



the partnership
for water sustainability in bc

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**Living Water Smart
in British Columbia:
*Asset Management Continuum for
Sustainable Service Delivery***

Note to Reader:

Waterbucket eNews¹ celebrates the leadership of individuals and organizations who are guided by the vision for Living Water Smart in British Columbia².

The umbrella for Partnership initiatives and programs is the Water Sustainability Action Plan for British Columbia³. In turn, the Action Plan is nested within Living Water Smart, British Columbia's Water Plan.



Cover Photo Credit: special thanks to Daniel Horan,
Director of Engineering & Public Works, District of Oak Bay

¹ <https://waterbucket.ca/wscblog/>

² https://waterbucket.ca/wcp/wp-content/uploads/sites/6/2017/11/livingwatersmart_book.pdf

³ <https://www.waterbucket.ca/cfa/sites/wbccfa/documents/media/81.pdf>

Editor's Perspective

Released in 2008, [Living Water Smart, British Columbia's Water Plan](#) is government's call to action, and to this day transcends governments. Living Water Smart has 45 actions and targets, one of which states that:

Governments will develop new protocols for capital planning that will look at the life-cycle costs and benefits of buildings, goods, and services.

The above stated Living Water Smart policy objective is the genesis for Asset Management BC — co-chaired by the Ministry of Municipal Affairs and UBCM (Union of BC Municipalities) — which rolled out [Asset Management for Sustainable Service Delivery: A BC Framework](#) in 2015.

Eligibility for senior government infrastructure grants is the incentive for local governments to embrace the BC Framework and thus fulfil the Living Water Smart policy objective. The BC Framework establishes expectations; it does not prescribe solutions. The Partnership is a champion supporter of the BC Framework.

Through a Memorandum of Understanding with Asset Management BC, the Partnership brings a whole-system perspective to the unfunded liability issue that is associated with drainage and creek systems. As Glen Brown, founding Chair of Asset Management BC, stated at the Partnership's 2015 [Annual Water Sustainability Workshop](#):

“The ultimate vision for Sustainability Service Delivery is that communities would manage natural assets in the same way that they manage their engineered assets’.”

The 2015 workshop was the forum where Glen Brown introduced the **Asset Management Continuum** to illustrate steps in the Sustainable Service Delivery journey. Over the years, we have evolved the graphic to improve the visual presentation. However, the basic information remains the same. In other words, the concept is standing the test of time.



Kim A. Stephens, MEng, PEng,
Executive Director
Partnership for Water Sustainability in BC
December 2021



Living Water Smart Context for Asset Management Continuum



"Eligibility for senior government infrastructure grants is the incentive for local governments to embrace the BC Framework and thus fulfil this Living Water Smart policy objective: *Governments will develop new protocols for capital planning that will look at the life-cycle costs and benefits of buildings, goods and services.*"

Kim Stephens, Executive Director, Partnership for Water Sustainability in BC

"Implementation of asset management along with the associated evolution of local government thinking is a continuous process, not a discrete task. We needed a way to illustrate this diagrammatically. This led us to the concept of a continuum to illustrate Sustainable Service Delivery."



GLEN BROWN, GENERAL MANAGER (VICTORIA OPERATIONS), UBCM

Embed a Life-Cycle Lens, along with a Sustainable Service Delivery Culture

The objective is to integrate stream systems into local government asset management processes. But the over-arching context is whether a local government has a life-cycle strategy for its constructed assets. This big picture context is defined by a **local government finance vision** that embeds a [Sustainable Funding Plan](#).

[EAP, the Ecological Accounting Process](#), makes the financial case to put maintenance and management (M&M) of stream corridor systems and water assets on an equal footing with constructed assets (municipal infrastructure).

*The approach BC local governments follow for their asset management process is enshrined in the document **Asset Management for Sustainable Service Delivery: A BC Framework**. The important and telling part of the title is that **Asset Management is a process to provide a sound basis for decisions relating to the function of service delivery. Assets exist and are created, upgraded, replaced, maintained, and operated to provide a service. There is no other reason for their existence than provision of the intended service.***

Communities Progress Step-by-Step Along the Continuum

The big picture described above provides context for **Exhibit A**. The latter illustrates a helpful way to conceptualize the asset management journey for a local government as a “continuum of steps”:

- **Step One** – embrace the BC Framework
- **Step Two** – implement Sustainable Service Delivery
- **Step Three** – apply the Ecological Accounting Process

Once the life-cycle approach is standard practice for constructed assets, it would then be much easier to add M&M for stream systems. In Step Three, EAP focuses on the investment of resources already made by many stakeholders, as well as their two-fold aspirations concerning degradation prevention and enhancement of ecological services, respectively.

Benefits to Communities by Designing with Nature:

ENHANCE the natural commons (stream corridors) to create high value public assets.

AVOID an unfunded financial liability (by limiting stream erosion, preventing flooding, improving water quality).

ADAPT to a changing climate.

REDUCE life-cycle costs for drainage infrastructure.

EXHIBIT A

Sustainable Creekshed Systems and the Asset Management Continuum



Branding logo for Asset Management for Sustainable Service Delivery: A BC Framework, 2014

WHAT is the issue (Ground Zero):

There is no **Asset Management Plan**. There is an 'unfunded infrastructure gap (liability)'.

SO WHAT can be done (Step One):

Embrace **BC Framework**. Focus first on constructed assets (pipes & buildings). Implement an **Asset Management Strategy / Plan / Program**.

NOW WHAT can we do (Step Two):

Life-cycle approach and **Sustainable Service Delivery** are standard practice for maintenance and management of constructed assets.

THEN WHAT (Step Three):

Apply **EAP, the Ecological Accounting Process**, to determine *Natural Commons Asset* values and establish budgets for stream corridor maintenance and management. Account for **Water Balance** services. Integrate climate adaptation.

As understanding of the **Local Government Finance Vision** grows, communities progress incrementally along the Continuum

The Asset Management Journey along the Continuum leads to a Sustainable Funding Plan

“Implementation of asset management along with the associated evolution of local government thinking is a continuous process, not a discrete task. We needed a way to illustrate this diagrammatically, and thus communicate, what the journey by a local government to the eventual [Sustainable Service Delivery](#) destination would look like. This led us to the concept of a continuum. Over time they can achieve the goal of sustainable service delivery for watershed systems,” stated Glen Brown, Chair of Asset Management BC, and General Manager (Victoria Operations) with the Union of BC Municipalities.

‘Sustainable Service Delivery’ Explained

Glen Brown coined the term Sustainable Service Delivery in 2010 when he was an Executive Director with the Ministry of Municipal Affairs. Formal branding came with release of [Asset Management for Sustainable Service Delivery: A BC Framework](#) in December 2014, and rollout in 2015. The emphasis on service is a game-changer for local government infrastructure asset management.

At that time, and thanks to the early work of the then newly formed Asset Management BC, chaired by Glen Brown, local governments were just starting to wrap their minds around the **‘20/80 Rule’** – that is, the initial capital cost of municipal infrastructure is about 20% of the ultimate total cost, and the other 80% is an unfunded liability.”



A Synthesis of Three Ideas

The approach BC local governments follow for their asset management process is enshrined in [Asset Management for Sustainable Service Delivery: A BC Framework](#). The important and telling part of the title is that Asset Management is a process to provide a sound basis for decisions relating to the function of service delivery.

Assets exist and are created, upgraded, replaced, maintained, and operated to provide a service. There is no other reason for their existence than provision of the intended service.

Desired Outcomes in Doing Business Differently: Under Glen Brown’s leadership, Asset Management BC used the term [Sustainable Service Delivery](#) to focus local government attention on two desired outcomes that flow from policy objectives in Living Water Smart:

- Shift the spotlight from the infrastructure itself to the service AND the level-of-service that the infrastructure asset provides.
- Implement a life-cycle approach to asset management AND eliminate the unfunded gap for infrastructure replacement.”

During a curriculum planning session for a local government workshop organized in 20210 by the Partnership for Water Sustainability, Glen Brown synthesized three themes – **financial accountability, infrastructure sustainability, service delivery** – into a single easy to remember phrase: [Sustainable Service Delivery](#). The rest is history, as they say.



Guy Felio – Source of Inspiration for Glen Brown

“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 (showing a road to nowhere), Guy Felio said, ‘It’s all about the service’. That is what resonated with me,” stated Glen Brown.

“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.”

“The core document for asset management for BC local governments is the BC Framework. It provides the basis for the entire asset management process for our local governments to follow. The title of the Framework is deliberate and important.”

- Glen Brown



An Overview of BC Framework: “The ‘function’ and responsibility of Municipal Councils and Regional Boards of Directors is Sustainable Service Delivery. The process to support decision making is Asset Management. Funding agencies, as part of funding applications, request communities to identify where they are within the asset management process using the BC Framework.”

“While much attention and discussion focus on the Asset Management plan or plans, there is much more to the process than just the plan. In fact, for Council, the implementation strategy and long-term financial plan are more important documents than the asset management plan itself,” concluded Glen Brown.

‘Story Behind the Story’ of Sustainable Service Delivery Genesis

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. The emphasis on service is a game-changer for local government infrastructure asset management.

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

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”. Asset Management BC is a ‘community of practice’ initiative with provincial support and participation.

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 this ‘story behind the story’, the focus is on the actions of Glen Brown as a key influencer in the world of government.

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](#)⁴ in September 2010,” recalls Kim Stephens.

“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 that presentation did Glen use the specific term ‘sustainable service delivery’.”

⁴ <https://waterbucket.ca/viw/category/convening-for-action-in-2010/2010-nanaimo-region-water-pricing-workshop/>

An Easy-to-Remember Phrase: “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 soundbite for use as a compelling title,” continues Kim Stephens.

“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.”

A Local Government Program for Peer-Based Education

Part of the rollout to stimulate a national dialogue on sustainable water management, the [Nanaimo Region Water Pricing Workshop](#) in September 2010 was a unique blend of research and practice. The workshop connected dots: ‘conservation-oriented water pricing’ is a tool to achieve a larger end, which is ‘sustainable service delivery’.

Unfortunately, Glen Brown took ill the night before the workshop. This 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](#).

The success of 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 Comox Valley series program, held from 2008 through 2015, 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.

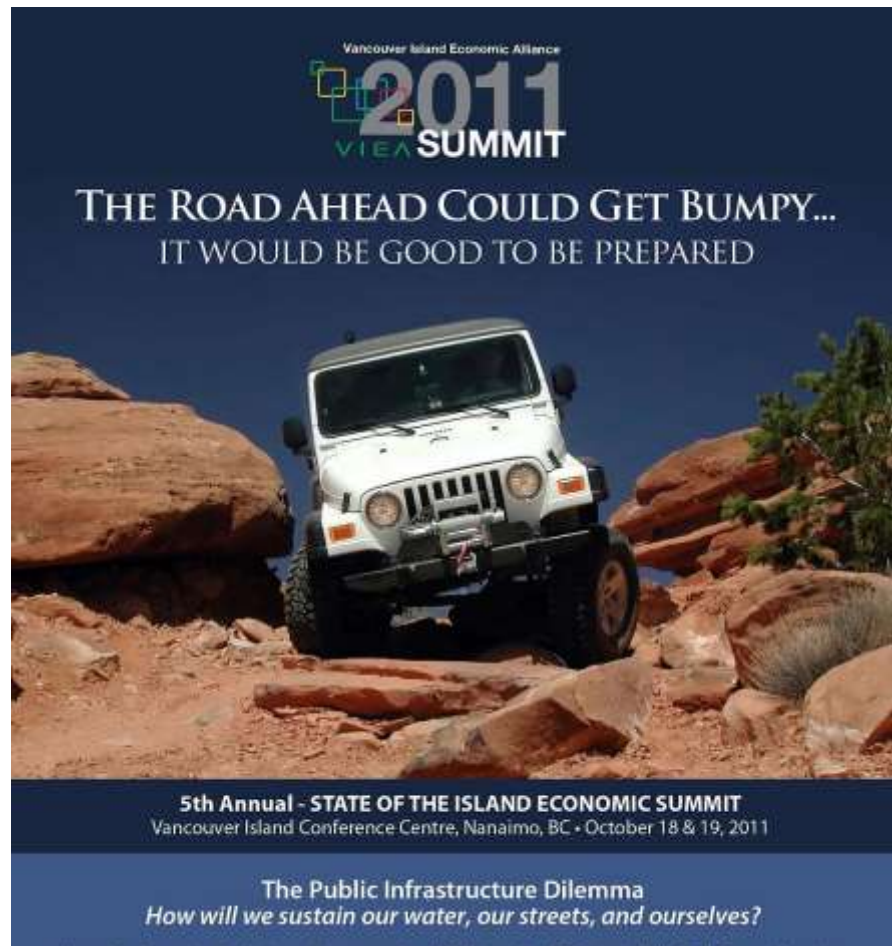
As an outcome of what they learned at the RDN workshop, the Comox Valley regional team shifted the spotlight from a ‘regional response to climate change’ to the financial challenges associated with replacement of aging municipal infrastructure. Climate change became a sub-theme.

Comox Valley local governments embrace vision for 'Regional Response to Infrastructure Liability'

The **20/80 Rule** provided context for the 2011 Comox Valley Series. Thus, the focus of the four participating local governments was 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 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 'convening for action' forum at the [2011 State of Vancouver Island Economic Summit](#). This event helped brand 'sustainable service delivery' as the wave of the future.



The Public Infrastructure Dilemma – How Will We Sustain Our Water, Our Streets and Ourselves?

The 2011 State of the Island Economic Summit⁵ held in Nanaimo included four pre-Summit sessions, one of which was organized by the Partnership for Water Sustainability. Branded as a ‘Forum within the Summit’, the focus of this session was on solutions to the ‘infrastructure liability’ challenge confronting all local governments.

The ‘Forum within the Summit’ provided the opportunity to showcase how one region – the Comox Valley – was responding to the challenge and developing a regional response to infrastructure liability. The Comox Valley regional team told their story and provided a context for townhall dialogue about challenges and solutions. Refer to **Exhibit B**.

The sustainable service delivery theme for the ‘Forum within the Summit’ was just a year after Glen Brown first conceived the term to brand the future direction of asset management.

Forum Objectives

First, CELEBRATE the collaboration then happening in the Comox Valley.

Secondly, and in building on what the Comox Valley had accomplished to that point, START an Island-wide conversation about the ‘20-80 Rule’ for infrastructure liability.

Thirdly, paint the big picture for WATER SUSTAINABILITY on Vancouver Island.



⁵ <https://waterbucket.ca/viw/category/convening-for-action-in-2011/2011-state-of-the-island-economic-summit/>

The 'Forum within the Summit' on October 18

"The Public Infrastructure Dilemma: How will we sustain our water, our streets, and ourselves?"

What / Who:	2011 State of the Island Economic Summit /// Vancouver Island Economic Alliance
Where / When:	Vancouver Island Conference Centre, Nanaimo, BC /// 12:30pm until 3:30pm
VIEA Context:	"Collaboration with CAVI creates an opportunity for early success in moving forward with the Link Project . CAVI has been building credibility and a partnership network in a local government setting. CAVI is a successful 'demonstration project' that can both inform the VIEA implementation plan and provide a springboard for expanded action," states the VIEA 3-Year Plan, adopted in 2010.
Affordability Issue for Taxpayers:	The initial capital cost of municipal infrastructure is about 20% of the life-cycle cost; the other 80% largely represents a future unfunded liability. Each year, the funding shortfall grows. Fiscal constraints provide a driver for a change in the way local governments plan, finance, implement and over time replace infrastructure.
Forum Vision:	The Forum program will be built around the "infrastructure liability" theme, and will showcase the Comox Valley experience in striving for Sustainable Service Delivery . The Comox Valley regional team approach is relevant to all local governments, and is replicable. Due to strong, local leadership at the working level, in 2009 the Province recognized the Comox Valley as a provincial demonstration of how to make real a <i>regional team approach</i> .
Sustainable Service Delivery:	Sustainable Service Delivery is the Province's branding for a comprehensive approach to infrastructure asset management. This approach goes beyond an accountant's life-cycle analysis. The paradigm-shift starts with land use planning and determining what services can be provided sustainably, both fiscally and ecologically. The legislative authority for integration of land use planning and asset management, including financial management, already exists within the Local Government Act and Community Charter.
Key Message:	<i>All those involved in land development have a role to play in achieving Sustainable Service Delivery.</i> Local governments can develop a truly integrated Asset Management Strategy that views the watershed and the strategy through an environmental lens.
Comox Valley Regional Team:	Four local governments (Courtenay, Comox, Cumberland, Comox Valley Regional District), the Comox Valley Land Trust, and TimberWest are striving to work across boundaries; align efforts at a watershed scale; and walk the talk in applying the '4Cs' – that is, <i>communicate, cooperate, coordinate and collaborate</i> . By working together as a regional team and focussing on commonalities, the goal is to achieve An Integrated Watershed Approach to Settlement .
Forum Structure:	The forum will be structured in two segments. First, we will present information to provide context and set the scene for the town-hall segment that will follow. Our objective in this segment is to inform and educate the audience so that there will be a common understanding. We will then conduct the town-hall segment as a 'sharing and learning' session. Our 'convening for action' experience is that this approach is effective in engaging an audience. It allows for a variety of ideas, questions and comments to flow freely.

The 4Cs for Sustainable Service Delivery: Collaboration, Capacity, Culture, Council

“After becoming CAO of Courtenay (in the Comox Valley) in 2013, we began exploring how to implement an Asset Management Program at the City. Collaborating with external agencies opened our minds to thinking of AM practices in far broader terms, so that they might be applied in any community, regardless of size,” states David Allen.

“We didn’t realize it, at the time, but it led to us eventually conclude that operationalizing AM would involve four separate, interconnected initiatives that would be the pathway for our journey toward Sustainable Service Delivery: They coalesced into what we locally refer to as *The 4C’s - Collaboration, Capacity, Culture, and Council.*”

“It is all about building trust between Council and staff, keeping in mind what can realistically be accomplished by an organization, and being clear about the limitations of the current state-of-practice and knowledge and our ability to explain what the numbers mean in that context.”

David Allen, Past- Chair (2012-2020)
Asset Management BC Community-of-Practice



It takes courage for a Council or Regional Board to embrace an intergenerational ‘Finance Vision’

To do what is right and necessary to bridge the infrastructure funding gap for constructed assets requires an intergenerational commitment. It takes courage on the part of a Council or Regional Board members to look beyond the short-term, understand what sustainable funding entails over the long-term, and direct staff to get on with the job.

Unless there is a intergenerational **financial vision for sustainable funding**, an incremental erosion of the service levels for constructed assets would inevitably result. This is the local government reality-check for integration of stream systems (natural assets) into asset management plans and annual budgets.

Asset Management Continuum points the way to EAP, the Ecological Accounting Process

EAP brings a whole-system approach to an understanding of **drainage service** realities. EAP implementation depends on decision-makers understanding that a municipal drainage service has two interconnected components – one is the constructed infrastructure and the other is the stream system.

EAP is a Land Use Perspective

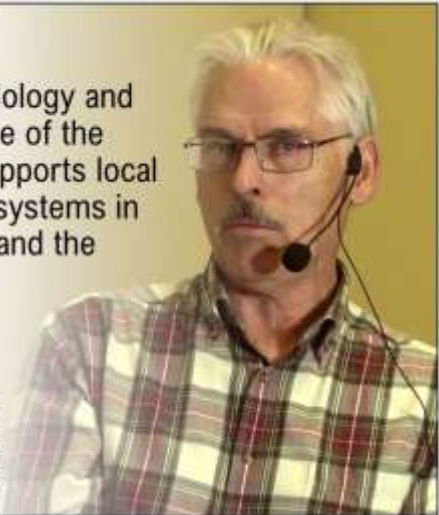
“The essence of EAP is expressed as follows: **What is the environment that supports the package of ecological services?** This refers to the combined range of uses desired and supported by the community, namely - drainage, habitat, recreation, and enjoyment of property. This is a land use perspective,” states Tim Pringle, EAP Chair.

“The strength of EAP is in how we look at and value streams as systems and as a land use. A stream corridor is a land use because it satisfies two criteria: it is defined in the [Riparian Areas Protection Regulations Act](#), and it has a financial value.”

“EAP uses [BC Assessment](#) parcel data to find the Natural Capital Asset values of streams. Parcel data are accurate, recent, and reflect the motivations of buyers and sellers over time. This means parcel values include social, ecological, and financial trend information.”

“The land supports assets that provide services. And decisions are made at the parcel scale. Thus, we are tied to the past through historical subdivision of land. This means we must understand the biology of land use. The human analogy is DNA. Only EAP deals with the parcel.”

-Tim Pringle

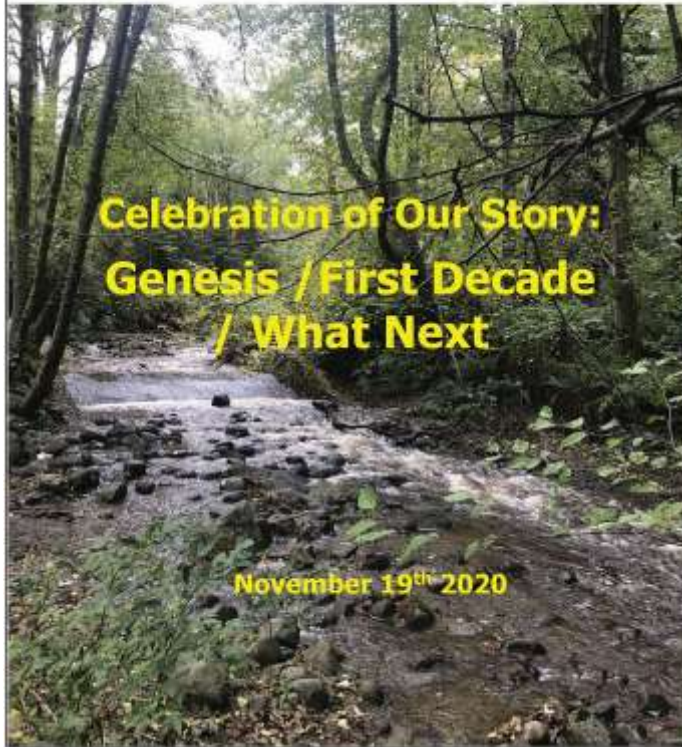


“EAP bridges a gap. The methodology and metrics recognize the importance of the stream in the landscape. EAP supports local governments to include stream systems in asset management calculations and the maintenance and management, or M&M, of drainage services.”

Tim Pringle
Chair, EAP Initiative
Partnership for Water Sustainability
in British Columbia



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<https://waterbucket.ca/about-us/>

About the Partnership for Water Sustainability in British Columbia

Incorporation of the Partnership for Water Sustainability in British Columbia as a not-for-profit society on November 19, 2010 was a milestone moment. Incorporation signified a bold leap forward.

Over two decades, the Partnership had evolved from a technical committee in the 1990s, to a “water roundtable” in the first decade of the 2000s, and then to a legal entity. The Partnership has its roots in government – local, provincial, federal.

The Partnership has a primary goal, to **build bridges of understanding** and pass the baton from the past to the present and future. To achieve the goal, the Partnership is growing a network in the local government setting. This network embraces collaborative leadership and **inter-generational collaboration**.

The Partnership believes that when each generation is receptive to accepting the inter-generational baton and embracing the wisdom that goes with it, the decisions of successive generations will benefit from and build upon the experience of those who went before them.



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