



## YOUR LOCAL ASSET MANAGEMENT COMMUNITY OF PRACTICE IN BC.

Enhancing BC communities through leadership in asset management.

TWENTY NINTH EDITION – SUMMER 2020

### Asset Management, Service Delivery, and the COVID-19 Virus

With the pandemic, the priority with our communities, councils, boards, and administrations has been on managing under adverse conditions with closure of facilities, 'physical distancing', and managing community health concerns. A major constraint, especially in larger communities, has been the loss of revenue from user fees, transit services, parking, and other related services. Local government have had to reassess service delivery and impacts on several major issues. Progress with asset management programs came to a halt with the required change in staff priorities, but those with asset management programs in place had the tools to help with difficult decisions. The 'value' of having an active and dynamic asset management program and process became clear.

**Asset Management BC**, as part of Local Government Week, undertook a series of interviews with senior staff and politicians. Some quotes from these interviews are highlighted throughout this newsletter. To follow are four articles dealing with managing in the COVID-19 pandemic environment:

1. District of **North Vancouver** – How our AM Framework helped with the decision process
2. Resiliency Planning During a Pandemic: Perspectives from **Gibsons** on a local government response
3. Asset Management Program Helps **CVRD** respond to COVID – 19 Virus
4. Citizens, Politicians, Councils, Boards and the COVID Virus: A View from **Christina Bentley**

### District of North Vancouver – How our Asset Management Framework helped with the decision process

*Rick Danyluk CPA CMA, Manager Business Planning & Decision Support, and Steve Ono Manager, Engineering Services/Deputy General Manager, Engineering, Parks & Facilities*

At the District of North Vancouver, our Asset Management framework, strong team, and long-term focus are helping us be more resilient in response to the impacts of COVID-19. We are:



- Fully engaged in 'business continuity' and our Asset Steering Committee was one of the first committees to move to virtual meetings
- Continuing our emphasis on isolating existing (renewal) assets and new assets, and applying appropriate funding sources
- Evaluating risks related to capital plans, including an assessment of reserves, enabling us to re-prioritise projects with confidence
- Accelerating urgent work and deferring non-essential work, where appropriate
- Leveraging opportunities related to changing market conditions and economic activity
- Improving our organizational resiliency and response capabilities to COVID-19, including investments supporting the new work environment and Ministry of Public Safety orders

- Providing a framework for future budget amendments and sharing revised plans with Council and the community
- Benefiting from an integrated team aligned in our approach to asset management, facilitating nimble, effective discussion and decision-making.

Within our Asset Management Framework and integrated, cross-departmental steering committee, we are accustomed to organizational alignment, collaboration, and best practice results. We believe our response to COVID-19 reflects our clarity of purpose and enables us to maintain essential services, avoid increased costs, and navigate project delays.

## Resiliency Planning During a Pandemic: Perspectives from Gibsons on a local government response

By Emanuel Machado,  
Chief Administrative & Resiliency Officer, Town of Gibsons

*The article was originally published in April 2020 by the Partnership for Water Sustainability in its weekly Waterbucket eNews.*

*In the article, Emanuel Machado first reflects on what he observed during a recent visit to South Africa just as the world began to react to the COVID-19 situation, and British Columbia was implementing initial actions in its pandemic response plan. After providing a big picture context, Machado sets the stage by describing COVID-19 impacts experienced in the Town of Gibsons. These fall into three categories: economy, mental health, and crime rates. He then elaborates on how local government is responding. His emphasis is on 'a culture of teamwork' that has made it possible to create staff teams that are ensuring continuity of service. Machado concludes with a perspective on the role of natural assets during a pandemic.*

### South Africa - an inspiring example of human resilience

In March, I travelled to Africa to share Gibsons' approach to natural asset management. This was part of an exchange between Canada and South Africa, via the Federation of Canadian Municipalities, to support local governments in work on asset management and climate change planning.

During the trip, I found inspiration in the capacity and commitment of municipal leaders in South Africa. This has been helpful with putting the recent changes that have occurred in Canada into perspective.

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Not only are our South African colleagues dealing with the effects of COVID-19, but also with mass migration, corruption, and extreme violence. According to them, however, it is climate change impacts and the imminent collapse of governance and democracy that they fear most.

I remain hopeful that we will get through this experience and emerge stronger as individuals, as an organization and as a community."

### Is COVID-19 an economic, environmental or a social (medical) pandemic?

The Town of Gibsons recently applied a **resiliency framework** that works as a dashboard to identify, prioritize and budget projects and initiatives to increase Gibsons' resiliency to climate change impacts, including global events, which are expected to become more common.

In our resiliency framework, Emergency Planning is identified as an area of focus and includes recommendations to update programs to support neighbourhood preparedness to deal with natural or human-induced disasters.

We had barely identified that as an action, and here we were dealing with an extremely serious situation, affecting everything and everyone we know. I wanted to share some thoughts about what I have observed in terms of our local government's response to this on-going situation."

### What Are the Impacts in Gibsons as a community?

In April of this year, Gibsons Council considered adoption of substantially revised municipal budgets for operations and capital programs. Lower revenues are expected from development-related fees and other impacts. Projects approved, identified as critical are primarily to deal with ensuring the delivery of essential services, such as upgrades to water and sewer infrastructure, affordable housing and climate change initiatives.

**Economy, Mental Health and Crime Rates:** Costs of wages and benefits are expected to be higher, at least in the short term, due to overtime costs, increased technology to support staff and Council working from home, physical separation requirements, illness and loss of productivity.

Uncertainty of the possible impact of lower property taxes revenues and utility fees are forcing local governments to take a cautious approach to spending and are looking to the province for direction and support. Without revenues, however, local governments will be unable to pay their bills or maintain basic services.

At the community level, businesses are adapting to continue providing essential supports such as medicine and food, daycare, transit and the transportation of goods, while attempting to ensure the health and safety of their staff and the public.

Despite some of those challenges, many local organizations and individuals in the community have stepped up to provide new services and new ways of doing business to ensure that critical services are continued, which demonstrate community resilience.

One way the Town of Gibsons is contributing to the Sunshine Coast's community response effort was by creating a **Business Watch Program**, which relies on community volunteers to patrol business areas after-hours in support of bylaw enforcement and community policing.

A rise in social anxieties is noticeable at home, at work and in the community – and could explain the noticeable increase in property-related crime, domestic violence and mental health-related calls being reported by the RCMP and other police forces.

### How are we responding as an organization?

What has been reassuring from day one, is that the provision of **essential municipal services**, such as water and sewer appear to be **resilient to a pandemic**, as we and other communities continue to provide those services without interruption.

**Emergency Management Plan:** On the Sunshine Coast, we have benefited from the existence of a plan and structure to help the region manage its response to the pandemic. The coordinated response, via an Emergency Operations Centre set-up for that purpose, has been particularly helpful in ensuring unified communications and action planning.

Municipal leaders and staff from various communities actively participated in the different roles and as a result, we have increased our region's capacity to support the work now and in future events. Many other agencies and utilities participate as well.

**A Culture of Teamwork:** Because of the way in which this pandemic has significantly affected virtually everyone, human resources have generated many questions and concerns. In response, and in close consultation with our labour union, benefits providers and others, we have done our best to provide timely responses and solutions to our staff. Part of the concern with COVID-19 is that if too many staff get sick at once, we will not be able to deliver the services the community requires. One key response was to create a series of staff teams, and to operate as follows:

- **The new work scheduling system** is designed to limit exposure among staff and to ensure that the Town continues to be able to offer at least a minimum level of our usual civic services, over the long term.
- **This strategy** is one that has been implemented with success in other parts of the world and we felt it was prudent to establish it within our workforce sooner rather than later.
- **Each department identified 2-3 teams** (Team A, Team B and Team C), based on the number of people in each section. Team A and B work alternating weekly schedules. If a department has enough people for a Team C, those employees remain at home and practice self-isolation during working hours. Team C will be called on to work

With the new scheduling protocol in place, many people will spend increased periods of time at home and perhaps seeking additional ways to stay mentally stimulated. Therefore, for example, we established employee access to **LinkedIn Learning**, an online learning platform which offers subscribers access to literally thousands of courses, from photography to business to design.

**Risk Management – Planning Obsolescence:** On top of enhanced health and safety measures to protect workers, contractors and the public, the Town has also conducted Critical Failure Testing on its key infrastructure in the water and sewer utilities. Contingency plans were then developed for the scenarios identified.

**Business continuity** was our focus when, in a matter of a few days, we eliminated nearly all direct interactions with the public, and between co-workers, and began offering online and phone support to homeowners, builders and developers. Building and development permit applications continue to be received and processed.

Information technology (IT) finally proved its worth, as the transition to working from home instead of the office was almost seamless, albeit with limitations. Despite concerns about data security, privacy and productivity, many of the changes we have introduced are likely to be used more regularly in the future, once the situation has improved.

Unfortunately, a real possibility is that we might be faced with having to manage other disasters, such as floods and, soon enough, wildfires, while the current one is still active. In those scenarios, we anticipate that our human resources would be highly stretched to respond. We continue to plan for those eventualities.

### The Role of Natural Assets during a Pandemic

During these rapidly changing times, public policy has had to catch up to its new realities. In an effort to assist with the containment of the virus, public gatherings have been restricted and people have been asked to practice physical distancing of at least two (2) meters. However, there are concerns about the physical and mental health impacts of long-term isolation.

The Town and others have been trying to find the balance between encouraging people to keep their distance from others, while also promoting healthy activities, such as walks in the woods, trails and other greenspace. There is

an abundance of evidence which shows even limited exposure to nature promotes health and wellbeing.



The **natural assets that provide those health benefits** are managed by the Town of Gibsons, applying natural **asset management approaches**, as outlined in the Town’s asset management policy.

These **ecosystem benefits** provided by the Town’s natural assets, are in addition to other core municipal services - such as drinking water storage and filtration, rainwater storage and conveyance, and slope stabilization.

#### AM Helps Local Govts Cope with COVID

**Emanuel Machado – Town of Gibsons**

*“Everything that we have been planning and thinking and putting into action has become very useful. When you practice asset management on an ongoing basis, risk management is a core function. From risk management, we have already taken an analysis of what we can be exposed to during these types of events.”*



### Asset Management Program Helps CVRD respond to COVID – 19 Virus

*Austin Tokarek, B.Sc., MBA, CEA, CAMP, Asset Coordinator, Cowichan Valley Regional District*

The **Cowichan Valley Regional District (CVRD)** is a complex service delivery organization with responsibility for managing an Asset Portfolio with a replacement value of \$363M in public infrastructure. The CVRD budget has over 180 independent services and many of them rely on infrastructure to support the delivery of services.



The CVRD approved its Corporate Strategic Asset Management Plan (SAMP) in February 2020. This document defines the CVRD's coordinated approach to implementing asset management principles into core business processes to achieve sustainable service delivery, guiding how infrastructure will be managed moving forward. Having a SAMP that defines roles and responsibilities and that has been embedded into workplans, ensures that implementation is ongoing and can quickly adapt to changes in operating conditions. This also ensures the continuity of the CVRD's asset management journey. A mature AM program will help establish resilient communities that are prepared and can quickly adapt to changes in operating conditions, whether they be planned or not. It also enables the continuity of essential services when the unexpected happens.

We are still at the front end of our asset management journey, but we have been able to adapt to this unexpected change in operating conditions brought on by the global health pandemic. Prior to this change, the CVRD, as an organization, recognized the value of a SAMP that defines levels of service, includes a risk management framework for managing climate change impacts, identifies infrastructure condition and priorities for renewal projects, and that attempts to identify future demand scenarios and break down the functional silos established by each department. This strategy enables an understanding of the systems within our community, interactions between staff, infrastructure requirements, defined service levels, and the costs to deliver those services.

The CVRD staff response to COVID-19 was quick and coordinated, following guidance from senior levels of government. A Regional Emergency Operations Centre was established, and the difficult decision was made to limit some parks and recreation services and to cancel scheduled performances at the Cowichan Performing Arts Centre. Meanwhile essential services, such as water, sewer, recycling, and waste management have been able to adapt to these new operating conditions. Much praise goes to the operational staff, who have adopted new health and safety protocols to keep the toilets flushing and the taps flowing, and also to the corporate services team for ensuring IT infrastructure can support those working from home and allowing invoices and payroll to still be processed. To be clear,

this modified work-from-home scenario under a global health pandemic is far from ideal, as staff need to inject family priorities into their daily work flows.



The SAMP includes activities that will further enhance the resiliency of the CVRD's infrastructure and the efficiency of service delivery. One of these priorities is the defining of key business processes and workflows, and the implementation of an AM software system. The benefits of clearly defined processes and workflows becomes abundantly clear when staff are not able to interact face-to-face on a daily basis. The institutional knowledge embedded in the day-to-day activities of long-time staff must be captured to inform the processes required for successful AM software implementation. The AM software system will allow sources of information to be shared between departments, with inspection and maintenance information flowing from operational staff: 1) to Division managers to inform budgets and workplans; 2) to the GIS Division for updates to the asset inventory, and; 3) to the Finance Division for long-term financial planning, and TCA updates will further support the coordinated effort to manage infrastructure.

#### AM Helps Local Govts Cope with COVID

**Rob van Adrichem – City of Prince George**

*“Asset Management underscores the foundational value of what a municipality provides to citizens, businesses and organizations, and to recreational users. Infrastructure really is the foundation of why people choose to live in cities. I can't imagine anything more critical to positioning a community to attract and retain people and businesses. At times like this, in times of crisis, it underscores why you put effort into creating policies and practices. Policies are not just for good times; they're for times when you have to be able to respond quickly.”*



Having a robust asset management program will ensure that sustainable service delivery and adaptable communities can be realized. We have systems in place to ensure essential services are met under various operating conditions and we recognize the need for continuous coordinated improvements, a thorough understanding of potential risks to service delivery, and the knowledge transfer of key operational staff. In fact, it should be stated that the CVRD's most important asset is the staff. They have experience managing assets with limited resources, competing priorities, and under various operating conditions on the best of days. Their dedication and commitment to maintaining levels of service under the current circumstances is admirable.

A Board-approved SAMP minimizes the distractions of moving along the CVRD's asset management journey and enables progress to continue, despite disruptions in operating conditions. A holistic AM program—one that includes effective knowledge transfer to define processes and procedures, and that feeds into an AM software system—will further develop the organizational capacity to adapt to change. This will further help establish resilient communities that are better prepared to deal with expected and unexpected events in the future. The CVRD is committed to this AM journey and is excited to share its approach with other local governments to ensure that the province and country, as whole, become more adaptable and resilient in this rapidly changing world.

Link to CVRD Corporate SAMP:

<https://cvr.bc.ca/2455/Asset-Management>

## Citizens, Politicians, Councils, Boards and the COVID Virus: A View from Christina Benty

*Christina Benty: Prior Councillor and Mayor of the Town of Golden, Strategic Leadership Solutions.*



This is for every citizen who has muttered, posted or even thought “What is my Mayor or Council doing about the COVID-19 crisis?” Here is what you need to know. They should not be **DO**-ing anything; they should be **thinking**.

Here is what they should be thinking about:

- What policies and processes need to be in place to mitigate the upcoming impact of climate change (e.g., floods and fires) given the complexity of ‘physical distancing’ during COVID-19?
- Is it possible that post-COVID-19 recovery efforts may severely limit the funding envelope for infrastructure investments coming from other levels of government? Will this impact sustainable service delivery to our residents?
- How can we improve our systematic approach to maintaining, upgrading, or very possibly decreasing levels of service while balancing available funding, time constraints, prioritization, public demand, and legislative requirements?

**Dear Citizen,** for every tax dollar you pay, your local government receives eight to nine cents on that dollar to deliver a broad range of localized services, including but not limited to drinking water, sewage treatment, storm drain management, garbage and recycling, snow clearing and road maintenance, investment in recreation and active transportation options, land use planning, arts and cultural activities, animal control, fire protection, and emergency planning services.

The job of your Mayor and Council is to provide stewardship and governance over the organization that runs your community and provides you with safe, sustainable, secure services in a predictable, cost-effective manner **NO MATTER WHAT SITUATION, CHALLENGE, OR GLOBAL CRISIS ARISES**. You trust that you will get clean, clear, safe water seven days a week, that every time you flush your toilet it has a place to go, that your garbage and recycling are picked up in a consistent manner, and that the arena roof is not going to collapse. Your local government team has to deliver on that trust. That's their job and their only job.

Do not urge your Mayor or Council to waste their limited resources writing yet another letter or passing a benign resolution on content outside of their control. They should not be muddying the waters, particularly right now. This is the time for steadfast leadership that know how to stay in their own lane.

Financial relief in the form of lower taxes sounds like a great idea in the short term, and maybe it is. However, draining reserves to alleviate the tax burden is akin to rearranging the deck chairs on the Titanic. Your Mayor and Council are already facing a tsunami of aging infrastructure that requires strategic investment and they need to weigh the risk consequences on the sustainability of the services they provide. There is only one taxpayer, and you are going

to pay one way or another. Can they afford to continuously ‘kick the can’ farther down the road?

To my Mayor and Council friends who are grappling with citizens who range from being understandably weary and nervous to down-right bullies, bring your non-anxious presence to the table and tell people what you are doing to protect the services they rely on everyday. Tell them why it matters. Tell them that you are not going to build a straw house to create the illusion that you are doing something to make them feel better, but that you are going to do whatever it takes to ensure a sustainable future for them, their children, and their children’s children.

Although it may not make sense in the immediate context of history, ‘seventh-generational’ thinking is more important than ever.

**Get in your lane | Stay in your lane | Rock your lane**

***“If you take care of important things, the urgent things don't show up as often. The opposite is never true” - Seth Godin***



Photo credit: NanaimoNewsNow.com

mains in the area, including a 750-mm diameter supply main that forms the backbone of supply to about 50% of the city. Several crews mobilized and were able to isolate the break area and restore service to the majority of residents and businesses before midnight.

In the words of NASA, it was our -

***“most successful failure ever”.***

Within half an hour of the break occurring, crews came together to focus on several fronts: close the road, mobilize Public Works crews to isolate and shut down the main, and reroute traffic. Simultaneously, we opened communications with Council, emergency services, the Nanaimo Hospital, local radio, print media, and the City’s social media channels. Communications

progressed through several stages and were updated frequently. It started with “avoid the area” and, as more information became available, it was pushed out to the public in a forthright and clear manner.

Residents understood the challenge right away and appreciated knowing the reason for their home water pressure drop. Nanaimo Fire Rescue invoked their mutual-aid agreements to source tenders, in case there was a fire in the affected area. The hospital began emergency preparations, in case the pressure drop was prolonged. The Regional District’s transit system responded, right away, by detouring their most popular bus route and supporting the City’s communications.

There were two water mains immediately affected; in addition to the supply main, a 250-mm distribution main serving the local commercial and industrial area was impacted by the large main and may have added to the flow and difficulty in isolating the leak.

**AM Helps Local Govts Cope with COVID**

Mayor Christine Fraser – Township of Spallumcheen

*“Because our Asset Management planning was in place, our projects have gone ahead. We’ve been able to keep business going as usual which has not only been a great source of relief for our residents but for our staff as we’ve been able to keep everybody employed.”*



**A Case Study:  
City of Nanaimo’s Bowen Road Water Supply Main Failure - A Case Study in Asset Management**

*Bill Sims, ASCT, PTech, General Manager, Engineering & Public Works, City of Nanaimo*



In the early evening hours of April 3, 2020, the City experienced a major water main break on Bowen Rd, a four-lane arterial road. Over the course of the evening, the City lost about 21 million liters of water, drained three of its ten reservoirs, and

put a large area of the city out of water or with decreased pressure. Public Works and Nanaimo Fire Rescue crews were on scene within 30 minutes. There are several water



Photo credit: NanaimoNewsNow.com

Both mains being in the City's GIS database—the repository for all its linear assets—and the database being digitally available to field crews enabled a clear plan and understanding of which valves to operate and shut down.

The supply main is a concrete pressure pipe (CPP), which is predominant across North America, especially in the 1970s and 1980s. When utilities in eastern Canada began having failures of CPP in the 1990s, the City of Nanaimo started making plans for the potential of such a failure here. CPP is a thin-walled steel pipe, encircled by a spiral prestressed wire wrap, then lined and coated in spun concrete. In many applications, it is a robust pipe suitable for large-diameter water supply. However, its flaw is installation and susceptibility to corrosion from chipped concrete or migration of road salts. Typically, the prestressed wire wrap breaks, creating a rapid and catastrophic failure. In our case, we were fortunate the failure was on the bottom of the pipe, pointing down into very hard conglomerate rock. This mitigated further undermining and erosion of the road prism.

The City was planning for the early duplication and rehabilitation of this 3.5-km section of CPP, already having duplicated another 1-km section. Thanks to the GIS inventory, the City knows exactly where and how much of this pipe exists and were able to make plans for its rehabilitation. As a result of this break, the water supply ten-year plan is being adjusted to accelerate this work to next year and delay other capital projects. We simply don't want to risk



another major failure; where next time there may be more significant private property damage or, worse yet, injury to the travelling public.

Due to its specialized nature, the City previously ensured it had repair spools specific to the brand of pipe and ready for such an eventuality. Having the repair materials close-to-hand sped the recovery and repair immensely. Within 48 hours of restoration of service, the City had ordered another repair spool kit for potential future events.

As a sidebar, the originally specified pipe for this particular project was steel—exclusively used for large diameter supply mains. At the time of the tender, a CPP salesperson successfully lobbied Council to overturn the specification and try the less-expensive CPP. Had the City known the life-cycle cost impacts of premature failure and replacement, it's unlikely that CPP would have been approved.

The damage to the arterial road was significant; the resulting water-excavated trench was about three meters deep, two lanes wide, and ten to fifteen meters long. It was extremely fortunate that none of the traveling public drove into this excavation while the road surface was awash, which was another bit of luck aided by Public Works' fast response to close the road. We were also fortunate that, early in the pandemic, many businesses were closed, and traffic was very light.

The city was extremely fortunate in having a number of operators that knew the system and the implications of failure and had established long-term relationships with contractors. We were able to mobilize one of the





contractors experienced in repairing CPP with whom we had a long working relationship.

Knappett Industries began at eight o'clock Saturday morning and worked around the clock to finish by 10 o'clock Sunday morning. This included repair to the 250-mm local distribution pipe that failed as a result of the subsidence of the area around the large main's failure. Having an established relationship and mutual trust enabled the fast response. In the emergency condition, there was a great deal of cooperation all around and City crews continued to support Knappett's crews with material and supplies.

The erosive force of the water was mitigated, somewhat, by being funnelled between the concrete curbs, with limited over-topping on a flat-graded section of road. There was some flooding of private property, but this was quickly cleaned up and did not impact any structures directly. City crews cleaned the streets and storm drains of sediment washed out of the location of the break. The break was in the midst of a commercial/industrial area; apart from low water pressure, we were fortunate that no residents were directly impacted.

We were fortunate on a number of fronts and this proved to be a good opportunity to develop improvements, namely:

- The quick response and availability of qualified staff enabled early isolation, traffic control, and mobilization of repair. Full water service was restored within 36 hours and the road was fully opened within five days.
- Anticipating that failure was possible, and preparing for it, means it was simple to swing

into action with everyone knowing their duties.

- One of the highest priorities is open communication among responders, affected agencies, media, community leaders, residents, and businesses. The rapid, frequent, and honest communication led to understanding and appreciation of Public Works as the fourth emergency responder.
- Early communications with emergency services (e.g., Fire and Hospital) enabled them to put contingency plans in place.
- Having well-established relationships enabled a response based on trust without the need for complicated procurement and scope definition.
- Had the failure occurred during summer water demands, it is doubtful the system could have recovered as quickly, and it's conceivable the consequences would have been worse (e.g., likelihood of wildfire).
- We were fortunate that it occurred in the middle of the pandemic, when traffic was light and many businesses were closed, thus minimizing impact and inconvenience.
- Damage, other than to the road, was quite limited. A number of prominent businesses had "high tide lines" near their front doors, but nothing internal. There was significant erosion to a number of industrial properties under construction, but restoration is a simple matter.
- Having the entire water network within our corporate GIS allowed a logical shutdown, including errors in mapping, which were fixed. Using the technology further, corporate asset management software and tablets in each truck would support a more efficient response.
- We knew how to respond, repair, and assess the consequences of failure due to having the linear asset registry updated with types, ages, and digital as-builts, as well as having corporate knowledge of the risks associated with CPP.

#### AM Helps Local Govts Cope with COVID

Mayor Leonard Krog – City of Nanaimo

*"Having an Asset Management plan in place, you understand the assets, you appreciate the impact of their effective performance. It also gives you comfort and the ability not to create dramatic tax increases that you might otherwise have to."*



- Staff took initiative to reprioritize the Capital Plan and accelerate projects that will minimize the chance of a similar event in the future.
- This is an opportunity to update the Emergency Response Plan with future specific shutdown scenarios.
- Conducting further exercises and training in emergency response will support operators to respond to large intense events with confidence. This will also support succession planning as younger operators fill roles vacated by those with deep experience.
- As a way of improving response for other incidents anywhere in the City, crews will be elevating the priority of valve exercise and maintenance. In recent years, due to tightening of resources, this program had slipped. Reprioritizing it ensures younger staff are familiar with valve locations in addition to ensuring functionality and repair.



The consequences of not being able to quickly respond and repair this catastrophic break would have been dire, indeed. At its peak, there were several thousand residents experiencing low pressure or out of water. Nanaimo Regional General Hospital was preparing contingency plans for their patients if the incident had extended into days. A quick response, preplanning and expectation of

failure, and a unified response on the part of all parties averted a situation that could have been much more severe. It was a very real and graphic demonstration of the criticality of this particular water supply main and reinforces the need to continually improve the condition of our buried infrastructure.

## Local Government Awareness Week Wrap Up: How Asset Management is Helping Local Governments Better Cope with COVID

*The AM BC Team*

### Coping with COVID

Recently, the Province of B.C. celebrated Local Government Awareness Week (LGAW) and highlighted the amazing work being done all around the province. Since its introduction, this annual initiative has worked to build public awareness of local government roles and encourage participation in local government processes.

In light of the new COVID reality we are facing at Asset Management BC, we thought it was important to step up and do our part to help highlight the outstanding work being done during these challenging times.

As a result, we launched a video series with local government elected officials to showcase the importance of Asset Management planning to give the public an idea of the work being done to ensure their community assets

will continue to be top of mind, regardless of how the future will look.

Mayors, CAOs, and managers from all corners of the province stepped up to the plate to take part in the week-long video series, where they discussed the importance of Asset Management to their community. In fact, you'll see some of the quotes throughout this newsletter.

We can't thank these busy folks enough for helping to spread the message and importance of the local government's role in ensuring our assets are maintained and here for generations to enjoy.

#### AM Helps Local Govts Cope with COVID

Mayor Gary Foster – Northern Rockies Regional Municipality

*"When we have Asset Management in place, we're proactive, not reactive. Without asset management in place, you have no or little control over capital spending. You're waiting for things to break down and hoping you have the funds available to cover the costs. With an Asset Management plan, those funds are already in place."*



## Sharing on Social Media

Early on the morning of May 17, 2020, the video series was launched on Asset Management BC's [Twitter](#) and [LinkedIn](#) pages. The team wasn't sure how they would be received or if they would be lost in the noise of social media, but we forged ahead with our salute to local government and hoped that others would join us to cheer on these unsung heroes.

Almost immediately, Asset Management BC followers began watching and sharing these videos with others. The impact of our work was paying off as the video views increased by the hour. By the end of the first day, hundreds of people had watched the first two videos in the series and were applauding our participants for their outstanding work, through difficult and unknown times.

Many others shared stories with us about their current challenges, the importance of maintaining assets, and creating a plan for the future, whatever it may look like. As the week-long series ran, momentum for the project grew and grew. By the end of the week, more than 5,000 people had seen, interacted, or shared at least one of the nine videos. Asset Management BC's following grew on all social media channels and the reach was higher than ever before!

The project proved to be a success and did its intended job, which was to engage people with their local government and gain an understanding of what these people do every day to help ensure our assets are protected and considered, regardless of the times.

Thank you to everyone who engaged with Asset Management BC during Local Government Awareness Week. A special thanks to FCM and the Government of Canada for their support of this program, offered through the Municipal Asset Management Program.

We hope you continue to share the importance of local government work and encourage citizens to be engaged in their processes. And if you need help, be sure to reach out on social media or by email. We are here for you because #OurAssetsMatter.

Join the conversation!



#OurAssetsMatter

## UBCM open to applications for Community Excellence Awards

Have you a story to tell about your asset management program or any part of it? UBCM is **accepting applications until July 10, 2020** in the categories below, all of which include asset management. We encourage you to apply and tell your story.

### Excellence in Governance

Governance is the process of decision-making and the means by which decisions are implemented (or not). This category recognizes UBCM members that utilize governance processes and policies that: are outcomes-based and consensus-oriented; support and encourage citizen participation in civic decision-making; are efficient, equitable, inclusive, open, and transparent; and exemplify best practices in accountability, effectiveness, and long-term thinking. This may include projects focused on staff, elected officials, and/or the community at large.

### Excellence in Service Delivery

Service delivery involves the actual production and provision of goods and services to the community and should be integrated with community plans and aligned with financial plans. This category recognizes UBCM members that provide effective services in a proactive manner, demonstrate benefit to the community, and utilize performance measures, benchmarks, and standards to ensure sustainable service delivery.

### Excellence in Asset Management

Asset management is an integrated business approach that involves planning, finance, engineering, and operations to effectively manage existing and new infrastructure to maximize benefits, reduce risk, and provide satisfactory levels of service to community users in a sustainable manner. This category recognizes UBCM members that have developed a comprehensive system of asset management policies and practices—a system that meets or exceeds accepted best practices, such as the International Infrastructure Management Manual (IIMM), ISO 55000, or Asset Management for Sustainable Service Delivery: A BC Framework.

### Excellence in Sustainability

Sustainability means meeting current needs without compromising the ability of future generations to meet their own needs. This category recognizes UBCM

members that incorporate a long-term sustainability lens by considering the four pillars in planning, policy and practice: cultural, social, economic, and environmental issues.

The application deadline is Friday, July 10, 2020. See the UBCM website ([ubcm.ca](http://ubcm.ca)), for details, criteria, and application forms.

## Asset Management Canada meets at FCM

Representatives of our Communities of Practice across Canada and the Canadian Network of Asset Managers (CNAM) met for two days in February 2020 in Ottawa. Asset Management Canada is a network of the Regional Communities of Practice and CNAM to ensure sharing of resources and formalizing a communications network. The representatives of Asset Management BC were Executive Director Wally Wells, Brian Bedford from BC Municipal Affairs and Housing, and Glen Brown from the Union of British Columbia Municipalities.



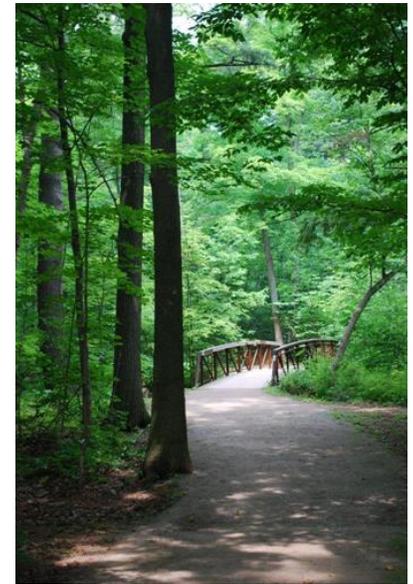
Others attending the meeting were representatives of Infrastructure Asset Management Alberta, AM Saskatchewan, AM Manitoba, AM Ontario, CEIRU (Quebec), Atlantic Infrastructure Management, and representatives from Yukon, NWT, and CNAM.

## Are we doing asset management sdrawkcab (backwards)?

*Roy Brooke, Executive Director,  
Municipal Natural Assets Initiative*

Life on Earth has been around for about 3.5 billion years. Waterfalls, wetlands, forests, plant roots, soils, and micro-organisms all lived together harmoniously. Then, about 6,000 years ago, humans started altering things.

Fast-forward to today and we see humans have pushed nature aside and consistently try to replicate its services... not doing a great job at it, and often with a hefty price tag. In the 1960s and 1970s, we built concrete water treatment facilities, roads, bridges, and culverts. Although most are now old and in urgent need of repair or replacement, local governments in Canada don't have the billions of dollars needed for such infrastructure upkeep and maintenance.



*Oakville, ON*

In addition, climate change is barreling on, causing more frequent and more extreme weather events, breaking down infrastructure even faster, disrupting the services they provide to communities, and thereby wreaking havoc on people's lives and livelihoods.

What can we do in such a dire situation?

Instead of only looking to build more engineered infrastructure with limited shelf lives, what if we also turn our views backwards—back to nature—to look for forward-thinking solutions?

As it turns out, a growing number of Canadian local governments are flipping their views and recognizing the importance of understanding, measuring, managing, and accounting for natural assets, as well as engineered ones. Doing so can allow them to manage climate, service delivery, and financial risks by better understanding what services come from natural assets, yet have not been accounted for, and how those services may be affected under conditions of climate change.

One of the most recent communities to explore the services from natural assets is the Northwest Regional Service Commission (CSRNO) in New Brunswick. Although the region is quite far from major watercourses and experiences less development than urban centres, it is still at risk of inland flooding.

Therefore, the CSRNO, together with the communities of Saint-André and Drummond, partnered with the Municipal Natural Assets Initiative (MNAI) to explore how their natural assets can help reduce flooding risks.



Photo courtesy CSRNO

“We believe it is essential to integrate natural asset planning into our work to better understand how different types of land-use can affect the region's resilience, especially in relation to runoff management and other water-related concerns,” says Adrian (Adje) Prado, Territorial Analyst in Research and Sustainable Development with CSRNO. “With the anticipated increases in precipitation as a result of climate change, we expect this will become even more of a concern over the coming decades.”

The CSRNO took the preliminary step in the asset management cycle by completing an inventory of their natural assets. The inventory lists the types of natural assets in the region, the services they're providing to the communities, their condition, and what risks may exist. Some of the highlights of the inventory indicate:

- The sub-watersheds surrounding the communities comprise significant natural assets, including 36,000 hectares of coniferous forest and 20,000 hectares of deciduous forest. These assets are likely to provide a range of services to the local residents that include carbon storage, stormwater management and water filtration, air purification, and improvements to community health, wildlife habitat, recreation, and aesthetic value.
- Much of the study area is rated low-permeability, meaning it has limited ability to absorb and manage flood waters.
- The condition of the assets from a species-diversity perspective is either very good or good.

This project also created a roadmap so Saint-André, Drummond, and CSRNO can decide what their next steps will be for managing their natural assets and reducing flooding. These steps could be to proceed with a full natural asset management project and implementation, including planning, regulatory, financial operations, maintenance, acquisition, and monitoring interventions with MNAI's technical support, advice, and guidance.

A number of other local governments in New Brunswick, Ontario, and B.C. have completed full natural asset management projects and have discovered how valuable it is to protect and restore their ecosystems to deliver services, some with savings up to \$414 million. These projects also found that healthy ecosystems have numerous other benefits, including:

- » Climate regulation
- » Water supply
- » Habitat
- » Air quality regulation
- » Pollination
- » Recreation
- » Amenity & cultural values
- » Health & well-being
- » Water quality maintenance
- » Transportation/livability
- » Safety & social benefits
- » Educational benefits
- » Economic benefits

The full technical reports are available at [MNAI project communities](#).



Sparwood, BC

There's no question the COVID-19 pandemic has turned the world on its head, and as we start cautiously moving from the emergency response phase to recovery and rebuilding phases, it's critical to look back to nature and plan how to build back better. The pandemic has dramatically impacted most local government budgets, but the climate crisis is still barreling ahead, and infrastructure is still falling apart. Natural assets can play a key role in helping communities continue delivering core services to their residents and businesses in a cost-effective, climate-resilient, and sustainable way, and even help prevent more emergencies from occurring; studies show that biodiversity and a healthy ecosystem can limit outbreaks of disease.

A growing number of economists, ecologists, scientists, planners, insurance and finance organizations, big businesses, and many others agree and recognize that natural assets provide numerous services and often cost less and are more efficient than built infrastructure. In fact, MNAI and 42 other Canadian organizations recently signed and delivered a letter to the Canadian government with detailed recommendations for short- and medium-term investment in natural infrastructure as an integral part of Canada's economic recovery from the COVID-19 crisis and its long-term resilience to climate change.

If natural assets are not managed responsibly, their value depreciates and so does their ability to provide beneficial services to humans and all other species. Looking to engineered infrastructure—first or exclusively—could be sdrawkcaB (backwards). Instead, nature has always been there for us with many answers to our questions; we just need to listen.

Website: [mnai.ca](http://mnai.ca)

Facebook: [facebook.com/municipalnaturalassets](https://facebook.com/municipalnaturalassets)

*The MNAI team provides scientific, economic and municipal expertise to support and guide local governments in identifying, valuing and accounting for natural assets in their financial planning and asset management programs and developing leading-edge, sustainable and climate resilient infrastructure.*

## MMCD Infrastructure Data Standard (IDS) and the Road to Community Resiliency

*Andrew Walther, P.Eng., APW Engineering Inc. on behalf of Municipal Construction Documents Association*

A resilient community requires the capacity to adapt to a changing climate, the sustainability of its infrastructure, and the data that reflects that infrastructure. Asset management tools can assist communities in cataloguing and evaluating critical infrastructure, but infrastructure is often designed and built based on historical demands, growth projections, and environmental impact forecasts. While many BC communities, through asset management practices, have put themselves in a proactive stance on infrastructure sustainability, the shortcomings are becoming increasingly apparent as communities find themselves operating in a reactive mode.

**“Physical infrastructure systems designed using this inadequate data (i.e., data that is less relevant because actual conditions have changed) are vulnerable to failure, compromising public and economic safety”<sup>1</sup>**

Community resiliency depends on a sound knowledge of the physical systems that provide critical services, but also recognizes the need for risk evaluation and a restoration strategy for overcoming impairment and failures caused by climate change, earthquakes, floods, fires, and other disasters created by humans.

Asset Management BC has a framework for local government to move toward service, asset, and financial sustainability through an asset management process. Fortunately, many BC communities have embraced asset management and embarked on long-term plans that outline the assets, asset conditions, levels of service, and service risks.<sup>2</sup>

### AM Helps Local Govts Cope with COVID

Chris Barlow – City of Castlegar

*“Had we not formalized our Asset Management strategy and financial plan with staff, council, and the public, our capital programs would have been set back years, thanks to COVID-19. Asset Management planning is not glamorous or exciting, but it's the legacy we can leave to our communities.”*



<sup>1</sup> **Introduction to Vulnerability and Adaptation of Infrastructure to Extreme Weather and Climate Changes**

Felio, Guy Ph.D. P.Eng. FCSCE Practice Lead – Special Projects, Engineers Canada

Harshan Radhakrishnan, M.A.Sc., P.Eng. Practice Advisor, Professional Practice, Standards & Development Association EGBC

<sup>2</sup> **Asset management for Sustainable Service Delivery *Asset Management BC***

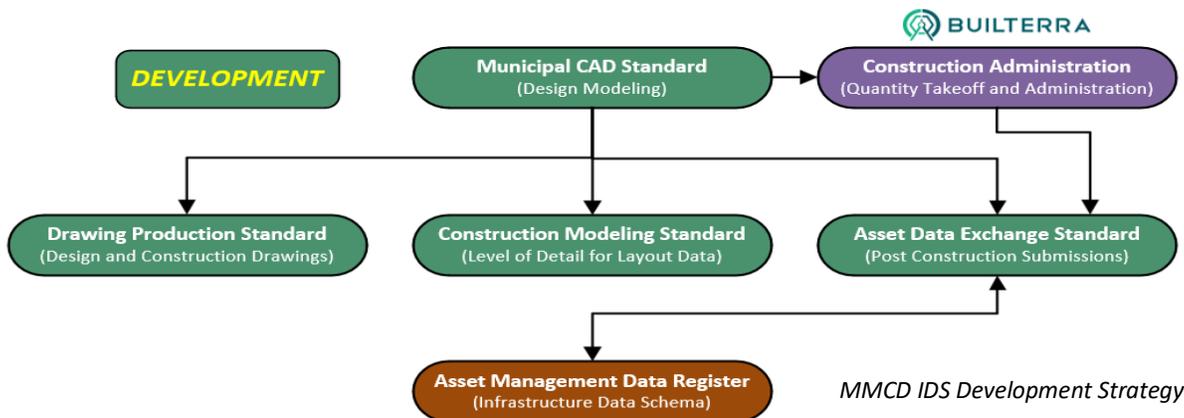
Depending on the stage of development of the asset management database, this approach can point towards an action plan to address vulnerabilities and to respond effectively to emergent conditions.

The Master Municipal Construction Documents (MMCD) Association has developed a set of tools and instructional videos—largely based on Autodesk Civil 3D infrastructure design software—to assist BC communities in capturing, formatting, and retaining key infrastructure data to help with their asset management plans. These tools are ‘freeware’ and are periodically updated to reflect both industry needs, and technological change.

The MMCD IDS (Infrastructure Data Standards) are a suite of standardized components that address the following project phases, and are at various levels of development:

1. Design Modeling – Civil 3D Drawing Template and Supporting Files
2. Drawing Production – Consistency in Design / Construction Drawing Appearance
3. Construction – Level of Detail for Construction Staking Data and Construction Management
4. Asset Data Exchange – Attributed Data Delivery Reflective of “Construction Recorded” Conditions
5. Lifecycle Management – Infrastructure Data Schema.

The MMCD IDS development strategy is shown in the following illustration:



that will greatly improve upon the suite of standards, specifically in asset data exchange and lifecycle management.

The underlying question is: How can you manage your assets when you lack the data? It is hard to believe that it was over 10 years ago that TCA legislation and the PSAB3150 accounting standard were introduced. This spawned an effort by BC communities to update infrastructure records with current and applicable information. The flip side is that we were so absorbed in updating records on existing assets that capturing data on new infrastructure did not become a priority until much later. There is where MMCD stepped up to the task with the first release of the Asset Data Exchange Standard. Developed mostly with the assistance of the City of Burnaby, the Asset Data Exchange Standard repurposes the design model data, which is updated to reflect construction-recorded conditions and is attributed with the required information.

Consistency with all aspects of infrastructure data preparation and flow simply makes good business sense. It is a common language for infrastructure data that can be taught, implemented and transferable across design consultants, construction companies, and communities. Every MMCD IDS implementation project brings improvements that are eventually rolled back into the MMCD offering. Sustainable infrastructure data management is central to community resiliency and there

is no better time than now to “get on the road”.

The standardized components are at various levels of development. They have historically evolved from contributions from BC communities that have undertaken projects to implement MMCD IDS. Current projects with the City of Prince George and the District of Saanich will result in significant updates

**AM Helps Local Govts Cope with COVID**

David Allen – City of Courtenay

*“COVID-19 has provided a real shock to our system. Asset Management practices are really essential to deliver the renewal of local government infrastructure efficiently and effectively with the least amount of waste. It allows us to know what needs renewal, in which sequence and how much it will cost.”*



## Infrastructure AM in BC: Transforming the phrase ‘sustainable service delivery’ into an actionable vision for local government

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

Glen Brown has provided leadership at a provincial scale to transform the phrase ‘sustainable service delivery’ into an actionable vision for local government.



*The phrase “asset management for sustainable service delivery” is now an accepted part of the local government vocabulary in British Columbia. The phrase was formalized with release of **Asset Management for Sustainable Service Delivery: A BC Framework** in December 2014, and rollout in 2015.*

*Transformational in its scope and vision for a desired outcome, this guidance document was the culmination of a multi-year process. It represents a personal and sustained commitment by Glen Brown, Chair of the Asset Management BC Partnership Committee, to “make it happen”.*

*What was the genesis of the phrase “sustainable service delivery”? A decade ago, what was the initial process for mainstreaming it? Both questions are addressed below in the retrospective written by Kim Stephens. He tells the story through a focus on the actions of Glen Brown as a key influencer in the world of government.*

*The article was originally published in April 2020 on the [waterbucket.ca](http://waterbucket.ca) website to celebrate the first decade of use of the term.*

## Sustainable Service Delivery: Coining of the Term in June 2010

I remember the moment so well when Glen Brown first used the term ‘sustainable service delivery’ to capture what was in his mind. It was June 2010, and I was at the offices of the Regional District of Nanaimo (RDN). John Finnie and I were on a phone call with Glen. The purpose was to develop Glen’s part in the agenda for the **Nanaimo Region Water Pricing Workshop**. At the time, Glen was an Executive Director in the provincial government; and John Finnie was General Manager, Regional and Community Utilities with the RDN.

Our conversation took place the week after Glen had given a presentation at the Leadership Forum organized by the Local Government Leadership Academy. His title was a long one: **Financial Accountability, Infrastructure Sustainability, Service Delivery: Connecting the Dots with an Asset Management Approach**. Nowhere in the presentation did Glen use the specific term ‘sustainable service delivery’.

During our brainstorming, Glen made repeated reference to the presentation; and expressed his desire to adapt it for the purposes of our upcoming event. As we talked, I kept pressing Glen to elaborate on what was in his mind so that John Finnie and I could help him crystallize a sound-bite for use as a compelling title.

There was an Ah-ha Moment and the penny dropped. Glen, John and I had a collective epiphany when we realized that Glen’s headline should be **What Does ‘Sustainable Service Delivery’ Mean to You?** That became the title for his workshop presentation.

In a nutshell, what happened during that conversation was that Glen Brown synthesized three ideas — *financial accountability, infrastructure sustainability, and service delivery* — into a single easy to remember phrase: “Sustainable Service Delivery”. The rest is history, as they say.

### It’s All About the Service

A decade later, I asked Glen about his recollections of why and how Sustainable Service Delivery clicked in his mind. He answered as follows:

“My inspiration came from Guy Felio, who is one of the original gurus of asset management, nationally. In his own words, and in a slide that I have seen him use in presentations since the mid-2000s, Guy Felio said, ‘It’s all about the service’.”

“Basically, well-maintained infrastructure/assets are worthless IF they do not provide a service. That is what resonated with me. Also, for any asset management approach to be successful, it must not focus on the infrastructure/asset by itself.”

“That way of thinking applies to nature and the environment, as well, as long as we fully understand and appreciate the value of natural services — particularly when we leverage natural services to provide traditional community services, as well as those that are provided to support a healthy environment — clean air, aquatic habitat, etc.,” concluded Glen Brown.

### Nanaimo Region Water Pricing Workshop

Part of the rollout to stimulate a national dialogue on sustainable water management, the Nanaimo Region Water Pricing Workshop in September 2010 was described by Oliver Brandes of POLIS (University of Victoria) as the first of its kind in Canada. The workshop program was a unique blend of research and practice. The workshop connected the dots between three initiatives:

- **Action for Water:** Implemented by the Regional District of Nanaimo, following approval in a referendum in November 2008.
- **Worth Every Penny:** A Primer on Conservation-oriented Water Pricing, co-authored by Oliver Brandes and released in May 2010.
- **Beyond the Guidebook 2010:** Implementing a New Culture for Urban Watershed Protection and Restoration in British Columbia, released by the Partnership for Water Sustainability in June 2010.

The desired outcome for the workshop was that participating practitioners would understand why ‘conservation-oriented water pricing’ is a tool to achieve a larger end: ‘sustainable service delivery’.

In a preview story published in summer 2010 about the workshop to prime our target audiences, I wrote that:

**“Sustainable service delivery is an emerging issue in BC. Changing and/or additional demands mean the local government workload is expanding. Local governments are being challenged to maintain and/or replace existing infrastructure over time, and to ‘do more with less’.”**

Unfortunately, Glen Brown took ill the night before the workshop. His presentation was delivered by Wally Wells, Executive Director of the then fledgling Asset Management BC. The significance of Glen not being able

to deliver his presentation, in person, meant that the formal unveiling of Sustainable Service Delivery in an outreach and professional development setting was delayed seven months until April 2011 when Glen was part of the faculty for the *Comox Valley Learning Lunch Seminar Series*.

This landmark series was initiated by the Partnership for Water Sustainability, hosted by the four Comox Valley local governments, and held under the umbrella of Convening for Action on Vancouver Island (CAVI).

### Comox Valley local governments embraced the vision for ‘A Regional Response to Infrastructure Liability’

The Nanaimo Region Water Pricing Workshop had ripple effects. This included inspiring the four Comox Valley local governments to change direction and build the 2011 Comox Valley Learning Lunch Seminar Series around the ‘sustainable service delivery’ theme. The annual series program provided peer-based education. Everyone was learning together.

Originally planned for the fall of 2010, the third annual Comox Valley Series was delayed until the spring of 2011. As an outcome of what they learned at the RDN workshop, the Comox Valley regional team shifted the spotlight from a ‘regional response to climate change’ to the financial challenges associated with replacement of aging municipal infrastructure. Climate change became a sub-theme.

### A Program for Peer-Based Education

Glen Brown was part of the faculty for the 2011 Comox Valley Series. He collaborated with the Comox Valley regional team to frame Sustainable Service Delivery in easy to understand terms.

Thanks to the early work of the newly formed Asset Management BC — a ‘community of practice’ initiative with provincial support and participation — local governments were starting to wrap their minds around the ‘20/80 Rule’, where the initial capital cost of municipal infrastructure is about 20% of the ultimate total cost, and the other 80% is an unfunded liability.

The 20/80 Rule provided context for the 2011 Comox Valley Series. Thus, the focus of the team was very much on what would be involved in facilitating the shift to a life-cycle approach to financing of infrastructure. Under Glen Brown’s guidance, the team embraced this explanation:

*Tackling the unfunded infrastructure liability involves a life-cycle way of thinking about infrastructure needs and how to pay for those needs over time. This holistic approach is described as Sustainable Service Delivery. The link between infrastructure asset management and the protection of a community's natural resources is emerging as an important piece in Sustainable Service Delivery.*

In 2011, Comox Valley local governments were early adopters of the vision for 'sustainable service delivery'. So much so, they delivered the program content for a 'CAVI Forum with the Summit' at the 2011 State of Vancouver Island Economic Summit. This event helped brand 'sustainable service delivery' as the wave of the future.

**Connect the Dots: Financial Accountability, Infrastructure Sustainability & Service Delivery**



"Money – it should be about how to get the most value out of every dollar spent. Too often, thinking stops after the capital investment is made. Yet everyone needs to be thinking in terms of life-cycle costs, including future recapitalization of the investment."

Glen Brown  
Province of BC  
September 2010

## When and where does the Asset Management process stop

*Wally Wells, P. Eng., Executive Director  
Asset Management BC*

### When

The question often comes up, when is asset management over or complete? As long as you own assets, never! The process is not static, but the inputs are constantly changing as assets are added, deleted, replaced, or upgraded. Asset management is a 'process' not a 'function'. Too often, we hear of asset management being treated as a separate discipline. It is not. We have managed assets for decades since the early days of our communities. The primary cause of the 'infrastructure gap' is that we operate on today's budgets without much attention to the ageing assets and future

requirements for replacement or renewal. Or at least that is the way we operated up until now.

### How

The asset management process provides the tools to address this gap and hopefully prevent the gap from growing by planning, methodically, for the short and long term. The BC Framework is deliberately titled, "Asset Management for Sustainable Service Delivery: A BC Framework". The operative word is 'sustainable' — both economically and physically. Our assets exist to provide a service. As an Australian associate once said, 'an asset without a user is an asset without value.'

### Where

The 'where' question is "Where do we exit the asset management process if the process is continuous?" The asset management process is a decision tool that assists in defining the needed projects, be they new assets or replacement, upgrades or rehabilitation of existing assets such as repaving a roadway, a facility roof replacement or rehabilitating a pump station. These projects are reflected in the capital works budget. At this point, once a specific project is defined, the project exits the asset management process until the project is completed. Once complete, the new or refurbished asset re-enters the asset management process with new or updated information. This is consistent with what our finance personnel do with the project to meet the reporting needs of PSAB 3150.

The City of Courtenay defined a project engineering and management group as part of their structure, specifically tasked with taking projects through design, construction, start-up, and delivery back to operating departments for continued asset use, operations, and maintenance. That project group interfaces closely with the finance personnel to meet all financial accounting, contract procedures, and reporting requirements of the projects.

There are guidelines for input to the asset management process for different professionals within their expertise. There are also guidelines for project management and construction. All are relevant but the start and stop point of each is an important differentiation in project delivery.

### AM Helps Local Govts Cope with COVID

**Joel Shaw - (two quotes) City of Kelowna**

*"We don't know what the future looks like, but what we do know is we can lean on the foundation that we have developed over the last number of years. Our Asset Management has allowed us to make informed decisions."*

*"With good Asset Management programs, we can understand all the projects and capital works and improvement works we need to do. We already have an extensive list of projects that are shovel ready to go tomorrow if we have to."*



## Coming Soon: Advancing Asset Management Practices

Jan Enns, Jan Enns Communications  
Project manager for AM BC / UBCM MAMP project

Need help taking your asset management practices to the next level? Whether you are starting out or advanced in your practice, Asset Management BC, with support through the Municipal Asset Management Program, has some new programs to help.

“We know from conversations with local governments across BC there are challenges to implementing asset management, ranging from organizational culture to capacity to communications,” said Asset Management BC Executive Director Wally Wells. “That’s why we are delighted to receive funding to develop training specifically to help our local governments enhance their asset management practices.”

The program consists of a variety of training, coaching and presentations designed to help local governments in three key areas:

- **Awareness:** Increasing awareness and support for local government elected representatives about why asset management matters and how it’s the key to sustainable service delivery.
- **Levels of service:** Providing custom webinars about levels of service – what it is, why it’s important, followed by workshop-style how-to sessions.
- **Operationalizing asset management:** A unique cohort-based learning experience designed to help local governments identify and overcome the barriers to asset management in the areas of organizational culture, structure, and capacity.

Thanks to the funding initiative from the Municipal Asset Management Program (MAMP) delivered by the Federation of Canadian Municipalities (FCM) and funded by the Government of Canada, these educational programs will be provided at little or no cost to our local government participants. The learnings from the workshops and cohort will also become part of a series of new case studies to pay it forward and help others with similar challenges.

Stay tuned for the Program Guide and application form available later this summer. Visit our website at [assetmanagementbc.ca](http://assetmanagementbc.ca) and follow us on [LinkedIn](#) and [Twitter](#).

Got questions? Simply email us at [info@assetmanagementbc.ca](mailto:info@assetmanagementbc.ca) or call 250-741-9887.

## Tips and Tactics: Developing Unit Costs for Asset Valuation

Bernadette O’Connor, Principal Consultant  
Asset Management, WSP

Using average unit costs to estimate asset replacement values is a common approach for valuation of asset portfolios and forecasting renewal costs. The benefits are;

- Reduced level of effort now and in the future
- Maximize benefit from valuation process

The alternative to unit costs is individual valuation of each asset. This not only requires greater effort, but it doesn’t allow for ease of updating values to keep them current.

### 1. Generate Unit Cost Reference Table

The unit cost reference table should list every asset type in your register, and each material type and size combination for the asset types. Material and size attributes are important because the unit cost will vary depending on what it’s made of and how big it is.

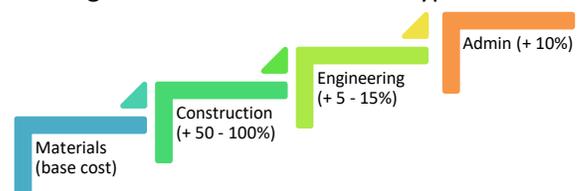
The reference table should also allow a data field to record replacement material type. This is where you can allow to replace an asset in a different material. For example, plan to replace all asbestos pipes with PVC pipes.

### 2. Develop Unit Costs

To account for total costs, the unit cost for replacing each asset must include all materials and construction costs, any fees, permits and licenses, plus engineering design and supervision, and an allowance for administration and management overheads. Asset renewal costs might also need to include demolition and disposal of the failed asset.

The construction (or installation) costs should include an appropriate proportion of general costs such as QA/QC, commissioning, traffic control, site works, safety works, temporary works, and reinstatement costs.

Where cost data suitable for developing robust unit costs is not available, initial estimates can use percentages based on general trends for different types of assets.



### 3. Calculate Asset Replacement Values

Match assets in the register to the type/material/size combinations in the reference table, then multiply the matched unit cost by the asset length/quantity to determine replacement value.

## Upcoming Events



### AM Helps Local Govts Cope with COVID

Mike Wall – qathet Regional District

*"We were fortunate as in 2019, our board adopted the Asset Management policy as well as our Asset Management strategy. Both address risks to our assets and how we can best prepare for tackling those risks through our capital planning and budgeting process. We already had everything prioritized when COVID-19 hit."*



Due to the COVID-19 virus and the requirements for 'physical distancing', all in-person conferences have been cancelled for 2020. Most are moving to a virtual conference. Check the Association website for details.

#### Union of British Columbia Municipalities (UBCM)

Annual Conference and Trade Show  
September 21-25, 2020  
[ubcm.ca](http://ubcm.ca)

#### Federation of Canadian Municipalities

Sustainable Communities Conference  
October 20-22, 2020  
[fcm.ca](http://fcm.ca)

#### BC Water and Waste Association

48th Annual Conference and Trade Show  
November 2-4, 2020  
[bcwwa.org](http://bcwwa.org)

#### Asset Management BC

5th Annual Asset Management Conference  
November 4-5, 2020  
[assetmanagementbc.ca](http://assetmanagementbc.ca)



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.

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## Join the conversation!



#OurAssetsMatter

Remember to share the importance of local government work and encourage citizens to be engaged in their processes. And if you need help, be sure to reach out on social media or by email. We are here for you because #OurAssetsMatter.