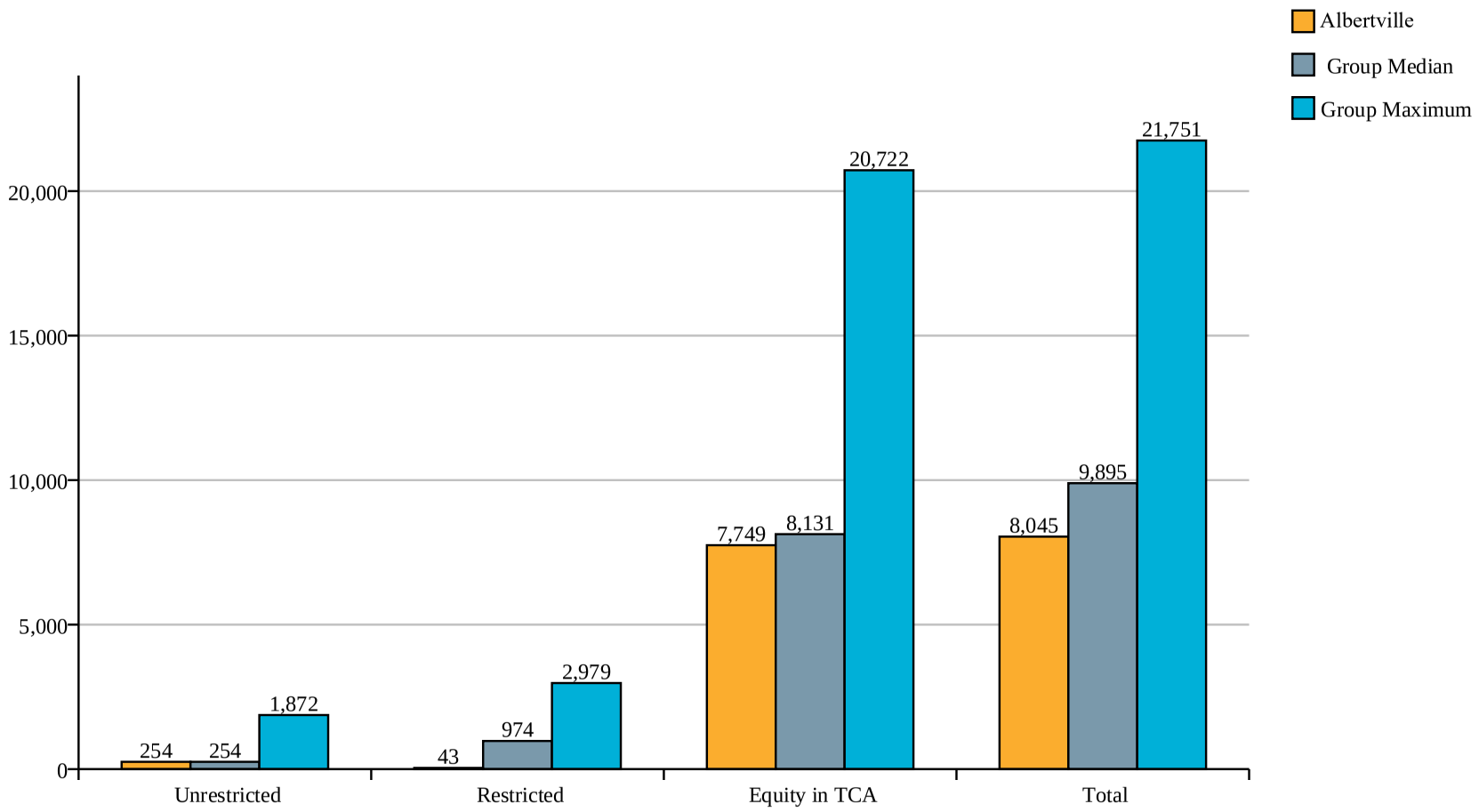


2010	75.7%	54.8%
2011	72.6%	59.2%
2012	70.5%	57.6%
2013	68.1%	56.0%
2014	65.8%	54.1%
2015	64.1%	53.9%

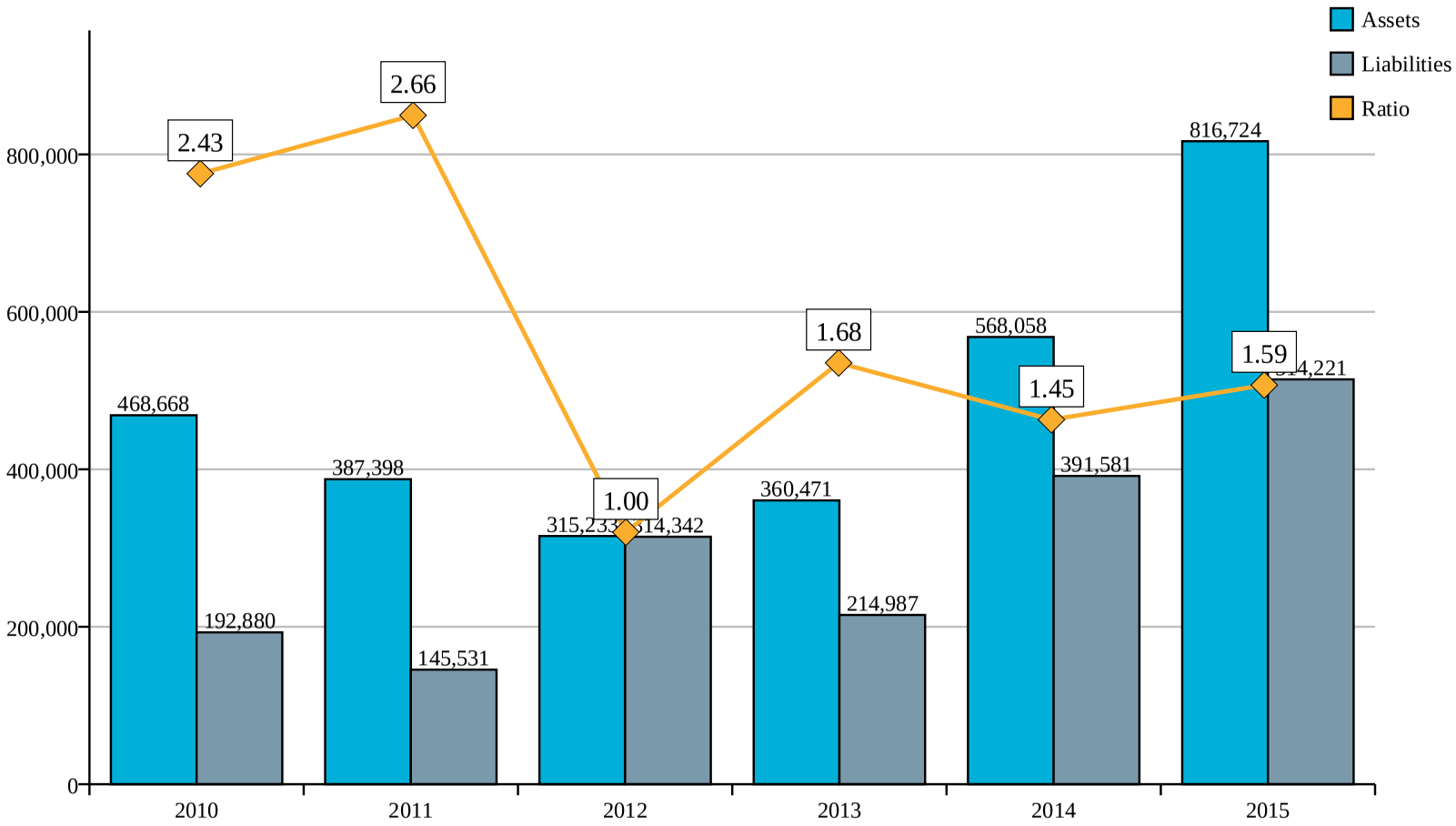
Accumulated Surplus Categories as % of Total, 2015



Accumulated Surplus Per Capita, 2015

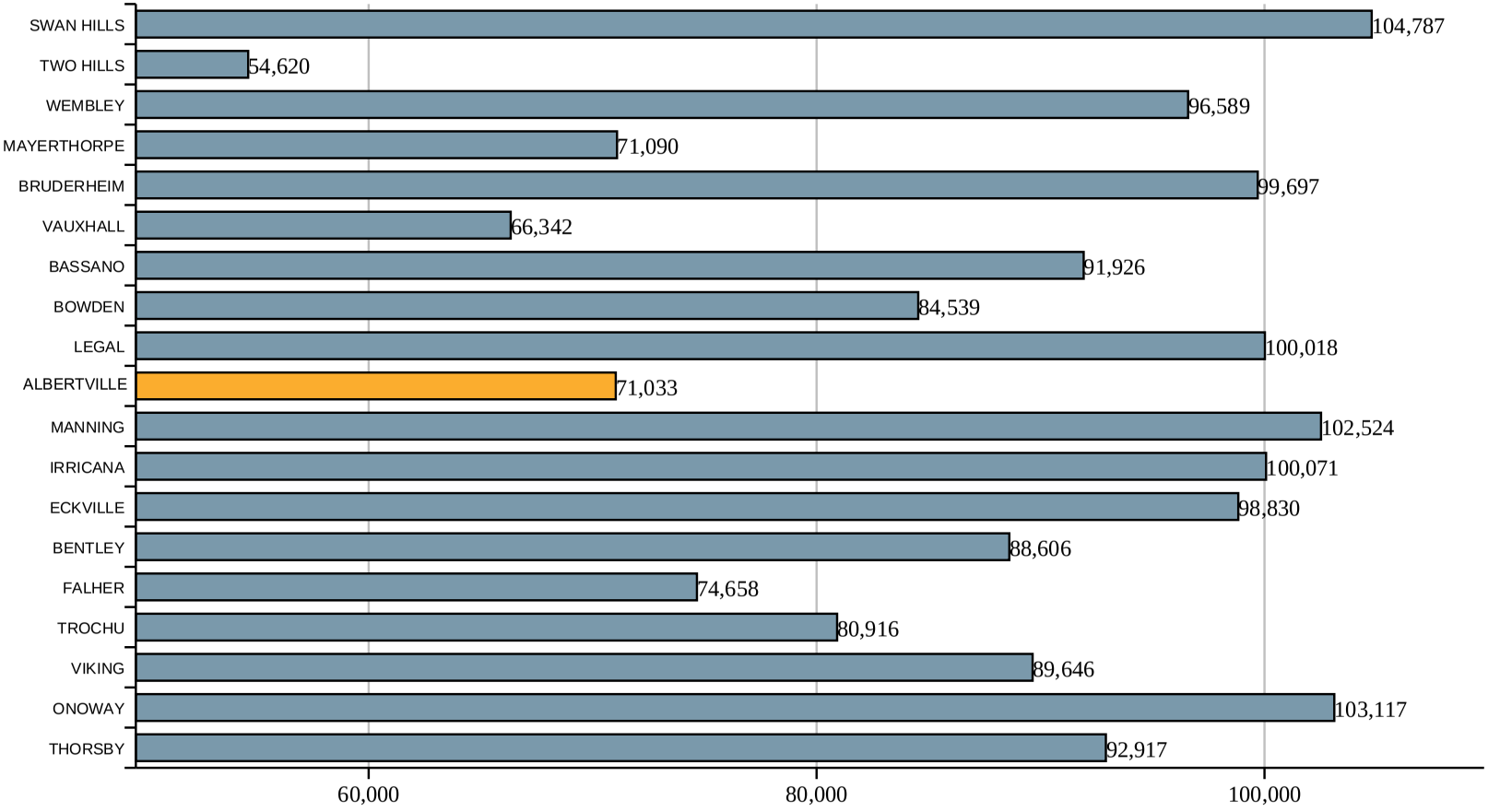


Ratio of Current Assets to Liabilities

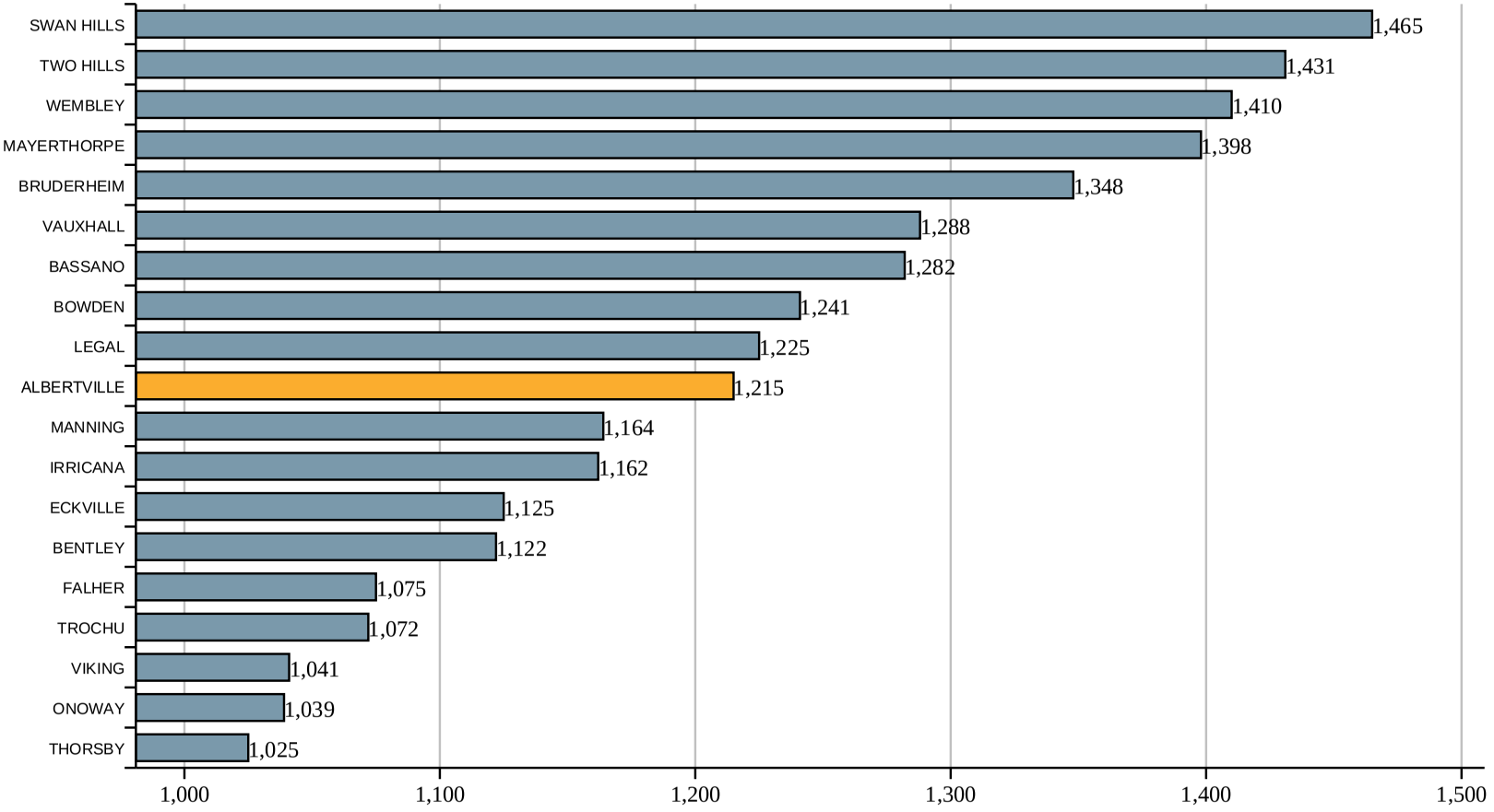


Note: The current ratio calculation measures ability to meet short-term obligations with existing liquid assets. "Current Assets" are those which are liquid in nature (cash or an asset which can be easily converted to cash). Inventory is excluded from the calculation. "Current Liabilities" are generally obligations coming due within the next fiscal year. The ratio is shown in the centre of the column. A ratio greater than one indicates the degree to which current assets exceed current liabilities; a ratio smaller

Equalized Assessment Per Capita



Group Population



1.15 Sample Commercial Building Valuation Report

Commercial Building Valuation Report

Property Express - Canada

Policy : AUMA 2253 (2012) 11/10/2012

INSURED

Effective Date:
Expiration Date:
Cost as of: 09/2012

BUILDING Public Works Repair Shop #2

Location Adjustments

Climatic Region:	3 - Cold
High Wind Region:	1 - Minor Damage
Seismic Zone:	1 - Minor Damage, Distant Earthquakes

SECTION 1

SUPERSTRUCTURE

Occupancy:	100% Municipal Service Garage	Story Height:	18 ft.
Construction Type:	100% Non-Combustible (ISO 3)	Number of Stories:	1
Gross Floor Area:	8,400 sq. ft.	Gross Perimeter:	440 ft.
Construction Quality:	2 - Average		

Adjustments

User Adjustment Factor:	1.30 Location Factor		
Hillside Construction:	Degree of Slope: Level	Site Accessibility:	Good
	Site Position: Unknown	Soil Condition:	Good

Fees

Architect Fees:	7% is included
Profit and Overhead:	25% is included

SUMMARY OF COSTS	User Specified	System Generated	Reconstruction	Exclusion
SUPERSTRUCTURE				
Site Preparation			6,586	
Foundations			264,854	
Foundation Wall				
Interior Foundations				
Slab On Ground				

MS/B costs include labor and material, normal profit and overhead as of date of report. Costs represent general estimates which are not to be considered a detailed quantity survey. These costs include generalities and assumptions that are common to the types of structures represented in the software.

Commercial Building Valuation Report

Property Express - Canada

Policy : AUMA 2253 (2012) 11/10/2012

Exterior			503,014
Exterior Wall		30% Wall Openings	
Exterior Wall	100% Siding, Metal or Other on Girts		
Structural Floor			
Roof			
Material		100% Steel	
Pitch	100% Low (2:12 to 6:12 pitch)		
Interior			39,136
Floor Finish	100% Concrete Sealer or Toppin		
Ceiling Finish	100% None		
Partitions			
Length	120 ft.		
Structure	100% Studs, Girts		
Finish	33% Plywood/Hardwood/Fiberboard		
Mechanicals			265,429
Heating	100% Gas, Oil, or Electric Suspended Unit Heater		
Cooling	100% None		
Fire Protection			
Plumbing	5 Total Fixtures		
Electrical		100% Average	
Built-ins			54,651
TOTAL RC SECTION 1			**$1,133,672**

TOTAL RC BUILDING	**Public Works Repair Shop #2**	**$1,133,672**

	Reconstruction	sq. ft.	$/sq. ft.
VALUATION SUBTOTAL (All Buildings)	$1,133,672	8,400	$134.96
VALUATION ADDITIONS			
Misc. Additional Features			
Cost to add a sprinkler system	98,797		
Debris Removal	113,000		
Total Valuation Additions	$227,862		
VALUATION GRAND TOTAL	**$1,361,534**	8,400	**$162.09**

MS/B costs include labor and material, normal profit and overhead as of date of report. Costs represent general estimates which are not to be considered a detailed quantity survey. These costs include generalities and assumptions that are common to the types of structures represented in the software.

Commercial Building Valuation Report

Property Express - Canada

Policy : AUMA 2253 (2012) 11/10/2012

INSURED

Effective Date:
Expiration Date
Cost as of: 09/2012

AGENT / AGENCY

BUILDING: SUPERSTRUCTURE		**Reconstruction**	**sq. ft.**	**$/sq. ft.**
Section 1:	100% Municipal Service Garage	$1,133,672	8,400	$134.96

BUILDING: SUBSTRUCTURE		**Reconstruction**	**sq. ft.**	**$/sq. ft.**
SECTION 1:		$0	0	$0.00

Section Totals		**Reconstruction**	**sq. ft.**	**$/sq. ft.**
SECTION 1:	100% Municipal Service Garage	$1,133,672	8,400	$134.96

BUILDING TOTAL, Public Works Repair Shop #2	**$1,133,672**	**8,400**	**$134.96**
BUILDING INSURANCE SUMMARY			
100% Co-insurance Requirement	**$1,133,672**		
Total Valuation Additions	$227,862		
VALUATION GRAND TOTAL	**$1,361,534**	**8,400**	**$162.09**

MS/B costs include labor and material, normal profit and overhead as of date of report. Costs represent general estimates which are not to be considered a detailed quantity survey. These costs include generalities and assumptions that are common to the types of structures represented in the software.

Commercial Building Valuation Report

Property Express - Canada

Policy : AUMA 2253 (2012) 11/10/2012

INSURED

Effective Date:
Expiration Date:
Cost as of: 09/2012

AGENT / AGENCY

Equipment: BUILDING ITEM, AND SITE IMPROVEMENT BREAKDOWN

Valuation

Building Items	
Mezzanines	
(1) Minimal finish	16,065
Misc. Additional Features	
Cost to add a sprinkler system	98,797
Debris Removal	113,000
TOTAL:	**$227,862**

MSB costs include labour and material, normal profit and overhead as of date of report. Costs represent general estimates which are not to be considered a detailed quantity survey. These costs include generalities and assumptions that are common to the types of structures represented in the software. Les coûts MSB comprennent la main d'oeuvre, les matériaux, la marge d'entreprise et les frais généraux à la date du rapport. Les coûts représentent une estimation générale qui n'est pas considérée comme une liste détaillée basée sur une enquête. Ces coûts comprennent les généralités et hypothèses communes aux types de structures représentées dan BVS.

MS/B costs include labor and material, normal profit and overhead as of date of report. Costs represent general estimates which are not to be considered a detailed quantity survey. These costs include generalities and assumptions that are common to the types of structures represented in the software.

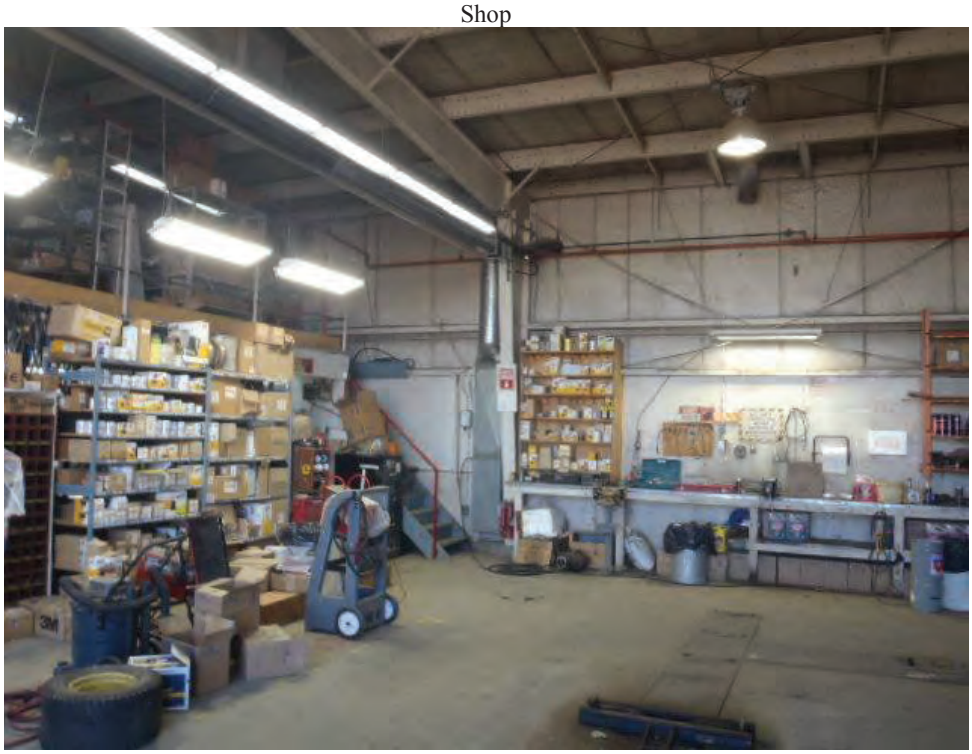
REPORT PHOTOS

Front

Front

REPORT PHOTOS

Rear
Shop

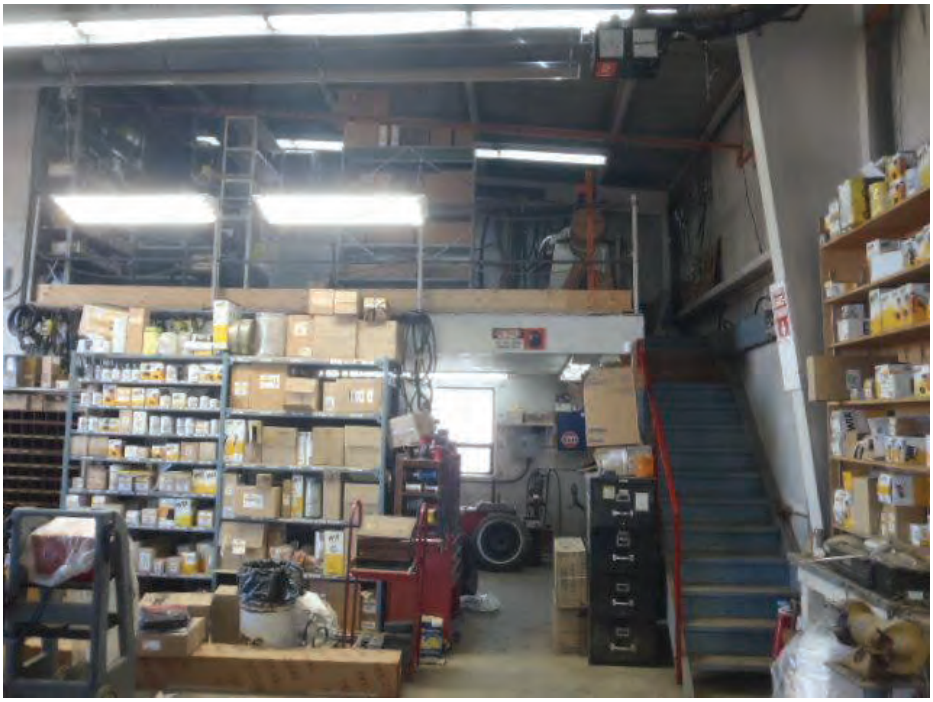


REPORT PHOTOS

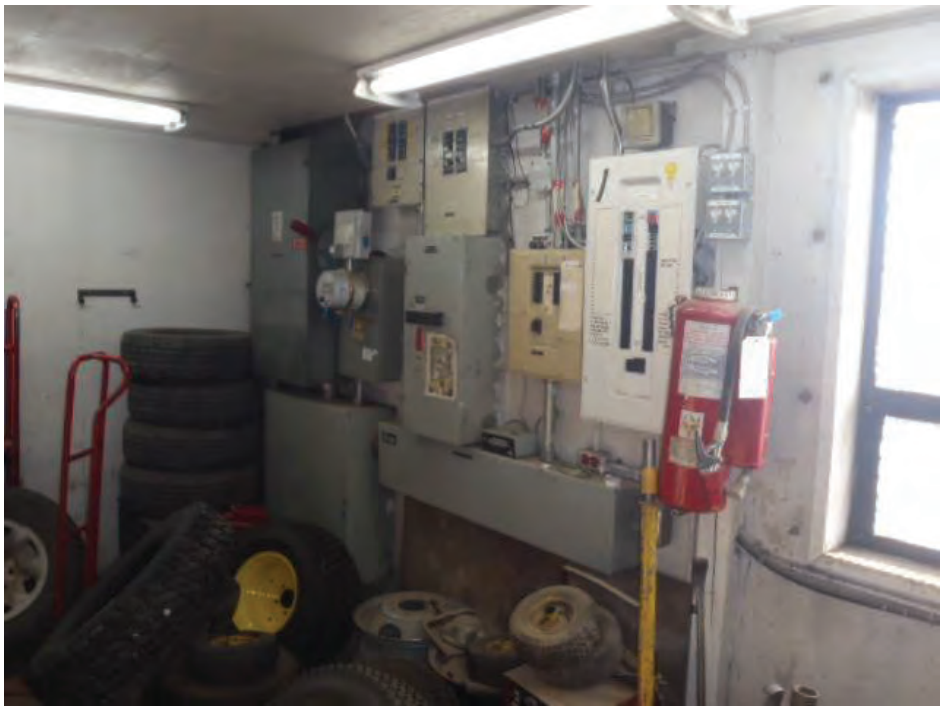
Shop
Hoist

REPORT PHOTOS

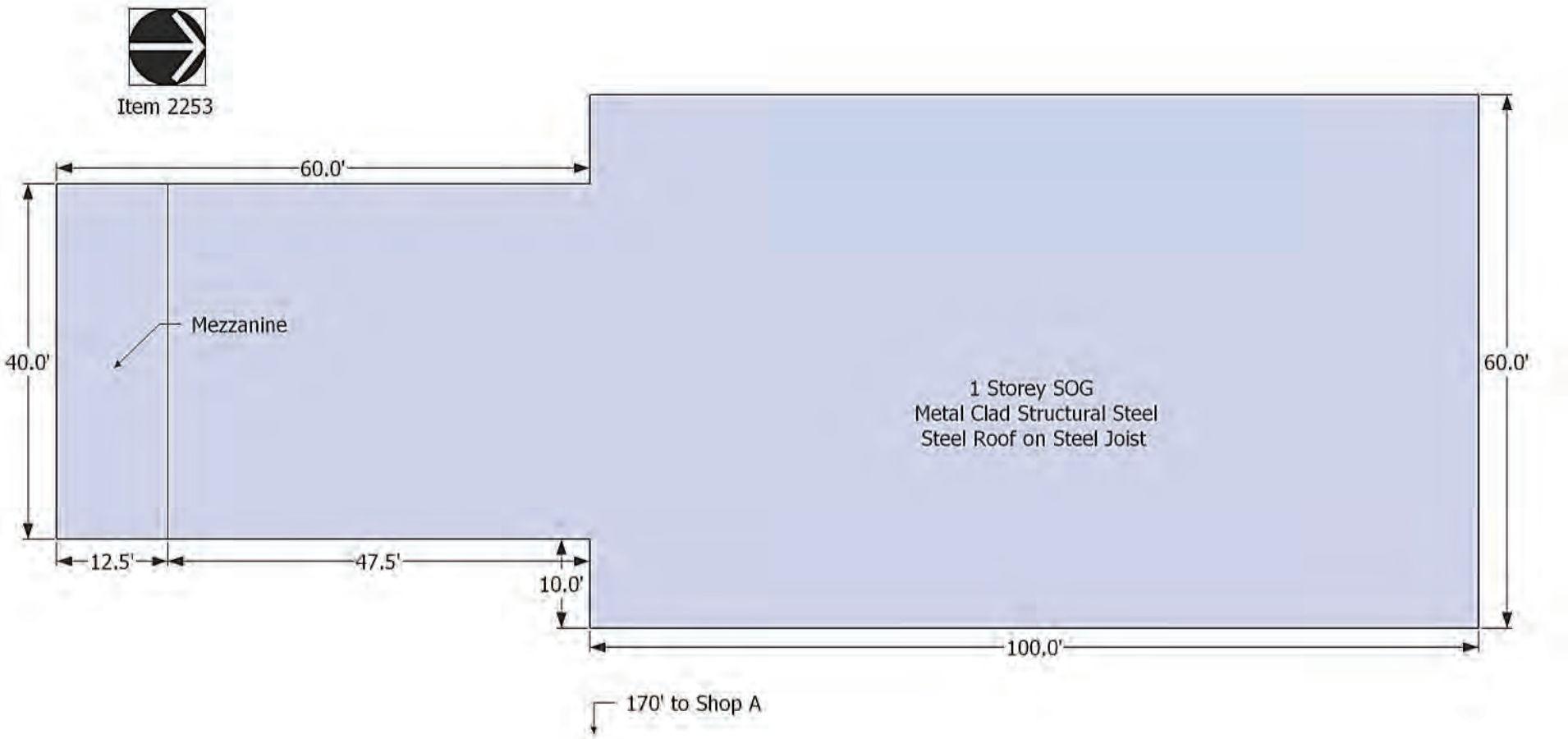
Shop
Mezzanine



REPORT PHOTOS



Electrical


Item 2253
60.0'
40.0'
Mezzanine
1 Storey SOG
Metal Clad Structural Steel
Steel Roof on Steel Joist
60.0'
12.5'
47.5'
10.0'
100.0'
170' to Shop A

1.16 International Infrastructure Management Manual (IIMM) Pg 2/56 – Types of Data Manual

Parameters	Description	Recommended Fields
Asset Identifiers, Location and Descriptors	Data used to identify, describe and locate the asset. Will also define assets in terms of position in asset hierarchy.	Asset No., Parent Asset, Description, Location, Asset Group, Asset Class, Asset Ownership.
Detailed Technical Data	Data which will help individualize this asset from similar assets.	Dependent on the asset groups involved and the needs of staff.
Valuation Data	Data that allows the organization to value the assets, record and track depreciation, and get an understanding of the actual lives of the assets.	Year Constructed, Estimated Remaining Life, Year End, Construction Cost, Replacement Value, Written Down Value, Method of Valuation, Annual Depreciation Rate, Annual Depreciation Charge, Depreciation to Date.
Contract Management	Data that related to contract management (if applicable)	Asset related contractual information, Vendor information, Third Party Agreements, Contract administration information.
Maintenance Data	Data that identifies the work to be completed and work completed against an asset. Unplanned maintenance activity is recorded against asset including cause and costs. Planned maintenance procedures adopted for critical assets.	Region, Asset No., Owner of Asset, Site Name, Activity Type, Work Order Created, Time Created, Task Title, Task Details, Generated by, Assigned to, Date on Site, Time on Site, Date Completed, Time Completed, Work Order Status, Priority, Work Details, Frequency of Work, Scheduled Period, Next Due Date.
Condition Data	Data used to prepare decay curves, revision of effective life and current valuation.	Condition, Condition Category, Condition-based Remaining Life, Condition-based Written Down Value, Date Assessed, Assessor.
Predictive Data	Data used to prepare decay curves, revision of effective life and current valuation.	Decay Curve Type, Future Year 1, 2..., Future Remaining Life 1,2..., Predicted Future Condition Year 1,2...
Performance Data	Data recording demand and capacity performance...Regulatory reporting requirements may be included. Asset Performance data as required for reporting of agreed service levels and performance measures.	Target Performance Indicators, Year of Assessment, Actual Performance Indicators, Delivery of Service Levels, Demand Management Objectives.
Risk Data	Data used to analyze an asset's failure and determine the risk to organizations if the asset were to fail. Data may include information about asset resilience, contingency and continuity planning.	Failure Mode, Probability of Failure, Consequence of Failure 1,2...etc., Criticality Rating, Cost of Consequence of Failure 1,2...etc., Risk Cost, Date of Analysis, Assessor, Risk Strategy
Lifecycle Data	Data used to plan future asset strategies, and determine future costs associated with operations, maintenance, creation, renewal, disposal of assets. The current cost of any strategy should also be determined.	Work Description, Cost of Works, Work Code, Year to Start, Date to Start, Resources to Use, Work Period, Safety Criticality Rating, Function Criticality Rating, Cost Criticality Rating, Discount Factor.
Optimized Lifecycle Data	Data used in the optimization analysis of works taking into account the following factors: risk, maintenance, operations, life extension, age and condition of asset, asset decay, treatment options and cost.	Treatment, Treatment Type, Cost of Treatment, Frequency of Treatment, Asset Life, Replacement Cost, Planned Maintenance Costs before and after Treatment, Planned Maintenance Costs before and after Treatment, Operations Cost before and after Treatment, Consequence of Failure Costs, Risk Costs before and after Treatment.

(IIMM) Pg 2/56 – Types of Data
1.17 Municipal Affairs Getting Started Toolkit -

Asset Inventory Field Descriptions

	Field	Description	Example	Notes
What do we own?	Asset Codes	The code, or class for the type of asset.	Engineered structures - xxx Water - W	Your TCA register may use asset classes, so you may choose to use the same ones. You may also choose to assign different codes based on the department structures or budget alignment. You may have a sub-class as well.
	Asset ID	Unique identifier for the asset	xxx.xxxxxxx.xx	May be automatically generated by software or assigned based on a system.
	Asset Extension	An extension on the unique identifier	.xx	You may use an extension when retiring and replacing an asset with a new asset.
Where is it?	Location	The physical location of the asset. This may be coordinates of the asset, or may be described as two points (from x to y) for linear assets.	From 1st Ave & Main St. to 2nd Ave. & Main St.	May represent this information in GIS. Not all of these descriptors are required - choose what makes sense for you.
	Municipal Address	The municipal address of where the asset is fixed or stored.	123 Main Street	
	Legal Description	Legal description of the land where the asset is fixed or stored.	Lot 16, Block 4, Plan 804 3167	

What are the attributes?	Material	The material the asset is made from	PVC	For assets made of more than one material, record the predominant material or separate the asset into component parts (e.g. base and surface for a road)
	Quantity	The amount of the asset (length, size, volume, etc.)	108	If these numbers are not easily accessible from GIS or CAD, you may want to start by estimating them and improve the accuracy in the future.
	Quantity units	The units the quantity is measured in	m	
	Year Installed	The year the asset was installed or acquired	1987	This information should be available through your TCA register.
	Year Renewed	The year of major renovation or renewal that will extend the life of the asset.	2006	Put N/A for assets that have not had renewals conducted.
	Age	The current year minus the date of installation	28	
	Make	The manufacturer of the asset	Ford	Required for equipment and vehicles only
	Model	Model of the asset	F150	Required for equipment and vehicles only

What will it cost to replace?	Historic cost	The cost of the asset when it was acquired.	$15,000	Include cost of design. For contributed assets, use estimated cost based on unit rates. This information is optional, and not required for asset management.
	Replacement unit cost	Cost per unit to replace, in the same unit as the quantity.	$325	Can be based on recent projects or on publicized rates. May not be relevant for all asset types.
	Replacement value	Total quantity multiplied by the replacement unit cost.	$35,100	Unit cost x quantity
What condition is it in?	Physical condition rating	A rating of the physical condition of the asset	May be Failed/Poor/ Fair/Good, or may be a specific number based on assessment.	For all condition ratings, use a system based on the data that you have or can easily collect. Refer to "*Asset Management Condition Grading Standards*" by the Saskatchewan Ministry of Municipal Affairs for a concise guide on standards you may consider using.
	Functional condition rating	A rating of whether the asset is functioning as intended.		
	Demand condition rating	A rating of whether the asset is meeting the required demand.		
How long will it last?	Expected service life	Theoretical service life of the asset	50	
	Remaining service life	Estimated number of years until the asset fails	40	This may be based on the expected service life and the age, or based on actual renewal, performance and condition data.

	Remaining service life basis	How service life was estimated	Expected life/ actual condition	
Source of information	Sources	List of sources of information	List all relevant sources of information	
	Accuracy	Notes about the accuracy of information	Rating of the accuracy of information, highlighting areas that need to be improved.	

Asset Inventory Field Descriptions (Pg 6-9)
1.18 Financial – Capital vs Operations Budget Items

Sample Guide to Distinguishing Capital Budget items from Operating Budget Items		
Facility	Capital Improvement	Operations and Maintenance
Road	Street paving Alley resurfacing Physical alteration of street capacity or design	Paving repair, even though rideability may improve Sealcoating and other maintenance
Sidewalks	Sidewalk replacement, new sidewalks, sidewalk intersections	Routine repair / patching
Sanitary and Storm Sewer	Replacement (e.g. aged pipe, capacity improvement, etc.) New construction for servicing of new development Major repairs (e.g. lining, pipe bursting, etc.)	Cleaning for manholes and catch basins Regular pipe flushing and CCTV inspection
Watermains	Replacement (e.g. aged pipe, capacity improvement, etc.) New construction for servicing of new development	Pipe clearing (e.g. swabbing and hydrant flushing) Minor repair (e.g. water breaks)
Water Facilities	Major remodeling and structural alterations to improve space utilization or capacity Major replacement or upgrading of design of major building components (e.g. roof replacement, major heating system improvements) Energy related physical improvement programs New construction	Preventative maintenance repairs that do not significantly upgrade the structure or increase its previously estimated useful life (e.g. minor roof repair)

1.19 A Guide to the Amortization of Tangible Capital Assets

Guide to the Amortization of Tangible Capital Assets

Local Government Infrastructure and Finance Division

May 2008

BRITISH COLUMBIA
The Best Place on Earth

MINISTRY OF COMMUNITY SERVICES: AMORTIZATION OF TANGIBLE CAPITAL ASSETS

Ministry of Community Services
Amortization of Tangible Capital Assets

Part 1: Introduction and Considerations

A) Overview: Purpose and Provincial Role

Purpose

The new accounting standard brought into effect by the Public Sector Accounting Board (PSAB) 3150 presents a major challenge to local governments throughout British Columbia. There are three major steps for implementing PSAB 3150:

1. Inventory;
2. Valuation; and
3. Amortization.

This document is intended to provide guidance on step 3, the amortization of local government tangible capital assets. Before valuation and amortization can be determined, it is necessary to establish the useful life of each tangible capital asset. The attached tables set out suggested useful lives for a wide range of assets. They are based on extensive research from a range of sources regarding the useful lives of tangible capital assets. The first part of this document outlines some key considerations in determining amortization rates. Should you have any questions about this document please contact your financial analyst.

Provincial Role

The province's role is to provide guidance to local governments with respect to PSAB 3150. The guidance provided will allow for provincial goals to be met. The provincial goals are as follows:

- Consistency between local governments for the purposes of Local Government Data Entry (LGDE) reporting;
- Support for local governments throughout the implementation of PSAB 3150, particularly for amortization; and
- Maintain a role consistent with the principles of the *Community Charter*, which recognizes local governments as an autonomous, responsible and accountable order of government within their jurisdictions.

Consultations

- The Ministry has consulted with a number of local government stakeholders in order to ensure the information presented is as accurate as possible. In addition, Ministry of Community Services finance staff have been working with Ministry of Community Services engineering staff on compiling the following information.

B) LGDE Reporting and Asset Categorization

The Province utilizes seven asset classes for the purposes of LGDE reporting. These seven asset classes are fairly standard and have worked well to this point. For that reason, this document makes use of these categories for the purposes of asset categorization. The following asset categories are used for LGDE reporting:

1. Land;
2. Buildings;
3. Furniture, Equipment, Technology and Motor Vehicles;
4. Roads, Highways and Bridges;
5. Water Infrastructure;
6. Sewer Infrastructure; and
7. Drainage Infrastructure.

C) Method of Amortization

There is significant leeway for approaching Amortization, as outlined by PSAB 3150. Section 22 of PSAB 3150 gives the following guidelines for amortization:

> *The cost, less any residual value, of a tangible capital asset with a limited life should be amortized over its useful life in a rational and systematic manner appropriate to its nature and use by the government.*

Accordingly, there are several amortization methods available for use, including:

1. Straight line
2. Declining balance; and
3. Units of use

Although each method has its merits, this note is focused on straight line amortization. A number of useful lives for tangible capital assets are provided. Where possible, the Ministry is suggesting the use of straight line amortization, due primarily to ease of application.

D) Determining the Useful Life of an Asset

As per the recently released PSAB *Guide to Accounting for and Reporting for Tangible Capital Assets*, there is a range of considerations when determining the useful life of an asset, including:

- Expected future usage;
- Effects of technological obsolescence;
- Expected wear and tear from use or the passage of time;
- The maintenance program;
- Geological conditions;
- Capacity versus actual usage;
- Studies of similar items retired;
- Changes in demand for services; and
- Condition of existing comparable items.

As much as possible, these considerations have been factored into the useful lives presented in the tables which follow. There may be differences for the useful lives of tangible capital assets in the regions across British Columbia. However, it was not possible to tailor useful lives to

meet the exact needs of every local government, due to variance in the range of factors that impact useful life. It is the provincial belief that the useful lives of tangible capital assets are reasonably consistent throughout the province. Accordingly, only one expected useful life is provided for each tangible capital asset.

E) Asset Management

Asset management can be defined as an integrated approach involving planning, engineering and finance to effectively manage existing and new infrastructure in a sustainable manner to maximize benefits, reduce risk and provide satisfactory levels of service to a community in an environmentally and ecologically responsible manner. As such, asset management is a process that involves accountants, local government administrators/managers, engineering and other related staff. The implementation of PSAB 3150 is a critical step to future management of infrastructure investment.

System Capacity

There is the possibility that the useful life of an asset used for amortization purposes may not represent the lifespan of an asset due to system capacity issues (such as population growth). The useful lives presented in Part 2 are based on the physical useful life of an asset and do not consider the future system capacity needs of a local government. However, planning for future capacity is important for local government asset management.

F) Capitalization Thresholds and Asset Aggregation

Capitalization Threshold

The capitalization threshold can have a great impact on the number of items that get capitalized. This is particularly important for broad categories of assets where many smaller items may be included, such as the asset category of furniture, equipment, technology and motor vehicles. The Province expects that local governments will establish capitalization thresholds that reflect their needs for capitalization.

Aggregation

The aggregation of assets involves the grouping of assets and is important for determining capitalization. In many cases the local government may wish to aggregate their capital assets. There are two major ways to go about this:

1. Grouping the same asset together. This is used primarily for linear assets. For example it may be desirable to count road by Km of road.
2. Grouping similar assets together. For example, it may be desirable to group all the assets for a sewage treatment plant, such as the disinfection system and the filters, under a singular category, called ‘sewage treatment plant’.

G) Considerations

Owning vs. Leasing

The method of amortization can be impacted by how local governments have acquired a tangible capital asset. As such, local governments could:

- Own the asset; or
- Lease the asset, either through an:
  - Operating lease (where the local government will not own the asset at the end of the lease)
  - Capital lease (where the local government will own the asset at the end of the lease).

Note: Operating leases are not amortized but are expensed each year, whereas capital leases should be amortized over the life of the asset.

Residual Value/Salvage Value

Residual value is the value the local government expects to recover at the end of the useful life of an asset. This is particularly relevant for large and high value assets such as buildings. The residual value of an asset is deducted from the initial valuation of the asset, prior to the amortization amount being calculated (as outlined by PS 3150.27).

Maintenance vs. Betterments

Some activities are part of the regular upkeep of an asset and do not contribute to the extension of its useful life (Maintenance). However, some activities extend the useful life of the asset (Betterments). Therefore, if an activity extends the useful life of a building, it should be amortized over the remaining life of the building. Please include this information as a note disclosure.

Part 2: Useful Lives

The aim of this section is to provide local governments in British Columbia with estimates for the useful life of their tangible capital assets. Local governments should consult with engineering personnel and consult with their auditors on appropriate useful lives. The Ministry of Community Services suggests that the useful lives presented below are appropriate for use by those local governments without the resources for consultation with professional engineering personnel. The assets are categorized along the same lines as for LGDE reporting:

1. Land;
2. Buildings;
3. Furniture, Equipment, Technology and Motor Vehicles;
4. Roads, Highways and Bridges;
5. Water Infrastructure;
6. Sewer Infrastructure; and
7. Drainage Infrastructure.

Where there are asset category specific considerations, they are provided before the table of useful life values.

1) Land

Land is not amortized and the value of land is separate from the value of the other assets on the land, such as buildings.

1) Useful Lives of Land		
Asset	***Useful Life***	***Comments***
Land		
Land	Not amortized	Land should be valued at historical cost, when available
Land Improvements		
Athletic Field	20	
Bleachers-Wooden, Aluminium and Other	15	This does not include bleachers found in a stadium, as they are part of the useful life of the stadium
Courts-Outdoor	25	Such as a basketball court or a tennis court
Golf Course-All Related Infrastructure	20	
Lighting-Outdoor	20	Street lights covered in Asset class #4
Parks	Not amortized	Paved trails and related structures are amortized separately
Running Track	20	If material
Sprinkler System-Outdoor	20	
Swimming Pools-Outdoor	20	
Tennis Courts-Outdoor	20	

2) Buildings

Buildings in British Columbia should meet the standards established by the British Columbia Building Code. As such, it is assumed that there is relative consistency across the province in the useful life of building infrastructure.

2) Buildings		
Asset	***Useful Life in Years***	***Comments***
Buildings		
Permanent Buildings-Brick, Stone or Cement	50	These are building made of brick, stone or cement. They include all buildings of this type, such as recreation centres, administrative buildings, shops, etc.
Permanent Buildings-Log, Frame and Other	40	Includes wood frame and metal frame
Buildings-No Foundation	20	Buildings with no foundation below ground, such as some greenhouses
Temporary/Portable Structures	20	
Operational Lease	Is not capitalized	Annual cost is shown as a current year expense over the lifespan of the lease
Capital Lease	Must be capitalized	The cost of the lease can be capitalized over the life of the asset
Leasehold Improvements	Based on the time span of the lease	Lease terms may vary
Other Structures		For specialty structures not listed please use engineering advice on the useful life of the TCA
Arena and Stadiums	50	
Fences	15	If material
Parking Structures-Concrete	50	This does not include open parking lots. This item is mainly parkades
Retaining Walls	20	If material
Fixtures		Fixtures are items necessary to make a building liveable/useable
Building Fixtures	20	This includes, HVAC systems, Carpet, Elevators, Plumbing, Lighting Fixtures, Electric Wiring, Cooling Equipment, etc. Aggregating fixtures ensures that local governments do not go into an unnecessary level of detail for this category.

3) Furniture, Equipment, Technology and Motor Vehicles

3) Useful Lives of Furniture, Equipment, Technology and Motor Vehicles		
Asset	***Useful Life in Years***	***Comments***
Furniture		
Furniture	10	Includes all types of office furniture
Equipment		
Air Conditioning Equipment-Portable	8	This is for removable air conditioning units only
Athletic Equipment	10	Suggest aggregation for items in this category
AV Equipment	7	
Books and Multi-Media Materials	5	If material
Communications Equipment	10	This includes switchboards
Construction Equipment-Light	10	This is equipment for small scale construction and/or maintenance
Construction Equipment-Heavy	15	This is equipment for larger scale construction and/or maintenance
Custodial Equipment	15	
Fire Department Equipment	12	
First Aid Equipment	7	First aid and medical equipment material enough to be capitalized, including defibrillator
Fitness Equipment	10	
Generator	20	
Grounds and Gardening Equipment	15	
Law Enforcement Equipment	12	
Playground Equipment	15	
Scales-Landfill	15	From OMBI Study
Stage and Auditorium Equipment	20	
Technology		
Technology-IT		
Computer Hardware	5	
Computer Software-Purchased	5	
Computer Software-Developed in House	5	
Photocopy Machines	5	
Printers	5	
Projectors	5	

Technology-Energy		Please note: This section is still under development
Ground Source Heat Loops (Geothermal)	50	
Ground Source Heat Pump (Geothermal)	10	
Solar Hot Water System	20	
Motor Vehicles		
Ambulances	10	
Buses	10	For transporting 12 or more people
Ferries and Boats	25	
Fire Trucks	15	
Forklifts	10	
Vehicles-Light GTW <4,500 Kg	6	Includes police vehicles
Vehicles-Medium 4,500> GTW <9,000 Kg	8	Includes police vehicles
Vehicles-Heavy GTW >9,000 Kg	10	Includes police vehicles

4) Roads, Highways and Bridges

Geographical Location/Environmental Impact
Roads are significantly influenced by geography and climate. This is due in large part to the climatic variations from region to region within British Columbia.

Temperature may reduce the useful life of a road.

- It is the freeze-thaw cycle that damages pavement.
- Not only does temperature impact useful life, but chemicals and other material used to treat the road in the event of ice can reduce the useful life of a road as well.
- The amount of rainfall can impact the useful life of a road, particularly for gravel or dirt roads.

Heavy Truck Traffic
The amount of traffic on the road impacts its useful life. More specifically, it is the amount of truck traffic that is important, as cars have less impact on the useful life of pavement. Some studies have shown that a heavily loaded truck can do 10,000 times the damage of a regular car.

- It is not the overall weight of the truck, but the weight on each axel that damages pavement
- Therefore, roads with high truck traffic have shorter useful lives.

Road Thickness
The thickness of a road is built in accordance with its anticipated use. The following provides typical thickness levels for different type of road:

Object	Typical Thickness (mm)
Sidewalks	100-125mm
Driveways	100-125mm
Parking Lots	100-125mm
Streets/Access Roads	150-200mm
Secondary Highways	150-200mm
Major Highways	200-250mm
Major Freeways	Over 250mm

4) Useful Lives of Roads, Highways and Bridges		
Asset	**Useful Life in Years**	**Comments**
Roads		Includes gutters and railway crossings
Dirt	10	
Gravel	15	
Permeable Roads	TBD	This is an emerging technology, with insufficient information on useful life
Asphalt Rural Local	50	
Asphalt Rural Collector	40	
Asphalt Rural Arterial	40	
Asphalt Urban Local	40	
Asphalt Urban Collector	40	
Asphalt Urban Arterial	30	
Concrete Rural Local	75	
Concrete Rural Collector	60	
Concrete Rural Arterial	60	
Concrete Urban Local	60	
Concrete Urban Collector	60	
Concrete Urban Arterial	55	
Parking Lots		This is for open lots only (non-buildings/parkades)
Parking Lot-Asphalt	40	
Parking Lot-Brick or Stone	50	
Parking Lot-Concrete	50	
Parking Lot-Gravel	15	Same as a gravel road
Parking Meters	10	Amortize only if amount is material
Alleys		
Alleys-Asphalt	40	
Alleys-Brick or Stone	50	
Alleys-Concrete	50	
Alley-Dirt	10	
Alleys-Gravel	15	
Sidewalks		Amortize paved sidewalks only
Sidewalks-Asphalt	40	
Sidewalks-Concrete	50	
Sidewalks-Brick or Stone	50	
Bike and Jogging Path		Only paved bike and Jogging Paths should be included
Path-Asphalt	40	
Path-Brick or Stone	50	
Path-Chip Trail	10	
Path-Concrete	50	

Tunnels		
Each tunnel is Unique	Depends on the Tunnel	Engineer input is required to determine the useful life of a tunnel
Bridges		
Each Bridge is Unique	Depends on the Bridge.	Engineer input is required to determine the useful life of a tunnel
Road Signage		
Traffic Signs	15	If material
Traffic Lights	15	If material
Street Lights	20	If material
Noise Reduction Berms		No dirt berms to be included
Plastic	20	
Metal	20	

5) Water Infrastructure

Particularly for asset category #5 (Water Infrastructure), #6 (Sewage Infrastructure) and #7 (Drainage Infrastructure), the following two options are relevant. Local governments can either:

- Aggregated Approach: Elements of the asset category are pooled together under one heading, i.e. a sewage treatment plant; or
- Separated Approach: Treat elements of the asset class as multiple components, i.e. amortize the components of a sewage treatment plant separately.

Based on the engineering management of water infrastructure assets, these assets have been grouped along the lines of:

- Water Supply Infrastructures;
- Treatment Infrastructures; and
- Distribution Infrastructures.

As the aggregated approach is particularly relevant for treatment and distribution infrastructure, aggregated useful lives for major system components in these categories have been provided.

Building Infrastructures

This section deals only with direct components of water infrastructures, such as water pumps, wells and water pipes. Therefore, the useful lives of buildings that may house water treatment should use the rates for the corresponding structure found in Section #2 (buildings).

Key Factor for Pipes: Type of Material

The key factor in estimating the useful life of many components, such as pipes, is the material used. The depth of pipe and the Ph level of the soil are also considerations; however the type of material used is the key variable in determining useful life. Since soil characteristics vary across the Province, this document is limited to providing general guidance based on research.

5) Useful Lives of Water Infrastructures		
Asset	***Useful Life in Years***	***Comments***
Supply Infrastructures		
Dams-Earthen	40	Still under review, may need to use engineering estimate
Dams-Concrete	60	Still under review, may need to use engineering estimate
Manmade Lakes/Waterways	100	
Reservoirs-Concrete	50	Includes both above ground and in-ground reservoirs
Reservoirs-Other	35	Includes lined earth, wood stave and steel reservoirs
Water Towers and Tanks	35	
Wells	60	This includes the well casing
Wells-Screen for wells	25	
Treatment Infrastructure		
Aggregated Approach		
Aggregated Approach-Treatment Plant	25	This may include all components of the plant (listed in detail below) excluding the building itself
Separated Approach		
Treatment Infrastructure—Disinfection		
Chlorinating Systems	25	
UV Disinfection Systems	25	
Ozonation Disinfection	25	
Treatment Infrastructure—Water Treatment		
Aerator	15	This includes the components of an aerator (tank, compressor hose, etc.), with the exception of a blower
Blower	10	This is a component of an aerator
Clarifier	20	This component removes solids from water
Filters-Sand	25	
Filters-Membrane	15	Includes ceramic and polyurethane filters
Flocculator	20	
SCADA Software	5	
Screens-Bar and Rotary	10	
Screens-Stainless Steel	10	
Thickener	20	

Distribution Infrastructure		
Aggregated Approach		
Aggregated Approach-Waterworks distribution	50	Use this, should you wish to amortize on a system wide basis
Separated Approach		
Fire Hydrants-Steel and Ductile Iron	40	
Fittings for Pipes-Ceramic, Concrete, Plastic and Steel	20	These are for fittings for pipes
Generator	20	Typically for pumping station
Manholes	50	
Meters	5	If material and including flow meters
Pipes-Brick	60	
Pipes-Cast Iron (British Standard)	100	Pipes are considered lined, where relevant
Pipes-Cast Iron (Other Classes)	60	
Pipes-Concrete	50	Includes reinforced and non-reinforced concrete and asbestos cement
Pipes-Copper	80	
Pipes-Ductile Iron	100	
Pipes-Galvanized Steel	60	
Pipes-PVC	80	
Pipes-Steel	80	
Pipes-Vitrified Clay	50	
Pumps	20	Includes pumps for wells
Valves	40	

6) Sewage Infrastructure

Based on the engineering management of sewer infrastructure assets, these assets have been grouped along the lines of:

- Sewage Collection;
- Sewage Treatment; and
- Discharge Infrastructure.

Building Infrastructure

This section deals only with direct components of sewage infrastructures, such as pumps, wells and water pipes. Therefore, the useful lives of buildings that may house sewer treatment should use the rates for the corresponding structure found in Section #2 (buildings).

6) Useful Lives of Sewage Infrastructure		
Asset	***Useful Life***	***Comments***
Collection Structures		
Aggregated Approach		
Collection System	50	Use this approach should you wish to amortize on a system wide basis
Separated Approach		
Fittings for pipes-Ceramic, Concrete, Plastic and Steel	20	This covers all types of fittings for pipes
Meters-Including Flow Meters	5	If material
Pipes-Brick	60	
Pipes-Cast Iron (British Standard)	100	Pipes are considered lined, where relevant
Pipes-Cast Iron (Other Classes)	60	
Pipes-Concrete	50	Includes reinforced and non-reinforced concrete and asbestos cement
Pipes-Copper	80	
Pipes-Ductile Iron	100	
Pipes-Galvanized Steel	60	
Pipes-PVC	80	
Pipes-Steel	80	
Pipes-Vitrified Clay	50	
Pumps	20	
Septic Systems-on site	20	
Valves-Water Control	40	Includes ceramic, concrete, plastic, steel and others.
Valves-Chamber	40	
Wet Well	50	

Treatment Infrastructure		
Aggregated Approach		
Aggregated Approach- Filtration Treatment System	30	From OMBI pilot study
Separated Approach		
Aerators	15	
Blowers	10	
Concentrators	20	
Digesters	20	
Heat Exchangers	15	
Lagoons	50	From OMBI pilot study
Screens	10	Includes bar and rotary and stainless steel
Discharge Infrastructure		
Aggregated Approach		
Aggregated Approach-Discharge System	30	
Separated Approach		
Pump	20	Includes booster pumps
Tanks-Wastewater Storage	40	Includes CSO tanks

7) Drainage Infrastructure

7) Useful Lives of Drainage Infrastructure		
Asset	***Useful Life***	***Comments***
Culverts-Concrete	40	
Culverts-Metal	30	
Culverts-Treated Wood	30	
Storm Drain-Cast Iron	30	
Storm Drain-Concrete	40	
Storm Drain-Ditch and/or Trench	Not Capitalized	
Storm Drain-Metal Corrugated	30	
Storm Drain-Plastic	25	

Appendix A: Converting Declining Balance Rates into Useful Life

When researching the amortization of tangible capital assets, there were a small number of sources that used declining balance as a rate for amortization, most prominently the federal government's guidelines for Capital Cost Allowance (CCA). Therefore, this information needed to be converted into useful lives, in order to maintain consistency between sources. For the purposes of converting declining value into useful life, it is assumed that residual value will be 10% (although this assumption does not impact the calculation of useful life). Therefore, the formula for converting declining balance into useful life is:

- $0.1x = x(1-y)^n$
    - x = baseline value of an asset (arbitrarily set at $100)
    - y = rate of declining balance
    - n = useful life

1.20 City of Powell River – Asset Management Strategy

https://powellriver.civicweb.net/document/24122

City of Powell River

ASSET MANAGEMENT STRATEGY

Version 1.3

January 2014

Doc ID	Rev No	Date	Revision Details
AM Strategy	1	13th November 2013	First Draft
AM Strategy	1.1	22nd November 2013	Second Draft
AM Strategy	1.2	4th December 2013	Third Draft
AM Strategy	1.3	22nd January 2014	Fourth Draft

Table of Contents

Tables

Figures

1. Executive Summary

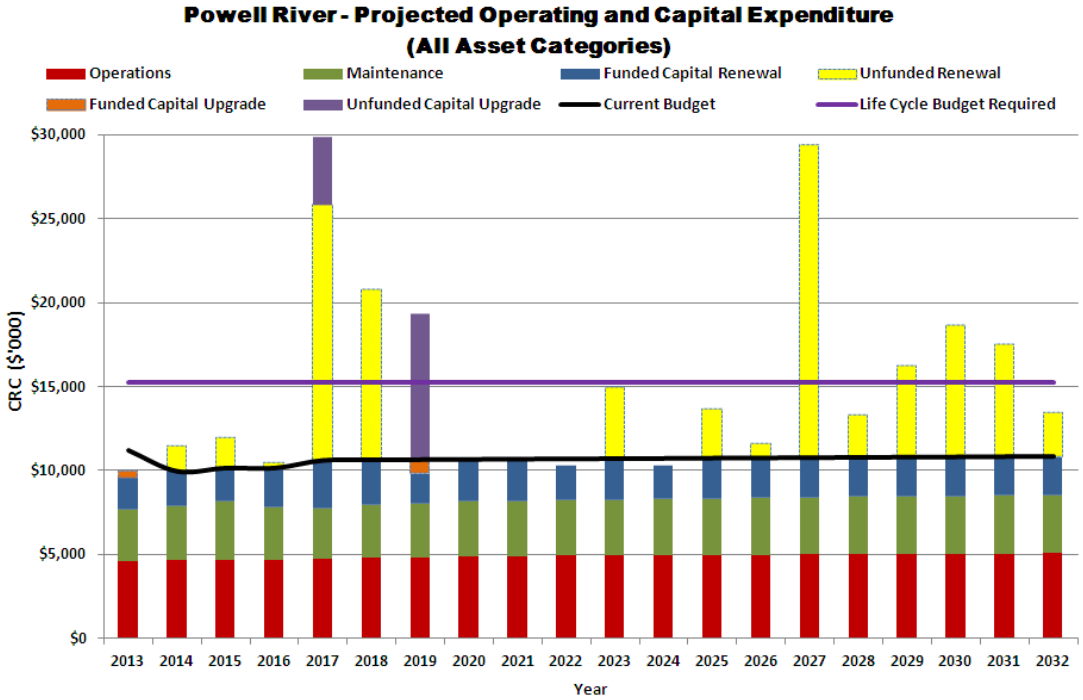
The asset management strategy has been prepared to further the objectives outlined in Council's adopted Asset Management Policy.

This asset management strategy is prepared in order to assist the City of Powell River in improving the way it delivers services from infrastructure including water supply, wastewater, stormwater, marine, buildings, roads, airports, park and site improvements, and equipment. These infrastructure assets have been separated into nine categories and have a current replacement value of $424,598,942. Land is the tenth asset category. Land does not deteriorate with age and it is assumed to have an unlimited useful life, therefore a replacement value for land is not included.

Adopting this asset management strategy will assist the City of Powell River to meet the requirements of the City's Corporate Plan, and to provide services needed by the community in a financially sustainable manner.

The strategy outlines an asset management improvement plan detailing a program of tasks to be completed and resources required to maintain a minimum 'core' level of asset management practice.

The life cycle budget required is the funding amount to optimally replace assets as their useful lives expire. The annual life cycle budget required is $15,231,028 and the current annual budget is $10,673,650. This is a shortfall of $4,557,378 ($15,231,028 less $10,673,650) on average per year. Over the life cycle, this cumulative shortfall amounts to $312,520,593.



1. Introduction

Assets deliver important services to communities. A key issue facing local governments throughout Canada is the management of aging assets in need of renewal and replacement.

Infrastructure assets such as water, wastewater, stormwater and buildings present particular challenges. Their condition and longevity can be difficult to determine. Financing needs can be large, requiring planning for large peaks and troughs in expenditure for renewing and replacing such assets. The demand for new and improved services adds to the planning and financing complexity.[1]

The creation of new assets also presents challenges in funding the ongoing operating and replacement costs necessary to provide the needed service over the assets' full life cycle.[2]

The asset management strategy enables the City to:

- show how its asset portfolio will meet the service delivery needs of its community into the future,
- achieve the City's asset management policies, and
- ensure the integration of asset management with the Corporate Plan.[3]

The goal of asset management is to ensure that services are provided:

- in the most cost effective manner,
- through the creation, acquisition, maintenance, operation, rehabilitation and disposal of assets,
- for present and future consumers.

The objective of the asset management strategy is to establish a framework to guide the planning, construction, maintenance and operation of the infrastructure essential for the City to provide services to the community.

1.1 Legislative Reform

Presently, there is not a federal, provincial or municipal legislative requirement to complete asset management planning or strategies, although this may be a requirement in the near future. The planning and implementation of strategies is in the best interests of all citizens and is therefore being adopted as a best practice management tool by municipalities across Canada.

1.2 Asset Management Planning Process

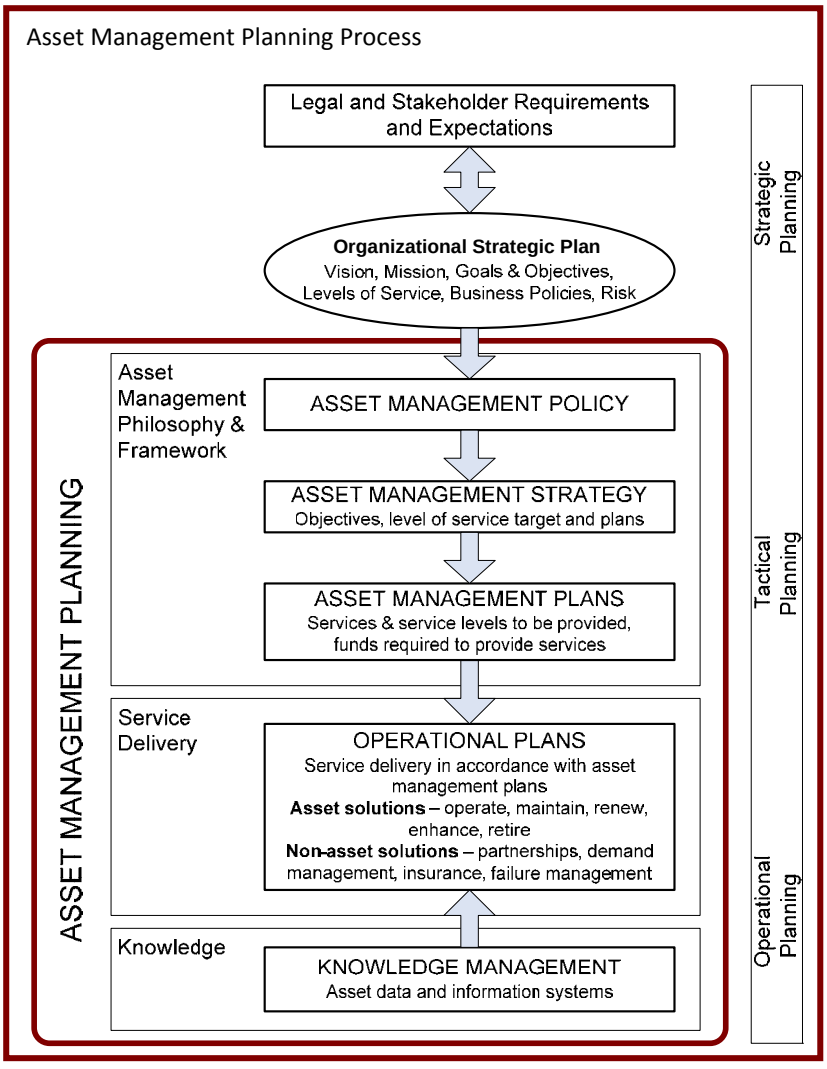
Asset management planning is a comprehensive process to ensure that assets are managed and maintained in a way that enables affordable services from infrastructure to be provided in an

---

[1] LGPMC, 2009, Framework 2 Asset Planning and Management, p 2.
[2] LGPMC, 2009, Framework 3 Financial Planning and Reporting, pp 2-3.
[3] LGPMC, 2009, Framework 2 *Asset Planning and Management*, p 4.

economically optimal way. In turn, affordable service levels can only be determined by assessing the City's financial sustainability under scenarios with different proposed service levels.

Asset management planning commences with defining stakeholder and legal requirements and needs, incorporating these needs into the organization's strategic plan, developing an asset management policy, strategy, asset management plans and operational plans, linked to a long-term financial plan with a funding plan.[4]



2. What Assets Do We Have?

The City uses infrastructure assets to provide services to the community. The range of infrastructure assets and the services provided from the assets is shown in Table 1.

[4] IPWEA, 2009, AIFMG, Quick Guide, Sec 4, p 5.

Table 1: Assets Used for Providing Services

Asset Class	Description	Services Provided
Water Supply	Reservoirs, pumps, lines, hydrants	Dependable supply of safe water
Wastewater	Treatment plants, pumps, lines, manholes	Collection and treatment of wastewater
Stormwater	Detention facilities, lines, catch basins	Conveyance of stormwater
Marine	Floats, boat launches, breakwaters	Moorage, boat launching, recreation
Buildings	Various building types and services	Various community needs
Road Network	Roads, bridges, sidewalks, curbs, lighting	Transportation of goods and services and public use
Airport Infrastructure	Apron, runways, fencing, parking	Air service for passengers and freight
Park & Site Improvements	Ball parks, paths, land improvements, etc	Sport and recreation amenities
Equipment	Vehicles, furniture, fitness equipment, servers, software, and other various equipment	Support the delivery of services to the community

North Harbour Marina

3. City's Assets and Their Management

3.1 State of the Assets

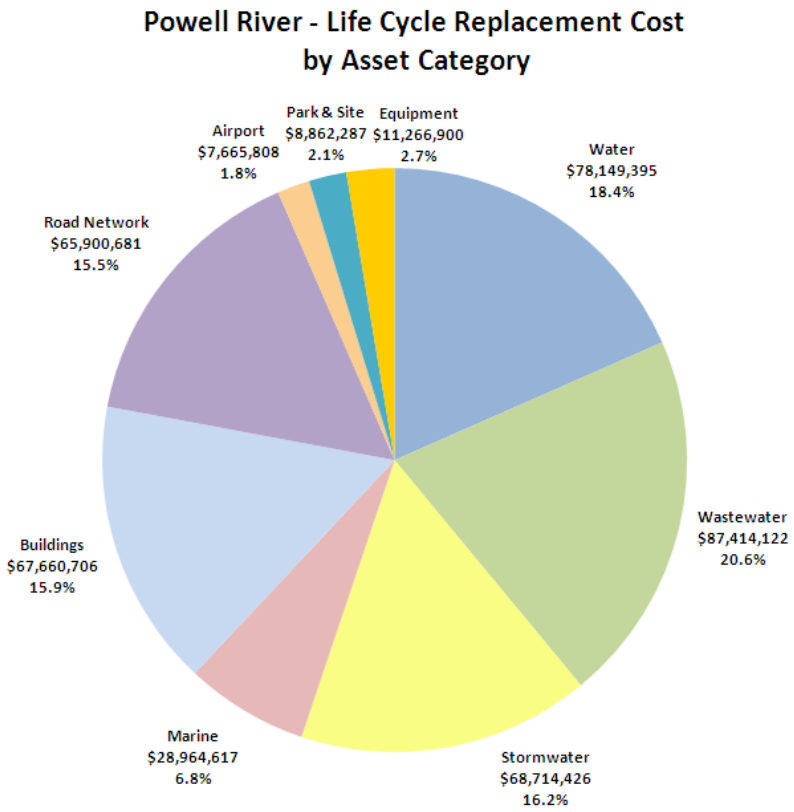
The financial status of City's assets is shown in Table 2.

Table 2: Financial Status of the Assets

Asset Class	Replacement Cost
Water Supply	$ 78,149,395
Wastewater	87,414,122
Stormwater	68,714,426
Marine	28,964,617
Buildings	67,660,706
Road Network	65,900,681
Airport Infrastructure	7,665,808
Park & Site Improvements	8,862,287
Equipment	11,266,900
Total	**$424,598,942**

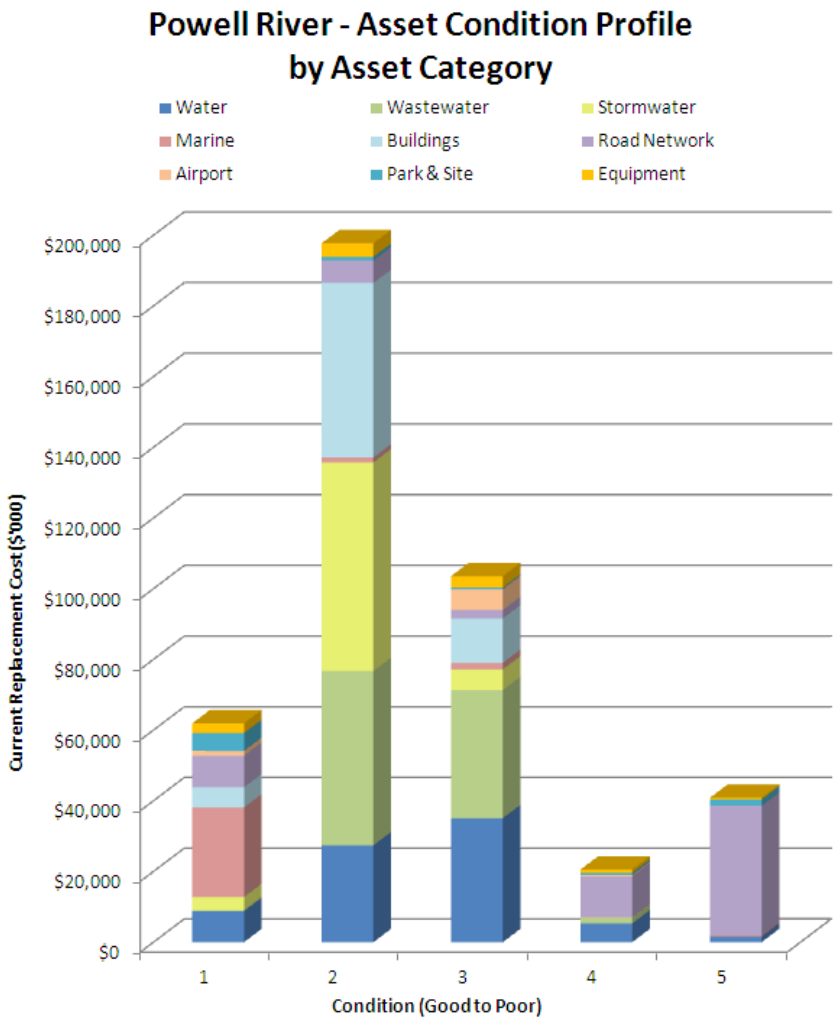
Figure 1 shows the current replacement values of the City's assets.

Figure 1: Asset Replacement Values



The condition of City's assets is shown in Figure 2.

Figure 2: Asset Condition Profile



Asset conditions have been assessed using attributes including asset age, material or type, knowledge of past failure and repairs, and physical inspection. Further condition assessments will be performed for increased confidence in the asset data and to identify the assets most in need of renewal and replacement.

3.2 Life Cycle and 20 Year Costs

Life cycle costs (or whole of life costs) are the average costs that are required to sustain the service levels over the longest asset life. Life cycle costs include operating and maintenance expenditure and asset consumption (depreciation expense).

Life cycle costs can be compared to life cycle budgeted expenditure to give an indicator of sustainability in service provision. Life cycle budgeted expenditure includes operating, maintenance and capital renewal budgeted expenditure. Life cycle budgeted expenditure will vary depending on the timing of asset renewals.

The life cycle costs and life cycle budgeted expenditure comparison highlights any difference between present outlays and the average cost of providing the service over the life cycle. If the life cycle budgeted expenditure is less than the life cycle cost, it is most likely that outlays will need to be increased or cuts in services will be required in the future.

Knowing the extent and timing of any required increase in outlays and the service consequences if funding is not available will assist organizations in providing service to their communities in a financially sustainable manner. This is the purpose of the asset management plans and long term financial plan.

A shortfall between life cycle cost and life cycle budgeted expenditure gives an indication of the life cycle gap to be addressed in the asset management and long term financial plan.

The life cycle gap and life cycle indicator for services covered by this asset management plan is summarized in Table 3.

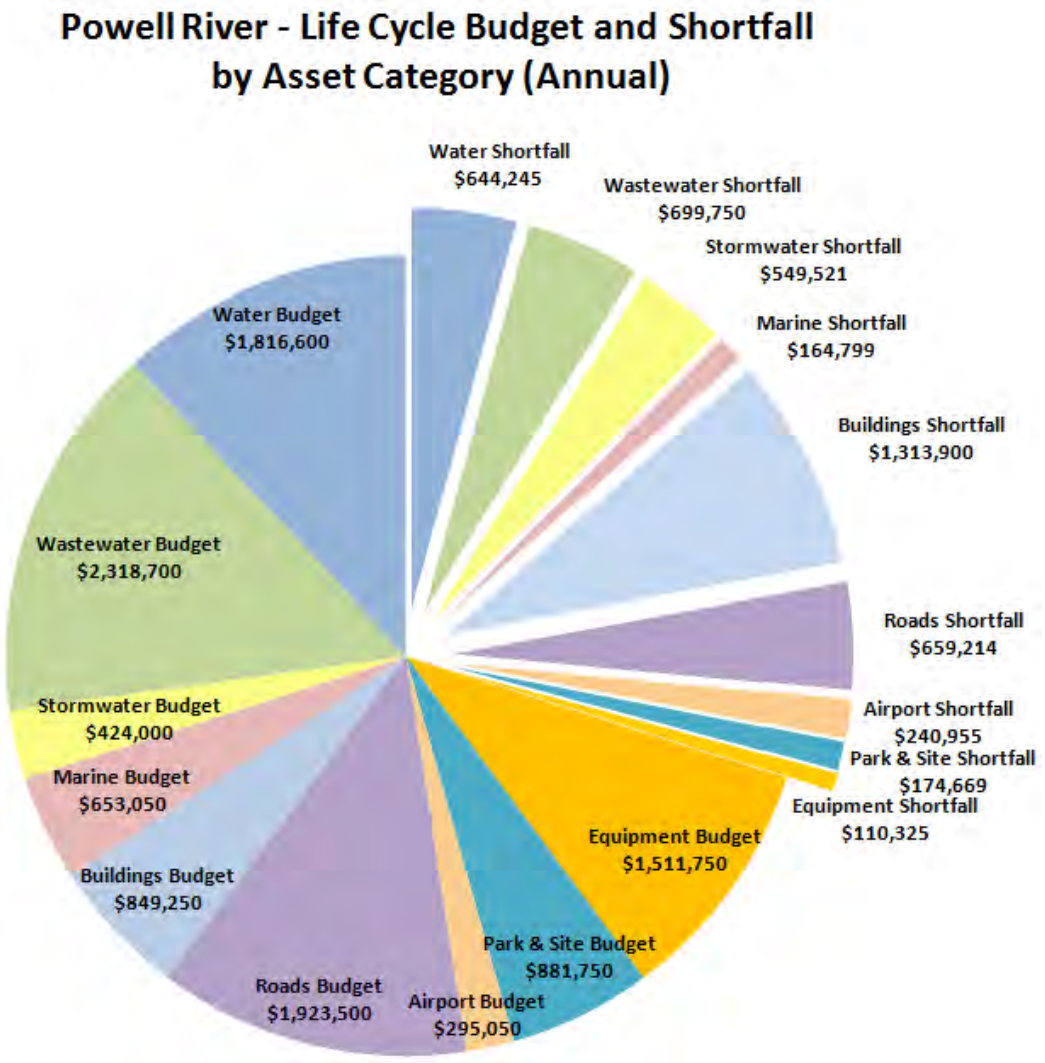
Table 3: Life Cycle Indicators

Service	Life Cycle Cost ($/yr)	Annual Budget ($/yr)	Life Cycle Gap * ($/yr)	Life Cycle Indicator
Water Supply	$2,460,845	$1,816,600	$-644,245	73.82%
Wastewater	3,018,450	2,318,700	-699,750	76.82%
Stormwater	973,521	424,000	-549,521	43.55%
Marine	817,849	653,050	-164,799	79.85%
Buildings	2,163,150	849,250	-1,313,900	39.26%
Road Network	2,582,714	1,923,500	-659,214	74.48%
Airport	536,005	295,050	-240,955	55.05%
Park & Site	1,056,419	881,750	-174,669	83.47%
Equipment	1,622,075	1,511,750	-110,325	93.20%
All Services	**$15,231,028**	**$10,673,650**	**$-4,557,378**	**70.08%**

Note: * A life cycle gap is reported as a negative value.

Figure 3 displays the data in Table 3 by category:

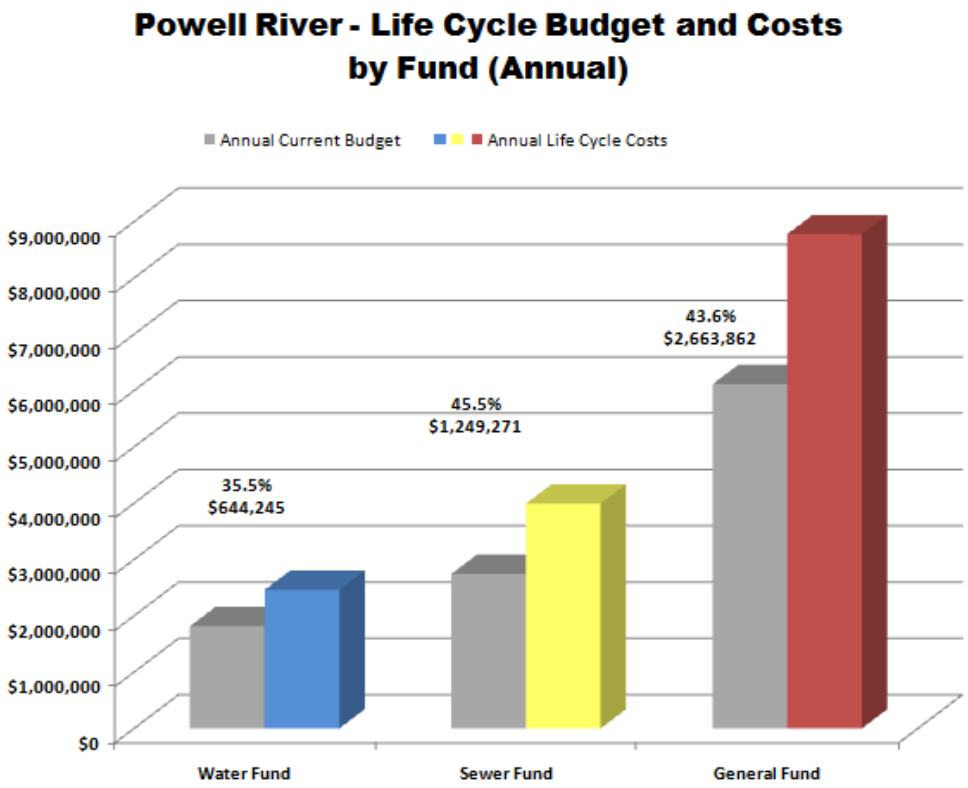
Figure 3: Life Cycle Budget and Shortfall by Asset Category



The overall life cycle gap of $4,557,378 per year is the annual increase required to optimally replace the City's infrastructure assets. The City currently budgets 70.08% of the funds required, but recognizes the need to address the shortfall. Funding from future grants is not known and, if received, would help to reduce this shortfall. The current trend of funding for approved water and wastewater capital projects is two-thirds. For the road network, Gas Tax grant funds may become available for renewals. Airport capital funding would be 100% for approved capital projects, although funding is not available for land purchases, feasibility, planning or zoning studies or projects which have already been started or completed. This asset management strategy includes an improvement plan with tasks to achieve the most efficient use of available funds.

The life cycle gap/shortfall can also be separated by fund. Figure 4 displays the shortfall in the water fund of $644,245, the shortfall in the sewer fund of $1,249,271 and the shortfall in the general fund of $2,663,862. The total shortfall over the life cycle is $4,557,378.

Figure 4: Life Cycle Budget and Costs by Fund



	Water Fund	Sewer Fund	General Fund	Totals
Annual Current Budget	1,816,600	2,742,700	6,114,350	10,673,650
Annual Life Cycle Costs	2,460,845	3,991,971	8,778,212	15,231,028
Annual Shortfall	(644,245)	(1,249,271)	(2,663,862)	(4,557,378)
% Budget Increase Required	35.5%	45.5%	43.6%	42.7%

The 20 year gap and indicator for services covered by this asset management plan is summarized in Table 4.

Table 4: 20 Year Indicators

Service	20 Year Cost ($/yr)	Annual Budget ($/yr)	20 Year Gap * ($/yr)	20 Year Indicator
Water Supply	$2,370,100	$1,816,600	-$553,500	76.65%
Wastewater	3,721,200	2,318,700	-$1,402,500	62.31%
Stormwater	396,400	424,000	$27,600	106.96%
Marine	645,410	653,050	$7,640	101.18%
Buildings	2,461,410	849,250	-$1,612,160	34.50%
Road Network	2,467,950	1,923,500	-$544,450	77.94%
Airport	590,282	295,050	-$295,232	49.98%
Park & Site	1,094,620	881,750	-$212,870	80.55%
Equipment	1,499,900	1,511,750	$11,850	100.79%
All Services	**$15,247,272**	**$10,673,650**	**-$4,573,622**	**70.00%**

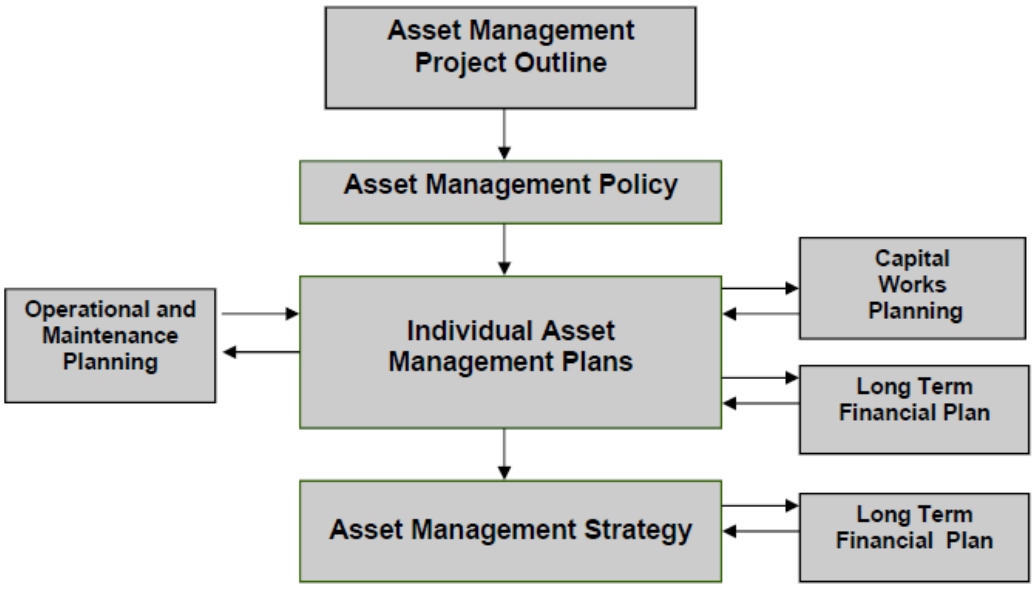
Note: * A 20 year gap is reported as a negative value.

The average annual shortfall over the next 20 year period is $4,573,622. This is comparable to the average annual life cycle shortfall of $4,557,378. Funding from grants is not known and, if received, would help to reduce this shortfall. This asset management strategy includes an improvement plan with tasks to achieve the most efficient use of available funds.

3.3 Asset Management Structure

The Table 5 shows the flow of information to facilitate decision making within the organization.

Table 5: Information Flow



The roles and responsibilities of groups and individuals within the organization that have a direct involvement in the asset management program are summarized in Table 6 below.

Table 6: Roles and Responsibilities

Group/Position	Role in Asset Management Plan
Council	• To act as custodians for the community's assets. • To set levels of service, risk and cost standards. • To approve the asset management plans and align with the Corporate Plan. • To approve the asset management program. • To ensure appropriate resources and funding are made available to support the asset management program.
Chief Administrative Officer and Management Group	• To provide strategic advice and leadership in the management of infrastructure assets. • Ensure outcomes support the Corporate Plan. • To validate and challenge proposals to ensure they meet the Corporate Plan objectives and community service needs. • To ensure the community and key stakeholder inputs are integrated into asset management plans.
Managers and staff	• Establish current levels of service for assets, compare to benchmarks and community needs and identify gaps or challenges. • To draft asset management plans • To implement the asset management program with agreed resources. • To develop, implement and review the asset management program using the International Infrastructure Management Manual as a guide, documenting required allocation of funding and improvement plans for individual asset groups, using the principles of life cycle costing. • To develop and implement maintenance, and capital works programs in accordance with the asset management plans and strategy, the Corporate Plan and the 5 Year Financial Plan. • Deliver Council approved 'levels of service' to agreed risk and cost standards. • To manage infrastructure assets in consideration of their long term sustainability. • To develop and implement maintenance and capital works programs in accordance with asset management plans and report to the Management Group and to Council.

3.4 Corporate Asset Management Team

A 'whole of organization' approach to asset management can be developed with a corporate asset management team. The benefits of a corporate asset management team include:

- demonstrate corporate support for sustainable asset management,
- encourage corporate buy-in and responsibility,
- coordinate strategic planning, information technology and asset management activities,
- promote uniform asset management practices across the organization,
- information sharing across IT hardware and software,
- pooling of corporate expertise,
- championing of asset management process,
- wider accountability for achieving and reviewing sustainable asset management practices.

The role of the asset management team will evolve as better information regarding asset condition and useful life expectancy is determined. The maturity of the asset management process occurs over several phases.

Phase 1

- strategy development and implementation of asset management improvement program,

Phase 2

- asset management plan development and implementation,
- reviews of data accuracy, levels of service and systems plan development,

Phase 3

- asset management plan operation
- evaluation and monitoring of asset management plan outputs
- ongoing asset management plans review and continuous improvement.

The Asset Management Project Team consists of:

- Asset Management Project Manager
- Engineering Services Secretary
- Manager of Accounting Services
- Senior Accountant
- Project Consultant

The Asset Management Project Team reports to the Asset Management Steering Committee. The Asset Management Steering Committee consists of:

- Chief Administrative Officer
- Councillor Portfolio Holder Public Works, Infrastructure & Water Quality
- Director of Infrastructure
- Director of Financial Services

3.5 Risk Management

Effective asset management includes effective risk management. To understand risks associated with City infrastructure, a Risk Management Framework has been developed. This framework consists of a Risk Management Policy, a Risk Management Framework Implementation Plan, and a Risk Register.

Risk Management Framework

- a set of components that provide the foundations and organizational arrangements for designing, implementing, monitoring, reviewing and continually improving risk management throughout the organization

Risk Management Policy

- Council assigns responsibility for managing risks associated with assets and service delivery in general to all departments within the City

- demonstrates the City's commitment to risk management and can be understood and applied at all levels

Risk Management Framework Implementation Plan

- Documents the results and recommendations arising from the City of Powell River's Risk Management Framework project and proposes risk treatment action plans

Risk Register

- records the risks and costs associated with the risk occurrence, both inherent and mitigated
- keeps a record of the mitigating controls and the risk treatment options to implement

A component of the risk register is the Infrastructure Summary Dashboard. The risks associated with each infrastructure category have been quantified and categorized by a low to high risk rating in Table 7 below.

Table 7: Infrastructure Summary Dashboard

	Number of Risks				
Asset Category	**Unscored**	**Low**	**Medium**	**High**	**Total of Identified risks**
Airport	0	4	3		**7**
Buildings	0		1	1	**2**
Equipment	0	3	1		**4**
Land	0	1			**1**
Marine	0	4	1		**5**
Parks & Recreation	2	3			**5**
Roads	0	5	1		**6**
Storm	2	2			**4**
Wastewater	0	3	3		**6**
Water	1	2	5	1	**9**
Total	**5**	**27**	**15**	**2**	**49**

The definitions of "low, medium and high" risks have been established in the risk register. Risks will be reported to Council on a regular basis as reports to Council. The risk tolerance level will be recommended for approval. The "High" risks related to asset infrastructure are summarized below:

Buildings

- Earthquake damage to public buildings

Water

- Water line breaks

Council recognizes there are risks related to infrastructure and that staff will work to mitigate these risks within established budgets. Action plans for risk mitigation have been identified in the risk register, and will be prioritized using considerable judgement. Council also accepts that particular risks are inherent and cannot be further mitigated.

3.6 Strategy Outlook

1. City has developed a range of "Technical Levels of Service" that reflect current practices in providing services and infrastructure to the community. The cost of meeting these "level of services" has been built into the City's Financial Plan and maintaining this level of service is achievable over the next 10 years.

2. City is not able to fund current infrastructure life cycle cost at current levels of service and available budget.

3. City's current asset management maturity is at a 'core' level and investment is needed to improve information management, lifecycle management, service management and accountability and direction. Council has committed to ensuring that it focuses on asset renewals and will prioritize funding to address infrastructure that is not providing a suitable level of service.

4. Where Do We Want to Be?

4.1 City's Vision, Mission, Goals and Objectives

The City has adopted a Vision for the future in the Corporate Plan.

Our vision[5] is a sustainable Powell River that provides for:

- Economic Diversity – a resilient economy.
- Social Well-Being – a vibrant, safe and healthy community.
- Healthy Environment – a diverse and healthy natural environment.

City's purpose or reason for existence is set out in the adopted mission statement.

The mission[5] of the City of Powell River is to ensure the provision of quality services, in a manner that promotes prosperity and economic, environmental and social health and well-being for current and future generations, while living within our means.

The Corporate Plan sets goals and objectives to be achieved in the planning period. The goals set out where City wants to be. The objectives are the steps needed to get there. Goals and objectives relating to the delivery of services from infrastructure are shown in Table 8.

[5] City of Powell River, Corporate Plan 2013-2014

Table 8: Organization Strategic Priorities

Strategic Priorities	Objective	How Strategic Priorities and Objectives are addressed in AM Plan
Live Within our Means	The City will strive towards long-term financial sustainability and best practices in internal processes.	The Asset Management Strategy is a best practice management tool for the financial stewardship of municipal assets and enables long term financial planning for all municipal assets.
Governance	The City will strive to develop comprehensive governance regimes supporting community cohesion, self-sufficiency and an informed and engaged citizenry.	The Asset Management Strategy will assist the organization to engage the community in discussion on service levels.
Sustainability	The City will be a leader in increasing our environmental, social/cultural and economic sustainability.	The Asset Management Strategy is a best practice tool for the implementation of sustainable asset management.
Asset Management	The City will follow best practices in asset management and seek to maximize capital utilization and stewardship.	The Asset Management Strategy is a best practice tool in the management of assets and seeks to maximize capital utilization and stewardship.
Liquid Waste Management Plan (LWMP)	The City will review with the community, adopt and implement a long-term Liquid Waste Management Plan.	The Asset Management Strategy will be in harmony with the Liquid Waste Management Plan.

The Corporate Plan defines the City's vision and service delivery objectives for asset management in accordance with legislative requirements, community needs and affordability.

4.2 Asset Management Policy

The City's Asset Management Policy outlines how asset management is to be integrated within the organization so that it is coordinated, cost effective and organizationally sustainable.

The asset management strategy is developed to support the asset management policy and is to enable the City to:

- show how its asset portfolio will meet the affordable service delivery needs of the community into the future,
- enable City's asset management policies to be achieved, and
- ensure the integration of City's asset management with its long term strategic plans.

4.3 Asset Management Vision

To ensure the long-term financial sustainability of the City, it is essential to balance the community's expectations for services with their ability to pay for the infrastructure assets used to provide the services. Maintenance of service levels for infrastructure services requires appropriate investment over the whole of the asset life cycle. To assist in achieving this balance, City aspires to:

Develop and maintain asset management governance, skills, process, systems and data in order to provide the level of service the community needs at present and in the futures, in the most cost-effective and sustainable manner.

In line with the vision, the objectives of the asset management strategy are to:

- ensure that the City's infrastructure services are provided in an economically optimal way, with the appropriate level of service to residents, visitors and the environment determined with reference to the City's financial sustainability,
- safeguard City's assets including physical assets and employees by implementing appropriate asset management strategies and appropriate financial resources for those assets,
- adopt the long term financial plan as the basis for all service and budget funding decisions,
- meet legislative requirements for all City's operations,
- ensure resources and operational capabilities are identified and responsibility for asset management is allocated,
- provide high level oversight of financial and asset management responsibilities through the development and implementation of the Asset Management Strategy, Asset Management Plans and Long Term Financial Plan.

Strategies to achieve this position are outlined in Section 5.

5. Asset Management Improvement Plan

The Asset Management Strategy proposes strategies to enable the objectives of the Corporate Plan and the Asset Management Policy to be achieved.

The tasks required to achieve the City's objectives are shown in priority order in Table 9.

Table 9: Asset Management Improvement Plan

Task No	Task	Responsibility	Resources Required	Timeline
1	Identification of critical assets and perform condition assessment of the critical assets	Engineering & Operational Services Department	Engineering & Operational and Financial Services Staff	April 2014
2	Long term financial planning for asset renewals and upgrades	Financial Services Department	Financial Services staff	May 2014
3	Undertake asset condition monitoring to increase confidence levels	Engineering & Operational Services Department	Various staff	April 2014
4	Communication to the community	To be determined	To be determined	March 2014
5	Performance measurement	Engineering & Operational Services Department	Engineering & Operational Services Staff	Continual

6. References

IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/IIMM

IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/namsplus.

IPWEA, 2009, 'Australian Infrastructure Financial Management Guidelines', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/AIFMG

IPWEA, 2011, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australia, Sydney, www.ipwea.org.au/IIMM

City of Powell River, November 1, 2012, Asset Management Policy, Council Policy 246, Powell River, British Columbia

City of Powell River, Corporate Plan 2013-2014, Powell River, British Columbia

Willingdon Beach Sunset

Resources List

1.1 Select Asset Management Organizations

1.1.1 National:

Canadian Network of Asset Managers (CNAM)
http://www.cnam.ca/

Federation of Canadian Municipalities (FCM) Municipal Asset Management Program (MAMP)
https://fcm.ca/home/programs/municipal-asset-management-program/funding-mamp.htm

Institute of Public Works Engineering Australasia (IPWEA)
https://www.ipwea.org/home

NAMS Canada
http://www.namscanada.org/home

International Association for Public Participation (IAP2)

https://www.iap2.org/

1.1.2 Provincial:

Asset Management BC (AMBC)
http://www.assetmangementbc.ca

Asset Management Ontario (ONT AM)
https://www.amontario.ca/

Asset Management Saskatchewan (AM-SK)
http://www.assetmanagementsk.ca

Atlantic Infrastructure Management Network (AIM)
https://www.aimnetwork.ca/

Centre d'expertise et de recherche en infrastructures urbaines (CERIU)
http://www.ceriu.qc.ca/

Federation of Canadian Municipalities (FCM)
http://www.fcm.ca/

Infrastructure Asset Management Alberta (IAMA)
http://www.assetmanagementab.ca/

Ontario Coalition for Sustainable Infrastructure (OCSI)
http://www.on-csi.ca/

1.1.3 Other

Municipal Natural Assets Initiative (MNAI)
http://institute.smartprosperity.ca/content/municipal-natural-assets-initiative

1.2 Select Documents

An Asset Management Governance Framework for Canada
National Round Table on Sustainable Infrastructure
https://www.assetmanagementbc.ca/wp-content/uploads/An-Asset-Management-Governance-Framework-April09.pdf

International Infrastructure Management Manual (IIMM)
Institute of Public Works Engineering Australasia
https://www.ipwea.org/publications/bookshop

Asset Management Primer – Canadian Infrastructure Report Card
Federation of Canadian Municipalities, Canadian Construction Association, Canadian Public Works Association, Canadian Society of Civil Engineers
http://www.canadainfrastructure.ca/downloads/circ_asset_management_primer_EN.pdf

InfraGuide -- Decision Making and Investment Planning: Managing Infrastructure Assets
Federation of Canadian Municipalities
https://www.fcm.ca/home/programs/past-programs/infraguide/e-learning-tools.htm

ISO 55000
International Organization for Standardization
https://www.assetmanagementstandards.com/

1.2.1 Various documents on Capital Assets

Government of Alberta – Guidelines on Valuations of Tangible Capital Assets for PSAB 3150
Alberta Municipal Affairs, Government of Alberta
http://www.municipalaffairs.gov.ab.ca/documents/ms/AIV_TCA_manual_on_guidelines_on_valuations.pdf

Guide to the Amortization of Tangible Capital Assets, Government of Alberta
Ministry of Municipal Affairs and Housing, Government of British Columbia
www.cscd.gov.bc.ca/lgd/infra/library/cir0815_attachment.doc

1.3 Videos

Aging Infrastructure and Sustainability
Asset Management Saskatchewan (AMSK)
https://player.vimeo.com/video/241396196?autoplay=1

Why Invest in Asset Management?
Federation of Canadian Municipalities
https://fcm.ca/home/programs/municipal-asset-management-program/why-invest-in-asset-management.htm

1.4 Self Assessments

AssetSMART
BC Ministry of Community, Sport and Cultural Development
http://www.ubcm.ca/assets/Funding~Programs/Asset~Management/AssetSMART_2%20_A_Local_Government_Self_Assessment_Tool--LGAMWG--September_2015.pdf

Municipal Asset Management Program (MAMP) Readiness Scale
Federation of Canadian Municipalities
https://fcm.ca/Documents/tools/MAMP/MAMP_Readiness_Scale_EN.pdf

NAMS.PLUS Maturity Assessment (Canada)
Institute of Public Works Engineering Australasia
http://www.namscanada.org/namscanada/education/search/upcomingevents/namsplus

Life-Cycle Cost Analysis Primer
US Department of Transportation
https://www.fhwa.dot.gov/asset/lcca/010621.pdf

Asset Management for Municipal Staff: The Technical Basics

Participant Workbook