



## A High-Level Overview of EAP, the Ecological Accounting Process

---

*Natural assets support the delivery of core local government services, while doing so much more*

### Why EAP:

The purpose of EAP is to enable local governments to establish values for the ecological services of streams and the land occupied by the stream (as defined in the *Riparian Areas Protection Act Regulations*). These values are social and financial.

**Social values evidenced by the uses and enjoyment that residents and property owners (communities) draw from stream systems.** These values reflect the Natural Commons character of such natural assets. These include:

- aesthetic amenities for parks, trails, greenways, urban woodlands, etc.
- community landmarks;
- natural areas (riparian zones) providing habitat for aquatic and terrestrial life;
- recharge of aquifers and wells;
- privacy, natural areas and amenities for residential and other parcels; and
- community expectations that the stream system is being maintained and managed.

### **Financial values include:**

- conveyance of stormwater from outfalls of local government drainage systems;
- attenuation of flooding (rainwater interception, detention, infiltration, release to ground water, etc.) and
- value of the area occupied by the stream width and set-back zone based on BC Assessment values of abutting residential parcels. This is called the natural commons asset (NCA).

### EAP involves five analytical steps:

1. **Watershed profile** which describes the stream system, the history of land use impacts, current land use and the functioning condition (riparian quality). Information based on existing studies, research and reports. Description of the land uses in the watershed. Community views on the risks and opportunities associated with the stream.

2. The condition of the **watershed hydrology**. How has land use altered/impacted water pathways (interception, detention, etc.) and what is the condition of the riparian areas (and zones) of the stream? Information based on existing studies, etc.
3. **Worth of the stream** as evidenced by community (local government, NGOs, property owners, businesses, and others) investment in its condition. An analysis of investment that is for remediation of problems compared to enhancement. Original analysis and available records including those of local government operating departments (public works, environment, parks and planning).
4. **Value of the ‘Natural Commons Asset’**. This is a calculation of the financial value of the land occupied by the stream. Data taken from BC Assessment records for residential and agricultural parcels abutting the stream. Original analysis.
5. **Influence of streams on nearby parcel financial values**. This step may be applied when a sufficient number of parcels for analysis exist.

## Use of EAP Findings:

1. A description of the importance of the stream system as a Natural Commons (refer to image on page 3). This is an asset available for all residents and property owners to use and enjoy with the expectation that it will be maintained and managed for future use and enjoyment. This is a statement of what the community thinks the stream is worth; that is, what might be expended to maintain and manage it.
2. A statement of the financial value of the land in the Natural Commons Asset, the land area occupied by the stream and the set-back zone. BC Assessment data for abutting and adjacent parcels is used. The assumption is that the land use would be residential if the stream did not exist. In rural areas agricultural parcels are included as a separate financial value calculation.
3. A report that can be used for budget and operations planning related to the maintenance and management (enhancement) of streams. A report that supports asset management planning.

## Project Management:

EAP projects are collaborations.

The collaborators are local government, NGOs, the Partnership for Water Sustainability in BC (PWSBC) and, possibly, others.

Projects require an Advisory Committee representing collaborators. PWSBC provides project management, research and reporting. Vancouver Island University supplies some research services (graduate students) through contracts with PWSBC. The local government cost for a project typically is \$10,000. PWSBC raises all other funding required for EAP projects.



## Foundational concepts that underpin EAP, the Ecological Accounting Process

Natural Commons	Constructed Commons	Institutional Commons
<p>As defined by the EAP, a natural commons is an ecological system that provides ecological services used by nature and the community.</p>	<p>Communities rely on a range of services such as roads, underground utilities and parks to support life-style and property enjoyment. These are <b>commons</b>. Through taxation, they are maintained and managed in order to ensure the availability of desired services.</p>	<p>Services such as fire protection and schools are a related kind of constructed commons.</p>