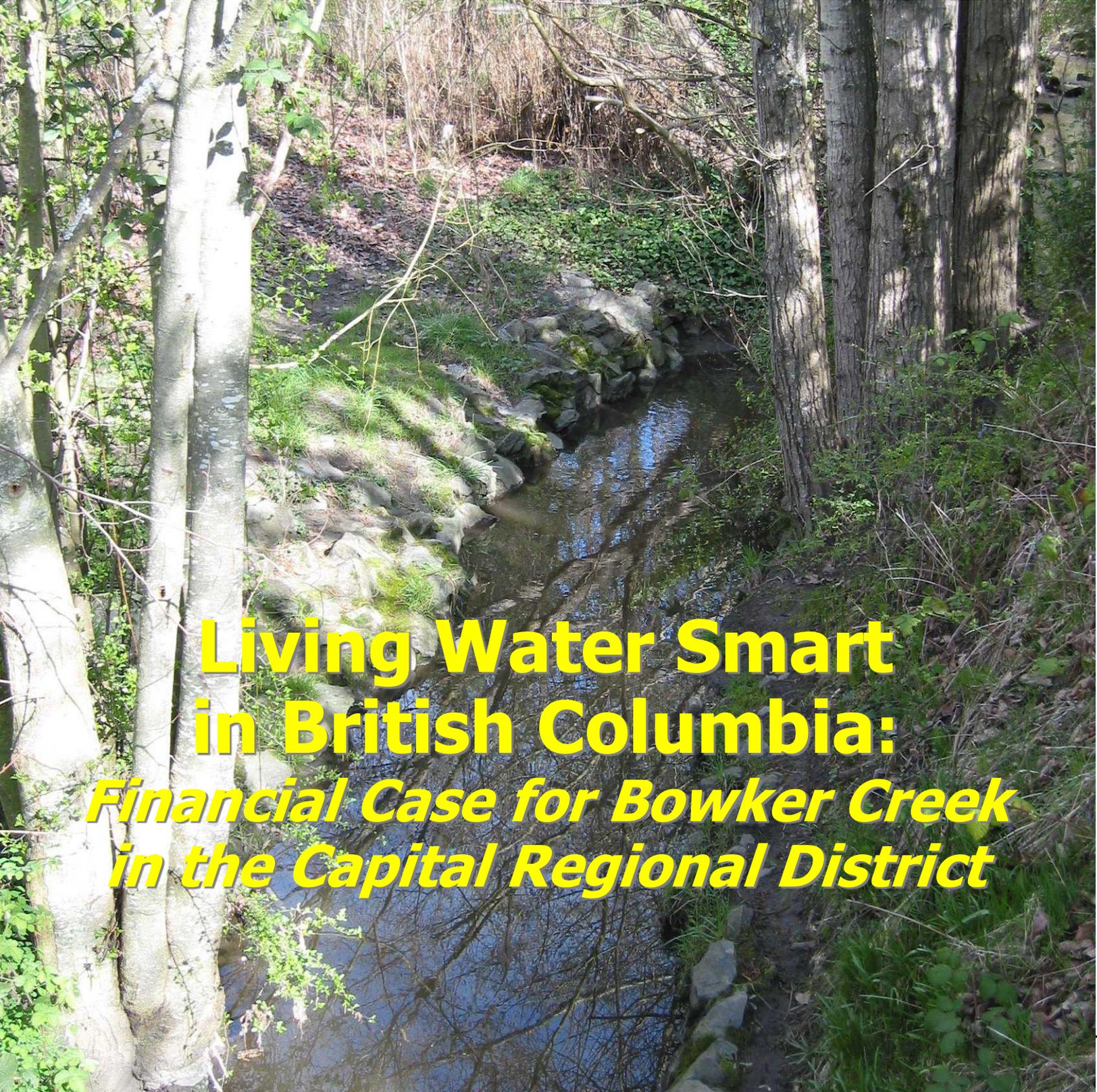




the partnership for water sustainability in bc

Waterbucket eNews on October 26, 2021

<https://waterbucket.ca/wscblog/>

A photograph of a small, clear stream flowing through a forest. The stream is surrounded by trees and rocks, and the water is clear and blue. The text is overlaid on the bottom half of the image.

Living Water Smart in British Columbia: *Financial Case for Bowker Creek in the Capital Regional District*

Note to Reader:

Waterbucket eNews¹ celebrates the leadership of individuals and organizations who are guided by the vision for **Living Water Smart in British Columbia**².

The edition published on October 26, 2021 featured EAP, the Ecological Accounting Process, as applied to the 100-Year Action Plan for daylighting Bowker Creek in the Capital Regional District.

The umbrella for Partnership initiatives and programs is the **Water Sustainability Action Plan for British Columbia**³. In turn, the Action Plan is nested within **Living Water Smart, British Columbia's Water Plan**.



Cover Photo Credit: Capital Regional District

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

The provincial umbrella for EAP is [Asset Management for Sustainable Service Delivery: A BC Framework](#). In 2019, UBCM and the Ministry of Municipal Affairs established an expectation that grant applicants would integrate natural assets into their asset management processes. EAP shows them how to do it for stream systems.

Reconnect Hydrology and Stream Ecology by Design

EAP provides communities with a philosophy, pragmatic methodology and metrics to make the financial case for annual investment to prevent degradation and improve the condition of ecological assets that constitute a stream corridor system.

Use of EAP to establish the 'financial case for the stream' would put maintenance and management (M&M) of stream corridor systems on an equal footing with constructed assets (municipal infrastructure).

The leap forward explicit in the vision for "sustainable drainage service delivery" is whole-system action on the landscape that ensures stream system integrity. Whether constructed or natural, an asset is an asset. And in the built environment, each asset type requires an annual budget for M&M.

Once local governments embrace a guiding philosophy that ecological services and use of land for development are equally important, then the next step is for them to include M&M budgets for stream systems in their Asset Management Plans. This would begin the process of reconnecting hydrology and stream ecology by design.



*Kim A. Stephens, MEng, PEng,
Executive Director*

*Partnership for Water Sustainability in BC
October 2021*



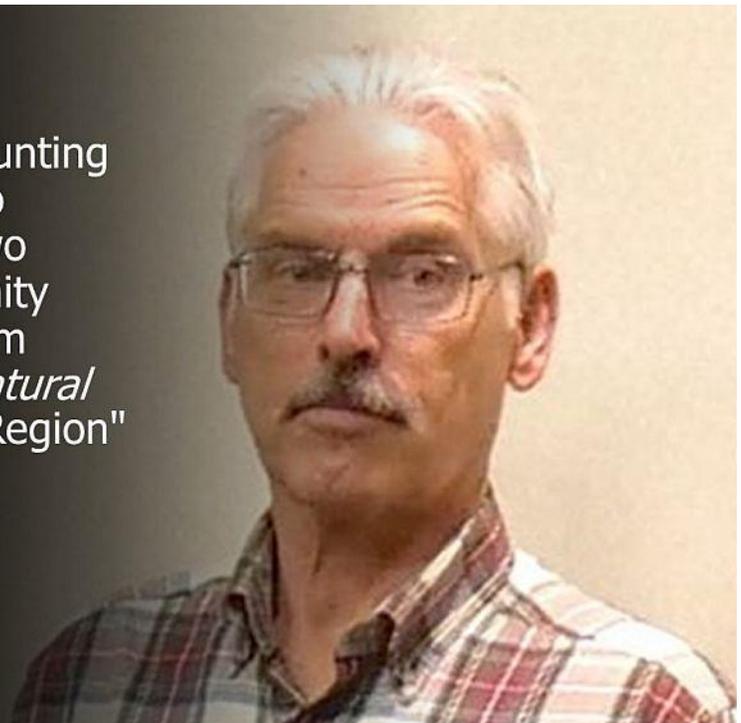
Bowker Creek – A Natural Commons

"The concept of the Natural Commons underpins EAP, the Ecological Accounting Process. It espouses the principle that use and conservation of land are equal values. The commons idea includes social, ecological and financial qualities."

- Tim Pringle, Chair, Ecological Accounting Process

"EAP, the Ecological Accounting Process, applies readily to Bowker Creek because two decades ago the community recognized that the stream could be restored as a *Natural Commons* in the Capital Region"

Tim Pringle, Chair, EAP Initiative
Partnership for Water Sustainability in BC



Financial Case for Bowker Creek in Capital Region

Bowker Creek originates at the University of Victoria on southern Vancouver Island and flows for 8 km through three municipalities – Saanich, Victoria and Oak Bay. The creekshed is completely urbanized. The impervious area coverage is 56%. Over 30,000 people reside in the surrounding creekshed.

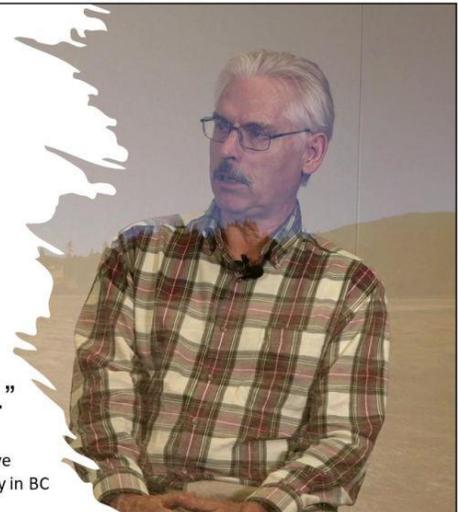
The Bowker Creek Blueprint is a 100-year action plan to create islands of nature within the urban environment, daylight a creek where it is enclosed in a pipe for two-thirds of its original channel length, and restore a continuous stream corridor.

The process to operationalize the Blueprint is now self-fulfilling. It is embedded in three Official Community Plans and cascades down to the DNA and departmental work plans within each municipality. In February 2021, the 12-clause motion passed by Victoria City Council is the game-changer that launched the second decade of the 100-Year Action Plan.

In this edition, the focus is on the "financial case for the stream" because the Partnership for Water Sustainability released [Bowker Creek: A Natural Commons in the Capital Regional District](#). Applying EAP, the Ecological Accounting Process, adds to the conceptual framework for stream daylighting with new insights about metrics.

“The Bowker Creek EAP project validates the vision driving the Bowker Creek Blueprint and the 100-Year Action Plan for creekshed restoration. With hindsight, the players knew intuitively what needed to be done, but did not have the numbers to make the case. Now they do.”

Tim Pringle, Chair, EAP Initiative
Partnership for Water Sustainability in BC



Application of EAP, the Ecological Accounting Process to Bowker Creek

“In 2020, the Bowker Creek Initiative added the [Daylighting Feasibility Study](#) to its strategy for restoration of the Bowker Creek stream corridor as a natural commons or ecological system,” stated Tim Pringle, EAP Chair.

“Applying EAP, the Ecological Accounting Process, adds to the conceptual framework for stream daylighting by providing new insights about metrics for annual maintenance and management (M&M) of a functioning stream corridor system.”

“The EAP findings for Bowker Creek also introduce intriguing insights that would potentially inform the long-term strategy for property acquisition, in conjunction with land redevelopment, for stream daylighting.”

Integration of Natural Assets into Local Government Asset Management

The Bowker Creek EAP project is part of an applied research program, involving multiple local governments, to demonstrate application of the EAP methodology and metrics. The intent is that the findings would be used by participating local governments to establish line items in budgets for maintenance and management (M&M) of ecological assets in stream corridors.

The EAP program supports local governments adopting an integrated approach to life-cycle M&M of the drainage service. The integrated approach recognizes that constructed infrastructure and stream systems are inter-connected components of the drainage service. Effective M&M of natural assets (stream systems) requires local government commitment backed by line items in an annual report.

The EAP methodology and metrics recognize the importance of the stream system in the landscape. A stream is a land use because the stream corridor is defined in regulations and has a financial value.

Land Use Context

“When land development takes place, there is necessarily a riparian deficit. Thus, when applying EAP, the measure of the riparian deficit is the most useful output,” stated Tim Pringle.

“Transformation of the Bowker landscape occurred decades ago in an era when there was no streamside protection regulation. Other than a 400m headwater reach at the University of Victoria, Bowker has no riparian ecosystem. Elsewhere, there are only remnant riparian areas.”

“The **Riparian Deficit** is the environmental equivalent of the **Infrastructure Deficit (or Gap)** for constructed assets such as underground utilities and buildings. It adds balance to the asset management conversation by giving equal weight to the environmental protection perspective and financial case for stream systems.”



Operationalizing EAP within Asset Management

The Federation of Canadian Municipalities (FCM) has developed a self-evaluation tool called the Asset Management Readiness Scale (AMRS). The 5-part tool defines five levels of competency and readiness. Currently, it is applied to M&M of constructed assets. However, it has value as a conversation starter with local government asset managers about M&M of natural assets.

The process for understanding how EAP might be applied to AMRS by local governments involved conversational interviews with asset managers in the three Bowker Blueprint partner municipalities. Their responses yielded insights into how the EAP case study aligned with and/or fitted into the big picture which is their organization's approach to asset management planning for sustainable service delivery.

Conversations revolved around the question of how likely is it that one small study would shift the overall ratings in a 15 x 5 matrix (a copy follows on page 6). The short answer by the partners is that it would not. The consensus, however, is that EAP does help broaden and balance the asset management conversation. This alone achieves the goal of EAP in providing local governments with a methodology and metrics for making the financial case for streams.

Reflections by Local Government Staff



“The value of projects like EAP to the asset management program in Oak Bay is that it helps us better understand the financial case for Bowker Creek. We are then able to make some planning decisions about how much money to put aside to sustain and maintain the creek for the future. Council buy-in is important.”

Dan Horan, Director of Engineering & Public Works, District of Oak Bay



“Decision-making is the key. In the City of Victoria, we are creating new ways of making decisions about what we do with our assets, whether they be natural or hard. Embracing EAP would introduce a structured asset planning approach. It provides metrics for integrating natural assets into the municipal infrastructure inventory and place them on an equal footing with constructed/engineered assets. This provides a starting point for a balanced conversation about the services that the natural and constructed assets both provide. EAP will be used for Bowker Creek, and for future planning and decision-making.”

Trina Buhler
Asset Management Specialist
City of Victoria

“Asset management and ecological frameworks are merging closer than ever before. This is good news as Saanich continues to catalogue and value storm water natural assets with the intent of establishing resources to steward both hard, linear infrastructure and natural systems alike. Modern asset methodologies can sync well with other frameworks, such as EAP, which provides additional tools and metrics to improve maintenance and management across the District, and in collaboration with our regional partners on such initiatives as the Bowker Creek Initiative.”



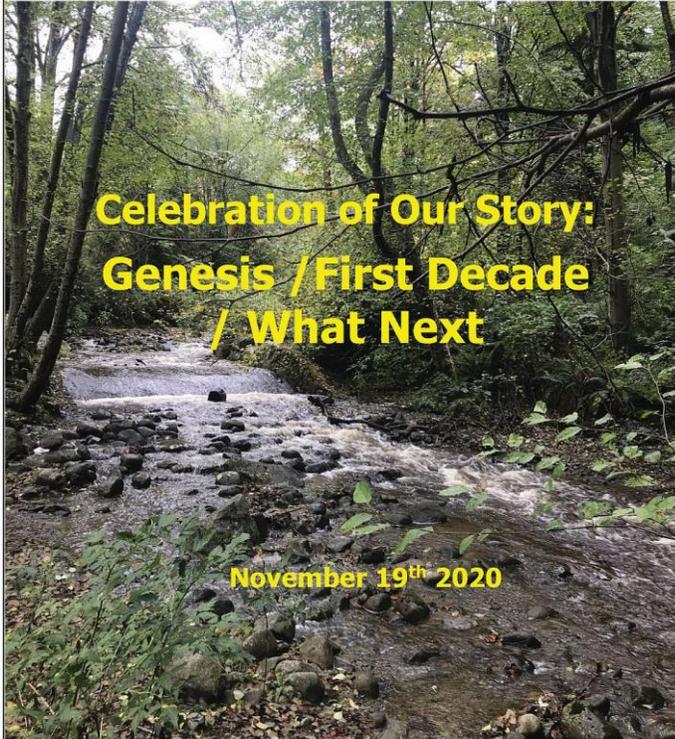
LESLEY HATCH, SENIOR MANAGER OF WATER RESOURCES, DISTRICT OF SAANICH

FCM Asset Management Readiness Scale Assessment for Constructed Assets

Competency	Current State	Expected Future State
Policy and Governance	<i>By developing this competency, the local government is putting in place policies and objectives related to asset management (AM), bringing those policies to life through a strategy and roadmap, and then measuring progress and monitoring implementation over time.</i>	
A. Policy & Objectives		
B. Strategy & Roadmap		
C. Measurement & Monitoring		
People and Leadership	<i>By developing this competency, the local government is setting up cross-functional teams with clear accountability and ensuring adequate resourcing and commitment from senior management and elected officials to advance asset management (AM).</i>	
A. Cross-Functional Teams		
B. Accountability		
C. Resourcing and Commitment		
Data and Information	<i>By developing this competency, the local government is collecting and using asset data performance data and financial information to support effective AM planning and decision-making.</i>	
A. Asset Data		
B. Performance Data		
C. Financial Information		
Planning and Decision Making	<i>By developing this competency, the local government is documenting and standardizing how it sets AM priorities, conducts capital and O&M planning, and decides on budgets.</i>	
A. Documentation & Standardization		
B. Asset Management Plans		
C. Budgets & Financial Planning		
Contribution to Asset Management Practice	<i>By developing this competency, the local government is supporting staff in AM training, sharing knowledge internally to communicate the benefits of AM, and participating in external knowledge-sharing.</i>	
A. Training and Development		
B. Internal Communication & Knowledge-Sharing		
C. External Communication & Knowledge-Sharing		



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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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