

Our members now have a tool to assist them in their facility asset management roles. The initial interest in the program has been great and as more of our members become aware of the potential of this product, we anticipate many more facilities and municipalities will be utilizing it. The beauty of the software is that it was developed with input from recreation facility operators who know what their needs are to operate and maintain multiple assets. It is a tool every facility operator needs in their toolbox."

The simple and easy to use functionality has made RFAM, the software of choice for over 50 municipalities across Canada and we are garnering interest from additional recreation associations, municipalities, consulting companies and private firms.

A BC Strategy for Community Investment in the Natural Commons: Why Terminology and Bias Matter

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A BIG IDEA: The sustainability of core service delivery is a concern for local governments across Canada. Rather than continuing to attempt to do more with less, local governments have an opportunity to do things differently - and achieve better results - by including natural assets in asset management processes¹.

How Communities Decide How Much to Invest in Creekshed Restoration

It should be relatively easy to embrace the 'big idea' introduced above. Many local governments do seem willing to take a leap of faith and venture into uncharted territory to expand the scope of asset management to encompass ecological assets.

Putting this big idea into practice, however, requires an understanding and a re-think of terminology that is

¹ Extracted from the introduction to *Integrating Natural Assets into Asset Management, A Sustainable Service Delivery Primer*, 2019, a companion document to **Asset Management for Sustainable Service Delivery: A BC Framework**

currently in use for valuation of *ecological systems and services*. It also requires that asset management professionals understand what such terms mean and are aware of the bias that may be implicit in traditional terminology.

In other words, clear and effective communication of basic concepts is a foundation piece for ultimately changing the way local governments do business.

Bias comes into play in one or more of the following three ways. First, whether one breaks the ecological system into its parts, or looks at the system as a whole. Secondly, whether the analytical focus is solely on financial values, or also takes into account social values. Finally, whether the guiding philosophy for valuation primarily is influenced by academia and scientific arguments, or by how the community uses the natural commons (stream corridor). These biases seem to persist.

EAP, the Ecological Accounting Process, is a pragmatic 'made in BC' approach to valuation of the ecological services supplied by a stream (one of our most common ecological systems). Think of it as a decision support tool for use by local government. EAP looks at the system as a whole, takes into account social values, is guided by how the community uses the natural commons, and looks at the influence of the natural commons on neighbouring property values.

Application of the EAP methodology and metrics can help to inform an investment strategy for protection or restoration of ecological-hydrological function in the natural commons. EAP is particularly relevant to urban and suburban creeksheds drained by a 1st order stream.

The EAP Journey:

EAP is a three-stage initiative: **Test / Refine / Mainstream**. During 2017 and 2018, two Stage 1 demonstration applications tested the concept, and demonstrated EAP relevance to local government. In 2019, two Stage 2 demonstration applications resulted in working definitions and consistent application of the EAP methodology. Next, six Stage 3 demonstration applications will mainstream use of EAP. The ten demonstration applications encompass a range of land use situations in five regional districts.

Dating back to 2015, the authors have done much soul-searching as we have collaborated with willing provincial and local government partners to advance the EAP initiative. Our partners have helped us to consider terminology and derive meanings that they can use.

In this article, we describe where we have landed in crystallizing a way of thinking about *ecological systems and services* in an asset management context.

Along the way, and as our understanding has grown, the terminology that describes the EAP methodology and metrics has evolved. First of all, some concepts and terms are missing from the ecological systems and services lexicon. Secondly, we all benefit by using a common language to communicate among local government departments and within our communities. Thus, an outcome of EAP evolution is the identification of an eco-terminology framework that is appropriate and relevant to municipal asset management.

Consider the concepts and definitions that have evolved through the EAP experience.

Maintenance and Management (M&M) of Ecological Assets

The starting point for application of EAP is recognition that local governments have existing tools in the form of policies and legislation for ‘maintenance and management’ (M&M) of ecological assets within riparian corridors.

Until now, however, what local governments have lacked are a pragmatic methodology for financial valuation, and meaningful metrics that go to the heart of sustainable service delivery. EAP provides metrics that enable communities to appreciate the worth of ecological assets. Six foundational and cascading concepts underpinning the EAP methodology are introduced below. They provide a mind-map:

- **Maintenance versus Management** – Maintenance is about preventing or avoiding degradation, whereas management is about improving the condition of the ecological asset. This is an important distinction. The M&M acronym is a starting point for encouraging practitioners to think holistically about the relationship between hydrology and ecology.
- **Whole-System Approach** – It is insufficient to look at nature primarily as a substitute for engineered infrastructure. We are looking at a system. Without an ecological system, there are no ecological services. Therefore, it is imperative to understand the system as a whole. Everything is connected.
- **Natural Commons and Constructed Commons** – It is not yet well-understood that these are parallel concepts and of equal importance.

Every urban creekshed comprises a constructed commons (roads, utilities, etc.) and a natural commons (streams, riparian corridors, etc.) Each commons is a system. The two are illustrated in the image below. The commons concept is the lynch-pin for EAP.

- **Package of Ecological Services** – This concept refers to the combined range of uses desired by the community. Three key words capture the essence of what we mean by ‘range of uses’ – drainage, recreation and habitat. These three words immediately conjure a word picture in our minds. They are visual. They make real what is an abstract concept to most people. Thus, a strategic plan that supports this diversity within the natural commons will appear worthwhile to the greatest number of interested parties.
- **A Stream is a Land Use** – This is a novel yet intuitively obvious way of characterizing a stream and its riparian corridor because streams in settled areas meet this litmus test for a ‘land use’, and that is: *they have a defined area in legislation; and measurement of their financial value can be calculated using BC Assessment data.*
- **Dollar Value of the Natural Commons** – The extent of use and investment in M&M indicates what neighbouring residents and the community as a whole think ecological assets are worth – which is defined as ‘value in use’. Looking through the ‘worth’ lens, and utilizing financial information supplied by BC Assessment as a proxy, the EAP methodology assigns a dollar value to the land occupied by the natural commons (stream corridor).

Implications for Asset Management Strategies and Plans

The idea of a natural commons supporting a package of ecological services which the community wants and expects to have implies that approved plans for land development should not result in ecological services being merely residual outcomes. Should the community simply be happy with what is left?

Rather, their maintenance and management (M&M) should be planned as core municipal services. It is the ecological services supplied by streams (as defined in the Riparian Areas Regulations Act) that influence the financial value of land parcels.

Residents and property owners are familiar with constructed commons services - roads, potable water, storm sewers and many other ongoing services.

They expect these services to endure. Similarly, communities expect the ecological services provided by the natural commons to be enduring.



Asset Management BC / UBCM receive Cohort funding from FCM Municipal Asset Management Program

With funding from the FCM Municipal Asset Management program and participation from the Province and UBCM, **Asset Management BC** is developing additional training tools and education programs for community asset management. Throughout March, UBCM is holding workshops around the Province on gas tax funding and asset management.

Three new programs are being developed for deliver locally over the next 18 months.

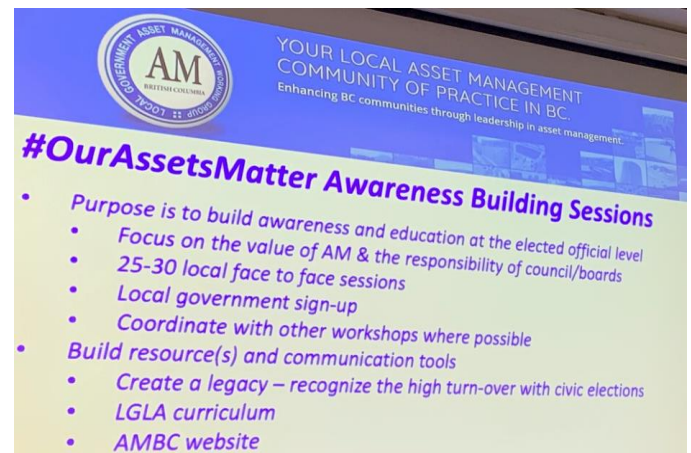
The first is a workshop on **Level of Service**.



A pilot workshop was run in November, 2019 with good success and great feedback from those that attended. In case you missed the description, here is the information presented by UBCM on the Level of Service Workshop.

Considerable work has been done on ‘communicating the message’ and ‘awareness building.’ An open house session was held at the UBCM conference in September with great feedback from our politicians on what is important.

The second program will be sessions that focus on **awareness building**, the role of Council and the role of asset management in the integrated decision-making process.



#OurAssetsMatter is the core message for these sessions and the take-away we hope people will have. In most cases our service delivery is dependent on the infrastructure and assets to do so.

The third program is called ‘**operationalizing asset management**’. What does this mean.? How do you put the pieces together to have a cohesive understandable process to achieve the desired outcome.

We have been asking you what your barriers are to achieve best results with asset management? It is one thing to prepare an Asset Management Plan, but then what?