Asset Management Roadmap

Guide for Implementing
Asset Management Practices

Asset Management BC
ROADMAP CASE STUDIES REPORT

MAY 2011

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Case Study Reports

CASE STUDY ONE: District of Lake Country

CASE STUDY TWO: City of Powell River

CASE STUDY THREE: City of Merritt

CASE STUDY FOUR: District of Tofino

1 Case Studies: Implementation of AM Practice

1.1 Project Overview

Four Municipalities participated in a Case Study project to review Asset Management Practices within their organizations. They are:

- City of Powell River;
- City of Merritt;
- District of Lake Country; and
- District of Tofino.

These case studies were part of a commission to develop a Generic Asset Management Roadmap. The following is a quotation from the Request for Proposal document for the Asset Management Roadmap. It sets out the overall context for the project and the intended use of the deliverables.

> *"Asset Management BC will co-ordinate four (4) case studies to develop an asset management roadmap. Using the four communities as representative of smaller BC communities, the similarities and differences of each will be examined with respect to the steps necessary to prepare an asset management strategy. A generic approach to a roadmap will be prepared that will be available to any community and used to assist the community in developing an asset management plan and strategy."*

The first and primary purpose of the case study work was therefore to determine what the status of asset management was within each organization. This refers to understanding what asset management practices have been implemented or are in the process of being implemented and to what level and scope they are complete.

This is the ***Asset Management Practices Review***.

In addition to this review, the project also included to:

- *Complete an **Asset Management Gap Assessment** specific to each organization, comparing their current state of asset management with the proposed Asset Management BC (AMBC) Roadmap;*
- *Develop an **Asset Management Strategy** specific to each organization and appropriate to their community needs;*
- *Consult on the outcomes of the asset management practices review, gap assessment, draft Roadmap and the proposed strategy for each organization;*
- *Confirm a plan to progress implementation of basic asset management practices; an **Asset Management Improvement Plan**; and*
- *Review and amend the content of the draft **Roadmap** based on outcomes from Case Studies, if appropriate.*

1.2 Case Study Reports

After establishing the current asset management practices in each organization, a comparison (gap assessment) was completed between the current situation and the work that needs to be in place to achieve a basic level of asset management practice.

Asset Management is overall a way of doing business. It includes many asset management practices and various levels of detail and complexity. The reference used to establish basic level asset management for the gap assessment was a draft of the proposed AMBC Roadmap.

A description of the minimum criteria for basic, intermediate and advanced level asset management practice is included in the AMBC Roadmap.

1.3 Roadmap Modules

The Roadmap identifies 17 modules of asset management practice that should be in place for basic level asset management. Intermediate and advanced levels of asset management include these same 17 modules as well as additional modules. However the standards of accuracy and completeness as well as the level of detail required for each module is higher for intermediate level than for basic level and higher still for advanced level.

The Roadmap includes information sheets for each of the 17 modules for basic level asset management practice. These sheets specify minimum standards for basic, intermediate and advanced level asset management. A copy of this information can be found in the Asset Management BC Roadmap.

1.4 Results Overview

All four organizations, although representing quite different communities and being at different stages of implementing asset management, had consistently similar outcomes regarding:

- What practices they have in place;
- What practices they are currently working to improve; and
- What areas they have not done but now realize they need to.

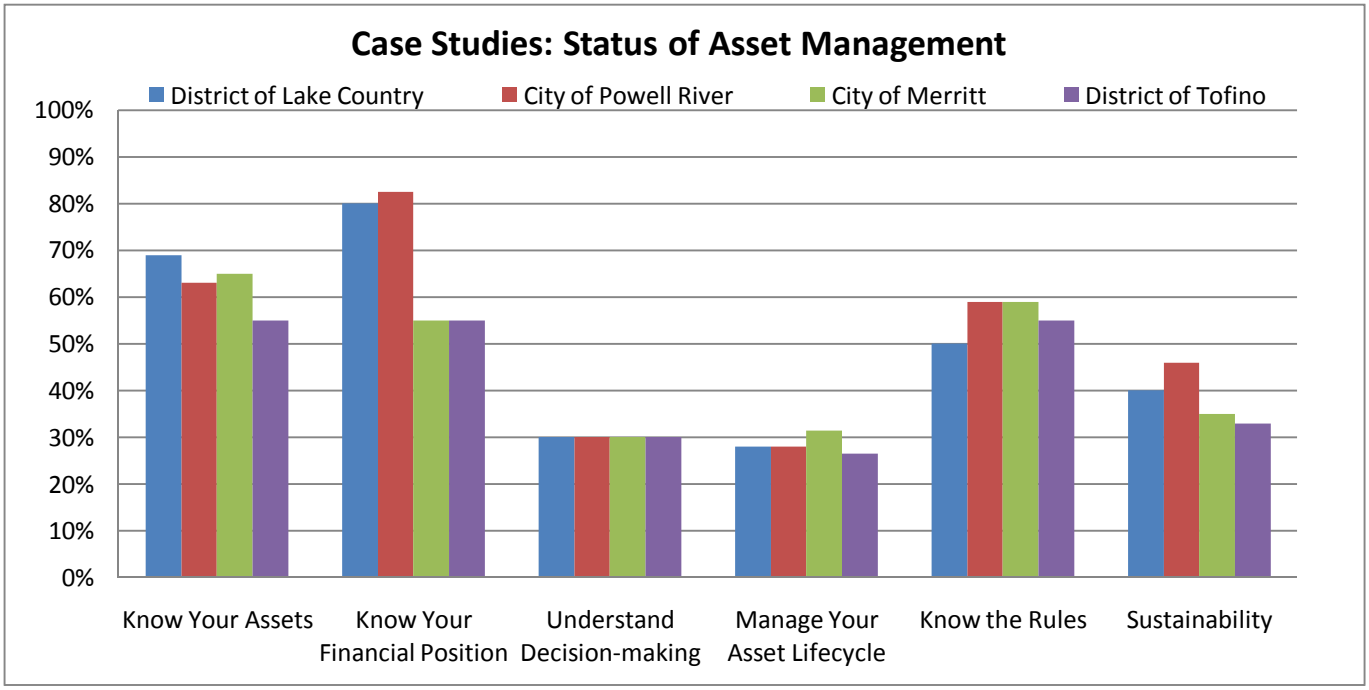
A review of the case study reports and the assessment results, demonstrates that each organization is following a similar logical path. They are just at different points along the path and have used in some cases, different approaches.

All four municipalities have clearly understood that asset data and financial data are the foundation for everything else in asset management.

Typically the organizations have had a good start on their asset inventory as a result of work done for PSAB 3150 reporting on Tangible Capital Assets.

Similarly all have some value information but not all have an understanding of current values or future liabilities for asset renewals. None of the participants were currently recording maintenance costs separate from operational costs. However one organization has these costs recorded in a way that they could retrospectively separate maintenance from operational costs if they needed to.

The following graph provides a summary of the overall outcomes compared to the Roadmap modules for basic asset management practices.



The values shown in the graph are 'weighted average scores'. These were computed from a rating for each asset management practice module in each category. The ratings were assessed from our review of data provided by each organization.

The table below gives the values for the 'weighted average scores' for each organization.

*Weighted Average Scores: **Status of Implementation** of Basic Level Asset Management Practices*						
Category	Know your Assets	Know your Financial Position	Understand Decision-making	Manage your Asset Lifecycle	Know the Rules	Sustainability
District of Lake Country	69%	80%	30%	28%	50%	40%
City of Powell River	63%	83%	30%	28%	59%	46%
City of Merritt	65%	55%	30%	32%	59%	35%
District of Tofino	55%	55%	30%	27%	55%	33%

All participants had little if anything documented for decision making. However, this does not necessarily mean that the decision-making processes require change. It is possible to have robust, defendable decision processes in place but have insufficient documentation.

Generally the following points in regard to decision-making could not be verified from data provided. It is acknowledged none-the-less, that the specific people making various decisions could on a case by case basis provide such information:

- understanding what information needed to be known for a suitably informed decision;
- being able to check that all relevant issues have been considered in making a decision; and
- being able to readily verify and defend the basis for a decision

The management of asset lifecycle category scored low in all cases due to:

- Lack of documentation; and
- The fact that the connection between the strategic goals of the organization and day to day asset activities is still in the process of discovery.

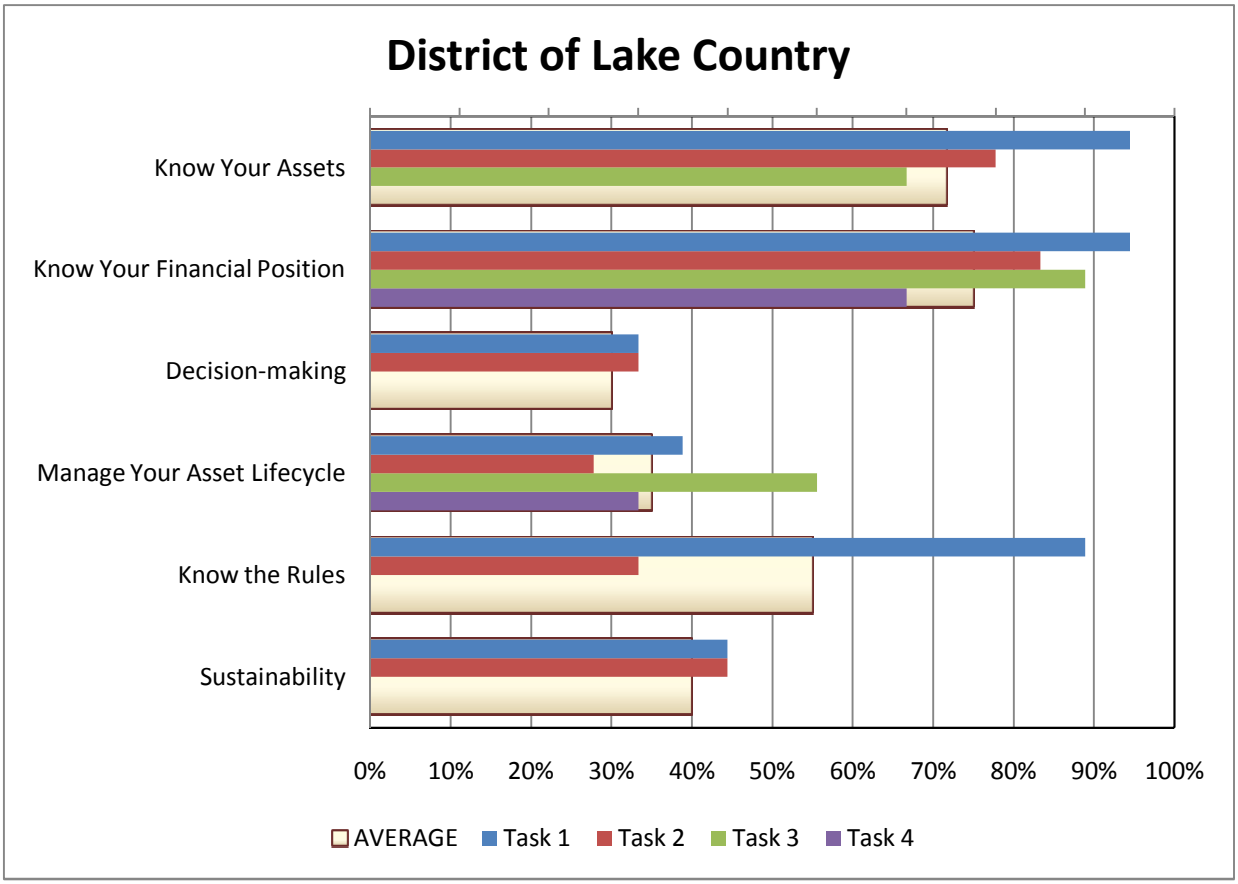
It will take time and consideration of more information for relevant staff to fully understand how the relationship between strategy and operations might be made visible and tracked in a practical and effective way.

To some degree in each organization, improvements are needed on documentation of compliance issues and procedures to verify if all relevant 'rules' are being managed appropriately. Most did not have a specific policy in place regarding any aspect of asset management practice.

In regard to sustainability, some of the participants had evidence of considering sustainability issues within their master plans and one organization had a sustainability strategy project in progress.

1.5 Lake Country Results Summary

The following graphs provide a summary of the asset management status for the District of Lake Country.

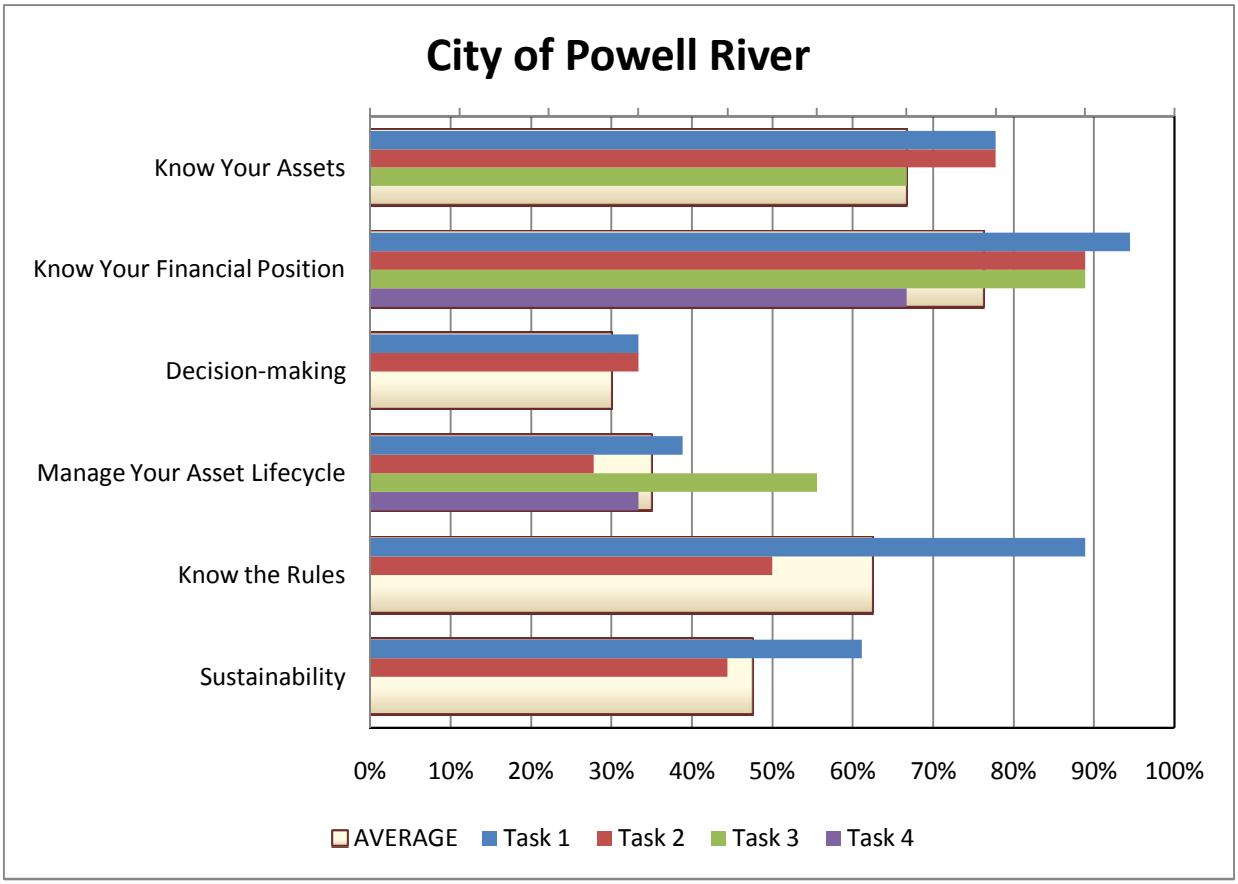


Lake Country has completed some excellent foundation work for asset management. The highlights of their progress to date include:

- A fully detailed long term capital work program for asset renewals for all of their main asset groups (This is in their IAMCP document);
- A program (and recently funding approval for 2011) to resolve key data gaps;
- Majority of information for key asset groups is available electronically and being shared through the corporate GIS system;
- Master Plans for water, wastewater and transportation have been completed;
- Good understanding of corporate and activity level goals; and
- Some assessment projects in support of sustainable management have been completed (i.e. Road Inventory Assessment and water Facilities Assessment).

1.6 Powell River Results Summary

The following graphs provide a summary of the asset management status for the City of Powell River.

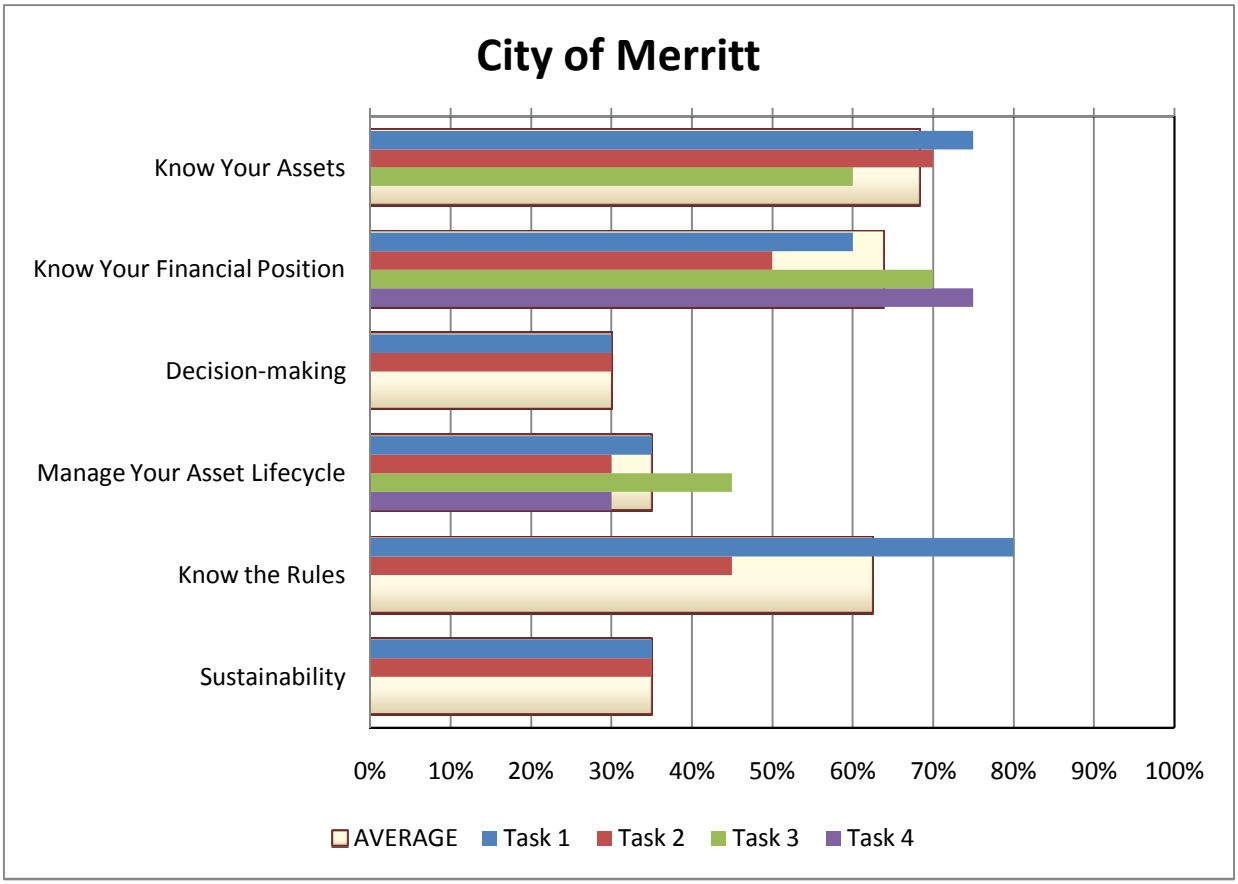


Powell River has been committed to a number of major construction projects and resources have not been available to progress as quickly on asset management initiatives as much as they would like to. However some excellent preparation work has and is being actioned, not the least of which is participation in this project. Through this project they gain an improvement plan for asset management that they can put in place over the next few years. The highlights of their asset management preparedness include:

- Significant asset renewal work has been scheduled and is in progress;
- Majority of information for key asset groups is available electronically and being shared through the corporate GIS system;
- Although records of maintenance and operational costs have historically been combined, it is possible (due to the way they have been recorded), to separate these costs reasonably easily for all the key asset groups; and
- Strategic planning has been undertaken for all sectors.

1.7 Merritt Results Summary

The following graphs provide a summary of the asset management status for the City of Merritt.

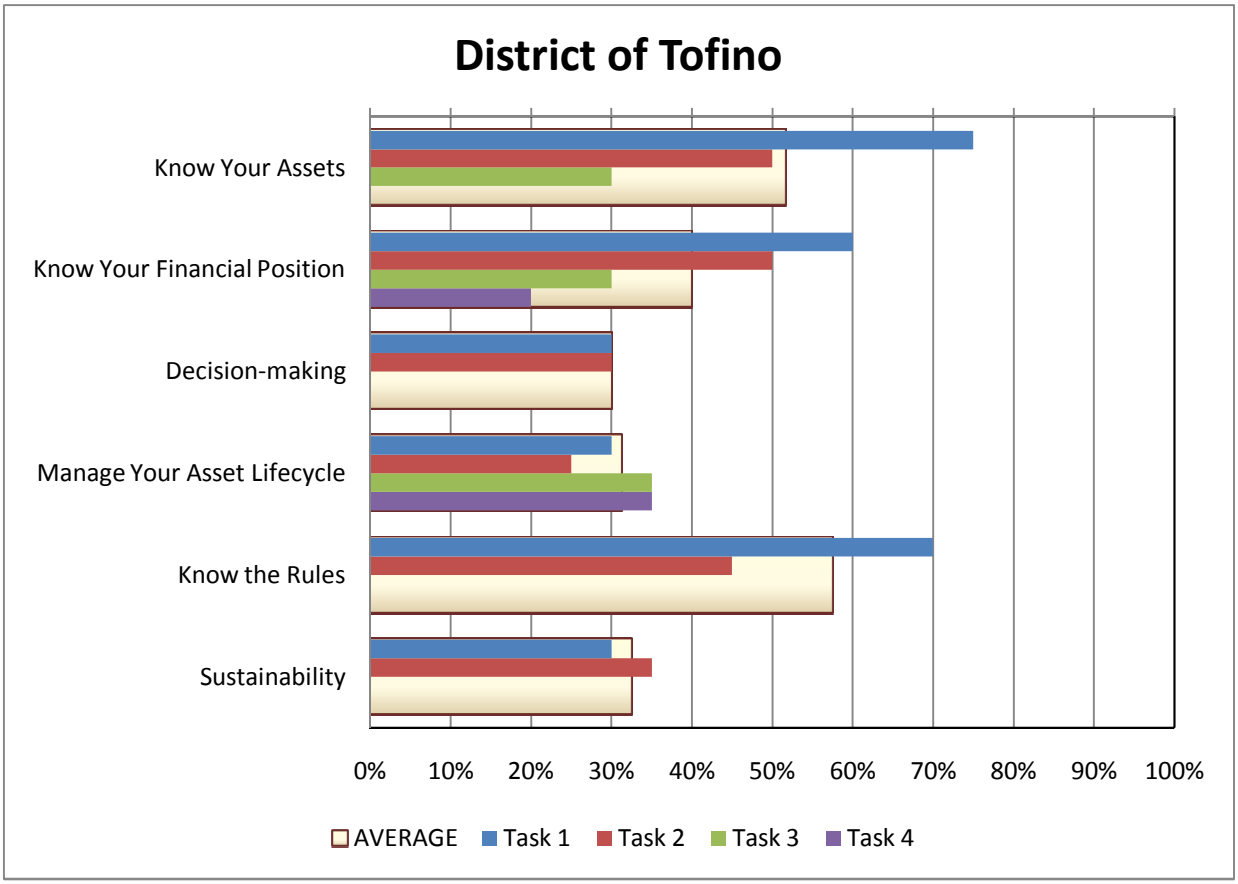


City of Merritt has had challenges in progressing asset management initiatives due at least in part to some key personnel changes and new staff settling into their positions. However participation in this project is providing advice and direction that will assist. In particular, from the project they will obtain an improvement plan for asset management. This can then be implemented over the next few years. The highlights of their asset management status include:

- TCA reporting for PSAB 3150 included to establish current cost values therefore these values are readily available to estimate predictions for future renewal costs;
- Progress is being made on representing all key asset groups on the corporate GIS. Asset detail information is not linked to GIS at the moment but the information is electronically stored in excel spreadsheets and may be able to be linked or imported at a later date;
- Master Plans for water and stormwater have been completed with others planned; and
- Some InfraGuide Standards have been incorporated into management of the assets.

1.8 Tofino Results Summary

The following graphs provide a summary of the asset management status for the District of Tofino.



District of Tofino has very few resources to progress asset management however despite this they do have some of the basic foundational elements in place including:

- TCA reporting for PSAB 3150 has been completed and therefore a data set of key asset information is available electronically (although the costs are historical only);
- Excellent plan records exist for most assets. Even though these are primarily paper based as-built plans, it is valuable that the information exists and is easily accessible. The information can be transferred to electronic format if necessary in the future and when budget and resources allow;
- Key asset inventory and management information is available in a web-based corporate system (municipal data works); and
- Operation and maintenance costs are known or could be assessed relatively easily for all major asset components.