



YOUR LOCAL ASSET MANAGEMENT COMMUNITY OF PRACTICE IN BC.

Enhancing BC communities through leadership in asset management.

TWENTY FIFTH EDITION – WINTER 2019

Congratulations, you have been elected, now what?

*Christina Benty, prior Mayor of the Town of Golden,
Strategic Leadership Solutions*



In the last newsletter we established a collective understanding of the purpose of local government to deliver services that provide a foundation for the health, well-being, and economic prosperity of our communities. Dependable services such as water,

sewer, transportation networks, attractive public spaces, fire halls, recycling and garbage pickup, and recreation amenities exist to provide basic necessities of life, which we rely on every day. Even though it may seldom enter our stream of consciousness, I am sure you are as much an unbeknownst fan of water and sewer as I am. So, with the election behind us, why does it matter that elected officials focus on these fundamental services? What is it that local government does best and should focus on?

Imagine asking your doctor to cut your hair. Or your accountant to clean your teeth. Surely, they would refuse since that is not where their skill, training, and responsibility lies—and we would not assume it. Why is it that local governments are asked to tackle a broad range of problems far beyond their scope and expertise? Poverty reduction, housing, food security, childcare, and school closures are all critical social issues, and

important community concerns but tend to highly distract from the real work of local government. If resources were unlimited, there would be no problem. However, with ageing water and sewer pipes, deteriorating roads, and depreciating buildings, it begs the question: What is the risk of local government squandering its limited resources outside its mandate? What will the future look like if we continue along this trajectory?

Over the last several decades, there has been growing concern about the financial sustainability of publicly-owned infrastructure. The long-time practice of short-term decisions about investment, maintenance, and

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renewal are not sustainable long-term. We know that much of Canada's municipal infrastructure is past its service life and we are now facing the cost of delaying infrastructure repairs, rehabilitation, or renewal. Local governments are just grasping the financial implications of replacing their aging infrastructure.

Leadership is about knowing what you are responsible for. Now is the time for elected leaders to be willing to accept their stewardship responsibility as custodians of the future. This may mean saying no to that legacy project or that new service you promised during the election. It also means telling the truth about the state of your infrastructure and what investments are going to be needed over the next decade. It is always easier to forget about the invisible pipes under the ground and to focus on the visible challenges plaguing our communities, because water and sewer 'ain't sexy 'til it ain't working'. Decision-making should not be driven by a desire to get re-elected in 4 years or to avoid public backlash, but by a commitment to make the right and difficult decisions to ensure the long-term sustainability of your local government services for the entire community.

The late Steve Jobs said: "What you say no to is just as important as what you say yes to." The province does not fix potholes on municipal roads, but they are responsible for housing, healthcare, and education. The federal government does not operate pools, but they are responsible for industry regulations and national defense. The community is well-served when their elected officials focus on what they're elected to do, not distracted by what other levels of government are doing.

UBCM Awards Program for Asset Management

The Community Excellence Awards recognize and celebrate UBCM members that exhibit excellence in meeting the purposes of local government and demonstrate successful pathways for others to follow. This week we highlight the "Asset Management" category and profile the City of Coquitlam (Winner) and the City of Grand Forks (Honourable Mention).

The Excellence in Asset Management category acknowledges UBCM members that develop comprehensive systems of asset management policies and practices that meet and/or exceed accepted established best practices, such as the International Infrastructure Management Manual (IIMM), ISO 55000 series, or Asset

Management for Sustainable Service Delivery: A BC Framework.

Winner - City of Coquitlam - Asset Management Funding Framework.



The City of Coquitlam integrated various policies and programs into an overarching framework. Coquitlam's project allows for more integrated and informed investment in the City's infrastructure and capital assets, which are vital to the health, safety, and quality of life of its residents.

By centralizing leadership of all asset types under one department (Finance & Technology), the framework ensures a consistent and holistic approach to asset management that limits duplication and administrative burden while providing decision makers with a balanced picture of asset funding needs.

The framework is informed by continually improving asset information systems and optimization software. Their inventory and valuation system is also Public Sector Accounting Board (PSAB) 3150 Tangible Assets Accounting Regulation compliant. This allows for enhanced and informed decision-making capability around timing and cost of asset replacement.

Boasting a 95% taxpayer satisfaction rate and 86% value-for-taxes rating when it comes to service delivery (both above provincial and regional averages), the success of Coquitlam's asset management program is demonstrated by the City's track record of sound financial stewardship and taxpayer confidence.

Through internal collaboration and partnership, as well as enshrined asset management practices in the City's financial policies, Coquitlam has developed a comprehensive process capable of limiting yearly budgetary fluctuations and ensuring quality service delivery for years to come.

Access to project details.

www.assetmanagementbc.ca/resources/#toggle-id-12

Honourable Mention - City of Grand Forks - Service Sustainability Assessment Tool.



The City of Grand Forks received an Honourable Mention for its use of the Service Sustainability Assessment Tool (SSAT). The SSAT is an innovative tool built in Excel to help local governments identify services that may become unsustainable, develop plans to improve service sustainability, and effectively communicate these findings to decision makers and the public.

It assesses service sustainability in eight core service areas: wastewater, water, drainage and flood protection, transportation, fire protection, parks and recreation, solid waste, and civic facilities.

While tools exist for assessing the overall sustainability of a community, these often leave gaps related to service sustainability. And those that do assess service sustainability can be costly and time consuming to fill. The SSAT takes an average of 15 minutes per service assessment –saving time and resources that can be dedicated to other community needs.

The project’s most significant achievement is making an exceedingly complex topic both accessible and communicable. The SSAT produces a final report that is comprehensible and engaging and promotes open dialogue between local governments and community stakeholders.

The SSAT was tested and refined in partnership with the City of Rossland, Village of Salmo, and Districts of Clearwater, Squamish, and Central Saanich. It is designed to reflect common local government services while allowing for substantial personalization to fit the interests of diverse communities.

The SSAT, City of Grand Forks and developing partner Urban Systems Ltd. also received the Award of Merit in the soft engineering category from the Association of Consulting Engineering Companies (ACEC-BC) during the 2018 Awards for Engineering Excellence Gala. The tool will now be part of a travelling exhibit that showcases winners of the award in more than 15 venues across BC.

Service Sustainability Assessment Tool (SSAT)

<https://www.assetmanagementbc.ca/resources/#toggle-id-12>

Annual Report for FCM’s Municipal Asset Management Released.

Michael Burt, Acting Director, MAMP

FCM’s Municipal Asset Management Program (MAMP) helps cities and communities in British Columbia and across Canada, adopt strong asset management practices. Read our 2017–2018 annual progress report to learn about our program and discover the **six asset management resources** we’ve published in the past year.

In that report you’ll also learn how MAMP is:

- enabling communities to enhance their skills in asset management through funding and training; and
- increasing local knowledge and know-how through the creation of a strong network of municipalities, sector experts, and partner organizations across the country.

The Annual report: “Municipal Asset Management Program 2017–2018 Providing tools to help municipalities optimize local asset management practices”.

Access the full report on the FCM website under resources www.fcm.ca/en/resources/mamp/annual-report-municipal-asset-management-program-2017-2018

InfraGuide is Back!

Thanks to FCM and the MAM program, InfraGuide is back.

InfraGuide: National guide to sustainable municipal infrastructure is a collection of technical best practices and principles to help inform municipal staff and decision-makers in infrastructure management. There are 54 best management practices (BMP’s) in Asset management (8), Potable water (10), Municipal roads and sidewalks (9), Stormwater and wastewater (13), Environmental protocols (6), Transit (2) and Multidiscipline (6).

These are routinely used by many agencies across Canada and in our universities and colleges as training tools.

A format change was needed to accommodate newer technologies and make these available to all.

You can access copies of all BMP’s on the FCM website.

www.fcm.ca/en/resources/infraguide-national-guide-sustainable-municipal-infrastructure

Kelowna uses the BC Framework for Asset Management Framework, Strategy, and Policy Development.

Joel Shaw, P. Eng., Infrastructure Engineering Manager, City of Kelowna



Kelowna is a community of 130,000 that provides typical municipal services – water, wastewater, storm drainage, transportation, transit, solid waste, parks and buildings and facilities. Kelowna’s corporate asset management journey started in 2012. Prior to that time, the City’s asset

management was being carried out within asset “silos” and the cross-department integration was not great. This presented a number of challenges and inefficiencies as departments vied for limited funding at budget time and there was lost opportunity to improve service delivery.

Since 2012, the City has made significant progress advancing their asset management program. Key initiatives include development of asset management plans (AMPs), integrating AMPs into long-term financial plans and implementing an enterprise asset management system.

In 2018, the City recognized that the asset management strategy and policy needed updating to set clear direction for the asset management program moving forward. The City applied for and received a grant from Federation of Canadian Municipalities (FCM) Municipal Asset Management Program (MAMP) for Policy and Strategy/Framework Development.

After completing an exhaustive review of industry best practice, the City decided to use the Asset Management for Sustainable Service Delivery: A BC Framework as a guide to update the City’s Asset Management Framework, Strategy, and Policy.

The BC Framework establishes a high-level, systematic approach that supports local governments in moving toward service, asset, and financial sustainability through an asset management process.

The Framework addresses:

- Why asset management is necessary;
- What asset management is; and
- How it can be implemented.



The BC Framework recognizes there are many components within the asset management process and provides a circular, continuous pathway to link all components of the process together. Further, the BC Framework reflects current best practices and aligns with, and is supported by, internationally accepted best practices such as the International Infrastructure Management Manual (IIMM) and the ISO 55001 Standard for Asset Management.

The City’s Framework and Strategy aligns with the BC Framework but is tailored to ensure it reflects the needs of Kelowna. The City’s Strategy for future asset management projects and initiatives advances the City’s Asset Management Program and leads to the core objective of sustainable service delivery.

The City’s Asset Management Policy was also updated so that it was consistent and provided direction to the Framework and Strategy. AM Policy key principles – Assess, Plan, Implement, Measure, and Report – align with those in the City’s Framework and Strategy and future projects and initiatives aimed at advancing the City’s asset management program are in step with the Policy.

The City’s Policy, Framework, and Strategy were adopted in 2018 and the City remains on the continuous pathway to asset management nirvana.

By using the BC Framework, communities take advantage of well-established asset management principles, best practices and standards that guide asset management program development. There is no need to ‘reinvent the wheel’ when developing your communities AM Framework.

Your Municipality is unique, and so is your Asset Management journey

*Rick Danyluk, Manager Financial Planning,
District of North Vancouver*



One of the primary Purposes of a Municipality

Providing stewardship of community public assets is one of the primary purposes of any municipality (Section 7 of the Community Charter). How your municipality addresses this stewardship responsibility will

depend on many factors and local conditions that make your situation unique.

Local Conditions

The District of North Vancouver (DNV) is a mountainside community within Metro Vancouver with rivers and creeks running through it which aims to preserve and enhance public lands and the ecological health of our natural systems including our urban forest. Like most municipalities we need to address our aging infrastructure. We also need to consider the impacts from climate change, including, in our case, sea level rise, and natural hazards like wildfires, earthquakes, landslides and storm water “debris flows”. Our Official Community Plan (OCP) considers these unique local conditions and includes policy statements that require new amenities and infrastructure to realize our community vision.

It takes a Team

Bringing all these considerations together and reflecting them in our Asset Management Plans requires a clear asset management strategy and policy supported by Council, senior management, and a strong asset management team. Our team includes staff from community planning, engineering, finance and technology and has developed a suite of Asset Management Plans that enable us to actively manage our stewardship responsibility. These plans are supported by asset levels of service, risk profiles, conditions, and cost assumptions which are captured in supporting asset registers.

A Strategic Framework

From a sustainable service delivery perspective this is but one part of a strategic framework that brings organizational alignment to asset stewardship and balance between our levels of service, the assets that support those services, and both the human and financial resources required to sustain services.

Financial Resiliency

Since 2005, the DNV has been building financial resiliency into the funding of its asset management plans through a stable annual tax rate increase of “inflation + 1% for renewal of existing assets”. We see this continuing each year for the foreseeable future. As we improve our financial resiliency and implement our asset renewal plans, we believe we are on the right path to achieve sustainable service delivery.

Since the adoption of our OCP in 2011, DNV has also been moving forward with a more integrated planning approach including community growth and identified new capital and risks. We now maintain a rolling ten-year plan and assess any gaps in our asset management framework in Q1 of each year. This year our asset management team will be updating our self assessments using Asset Smart 2.0, completing an update of the NAMS Maturity Assessment Model, and identifying any new training the team requires to move forward with this year’s improvement plan.

Key elements of the integrated planning framework	
1. Base plan	<ul style="list-style-type: none"> Service inventory including current service levels
2. Improvement plans	<ul style="list-style-type: none"> Official community plan and key strategic plans Asset management plans including a strategy, policy, asset service levels, risk profiles, conditions, and cost assumptions Long term financial plan including a policy framework to develop strategies to close any funding gaps and make the plans affordable
3. Long-term integrated plan (10 years)	<ul style="list-style-type: none"> Capital improvement plan including renewal projects required to maintain asset service levels and upgrade and expansion projects that support community growth or service level improvements (business case)
4. Near-term integrated plan (4 years)	<ul style="list-style-type: none"> Capital plan optimization including improving project information through studies and design, bundling projects to realize efficiencies and reduce community impacts, and monitoring grant opportunities to reduce costs Program and service adjustments including changes in demand, cost recovery, service delivery and mandate
5. Implementation and monitoring	<ul style="list-style-type: none"> Metrics including funding levels (operating surplus ratio), DNV’s ability to implement the plan (asset sustainability ratio) and asset performance (condition ratings) Rolling ten year plan including ongoing improvements to the planning process and updates for new information

The Need to Accelerate Asset Management Implementation

Kim Fowler, MCIP, RPP



Asset Management BC was established over 10 years ago as a professional interdisciplinary working group to further asset management in local government. AM BC created policies, road maps and frameworks that have been used across Canada to assist local governments improve

their asset management practice. Provincial governments have used several approaches to 'entice' more local governments to further this work. Ontario has regulated some aspects of asset management for its local governments, but the uptake does not appear to be any faster or better than BC's softer approach of requiring asset management practice as a condition of infrastructure grants. The federal government has also recently required evidence of asset management planning as a condition of its grants.

Different approaches, however, have not hastened the cultural change in local government needed to keep up with increasing risk from mounting replacement or maintenance gaps, demands for increased levels of service or climate change (i.e. increased flooding, forest fires and sea level rise). Underwriters for insurance companies have been seeing these changes for decades. Many residents of Vancouver Island spent 2-10 days this past December without power after the worst wind storm in the history of BC Hydro. This was shortly after we had been told to reduce natural gas usage due to an explosion of an Enbridge main supply line. February followed with record snowfalls and persistent low temperatures, so the camelias and daffodils have been frozen for weeks! Collectively over time, these events are increasing risk and cost.

Asset management is the lifeline to maintaining many essential community services through reduced risk and cost. Potable water, stormwater management, sanitary sewers, and police and fire protection services provided by local governments are not optional, so neither should their management. Local governments governing without properly managing their assets put those essential services at risk. Improved asset management can be done

in stages, resulting in cost savings and reduced service disruptions. Starting now makes those stages more incremental.

Community members assume and expect their local government to fully manage their road, sewer, water and building assets. Asset management information enables more informed choices through comparing levels of service for existing and new services together. Better information can be provided through improved reporting. Reporting on infrastructure maintenance and replacement gaps would provide local governments and their communities with a more accurate financial picture and the actual costs of services.

The standards for financial planning and accountability are contained in Part 6, Division 1 of the Community Charter. Subsection 6(b) requires reporting on the proposed capital expenditures for the next 5 years. Amending this section to include capital expenditures required for maintenance and replacement of capital assets would reveal any gaps that need to be addressed over the next 30-50 years. Local governments with asset management plans will have calculated their useful life and replacement rates required to estimate the asset gaps. Those local governments that have yet to undertake these assessments will need the provincial government to provide standard rates for major asset classes. While this will affect accuracy, the first step of reporting will be accomplished. Failure to provide this information would result in audit failure and no Gas Tax transfer. Improved reporting would also provide a stronger business case to provincial and federal governments to increase funding for these essential services.

How can local government councils and boards make infrastructure and service decisions without this information? While it may be more politically popular to build new infrastructure, like bike lanes or arenas, local governments are limited by legislation on their borrowing, and property taxes remains the principal source of revenue. With these two bookends, community members should be given information on the choices being made on their behalf, so they are aware of the consequences or opportunity cost. Should that new pool be built, or the road maintenance gap be funded? Or perhaps infrastructure reserve funding should be increased to cover the sanitary sewer replacement gap? Most community members are unaware of these significant gaps in asset maintenance and replacement, and the responsibility to inform them rests with their local government.

PARKSVILLE 2019 SYMPOSIUM: Make Where We Live Better through Restorative Development.

Kim Stephens, M.Eng., P.Eng, Executive Director, Partnership for Water Sustainability in BC, In collaboration with Paul Chapman, Executive Director, Nanaimo & Area Land Trust; Peter Law, President, Mid Vancouver Island Habitat Enhancement Society; and John Finnie, Chair, Parksville 2019 Symposium Organizing Committee.

Join delegates from the east coast of Vancouver Island and beyond and attend a 'watershed moment' in Parksville. At the **Parksville 2019 Symposium**, you will learn why and how local government partnerships with stewardship groups can be transformational and 'make where we live better' to respond better to a changing climate.

Parksville 2019 is a collaborative effort of the Partnership for Water Sustainability in BC, Nanaimo & Area Land Trust, and Mid Vancouver Island Habitat Enhancement Society. We have joined forces to host a field day on April 2, followed by a 2-day symposium on **Water Stewardship in a Changing Climate** on April 3rd and 4th. The daily symposium themes are *Sustainable Stream Restoration* and *Restorative Land Development*, respectively.

TO LEARN MORE AND REGISTER, VISIT

<https://www.civicinfo.bc.ca/event/2019/Parksville-Water-Stewardship-Symposium>

Context for Local Government Action

The 'worth' of a creekshed (i.e. small watershed) is defined in terms of a *package of ecological services* made possible by the hydrology. More specifically, hydrology means the three pathways by which rain reaches the stream and ecological services refers to the benefits that streams provide to us. This includes flood and erosion regulation, nutrient cycling, habitat, groundwater recharge, etc. The way we have historically developed, and drained land has disconnected hydrology from ecology.

The consequences of this disconnect are more erosion and flooding, loss of baseflow and aquatic habitat, and an unfunded infrastructure liability for stream stabilization. Communities have for the most part failed to properly address root causes of 'changes of hydrology', as well as subsequent impacts of those changes on natural creekshed function.

The bottom-line is that decades of in-stream enhancement work will not be enduring if hydrological function is not restored.

Thus, a goal of restorative land development would be to restore the integrity of the natural water balance. If this work is done right, it should be possible to: first, halt ecosystem decline; and after that, bend the trend-line in an upwards direction.

At Parksville 2019, delegates will learn how communities can apply science-based understanding to increase their **restorative footprint** and at the same time decrease their **destructive footprint**. Delegates will also learn about local government initiatives that are 'getting it right' and are moving along pathways that lead to restorative land development. Follow these leaders!

Reconnect Hydrology and Ecology

We experience climate change primarily through water – intense rainfall, floods, droughts and so on. The major driver of economic growth in the twenty-first century will be responding to climate change, redeveloping our nations, revitalizing our cities and towns, and rehabilitating and expanding our ecosystems. This is not some wistful vision of the future: it's already happening.

"Restoration comprises the largest new economic growth cycle since the beginning of the industrial revolution. Development has arrived at the ends of the Earth. Progress has nowhere to turn, except to revisit and restore what we've already wrought," states Storm Cunningham, author and global thought leader. He is one of three prominent headline speakers from the United States who are part of the Parksville 2019 presentation team. Storm Cunningham, Dr. Chris May and Dave Derrick connect us with a larger body of experience.

The working definition for restorative development, as crafted by Storm Cunningham, follows:

"A mode of economic activity that returns property, structures, or objects to an earlier condition, transforms them into a healthier and/or more functional condition, or replaces an unsalvageable structure without consuming more land."

Guided by a whole-system, water balance approach, restorative land development would reconnect hydrology and ecology, and this would: reduce stream erosion, flooding and the associated infrastructure liability; increase the dry weather baseflow in streams; and stem the loss of aquatic habitat and fish. Connecting dots, then, a key message is that **restorative land development results in sustainable stream restoration**.

How will communities 'get it right' as land develops and redevelops?

The Parksville 2019 Symposium is a milestone event on a multi-year 'convening for action' journey that commenced in 2004 with release of the Water Sustainability Action Plan. Parksville 2019 builds on the 2018 *Vancouver Island Symposium on Water Stewardship in a Changing Climate*, held in the City of Nanaimo.

Nanaimo 2018 was a 'call to action'. The theme? Build on the good outcomes that flow from local government and stewardship sector collaboration! Nanaimo 2018 introduced a vision for 'restorative land development' that would re-establish creekshed function. And it energized the audience with this challenge: *How will communities 'get it right' through collaboration as land develops and redevelops?*

A decade of effort on Vancouver Island, by partnerships of local governments and community stewards, is demonstrating success on the ground where it matters. They are on a pathway to reconnect hydrology and ecology. Parksville 2019 will celebrate success stories that are characterized by three attributes: **commitment, collaboration and the 'hard work of hope'**.

The Bowker Creek and Brooklyn Creek restoration stories are provincially significant precedents. Each has a long history. Each demonstrates how local government partnerships with stewardship groups can be transformational and 'make where we live better'. These precedents represent a range of situations: Bowker in the urban heart of the Capital Region; Brooklyn in the suburban Comox Valley.

A takeaway for Parksville 2019 is that the essential ingredients for restorative development encompass: vision, strategy to deliver the vision, and commitment to implement an ongoing program. Vancouver Island success stories are beacons of hope. They demonstrate how a **good strategy** is the path to success.

AM BC holds successful Conference

The 3rd annual **Asset Management BC** conference was held in September 2018 at the Radisson Hotel – Vancouver Airport in Richmond with approximately 150 in attendance. Planning is already underway for the **4th annual conference to be held November 5 and 6, 2019 at the same location.**

GFOA BC held a pre-conference workshop which was well attended. Our keynote speakers, Bob Sanford on climate change and Diane Kalen -Sukra on change management offered great perspective to our audience.

There was a wide variety of presentations, including First Nations, on integrated Asset Management. Besides our panel on funding with Federation of Canadian Municipalities, Ministry of Municipal Affairs and Housing, Infrastructure Canada and Union of British Columbia Municipalities, we welcomed two special guest speakers from outside of BC, Leanne Brannigan from the Region of Peel in Ontario and Duane Nicol, Chief Administrative Officer from the City of Selkirk in Manitoba.

Leanne Brannigan, presented *Asset Management: Enabling Council Conversations – How to Integrate Technical and Financial Information for Council* which focused on the approach of presenting information to Council as part of their overall strategy. The Asset Management Plan and Long-Term Financial Plan are the basis for developing their strategy. Duane Nicol, presented *Managing the Critical 'Soft' Assets* an overview of a complete asset management program with the key being, as Duane calls it, 'on-boarding Council'. The presentation is on the **Asset Management BC** website along with other conference presentations under the tab, Resources.

Asset Management BC website:

www.assetmanagementbc.ca

4th ANNUAL ASSET MANAGEMENT BC CONFERENCE

MARK YOUR CALENDAR

**NOVEMBER 6 AND 7, 2019 – RADISSON HOTEL AIRPORT
VANCOUVER**

PREFERRED HOTEL RATE OF \$169.

BOOK YOUR ROOM NOW – ASK FOR AM BC CONFERENCE RATE

HOTEL TEL: 604-279-8384

E-MAIL: RESERVATIONS@RADISSONVANCOUVER.COM

Are there TWO infrastructure gaps?

We constantly talk about the backlog and the financial 'infrastructure gap' we have. This is normally expressed in financial terms other than timelines. Is there another more immediate and more solvable infrastructure gap. Well, yes there is.

Watch for the Summer Newsletter of [Asset Management BC](#) issued before the end of June for some answers. We intend to focus the discussion around these gaps.



Join us in Kelowna, BC - one of Canada's fastest growing cities - for the 13th Annual Canadian Network of Asset Managers (CNAM) Conference. No longer a side project or a buzz word, sound Asset Management practice is a requirement for public sector organizations to provide sustainable service delivery. Our communities are growing and as they do, practitioners will continue to face the financial, environmental, and societal challenges of managing growth and development while also maintaining existing infrastructure assets.

The annual conference and trade show will continue to explore these challenges through leading edge professional development, idea sharing, workshops, and fun networking opportunities with your peers and new players in government, academia, and industry.

So, **mark your calendars for May 6-9, 2019** - we will see you then in beautiful Kelowna, BC! To register for the conference, [click here](#). Or for more information;

Check out the CNAM conference website at <https://cnam.ca/upcoming-events/2019-conference/>



CNAM 2019 Conference | May 6-9, 2019 | Kelowna, BC

Tips and Tactics: How to do Basic Asset-Level Risk rating

*Bernadette O'Connor AM BC Newsletter Editor,
 Principal Consultant, Asset Management, WSP*



There are many well-structured methods for evaluating a variety of types of risk. However, a common situation is that organizations just starting the process of risk assessment, do not have the asset information to support such methods. Some decide to wait until they have appropriate data, but this can leave them relatively blind to risk issues in the meantime. Another stumbling block for organizations can be the complexity of many risk evaluation methods.

The following is a very basic method that organizations struggling with either of these issues (insufficient asset data or the complexity of the evaluation) can use to obtain initial asset-level risk scores. This basic method can be replaced at a later stage, with a more sophisticated evaluation method, when the organization has sufficient credible data to support such methods.

It is very important to consider risk issues in decisions relating to public assets and services. We intuitively balance costs, risks, and benefits in our mind when making decisions on a wide range of personal matters. And we understand that for different circumstances we are willing to accept different combinations of cost, risk, and benefit.

For public assets and services, we shouldn't rely solely on intuition, nor should we delay in getting some visibility of risk added to the consideration of costs and benefits. However, the evaluation of risk even at the most basic level, must have some structure. Structure ensures repeatability and supports the usefulness of outcomes.

The general principle for basic risk evaluation is to simplify the evaluation structure. This is achieved by simplifying the risk criteria or risk indicators and the calculation process. Most will know that an asset risk score is derived from the consequence of asset failure and the likelihood it will fail.

At the most basic level;

- A simple (high, medium, low) criticality rating can be used as an indicator for **consequence** of failure, and
- The remaining life of each asset can be used as an indicator of its **likelihood** to fail.

Criticality

Criticality is a measure of the importance of each to delivering the service. If sudden failure of the asset would cause a major outage of the service, and it would take some time to restore service, then it is a highly critical asset. Conversely, if failure of the asset would have little or no impact on delivering the service, then it is a low critical asset. Criticality is a significant part of measuring consequence of failure. Therefore, in a basic level risk assessment it is reasonable to use criticality as an initial indicator for consequence. However, it is important to know that they are different. Refer to AM BC Newsletter 18 (Fall 2016) for Tips and Tactics article on the [difference between Criticality and Consequence](#).

At the most basic level you can simply rate each asset as having a High, Medium, or Low criticality. One step up from that level is to rate criticality of the assets on a numeric 1 to 5 scale. This allows generation of a numeric risk score which can graphed to communicate risk exposure and used for prioritizing action/projects.

Criticality		Score
High	H	5
Medium-High	MH	4
Medium	M	3
Medium-Low	ML	2
Low	L	1

Likelihood

The expected remaining life of the asset is a reasonable first indicator for likelihood of failure. The process to obtain this requires each asset to have an install date (or an approximation for its install date), and an estimated useful life. At a basic-level, all assets of a similar type can be assigned an average useful life for that type of asset. You can populate the useful life for each asset in your inventory by matching its asset type to a reference table of average lifespans for all the different types of asset.

Having both install date and estimated lifespan recorded, you can calculate the expected remaining life of each asset and assign a likelihood of failure. At the most basic level you can simply rate each asset as having a High, Medium, or Low likelihood. One step up from that level is to rate likelihood of failure on a numeric 1 to 5 scale.

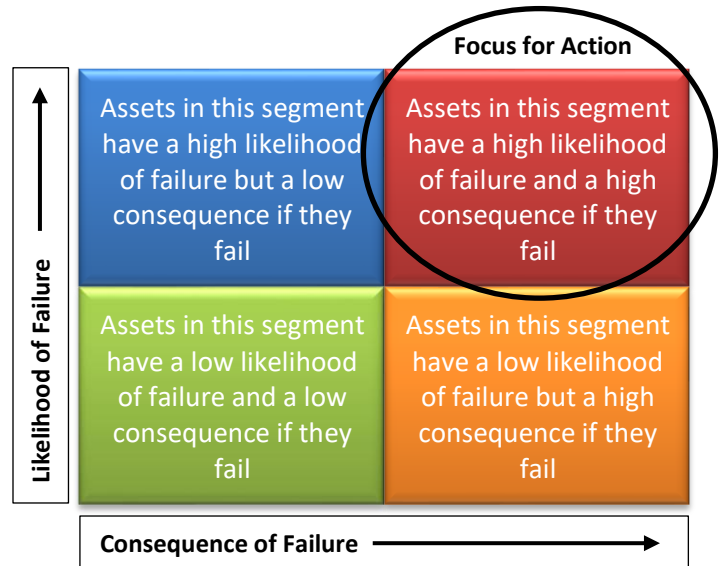
Criticality		Score
High	1yr	5
Medium-High	2-3yr	4
Medium	4-5yr	3
Medium-Low	6-10yr	2
Low	11+yr	1

Risk

At the most basic level if you use a 'High, Medium, Low' scale for both criticality and likelihood, you can report the risk outcome using the following table.

Criticality Likelihood	Low	Medium	High
High	HL	HM	HH
Medium	ML	MM	MH
Low	LL	LM	LH

If you use a 1 to 5 scale for rating criticality and likelihood, then risk ratings will be the criticality score multiplied by the Likelihood score for each asset. Results can be reported in priority order according to the risk score and graphed in a number of ways to show the risk profile of the assets and risk exposure for the service.



Upcoming Events

Municipal Insurance Association of BC

April 16 – 18, 2019
 8th Annual Risk Management Conference
 Hyatt Regency Vancouver
 Vancouver, BC
www.miabc.org



Canadian Network of Asset Managers

May 6 – 9, 2019
 13th Annual Networking Conference and Workshops
 Kelowna, BC
www.cnam.ca

Planning Institute of BC

May 8 – 10, 2019
 BC Land Summit
 Vancouver, BC
www.piabc.bc.ca

BC Water and Waste Association

May 26 – 28, 2019
 47th Annual Conference and Trade Show
 Conference Centre
 Victoria, BC
www.bcwwa.org

Canadian Water Summit

May 26 – 31, 2019
 10th Annual Canadian Water Summit
 Blue Mountain Resort, Collingwood ON.
www.watercanada.net

Government Finance Officer of BC

May 29 – 31, 2019
 Annual Conference and Trade Show
 Fairmont Empress Victoria & Conference Centre
 Victoria, BC
www.gfoabc.ca

Federation of Canadian Municipalities

May 30 - June 2, 2019
 Annual Conference and Trade Show
 Quebec City, QC
www.fcm.ca

Local Government Management Association

June 11-13, 2019
 Conference & Annual General Meeting
 The Westin Bayshore Vancouver
 Vancouver, BC
www.lgma.ca

Infrastructure Asset Management Alberta

June 12, 2019
 One day Workshop
 Edmonton, Alberta
www.assetmanagementab.ca

Public Works Association of BC

September 15–18, 2019
 Annual Conference and Trade Show
 Penticton Conference Centre
 Penticton BC
www.pwabc.ca

Union of British Columbia Municipalities (UBCM)

September 23 - 27, 2019
 Annual Conference and Trade Show
 Vancouver Convention Centre
 Vancouver BC
www.ubcm.ca

Asset Management BC

November 6 -7, 2019
 Annual Asset Management Conference
 Radisson Vancouver Airport Hotel
 Vancouver (Richmond), BC
www.assetmanagementbc.ca

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