

## Principles of Stewardship

### Introduction

Stewardship is an ethic that embodies cooperative planning and management of environmental resources with organizations, communities and others to actively engage in the prevention of loss of habitat and facilitate its recovery in the interest of long-term sustainability.

This advisory practice bulletin is prepared by your APB and provides specific guidance to College of Applied Biology members around upholding the principles of stewardship of aquatic and terrestrial ecosystems and biological resources.

### Definition of Stewardship

There are a number of dictionary definitions of “stewardship”. For APB purposes, stewardship means **care and management of ecosystems to ensure a continued flow of ecological goods and services to nature and humans.**

Care and management of ecosystems includes sustaining the ecosystem integrity (functions, composition and structure) for the long term while meeting short term needs. Ecological goods and services include the broad range of ecological and cultural life support systems provided by ecosystems, such as water purification, climate regulation, nutrient cycling, habitat provision, aesthetic values, recreation, ecotourism, timber, etc.

This definition accepts that stewardship and sustainability are linked terms – both require the balancing of conservation and use. It also accepts that ecosystems, as natural systems, change. As a result ecosystem based stewardship requires long term adaptive management that utilizes a multidisciplinary approach.

### ❖ Principle 1

**Ecosystems should be maintained in, or restored to a healthy, resilient condition.**

Interpretive Guidance:

Ecological functions and biological diversity components of an ecosystem should be identified and a determination made as to whether the present situation should be maintained or represents a situation requiring restoration/enhancement. This means that the practitioner should:

- determine current conditions, and the causes of the current conditions;
- endeavour to determine, and take into consideration, the natural ecological function of a site;
- provide advice as to how to ensure the ecosystem maintains ecological goods and services.

### ❖ Principle 2

**Human activities are viewed as part of, not separate from, ecological systems.**

Interpretive Guidance:

The stewardship of environmental resources is more effective if human activities are factored into the management of ecosystems in a way that respects ecological goods and services.

❖ **Principle 3**

**The use or alteration of ecosystem components (i.e. natural resources or habitats) will be undertaken in a manner that sustains the ecological processes which they are part of.**

Interpretive Guidance:

There is a tendency amongst biologists to focus on ecologically productive features such as deep pools and riparian cover in streams rather than the natural processes that produced those features – which, in this example, almost certainly include natural disturbance regimes. Good stewardship therefore, must incorporate and accommodate natural disturbance processes when the impacts of planned disturbances are considered. This means that the professional biologist should:

- assess risks and uncertainty associated with different decisions and strive to maintain the flexibility to accommodate the future implications of new information as it becomes available;
- project future trends in ecosystem conditions, both with and without intervention;
- incorporate the principles of adaptive management;
- endeavour to identify and mitigate all unavoidable detrimental or negative impacts, and clearly present the implications of all mitigation and/or compensation options.