



STATUS OF ASSET MANAGEMENT IN BRITISH COLUMBIA

RESULTS FROM THE
CANADA COMMUNITY-
BUILDING FUND
ASSET MANAGEMENT
MEASURING
PROGRESS SURVEY
2022





ACKNOWLEDGEMENTS

The Union of BC Municipalities (UBCM) acknowledges Asset Management BC and the Ministry of Municipal Affairs for their contributions to the development of the Phase 1 Asset Management Assessment Form Baseline Survey for which the Phase 3 survey would not have been possible.

Above all, UBCM recognizes the efforts each BC local government put in to completing the Measuring progress survey.

Cover image: City of Kelowna

Background image: City of Vancouver

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PREFACE

The collection of asset management data presented in this report is the result of mandatory reporting requirements under the Administrative Agreement of the Canada Community-Building (CCBF) Fund in British Columbia (Agreement). The tripartite Agreement between Canada, British Columbia and Union of BC Municipalities (UBCM) was signed on April 1, 2014 and outlines asset management as the preferred avenue for “... building local government capacity to take an integrated, long-term approach to plan, build and maintain strong sustainable communities...”

The CCBF Partnership Committee (Committee) which is responsible for strategic oversight and implementation of the Agreement, identified and approved the development of Asset Management for Sustainable Service Delivery: A BC Framework (Framework) as a tool to build and strengthen asset management over the term of the Agreement. Pursuant to the Framework and the Agreement, the Committee developed and approved local government asset management commitments. The commitments include three phases for meeting asset management reporting requirements:

1. Phase 1: 2016 Asset Management Assessment Form Baseline data establishes baseline information on local government asset management practices and information management.
2. Phase 2: 2017 Asset Management Assessment Form Implementation Plan establishes individual local government asset management commitments towards implementing/improving asset management practices.
3. Phase 3: 2022 Asset Management Assessment Form Measuring Progress data reports on local government asset management progress made during the term of the Agreement.

Under the Agreement, UBCM administers asset management commitments developed and approved by the Committee. This report represents the cumulative outputs from the 2022 Asset Management Assessment Form Measuring Progress survey. This report meets the Phase 3 commitment to generate comparative analysis of baseline data and report out on improvements in asset management for all BC local governments since 2016.



Capital Regional District wastewater treatment plant

EXECUTIVE SUMMARY

The launch of the Phase 1 Asset Management Assessment Form Baseline survey in May 2016 was timely. The responses revealed what experts in the field knew anecdotally; in British Columbia there is a growing awareness in the importance of implementing asset management practices to support sustainable service delivery. With many existing assets at or nearing the end of their useful life, survey responses indicated local governments are aware of the importance in regular investment of maintenance, renewal and replacement of infrastructure. This is no different in 2022.

The purpose of the 2022 survey was to collect data and measure the progress of BC local governments' asset management practices since 2016. The survey was structured in two parts. Part one focused on existing asset management practices. Part two focused on the collection of financial information of assets owned by local governments. The survey was developed by UBCM with contributions from the Ministry of Municipal Affairs and Asset Management BC. The 2022 survey mirrors the 2016 survey to facilitate a comparative analysis.

This report represents the cumulative responses from 180 local governments across BC on the state of asset management practices, comparing the responses received from the 2016 survey to the 2022 survey. The 2022 survey results demonstrate significant improvements in asset management. It is anticipated this data will provide an intermediate measurement of asset management practices over the next decade and beyond.

In the 2022 survey an additional question was asked regarding the accuracy of data provided in 2016. It was proposed some local governments, as they mature in their asset management knowledge and practices, would reassess the validity of their 2016 survey responses. (Note: All local governments were provided access to their 2016 baseline survey data.)

Responses were as follows:

- 56% of respondents reported the 2016 survey data was accurate.
- 26% of respondents reported the 2016 survey data was either understated (11%) or overstated (15%).
- 18% of respondents reported "other" i.e. they did not know their baseline data; the baseline data was still being reconciled; or the open-ended response field was left blank.

EXECUTIVE SUMMARY (continued)

Key observations from part one of the 2022 survey include:

- Over 50% of local governments have developed formal asset management processes. This is an increase of 24% since 2016.
- 49% of local governments have developed an asset management strategy which is an increase of 19% since 2016. Of those, just under 50% reported integrating asset management activities and long-term financial plans, over 25% have developed asset management policies and over 66% have developed at least one asset management plan.
- Assessing and integrating level of service and risk remains a challenge.

Key observations from part two of the 2022 survey include:

- Reported average condition of all asset classes was consistent with that reported in 2016.
- Fewer local governments calculated and were able to report on historical replacement costs.
- Fewer local governments calculated and were able to report on asset replacement costs.
- Data collected and calculated for asset replacement costs continues to be a challenge.

The results from the 2022 survey are positive overall. Local governments are improving their understanding of the value and importance of asset management and marked advancement in the development and implementation of asset management best practices. This positions local governments well in preparation of potential new and expanded asset management requirements to be included in the 2024-2034 Canada Community-Building Fund.



Translink

INTRODUCTION

Many local governments have existing infrastructure at or nearing its critical age of replacement or renewal. Asset management practices, including the maintenance, repair and replacement of an asset during its entire lifecycle, is critical in supporting sustainable service delivery. To support sustainable service delivery, local governments search for innovative ways to build capacity and fund infrastructure replacement and renewal. This includes seeking out ways to adapt to existing and emerging risks, such as climate change, that have required local governments to reassess how they provide services and the infrastructure required to address those risks.

In November 2014, the Committee identified and approved the development of the Asset Management Framework as the tool to build and strengthen asset management over the term of the Agreement.

Following the development of the Framework, the Committee approved three phases for meeting asset management commitments under the CCBF. The Committee's path for meeting these commitments focused on a comparative analysis between the 2016 survey and the 2022 survey. This report represents the third and final phase of meeting those commitments.

In June 2022, UBCM launched the Phase 3 Asset Management Assessment Form Measuring Progress survey (2022 survey).

The survey was prepared in two parts. Part one collected information on the process of asset management focusing on capacity, assessment, planning, and implementation and was reported by local governments based on the practices they followed at the time of data collection. Part two collected information on asset condition and financial information for existing assets. All data was requested to be reported as of December 31, 2021.

The collection of asset management data presented in this report is the result of mandatory reporting requirements of the Agreement. Under the Agreement, which came into effect on April 1, 2014, UBCM administers asset management commitments developed and approved by the Committee and is aimed to generate comparative data on the status of asset management for all BC local governments since the 2016 Status of Asset Management in British Columbia report.

While each local government provided individual data, this report describes cumulative data only.

METHODOLOGY

The 2022 survey mirrors questions from the 2016 survey that were developed in consultation with BC local governments, Asset Management BC and the Ministry of Municipal Affairs. The survey was developed to align with the Framework, which describes the process and typical practices for asset management in BC. An additional resource used to guide the development of the surveys included the 2016 Canadian Infrastructure Report Card.

The 2022 survey was divided into two sections and asked over 200 detailed questions on inventory, condition, and management of local government owned infrastructure. The self-reported results provided both qualitative and quantitative information on local government owned assets and/or assets leased where the responsibility of the leaser included maintenance and capital improvements. Where a question resulted in a qualitative response or the local government provided additional information, responses were interpreted and categorized by UBCM.











Following suggested typical practices described by the Framework, part one of the 2022 survey consisted of a high-level overview on the current state of asset management practices. Part two of the survey involved local governments responding regarding ownership, condition and financial information (as of December 31, 2021) for six asset classes. The asset classes surveyed included Roads & Bridges, Potable Water, Wastewater, Stormwater, Sports & Recreation Facilities, and Other Buildings & Facilities. Respondents were asked to report on the status of assets as of December 31, 2021.

A number of questions in the 2022 survey required local governments to provide a condition-based response or choose multiple selections based on typical asset management practices described by the Framework (response scales found on the next page). The collection of condition-based responses for capital assets did not require local governments to identify individual data collection methodologies. Where questions allowed for multiple selections, a scale was devised to capture how many typical practices were currently being utilized. As a result, data for these questions was analyzed based on the number of respondents, not responses.



Town of Sidney pier

METHODOLOGY (continued)

Ranking Description for Assess Section	Ranking Description for Plan & Implement Sections
 Not Developed	 Not Developed — Number of multiple-choice sections 0
 Underdeveloped — Completeness and accuracy of data is unknown, availability of data is unknown, and generally work on this topic has not been confirmed.	 Underdeveloped — Number of multiple-choice selections 1-3
 Competent — Foundation of AM, data is not necessarily complete of fully accurate, information gaps exist, significant amount of missing data, but is sufficient for basic AM assessment.	 Competent — Number of multiple-choice selections 4-6
 Strong — Improved level of completeness and accuracy of data as compared to competent, detailed and accurate analysis, greater understanding of current and future situations.	 Strong — Number of multiple-choice selections 7-9
 Outstanding — High level of accuracy and completeness of data, continuous improvement practices in place, long term planning in effect.	 Outstanding — Number of multiple-choice selections 10+

The 2022 survey was designed to be accessible for local governments of all sizes and with all levels of experience in asset management. A number of factors should be considered when reviewing the results contained within this report. While UBCM made considerable effort to collect only the best available information, due to the large number of questions and the level of detail sought, not all of the data presented is weighted equally.

A number of variables impact how asset management data was reported. These include:

Capacity of Local Government: The size (population, number of staff, diversity of services and resources) of a local government can impact their ability to undertake asset management activities. Capacity can also affect the level of detail, quality, and accuracy of information available.

Perceived Knowledge of Asset Ownership: Defining ownership and providing financial information on assets can be complicated. Some local governments do not own all of their major assets. Assets can be leased, with maintenance and renewal expectations, while others cost share infrastructure between multiple local governments. This can make reporting challenging, especially regarding duplications in reporting ownership and determination of historical and replacement costs and renewal values.

Familiarity with the Subject Area: Previous experience with asset management activities can result in more experienced respondents providing a higher level of detail for assets versus a respondent who has minimal experience with asset management.

METHODOLOGY (continued)

Maturity of Asset Management Approach: As local governments continue to build their awareness and understanding of asset management, they gain a better understanding of their asset management maturity as an organization, as well as the benefits of implementing robust asset management practices. This can be seen particularly in the question asked in 2022 regarding 2016 baseline data being accurate, understated or overstated. As an organization matures, they are better able to assess the accuracy of reporting and under- or over-reporting will become less commonplace.

Accuracy of Condition Data or Financial Data: Neither the 2016 nor the 2022 survey specified a standard method for reporting. Ideally, reporting accurate condition data would include ground truthing the state of an asset. Furthermore, in terms of replacement cost values, these costs would ideally be based on an accurate condition rating and reported as real costs.

Number of Responses: There is a discrepancy between the number of responses used for data analysis between the 2016 and 2022 surveys. In 2016 data analysis was completed on 189 responses whereas in 2022 it was completed consistently on 180 responses. The 2022 data represents 95% of local governments which captures the majority of respondents. Since the report was written, three additional local governments have responded and the remaining five outstanding respondents are still working on providing completed surveys.



District of Vanderhoof aquatic centre

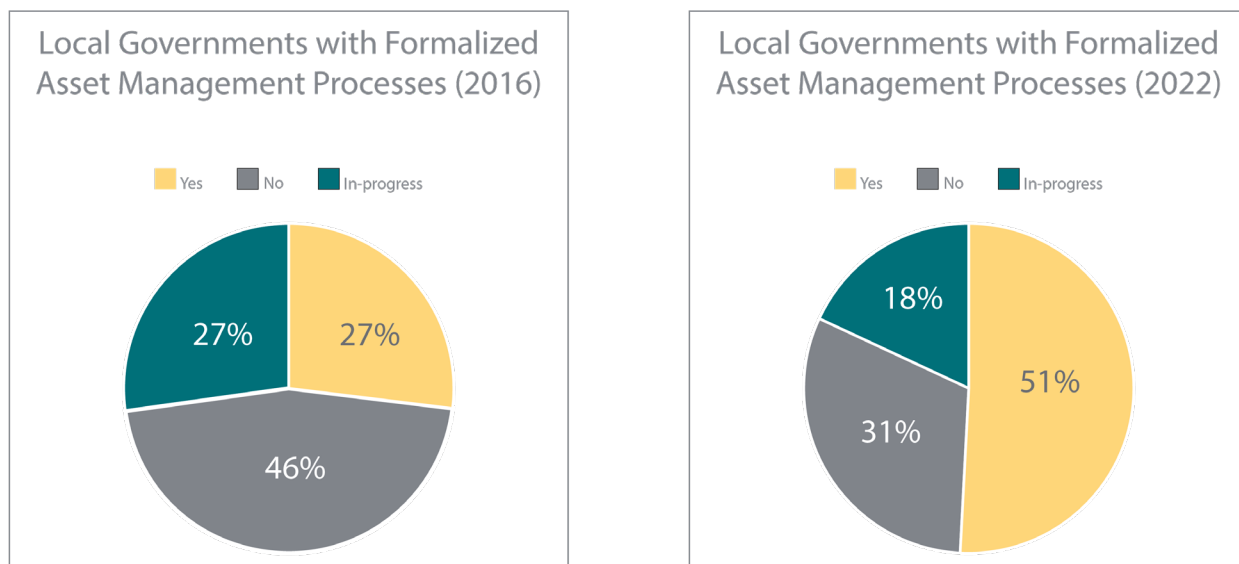
PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

SECTION 1: CAPACITY BUILDING FOR ASSET MANAGEMENT

The Framework describes the core elements of sustainable service delivery as people, information, finances and assets. Together, these elements combine to build the asset management capacity necessary for achieving sustainable service delivery. In this section of the survey the focus is on the categories of leadership, people and information, finances and formal processes.

A significant outcome from the 2022 survey; over 51% of local governments reported a formal process had been adopted. This is a 24% increase from the 2016 survey.

Figure 1



For those local governments that responded a formal process is 'in-progress', the responses indicate the focus has been to compile information on assets, develop policies and the implementation of strategies as they work towards developing formal processes. However, not all local governments are working towards a formal process. Others have informal or semi-formal processes in place.

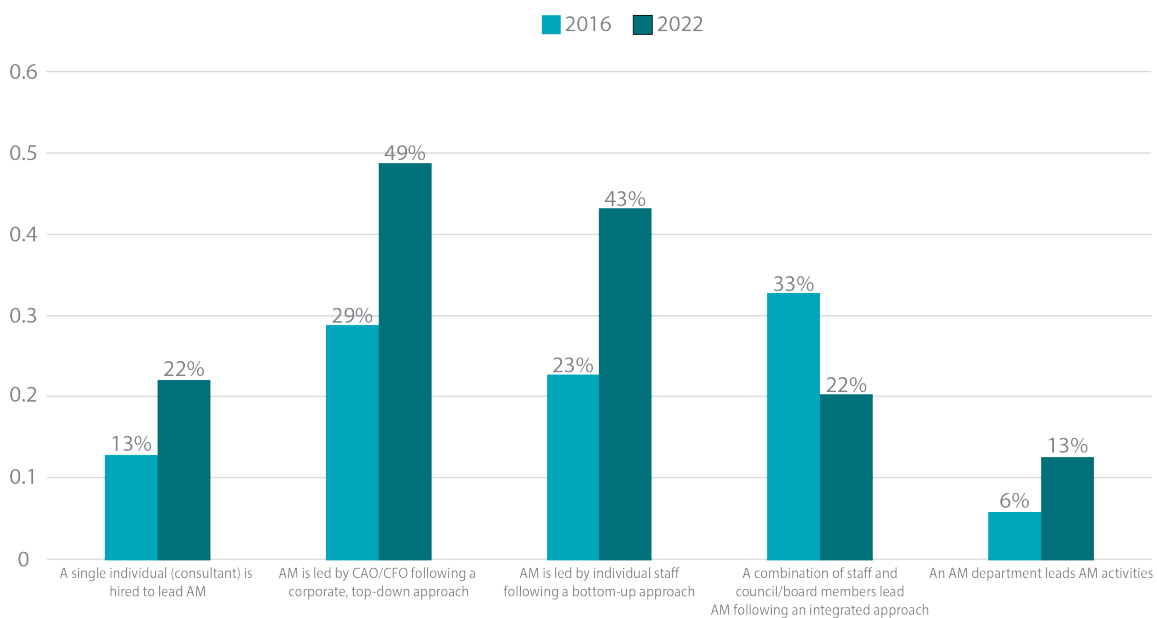
The 2022 survey results show local governments are utilizing various leadership approaches to achieve asset management outcomes. Since 2016, local governments reported a 20% increase in asset management being led by individual staff and an equal increase in asset management being led by the Chief Administrative Officer and/or Chief Financial Officer.

PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

HIGHLIGHTS OF SECTION 1: CAPACITY BUILDING FOR ASSET MANAGEMENT

Leadership: The 2022 survey shows 49% of local governments follow a top-down approach where asset management is led by the Chief Administrative Officer and/or Chief Financial Officer (Figure 2). We also see increases of 9% and 7% respectively for local governments utilizing consultants or establishing an asset management department to lead activities. The 2022 results also show local governments in BC use different approaches at various stages of their asset management journey as over 41% of respondents indicated using two (2) or more asset management leadership practices.”

Figure 2 - Local Government Asset Management Leadership Approaches in 2016 and 2022



Bridge over the Fraser River at Williams Lake

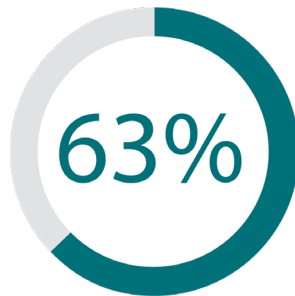
PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

HIGHLIGHTS OF SECTION 1: CAPACITY BUILDING FOR ASSET MANAGEMENT (CONTINUED)

People and Information: Local governments were asked about communication and information sharing practices with staff in 2022:



67% reported some staff understand the need for asset management. This remains unchanged from 2016 reporting.



63% reported staff understand the benefits of asset management. In 2022, an increase of 11% was reported for responses in this category.

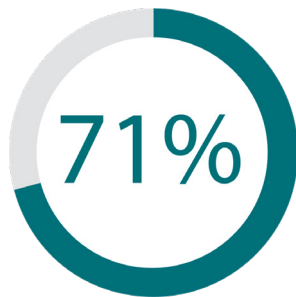


25% of staff work plans include asset management activities. In 2022, a modest increase of 1% was reported.

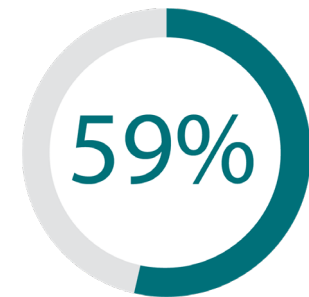
Similar questions were asked regarding communication and information sharing practices with elected officials:



79% of local governments reported elected officials understand the need for asset management. In 2022, an increase of 7% was reported for responses in this category.



71% reported elected officials understand the benefits of asset management. In 2022, an increase of 14% was reported for responses in this category.



59% of elected officials endorse asset management activities. In 2022, an increase of 15% was reported for responses in this category.



An increase of 15% was reported since 2016 where 65% of local governments share progress on asset management with elected officials.

PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

HIGHLIGHTS OF SECTION 1: CAPACITY BUILDING FOR ASSET MANAGEMENT (CONTINUED)

Formal Asset Management Process: Organizations seeking to formalize asset management activities can do so by tailoring processes that reflect community values, priorities, and capacity in a way that is incremental and scalable. Formalized asset management processes are established in part to prioritize an organization's commitment to asset management. The 2022 survey shows 51% of local governments reported having a formal process for asset management in place (Figure 1) resulting in an overall increase of 24%.



City of Prince George Masich Stadium

PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

SECTION 1: FINANCE & ASSET MANAGEMENT

A strategic lens must be used when analyzing how local governments utilize revenues, reserve funds and debt for asset management activities. Depending on the type of expenditure, current interest rates, and existing reserves, the perspective, need and/or financial circumstances, an organization may utilize these tools to fund new capital, asset renewal or replacement. The intention of the financial data analysis is to provide insight into the strategies organizations employ to fund infrastructure improvements without suggesting there is a 'right' way or standardized approach.

Moving forward, local governments should be monitoring and measuring financial sustainability under a long-term financial plan. This is best achieved through the use of appropriate financial sustainability indicators that monitor sustainability through the integration of long-term asset management requirements and long-term financial plans. Asset Management BC is developing best practices for financial sustainability indicators for local governments based on accepted international best practices.



City of Quesnel bike underpass

PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

HIGHLIGHTS OF SECTION 1: FINANCE & ASSET MANAGEMENT

Reserve Funds



Debt: The 2022 data shows 79% of local governments reported debt levels are prudent and reasonable, where debt is a tool used strategically and is in line with a long-term financial plan. Since 2016 this response has increased by 22%.

Revenues: The 2022 data shows 52% of local governments reported revenues are sufficient and reliable to fund requirements for the next five years. Since 2016 this response has increased by 4%. In 2022, 19% reported revenues fluctuate year to year with no linkages between reserves and a long-term financial plan. Since 2016 this response has decreased by 1%.

Existing Levies for Capital Infrastructure Renewal: Local governments were surveyed regarding the use of other financial tools developed to meet the requirements of capital infrastructure renewal. Results from the 2022 survey shows 48% of local governments have developed a levy or other tool to help support the cost of infrastructure renewal. This response has remained steady since 2016.

PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

SECTION 2: ASSET ASSESSMENT

This section of the 2022 survey focused on the assessment of information on existing capital assets. The assessment of assets includes having access to information on the location and extent of assets; condition of assets; technical and customer level of service; risk assessment; and expenditures related to asset renewal and maintenance. The Framework describes information on assets as beneficial for guiding decision-making; aids organizations in identifying gaps; prioritizing activities based on community need; and improving overall service delivery.

Improving the condition of an asset is an ongoing process of continuous quality improvement (CQI). The practice of asset management is only as strong as its asset inventory. Therefore, ensuring the condition of all assets is known, information is collected in a standardized, reproducible manner, and information on assets is updated as required is key for ensuring CQI.

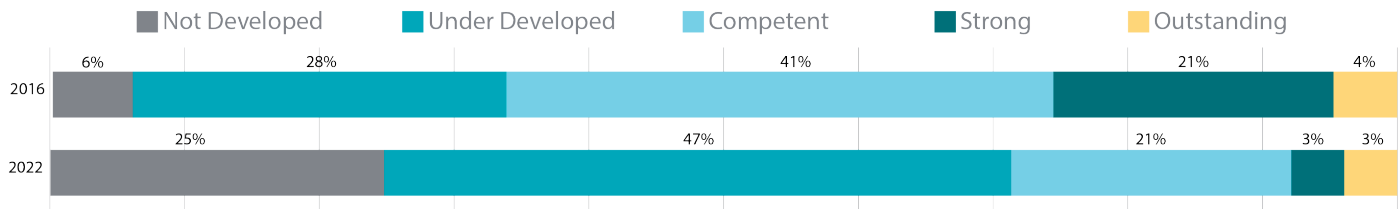


City of Rossland library project

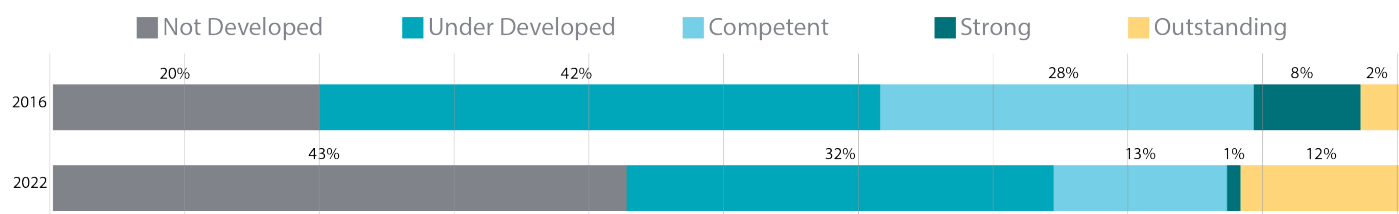
PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

HIGHLIGHTS OF SECTION 2: ASSET ASSESSMENT

Asset Expenditures: The 2022 survey data shows 27% of local governments considered the completeness of information regarding asset expenditures as competent to outstanding, a decrease of 39% since 2016.



Risk: The 2022 survey shows 26% of local governments considered the completeness of information regarding risk as it relates to service delivery for existing assets as competent to outstanding. When compared to 2016 this is a decrease of 12%. However, there was a 10% increase in outstanding.



City of Kamloops Valleyview Interchange

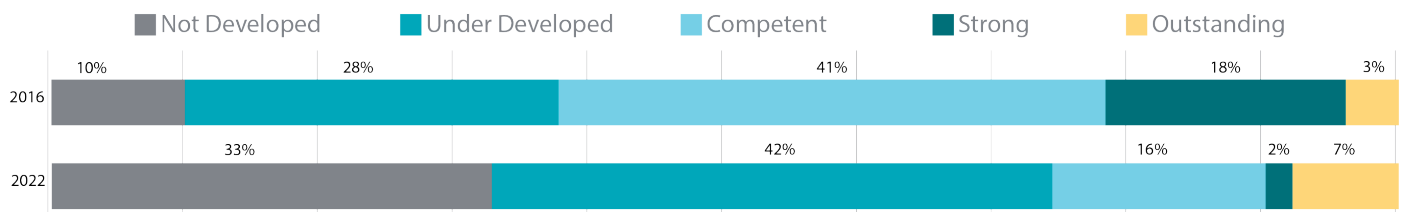


City of Victoria storm drain lining

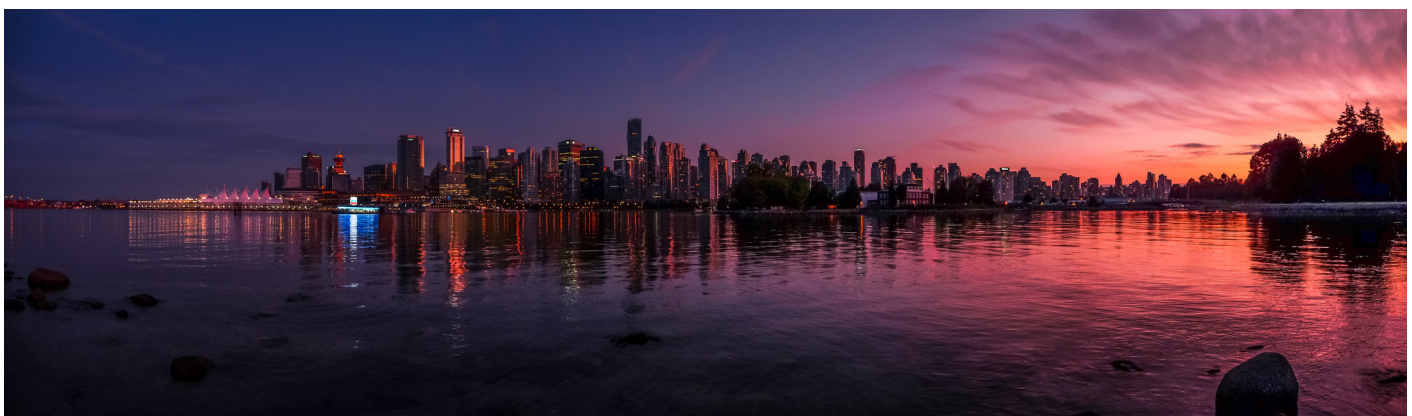
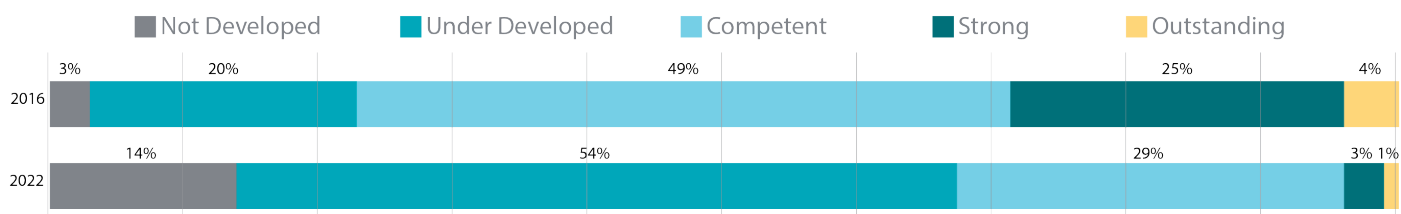
PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

HIGHLIGHTS OF SECTION 2: ASSET ASSESSMENT

Level of Service: The 2022 survey shows 25% of local governments considered the completeness of information regarding asset service levels as competent to outstanding. This results in a decrease of 37% since 2016.



Location and Condition of Assets: The 2022 survey shows 33% of local governments considered the completeness of information regarding asset location and general condition information for existing assets as competent to outstanding. When compared to 2016 this is a decrease of 45%.



City of Vancouver skyline

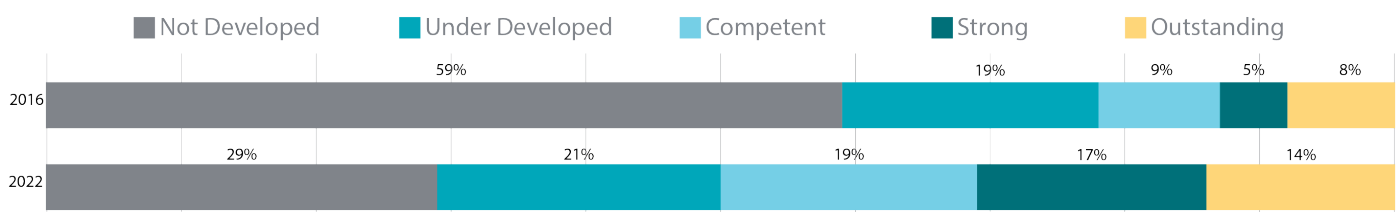
PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

SECTION 3: PLANNING FOR ASSET ASSESSMENT

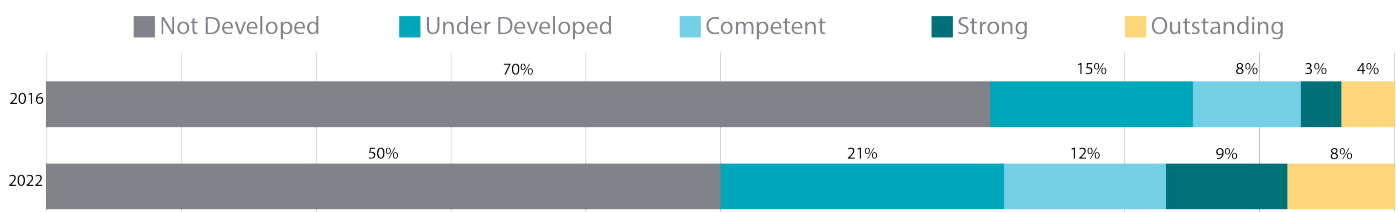
Planning for asset management focuses on activities that integrate asset management into corporate functions of the organization. These include the preparation of a policy formalizing corporate commitments, a strategy linking organization objectives to individual departments, asset plans for existing capital assets, and integrating planning documents into long-term financial plans.

Responses from the 2022 survey regarding planning for asset management showed 44% of local governments continue to be in the process of integrating asset management activities into long-term financial plans.

Plan: In 2022, 71% of local governments report completing an asset management plan(s). 50% of plans were considered competent to outstanding when compared to typical practices described by the Framework. When compared to 2016, local governments reported an improvement of 28%.



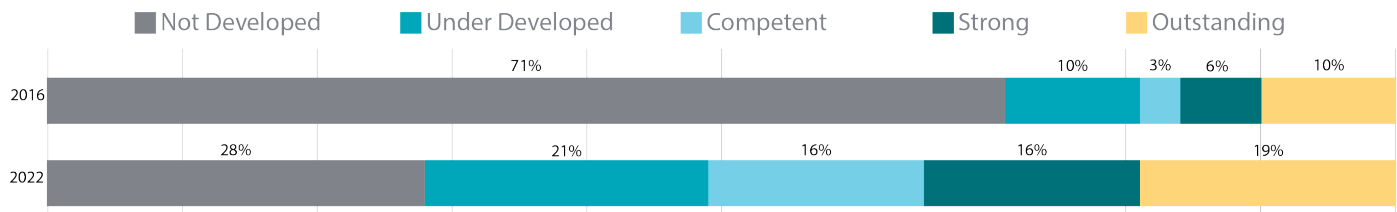
Strategy: In 2022, 50% of local governments have developed an asset management strategy. This is an improvement of 19% since 2016. Of those with existing strategies, 29% of strategies were considered competent to outstanding when compared to typical practices described by the Framework. This is an increase of 14% when compared to 2016.



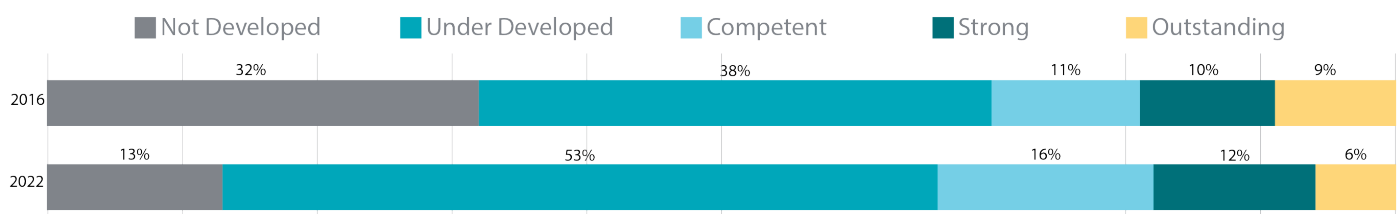
PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

HIGHLIGHTS OF SECTION 3: PLANNING FOR ASSET ASSESSMENT

Policy: In 2022, 78% of local governments indicated an asset management policy exists, an increase of 42% since 2016. Of those with existing policies in 2022, 51% were considered competent to outstanding when compared to typical practices described by the Framework. This is an increase of 32% since 2016.



Integrating Asset Management and Financial Plans: In 2022, 87% of local governments have integrated, or are in the process of integrating, asset management processes into long-term financial plans. Of those, 34% were considered competent to outstanding when compared to typical practices described by the Framework. This is an increase of 4% since 2016.



District of Hudson's Hope solar array

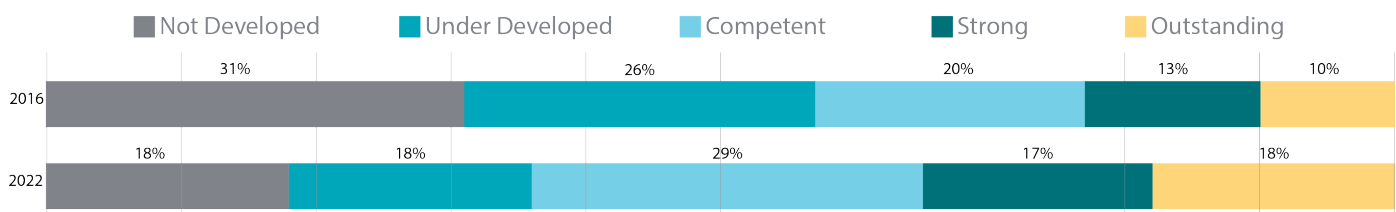
PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

SECTION 4: IMPLEMENTATION OF ASSET ASSESSMENT

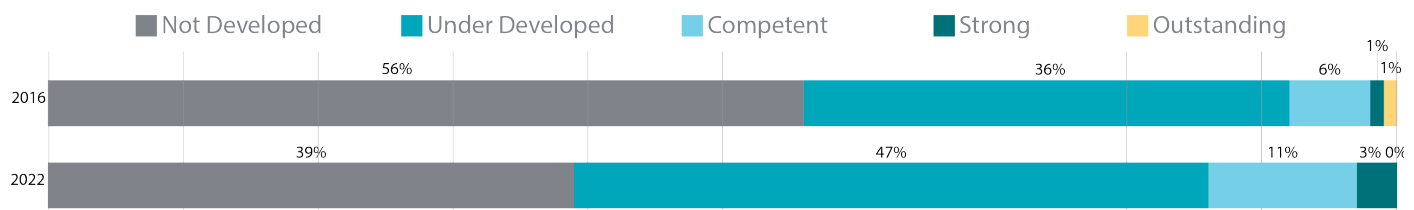
The implementation component of asset management is used to evaluate organizational capacity and ensures ongoing review, update and reporting of asset management activities to stakeholders. Implementation activities include establishing timelines and minimum requirements for asset management activities based on risk and criticality of the asset, and measuring and reporting on progress made towards achieving sustainable service delivery.

2022 survey responses to implementation practices show 64% of local governments have developed implementation practices, 61% have started implementing measurement and 52% have started reporting status of asset management practices. Since 2016, there has been a decrease of 17% of local governments reporting these activities as not developed. Measuring the progress of activities ensures organizations are meeting the expectations set out in asset management plans while reporting on asset management ensures stakeholders are informed on the progress being made towards sustainable service delivery.

Practices: The 2022 survey shows 64% of local governments have defined asset management implementation practices considered competent to outstanding when compared to typical practices described by the Framework. This is an increase of 21% since 2016.



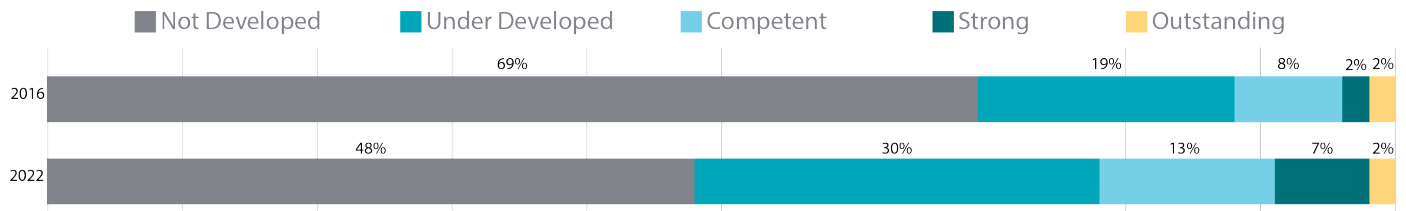
Measurement: The 2022 survey shows 57% of local governments have measured the progress of asset management activities. Of those who measure progress, 14% were considered competent to outstanding when compared to typical practices described by the Framework. This is an increase of 6% since 2016.



PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

HIGHLIGHTS OF SECTION 4: IMPLEMENTATION OF ASSET ASSESSMENT

Reporting: The 2022 survey shows 52% of local governments have reported out on the status of asset management activities. Of those who reported on progress, 22% were considered competent to outstanding when compared to the typical practices described by the Framework. This is an increase of 10% since 2016.



Continuous Improvement: Asset management is an ongoing exercise of continuous quality improvement (CQI) that is incremental, tailored to the specific needs and capacity of individual local governments. The 2022 survey shows 34% of local governments have reviewed asset management practices since their initial development and 56% reported updating asset inventories. These two activities demonstrate an increase of 14% and 11% respectively since 2016.



City of Abbotsford secondary clarifier

PART 2 SURVEY FINDINGS FOR ASSET CATEGORIES

SECTIONS 6-11: SUMMARY OF ALL ASSET CATEGORIES

The Framework describes effective asset management planning as requiring up-to-date condition assessments for all core assets as well as information on historical and, more importantly, replacement costs of assets and associated asset components. Information on the condition and replacement cost of assets is used to estimate anticipated costs of asset renewal, also known as reinvestment, and should be linked to a long-term financial plan.

Part two of the 2022 survey was based on the asset categories and methodology described in the 2016 Canadian Infrastructure Report Card. The asset categories in part two of the survey included roads & bridges, potable water, wastewater, stormwater, sports & recreation facilities, and other buildings & facilities.

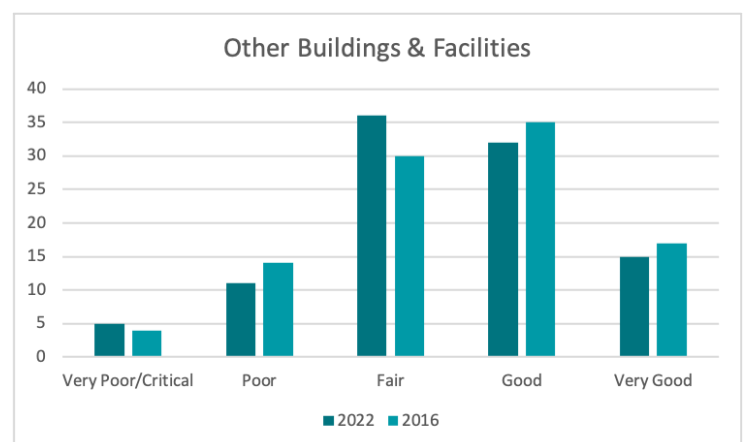
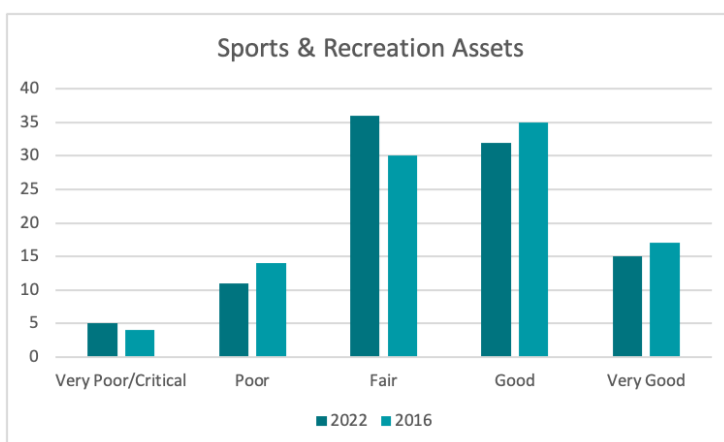
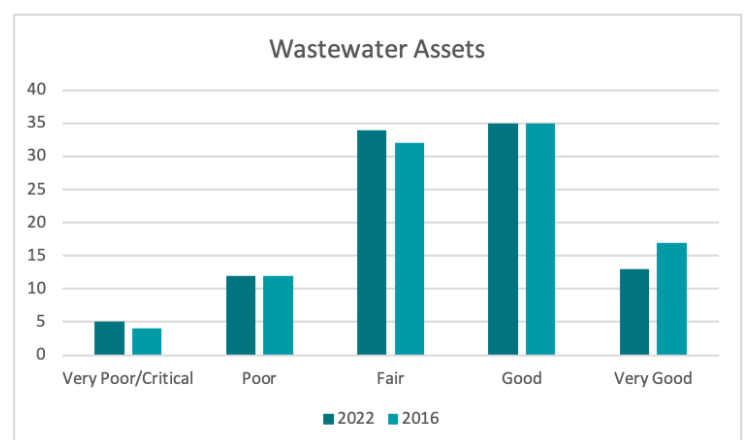
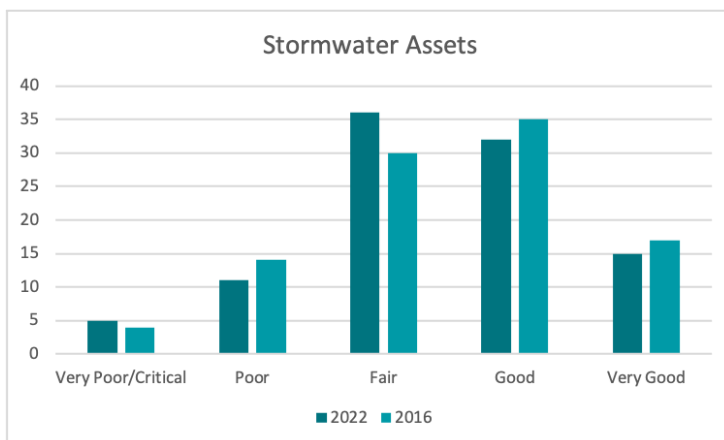
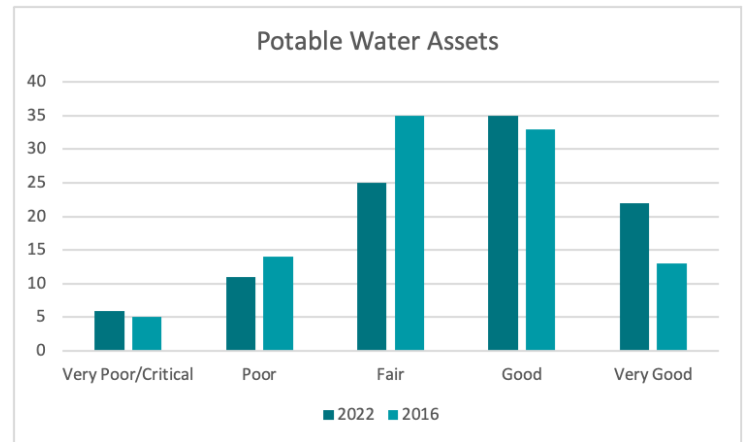
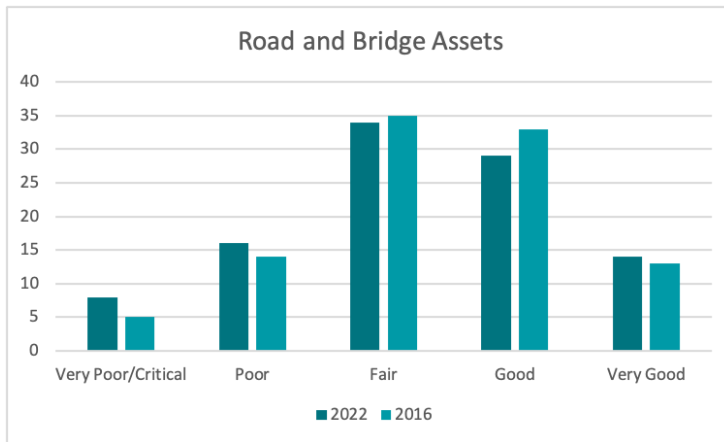
Condition: Results from the 2022 survey showed very little change to the average condition for all asset categories, other than Potable Water Assets (Figure 2). While other asset categories showed marginal condition improvements in good and very good, Potable Water Assets showed a worsening condition rating for both good and very good.



Town of Comox

PART 2 SURVEY FINDINGS FOR ASSET CATEGORIES

FIGURE 2: AVERAGE CONDITION RATING FOR EXISTING ASSETS IN 2022 AND 2016



PART 2 SURVEY FINDINGS FOR ASSET CATEGORIES

FIGURE 3: AVERAGE CONDITION RATING FOR EXISTING ASSETS IN 2022 AND 2016

Historical Costs, Replacement Costs, and Renewal Funds

When collected, information on tangible capital assets combined with condition, can be used to identify the infrastructure gap; the gap between available funding and requirements for existing asset renewal and replacement. Invested in regularly, asset renewal can help maximize the total life cycle of an asset.

It is important to note neither the 2016 or 2022 survey requested a standardized approach to calculating replacement costs. It is further recognized in actual practice, replacing or renewing an asset, in many cases, will have to include a further analysis of risk, such as climate change. Therefore, replacement costs may not be a 'like for like' exercise in practice. With this, further analysis, and any conclusions derived from this data would be inconclusive.

Furthermore, for the purposes of data analysis we have combined both cumulative and discrete responses for historical values and replacement costs together and considered all the data cumulatively.

Historical Costs

141 local governments completed the Part 2 section on Historical Costs of the 2022 survey. This was achieved either by cumulative response where all the costs were provided as a lump sum per category, or provided discretely for individual asset components, at a value of \$51.6 billion dollars (Figure 3). 26% of respondents did not report historical costs for 2022 compared to 24% in 2016.

At the time of data analysis, 180 local governments had completed the 2022 survey. As required by PSAB 3150, it was expected all 180 reporting local governments have this data. While the cumulative historical cost value (all asset categories) increased from 2016 to 2022, the roads & bridges category showed a decrease of \$4.5 billion or 27% compared to 2016. Cumulative historical cost values for all other categories increased between reporting periods with the largest increase reported for wastewater at 45% or \$3.9 billion and the smallest increase was for stormwater at \$44.6 million or 1% (Figure 2).

PART 2 SURVEY FINDINGS FOR ASSET CATEGORIES

FIGURE 3: AVERAGE CONDITION RATING FOR EXISTING ASSETS IN 2022 AND 2016

Figure 3: Reported Historical Value Costs for Six Asset Classes in 2016 and 2022

Asset Categories	2016 Respondents Reporting Historical Cost Values	2016 Cumulative Historical Cost Value	2022 Respondents Reporting Historical Cost Values	2022 Cumulative Historical Cost Value
Roads & Bridges	146	\$16,368,042,459.36	142	\$11,875,288,986.24
Potable Water	150	\$9,858,106,438.97	147	\$11,098,050,808.00
Wastewater	152	\$7,439,974,351.00	145	\$11,417,198,594.74
Stormwater	121	\$5,559,557,415.81	118	\$5,604,178,831.78
Sports & Recreation	152	\$6,020,333,452.00	148	\$7,193,565,626.24
Other Buildings & Facilities	156	\$3,534,344,504.00	146	\$4,484,928,507.55
Totals		\$48,780,358,621.14		\$51,673,211,354.55



City of Grand Forks

PART 2 SURVEY FINDINGS FOR ASSET CATEGORIES

FIGURE 3: AVERAGE CONDITION RATING FOR EXISTING ASSETS IN 2022 AND 2016

Replacement Costs

The 2022 survey received responses from 123 local governments on asset replacement cost, either by cumulative response, provided as a lump sum per category or discretely for individual asset components, at a total (all asset categories) cumulative replacement value of \$121.1 billion dollars (Figure 3). 31% of local governments did not report replacement costs in 2022 compared to 33% in 2016.

In general, 2022 survey results identified more local governments reporting on replacement costs for stormwater, sports & recreation facilities and other building & facilities reported a 16% increase in respondents. All other categories experienced a slight decrease in respondents reporting in 2022, with potable water having 2% fewer respondents and wastewater and roads & bridges having 18% and 17% fewer respondents. Important to note, the 2016 dataset includes responses from 189 local governments whereas 2022 data only includes 180.

Cumulative total replacement cost value (for all asset categories) for 2022 increased slightly from 2016 by \$6.4 billion to \$121,193,270,142 (Figure 3). The potable water category reported a decrease, \$15.8 billion equating to a 36% reduction in cumulative replacement value since 2016. All other categories reported increases to cumulative replacement value (Figure 3).



Town of Golden

PART 2 SURVEY FINDINGS FOR ASSET CATEGORIES

FIGURE 3: AVERAGE CONDITION RATING FOR EXISTING ASSETS IN 2022 AND 2016

Figure 3: Reported Replacement Value Costs for Six Asset Classes in 2016 and 2022

Asset Categories	2016 Respondents Reporting Replacement Cost Values	2016 Cumulative Replacement Cost Value	2022 Respondents Reporting Replacement Cost Values	2022 Cumulative Replacement Cost Value
Roads & Bridges	165	\$24,543,934,851.63	123	\$30,275,492,815.37
Potable Water	136	\$43,509,638,474.75	126	\$27,689,348,571.50
Wastewater	165	\$20,184,111,348.00	125	\$27,359,234,155.87
Stormwater	83	\$11,638,809,054.00	107	\$16,331,701,500.70
Sports & Recreation	100	\$7,816,397,574	131	\$12,017,331,498.03
Other Buildings & Facilities	109	\$7,030,461,630.00	129	\$7,520,161,600.50
Totals		\$114,723,352,932.38		\$121,193,270,141.97



City of Nanaimo solid waste transfer station

PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

CONCLUSION

The Canada Community-Building Agreement in BC states, in Schedule A – Ultimate Recipient Requirements (Section 5) the following:

- During the term of this Agreement, where an Ultimate Recipient is a Local Government, work to strengthen Asset Management, in accordance with the Asset Management framework developed by the Committee.

Further, Schedule F - Asset Management states:

- The Committee will develop an Asset Management Framework,
- The Framework will recognize the varying capacities of local governments and the range of ongoing asset management activities.

In 2015, the Committee approved:

- Asset Management for Sustainable Service Delivery: A BC Framework, and
- Local government asset management commitments pursuant to the Framework

The results from the 2022 survey demonstrate BC local governments have met their commitments to strengthen asset management practices pursuant to the Agreement.

In summary, the following outcomes were observed from Part One of the 2022 survey include:

- Approximately 50% of local governments have developed formal asset management processes. An increase of 24% since 2016.
- Approximately 49% of local governments have taken a corporate approach to the leadership of asset management, where 30% have also integrated staff from individual departments into asset management leadership team. This reporting has increased since 2016.
- Approximately 73% of local governments reported elected officials and local government staff understand the need and benefit of asset management. This reporting has stayed steady since 2016. It is noted the 2022 survey was completed prior to the local government election in October 2022 and these responses may not accurately reflect the current engagement of all newly elected local government officials in BC.

PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

CONCLUSION (continued)

- Approximately 50% of local governments have developed an asset management strategy which is an increase of 19% since 2016. Of those, just under 75% of local governments reported integrating asset management activities and long-term financial plans, over 66% of local governments have developed asset management policies and over 75% have developed at least one asset management plan. This reporting has been maintained since 2016.
- Over 66% of local governments reported developing asset management implementation practices, an increase of 6% since 2016.
- Over 50% of local governments have measured and just under 50% have reported on the progress of asset management activities. This is an increase of 11% since 2016 for both categories.
- For the 2022 survey a question regarding the accuracy of data provided in 2016 was asked to survey respondents. Prior to the 2022 survey being launched, it is important to note all local governments were provided access to their 2016 baseline survey data through the survey platform.
- Over 56% of local governments reported the baseline data provided to UBCM was accurate.
- 26% of respondents reported the data was either understated (11%) or overstated (15%).
- 18% of respondents reported other which when reviewed resulted in numerous responses including that they did not know their baseline data, that the baseline data was still being reconciled or the open-ended response field was left blank.

Key outcomes from part two of the 2022 survey include:

- On average, potable water and sports & recreation facilities were reported as in good condition. This was consistent with 2016 reporting.
- On average, roads & bridges and stormwater assets were reported as in fair condition. This was consistent with 2016 reporting.
- On average, other buildings & facilities and wastewater assets were reported as in fair to good condition. This is a change from 2016 reporting where these assets were reported as in good condition.
- Historical Costs, Replacement Values & Renewal Costs:
 - 74% of local governments provided cumulative historical costs on assets, a decrease of 2% since 2016;
 - 68% reported cumulative replacement costs; As of 2021, cumulative reporting shows there is, or will be, \$121.1 billion in costs associated with asset replacement; and
 - 30% reported cumulative renewal funds for assets they described as being owned by their local

PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

CONCLUSION (continued)

government, an improvement of 22% since 2016.

- Although PSAB 3150 requires local governments report historical costs for tangible capital assets, at this time just over 25% of local government were unable to report these cumulative values.

Final Comments

BC local governments have demonstrated a commitment to improving asset management practices within their respective communities. As awareness and knowledge grows, asset management practices and culture has matured. However, the 2022 survey results also indicate, while on the right path forward, there remains significant gaps and priority areas where local governments will need to improve upon if they are to realize the true benefits of asset management. Two specific gaps are:

1. Asset Assessment (Part 1: Section 2) – The 2022 survey revealed the collection, assessment and management of asset information requires additional focus and attention by local governments. While the comparison between the 2016 and 2022 survey showed a marked decrease in competency, this could largely be the result of local government's gained knowledge and understanding – with gained knowledge of asset management, they are better able to evaluate their competency. Regardless, understanding areas of risk and level of service are both critical to the overall success of asset management.
2. Condition Assessment/Replacement Cost (Part 2) – The 2016 and 2022 surveys identified gaps in a robust understanding of asset condition. While there is anecdotal evidence of overall improvement, this must be considered an ongoing exercise by local governments and an understanding of how implementing a quality improvement process (CQI) will support better decision making. Further, the importance of calculating and utilizing asset replacement costs is an apparent gap for many, if not most local governments.

It is worth noting the BC Ministry of Municipal Affairs has recently updated its Local Government Data Entry (LGDE) system to include a section on asset management. Among other new fields, asset condition and asset replacement values have been added. There is likely the opportunity for UBCM, Ministry of Municipal Affairs and Asset Management BC to work together and support building local government knowledge and capacity in improving the calculation/collection of this information. Part of this should include a standardized approach.

Finally, as UBCM and the Province enter into negotiations with the federal government to renew the Canada Community-Building Fund, there is a continued opportunity to integrate asset management criteria into the program, further building capacity within BC local governments.

PART 1 ASSET MANAGEMENT FRAMEWORK SURVEY FINDINGS 2016-2022

CONCLUSION (continued)

The Asset Management BC Framework identifies asset management is a continuous quality improvement process. Further, it identifies there is no defined 'starting point' for implementing asset management and local governments may choose to develop and implement practices within their respective organizations based on individual needs and capacity. The approach used in BC, developed by Asset Management BC, focuses on desired outcomes rather than prescribed methodologies, and allows local governments to develop and implement an approach that can be measured, incremental and tailored to their specific needs and capacity is working. While the 2022 survey results indicate there is lots of work to be done, it also shows BC local governments are on the right track.

Supported by the Asset Management BC and through the Canada Community-Building Fund, BC local governments continue to forge ahead with asset management regardless of the obstacles they have experienced over the last five years. As always, it is important to ensure the current activity and interest in asset management is maintained. UBCM will continue to support and encourage the development of asset management tools, resources and training opportunities. For asset management as a whole, and local governments in BC, Asset Management BC and its evolving community of practice has been of great benefit. It is UBCM's hope it continues to thrive as local governments continue to mature asset management practices.



City of Armstrong Fortune Creek treatment centre

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS

Questions prior to 7 are related to contact information.

7. Has your local government established a formal AM process (single response)?

Selection	Percent	Responses
Yes	51%	92
No	31%	55
In-progress	18%	33
	100%	180

8. AssetSMART 2.0 is a tool used by local governments to assess and improve organizational capacity. Has your local government used AssetSMART to evaluate organizational capacity for AM (single response)?

Selection	Percentage	Response
Yes	36%	65
No	64%	115
	100%	180

9. Select the option that best describes how your organization became familiar with AssetSMART (single response).

Selection	Percentage	Response
Staff completed a consultant lead training session.	23%	41
Staff completed an internally lead (lead by your local government) training session.	16%	28
Other	46%	83
Blank	16%	28
	100%	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

10. Based on your previous assessment using AssetSMART 2.0, for each of the four core elements indicate your local governments overall capacity level for AM (single response).

Selection	Level 1	Level 2	Level 3	Level 4	Total
Assets	12	46	36	5	99
Information	21	51	26	1	99
Finances	8	54	32	5	99
People	15	55	24	5	99

11. Has your organization completed the FCM Asset Management Readiness Scale (single response)?

Selection	Percentage	Response
Yes	46%	83
No	54%	97
	100%	180

12. For each of the five FCM competencies indicate your local governments overall readiness scale (single response).

Selection	Working on Level 1	Completed Level 1	Completed Level 2	Completed Level 3	Completed Level 4	Completed Level 5	Total
Policy & Governance	15	27	24	8	6	1	81
People & Leadership	10	33	23	10	4	1	81
Data & Information	11	30	26	9	4	1	81
Planning & Decision Making	9	28	22	18	2	2	81
Contribution to AM Practice	7	35	28	6	5	0	81

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

13. What best describes the leadership approach for AM at your local government (select all that apply-multiple responses).

Selection	Percentage	Responses
A single individual (consultant) is hired to lead AM	22%	40
AM is led by CAO/CFO following a corporate, top-down approach	49%	88
AM is led by individual staff following a bottom-up approach	43%	78
A combination of staff and council/board members lead AM following an integrated approach	21%	37
An AM department leads AM activities	13%	23
Not established	0	0

14. What best describes AM communication and information sharing practices between staff and AM leads at your local government (select all that apply-multiple responses).

Selections	Percentage	Responses
All staff understand the need for AM	22%	39
Some staff understand the need for AM	67%	120
Staff understand the benefits of AM	63%	114
Staff understand their role in AM	21%	37
Staff understand the need for continuous learning to develop their knowledge, experience and capacity for AM	51%	92
Staff work plans include time for AM activities	25%	45
Integration of AM practices across departments/divisions is commonplace	14%	26
Other	8%	15

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

15. What best describes AM communication and information sharing practices with elected officials and AM leads at your local government (select all that apply-multiple responses).

Selections	Percentage	Responses
Elected officials understand the need for AM	79%	143
Elected officials understand the benefits of AM	71%	128
Elected officials have championed AM activities as a special interest	19%	35
Progress on AM implementation is shared with elected officials	65%	117
Elected officials understand the need for continuous learning to develop their knowledge, experience and capacity for AM	33%	60
Elected officials endorse AM practices	59%	106
Integration of AM practices across departments/divisions is commonplace	16%	28

16. Has your local government established a specific levy(s) for AM renewal/replacement of existing capital assets (single response)?

Selection	Percentage	Response
Yes	48%	87
No	51%	92
Other	1%	1
	100%	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

17. Reserve Funds - Select the option that best describes your local governments reserve fund (single response).

Selection	Percentage	Response
Non-existent, there are no reserves in place	1%	1
Minimal reserves are in place, but are restricted to use	14%	25
Reserves in place to buffer short-term revenue fluctuations	9%	16
Moderate reserves are held, but are restricted to use	25%	45
Asset management reserve strategies are in place to build reserve levels established in accordance with a long-term financial plan	27%	48
Asset management reserves are held and replenished at levels established in accordance with a long-term financial plan	8%	14
Asset management reserve strategies under development	17%	31
	100%	180

18. Debt - Select the option that best describes your local governments debt level (single response).

Selections	Percent	Responses
Debt levels are high with no plan in place to reduce debt	1%	1
Debt levels are high and a debt management strategy is being considered	3%	5
Debt levels are reasonable, but debt is trending upwards	17%	31
Debt levels are prudent and reasonable; Debt is a tool we use strategically and is in line with a long-term financial plan	79%	143
Other	0%	0
	100%	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

19. Revenue - Select the option that best describes your local governments revenue stream(s) (single response).

Selections	Percent	Responses
Revenues fluctuate year to year with no linkages between reserves and a long-term financial plan	19%	35
Revenues are sufficient and reliable to fund requirements for the next five years	52%	94
Revenues are sufficient and reliable to fund requirements for the next 10 years	8%	15
Revenues are sufficient, predictable, and stable to fund long term sustainable service delivery	11%	20
Major controllable revenues are sufficient, predictable and stable to fund long term sustainable service delivery	9%	16
	100%	180

20. Location of Assets - Information on the location of assets are (single response):

Selections	Percentage	Responses
Underdeveloped	6%	11
Competent	39%	71
Strong	48%	86
Outstanding	7%	12
Not developed	0%	0
	100%	180

21.a Condition of Assets - Information on the age of assets are (single response):

Selections	Percentage	Responses
Underdeveloped	7%	13
Competent	52%	93
Strong	39%	71
Outstanding	2%	3
Not developed	0%	0
	100%	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

21b. Condition of Assets - Information on the installation dates for assets are (single response):

Selections	Percentage	Responses
Underdeveloped	12%	21
Competent	53%	95
Strong	33%	59
Outstanding	2%	4
Not developed	1%	1
	100%	180

21c. Condition of Assets - Information on the remaining useful life of assets are (single response):

Selections	Percentage	Responses
Underdeveloped	16%	28
Competent	62%	112
Strong	19%	34
Outstanding	2%	4
Not developed	1%	2
	100%	180

21d. Condition of Assets - Information on the expected retirement of assets are (single response):

Selections	Percentage	Responses
Underdeveloped	25%	45
Competent	58%	104
Strong	14%	26
Outstanding	2%	3
Not developed	1%	2
	100%	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

21e. Condition of Assets - Information on the quality and suitability of assets are (single response):

Selections	Percentage	Responses
Underdeveloped	16%	28
Competent	62%	112
Strong	19%	34
Outstanding	2%	4
Not developed	1%	2
	100%	180

22.a Level of Service - Available information on customer level of service are (single response):

Selections	Percentage	Responses
Underdeveloped	37%	66
Competent	38%	68
Strong	14%	25
Outstanding	2%	4
Not developed	9%	17
	100%	180

22b. Level of Service - Available information on technical level of service are (single response):

Selections	Percentage	Responses
Underdeveloped	33%	59
Competent	38%	68
Strong	19%	35
Outstanding	2%	3
Not developed	8%	15
	100%	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

22c. Level of Service - Available information on existing asset capacity levels are (single response):

Selections	Percentage	Responses
Underdeveloped	32%	58
Competent	43%	78
Strong	18%	32
Outstanding	2%	4
Not developed	4%	8
	100%	180

22d. Level of Service - Available information on existing asset demand are (single response):

Selections	Percentage	Responses
Underdeveloped	28%	51
Competent	46%	83
Strong	18%	32
Outstanding	3%	5
Not developed	5%	9
	100%	180

22e. Level of Service - Available information on expected future demand are (single response):

Selections	Percentage	Responses
Underdeveloped	35%	63
Competent	44%	80
Strong	13%	24
Outstanding	1%	2
Not developed	6%	11
	100%	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

23a. Risk - Risk assessments have been completed for assets (single response):

Selections	Percentage	Responses
Underdeveloped	43%	77
Competent	36%	65
Strong	12%	21
Outstanding	2%	3
Not developed	8%	14
	100%	180

23b. Risk - Information on potential risks that may impact sustainable service delivery are (single response):

Selections	Percentage	Responses
Underdeveloped	39%	71
Competent	38%	69
Strong	12%	22
Outstanding	2%	3
Not developed	8%	15
	100%	180

23c. Risk - The criticality (perceived importance) regarding asset(s) failure is (single response):

Selections	Percentage	Responses
Underdeveloped	33%	59
Competent	40%	72
Strong	18%	33
Outstanding	2%	3
Not developed	7%	13
	100%	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

23d. Risk - Assets have a risk register that accounts for the consequence of failure (single response):

Selections	Percentage	Responses
Underdeveloped	52%	93
Competent	19%	35
Strong	9%	17
Outstanding	1%	2
Not developed	18%	33
	100%	180

23e. Risk - Assets have a risk register that accounts for the probability of failure (single response):

Selections	Percentage	Responses
Underdeveloped	52%	94
Competent	21%	37
Strong	9%	16
Outstanding	1%	2
Not developed	17%	31
	100%	180

23f. Risk - Renewal, repair and/or replacement of assets is prioritized by risk or consequence of failure (single response):

Selections	Percentage	Responses
Underdeveloped	38%	68
Competent	36%	64
Strong	14%	26
Outstanding	2%	3
Not developed	11%	19
	100%	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

23g. If risk assessments have been completed, when (date) and for which assets have they been completed for (open-ended)?

Years When Risk Assessments Were Completed	Number of Times Reported
2023	2
2022	25
2021	25
2020	20
2019	18
2018	19
2017	11
2016	14
2015	11
2014	9
2013	5
2012	2
2011	1
Annually	5
Type of Asset	Number of Times Reported
Drinking Water Assets	58
Wastewater Assets	54
Stormwater Assets	36
Buildings & Facilities	28
Sports and Recreation Assets	25
Road & Bridge Assets	38
Other (Dams)	3
Other (Airport)	4
Other (Natural Assets)	4
Other (IT)	5
Other (Solid Waste)	3
Other (Fleet)	10
Other (Equipment)	6

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

24a. Current Expenditures - Available information on capital renewal costs for assets are (single response):

Selections	Percentage	Responses
Underdeveloped	23%	42
Competent	45%	81
Strong	24%	43
Outstanding	3%	6
Not developed	4%	8
	100%	180

24b. Current Expenditures - Available information on operational costs for assets are (single response):

Selections	Percentage	Responses
Underdeveloped	16%	28
Competent	49%	88
Strong	31%	56
Outstanding	3%	5
Not developed	2%	3
	100%	180

24c. Current Expenditures - Available information on planned maintenance costs for assets are (single response):

Selections	Percentage	Responses
Underdeveloped	27%	48
Competent	51%	91
Strong	18%	32
Outstanding	2%	3
Not developed	3%	6
	100%	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

24c. Current Expenditures - Available information on reactive maintenance costs for assets are (single response):

Selections	Percentage	Responses
Underdeveloped	38%	68
Competent	41%	74
Strong	16%	28
Outstanding	2%	4
Not developed	3%	6
	100%	180

24d. Current Expenditures - Available information on historical costs for assets are (single response):

Selections	Percentage	Responses
Underdeveloped	11%	20
Competent	47%	85
Strong	33%	60
Outstanding	7%	12
Not developed	2%	3
	100%	180

24e. Current Expenditures - Available information on current replacement costs for assets are (single response):

Selections	Percentage	Responses
Underdeveloped	23%	42
Competent	53%	95
Strong	21%	37
Outstanding	3%	5
Not developed	1%	1
	100%	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

24f. Current Expenditures - Available information on write-down and disposal costs for assets are (single response):

Selections	Percentage	Responses
Underdeveloped	32%	58
Competent	44%	80
Strong	14%	25
Outstanding	2%	4
Not developed	7%	13
	100%	180

24g. Current Expenditures - Available information on expected dates for acquiring new assets are (single response):

Selections	Percentage	Responses
Underdeveloped	33%	60
Competent	48%	87
Strong	14%	25
Outstanding	2%	3
Not developed	3%	5
	100%	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

25. What best describes your local governments AM policy (select all that apply-multiple response):

Selection	Percentage	Responses
An AM policy does not exist	28%	51
The policy establishes corporate commitments to AM	54%	97
The policy has been integrated into corporate plans	29%	52
The policy provides context for AM integration over all lines of business	36%	64
The policy ensures that service levels meet community priorities	53%	96
The policy ensures that service levels meet council/board priorities	32%	58
The policy defines clear expectations for developing asset inventories	28%	50
The policy defines clear expectations for the maintenance of asset inventories	29%	52
The policy makes commitments for working towards improving service levels	28%	50
The policy makes commitments for working towards extending the useful life of assets	29%	53
The policy provides staff with direction for integrating AM plans into the Long-term Financial Plan	37%	66
The policy sets clear expectations for monitoring assets	23%	41
The policy sets clear expectations for reporting on the status of assets	28%	50
The policy provides a commitment for staff to report regularly to the community on the status of the policy	24%	44
The policy has been endorsed by council/board	51%	92

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

26. What best describes your local governments AM strategy (select all that apply-multiple response):

Selection	Percentage	Response
An AM strategy does not exist	51%	91
The strategy outlines AM practices	37%	66
The strategy outlines connections to the AM policy	29%	53
The strategy describes the current state of assets	28%	51
The strategy identifies target levels of service	12%	21
The strategy identifies a desired level of service for each asset	12%	21
The strategy identifies service delivery risks to be managed	13%	23
The strategy provides AM implementation guidelines for each asset category	14%	26
The strategy establishes estimated timelines for improving each asset category	17%	30
The strategy communicates how AM is linked to corporate plans	23%	42
The strategy summarizes projected resource requirements for developing an AM plan(s)	17%	30
The strategy summarizes projected future resource requirements for AM	17%	30
The strategy makes commitments for annual reporting on AM to the community	11%	19
The strategy provides direction for improving capacity levels	14%	26
The strategy is aligned with community priorities	19%	35

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

27. What best describes your local governments status towards completing AM plans for all asset categories (single response):

Selection	Percentage	Responses
AM plans have not been developed for any asset categories	26%	46
Less than twenty-five percent (25%) of asset categories have AM plans	24%	44
Between twenty-five percent (25%) and fifty percent (50%) of asset categories have AM plans	13%	23
Between fifty percent (50%) and seventy-five percent (75%) of asset categories have AM plans	14%	26
Between seventy-five percent (75%) and ninety-nine percent (99%) of asset categories have AM plans	14%	26
All asset categories have AM plans	8%	15
	100%	180

28. What best describes your local governments AM plan(s) (select all that apply-multiple response):

Selection	Percentage	Response
AM plan(s) do not exist	29%	53
Plan(s) support the implementation of the AM policy and strategy	44%	80
Plan(s) contain condition-based lifecycle adjustments	41%	73
Plan(s) comprise information on asset condition	59%	106
Plan(s) provide information on current level of service	43%	78
Plan(s) provide information on desired level of service	27%	48
Plan(s) describe gaps between current and desired levels of service	24%	44
Plan(s) establish service goals	22%	39
Plan(s) take community priorities into consideration	28%	50
Plan(s) describe known risks	41%	74
Plan(s) describe innovative practices	15%	27
Plan(s) utilize a standardized approach when discussing assets	33%	60
Plan(s) describe staff resources required to meet goals	10%	18
Plan(s) provide a timeline for implementation	34%	61
Plan(s) provide a timeline for plan reviews	22%	39

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

29. Select the option that best describes your local governments LTFP (single response):

Selection	Percentage	Response
Our local government does not have a LTFP	11%	20.00
Our local governments LTFP is based on less than a four-year planning cycle	4%	7.00
Our local governments LTFP is based on a four-year planning cycle	11%	20.00
Our local governments LTFP is based on a five to 10-year planning cycle	63%	113.00
Our local governments LTFP is based on a 11 - 20-year planning cycle	6%	10.00
Our local governments LTFP is based on more than a 20-year planning cycle	6%	10.00
	100%	180.00

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

30. What best describes the integration of your local governments AM & LTFP plans (select all that apply-multiple response):

Selection	Percentage	Response
An LTFP does not exist	13%	24
AM plan(s) do not exist	22%	40
AM plan integration with the LTFP is in progress	44%	80
The LTFP exists, but linkages between AM plan(s) and LTFP have not been made	24%	0
The LTFP identifies gaps between AM long-term potential needs and available funding	20%	36
The LTFP includes an overview of requirements for capital asset renewal (see above for description)	36%	64
The LTFP includes an overview of requirements for capital asset upgrades (see above for description)	28%	50
The LTFP includes an overview of requirements for new capital assets (see above for description)	27%	48
The LTFP includes an overview of requirements for asset operations	21%	37
The LTFP includes an overview of requirements for asset maintenance	21%	37
The LTFP identifies opportunities for reducing costs associated with assets	7%	13
The LTFP identifies opportunities for increased funding to support assets	18%	32
The LTFP provides a basis for developing AM strategies for service, asset and financial sustainability	18%	0
The LTFP provides a basis for reviewing service sustainability	13%	24
The LTFP provides a basis for reviewing asset sustainability	16%	29

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

31. What best describes your local governments AM implementation practices (select all that apply-multiple response):

Selection	Response	Percentage
AM implementation practices are not defined	61	34%
Practices include updating asset inventories on a regular basis	108	60%
Practices include updating asset replacement costs as needed	105	58%
Practices include implementing risk management plans	51	28%
Practices include implementing asset maintenance projects	96	53%
Practices include implementing asset renewal projects	100	56%
Practices include holding regular AM team meetings to review implementation progress	37	21%
Practices include reviewing lifecycle analysis of assets	64	36%
Practices include updating related corporate plans to reflect changes in AM practices	36	20%
Practices include implementing appropriate AM systems to support the management of AM data	62	34%
Practices include developing staff knowledge transfer and succession plans	73	41%
Practices include updating and/or developing job descriptions to align with AM requirements	42	23%
Practices include using AM data to guide decision making	88	49%
Practices ensure that quality information on assets is available to staff who require it	64	36%
AM implementation practices exist but none of these selections apply	6	3%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

32. What best describes your local government's progress towards measuring AM activities (select all that apply-multiple response):

Selections	Percentage	Response
AM activities are not measured	43%	78
We measure progress toward sustainable service delivery using best practice high level corporate wide indicators that track progress annually over long periods of time	16%	28
We measure progress toward reducing infrastructure backlogs using best practice high level corporate wide indicators that track progress annually over long periods of time	8%	14
We measure high level cost of service for each service using measures our citizens can easily relate to and understand	7%	13
Measuring AM activities has resulted in the development of strategies that reduce infrastructure backlogs	3%	6
Measuring AM activities has resulted in the development of strategies for reaching desired service levels	1%	2
Measuring AM activities is used to identify communication pieces to highlight for community education and outreach	2%	3
Performance measures include tracking customer satisfaction	2%	4
Performance measures include tracking technical levels of service	1%	2
Measuring AM activities is used to identify efficient and effective cost recovery opportunities	1%	1
The Asset Management BC Roadmap is used to measure AM activities	6%	11
Other best practice tools are used to measure AM activities	2%	3
AM activities are measured but none of these selections apply	8%	15

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

33. Based on your experience with the Asset Management BC Roadmap, choose the selection that best describes your local government's current level of AM (single response):

Selection	Percentage	Responses
Basic	49%	89
Intermediate	31%	55
Advanced	3%	6
Our current level of AM is unknown	10%	18
Other, please specify...	7%	12
	100	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

34. Describe in further detail the other best practice tools that are used by your local government to measure AM activities (open ended):

Responses		
Power Plan	Asset Finda	Cityworks
GIS	Dashboards	PSD CityWide
VFA Facility	Nams+ Canada	Tempest
Brightly Asset Management Software	Internally developed Models	Civitas AM Portal
Infor Public Sector	Amanda	Asset Finda
PeopleSoft	Fulcrum	Firehall.net
Asset Register Reviews	Staff Reporting based on Inventory Tools	Budgeting Activities
Condition Assessment Reviews	Cross Department Communication	Internally Developed Statistics
AssetSmart	Council and Staff Training	Citizen Satisfaction Surveys
Asset Healthscore by your City	Asset Expenditures	IPWEA Asset Management Processes and Tools
FCM Readiness Tool	Benchmark Comparisons	NAMS Framework
Consultants	Engineering Reports	Annual Funding vs. Average Annual Asset Consumption
Corporate Asset Management Strategy	Infrastructure Funding Gap	Asset and Amenity Master Plans
Community of Practice	Financial Reporting	AM Working Group
Sustainable Asset Management Plan	Internal Working Groups	Engineering Contractor
Long-term Financial Strategy	ISO 55001	Predictive Modelling Tools for Infrastructure Cost Analysis
IIMM Practices	AWWA	Capital Reinvestment Program
KPI's	Asset Management Customer Value Global Benchmarking	Participation in a National Benchmarking Initiative
Asset Management Plans	IAM Competences Framework	Standardized Condition Ratings
Capital Strategic Outlook Tool	LTFP includes Infrastructure Report Cards for each Asset Type	Budgeting Activities

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

35. Describe below your local governments approach for measuring financial benefits of AM (open ended):

Responses		
Debt	Annual Capital Reserve Transfer/NBV of Assets	BCWWA Financial Sustainability Measures
Reserves	Annual Capital Reserve Transfer/Annual Expenditures	Net Financial Liabilities
Financial Health Score	Cost/Benefit Analysis for Capital Projects	Life Cycle Replacement Costs by Asset Category
Short-term Planning and Long-term Capital Targets	Lifecycle Modelling using IRR, NPV and Break-even	Asset Condition Ratings by Asset Category
Past Life Asset Data	KPI's	Life Cycle Gap/indicators between Funding and Costs by Asset Category
Asset Consumption Ratio	Asset Sustainability Ratio	Life Cycle Budget and Costs by Fund (general, sewer, water, etc...)
Reviewing Annual Maintenance	Acquisition Spending Relative to the Asset Base	20 Year Gap/Indicators Between Funding and Costs by Asset Category
Reviewing Renewal Costs	Amortization	Rate of Annual Asset Consumption
Increasing Am Levy by CPI Value Annually	Stability and Visibility Costs	Annual Consumption Expense by Asset Category
Sustainability Ratio	LOS	20 Year Asset Renewal Funding Ratio
Asset Funding as Compared to Sustainability Targets	Financial Benefits	Life Cycle Asset Renewal Funding Ratio
Asset Renewal Funding Ratio	Operating Surplus Ratios	NAMS
Grants	Required vs. Available Funding	Risk Based Renewal

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

Responses		
Replacement and Renewal Reserve	Budgetary Planning	Financial Outcomes
Funding Gap Analysis	Asset Maintenance and Replacement Costs	Condition Reports
Debt Costs/Revenue	Reserve Levels	Infrastructure Report Cards
Annual Capital Debt/Total Capital Spend	Unit 4	TCA NBV/Cost
CMMS and Capital Planning Software	Level of Service with Communities Ability/Willingness to Pay for SSD	Net Financial Liabilities Ratio

36. Describe below your local governments approach for measuring social benefits of AM (open ended):

Responses		
Complaints	Service Requests	Internally Generated Statistics
Service Demands	Quality of Service	Active Living Increases Across Demographics
Decrease in the Number of Assets Considered Poor/Very Poor Quality	Reduction in Service Disruptions	Water and Energy Conservation Program Targets Met
Climate Action Mitigation Targets being met	Alignment with Council Priorities	Sustainability Report Card
Reconciliation Policies Being Met	Decrease Number of Water Quality Advisories	Increase in Service Life
Satisfaction Surveys	Number of Users of a Facility or Program	Meeting Milestones of the AM Plan

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

37. Describe below your local governments approach for measuring environmental benefits of AM (open ended):

Selections		
Water Quality Control Measurements and Performance Indicators	Flood Control and Mitigation Plans	Measuring Dam Levels
GHG Emissions	Mostly Utilize Legislatively Mandated Requirements	Canopy Cover including Benefits of Natural Infrastructure
Sewage Statistics (Overflows)	Erosion Control/Mitigation	Demand Management Programs
Natural Asset Register	Energy Audits	Citizen Feedback
Solid Waste Reductions	Environmental Service Team	Air Quality Monitoring Stations (Daily/Annual Air Reports)
Incorporating AM practices into New Infrastructure Projects	Climate Action Coordinator	Ground Water Protection Planning
Energy Efficiency Reductions	Customer Satisfaction of Natural Areas	Water Consumption Education
Inflow and Infiltration Tracking	Species at Risk and Critical Habitat	Provision and Use of Composting of Yard and Garden Waste
Community Gardens	Climate and Risk Vulnerability Assessment	FireSmart Education
Sea Level Rise Study	Participation in CNAM Applied Climate Action Cohort	Increase in Number of Recreational Trails and Use

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

38. What best describes your local governments current AM reporting practices (select all that apply-multiple response):

Selection	Percentage	Response
Reporting on AM implementation has not started	52%	94
AM reports are easy to read	18%	32
AM reporting utilizes asset condition and indicator data to tell the AM story	26%	47
Reporting on AM includes debriefing staff	27%	48
Reporting on AM includes debriefing council/board	33%	59
AM reports are available for staff and council/board to review	24%	44
AM reports are prepared in accordance with LTFP reviews	8%	15
Reporting on AM is completed on an annual basis	16%	28
AM reports are available for community members to review	13%	24
Information related to AM (process/reporting) is easy to access (online/printed)	13%	24
Reporting on AM includes a public outreach component	7%	13
Reporting on AM includes public education component	6%	11
Reporting on AM is completed but none of these selections apply	2%	4

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

39. What best describes the AM activities your local government has undertaken to date (select all that apply-multiple responses):

Selection	Percentage	Responses
Assessed the current state of assets	77%	138
Developed an asset inventory for at least one asset category	89%	160
Developed an AM policy	60%	108
Developed an AM strategy	38%	68
Developed AM plan(s) for renewal assets (existing assets)	47%	85
Developed AM plan(s) for upgrading assets and new assets	29%	53
Integrated AM activities into a long-term financial plan	37%	67
Established AM implementation practices	24%	43
Measured progress towards meeting AM goals	24%	44
Reported to staff on the progress of AM	33%	59
Reported to council/board members on the progress of AM	47%	84
Reported to public on the progress of AM	17%	31
Reviewed AM practices	34%	62
Updated a portion of AM inventories	44%	80
Updated all AM inventories	12%	22

40. To gain knowledge on the improvements made in asset management practices since the 2016 baseline assessment, how do you judge the accuracy of the data previously provided to UBCM (single response)?

Selection	Percentage	Response
Baseline data previously provided to UBCM in 2016 by our organization was accurate	56%	101
Baseline data previously provided to UBCM in 2016 by our organization was overstated	15%	27
Baseline data previously provided to UBCM in 2016 by our organization was understated	11%	20
Other	18%	32
	100%	180

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

Part 2, Section 6: Road and Bridge Assets

41a-i. For the following asset components, describe the status of the asset (single response):

Assets	Asset Reported as owned by the local government	Reported Ownership in Percent (%)
Highways	12	7%
Arterials	79	44%
Collectors	132	73%
Locals	154	86%
Lane & Alleys	140	78%
Sidewalks	147	82%
Bridges	102	57%
Culverts < 3 m	121	67%
Footbridges	117	65%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

42a-50f. Referring to the asset categories provided, for each physical condition option enter a percentage for each category listed under the road & bridge network owned by your organization (multiple responses).

Assets	Condition Data Reported					
	Response	Very Poor/Critical	Poor	Fair	Good	Very Good
Highways	18	4	6	10	8	4
Arterials	88	38	58	76	72	54
Collectors	112	56	83	98	95	69
Locals	137	74	114	126	115	80
Lanes & Alleys	93	35	68	79	48	32
Sidewalks	111	45	75	92	88	68
Bridges	84	20	33	49	56	33
Culverts < 3 m	84	27	47	62	54	30
Footbridges	83	17	29	42	49	27
Averages		35	57	70	65	44

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

51-60. In 2021, what was the historical value for the road & bridge network components owned by your organization? What was the estimated replacement value for the entire road & bridge network components owned by your organization? What was the annual renewal budget for the entire road & bridge network components owned by your organization (single response for each category)?

Assets	Responses Historical Cost	Percent Historical Cost	Responses Replacement Cost	Percent Replacement Cost	Responses Renewal Value	Percent Renewal Value
Highways	4	2%	4	2%	1	1%
Arterial Roads	40	22%	45	25%	27	15%
Collector Roads	50	28%	60	33%	32	18%
Local Roads	66	37%	76	42%	42	23%
Lanes & Alleys	32	18%	44	24%	15	8%
Sidewalks	58	32%	59	33%	31	17%
Bridges	49	27%	51	28%	21	12%
Culverts <3 m	15	8%	30	17%	12	7%
Footbridges	30	17%	41	23%	14	8%
Cumulative Asset Submission	115	64%	93	52%	85	47%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

Part 2, Section 7: Potable Water Assets

61a-e. For the following asset components, describe the status of the asset (single response):

Assets	Asset Reported as owned by the local government	Reported Ownership in Percent (%)
Local (dia. <416 mm)	165	92%
Transmission (dia. >416 mm)	97	54%
Water Treatment Plants (incl. Wells)	139	77%
Water Pump Stations	152	84%
Water Reservoirs	147	82%

62a-66f. Referring to the asset categories provided, for each physical condition option enter a percentage for each category listed under the potable water network owned by your organization (multiple responses).

Assets	Condition Data Reported					
	Response	Very Poor/Critical	Poor	Fair	Good	Very Good
Local (dia. <416 mm)	137	65	90	110	114	93
Transmission (dia. >416 mm)	80	21	29	47	49	40
Water Treatment Plants (Incl. Wells)	119	22	22	53	74	56
Water Pump Stations	130	22	45	77	82	57
Water Reservoirs	125	18	33	75	85	52
Averages		30	44	72	81	60

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

67-72. In 2021, what was the historical value for the potable water network components owned by your organization? What was the estimated replacement value for the entire potable water network components owned by your organization? What was the annual renewal budget for the entire potable water network components owned by your organization (single response for each category)?

Assets	Responses Historical Cost	Percent Historical Cost	Responses Replacement Cost	Percent Replacement Cost	Responses Renewal Value	Percent Renewal Value
Distribution pipes (dia. <416 mm)	60	33%	74	69%	39	22%
Transmission (dia. >416 mm)	35	19%	43	40%	19	11%
Water Treatment (incl. Wells)	59	33%	70	65%	24	13%
Water Pump Stations	62	34%	71	66%	30	17%
Water Reservoirs	68	38%	73	68%	25	14%
Cumulative Asset Submission	124	69%	98	91%	85	47%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

Part 2, Section 8: Stormwater Assets

73-78. For the following asset components, describe the status of the asset (single response):

Assets	Asset Reported as owned by the local government	Reported Ownership in Percent (%)
Culverts (dia. < 3 m)	127	71%
Stormwater Pipes (dia. < 450 m)	138	77%
Stormwater Pipes (dia. 450-1500 mm)	123	69%
Stormwater Pipes (dia. > 1500 mm)	66	37%
Drainage Pump Stations	52	29%
Stormwater Management Facilities	60	34%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

79a-84f. Referring to the asset categories provided, for each physical condition option enter a percentage for each category listed under the stormwater network owned by your organization (multiple responses).

Assets	Condition Data					
	Response	Very Poor/Critical	Poor	Fair	Good	Very Good
Culverts (dia. < 3 m)	86	29	50	63	56	31
Stormwater Pipes (dia. < 450 m)	111	46	68	83	76	53
Stormwater Pipes (dia. 450-1500 mm)	95	30	54	65	62	44
Stormwater Pipes (dia. > 1500 mm)	49	10	15	27	22	16
Drainage Pump Stations	45	5	11	17	16	14
Stormwater Management Facilities	48	4	5	15	21	13
Averages		21%	34%	45%	42%	29%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

85-91. In 2021, what was the historical value for the stormwater network components owned by your organization? What was the estimated replacement value for the entire stormwater network components owned by your organization? What was the annual renewal budget for the entire stormwater network components owned by your organization (single response for each category)?

Assets	Responses Historical Cost	Percent Historical Cost	Responses Replacement Cost	Percent Replacement Cost	Responses Renewal Value	Percent Renewal Value
Culverts (dia. < 3 m)	30	17%	47	26%	20	11%
Stormwater Pipes (dia. < 450 m)	36	20%	60	33%	30	17%
Stormwater Pipes (dia. 450-1500 mm)	32	18%	51	28%	17	9%
Stormwater Pipes (dia. > 1500 mm)	12	7%	24	13%	8	4%
Drainage Pump Stations	15	8%	20	11%	8	4%
Stormwater Management Facilities	7	4%	15	8%	5	3%
Averages	96	53%	78	43%	66	37%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

Part 2, Section 9: Wastewater Assets

92-99. For the following asset components, describe the status of the asset (single response):

Assets	Asset Reported as owned by the local government	Reported Ownership in Percent (%)
Forcemains	147	82%
Wastewater Pipes (dia. < 450 mm)	163	91%
Wastewater Pipes (dia. 450-1500 mm)	100	56%
Wastewater Pipes (dia. > 1500 mm)	48	27%
Wastewater Treatment Plants	107	59%
Lagoon Systems	81	45%
Wastewater Pump Stations	156	87%
Wastewater Storage Tanks/Pipes	62	34%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

100a-107f. Referring to the asset categories provided, for each physical condition option enter a percentage for each category listed under the wastewater network owned by your organization (multiple responses).

Assets	Condition Data					
	Response	Very Poor/Critical	Poor	Fair	Good	Very Good
Forcemains	114	22	40	67	75	45
Small Local Collection Pipes < 450 mm	130	49	86	108	96	67
Large Local Collection Pipes 450-1500 mm	77	21	43	57	52	32
Trunk Collection Pipes > 1500 mm	30	1	7	12	8	3
Wastewater Treatment Plant	101	18	26	43	58	36
Lagoon Systems	73	7	15	34	33	9
Wastewater Pump Stations	134	29	64	93	94	43
Wastewater Storage Tanks/Pipes	44	1	4	15	19	7
Averages		19%	36%	54%	54%	30%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

108-116. In 2021, what was the historical value for the wastewater network components owned by your organization? What was the estimated replacement value for the entire wastewater network components owned by your organization? What was the annual renewal budget for the entire wastewater network components owned by your organization (single response for each category)?

Assets	Responses Historical Cost	Percent Historical Cost	Responses Replacement Cost	Percent Replacement Cost	Responses Renewal Value	Percent Renewal Value
Forcemains	42	23%	58	32%	19	11%
Small Local Collection Pipes < 450 mm	50	28%	71	39%	33	18%
Large Local Collection Pipes 450-1500 mm	26	14%	43	24%	17	9%
Trunk Collection Pipes > 1500 mm	7	4%	8	4%	1	1%
Wastewater Treatment	47	26%	59	33%	26	14%
Wastewater Lagoons	31	17%	28	16%	7	4%
Wastewater Drainage Pump Stations	64	36%	79	44%	33	18%
Wastewater Storage	11	6%	12	7%	4	2%
Cumulative Asset Submission	126	70%	95	53%	85	47%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

Part 2, Section 10: Sports and Recreation Assets

There is no question 117; For data analysis purposes all responses not related to cumulative values for airports, wharves and harbours have been moved to 'Other Buildings and Facilities' section.

118-142. For the following asset components, describe the status of the asset (single response):

Assets	Asset Reported as owned by the local government	Reported Ownership in Percent (%)
Indoor Rinks: Single pad	78	43%
Indoor Rinks: 2-3 pads	25	14%
Indoor Rinks: 4 pads (quad)	2	1%
Indoor Rinks: 5+ pads	3	2%
Outdoor Rinks	31	17%
Indoor Pool: 25 m	52	29%
Indoor Pool: 50 m or longer	17	9%
Indoor Pool: Leisure pools	43	24%
Outdoor Pool	36	20%
Wading Pool	27	15%
Splash Pool	50	28%
Skateparks (indoor/outdoor)	105	58%
Indoor Curling Rinks	61	34%
Stadiums (indoor/outdoor)	21	12%
Tennis Courts (indoor/outdoor)	130	72%
Sports Fields (indoor/outdoor)	138	77%
Ski hills	5	3%
Parks	171	95%
Trails	155	86%
Community Recreation Centres / Multiplexes	106	59%
Seniors Centres	47	26%
Youth Centres	30	17%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

143a-167f. Referring to the asset categories provided, for each physical condition option enter a percentage for each category listed under the sport and recreation network owned by your organization (multiple responses).

Assets	Condition Data					
	Response	Very Poor/Critical	Poor	Fair	Good	Very Good
Indoor Rinks: Single pad	75	13	18	34	33	20
Indoor Rinks: 2-3 pads	32	1	2	10	11	7
Indoor Rinks: 4 pads (quad)	15	0	0	0	0	0
Indoor Rinks: 5+ pads	16	0	0	1	0	0
Outdoor Rinks	40	3	4	10	77	6
Indoor Pool: 25 m	54	8	18	22	14	16
Indoor Pool: 50 m or longer	24	0	1	2	6	4
Indoor Pool: Leisure pools	45	3	9	16	15	13
Outdoor Pool	49	10	9	17	10	2
Wading Pool	33	2	6	8	7	3
Splash Pool	52	4	6	13	22	12
Skateparks (indoor/outdoor)	100	8	13	38	44	24
Indoor Curling Rinks	61	6	16	30	19	5
Stadiums (indoor/outdoor)	32	0	1	8	5	3
Tennis Courts (indoor/outdoor)	118	21	35	61	52	27
Sports Fields (indoor/outdoor)	120	17	27	68	75	40
Ski hills	17	0	1	3	2	1
Parks	139	29	46	88	109	47
Trails	130	21	40	81	92	44
Community Recreation Centres / Multiplexes	101	19	36	50	57	32
Seniors Centres	53	4	10	21	17	11
Youth Centres	35	1	3	14	10	7
Averages		8%	14%	27%	31%	15%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

168-193. In 2021, what was the historical value for the sports and recreation network components owned by your organization? What was the estimated replacement value for the entire sport and recreation network components owned by your organization? What was the annual renewal budget for the entire sport and recreation network components owned by your organization (single response for each category)?

Assets	Responses Historical Cost	Percent Historical Cost	Responses Replacement Cost	Percent Replacement Cost	Responses Renewal Value	Percent Renewal Value
Indoor Rinks: Single pad	31	17%	35	19%	20	11%
Indoor Rinks: 2-3 pads	12	7%	12	7%	5	3%
Indoor Rinks: 4 pads (quad)	0	0%	0	0%	0	0%
Indoor Rinks: 5+ pads	1	1%	1	1%	1	1%
Outdoor Rinks	6	3%	13	7%	4	2%
Indoor Pool: 25 m	16	9%	19	11%	13	7%
Indoor Pool: 50 m or longer	7	4%	8	4%	4	2%
Indoor Pool: Leisure pools	6	3%	7	4%	3	2%
Outdoor Pool	20	11%	22	12%	11	6%
Wading Pool	6	3%	6	3%	4	2%
Splash Pool	18	10%	20	11%	6	3%
Skateparks (indoor/outdoor)	47	26%	50	28%	11	6%
Indoor Curling Rinks	18	10%	20	11%	8	4%
Stadiums (indoor/outdoor)	12	7%	11	6%	4	2%
Tennis Courts (indoor/outdoor)	56	31%	54	30%	25	14%
Sports Fields (indoor/outdoor)	62	34%	52	29%	24	13%
Ski hills	2	1%	1	1%	0	0%
Parks	80	44%	70	39%	45	25%
Trails	65	36%	39	22%	17	9%
Community Recreation Centres / Multiplexes	50	28%	57	32%	30	17%
Seniors Centres	21	12%	22	12%	12	7%
Youth Centres	11	6%	4	2%	11	6%
Airports	27	15%	19	11%	8	4%
Harbors	33	18%	34	19%	15	8%
Wharves	7	4%	5	3%	3	2%
Cumulative Asset Submission	107	59%	88	5%	74	41%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

Part 2, Section 11: Other Buildings and Facility Assets

194-203. For the following asset components, describe the status of the asset (single response):

Assets	Asset Reported as owned by the local government	Reported Ownership in Percent (%)
Police Stations	61	34%
Fire Stations	163	91%
Paramedic Stations	13	7%
Administrative Buildings, Service Centres, Work Yards	176	98%
Shelters (e.g. youth, women's, homeless)	8	4%
Libraries	84	47%
Childcare / Daycare Centres	20	11%
Community Centres and Cultural Facilities	118	66%
Health Care Facilities	14	8%
Long-term Care Centres	2	1%
Airports	53	29%
Harbors	12	7%
Wharves	71	39%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

204a-212f. Referring to the asset categories provided, for each physical condition option enter a percentage for each category listed under the other buildings and facilities network owned by your organization (multiple responses).

Paramedic data was not captured in this data set.

Assets		Condition Data					
		Response	Very Poor/Critical	Poor	Fair	Good	Very Good
Police Stations		63	10	19	27	30	20
Fire Stations		141	28	47	78	75	46
Administrative Buildings, Service Centres, Work Yards		152	38	59	98	96	39
Shelters (E.g. youth, women’s, homeless)		20	1	3	2	2	0
Libraries		74	6	13	27	35	21
Childcare / Daycare Centres		80	0	0	1	2	2
Community Centres and Cultural Facilities		119	10	19	28	25	9
Health Care Facilities		83	1	2	7	2	4
Long-term Care Centres		75	0	0	0	0	0
Airports		55	31	40	61	50	28
Harbors		24	42	14	58	29	72
Wharves		68	57	44	64	61	45
Average			19%	22%	38%	34%	24%

APPENDIX A: PHASE 3 SURVEY QUESTIONS & RESULTS (continued)

213-222. In 2021, what was the historical value for the other buildings and facilities network components owned by your organization? What was the estimated replacement value for the entire other buildings and facilities network components owned by your organization? What was the annual renewal budget for the entire other buildings and facilities network components owned by your organization (single response for each category)?

Cumulative responses below are exclusive to reporting for discrete assets and not cumulative values. Cumulative values will be found in the 'Sports and Recreation Facilities'.

Assets	Responses Historical Cost	Percent Historical Cost	Responses Replacement Cost	Percent Replacement Cost	Responses Renewal Value	Percent Renewal Value
Police Stations	43	24%	38	21%	22	12%
Fire Station	100	56%	97	54%	46	26%
Paramedic Stations	0	0%	0	0%	0	0%
Administrative Buildings, Service Centres, Work Yards	104	58%	95	53%	46	26%
Shelters (e.g. youth, women's, homeless)	5	3%	4	2%	2	1%
Libraries	49	27%	43	24%	21	12%
Childcare/ Daycare Centres	9	5%	9	5%	6	3%
Community Centres and Cultural Facilities	69	38%	62	34%	36	20%
Health Care Facilities	11	6%	9	5%	3	2%
Long-term Care Centres	0	0%	0	0%	0	0%
Airports	27	15%	19	11%	8	4%
Wharves	33	18%	34	19%	15	8%
Harbours	7	4%	5	3%	3	2%
Cumulative Asset Submission	98	54%	82	46%	61	34%

APPENDIX B: FEEDBACK RECEIVED FROM SURVEY PARTICIPANTS

Feedback received from the 2022 survey was positive. Some local governments shared how asset management activities funded priorities for improving and moving forward with asset management, and challenges with implementing and building internal capacity to support asset management. Generally local governments continue to be enthusiastic about the evolution their asset management practices. There were 34 responses received and numerous emailed feedback provided regarding the 2022 report. When reviewing we were able to split feedback into two broad categories:

1. Local governments who wanted to share more about their journey with asset management further, including next steps, and
2. Local governments who had suggestions regarding improvements to 2022 survey functionality and design.

Functionality of Form

Feedback received from local governments indicated that if a more sophisticated 2022 survey could be built ensuring that subsequent related questions did not ask the same question twice would be appreciated. Furthermore, avoiding the use of radio buttons where another type of button was also being used (e.g. numeric field) would also be helpful as radio buttons cannot be reset if accidentally selected. Overall, the main complaint from 2022 survey users was that the system was slow and often timed out when saving. This was an ongoing issue that remains under investigation.

Content Found Within Form

A number of respondents commented that they had ownership of assets that were not included in the form that were of significant financial value. The inclusion of assets such as IT, Fleet & Equipment, Land, Natural Assets were mentioned. The ability to expand outside of a core set of assets is likely to become an option as asset management matures in BC. Furthermore, there remains a desire to provide precise versus accurate information. For example, when providing discrete values for historical, replacement and/or renewal values, respondents are challenged by deciphering whether or not a certain component of a discrete asset should be included or not. All components that contribute to the overall function of an asset should always be reported. When reporting cumulative values for the same questions, it is the value that is of most concern to report. Finally, depending on the way a respondent classifies the condition of an asset and/or how those assets are broken out into discrete components remains an ongoing challenge for respondents.

Capacity & Historical Knowledge

Since the 2016 survey local governments have been challenged, and continue to be so, when it comes to organizational capacity/priorities due to emergent issues, and labor gaps among other issues. High rates of staff turnover have left many organizations without a clear path forward when seeking historical information on assets. Furthermore, vacant positions/lack of internal staff capacity has hindered local government's ability to train-up staff in asset management let alone prioritize asset management activities. Respondents also reported that they relied on incomplete or estimated data when reporting on the 2022 survey. Estimate data was described as data that was not based on physical confirmation but instead based on useful life.

Streamlining of Reporting

Feedback from respondents included reducing the number of questions asked and multiple reporting requests from individual organizations. As noted in the report conclusions, UBCM and the province are working together to streamline reporting.

APPENDIX C: RESOURCE ORGANIZATIONS

Asset Management BC

BC's leader in guiding and supporting local governments on the path towards sustainable service delivery. Asset Management BC is comprised of local government representatives and key industry associations, offers tools, resources and training opportunities and a quarterly newsletter.

Union of BC Municipalities

Subscribe to UBCM's weekly newsletter, The Compass, to receive announcements on future program intakes.

Canada Community-Building Fund (CCBF)

The CCBF Fund in BC has two program streams available to Local Governments for asset management activities. Each stream allows for eligible costs under Capital and Capacity Building project categories. Community Works Fund (CWF) is delivered to all local governments in BC through a direct annual allocation where local governments make local choices about which eligible projects to fund and report annually on these projects and their outcomes to UBCM.

Local Government Program Services

The Asset Management Planning Program was created in 2014 through a \$1.5 million grant from the Ministry of Municipal Affairs. The intent of this on-going program is to assist local governments in delivering sustainable services by extending and deepening asset management practices within their organizations.

Federation of Canadian Municipalities

Since 2017, FCM has offered the Municipal Asset Management Program, a five-year, \$50-million program that supports Canadian cities and communities to make informed decisions about infrastructure, such as the planning and construction of roads, recreational facilities, and water and wastewater systems. While the program has ended FCM has created many products to support asset management activities and has fostered a community of asset management practitioners.

APPENDIX C (continued)

Ministry of Municipal Affairs

The Infrastructure Planning Grant Program offers grants to support local government in projects related to the development of sustainable community infrastructure. Grants up to \$10,000 are available to help improve or develop long-term comprehensive plans and can be used for a range of activities related to assessing the technical, environmental and/or economic feasibility of municipal infrastructure projects.



Prince George Cameron Street bridge



UBCM

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