



Asset Management Newsletter

NINETEENTH EDITION – WINTER 2017 ISSUE



NEED or WANT - Is there really a choice?

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Imagine that you are having a conversation with a close family friend who is bursting with news. He is taking the family to Disneyland for spring break and everyone is so excited. They held a family meeting, asked everyone what they wanted to do

for vacation and a visit to the Magic Kingdom emerged as the top priority. As he shares the details, you can already see the long faces of your own kids who have been asking to go to the “happiest place on earth” forever and you can hear the bellyaching when they find out their friends are going without them. After muttering that you wish you could afford to take your family too, your friend replies that you should use his strategy. Your interest peaks so you ask about it. He proceeds to tell you that they are paying for this trip by deferring their bills for 10 months.

You look at him incredulously and wait for him to burst out laughing then tell you his real strategy until you realize that he is serious. Hydro, gas, insurance, medical, are all to be intentionally and willfully disregarded. After you pick up your jaw, you can't help yourself. You tell him he is being rash, negligent, and just plain foolish.

You try to convince your friend that his decision is short-sighted. He is putting his family's future in jeopardy for an ill-conceived priority that he can't honestly afford to obtain short-lived heroic status.

As strange as it may sound, there are times when local government employs a similar methodology. During strategic planning sessions, boards will frequently embrace some version of the following broad statements:

- Support a vibrant and diversified economy
- Enhance economic growth & business development
- Pursue economic opportunities
- Grow the population

As well-intentioned as these overarching themes are, the true role of local government in economic development is often overlooked.

The role of local government is to provide both the legislative environment and the built environment to allow economic development to thrive. If the infrastructure is 60-100 years old and in fair to poor shape, then ignoring a strategy to deal with it is like trying to fill a water bucket with holes in it and racing to fill the bucket before it empties out the bottom. Even if you do manage to fill the bucket, the holes at the bottom will continue to make sure that it leaks out. No assets means no services which means no economic development, PERIOD.

Almost every level of government has identified a significant infrastructure backlog and when it comes to economic development, it matters. Local infrastructure provides services that are the foundation of the health, well-being, and economic prosperity of communities across the country. A thriving economy is only possible

when the community's infrastructure and service delivery needs are being met. Failure to care for that infrastructure will lead to degradation or even loss of the services communities enjoy, and that future generations will rely on.

There is increasing recognition that many local governments have been making short-term decisions about investment, maintenance, and renewal of public assets that are not sustainable over the long-term. Therefore, embarking on an economic development strategy that does not involve sound asset management practices is nothing more than filling a leaky water bucket. The real danger may be that by the time the future generation comes along, the bucket is empty.

Changing economic realities within the community influence local government at a political level but seldom at a service delivery level. Regardless of whether or not the economy is thriving, the local government must continue delivering services such as water, sewer, garbage, recycling, roads, sidewalks, snow clearing, recreation, and more.

When the economy is flourishing and employment is stable, tax increases are distasteful but not intolerable. However, when economic uncertainty is felt, the political climate becomes volatile and local government spending can become a poorly understood issue. As well, new priorities emerge when local governments assume responsibilities for services previously delivered by the province or the feds, which includes a range of health and social services, such as affordable housing or daycare facilities, as well as emergency services such as first responder services, interface fire mitigation, flood control, and diking. In a large part, the general public doesn't care who is delivering these services as long as they are.

But any responsible adult knows that you can't have what you want if you don't have what you need. It is critical to continue to invest in the foundational infrastructure that supports economic growth and that communities rely on each day. Economic stability and prosperity are only possible if better asset management practices are a strategic priority for boards and councils with dedicated financial and human resources to retain existing services and maximize their asset lifecycles. Recognizing that true strategy is about making hard choices, better planning for that family trip might make more sense.

So what will it be: Disneyland or Dairy Queen? The stakes are higher than you think.

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BREAKING NEWS

On February 2nd at Ottawa a press conference was held for the formal announcement of the new FCM programs for asset management and climate change.

- **Municipalities for Climate Innovation Program**
- **Municipal Asset Management Program**

These programs will provide municipalities with access to funding, training and learning opportunities to increase their capacity to reduce greenhouse gas emissions, build resilience to the impacts of climate change, and support better planning and management of municipal infrastructure.

Details about the programs are available on the FCM website <http://www.fcm.ca>.

Helping Communities Strengthen Asset Management

By Infrastructure Canada

There are significant social, environmental and economic gains to be made by supporting asset management practice in Canada and helping provincial, territorial and local governments address climate change. For example, in applying asset management practices, communities will be better positioned to make their infrastructure dollars go further, with a lighter environmental footprint.

That is why asset management was identified by the Government of Canada as a priority.

Asset management is now, more than ever, part of the lexicon of infrastructure decision makers. Through knowledge forums like the Asset Management Roundtables as well as continued financial commitment through the Federal Gas Tax Fund, the Government of Canada is an active partner as the country moves forward with making sound infrastructure investments.

The Government announced in Budget 2016 a \$50 million capacity-building fund to be delivered by the Federation of Canadian Municipalities (FCM) in support of asset management. The fund will also encourage the development, adoption and application of best practices across Canada to help Canadian municipalities and communities make informed infrastructure investment decisions based on stronger asset management practices.

An additional \$75 million will be delivered through the FCM to support municipality-led projects to identify and implement greenhouse gas reduction opportunities. It will also support the assessment of local climate risks, and the integration of these impacts into asset management plans.

These funds will support municipalities in all provinces and territories in managing their infrastructure more strategically, contributing to the success of new federal investments in municipal infrastructure. The programs will be implemented in partnership with municipal, provincial and territorial governments, municipal associations and other organizations that support strengthened municipal asset management practices.

More details will be made available soon with the program launch in early 2017. You can also subscribe to FCM's e-bulletin to receive up-to-date information on the new programs: www.fcm.ca/fcmgreen

Rossland Tackles Asset Management

By Bryan Teasdale, Chief Administrative Officer and Cory Sivell, Urban Systems Ltd.

The City of Rossland is paving the way to develop and implement an asset management policy and decision making framework, led by new CAO, Bryan Teasdale.

Primed for Asset Management in Rossland

Working with local government for over 10 years, Bryan previously worked as CAO, CO, Financial Officer, and Approving Officer for the Village of Montrose and as the Manager of Infrastructure and Sustainability for the Regional District of Kootenay Boundary in addition to other positions in a variety of municipalities across BC. Having provided additional guidance in respect to long-term infrastructure management to these organizations, Bryan saw the opportunity to apply his knowledge of asset management in other communities.

Passionate about the impact asset management could have on a community and organization, Bryan was interested in stepping into a role with a new community where he could make a difference. When the opportunity to work as the CAO with the City of Rossland arose, where asset management was a top priority on the city's strategic plan, the fit couldn't have been more perfect.

The Rossland Approach

Many municipalities in BC tend to believe that asset management is the responsibility of one department or individual and requires detailed asset information to get started. The answer couldn't be more opposite; asset management is most successful when using a shared leadership model and can be started with little information and staff time.

In fact, the City of Rossland built their first asset management plan with data that was readily available in only a few months. After the completion of the plan, the City understood what assets they owned, what condition they were in, how much they are worth, and determined their annual investment needs. After quickly realizing the cost pressures, the City decided that they would not take a technical approach by collecting more asset data --

which would be time consuming, expensive, and would likely result in unaffordable asset investment figures.

Instead, the City looked at how they could have immediate and long lasting organizational impact and concluded that a strong policy and decision making framework would enable this. The City also knew this type of project would also provide guidance to future staff which will reduce the likelihood of the organization dramatically changing direction. They also believe that it will build trust with the community by providing a transparent and open way of making decisions.

In order to turn this idea into a reality, the City took the following steps:

Step 1: Council buy-in - If council doesn't believe in the development of an asset management plan, it won't likely happen. Luckily for Bryan, he didn't have to do any convincing. Council already knew the importance of asset management and it was embed within their strategic plan.

Step 2: Funding - With senior level support through the Strategic Priorities Fund, the City of Rossland secured grant funding which was used to hire a consultant.

Step 3: Organizational assessment (completed by CAO): Before rushing to get the RFP out the door, the CAO took a critical look at the organization in order to determine where the City could invest to ensure it had the largest return. This involved many back and forth conversations with staff and council until they landed on a project which everyone thought would be beneficial to the community. This was a collaborative effort across the organization and not just an idea of a single individual or department.

Step 4: Develop a scope of work and hire Consultant: Based on the organizational assessment, the City had a clear understanding and vision for where they needed to focus their asset management efforts.

Step 6: Execute/Implementation: Over the next few months the City of Rossland will finish their policy and decision-making framework and will test and improve upon it throughout 2017 and beyond.

Tips for Getting Started

For other municipalities looking to get started with asset management, key pieces of advice from Rossland include:

- **There's no such thing as perfect:** Getting started is better than fearing imperfection; you will never receive perfect information. If you wait for it, it will never come, which will in turn, halt the implementation of a plan;

- **Realize that asset management is NOT:**
 - a one-off plan about replacing assets and calculating large deficits/replacement costs;
- **Realize that asset management IS:**
 - a continual improvement process;
 - forward looking -- which helps to ensure the maximum value of assets is realized;
 - about the long-term delivery of a services;
- **All aboard! Yes... it's a mind shift:**

Asset management is about changing the way we think about delivering services. It requires cross collaboration and buy in from all levels within the organization and most importantly, the community.

Performance Measurement and Reporting Framework for Sustainable Service Delivery – Pilot Project, An Update

By: Doug Allin, CAO, City of Grand Forks, Scott Shepherd, Urban Systems and Kevin Ramsay, Innova Strategy Group

Overview

Sustainable service delivery is a broad term. It encompasses many considerations, including but not limited to:

- Are the services meeting the needs of the community?
- Are services affordable, today and into the future?
- Do services provided protect and enhance the environment?
- Are risks to service delivery being managed?
- Does the community perceive value for money in the services being delivered?
- Is the city adapting to meet the needs of the community in the future?

Any viable performance management program requires a set of indicators to inform continuous improvement toward the desired outcome. Asset management is no different; the identification and utilization of performance measures is a fundamental component of asset management implementation.



Performance measures can also provide an effective and consistent format for communicating progress toward sustainable service delivery among staff, Council, and the community.

The City of Grand Forks is continuously striving for sustainable service delivery and informed decision making through the development of an Asset Management Program, which began in 2010. The next step in building the program is to develop a set of performance measures that will be used to report progress to both Council and the community.

In 2016, the City received gas tax funding through the Strategic Priorities Fund to lead the development of a Performance Measurement and Reporting Framework for Sustainable Service Delivery. This framework will provide confidence to staff, Council, and the community that the City will be able to provide quality services today and into the future.

The City will be joined in this pilot project by five other Cohort Communities:

- The District of Squamish
- The District of Central Saanich
- The City of Rossland
- The District of Clearwater
- The Village of Salmo

The City of Grand Forks and the five cohort communities have been working together since the Fall of 2016 to develop and test a framework for reporting on Sustainable Service Delivery, which will be used in each of their respective communities.

The framework will also be available for use by other communities in BC through the AMBC website.

The City of Grand Forks, with support from Urban Systems and the Innova Strategy Group, is leading the development of this pilot project. The primary objectives of the performance measurement framework are:

- Develop a set of both "leading" and "lagging" indicators that evaluate the sustainability of City services;
- Design accompanying reporting tools and templates to communicate the measures to staff, Council, and the community;
- Produce a best practice resource for other BC communities.

Progress to date:

To date, we've taken the following steps and are on track for the development of the Best Practices Resource by the fall of 2017:

- **Background Review** – An assessment of existing materials on asset management performance measurement was conducted, which evaluated open source data and what other communities were using in both North America and Australia.
- **Advisory Panel Review** – Existing data was reviewed by an Advisory Panel comprised of leaders within the BC local government industry (ie. UBCM, AMBC, BCWWA, GFOA- BC, AGLC) at the 2016 UBCM conference.
- **Draft Metrics Prepared** – Based on input from the Advisory Panel, draft metrics were prepared for core municipal services.

- **Cohort Communities Workshop #1** - Desired framework outcomes and draft metrics were evaluated by participants at the Asset Management BC conference (Nov 2016).
- **Refined & Reviewed Metrics** – Using readily available data in Grand Forks, draft metrics were refined and reviewed with Grand Forks staff.

Next Steps

Over the next eight months, key performance indicators of municipal services will be refined through consultation and alignment with guiding principles and readily available data. Cohort Communities will provide additional input and a Pilot Framework will be developed for the City of Grand Forks and the five communities involved. Feedback will also be solicited from conference attendees at the CAO Conference (Jan 2017) and LGMA Conference (May 2017). In the fall of 2017, the Performance Metric Document and Community Case Studies will be presented at fall conference of UBCM.

AM News from the Regions



Atlantic Infrastructure Management Network

By: Daisy Foster, Managing Director



It is just over one year since Atlantic Infrastructure Management Network (AIM Network) was formed as a not-for-profit organization. Our mandate is to guide and support municipalities in Atlantic Canada in their infrastructure management planning needs.

Like other municipalities throughout Canada, our municipalities have always done a reasonable job of providing essential services and managing their infrastructure. Most often it has been done without the benefit of long term planning or access to predictable long-term funding. Although there is an apparent increase in awareness of the need to do long term planning, many struggle to do this effectively.

A large proportion of municipal entities in Atlantic Canada are very small which creates many challenges, not the least of which is a small tax base. For example, in Newfoundland and Labrador there are more than 400 municipal entities

and more than 50% of these have populations of 500 or less. Many are unable to find enough candidates to run for election on their Councils. The total population of all four Atlantic Provinces is less than 2.5 million or about 6.75% of the Canadian population, which is spread over a very large geographic area.

Smaller municipalities experiencing ageing and declining populations, infrastructure which is failing or needing upgrading to meet new regulatory standards or to address the impacts of climate change, as well as a rural to urban shift are common issues many municipalities in Atlantic Canada are facing. A declining tax base poses a huge challenge for providing sustainable service delivery of even the most essential services. The need for a deeper understanding of the longer-term implications of these factors and for long term planning is evident.

Many of the great methodologies and practices being advanced through a more structured approach to *asset management planning* will be very helpful to municipalities in Atlantic Canada. Creating awareness of these and providing support for decision-making with a focus on determining what services are needed and which services can be afforded to support our communities of tomorrow has been the primary focus of AIM Network over the past year.

Our Approach

Our name, AIM **Network**, was chosen intentionally to recognize the value of partnerships and alignment in initiating a movement towards improved asset management practices. Recognizing the important role of provincial governments and municipal associations was our first approach to forming a network. AIM Network first reached out to all four provincial governments and we continue to work collaboratively with the appropriate departments and individuals in each. We have also built good relationships with municipal associations to help them serve their members' needs for asset management by partnering with them for educational and awareness activities and events.

More and more, AIM Network is being approached by individual municipalities for guidance and assistance. We welcome this and are pleased to help where we can. Our **AIMnet Solution**, a methodology built on free open source software specifically to help smaller municipalities with asset management planning, is generating a lot of interest.

Many times, we are able to help by providing access to resources developed by our cohorts across the country

such as AMBC and the other Communities of Practice, or we can connect our municipalities with our ever-expanding private sector network.

Events and Activities

- AIM Network offered a 2-day conference entitled “On the Road to Asset Management” in **Wolfville, NS on September 21-22, 2016**. The first day was an information-sharing format and Day Two was a training workshop covering the key steps in asset management planning. More than 80 people attended this event.
- AIM Network, in partnership with AMANB, will be offer a similar “On the Road to Asset Management” conference in **Fredericton, NB on February 22-23, 2017**.
- Facilitated an asset management awareness workshop offer by UNSM for Nova Scotia municipalities in April 2016.
- Assisted the Province of NS with formation of a NS Asset Management Provincial Working Group.
- Discussions and awareness activities with interested stakeholders in support of an Atlantic Canada pilot project to create awareness about integration of natural assets into AM planning.
- Presentations to various municipal councils and staff on asset management planning.
- Working collaboratively with two provincial governments on a pilot project involving multiple smaller municipalities using the **AIMnet Solution** to support them in developing an inventory of their infrastructure, a GIS mapping system and preparing preliminary state of infrastructure reports.

Resources developed by AIM Network

- **AIMnet Solution:** Low cost, easy-to-use amp methodology designed specifically to help smaller municipalities develop an inventory of their infrastructure in GIS format and produce preliminary State of Infrastructure Reports are generated quickly and easily without a requirement to purchase software. www.aimnetwork.ca/aimnet-2/.
- **A one-day hands-on training workshop – Steps in Asset Management Planning.**
- **AMP Handbook** – This is a supplementary resource with a collection of templates and examples for

each of the steps in AM planning. Used in conjunction with one-day training program developed by AIM Network on asset management planning.

It is great to see the increase in development of the asset management body of knowledge, tools and resources across Canada by FCM, other provincial and regional Communities of Practice and the private sector. At AIM Network, our role is to create awareness of these resources among municipalities in Atlantic Canada and help them along the road to asset management. We encourage our municipalities to reach out to us for assistance.¹



Infrastructure Asset Management Alberta launches 2017 Program

The Community of Practice has scheduled three workshops for this year. The group will convene in Red Deer County on February 8, 2017. The feature presentation will be from Kate Fleming, Program Director, Asset Management, Federation of Canadian Municipalities. Announcement of details of new funding will be the main topic of discussion. Other presentations include Michelle Tetreault of the Common Ground Alliance, Aquatera Utilities AMIS Assessment Report and National Energy Codes from Kevin Griffiths, Director of Calgary Building Services, City of Calgary.

Future meetings are scheduled for June 21 and October. Watch the website at www.assetmanagementab.ca for details. E-mail: info@assetmanagementab.ca

Infrastructure Asset Management Alberta (IAMA) represents the greater community of any person, organization or agency engaged in or has an interest in infrastructure asset management. The ‘community’ is supported by the IAMA Working Group which is a voluntary group of representatives from associations, local governments, agencies, private industry and/or first nations brought together to recognize and integrate the administrative, technical, operational, financial, and planning aspects of asset management.

¹ Contact: Daisy Foster, Managing Director,
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What has Asset Management BC been up to?

By: Wally Wells, Executive Director

As we move into 2017, it is clear Asset Management has traction with most of our communities and is likewise gaining traction across much of Canada.

The role of **Asset Management BC** (AM BC) has gained significance in supporting our partner Associations, engaging with national bodies especially Infrastructure Canada, Federation of Canadian Municipalities and the Canadian Network for Asset Managers and supporting and providing information to our local governments and first nations throughout BC.

As we are not incorporated or really created as an 'entity', the business model of AM BC is under review with the view to strengthening the relationship with our partners, defining that relationship and providing funding opportunities to support on-going work. The AM BC Working Group met in November to start these discussions and will be meeting again in March, 2017.

We continue with information and support services and repopulating the website with additional tools and documents in support of [Asset Management for Sustainable Service Delivery: A BC Framework](#).

In November, 2016 we sponsored a very successful asset management conference with over 150 in attendance. Planning for a fall 2017 conference will get underway shortly. We held 5 NAMS training sessions totaling 125 participants. See elsewhere in this newsletter for the 2017 schedule for NAMS. And, of course, we issued 3 editions of our newsletter, which circulates across Canada and to 5 different countries. Our last edition was the largest ever.

Asset Management BC, as a community of practice, has assisted in strengthening all our Communities of Practice across Canada. Active groups now exist in BC, the Yukon, Alberta, Saskatchewan, Ontario, Quebec and Atlantic Canada.

Work is progressing for a formal a group in Manitoba, and NWT is aligned with AM BC.

The third annual meeting of these 'communities' and national partners will again be hosted by CNAM at their annual conference in Calgary in May.

UBCM, this past year under the Gas Tax agreement and funding, undertook a major asset management survey of all our local governments in BC. This will be published this spring. The information on the status and needs of our communities will be extremely valuable in defining the road ahead for AM BC.

Need help with Asset Management? Have ideas of what you need or tools/assistance AM BC can do? Contact us at info@assetmanagementbc.ca

Yukon Asset Management Holds 3rd Community of Practice Meeting

The Government of Yukon – Department of Community Services provides ongoing support to local First Nation and municipal governments in advancing their Asset Management programs.

The project is led by community advisor Damien Burns. Since 2015, Damien and his team have held conferences and meetings to create an **Asset Management Community of Practice** in Yukon. The ongoing initiative of the Government of Yukon to support local governments in advancing their Asset Management practice is funded through Northern Strategies Trust and Gas Tax funds.

The latest Asset Management Community of Practice meeting, on November 29, 2016 was attended by more than 65 people, with representation from nearly every Yukon municipality and First Nation government. The buzz around the room in the round-table session was one of progress and action, despite the fact that many communities are still at the very beginning of their asset management journey.



Figure 1 Yukon Community of Practice Meeting. Damien Burns of Yukon Territorial Government standing on the right

The difficulty that almost all local governments were struggling with, and the main reason they had not progressed as far as they would have liked, was the issue of personnel capacity. Committed staff discussed the challenges of finding spare time in the midst of their workloads to try to get the first key tasks completed (i.e. develop an asset inventory, analyse the state of infrastructure, and forecast renewals).

It was a valuable day of sharing knowledge, learning new things, and supporting each other.

The meeting included a roundtable update, presentations from other jurisdictions, and a small trade show. During the roundtable updates from every local government it was clear that, since the first community of practice meeting held in 2015, the level of knowledge and expertise in the room has grown exponentially.

The Government of Yukon approach to Asset Management which provides funding, along with support and access to a community of practice, is working very well to support local governments in moving towards a culture of asset management.

Darla Campbell of the Ontario Coalition for Sustainable Infrastructure provided an interactive workshop that gave everyone the opportunity to experience asset management planning in action. Robin Hawker and Mike Homenuke of Kerr Wood Leidal joined Lou-Ann Watson, the Public Works Operations Administration Manager for Northern Rockies Regional Municipality, in presenting to the group on their award-winning asset management program in Fort Nelson area.

The trade show held in conjunction with the meeting provided an opportunity for communities to connect with experienced Asset Management service providers. Bernadette OConnor and her colleagues at OPUS International (OPUS), as well as Kerr Wood & Leidel (KWL), Associated Engineering (AE), TesserAct Associates and Fireseeds North Inc. seemed pleased to interact with the various members of local governments and territorial staff in Yukon.

Damien and the team at Community Affairs are planning another meeting of the Community of Practice in early March. More information about the Government of Yukon Asset Management initiative available here:

www.aycyk.ca/asset_management_community_of_practice

Ontario Coalition for Sustainable Infrastructure has Busy Year

By: Darla Campbell, Executive Director

OCSI 2016 highlights include a successful InfraForum in May (leveraging investments in infrastructure) which identified, as one of the priorities, a need to look at innovation in procurement. In October, we co-hosted a procurement workshop with WaterTAP and Consulting Engineers of Ontario (CEO). The participants developed a short list of criteria that will improve the ability of municipalities to procure sustainable infrastructure.

OCSI participated on an expert technical advisory panel to the Ontario Ministry of Infrastructure on a potential regulation for municipal asset management planning.

In 2017 we will focus on sustainable funding, improved communication tools for municipalities, innovation in procurement (life cycle approach) and levels of service. Our 4th annual InfraForum: **Courageous Conversations will be held on May 25, 2017 in Toronto.** For more information on this, go to www.on-csi.ca or e-mail ExecutiveDirector@on-csi.ca.



Figure 2 Carl Bodimede, Chair of OCSI

OPINION: Vision for “Sustainable Watershed Systems” resonates with audiences in BC and beyond

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



A new way of thinking about municipal infrastructure has the attention of the local government world. Simply put, natural watershed systems are infrastructure assets – we must manage and protect them as such.

A mere fifteen months ago the Partnership for Water Sustainability framed the following **program goal** for the Georgia Basin Inter-Regional Education Initiative:

By 2017, local governments would understand how to achieve “Sustainable Watershed Systems, through Asset Management”

At the dawn of 2017, the purpose of this article is two-fold: take stock of our progress in 2016 to inform and educate; and foreshadow where we may be at year-end

The desired outcome that would flow from Sustainable Watershed Systems is a water-resilient future. This way of thinking builds on the vision for *Asset Management for Sustainable Service Delivery: A Framework for BC*; and has

twin technical pillars – Water Balance Methodology and Ecological Accounting Protocol.

Understanding leads to action. Getting there is a step-by-step process to build practitioner capacity to get the job done. Presently, we are creating awareness of the goal.

The purpose of this case study is to provide a regional district perspective on asset management, and to describe the process for implementing asset management that the Regional District of Nanaimo (RDN) has followed over the last two years.

Looking Back: What We Accomplished

Early uptake of the vision for Sustainable Watershed Systems has exceeded our expectations. There is clearly interest and an appetite to learn more. It is an idea whose time has come.

Asset Management Continuum: Starting in November 2015, we have introduced the Asset Management Continuum (see image below) to an array of audiences in a variety of forums and media.

Asset Management Continuum for Sustainable Service Delivery

GROUND ZERO: In the beginning, no **Asset Management Plan** exists. A consequence is an ‘unfunded infrastructure liability’.

STEP ONE: Local governments embrace the BC Framework, with an initial focus on core engineered assets (water supply, sewage, roads) and embark on an **Asset Management Strategy / Plan / Program** process.

STEP TWO: Local governments start thinking holistically and implement a life-cycle approach to infrastructure decision-making so that **Sustainable Service Delivery** for engineered assets becomes standard practice.

STEP THREE: For the drainage function, local governments will integrate natural systems thinking and climate adaptation into asset management and account for the **Water Balance Services** provided by watershed systems.

As understanding grows, local governments will progress incrementally along the **Continuum**

Our key message is that Sustainable Watershed Systems will be the outcome in Step Three. But it is not a wait-and-see proposition. Even as local governments are progressing through Steps One and Two for their core infrastructure, they need to be laying the groundwork so that they will be ready to implement Step Three.

Our outreach program for sharing the Sustainable Watershed Systems message is broadly based. Within the



initial 12-month period, getting the word out involved constantly making presentations to inform and educate:

Regional boards and municipal councils (6), conference audiences (6), local government technical groups (3), professional groups (1), stewardship sector (1) and university classes (2).

So, what were the defining moments in 2016? In August, my keynote address at a national conference in Australia provided a platform to reflect on “parallel journeys”. In October, publication of an op-ed in the Vancouver Sun demonstrated that our whole-system, water balance message is news worthy.

Australian Keynote: The BC approach to infrastructure asset management has learned from and built upon Australian experience, and is now taking asset management to another level with *Asset Management for Sustainable Service Delivery: A Framework for BC*.

To develop a storyline on parallel journeys for my 2016 keynote, I interviewed a cross-section of “water thought leaders” from across Australia. These conversations allowed me to identify over-arching themes that shaped my storyline and relevancy to an Australian audience.

The conference then served as the moment of truth for audience response. Would Australians be receptive to the storyline? Would they understand our way of watershed systems thinking? Would they grasp the significance of the Asset Management Continuum?

Just as the BC Framework has garnered both Canada-wide and international attention, so too is “Sustainable Watershed Systems, through Asset Management” attracting interest in our pragmatic whole-system, water balance approach to GETTING IT RIGHT.

Other regions recognize BC as a leader. They perceive BC moving in the right direction with integration of watershed systems thinking and asset management. International exposure allows us to judge how BC stacks up against the rest of the world.

Journey to a Water Resilient Future

Visit <https://youtu.be/JCrdEkk61GY> to watch and learn how I introduced Australians to three “big ideas” that underpin where we are heading in BC, namely: Primacy of Hydrology, Shifting Baseline Syndrome, and Cathedral Thinking. The three are interconnected. The outcome would be Sustainable Watershed Systems.

Changes in hydrology, not water quality, must be the primary focus. If we can get the hydrology right, and

recreate watershed systems, then as an added benefit the water quality would be greatly improved.

The good news is that redevelopment creates an opportunity. If we do get the hydrology right the second time, and restore the **watershed system**, this would then reset the ecological baseline.

Coined by University of British Columbia’s Dr. Daniel Pauly, the Shifting Baseline Syndrome describes an incremental and imperceptible eroding of expectations and standards that results from each new generation lacking knowledge of the historical condition of the environment.

Resetting the ecological baseline would take time, inter-generational commitment, and perseverance. This is the essence of “cathedral thinking” which describes our BC vision for **Sustainable Watershed Systems**.

In embarking on the journey to a water-resilient future, we can learn from our ancestors. The foundation for cathedral thinking is a far-reaching vision, a well thought-out blueprint, and long-term implementation.

These ideas resonated with the audience in Australia, and opened eyes and minds to a different way of thinking. These ideas are also resonating with audiences in British Columbia.

Looking Ahead: What is on the Horizon

The BC Framework links local government services, infrastructure that supports service delivery, and watershed health. Thus, it sets a strategic direction that would refocus business processes to properly manage **watershed systems** within the built environment:

Mimic natural flows in streams. Preserve the natural pathways by which water reaches streams. Slow, spread and absorb runoff.

Benefits of the whole-system approach include less flooding, less stream erosion, and more streamflow during dry weather when needed most. These water balance benefits ultimately translate into lower life-cycle costs and a water-resilient future!

But there is a caveat - moving from understanding to implementation requires a sustaining commitment by local governments to implement ‘standards of practice’ that restore the desired watershed condition over time.

Some communities already have some of the puzzle pieces needed to ensure a water-resilient future. What is lacking, however, are precedents that demonstrate HOW

to fit those pieces together to form a complete puzzle picture.....AND also ‘walk the talk’ to implement a pragmatic whole-system approach that resets the baseline. This is a major gap. The Partnership is working with our local government partners to fill it through development of the **Ecological Accounting Protocol**.

By the end of 2017, success would be measured by progress on two case studies that would refine, apply and test application of the Ecological Accounting Protocol to show that: *To protect watershed health, engineered infrastructure has to fit into natural systems, rather than the other way around.*

UPDATE: Ecological Accounting Protocol – A Tool to Calculate the Opportunity Cost of Drainage Infrastructure

By: Tim Pringle, Chair, Ecological Accounting Initiative, Partnership for Water Sustainability in BC

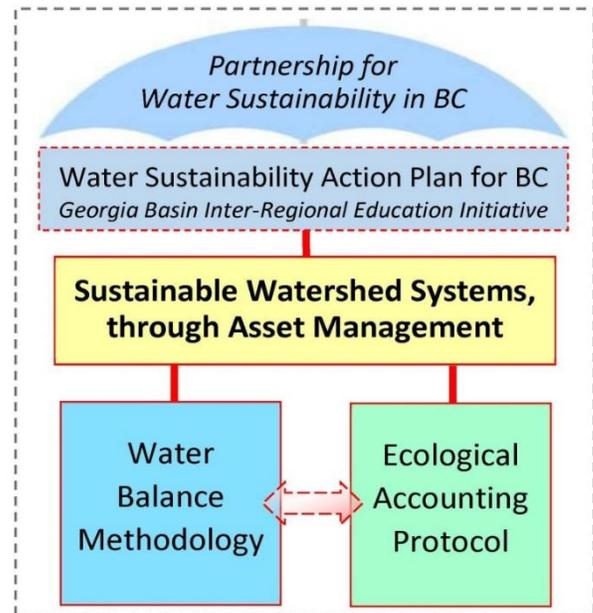
*This article is a companion to **Vision for “Sustainable Watershed Systems” resonates with audiences in BC and Beyond**. It is a progress report on the ongoing development of the Ecological Accounting Protocol (EAP) by the Partnership for Water Sustainability in BC (“the Partnership”).*



In November 2015, and with release of *Beyond the Guidebook 2015: Moving Toward “Sustainable Watershed Systems, through Asset Management”*, the Partnership launched a process to introduce EAP into standard practice. EAP

is one of the twin technical pillars for the whole-system, water balance approach that would refocus business processes to properly manage **watershed systems** within the built environment.

EAP is a method of ascertaining economic values of services drawn from natural assets. It is a tool for practitioners in the local government setting. The purpose of EAP is to help practitioners calculate the opportunity cost of drainage infrastructure.



Synopsis

The purpose of this progress report to the Asset Management BC readership is to inform as follows:

- Provide a perspective on how the thinking behind the EAP pillar, and awareness of the EAP process, unfolded over the course of 2016.
- Draw attention to the significance of the EAP presentation at the FLOWnGROW workshop, co-hosted with the Okanagan Basin Water Board and Irrigation Industry Association in November, as a milestone moment in rolling out the concept.
- Foreshadow how the upcoming Comox Valley Eco-Asset Symposium fits into a bigger picture.

The EAP approach begins by first recognizing the importance of a stream in a natural state and then asking: how can we maintain those ecological values while allowing the stream to be used for drainage.

What Gets Measured Can Be Managed

If natural assets and derived services variables are not measured, they will not be managed in the context of drainage infrastructure.

This lesson is manifest in the persistent problems in the quality of infrastructure and unfunded liabilities associated with over-reliance on engineered measures (and other factors).

Getting the Logic Right: Over the past year, we have improved the logic of EAP. In a nutshell, it is about specific values (pricing) - not imputed, generalized values.

Since cost-avoidance, at least perceived cost-avoidance, motivates much of the decision-making process about infrastructure, and development in general, why has the obvious role of natural assets been omitted to date?

EAP suggests it is the lack of measurement.

Big Ideas & Details: The big ideas about imputed values are part of the sales pitch, but they are not the details needed for implementation.

EAP is about the details. What is the defined drainage system work offered by a natural asset worth? What is the price?

To fully appreciate how we have arrived at this logic, one needs to understand how a green infrastructure way-of-thinking has evolved over the past 15 to 20 years. It has been a building blocks process.

Green Infrastructure in Context

Policy and practices that recognize the value of natural assets began to attract widespread attention in BC communities circa Year 2000 when green infrastructure concepts were first introduced.

Macro versus Micro: Green infrastructure concepts and practices continue to evolve; the interest in eco-asset designations is the most recent stage (also "regenerative design"). However, these perspectives are rather macro.

Communities still need to deal with the micro realities. What does a stream do? Can it be drawn on to support infrastructure? Will such a process improve sustainable service delivery and the cost of doing it?

Increasingly, communities are expressing interest in the process of valuing natural assets as part of managing settlement growth. The Town of Gibsons, for example, is a leader in policy about eco-assets. The Municipal Natural Asset Initiative, a multi-partner initiative is sponsoring several projects to illustrate strategies to value natural assets and influence policy.

In March 2017, the conservation community in the Comox Valley is hosting an Eco-Asset Symposium. The Partnership is participating to explain the detailed method of the EAP to establish actual prices for civil services drawn from natural assets.

A Tale of Two Watersheds: Under the umbrella of the Georgia Basin Inter-Regional Education Initiative, later in

2017 the Partnership is planning to undertake two watershed case studies – one within a municipality (Town of Comox); the other within a regional district electoral area (Cowichan Valley) – to apply, test and refine EAP

Looking ahead, the Comox case study is envisioned as a tale of two watersheds. One would expose the price of not recognizing or using the services of the watershed. It is the negative cost case. The other would illustrate the price of the work needed to incorporate protection and use of natural assets for drainage infrastructure.

FLOWnGROW Workshop: This event was the fourth in an annual series organized by the Partnership. The series is designed to draw attention to leading thinkers and to 'big ideas' that would transform how communities tackle critical issues. Throughout 2016, the presentations described in the companion article touched lightly on the vision for EAP. It was the FLOWnGROW forum that "made EAP authentic".

A Measure of True Value

EAP is a tool to help calculate the opportunity cost of drainage infrastructure to measure the true value of the natural system as an item of infrastructure.

The measurement and pricing process will build an index that quantifies and prices civil services drawn from natural assets that may be and, if possible, should be included in infrastructure design, construction, maintenance and operations.

As more projects are analyzed, the index will provide measures of the financial value of specific hydrological functions and services in a drainage context.

As for an approach to outreach and professional development, we believe that audiences would appreciate a conversation rather than a presentation. We hope they would be curious and gladdened to know that the Partnership has thought long and hard about the need for EAP and the role it would play in accurately valuing the existence of natural assets and the price/cost of the services that may be derived from them for drainage infrastructure design, construction, and life-cycle management.

What Gets Measured Can Be Managed: This is an inclusive and logical approach. Recognize all of the variables in the equation. They must be measured, so we have figured out how to do it.

Communities and the practitioners that shape them will be glad to know that optimum infrastructure design and

construction can and ought to equal watershed health. This is fundamental to sustainability.

Accepting this reality and dealing with it positively (measure and manage) contributes fundamentally to other challenges in the landscape - including climate change, food security, protecting property values, supporting healthy environments (air quality, proximity to nature, etc.), adding accessible natural amenities to the "urban" fabric, etc.

Finally, sustainability also means apply cathedral thinking; build basic settlement assets that will last. Drainage infrastructure and other infrastructure are realistic targets for greatly improved longevity and reduced life-cycle costs. EAP will contribute significantly to such sustainability. Let the taxpayers and politicians applaud!

To learn more: www.ecologicalaccountingprotocol.ca

Municipal Natural Assets Projects Progressing

Through the Municipal Natural Assets Initiative (MNAI), five Canadian municipalities are now pioneering strategies to preserve and enhance natural assets as a key component of ensuring the sustainable delivery of core municipal services. The pilot municipalities are: in British Columbia; the City of Grand Forks, the City of Nanaimo, the District of West Vancouver and in Ontario; the Region of Peel and the Town of Oakville.



Figure 3 City of Nanaimo Eco-Strategy team – Buttertubs Marshes

Left to Right: Michelle Molnar, Environmental Economist and Policy Analyst, David Suzuki Foundation; Roy Brooke, R. Brooke Associates; Sarah Nathan, Wetlands Biologist, Ducks Unlimited; Rob Lawrence Nanaimo, Project Manager; Doris Fournier, Nanaimo Asset Management Engineer.

In slightly over one year, and with support from technical partners, MNAI has moved from a concept and the one practical example of Gibsons, BC, to 5 exciting pilot projects in 2 provinces, several research initiatives, and practical new partnerships. There is also now substantial interest in expanding the approach.

The experience to date provides a strong basis both to ensure the success of the current pilots, and to help the approach become mainstream across Canada and potentially beyond.

Furthermore, it is increasingly apparent that MNAI is complementing numerous international initiatives that seek to better value natural assets. For example, one recent article describes a new California law that makes forests, farms, and fields eligible for infrastructure funding, and another one describes Peru's efforts to funnel water fees into the restoration of green infrastructure. These stories underscore how much MNAI is part of global trends to make nature count. Our natural assets are part of our local asset management program.

Asset Management BC continues to support MNAI and share news and updates on the initiative.

How's your Data and Asset Register? Garage in -Garbage out

Based on Presentation By: Barry Davis P.Eng. City of Burnaby (retired)

Exploring data asset registers with our BC communities has been interesting and given us 'things to think about'. Here are some of the findings:

- Too many communities have paid very little attention to an inventory of what they own. PSAB brought this to their attention however most did an inventory for accounting and valuation purposes and didn't look forward to incorporating the information into Asset Management
- Many communities still have several inventories by department, which have varying degrees of completeness, may overlap, many duplicate assets and often define the same asset differently. The worst case was a community with 11 data sets.
- Linear assets and some structures, based on function, are managed through the Public Works Department. Other buildings serve Parks and Recreation functions and are managed elsewhere. Then there are the other culture, administrative and

miscellaneous building and structures, including City Hall, managed across the organization. There is no cohesive approach to defining these assets or managing buildings. Therefore, there is no cohesive approach to a fair assessment of their condition for comparative purposes

- No one is in charge of the inventory and there are few or no rules as to what, how and when information goes in or out or the format of that information
- There are no policies in place respecting inventory content, management and control
- Adding new infrastructure to the database assumed from developers is often ignored or is not added in a timely fashion (anecdotally one community we are aware of requires “as built” for new development to be added within two years a long time!
- No policy or actions exist respecting deletion from the inventory.....no one person in charge
- Different inventories in different departments used for different purposes can generate different answers for the same assetneeds co-ordination.

Certificate Course in Asset Management Planning

Canadian Public Works Association (CPWA), American Public Works Association (APWA) and the Institute of Public Works Engineering of Australasia (IPWEA) are working together to bring an internationally-recognized online education program in asset management to North America, beginning in Canada.

Initially Canadian members, through the CPWA will benefit from the delivery in Canada of the IPWEA Professional Certificate in Asset Management Planning,

“Capacity building in municipal asset management is a priority for the Government of Canada,” said CPWA President Andrew Stevenson. “CPWA recognized this need and has been working with IPWEA’s training arm, NAMS Canada, to bring its’ 20 years of experience in sustainable asset management to the municipal and public works infrastructure sectors in Canada.”

The online Professional Certificate provides the unique opportunity to learn more skills, write an organization’s asset management plan and earn a qualification at the same time.

The joint international program builds on the face-to-face workshops that IPWEA’s NAMS Canada has been delivering for several years in association with AMBC and other local communities of practice across western Canada. NAMS Canada is recognized by the Engineering Institute of Canada as a quality provider of Continuing Education Units.

To date, more than 25 Canadians have successfully obtained their IPWEA Professional Certificate. Business Operations Analyst Troy Sykes was one of three from the City of Calgary to complete the online course when it was first offered in 2014.

Sykes believes the course is well suited to the Canadian environment because it aligns with ISO 55001 standards and the asset management principles taught are universal.

“Asset Management is a field dominated by engineer professionals, as a non-engineer it is difficult to find a designation to illustrate your skill set. The IPWEA Professional Certificate course not only provides a valuable asset management education opportunity; it also gives participants an asset management certificate.” he said.

“Participants will learn valuable asset management skills in a real life situation” said Sykes.

David Love from the City of Courtenay has also completed the Professional Certificate and fully endorses the advanced training it provides. He commented that “the introductory three-day AMBC NAMS workshops create the foundation well-suited to all practitioners. However, the Professional Certificate provides further skills at the leadership level which builds on that foundation.”

The Professional Certificate in asset management is delivered as eight modules over 10 weeks, and goes well beyond the eight webinars to provide an interactive online program. It is delivered using the cutting-edge Cahoot education platform.

The next course commences March 6, 2017 and registration is now open. Make sure you check out the YouTube video and get further information at www.namsCanada.org/ProCertAMPlanning.

For further IPWEA information: contact Chris Champion, Director International, IPWEA at:

chris.champion@namsCanada.org

Interested in NAMS Training in 2017? Contact Us Now!

Last year 125 municipal employees participated in the NAMS training course for asset management. The feedback we had was 100% positive of putting municipal staff 'on the road' within the asset management process.

Asset Management BC will host up to 6 NAMS training programs in 2017 strategically located around the Province. We need approximately 20 registrants per workshop in order to host it at any location. Depending on demand, workshops will be organized for:

- Vancouver Island
- Lower Mainland
- Central BC
- Northern BC
- Southeastern BC

Through UBCM, Asset Management Planning program, training subsidy is available to cover up to 50% of the registration fee of \$1650 per person for up to three staff per local government for eligible Asset Management BC training events providing more than one discipline registers for the program. Funding permitting, one training subsidy is available per local government and prior training without the subsidy does not impact eligibility.

Our experience is most local governments send two to six people. Many have sent new staff to subsequent sessions after initial training. Please contact Asset Management BC for more detailed information and / or express your interest in attending. Contact *Wally Wells*, Executive Director, info@assetmanagementbc.ca



Asset Management BC holds Successful Conference

Over 150 people from across BC, including attendees from Ontario, Saskatchewan, Alberta and Yukon, congregated in Vancouver in November for a learning experience on asset management.

The conference opened with key note speaker *Gord Hume* known for his dedication to the cause of asset management and his political experience, research and books on our urban environment and failing infrastructure.

A well-balanced program on a number of topics appropriate to asset management made stimulating presentations with the second day dedicated to presentations by UBCM, FCM, the Province and Infrastructure Canada on programs and funding opportunities to support asset management and infrastructure.

At the conclusion of the conference delegates were asked 'Would you like to do this again next year?' The answer was a unanimous YES.

In lieu of speaker's gifts, Asset Management made a \$500 donation to the BC Children's Hospital.

All the presentations are posted on the Asset Management BC website at www.assetmanagementbc.ca

Stayed tuned for information on 'Conference 2017'.



Figure 4 L to R: *Brian Bedford*, Ministry of Community, Sport and Cultural Development; *Glen Brown*, Union of British Columbia Municipalities; *Donna Chiarelli*, Federation of Canadian Municipalities; *Laura Di Paolo*, Infrastructure Canada; *Christina Benty*, Panel Chair; *Wally Wells*, **Asset Management BC**

Mark your Calendars – CNAM 2017

By: Steve Wyton, P. Eng., MBA, FIAM

Back in Western Canada, **CNAM 2017** in Calgary is a Must. Plan to attend. This is a tremendous learning and networking experience. Asset Management BC will be there. Will you?



An Invitation from the Conference Chair

As the Conference Chair of the 2017 Canadian Network of Asset Managers (CNAM) Workshop, I want to give all of you a big western welcome to join me in Calgary from May 15 to 18 at the downtown Hyatt Hotel. I'm very privileged to be asked to Chair the CNAM Workshop for a second time - I enjoyed the experience so much the first time in 2009 that I couldn't say no when I was asked to host it again this coming year!

I'm excited to be able to give you a "sneak peek" into this year's program. We have had a record number of abstracts submitted to the Conference Committee. This year, we are offering nearly 60 presentations, including speakers from outside of our traditional municipal asset management sphere. Presentation themes will include Investment Planning, Transportation, Data Collection and Analysis, Implementation, Change Management, Asset Management Planning, Investment Planning, Sustainability, Governance, Water/wastewater/ Lifecycle Plans, Financial, Data Collection and Analysis, Collaboration, Climate Change/Resiliency, Risk Management, Criticality, Cultural/Facility, Benchmarking, Collaboration, Decision Making, Education and Training, Policy, ISO 55000, and last but not least a number of topics relevant to small municipalities.

We've also made improvements to our program based on feedback of previous years' attendees. This year's program includes 6 workshops – allowing participants to network, collaborate and take a deeper dive on a number of topics relevant to our community of practice. Some of the topics will include the development of business cases, how to write an asset management plan (AMP), the implementation of a rapid asset management program for affordable housing, risk management in practice and a workshop with the Federation of Canadian Municipalities.

I'm also pleased to announce one of our keynote speakers. Dave Clark, the Director Capital Improvements Program within the Office of the Chief Financial Officer at the District of Columbia, USA will be discussing "What's the size of the 'bridge' needed?: Defining the gap between capital needs and available funding by asset type, and how to approach a solution."

In this presentation, Dave will share a case study on how the District of Columbia leveraged technology to optimize their capital investment for maximum return. During this presentation, David will discuss the advantages developing an integrated asset inventory program that focuses on improved clarity of decision making made possible by a system which optimizes risk, assets, resources and budgets.

He will tell the story of how the District of Columbia managed the key components of this process: recognizing the need to evaluate projects and assets, the creation of evaluation criteria and their appropriate weighting, the configuration of the software to record and tabulate results, and the time and effort needed to properly score each asset and project objectively.

Of course, we will be offering a number of great technical tours, fantastic opportunities to network, a new annual golf event, and of course, a gala event that will be second to none. Without spilling the beans, let me just say that this year's live band is one of my personal favorites here in Calgary! I've spent many nights watching these guys, dancing till the wee hours with Mrs. Wyton and reminiscing of those days where I sported a mullet - trust me you will have a great time!

I'm looking forward to seeing all of you at the 2017 CNAM Workshop in Calgary. For more information and to register, please visit the CNAM website at www.cnam.ca. If your organization is also interested in sponsoring the Workshop, please don't hesitate to contact me directly.

Cheers, Steve.

Update on Gas Tax Fund Asset Management

Strengthening local government asset management practices is a requirement for local government recipients of allocated Federal Gas Tax funding.

In November 2016, UBCM presented findings from its asset management assessment survey during the Asset Management BC conference. UBCM is preparing a report based on these findings that will be released in the spring of 2017.

Following the release of the report, UBCM will survey local governments to gather information on the implementation of asset management practices. Gas Tax Program Services will contact local governments directly when the time comes to complete these required reports.

In the coming months, more information on both of these initiatives will be provided through **The Compass**, UBCM's weekly newsletter.

Tips and Tactics: Doing a Reality Check on Deferred Maintenance

*by Bernadette O'Connor,
of Opus International Consultants (Canada) Ltd*

We have heard the term “deferred maintenance” and possibly used it ourselves. Most often this term is coupled with a report of a large unaffordable amount of money being needed and a tale of impending doom on the horizon if the funds are not found and work completed.

But I ask you - how real are these figures and how credibly were they determined? What is the evidence? Can we believe the value and the consequence of under-funding?

Now I am not advocating to wait for detailed accurate data before computing such things, but I would like to make some suggestions around two points;

1. Establishing what has not been done that should be done, and
2. Determining the cost to bring assets back to an appropriate standard.

Establishing what has not been done that should be done

To answer this first point requires some definition of ‘what should be done’ as opposed to ‘what I would like to do if

money was no option’, or ‘what in my opinion is the ideal things to do’. Already you can see the subjectivity creeping in to the discernment of ‘what should be done’.

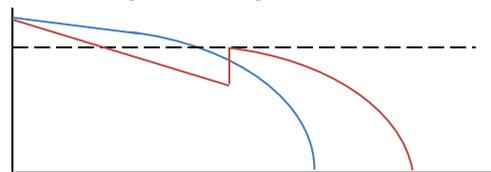
I would like to suggest that when you want to determine if some component of maintenance work or a repair project should be classified as ‘deferred maintenance’, that you consider the following;

- Has this (uncompleted) maintenance or repair work caused a decrease in the expected lifespan of the asset? If ‘yes’ then compare the cost of the shorter lifespan to the cost of the maintenance. This will guide you in deciding if the work ‘should’ be done.
- Is the work required for legislative or regulatory compliance and what is the cost/consequence of non-compliance?
- If neither of the above give evidence for the need to do the work, what is the driver and the consequence of not doing the work? What is the impact on service? On public confidence/willingness to pay? On risk/liability? Do any of these provide sufficient evidence that the work should be done urgently.
- If it can wait till next year or the year after, without major impact is it really deferred maintenance?

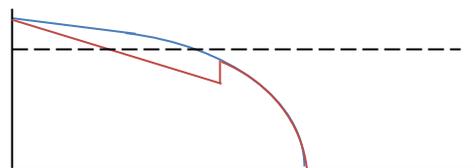
Determining the cost to bring assets back to an appropriate standard

The answer to this lies in defining what the ‘appropriate’ standard is. Consider whether you are;

- A. Trying to bring the asset back to a set standard i.e. reinstating asset to ‘good’ or ‘fair’ condition, or



- B. Just wanting to prevent the asset from falling below what is the acceptable condition for its age.



There is a difference in reporting values as deferred maintenance or best investment. Option A may be the best long term investment, but clearly it includes some improvement cost. Is Option B the deferred maintenance portion? Should we be reporting it as the do-minimum?

Upcoming Events

Recreation Facilities Association of BC

May 8-11, 2017

Annual Conference and Trade Show

Tigh Na-Mara Resort and Conference Centre
Parksville, BC

www.rfabc.com

Canadian Network of Asset Managers

May 15 – 18, 2017

11th Annual Networking Conference and Workshops

Hyatt Regency
Calgary AB

www.cnam.ca

Local Government Management Association

May 16-18, 2017

Annual Conference

Penticton Trade & Convention Centre

www.lgma.ca

BC Water and Waste Association

May 27 – 30, 2017

45rd Annual Conference and Trade Show

Victoria, BC

www.bcwwa.org

Planning Institute of BC

May 30 – June 02, 2017

Annual Conference

Prince George, BC

www.pibc.bc.ca

Federation of Canadian Municipalities

June 1-4, 2017

Annual Conference and Trade Show

Ottawa Convention Centre, Ottawa, ON

www.fcm.ca

Government Financial Officers Association of BC

June 14-16, 2017

Annual Conference

Fairmont Hotel, Victoria BC

www.gfoabc.ca

Union of British Columbia Municipalities (UBCM)

September 27-29, 2017

Annual Conference and Trade Show

Vancouver Conference Centre

Vancouver, BC

www.ubcm.ca

Questions & Answers

We strongly encourage you to raise questions and make comments as this newsletter is provided for the advancement of Asset Management. Email questions or comments to the editor and note if you wish to be anonymous or not to have comment published.

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