



YOUR LOCAL ASSET MANAGEMENT COMMUNITY OF PRACTICE IN BC.

Enhancing BC communities through leadership in asset management.

THIRTY-NINTH EDITION – SUMMER 2023

Are we creating a silo called Asset Management?

By Wally Wells P. Eng. Master Mentor and Coach



Asset Management is a process to provide a sound basis for decision making for the function of **Sustainable Service Delivery**. It is critical to differentiate between Council's role for Sustainable Service Delivery, the staff role, and the process of using the principles of asset management to help formulate the basis for

Council decisions. Asset Management provides Council with the information needed to support decisions for capital projects or upgrade and replacement of infrastructure in relations to services provided. It also supports Council's role in long-term financial planning.

Local government, by the nature of their structure and mode of operations, is a highly siloed enterprise. Asset management, to be effective and comprehensive, must cross all administrative boundaries within the local government. It must be or become part of the culture within the organization and have the support of council and senior leadership. The process of asset management is just good business.

Much of the discussion at forums and attention to the tasks of asset management is about what is classically called an **Asset Management Plan**. The Word **PLAN** is misleading as we have trained our Councils over the years

to understand a 'plan' uses the information on existing built and natural assets as the basis for considering future developments and assets be it for water supply, fire services, transportation, parks and recreation or a range of other services. These are often called **Master Plans**. As these plans deal with future development, Councils have choices and recommended facilities may or may not be built depending on those choices. The Asset Management Plan, as we call it today, is based on only existing assets and does not give Council alternates respecting new assets.

In providing a framework for asset management for our local governments in BC, [Asset Management BC](#) published "**Asset Management for Sustainable Service Delivery: A BC Framework.**" This is the core document that identifies the roles and responsibilities across the organization to ultimately achieve sustainable service delivery.

The process is illustrated in the graphic below.



The **Asset Management Plan** is represented on the process 'wheel' in only one sector, and there are many sectors and engagements required to achieve asset management within the organization. The graphic is a 'wheel' as the asset management process is dynamic and never ends.

When is it completed? For as long as you provide services requiring assets to deliver those services, never!

The middle loop on the 'wheel' defines the need to engage, communicate and continuously review and update the information.

Several Councils are provided with an annual strategic direction report based on the AM process at budget time each year. This has proven very effective.

Of the nearly 4000 local governments in Canada in our Provinces and Territories plus over 3300 Indian reserves representing 600 first nations, only a very small percentage are of a medium or large size in population. Our small communities have limited staff and technical resources yet are required to meet the same criteria and legal obligations in their provinces or territories as large local governments. With respect to asset management, only the large municipalities fund a full-time coordinator position for asset management. Smaller local governments will find a champion within their organization to lead the process. In all cases it is essential that Council and senior management buy in and strongly support the process. On the other hand, the complexity of the range and number of assets in large communities justifies that level of commitment. Many small rural and areas may have very limited asset classes such as roads and drainage (with drainage structures as part of the road network). While the principles of carrying out the asset management process are the same, it is greatly simplified in these communities but with the same positive result.

We must be very careful within our organizations to communicate the principles of asset management and the results with great thought to the audience as it is not the same message for all. Engaging Council or operations staff requires very different messages.

One of our continued barriers to effective asset management and the uptake within our communities is communications.

Our experience tells us that asking busy people to do asset management just because we think it is a good idea does not work. Busy people are not willing to take on additional tasks unless they see the value in them. As the term "asset management" is new to them, even though much of their existing job already engages managing assets, they do not understand what you are asking them to do, and the job

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then looks to them as overwhelming. Instead of asking people to 'do' asset management we must show them how their job has already engaged many of the principles of asset management plus how extending just a little of what they do, to include other asset management principles helps them do their job and overall helps effective management and service delivery.

We work hard to ensure that asset management does not become just another department within your organization. Every department and function have a role, as every service relies on assets to be delivered both internally and externally.

Our challenge, at all levels of the organization, is to show value collectively and individually. We all need these success stories. As an example, a case came to our attention of a parks department who claimed the inventory of all their parks, the furniture within the parks and their function. On further review, the inventory was done by different individuals without any common framework and, while reasonably complete, the individual park data was not to the same base or definitions and could not be compared. It was not a large task to adjust these inventories into one inventory where comparison could be made across the spectrum of all the parks to assess and prioritise park upgrades or improvements with a limited budget.

Asset Management BC (AMBC) was created approximately 15 years ago to provide all our local government and First Nations in BC with a 'GO TO' place for knowledge and information transfer. AMBC receives your input through our Community of Practice which engages people from different areas of the province and differing backgrounds and skill sets. Through this group and many individual conversations with many of you plus input from those agencies making grants and having reporting requirements, we establish our programs to meet your needs. We provide training and have successfully run workshops on NAMS, Level of Service, Operationalizing Asset Management, and Long-term Financial Planning. The delivery of training programs is an ongoing function. Our annual conference is in November with the 2023 conference scheduled for November 8 and 9. We publish a newsletter three times a year focusing on current issue and the presentation of case studies, from which we all learn. AMBC participates on the national scene as part of a network of asset management groups across Canada, so we can keep you up to date.

Asset Management BC is there for you. The website is assetmanagementbc.ca. There is a large resource base on the website, updated information on events training and related activities plus information of interest locally and from (or with links to) outside sources.

Enjoy your Asset Management journey. I have been known to say many times "It is just having fun!"

CASE STUDY: Towards Wildfire Resilient Yukon Communities: An Asset Management approach to Fire Risk Reduction

Damien Burns, Assistant Deputy Minister, Community Development, Government of Yukon

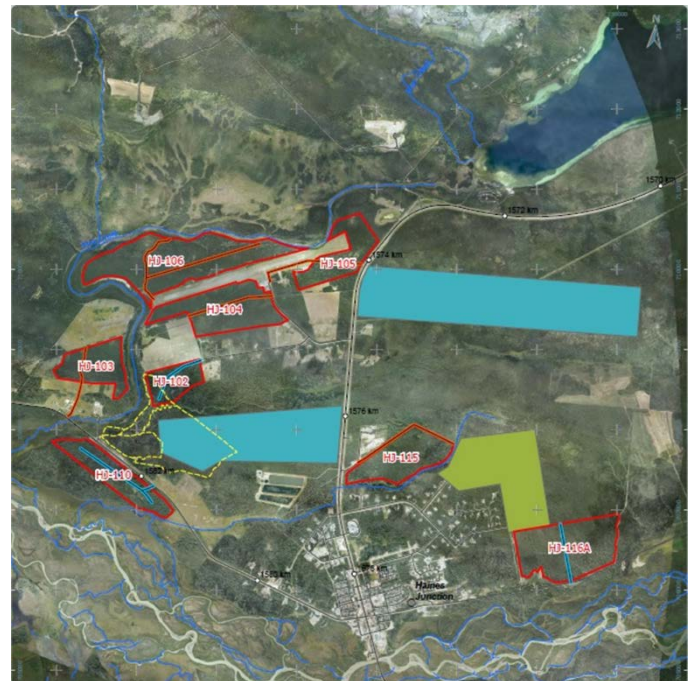
Each summer, wildfires threaten communities and infrastructure throughout North America. Evacuations displace communities for weeks at a time; air quality plummets to dangerous levels; and livelihoods are impacted by area closures, reduced tourism, and damage to communities and critical infrastructure. Across the world we are experiencing longer, more intense wildland fire seasons that have pushed fire response capabilities to the brink of failure. This perceived increase in extreme weather behavior is amplifying the threat to life, property, communities, and their infrastructure.

Natural fire has been suppressed around communities for decades. Aggressive and successful wildfire suppression has left an accumulation of flammable forest fuels. In

Canada, the challenges of the past few fire seasons have raised the awareness to a level of national significance. It is believed that, over the next few decades, climate change will continue to significantly affect wildland fire management in Canada. We expect longer fire seasons, more extreme weather events, more lightning, and larger, more difficult to manage wildfires.

Neighbourhoods and communities are also expanding into the wildland-urban interface (where the community and the forests intersect), adding increased exposure to the mix of accumulating forest fuels and worsening fire climate. This is a Yukon problem and a national problem. And this a certainly a problem for local governments and managers of communities and assets. To address this pressing issue, the Government of Yukon has adopted an innovative approach borrowed from infrastructure asset management programs. This article explores the application of this approach in Yukon communities.

Drawing inspiration from the municipal asset management community, the Yukon government embraced an asset management approach to address fire risk reduction that borrowed from the authors' experience in the municipal sector. The aim was to view forests and the Firesmart treated areas, as assets that provide a service – either to create or reduce a fire risk - and that these assets require documentation, monitoring, assessment, and maintenance to ensure the desired level of service.



Map of treatment area

Yukon had maintained a program to thin the forest and reduce the fire risk for more than 20 years in our Firesmart

program. These treatment areas were completed, and the focus moved to the next area. Despite more than 20 years of investment in these areas, we were not accurately tracking the service provided in these areas, once the first treatment was complete. To establish a comprehensive understanding of the previously Firesmart treated areas, a Geographic Information System (GIS) inventory was created, encompassing the past 20 years of treatment efforts. This inventory provided valuable insights into the distribution and extent of treated areas, forming the foundation for further assessment.

Surveys were conducted to assess the condition of each treated area and determine if the desired level of fire prevention service was still being provided. It was observed that over time, treatment areas required maintenance to sustain the desired condition and effectiveness in fire prevention.

Based on the assessment outcomes, priority areas requiring re-treatment were identified. The government recognized that maintaining treated areas yielded more value for money compared to creating new ones. By prioritizing maintenance, the longevity and efficacy of fire prevention services could be sustained.



This case study underscores the interconnected nature of risk management, climate adaptation, and asset management principles. Integrating climate adaptation measures with asset management ensures the ongoing maintenance and desired level of service for these assets. Moreover, it highlights climate adaptation as a crucial component in mitigating risks to community infrastructure.

The innovative asset management approach applied to fire risk reduction in Yukon communities demonstrates the effectiveness of integrating risk management, climate adaptation, and asset management principles. By viewing Firesmart treated areas as service-providing assets, and prioritizing their maintenance, the Government of Yukon ensures the provision of optimal fire risk reduction and mitigation services and contributes to the creation of climate resilient Yukon communities.

CASE STUDY:

Enhancing Asset Management Practices for Long-Term Planning: A Case Study of the Town of Sidney

Patricia Charlebois-Page, Asset Management Technician and Jenn Clary, Director of Engineering, Town of Sidney, BC
Jeff Muir, Regional Manager and Elio Ibrahim, Senior Asset Management Advisor, PSD Citywide



SCOPE

The Town of Sidney has been working to establish maturity within their asset management program. Equipped with a small yet diverse cross-departmental workforce, the Town recognized the importance of establishing a centralized source of information for the Town's asset data to improve confidence in their long-term planning.

While the ultimate objective was to create a holistic asset management plan that looked at all core infrastructure, the Town of Sidney recognized that such an undertaking would require a phased approach due to initial data limitations, limited in-house capacity, and other competing strategic priorities.

The first phase of the project focused on the Town's road network, as it was the asset category with the highest level of data maturity. Through this exercise, they looked at structuring and centralizing their inventory for roads,

sidewalks, and curbs and gutters, which is a fundamental step in any asset management program development.

The Town modeled its asset conditions and lifecycle management strategies (including trigger points, impacts, deterioration curves, useful lives, and costs) from an analytical standpoint. These lifecycle models were supplemented by risk models with the end goal of analyzing asset criticality using the probability and consequence of asset failure.

The Town has also mapped its transportation priorities by formalizing a levels of service framework and plans to analyze performance and investment trade-offs and integrate this with lifecycle management strategies, available budgets, and risk. Building on this momentum, the Town is prepared for future phases of the asset management project that address the Town’s water, sewer, and stormwater asset categories.

CHALLENGE

With a history of informal inspection and maintenance work, the Town of Sidney wanted to establish a more structured approach to its asset management program to avoid having data stored across multiple data repositories. Over the past two decades, the Town has successfully integrated asset management planning in their day-to-day operations, but limited resources made it difficult to develop and implement formalized procedures that correlate their levels of service to risk levels, lifecycle strategies, and available budget scenarios.

Transforming staff’s informal processes into a formalized framework also encourages knowledge retention and reduces the likelihood of losing highly specialized and valuable information if key personnel leave the organization. With many different business functions being performed by a wide range of subject matter experts including data specialists, accountants, engineers, operations staff, and more, the Town wanted to ensure that the software tools they were investing in could accommodate all types of data and users.

A major challenge Sidney faced was ensuring that their data collection efforts were not only relevant, accurate, and complete, but also aligned with the Town’s existing operating budgets, since over-committing to data collection could strain resources and jeopardize the sustainability of ongoing asset management planning. Staff also saw the need to consolidate existing data and establish a single source of information. This will increase confidence in the accuracy of their reporting, without requiring continual data syncs.

Another challenge the Town faces is coordinating the various asset management plans by using a corridor approach.

The Town hopes to avoid situations where roads are paved without considering the condition of underground utilities, emphasizing the importance of comprehensive planning.

SOLUTION

Despite being only halfway through the project’s timeline, the Town of Sidney has already identified numerous benefits that have contributed to its overall understanding of asset management best practices.

Phase One targeted the Town’s Road network by building risk models to assist staff with identifying critical assets, prioritizing them on a limited budget, and creating various lifecycle management strategies, similar to the one shown below.

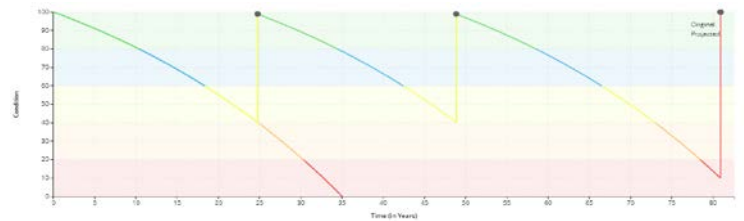


Figure 1 Roads deterioration curve including two rehabilitation events.

Building these models required workshops to identify the data points and ranges that can be used to model the probability of asset failure versus the consequence of asset failure, as seen below.

Field	Value	Risk Level	Weight (%)	Score	Weighted Total	Actions
Condition	52.16	3 - Possible	50%	1.50	1.50	
Asset Age (Years)	72 Years	5 - Almost Certain	15%	0.75	0.75	
Average Annual Daily Traffic	5570	4 - Likely	30%	1.20	1.20	
Transit Route	Yes	3 - Possible	5%	0.15	0.15	
Strategic Total:					3.60	
					Probability of Failure Total:	3.6 - Possible

Figure 2 Example of a calculation looking at the probability of failure.

Field	Value	Risk Level	Weight (%)	Score	Weighted Total	Actions
Replacement Cost	\$148,260,000	4 - Major	100%	4.00	1.00	
Economic Total:					4.00	
Operational - Weight: 70%						
Transit Route	Yes	3 - Moderate	100%	2.00	2.10	
Operational Total:					5.00	
Social - Weight: 5%						
Road Class	Collector	4 - Major	15%	0.50	0.02	
Number of Cyclists per Day	91	4 - Major	5%	0.20	0.01	
Average Annual Daily Traffic	5570	1 - Major	40%	7.00	0.10	
Location Zone	Other Areas	2 - Minor	30%	0.60	0.03	
Social Total:					0.17	
Consequence of Failure Total:					3.27 - Moderate	

Figure 3 Example of a consequence of failure of a road section.

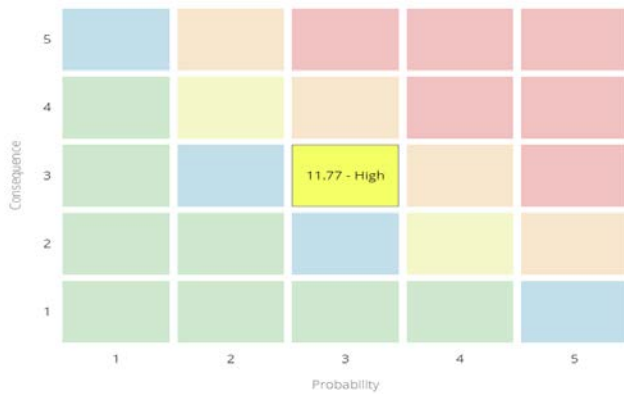


Figure 4 A risk rating diagram displaying the probability of failure vs. consequence.

Summary

These developments will not only allow the Town to manage core assets more efficiently but will also ensure that spending is balanced between various asset types and that funding gaps are clearly understood.

Moving forward

This framework will offer the ability to run scenarios that highlight the relationship between funding levels, performance, and risk. This will allow the Town to analyze the impact of short-term financial decisions on long-term service delivery and will assist in future road rehabilitation planning and decision making.

While the software implementation required to run these scenarios independently is still a work in progress, through this process staff have learned that, even with decades of asset management planning at the Town, there will always be areas for improvement.

As a small municipality where departments work closely together daily, the investment of both staff time and funding into the Town's asset management program development has improved their staff's ability to discuss issues as they arise and to get feedback from internal stakeholders before making major decisions.

Overall, the Town of Sidney showcases **the importance of formalizing processes and leveraging data for effective long-term planning.**

Through cross-departmental collaboration, the Town has **created an environment conducive to making informed decisions** that benefit both the municipality and its citizens.

By addressing challenges and leveraging the benefits of improved data analysis and forecasting, the Town of Sidney is **well on its way to optimizing asset management practices** and ensuring a sustainable future for its infrastructure.

Communities of Practice: Vancouver Island A BIG Success – North Island Asset Management Group

Arnold Schwabe, Manager of Asset Management & Strategic Initiatives, qathet Regional District

On May 17, 2023, representatives from the North Island local governments gathered in Nanaimo to discuss current asset management issues and trends. The group has been meeting for more than five years and we've seen participants from many different local governments during that time. The attendance for this meeting was outstanding with more than 30 people representing 15 local governments. Many of the people that attending this meeting were first time attendees and we saw several new faces. Almost all of the branches of local government were represented by people from Engineering, Operations, Finance, GIS, and Asset Management.

Unfortunately, we ran into a few technical difficulties early but after they were ironed out, things moved quickly. David Allen from Asset Management BC gave an update on recent and future events in the Asset Management field and reviewed a recent local government presentation on the importance of including all parts of the organization and the roles of boards and senior management.

There were also presentations from two municipalities on their progress implementing and updating Asset Management practices in their cities, including successes, failures, and lessons learned. There was also an interesting presentation on a Cartegraph implementation with demonstrations on the workflow and implementation of mobile applications. After the presentation, discussion veered off and ended with a larger conversation on change and how best to implement change management.

We were fortunate to have Kim Fowler attend and talk about Asset Management, land use planning, and climate action. She presented some thought-provoking stats on climate change trends and an integrated approach to climate change. Their local government is also working on aquifer mapping, sustainable procurement, and a risk management approach to their processes. We rarely see attendance by Planners in our group, but Kim's presentation was a good reminder that Planning staff should definitely be at the Asset Management table.

The mid-afternoon session was about financial planning in a Regional District. The presentation covered a financial planning model and demonstrated some detailed and noteworthy spreadsheets for Asset Management budgeting. There was also information about Asset

Management processes and the incremental progress made on the Asset Management plan.

The entire group finished the day with a roundtable discussion on what it means to incorporate Levels of Service into financial planning. There were obviously differing opinions on how it was interpreted, and there was no consensus on what it truly means and how far into the woods staff and council should go.

At the end of the day a few things were clear. Climate change and climate concerns, and how they relate to natural assets and Asset Management as a whole, are increasingly relevant topics. Levels of Service are still an obscure and unresolved concept and further discussion needs to happen before some kind of accepted practice can be established.

The presentations reinforced that different local governments are focusing on different areas of Asset Management and **our strength lies in our ability to collaborate and learn from what others are doing.**

Communities of Practice: Vancouver Island Establishing the South Vancouver Island Asset Management Community of Practice

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



In Fall 2022, with encouragement and support from Asset Management BC, the inaugural South Vancouver Island Asset Management Community of Practice (CoP) meeting was held in Victoria, on the traditional territory of the Lək̓ʷəŋən speaking peoples.

The CoP was created with the intent to provide an ongoing informal network and place for sharing of knowledge and ideas, all relating to topics in asset management. The first meeting had representation from 14 different organizations, primarily local governments in the region. Potential members were identified through the CivicInfo

BC directory and input from the neighbouring North Vancouver Island CoP. The inaugural meeting included a presentation and discussion about long-term financial planning, followed by a MentiMeter survey to gather information that would inform planning of subsequent CoP meetings.

Top Reasons to Attend a Meeting

The survey results concluded that the top reasons to attend a CoP meeting were:

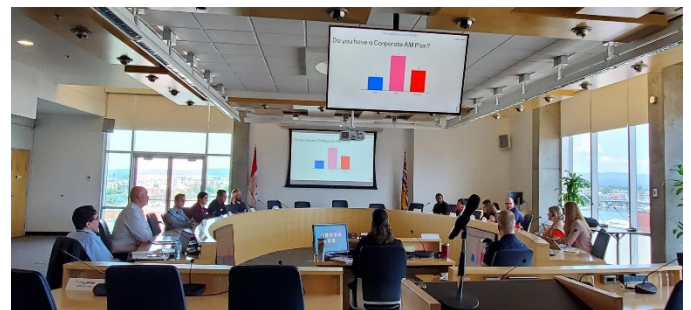
1. To learn more about asset management.
2. To share successes and challenges with peers.
3. To hear updates from asset management associations, e.g., AMBC.
4. I'm here for the coffee and muffins!

Meeting Topics and Logistics

The survey results indicated that CoP members preferred to meet between two and four times each year. Hybrid (in-person / online) morning meetings were preferred for a two-hour duration. The CoP members were interested in a variety of asset management topics spanning different functional and departmental groups. Topics were ranked by the members from most to least important, with the following results:

1. Reporting and performance indicators
2. Systems and tools
3. Strategy and policy
4. Planning and plans
5. Governance
6. Resource allocation
7. Maintenance management

In 2023, CoP meetings were held in March and in June; a third meeting is planned for October 2023. Meetings are now hybrid, held in-person at the Capital Regional District office with an online Microsoft Teams option available.



Meeting agendas reflect the asset management topics identified by members in the survey results. Topics are

aligned to the outcome areas in the Federation of Canadian Municipalities' [Asset Management Readiness Scale](#) and the core elements in Asset Management BC's [AssetSMART 2.0](#) tool for measuring progress in asset management. Aligning meeting content to asset management scales has provided a framework for best practice and enabled participation from organization at all levels of asset management maturity.

CoP members have stepped up to present new asset management initiatives and plans for their organization and have shared their successes and challenges along the way. The contributions of many have made for light work planning CoP meetings and has resulted in meetings that are engaging and dynamic.

The Value of Connections

Before starting the CoP, former Executive Director of Asset Management BC, Wally Wells, shared that "the best meetings are just getting people in a room and talking about asset management." This advice took the pressure off having polished presentations and for organizers to feel the need to know all the answers. Instead, the purpose of CoP meetings is to share and connect. Meeting agendas have generally included two short presentations from members followed by longer group discussions. With new faces joining the CoP, each meeting begins with a land acknowledgement and then a round of introductions. At the end of the meeting, there is time set aside for informal networking.

Since starting the CoP, members have connected outside of the meetings to discuss specific topics, share information, and collaborate, such as:

- Establishing a sub-group of local governments interested in partnering on a pavement condition assessment program,
- Discussing and sharing cost estimates for common asset replacements,
- Sharing tools and templates for asset management planning, and
- Sharing grant opportunities available for asset management training and initiatives.

While coffee and muffins are a nice touch for a morning meeting, members are showing up to the CoP meetings to make meaningful connections about asset management. As members arrive, the conversations begin.

The South Vancouver Island CoP has already brought many benefits, with the most valued being the connections made with others. **Ultimately, our connections generate efficiencies and advancements in asset management that impact our organizations, individually and as a collective in the region.**

Acknowledgements

Thank you to the following individuals for your support establishing the South Vancouver Island Asset Management Community of Practice.

- › Arnold Schwabe, qathet Regional District
- › Ben Lubberts, Town of View Royal
- › Carlo Vijandre, Aboriginal Housing Management Association
- › David Allen, Asset Management BC
- › Glen Brown, UBCM
- › Lauren Binnersley, Capital Regional District
- › Jacqueline Weston, District of Saanich
- › Wally Wells, Asset Management BC

Reach Out

If you are interested in starting a CoP in your region and would like to learn more about the South Vancouver Island CoP, please write to me at lhardiman@crd.bc.ca.

Local Governments invest in youth at Vancouver Island University

A conversation with Graham Sakaki, Regional Research Institute Manager

Kim Stephens, M.Eng., Executive Director, Partnership for Water Sustainability in BC



A theme dominating the news these days is the shortage of skilled, trained, or qualified people. Investing in people takes patience, commitment, and time. There is no shortcut to build in-house capacity.

The City of Nanaimo, Municipality of North Cowichan, and Regional District of Nanaimo have taken the leap of faith to invest in youth at Vancouver Island University. The mission is to develop next generations of local government staffs so that they have the knowledge and understanding to apply **EAP, the Ecological Accounting Process** to land use processes.

And the Partnership for Water Sustainability is passing the "EAP baton" to the Mount Arrowsmith Biosphere Research Institute (MABRRI) at Vancouver Island University to be the knowledge keeper. EAP will be embedded in MABRRI.

How much should local governments spend each year to reduce the Riparian Deficit?

EAP is about maintenance and management (M&M) of stream corridor systems. The spotlight is on outcomes. The short story about EAP is that it provides local government with the methodology and metrics so that they can use “real numbers” to establish annual budgets for line items within Asset Management Plans.

It took a 6-year program of applied research to evolve the EAP methodology and metrics so that local governments can tackle the **Riparian Deficit**.

Between 2016 and 2022, the Partnership for Water Sustainability completed 9 case studies in collaboration with 13 local government partners in 5 regions of southwest BC. We also built a relationship with MABRRI and involved students in the program. In fact, we relied on students.

With release of the **EAP Synthesis Report** in June 2022, the timing was right to embed EAP at MABRRI. Within a matter of months, the EAP Partnership came together. The inaugural meeting was on October 27, 2022.

EAP Partnership is a network

In addition to the “founding three” local governments, other case study partners are “mentor members”. Everyone wants to stay involved with the EAP program, understand what other members of the EAP Partnership are doing, and look for opportunities to either help or support each other.

The EAP Partnership also includes UBCM and the Ministry of Municipal Affairs. They are co-funders. In 2019, they formalized an expectation that local governments applying for provincial grants would integrate “natural assets” into their asset management processes.

EAP shows local governments how to do it through an annual budget for maintenance and management of stream systems and wetlands.

The EAP message is timely and local government audiences are receptive to hearing it.

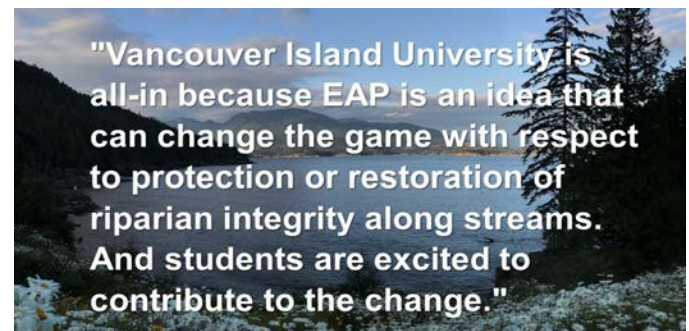


Story behind the story

“The story behind the story is about the importance of embedding knowledge of EAP into the youth who are going to be the future of our local governments. The framework that we have set up ensures this will happen,” Graham Sakaki emphasizes in conversation about what being an EAP partner means to him and to Vancouver Island University.

“A useful aspect of the EAP Partnership is that universities want to disseminate information and share knowledge. Vancouver Island University, as a smaller university, is very focused on applied research and community engagement. This is a good fit for the EAP mission.”

“There are lots of partnerships that exist for selfish reasons. But the EAP Partnership is selfless, and from all angles. It is a leap of faith for member local governments. Partnership for Water Sustainability commitment to passing the baton is unwavering.”



“The collaborative nature of the EAP Partnership ensures that the Ecological Accounting Process can be embedded into the youth who will be the future generations of local government staff,”

“We have a commitment from the Partnership for Water Sustainability to provide oversight and mentoring during a 3-year transition period. And three local governments are committed to providing project work experience for students.”

“The EAP Partnership will be training graduate students from two master's degree programs, Community Planning and GIS. Potentially, graduate and undergraduate students from other disciplines will come on board.”



"It is not just about students learning how to apply the methodology. It is also about passing on to them an understanding of the usability and practicalities of EAP. Many of these students are going directly into local government staff positions after graduation."

Foundational framework for EAP Partnership is unique, valuable and viable

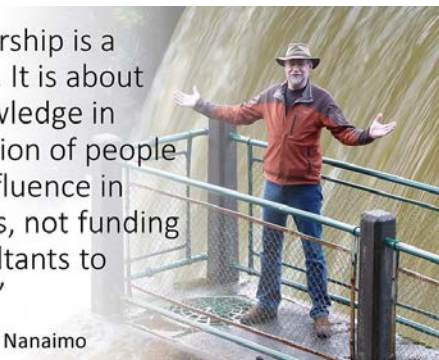
"The EAP Partnership was set up in a really unique, really valuable and viable way right from the beginning. The Partnership for Water Sustainability made the connections to the three local governments," continues Graham Sakaki.

"Together, we met with each individually. Then we all got together as a group to talk about what our values are and what we are really hoping to achieve. The fact that the three are showing their support for the students, and for the training to occur, is a great story."

The staff report from Bill Sims, General Manager for Engineering and Public Works, to Nanaimo Council put it this way: *"This collaboration will help ensure that training and expertise is retained within the university and can be continually developed. It also supports local governments with internal capacity, rather than exporting knowledge to consultants."*

"The EAP Partnership is a good news story. It is about embedding knowledge in the next generation of people who will have influence in our governments, not funding expensive consultants to learn about EAP."

Bill Sims, City of Nanaimo



Graham Sakaki continues the EAP conversation, "I just wish that partnerships like this existed among all research projects. Unfortunately, they do not. A lot of the time, researchers and research institutes and research students are working in their own silos. They do their work without having the support of community member expertise, municipal expertise, the expertise of organizations like the Partnership for Water Sustainability."

"Students will be creating a portfolio of professionals who they know. These are important relationships for students to make. And it is important knowledge that they are gaining too."

"EAP is cutting edge. It is innovative, very new, and very unique. And it has the ability to really change the game. We have been degrading streams and complaining, for too

long. We need to start maintaining and ensuring that the functions of these streams are improved."

"We can do a better job of this, and we know that is what we must do. It just takes somebody to come up with the idea for how to do it. And that is what the Partnership for Water Sustainability has done with the EAP methodology and metrics."

"We are applying EAP to relatively small-scale streams to illustrate its usefulness and effectiveness. The application of EAP will grow from there, I am sure."

Murray Walters
Manager – Water Services
Regional District of Nanaimo



Invest in graduate students to do a deeper dive to support local governments

Graham Sakaki continues, "When we started talking about the EAP Partnership and the importance and the value that local governments placed on training students, it made sense for VIU to go through Mitacs to obtain additional funding. I believe that being able to provide students with stipend payments for their research goes a



long way."

"School is expensive. If you can offer students a stipend payment for research work that relates directly to their degree, it adds a ton of value. It allows the students to stay focused on what they are passionate about, concentrate on their academic career 100 percent, and alleviate a lot of financial stress."

"The local government partners were willing to put some of the money that they are contributing into a Mitacs application. This would return 9 internship units over three years. That means we will be able to hire five students because four will get 2 units and one will get 1

unit. This will allow each student to really deep dive into their thesis work around EAP."

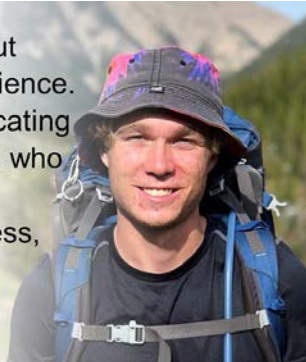
"Willingness by the three local governments to partner with Mitacs and push out some of the money directly to student internship units is PRETTY UNIQUE, especially since it is three different local governments collaborating on the same application to Mitacs."

"It is important for people to know that, while the EAP Partnership is committed to embedding EAP at the university and supporting students, the students actually want to work on EAP for their thesis research," concludes Graham Sakaki.

A student perspective on why EAP is attractive

"When Graham Sakaki offered me a choice of projects for my thesis, EAP seemed like a perfect balance of something related to municipal planning and my personal interests," states Sam Gerrand, the first graduate student who has chosen to build his research around EAP.

"What really struck me about EAP is the application of science. And it is a way of communicating expert knowledge to people who are involved in the political process, the planning process, and actually implementing changes on the ground."



Improvements in Practice Opportunities for Natural Asset Management

Roy Brook, Executive Director, Natural Assets Initiative

Natural Asset Management (NAM) is still a relatively new practice. However, it is no longer the exception, nor confined to a few innovators. NAM is trending upwards across Canada, with British Columbia in the lead: approximately 27 of about 175 (about 15%) of BC local governments are taking actions towards integrating natural assets into their mainstream decision-making processes. NAM is also nudging into early mainstream adoption in other provinces.

As with asset management more generally, NAM itself is an adaptive management process. The Natural Assets Initiative (NAI), is a Canadian NGO that has helped to define and pioneer NAM, improves methods, tools and practice with each new project. Some of the recent

lessons and considerations to make NAM mainstream follow.

1. Large-scale action relies on explicit natural asset policies

NAM — and Nature-Based Solutions (NBS) more generally — face a wide range of barriers to adoption. With this in mind, the Province of British Columbia engaged NAI on a major research project to understand the regulatory and policy issues for which they are responsible for that interfere with planning, designing, and developing natural asset infrastructure across BC, and how they can overcome them. The [final report](#) highlights opportunities for the Province of BC to increase uptake of NAM by local governments and watershed agencies.

Some big takeaways?

- There is a near-complete absence of policy or regulation in BC (and elsewhere) for any entity to consider nature broadly in terms of the full suite of benefits it provides. This, combined with a dominant worldview that sees nature as something to be extracted, favours status quo approaches. A first step would be clear direction from the province that nature must be considered in decision-making in terms of the full range of infrastructure and non-infrastructure services it provides. An immediate action would simply be to issue and interpretation of the *Local Government Act* to clarify that "public assets" include natural assets and that "services" include those from nature.
- Watershed governance is, at best, fragmented in BC and this limits how successful any entity can be in NAM, since everyone is downstream of someone else. Fortunately, there are regulatory and policy tools already in existence that could be used to help overcome this.

Read the full report, [Natural Asset Infrastructure in British Columbia: Barriers and Opportunities](#), for more details.

2. Making NAM widespread requires provincial leadership — but that doesn't mean local governments should wait.

Local governments have a duty to provide community services to their residents. With respect to our growing understanding of nature's role in maintaining these critical services, what legal responsibilities does a local government have to the environment? Are there legal risks to undertaking NAM — or to not undertaking it?

To start filling this knowledge gap, NAI published a legal primer for local governments. The [legal primer](#) is national

in scope with analysis of four sample provinces, including BC, to provide much needed detailed context, and includes:

- Legal authority surrounding natural asset management
- Legal policies and tools
- Legal risks relating to natural asset management
- Legal developments to watch

The bottom line: undertaking NAM may carry some minor legal risk, but in the context of a disrupted climate and the evolving case law NAI reviews, the greater legal risk for a local government is inaction.

3. The best NAM approach includes Indigenous knowledge and perspectives

NAM can only reach its potential by evolving to centering inherent Indigenous rights and responsibilities in its methodologies and, wherever appropriate and possible, Indigenous perspectives, knowledge, and biocultural indicators.

To start to reconcile NAM and Traditional Knowledge, NAI worked with the Winnipeg Metropolitan Region (WMR), the Southern Chief's Organization and the Centre for Indigenous Educational Resources to complete the [Land, Water and Other Natural Resources Inventory](#) in Treaty One territory. Following insights gained from this project, NAI is exploring NAM through a Two-Eyed Seeing (*Etuaptmumk*) and Ethical Space approach, and has shared the process of developing the inventory in the [Journey So Far](#) report so others can better include Indigenous governments and traditional land rights holders as a part of a holistic natural assets approach.

Including voices, knowledge and rights of First Nations, Métis and Inuit partners will look different region to region; what's important is including these partners and doing so early in the process. NAI is now moving on to new collaborative projects with First Nation communities and local governments in BC to develop watershed-scale inventories built with Western knowledge, technical information and First Nations knowledge, worldviews, and perspectives.

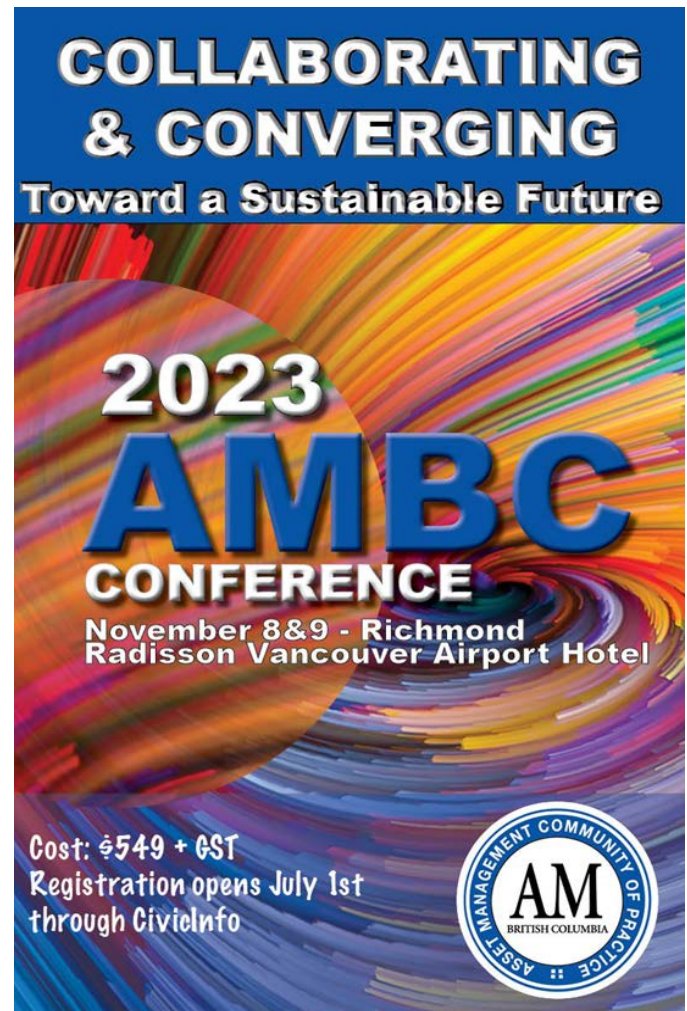
Asset Management BC Hosts Annual Conference

Another year and another opportunity to bring you the best of asset management. [Asset Management BC](#) invites you to the 2023 annual conference to be held **November 8 and 9, 2023** at the Radisson Vancouver Airport Hotel.

The theme of the conference this year is:

Collaborating and Converging Toward a Sustainable Future

... Fostering Social, Economic and Environmental Well-being Through Continuous Improvement Processes



It will be an exciting program with high quality keynote speakers and a wide variety of topics and case studies on different facets of the asset management journey. Registration opens on CivicInfo as of July 1, 2023.

A call for Expressions of Interest is currently open closing on July 14 for conference presentations. Do you want to be considered as a presenter. Get your submission in.

Last year, AMBC introduced a new annual awards program with two Awards of Excellence, one for an individual and another for an organization. Nominations for these awards is now being accepted.

All information or expressions of interest, registration and awards nominations is on the AMBC website at www.assetmanagentbc.ca

See you in November!

Our reflections on sharing a mission with Wally Wells

*Kim Stephens, M.Eng., P.Eng, Executive Director,
Partnership for Water Sustainability in BC*

Paul Chapman, Executive Director, Nanaimo & Area Land Trust (NALT), and Chair, Watershed Moments Symposia Series

This essay is structured in two parts, with Wally Wells as the common thread. This is a story of what is achievable when individuals and organisations commit to a shared vision and mission, truly collaborate in good faith, and align their efforts for the *common good*.

It was Glen Brown who aligned the missions of Asset Management BC and the Partnership. Wally Wells then brought the Partnership and Nanaimo and Area Land Trust (NALT) together in 2017. His inciting action instigated what became **“Watershed Moments, the Vancouver Island Symposia Series on Water Stewardship in a Changing Climate”**.

The Watershed Moments team is working towards Water Reconciliation. The pathway to get there is Blue Ecology. This is a *water-first* approach to interweaving of Indigenous knowledge and Western science.

So, what are the stories behind the story?

To Build Respect & Trust, It Starts with a Conversation.

Listen, Listen, Listen....because.....

Conversations →

will lead to **Dialogue** →

will lead to **Consensus**

Water Sustainability and Asset Management (Kim Stephens)

Two moments define my collaboration with Wally Wells. The first was my introduction to Wally in September 2010. The second was an email from Wally in March 2017.

Looking back, both were game-changing moments in what evolved into a shared vision for a whole-system approach to operationalizing **Sustainable Service Delivery**. The essence of the whole-system approach is that constructed and natural systems both provide municipal services.

Alignment of efforts with Wally has been key to elevating Water Sustainability and Asset Management as top-of-mind priorities for local governments. The two priorities are inextricably linked, and our efforts are complementary in facilitating peer-to-peer learning across boundaries.

Flashback to 2010: The Partnership was the established group and **Asset Management BC** was newly formed.

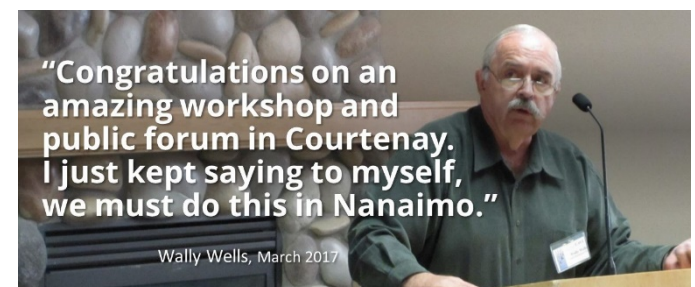
Glen Brown was central to both. Under Glen’s leadership as our Chair (2008-2010), the Partnership morphed from an inter-governmental partnership into a stand-alone legal entity. This assured continuity in delivering the **Water Sustainability Action Plan**, released in 2004.

In parallel, Glen convened an Asset Management Community-of-Practice, with Wally Wells as his *volunteer extraordinaire*. Wally was a recent arrival to British Columbia. Although he had just retired from his day job in Ontario, his mission was not over. Wally became hands-on with Asset Management BC.

In September 2010, Glen Brown took ill the night before the Partnership’s **Worth Every Penny Workshop** in Parksville. Wally stepped in to seamlessly deliver Glen’s presentation about a new way-of-thinking that we now call “sustainable service delivery”. And so began my collaboration with Wally. The rest is history.

Several months later, in the brand-new Asset Management BC Newsletter, Wally published the first of 26 articles contributed by the Partnership. Beginning in January 2011, these have connected the dots between sustainable service delivery and water sustainability. In turn, the Partnership created a homepage on our waterbucket.ca website to draw attention to the good work being spearheaded by Asset Management BC.

Flashback to 2017: The genesis for the Watershed Moments Series was the Eco-Asset Symposium held in Courtenay and organized by the Comox Valley Land Trust. My role in content development and delivery prompted Wally to send me an email the following day. His message was succinct. It was also a call to action:



Wally wears many hats. NALT Director is the hat he was wearing when he convened a meeting at Serious Coffee in Parksville to introduce Paul Chapman to members of the Partnership Leadership Team. Once again, the rest is history. That is the story that Paul tells in his part of this essay.

Suffice to say, Paul and I believe it is important to recognize the catalyst role played by Wally Wells in sparking a provincially significant undertaking.

Relationships founded on Respect and Trust: The scope of collaboration between the Partnership and Asset Management BC is formalized in a memorandum of understanding. But the success of our collaboration is that it is relationship-based and founded on respect and trust. The latter also applies to our partnership with NALT. The proof is in the pudding, as they say in the classics.



Blue Ecology is a pathway to Water Reconciliation (Paul Chapman)

Wally Wells brought his enthusiasm for the Courtenay Eco-Asset Symposium to the Nanaimo & Area Land Trust (NALT) boardroom. He began to connect the dots for us between asset management and ecology. The meeting over coffee, with members of the Partnership for Water Sustainability in BC, set us on the route we continue to follow today.

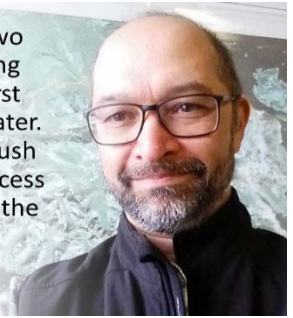
The Symposia Series: Beginning in Nanaimo in 2018, the idea for what has now become the **Watershed Moments Symposia Series**, started as a modest idea to highlight the successes and challenges of water stewardship in the Nanaimo area. This meeting brought together service providers, regulators and stewardship groups and began the nascent discussion of our common interests in water stewardship.

Our discussions lead to an expanded common vocabulary. Sustainable Service Delivery, Eco-Assets and Eco-Asset Management, the Ecological Accounting Process, Municipal Natural Asset Inventory, Riparian Deficit, and watershed stewardship are some of the words in our new common tongue. The rabid environmentalist, the cold-hearted accountant and the aloof engineer could come together and focus on a common goal – **Water Balance**.

Our understanding of “water balance” has grown beyond the graphics of how water travels across a landscape, is absorbed or taken up to be distributed again. Water balance at a very key level is about our relationship with water and with each other. We design and build our communities based on our relationship to water. Our neighbourhoods arise from this relationship. Resilient communities will embrace the language and lessons of Sustainable Service Delivery and Eco-Asset Management.

“We have landed at the crux of two of the most important issues facing Canadians – relationships with First Nations and relationships with water. We must ensure that we do not rush the process. We must get the process right, and that what we deliver is the water reconciliation piece.”

Paul Chapman, Chair
Watershed Moments Symposia Series



Budgets can be aligned with best practices, ecological know-how and boots in the stream to steward the critical infrastructure that is our watersheds.

Our understanding of water balance as a point to build relationships continues to grow. The senior stewards on the land, the Indigenous Peoples that have been actively and sustainably managing these eco-assets from the earliest memories have been shut out of the conversation and decision making for too long. Real water balance is about water reconciliation – recognizing our common ground in the watersheds and interweaving our knowledge and experience. This is the Blue Ecology path.

For NALT, Wally Wells brought us on this journey. He helped us expand our discourse and our understanding of alignment across sectors and stewardship roles.

We’ve always been in this together - now we know it too.

Counter-Intuitive Principles for Effective Networks

Focus on mission before organization
Manage through trust, not control
Promote others, not yourself
Build constellations, not stars

Crafting Resilient Communities: CNAM 2023 Conference Report

Darla Campbell, Vice Chair, CNAM

The 2023 CNAM hybrid conference was delivered in style in **Fredericton (May 1 to 4)**, with a full house of 200 in-person attendees and 100 virtual participants. The technical programming and keynote speakers focused on the latest information and trends in Asset Management.

The Honourable Jeff Carr, Minister of Transportation and Infrastructure, Government of New Brunswick opened the conference along with Mayor Kate Rogers who brought greetings from the City of Fredericton.

The 18 technical break-out sessions featured presentations on climate adaptation, data driven strategies for effective asset management, risk informed capital planning, asset and maintenance assessments, as well as organizations, people and leadership.

Workshops featured topics such as: building a maintenance management plan; creating an inclusive work environment; linking climate and other risks with levels of service; planning procurement implementation of asset management software; and asset management education for the next generation.



Morning runs featured the picturesque Bill Thorpe Bridge, a pedestrian bridge converted from a rail bridge.

The City of Fredericton sponsored a lobster dinner for the Gala Awards Ceremony at the famous Boyce Farmers Market and The Montgomery Street Band entertained for an authentic Maritime kitchen party.

Two virtual networking sessions were hosted by CNAM's Membership Committee to connect and review the key topics and themes from the day.

It was announced that **Conference 2024 will be hosted in Edmonton, Alberta.**



CNAM National Fall Summit (October 4 - 5)

Join us for the inaugural Canadian Network of Asset Managers (CNAM) National Fall Summit, happening on October 4-5. This event will be virtual only to provide access to everyone at least cost!

Multiple sessions will be provided on both days between 8:00am and 12:00pm PST (12:00pm - 3:00pm EST).

Get ready for power-packed summit with industry insights, interactive learning, and cutting-edge discussions. Our theme for this year's event will be announced soon, promising to deliver a unique and immersive experience that will shape the future of our industry.

Whether you're a seasoned professional or a rising star in the field, the CNAM National Fall Summit is designed to cater to your needs. Gain actionable strategies, learn from real-world case studies, and discover new tools that will revolutionize your operations.

Don't miss your chance to be part of this ground-breaking event. The CNAM National Fall Summit (Virtual) awaits you.

Registration details to be released soon – check the website cnam.ca.

Tips and Tactics: What does EDI have to do with Asset Management?

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



The concepts of Equity, Diversity, and Inclusion (EDI) have been around in various forms for a very long time. However, for local governments, these concepts have more recently evolved into an integrated set of ideals, to be applied to sustainable service delivery (asset management).

EDI is being spoken about more often. But most local government staff are struggling to understand how they can apply EDI principles and goals to their business, apart from procurement processes and policies. Many local government organizations have embedded EDI principles into their procurement policies and for some it is mandated through legislation. It is not difficult to understand EDI in terms of "fairness" and "transparency" for buying goods or contracting services. The difficulty (and for many, the discomfort), occurs when considering how to understand and attend to the needs of disadvantaged neighbourhoods and groups of people within our communities.

Historically, the approach to levels of service has included variations related to different asset groups and types. A high-profile recreation facility is likely to have a higher level of service compared to a storage shed. A major road serving the whole community will have a higher level of service than a local road serving a few. This we understand and accept as both reasonable and appropriate.

A key thing that EDI asks of us, is to explore whether our levels of service vary for different neighbourhoods or groups of people and whether these variations should or should not exist.

To answer this requires us to research and examine whether we are truly delivering our services in a way that everyone can experience the same quality of service. Other questions to explore include “Are there disadvantaged people or locations in our community?”; “How are they disadvantaged?”; “Do different groups and locations need different things?”; “What are fair and reasonable expectations of the local authority regarding what is provided and how it is provided?”.

Fear is preventing many from beginning this examination of current services through an EDI lens. But let’s not allow fear to stop us from doing what is fair. Let reasonableness, communication, and education guide us to make a genuine start. Many will be waiting for others to go first to light a path they can follow, but that only works if some have the courage to begin.

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The opinions expressed in articles in this newsletter are those of the authors and do not necessarily reflect the opinions of Asset Management BC or any of its partners.



Upcoming Events



[Asset Management BC](#)

November 8-9, 2023

Annual Asset Management Conference

Radisson Hotel, Richmond BC

assetmanagementbc.ca

Registration on CivicInfo: civicinfo.bc.ca

[Union of British Columbia Municipalities \(UBCM\)](#)

September 18-22, 2023

Annual Convention and Trade Show

Vancouver Convention Centre

Vancouver BC

ubcm.ca

[Public Works Association of BC](#)

September 26 -27, 2023

Joint annual conference and trade show

Penticton Convention Centre

Penticton BC

pwabc.ca

[Canadian Network of Asset Managers \(CNAM\)](#)

October 4-5, 2023

National Fall Summit

Virtual: 8:00am - 12:00pm PST (12:00pm– 3:00pm EST)

Registration available soon on CNAM Website

cnam.ca

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