

#OurAssetsMatter

AMBC NEWSLETTER



Sharing information, transferring knowledge, and building capacity for sustainable service delivery.

FORTY FIRST EDITION – WINTER 2024

What do we know and How do we work? Comments by Christina Benty and Wally Wells

Christina Benty, prior Mayor of the Town of Golden, AM champion and owner of 'Strategic Leadership Solutions and Wally Wells P. Eng. Executive Director, Asset Management BC

An article in this newsletter always begins with a rousing conversation with Wally, does it not? At the November AMBC conference, we were excitedly discussing his latest article in the fall newsletter where Wally wrote about the value and significance of thinking and working both vertically and horizontally across all disciplines and functions. This got me pondering the message from one of my favorite books by the late David Foster Wallace which starts with a humorous parable about perspective:



There are two young fish swimming along who happen to meet an older fish. The older fish nods at them and says: 'Morning boys, how's the water?' The two young fish swim on for a bit and then eventually one of them looks over at the other and asks: 'What the hell is water?'

David Foster Wallace insists, "I am not the wise old fish." Well, neither am I. Nonetheless, there are three salient themes within that parable that I want to draw out.

AM as embedded Business Model

The first connects to the primary goal of organizations such as AMBC who support local governments to

normalize sound asset management practices as a way of doing business. Sustainable service delivery enthusiasts, such as yourselves, know that asset management processes will only be successful if they are ubiquitous throughout the system. There would be no need to be concerned with vertical and horizontal power dynamics because it would be the way business is done.

AM Processes are Core Business

An even more relevant point of the fish story is that the most obvious, important realities are often completely invisible to us (and will remain that way if we let them). It would stand to reason that if you lead an organization that provides services and utilizes assets to do so, then you have an obligation to ensure that the assets can deliver those services in a safe, secure, and seamless fashion. Based on that logic, your practices (the process you use to manage the assets under your care) would not be considered extra work but in fact, the only work you do. It is the water you swim in. Is it possible to reframe asset management and see the opportunity to make every part of the system run smoother in the long run? This goes for elected officials as well. If you find yourself part of a governing body of an organization that exists solely to provide services that contribute to a great quality of life, and that protect the health, safety and wellbeing of your community, then you must responsibly plan for a sustainable future. You have a social, moral, and financial obligation to not put future generations at risk and compromise their ability to enjoy the same great quality of life by making short term decisions that could have a negative impact down the road. This seems so obvious that it is hardly worth writing. What then is the value of the obvious? Why is the obvious often

overlooked or ignored? What would it take to bring awareness of the water we swim into the consciousness of those who need to be paying attention?

Deep Knowledge Transfer

The story also begs the question, what makes the older fish so much wiser? We must infer that it is his experience. That is, the older fish only knows about water because he's been either outside the fishbowl or in many different fishbowls. This got me thinking about the most recent reflections by Robert Hicks in his latest article in the WaterBucket. His observations lead him to conclude that solutions to complex problems require deep knowledge, and that organizational and intergenerational amnesia can only be overcome through deep knowledge transfer. This does not happen in silos; it happens in a learning organization that embraces systems thinking. This approach is less concerned with vertical and horizontal thinking and sees inter-connectedness of the whole system; it knows that water it is swimming in. This can be achieved using the practice of organization-wide system mapping exercises that identify key areas where knowledge transfer is needed. Where does each part of the system intersect? What does each department need the other parts of the system to understand about their part of the world? What are some of the risks that, if ignored, will create a slow erosion of services and service levels? Create opportunities for inter-departmental collaborative processes that ensures that knowledge sharing is pervasive within the organizational culture. Departments need to have regular opportunities to network with other departments to identify cross-disciplinary risks, challenges, and wins. Give folks opportunities to brag about what their department does well and identify where they do need some support.

The importance of Awareness

David Foster Wallace ends his musings by reminding us that the real value of a parable like this has to do with simple awareness—awareness of the obvious. For me, that means the long-term sustainability of the natural and built environment, and economic viability and prosperity for current and future citizens relies on sound asset management practices.

That is the water we want to swim in.

And Wally adds.....

I am sympathetic to elected Councils and Boards with the dilemma they have in synthesizing a huge volume of information to make informed decisions. When you look at the qualifications to be a Council or Board member, it ...

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Look at us. We have changed!

Your NEW AMBC newsletter is the 41st edition and time for a change. **We have a new masthead.** Please take note at the top of page one. We hope you like it. Our first newsletter was in the Fall of 2010, **13 years ago**. It featured an interview between then Mayor of the District of Saanich, Frank Leonard and Glen Brown, then with the Ministry of Municipal Affairs. I just reread that interview. The principles that Mayor Leonard stated in that interview clearly applies to today. A key and important statement is

"Never advance a solution to an issue prior to having public awareness of the issue, or the solution may become the issue."

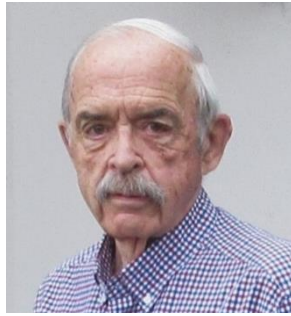
All prior copies of the newsletter are located on our website at www.assetmanagementbc.ca

Look for our new column that appears in this issue **Young Professional – A Profile**. Our first interview is with Laura Hardiman of the Capital Regional District.

Do you have an upcoming staff member in your organization who deserves to have a profile published? Contact AMBC at info@assetmanagementbc.ca and tell us. We will do the rest.

Feature Article Continued: Comments by Christina Benty and Wally Wells

... is as simple as owning property in the jurisdiction, not having a criminal record and not having declared bankruptcy. It varies slightly by jurisdiction. The consequence is we get a wide variety of education and skill sets on Councils and Boards often with very different interests. This makes communications complex and challenging. Most of us are very good at communicating based on what we know, but the message is not always in the form the listener needs to hear. Based on their own knowledge and experience, they may interpret the message differently than the speaker intended. Multiply that by the number of Council or Board members and messaging can become confusing or distorted. How often have staff been disappointed with a decision made by their elected officials yet the correct conclusion seemed so obvious.



With the elected officials having responsibility for delivery of services across the organization, elected officials must think in a horizontal environment whereas staff work in silo or a vertical environment (*refer also to article in previous AM BC Newsletter – fortieth edition – Fall 2023*).

To cross these boundaries many communities have established working committees representing all departments and focusing on all asset classes. The committee members work collectively together to bridge this horizontal and vertical gap so that information prepared for the elected officials uses agreed key criteria in assessing capital projects as to the risk to the service, the risk to the asset or class of assets, and the potential liability to the community or local government. Capital projects are prioritized on that basis within the financial constraints of the local government. The recommendations therefore do not favour a specific asset but balance service and risk with finances available across the entire spectrum of the organization.

There are many challenges for these committees and processes to operate successfully but they work and provide a better basis for decisions across the structure of the entire organization rather than favour one asset or asset class.

In future editions we will explore the functioning and structure of these group and provide success stories.

CASE STUDY:

District of Summerland Water and Road Infrastructure Integrated Asset Management Plan

*Joe Mitchell, P. Eng. | Director of Works & Infrastructure,
District of Summerland*

(Editors note: The District of Summerland was the winner of the UBCM asset management award in September. The Fall Edition of the AMBC newsletter carried the photo of the award presentation and a summary of the plan)

Basis of the Plan

Every spring Council and staff get asked the same question regarding the roads of Summerland...“when is my road going to be repaved.” This can lead to awkward discussions, mixed responses and scrutinized decisions. We all know there is more to the decision than the road with the most potholes, or the oldest watermain gets replaced. The challenge was to come up with an easy to navigate tool that shows a combination of planning, engineering and policy in a transparent way. Ideally it is a single tool that is easy to access and can be used effectively by staff, Council and the public.

The District of Summerland has turned to asset management as the process for making informed infrastructure decisions, improving governance, and building financial capacity to renew, operate, and maintain existing infrastructure. Utilizing funding from the Strategic Priorities Fund, the District developed an integrated asset management plan for its roads and water assets. The plan utilized a service and risk assessment to prioritize capital re-investments in these key asset categories.

Development of the Plan

The plan has been developed by incorporating community priorities, strong asset management principles, and through close collaboration with Council. Council was engaged in a workshop at the very start of the plan to determine criteria for watermain and road replacement prioritization. Factors that were taken into consideration and prioritized by Council were road volumes, locations (eg. Downtown roads) and condition. For watermain, it was mainly condition and risk of failure. The goal of this approach was to provide Summerland with a defensible, consistent, and transparent process for the selection of projects for inclusion in its long-term capital plan.

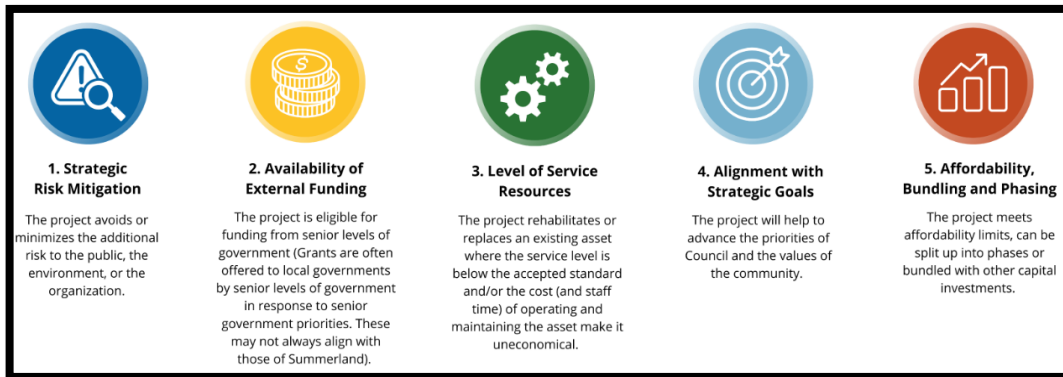


Figure 1: Capital Project Scoring Criteria

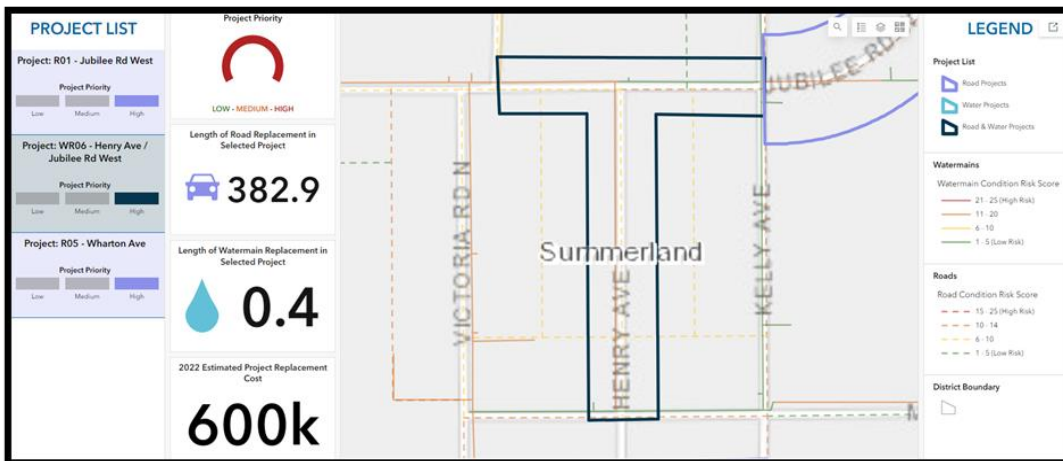


Figure 2: Typical StoryMap Project Sheet

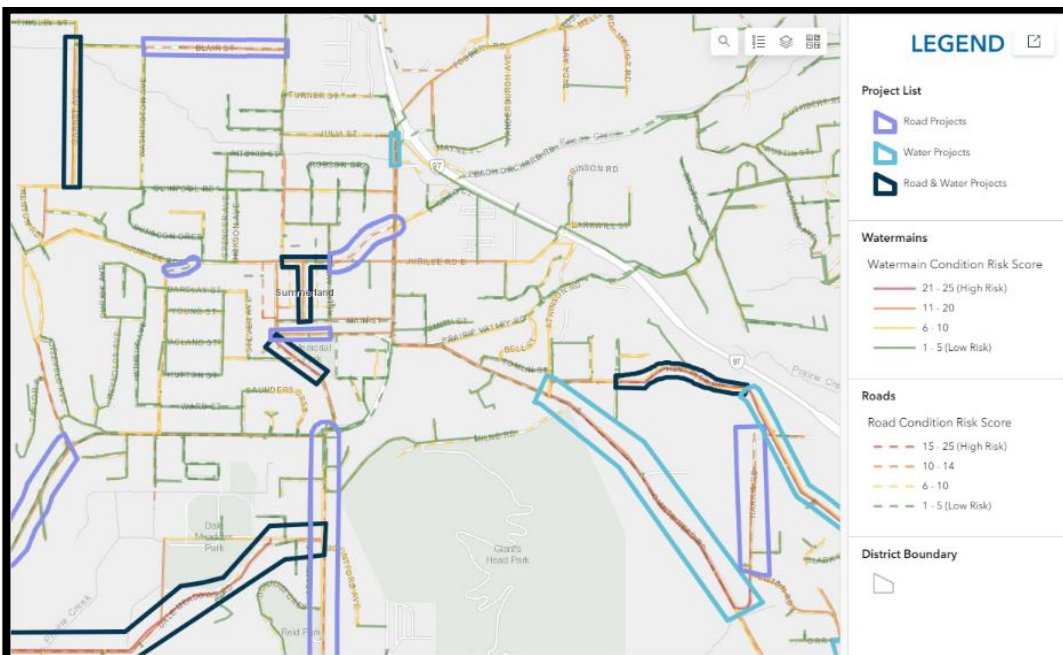


Figure 3: Interactive Project Navigation Dashboard

Utilizing the prioritization criteria established by Council (see Figure 1), staff worked with Urban Systems to create and rank the projects list. This involved collaboration with several internal departments including planning, finance, utilities, engineering and public works.

Following the critical review of project prioritization results, projects for a 20-year horizon were selected. The project scoring was compiled using Excel and added to a public facing StoryMap (see example in Figure 2) for communicating to the public. Each project sheet includes details such as scoring results, project location, anticipated costs, and infrastructure to be renewed.

Typically, asset management plans and decisions are made by staff with limited public involvement or communication. The Water and Road Infrastructure Integrated Asset Management Plan includes an engaging, public-facing web-based StoryMap where the District's asset management strategy, risk assessment, and prioritization of projects is hosted.

The immersive webpage integrates visuals, text, and maps to share information in a creative, accessible, and easily digestible manner, and includes an interactive project dashboard (see Figure 3) to present prioritization results. Additionally, the webpage provides sections on reporting and tracking the performance of the plan. As a result, this asset management plan remains at the forefront of Council's decision-making.

Using the Plan

This plan serves as a roadmap for the District to make sound infrastructure and financial decisions through evolving conditions. Its primary objective is to provide clarity to staff, Council, and the community by outlining the process in which infrastructure investment decisions are made, both today and in the future, to ensure sustainable service delivery. The plan has been used in creating the 5-year financial plan and capital plan as well as setting the stage for rate setting and updates to the Development Cost Charges Bylaw.

The interactive StoryMap is available to the public on the District of Summerland GIS portal (<https://storymaps.arcgis.com/stories/4e236f718ec246d49385bd134d6b145d>).

Updating the Plan

The intention of the plan is to update the projects annually as they are completed. The plan will identify project particulars including upgraded infrastructure, completion date, project costs, project photos and links to the as-constructed documents (internal). Similarly, new projects will be added to the StoryMap utilizing Council's previously

determined criteria. This will provide a clear visual for the public, Council, and staff to review what projects have been completed over the years, and the associated costs for delivery.

The plan will also be updated to include additional infrastructure in the future. Currently the sanitary sewer system in Summerland is quite new and renewal is beyond 20 years out, so it was not included in the original plan. As time passes, the sanitary sewer system will be added as appropriate. The District is also undergoing a review of system separating our treated water from our untreated water for agricultural use. Following this review, proposed watermain twinning renewal and new infrastructure will be added to the plan.

By including an innovative process of engaging the public and Council in determining priorities, sharing investment information, and reporting performance metrics, the District is a regional leader in actively engaging and transparently reporting on its asset management initiatives.

CASE STUDY:

What's in a Strategy? District of Saanich Council approves First-Generation Asset Management Strategy

*Jacqueline Weston, P.Eng., PMP,
Asset Management Program Manager, District of Saanich*

Saanich's AM Journey

Saanich has made significant progress in its asset management (AM) journey over the last 15 years, and work is underway to formalize the AM Program.

The scope of the AM Program is organization-wide and includes both engineered and natural assets. The governance structure follows a centre-of-excellence model with a centralized group providing guidance and support to departmental staff, who are responsible for the day-to-day work of managing assets and delivering services to the community.

Council Direction

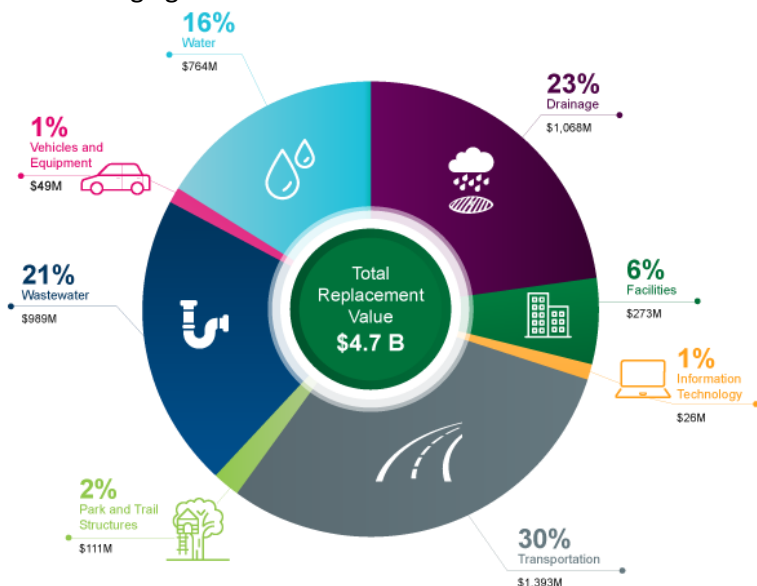
Saanich's 2019-2023 Strategic Plan included the development of an asset management strategy to provide a road map for the AM Program. Development of Saanich's first-generation AM Strategy was the team's focus over an eighteen month period from early 2022 until Council approval in July 2023.

The Approach

Saanich established a cross-departmental AM Steering Committee (AMSC) guide the AM Program in 2018, and Council approved a new Asset Management Program Manager (AMPM) position in 2021. In 2022, a cross-departmental AM Working Group (AMWG) was established to collaborate with the AMPM on developing and implementing the AM Strategy.

Using AMBC's AssetSMART tool and FCM's Asset Management Readiness Scale (AMRS), the AMWG and AMSC assessed AM maturity, identified gaps, and developed actions for continuous improvement, all organized around the four core elements of the AMBC *Asset Management for Sustainable Service Delivery – A BC Framework* (assets, information, finances, and people). The team then prioritized the actions, and created a five-year implementation plan for the short and medium-term. Long term priorities are also included in the AM Strategy for consideration in future updates.

As part of the project, Saanich staff updated asset inventories, unit costs, and replacement values, resulting in an updated estimate of total replacement value for engineered assets of \$4.7 billion (\$2022) as shown in the following figure.



Learning From Others

The framework for Saanich's AM Program is Asset Management BC's (AMBC) *Asset Management for Sustainable Service Delivery – A BC Framework*. Development of the AM Strategy was guided by the Federation of Canadian Municipalities' (FCM) *How to Develop an Asset Management Policy, Strategy and Governance Framework*. Saanich also completed an industry scan and found inspiration from the documents

shown in the table below – thank you to these colleagues for sharing their work!

Title	Municipality	Date
Asset Management Strategy	Ashcroft, Village of	2020
Corporate Asset Management Strategy	Capital Regional District	2018
Asset Management Strategy	North Vancouver, District of	2018
Asset Management Strategy	Oak Bay, District of	2021
Asset Management Strategy	Port Coquitlam, City of	2019
Asset Management Strategy and Roadmap	Prince George, City of	2019
Asset Management Strategy	Summerland, District of	2019

External Support, Training and Advice

The AMPM developed in-house AM training using resources provided by the Canadian Network of Asset Managers (CNAM) and the FCM. In addition, the AMWG participated together in several external programs, including:

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

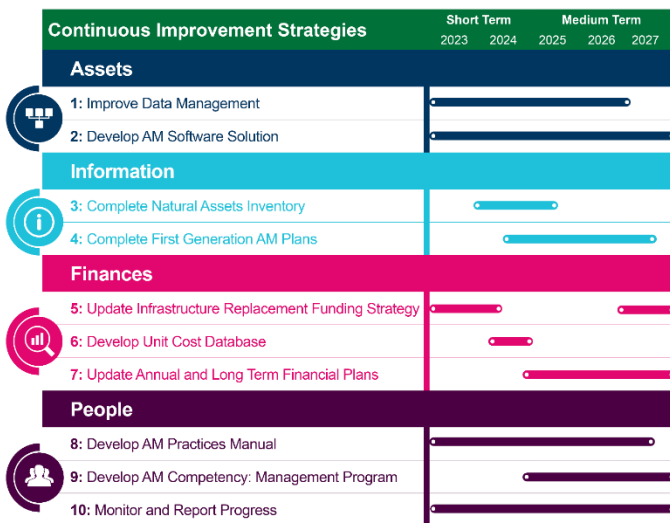
Specialized asset management advisory services in support of the development of the strategy were provided by icInfrastructure Corporation and Urban Systems Ltd through Saanich's AM Advisory Services consultant list.

AM Strategy and Implementation Plan 2023-2027

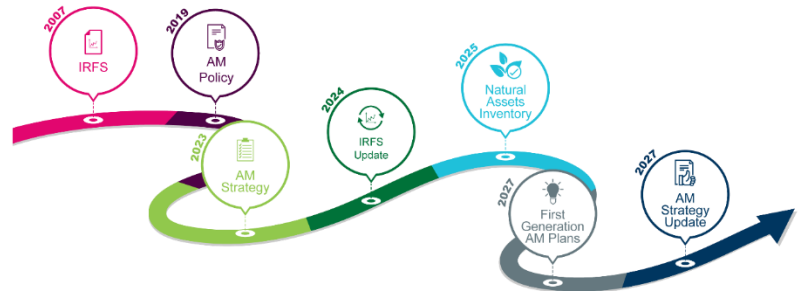
Saanich's AM Strategy is found on the District's AM Program webpage at [Asset Management Program | District of Saanich](#).

A high-level summary is provided in the on-line StoryMap found here [Asset Management Strategy \(arcgis.com\)](#).

For ease of reference, the executive summary, main document, and appendices are also provided as separate PDF files.



developing our internal capacity and cross-departmental integration, and to having some fun together along the way. After all, to quote Wally Wells, “Asset management is fun”!



Acknowledgements

Saanich would like to thank the Government of Canada and the Federation of Canadian Municipalities, and the British Columbia Ministry of Municipal Affairs and the Union of British Columbia Municipalities for grant funding assistance for the AM Strategy project.

Young Professionals – A Profile: Laura Hardiman, Capital Regional District

Laura Hardiman, PEng, MEng, PMP,
Manager, Asset Management, Capital Regional District.

Interview with Laura

You are an engineer. What made you decide to pursue a career in engineering? Where did you go to school and graduate from?

I was keenly interested in the environment while growing up on the Sunshine Coast. I hiked and biked near Chapman Creek, one of the primary drinking water sources on the Coast and learned about source water protection and was fascinated by the challenges of protecting the water supply. I pursued degrees in science and engineering at UBC where I was able to develop these interests.



What was your initial career and what were your aspirations?

Communication With Council

Early in 2023, Council was provided with an information package on asset management, including resources provided on AMBC's website. In May 2023, Council received a report and presentation on the progress of Saanich's AM Program over the past 15 years. Saanich's AM Strategy was then presented and approved by Council in July 2023.

Lessons Learned

As the final phase in completing our AM Strategy project, the AMWG completed a lessons learned exercise together, including discussion of what worked well, what could be improved, and recommendations/actions for continuous improvement. There was general agreement that a strong cohesiveness had developed within the AMWG, and that inter-departmental communications had improved. Given the recent provincial housing mandate, there was a recommendation to include a representative of the Planning Department on the AMWG and this change was made starting in fall 2023. Another recommendation was for the AMPM to have quarterly one-on-one meetings with each member of the AMWG to provide focused time for implementing the AM Strategy within each service area, and this new approach also started in fall 2023.

Next Steps

The District of Saanich team now has a Council approved road map for the next five years on our journey towards sustainable service delivery. Implementation of the plan will advance Saanich's AM practices in each of the four core elements of the AMBC framework (assets, information, finances and people), and will result in completion of Saanich's first-generation AM Plans by 2027. We are looking forward to the challenge, to

Engineering is my first career after graduation. I started as an engineer-in-training at Kerr Wood Leidal Associates. During this time, I traveled to communities throughout BC to advise on water quality and treatment. This practical experience highlighted the competing priorities of infrastructure needs, resource availability, and funding. For some remote communities, access to resources was a key consideration for improving drinking water quality. Once I obtained my professional engineer (P.Eng.) designation in environmental engineering, I moved into the public sector at the City of Surrey. In local government, I was able to broaden my knowledge of municipal engineering and expand upon my skills in capital planning and project management.

How did you learn about asset management? What interested you in the subject? What caught your attention? Once you had some sense of what asset management did, how did you pursue the subject and opportunity toward deciding there was a career choice there?

I first learned about asset management a little more than ten years ago, when I began working more closely with operations at the City of Surrey to understand their capital needs. In this work, I used asset data, such as condition and performance metrics, to inform asset replacement planning and project prioritization. Like many engineers, I was already doing asset management, but I didn't fully appreciate the depth of the field nor its reach outside that of a practicing engineer.

What attracted you to the position at Capital Regional District?

In 2021, my family and I decided to move to Vancouver Island, and I joined the Capital Regional District as the Manager of Asset Management. This position appealed to me because it focused on collaboration between divisions and implementing actions in a board-approved Corporate Asset Management Strategy in a regional setting. Asset management is supported within the organization through this dedicated position and there was a recognition that further investment was needed in asset management for sustainable service delivery.

The Manager of Asset Management position is a corporate role that is responsible for delivering on the Corporate Asset Management Strategy in collaboration with other divisions. The work is with cross-divisional teams, from finance to operations to planning and we work together to advance our asset management practices in support of each other. It's a journey of continuous improvement.

You have taken an active leadership role in the South Island Community of Practice. What led you to do that?

Shortly after joining the Capital Regional District, I attended a Vancouver Island Community of Practice meeting in Qualicum Beach. At the meeting, different local government staff presented on asset management work in their organizations, and this alternated between facilitated and impromptu group discussions. I quickly noticed how it was an easy place to ask questions and share observations about asset management. Arnold Schwabe (who is now Manager of Asset Management & Strategic Initiatives at Capital Regional District) chaired the group and later suggested that the group could be split into north and south communities of practice. I knew having a group in the South Island would be valuable for me and likely for others, as we could meet in person more frequently and could discuss asset management topics specific to the South Island, such as construction costs and regional opportunities. With support from Arnold and others, the South Island Asset Management Community of Practice was established and now meets three times each year.

What are your career aspirations?

Over the next few years, I'm looking forward to seeing the development of asset management as a corporate strategy at the CRD and leading that work. There is a lot for us to do! In addition, I'm excited to see the South Island Community of Practice continue to develop in the coming years as our group continues to learn from one another. I'm also interested in developing the next generation of leaders in asset management and look forward to those opportunities as well.

What is your current position and what are your responsibilities?

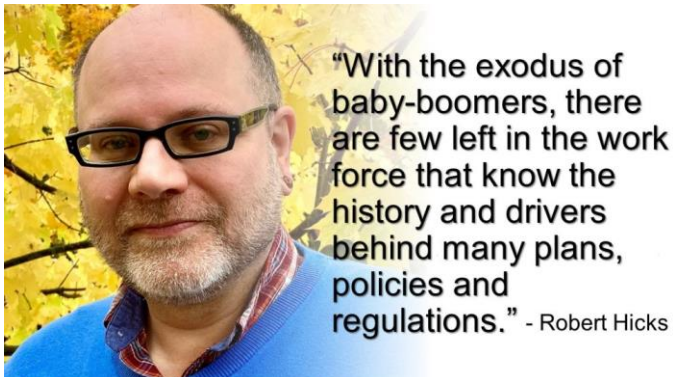
SUSTAINABLE SERVICE DELIVERY: Solutions to Complex Problems Require Deep Knowledge

Kim Stephens, M.Eng., P.Eng, (Executive Director, Partnership for Water Sustainability in BC) and Robert Hicks, M.Eng., P.Eng. (career engineer-planner in local government and an "Ambassador of the Partnership")

This 3-part essay builds on one published in the Fall 2023 edition of the AMBC Newsletter. Titled **Context and History Do Matter**, the takeaway message was that "the asset management community has lost sight of Sustainable Service Delivery strategies because it is lost in the details of Asset Management." The solution is to actively work to transfer knowledge through mentoring.

PART ONE – Knowledge transfer is a broken process in local government.

Organizational and intergenerational amnesia is real and has a downside. It results in unintended consequences. Superficial understandings do not yield solutions to complex problems. One needs deep knowledge.



The ramifications of amnesia are cause for concern in an era when systems of all kinds are being subjected to repeated shocks that test their resiliency. At the same time, councils and boards are grappling with top-down decisions or directives by senior governments.

2024 is their "year for decisions" in their 4-term of office.

With a year of experience under their belts, newly elected municipal councillors and regional district directors should now be increasingly effective in tackling the issues.

But how effective can they be when knowledge transfer in local government is broken?

Can their staffs produce practical and achievable plans that lead to affordable and climate-ready housing?

Can local government elected representatives throughout BC meet the moment in Year Two of their mandate?

Will they grasp the full implications of why the decisions they make today ripple through time, for better or worse?

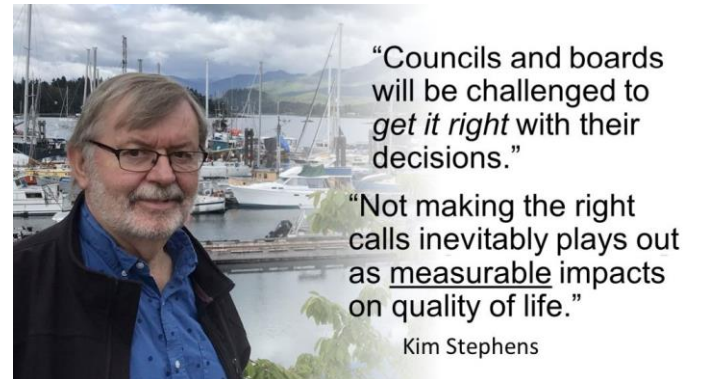
So what, now what, then what: With these four questions in mind, we introduce two big ideas. One is systems thinking and the other is the perspective captured by this soundbite: *What are the numbers telling you?*

When understanding is superficial, practitioners lose their feel for what numbers mean in practice. This loss plays out as failure to grasp the implications of assumptions they make, and failure to know intuitively when a number does not make sense.

These ideas set the scene for our reflections on why knowledge transfer is broken in local government, and then, how one could fix or remedy the situation.

Why 2024 is a year for decisions.

The stakes for communities are high in 2024 because of pressures caused by inflation, population growth and unaffordable housing. Yet councils and boards will need to give equal weight to what those issues mean for the future resiliency of infrastructure and environment.



The spectre of unintended consequences elevates the inherent risks. Local governments cannot run a deficit and we are in an era where so many systems are stretched to the breaking point.

The context for this essay is that Year Two of the 4-year term for councils and boards is usually the window of opportunity for local government managers to bring forward big ideas and initiatives that play out over time. But the window will close when many among the current group of elected representatives turn their minds to getting re-elected in 2026.

What systems thinking means

In a system, everything is connected. That is a key message in this essay. Think about what you have experienced vis-

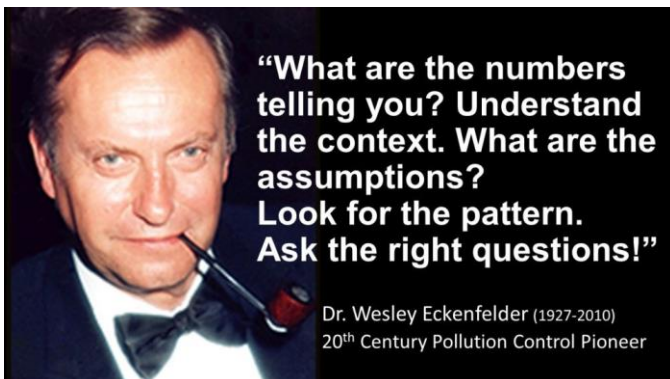
à-vis global supply chains and how problems cascade. And keep in mind that the systems perspective is not a new idea. John Muir, known as the father of the American national parks system, was an exponent of systems thinking in the late 1800s.



Housing supply, affordability, and home ownership. Health care. Crime. Sustainable and affordable funding for municipal infrastructure over generations. Water supply and food security. Agricultural land and food security. Weather extremes, creek system integrity, and risk management in the urban landscape. All are connected. All are at the forefront in this year for decisions.

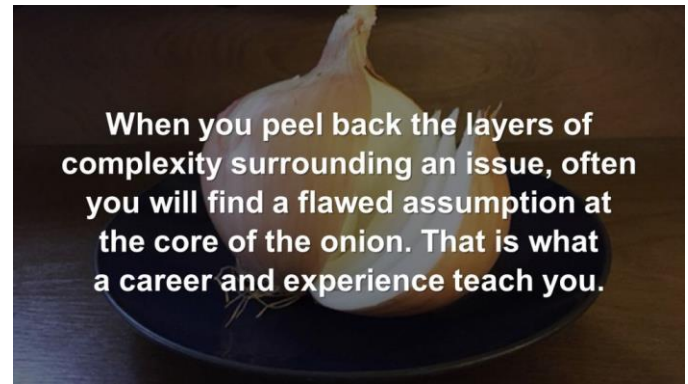
What are the numbers telling you?

As we reflect on the planning and operational implications of these interconnected issues, we are reminded of what the late Dr. Wesley Eckenfelder, a legendary professor from Vanderbilt University, told an engineering class when he was a guest lecturer for a week-long course at UBC.



Wesley Eckenfelder's words of wisdom provide perspective on the implications for decision-making. When a new generation of advisors lacks the deep background and experience to comprehend what numbers really mean, how can we expect elected representatives to make informed decisions?

This question got us thinking about how numbers are bandied about as gospel. And drive policy. Does anyone question the underlying assumptions and ask, what is wrong with this picture?

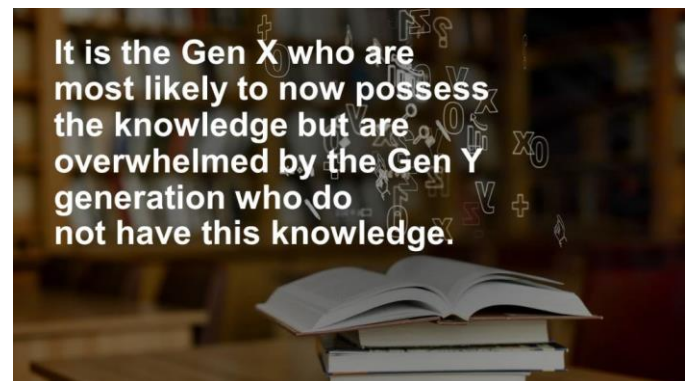


PART TWO – Solutions to Complex Problems Require Deep Knowledge

An existential issue for local government is knowledge-transfer. The baby boomers have more or less retired and now you are left with Gen X, born between 1965 and 1980. But many Boomers continued in senior positions late into their careers, interrupting the chain of succession and knowledge transfer.

What we are really saying is that, in the work force, a huge amount of experience has just gone out the door and very quickly. It is unbelievable. And the few people remaining with experience are not necessarily in a position where they can use that experience effectively.

And those coming in, the Gen Y born between 1981 and 1996, may not have access to past experience. Is there someone to show them how the pieces fit together? Or since they do not own the past, maybe they just feel they can do better with a fresh start? Do they care?



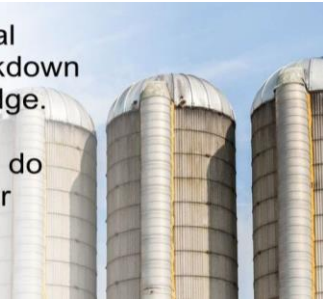
The elephant in the room is organizational and intergenerational amnesia.

Without deep knowledge and an understanding of history, proposed courses of action may be ineffective or unimplementable. Loss of big picture thinking is reflected in the way larger organizations are siloed.

This way of functioning focusses attention on immediate, narrower mandates and on managing program budgets and staffing.

When you talk to the right people, they do see the big picture and how everything connects. And yet, when it comes into the actual realm of application, it is so much easier for them to apply something when it is chopped up and put into silos. And in the process, they lose the ability to address big picture.

The challenge facing local governments is the breakdown in the transfer of knowledge. And so there is a lack of understanding of why we do the things we do, whether those things be plans, policies or regulations.



Lack of exposure to foundational research.

To illustrate the foregoing observation with a relevant example, the 2000s stand out as a transformational and consequential period for rainwater management and green infrastructure in the Metro Vancouver region. But changes in policies, procedures, or design approaches in the 2000s were the culmination of foundational research in the 1990s.

Fast forward to the present. In general, what we are gleaning is that most post-2000 engineering graduates with an interest in green infrastructure would not have been exposed to that foundational research. Without that deep knowledge, would they understand what the real objectives are or why we are pursuing these solutions?

Superficial understanding has unintended consequences.

It is not just green infrastructure. We are seeing other examples in local government that illustrate losing track of the purpose and not knowing what is realistic. This goes back to BIG PICTURE THINKING. If you just look at things in isolation, you might say it is no big deal. But when you look at things in context, it becomes a big deal because the question is, now how do you fit all the pieces together?

How can you come up with a good holistic or integrated solution if you are just skimming the surface on high-level information?



In today's world, we must increasingly consider solutions in a whole-system context. That means you need broader perspectives. But at the same time, you need the depth behind it.

The honeymoon is over.

Local governments are dealing with complex problems needing complex solutions. Superficial understandings do not get you to the solutions for complex problems. To get to that complexity, you have to know the background, you have to know the history, you must have DEEP KNOWLEDGE.

We are at a stage where we have stretched systems to the point where we no longer have those big margins or safety factors that we had in the past. We are bumping up against an infrastructure shortage. We have hit the wall with our existing infrastructure investments. Systems are maxed out to the breaking point.

When we look at system capacities, there are two approaches at play. One is optimization and the second is future sizing. Ideally, we would be doing some sort of risk analysis and calculating net present values. However, it seems that optimization has probably been more focussed on the near-term because of lower capital cost commitments and the political desire to fund a broader suite of investments.

Asset management for sustainable service delivery has an interesting link to this. On one hand, asset management can be about protecting those future sized investments; on the other hand, it can be about optimizing existing investments in the present.

The problem with optimizing the present, is that urban systems and the economy are based on a growth model. Therefore, optimization means demand management and belt tightening to stretch existing infrastructure and assets to do more. The honeymoon of abundant infrastructure is over.

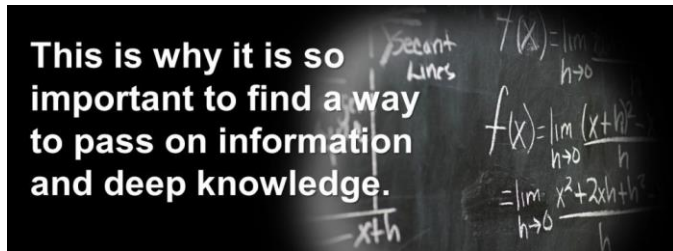
PART THREE - The solution is to actively work to transfer knowledge through mentoring.

The notion of a superficial understanding explains the challenge that we are seeing. There are post-2000 graduate engineers coming out of university who are familiar with infrastructure ideas and concepts, but they do not know the details behind them: details that they did not have to know at university or in their previous jobs.

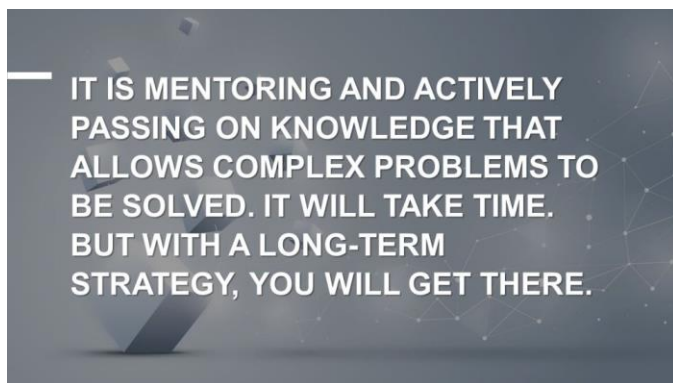
Sure, they understand the ideas and concepts at a high level. But without the background and history, can they really appreciate the complexity of interactions in a

whole-systems approach and why certain targets and approaches were selected while others were not?

With the exodus of baby-boomers, there are few left in the work force that know the history and drivers behind many plans, policies and regulations.



Mentoring is necessary to pass on foundational knowledge and information. You do not necessarily have to be active in the workforce to be a mentor. But local governments must work at actively transferring that DEEP KNOWLEDGE.



The Best Time for Natural Asset Management is Now

Emily Sharma, Natural Assets Initiative

It's an asset manager's role to keep their finger on the pulse of existing infrastructure, determining the state of those assets, and ultimately implementing a responsible budget and plan so that those assets can be maintained or replaced.

However, as many in the profession are surely aware, planning for tomorrow with what we have available today is easier said than done. The majority of Canada's public infrastructure is aging and in poor condition. Combined with the 1 in 100-year climate events that were experienced by BC communities in 2023, there's often little budget left to both address emergency repairs and other upgrades or replacements.

Thankfully, a growing number of local governments are now working towards a solution: natural asset management (NAM).

Developed by the Natural Assets Initiative (NAI) and based on traditional AM methodologies, NAM ensures that natural assets — such as wetlands, forests, and riparian areas — can be effectively integrated and considered as a part of financial and service delivery planning.

Think of it this way: nature is infrastructure that is already built, providing services you already use. And unlike a levee or pipe, natural assets can be self-sustaining, lessening replacement or repair costs on communities. With effective monitoring, maintenance, and rehabilitation now, nature can add value for decades in ways that many engineered assets cannot match.



Natural asset management cycle, adapted from AMBC's asset management framework. NAI (2017).

Local governments already working in NAM — including the BC towns of Gibsons, Courtenay, and Rossland — are also able to maximize on the added benefits from working with nature. In addition to outdoor recreation and education opportunities that come with preserving or restoring natural areas, building out inventories and plans with natural asset data offers them an edge when securing grant funding, especially those with climate consideration requirements.

Where to get started in NAM

While it is still a growing field, NAI and other natural infrastructure practitioners have built a foundation of resources and opportunities to learn and apply NAM, including:

- [*CLIM050 Natural Asset Management: An Introduction to Making Nature Count in Canadian Municipalities*](#) — offered through Royal Roads University, this online course provides the 101 on NAM for anyone new to the practice, and the credit can be used towards RRU's Climate Adaptation Fundamentals Micro-credential.
- *Specifications for Natural Asset Inventories (CSA W218)* — released last year, this national standard provides the minimum requirements for the development and reporting of a natural asset inventory, the first step in NAM. The Standard offers planners and land managers a starting point to understand what data is needed and how it can be organized to assess their existing natural assets.

For NAM, the best course of action is just that — action, because it is much easier to preserve the natural assets, we then have to recoup the ones we have lost. The biggest impacts to a local government's budget, climate resilience, and sustained services are determined by what you do today.

Ref: **Natural Assets Initiative**, naturalassetsinitiative.ca

Asset Management BC

Interested in Training?

AMBC has training programs available as follows:

Level of Service

A five-part workshop online spread over several weeks. This can be set up for a group with just your local government staff or with a group of local governments. The schedule will be worked out with you and our consultant.

Long Term Financial Planning

This workshop can be arranged in person with a single local government or on-line with a group of local governments.

Contact **Asset Management BC** for details at info@assetmanagementbc.ca or call or e-mail to discuss your requirements.

New training programs are being developed. **Watch for details.**



MARK YOUR CALENDAR 2024

Asset Management BC Conference

Absolutely yes! We are doing it again. The Radisson Vancouver airport hotel again will be the location of the conference. The dates?

- **Pre-Conference workshop November 5, 2024**
- **Conference November 6 & 7, 2024**
- **Theme: 'Today's Decisions – Tomorrow's Future'**

Watch for a call for presentations in early spring. Do you have story to tell. Come and tell the world. Do you have program ideas.

Send them to info@assetmanagementbc.ca

Registration is \$650. There will be no single day registration rate. Bring a young staff member. With your full registration bring a 'staffer' 30 or under for \$500. Student registration is \$300.

Watch CivicInfo for conference registration. The **Asset Management BC** website will be updated regularly with program, sponsors, and call for presentation details. www.assetmanagementbc.ca



ASSET MANAGEMENT AWARENESS DAY

MAY 15, 2024

Get Ready to Show Off Your Assets!

Get ready to share a picture of your assets on social media and you could win a free registration to our fall conference!

WATCH FOR DETAILS:

www.assetmanagementbc.ca
 LinkedIn: Asset Management BC
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#OurAssetsMatter

Tips and Tactics: How to Form, Retain, and Share Institutional Knowledge

Bernadette O'Connor, PMP, IAM Dip, CAMA, NZCE(Civil),
Asset Management Specialist, WSP



In this edition of our newsletter two articles discuss the importance of “Deep Knowledge Transfer”. This term is generally referring to the effective sharing of knowledge that has been informed by a lot of experience.

This is important and I will share some practical ideas of how we can do this, but I also want to talk about balanced methods for **forming institutional knowledge** and the importance of including new ideas, new knowledge, and new perspectives along with the tried and tested old ways.

A truly wise person remains teachable their entire lives, always curious and open to hearing new ideas and learning new things. They never get to a point that they stop listening because they think they know everything. Thus, a work environment that encourages exploring and adapting to new knowledge as well as sharing senior knowledge and learned experience will generate higher functioning teams (better problem solvers and decisions).

A balanced method to form institutional knowledge will draw benefit from the knowledge and experience of senior staff without discounting the contribution of new ideas, approaches, and information.

It also mitigates the risk of resistance to change and perpetuating business processes that are no longer optimal just because “we have always done it this way” or because “that is the way I was taught”. We live in constantly changing environments. Our ability to adapt to new information is critical to sustainable service delivery.

A key attribute of good asset management and sustainable service delivery is continuous improvement. The foundation for this is regular review of what we are doing, what it costs, and the performance results we are getting. Based on our best information at any time, we adapt our asset and service management to find and maintain that “sweet spot” where costs, risks, and benefits are balanced. This is the sustainable state where we deliver the required level of service for the least lifecycle cost without exceeding risk boundaries or impairing our environment.

Forming Institutional Knowledge

Three obstacles to forming good quality institutional knowledge, and recording and sharing it are ego, work

environment, and mandate. However, the potential problem of people’s egos being an obstacle will be mitigated if the other two obstacles are well managed.

Work Environment

Creating a work environment that encourages a balanced approach to forming and sharing institutional knowledge will typically include the following attributes:

1. Focus on continuous improvement as the path to sustainable service delivery.
2. Common understanding that adapting to change requires past, present, and future perspectives.
3. Reciprocal respect for tried and tested old ways and new ideas and innovation.
4. A culture of teamwork and stewardship, knowing our role is to support our community using the combined skills and best information available.

This environment will encourage the right attitudes and behaviours for higher functioning teams.

Senior Mandate

Frequently the demands of day-to-day work can make it difficult to take the time to record and share institutional knowledge. Therefore, in addition to creating a work environment that encourages staff to do this, there must be a mandate that prioritizes it. Having a culture of wanting to share is not enough without it being a required priority.

It is common for staff (past and present) to think of documenting a process as a luxury item, not essential to our business but something to do if we have the time. Even more have this attitude toward candid reviews of what we do, or recording the logic and assumptions in an analysis, or noting why we decided on a particular course of action.

A positive work environment must be supported with a clear expectation from senior management that staff will document processes and logic, so if they are not the ones to do the task in the future, the next person will be guided and well informed about what, how, and why it was done, along with relevant assumptions and limitations.



Upcoming Events

Asset Management BC

November 5, 2024

Pre-conference Workshop - **How To Write an LTFP for Asset Management**

Radisson Airport Hotel – Vancouver
Richmond BC

Registration on CivicInfo: civicinfo.bc.ca

Asset Management BC

November 6-7, 2024

Annual Asset Management Conference
Radisson Hotel, Richmond BC

assetmanagementbc.ca

Registration on CivicInfo: civicinfo.bc.ca

Municipal Insurance Association of BC (MIABC)

April 3 – 5, 2024

Risk Management Conference
Vancouver BC

miabc.org

Recreation Facilities Association of BC (RFABC)

April 15 – 18, 2024

Annual Conference and Trade show
Harrison Hot Springs, BC

rfabc.com

BC Water & Waste Association (BCWWA)

April 28-30, 2024

Annual Conference and Trade Show
Whistler BC

bcwwaconference.org

Canadian Network of Asset Managers (CNAM)

May 6-9, 2024

CNAM Annual Conference
Sandman Signature Downtown Hotel
Edmonton AB

cnam.ca

Government Finance Officers of BC (GFOA BC)

June 5 – 7, 2024

Annual Conference
Kamloops BC

gfoabc.ca



Federation of Canadian Municipalities (FCM)

June 6 - 9, 2024

Annual Conference and Trade Show
Toronto, ON

fcm.ca

Local Government Management Association of BC (LGMA)

June 11-13, 2024

Annual Conference and Trade show
Victoria, BC

lgma.ca

Union of British Columbia Municipalities

September 16-20, 2024

Annual Conference and Trade Show
Vancouver Convention Centre East
Vancouver BC

www.ubcm.ca

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