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# Kootenay Conservation Program Stewardship Framework

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## Introduction

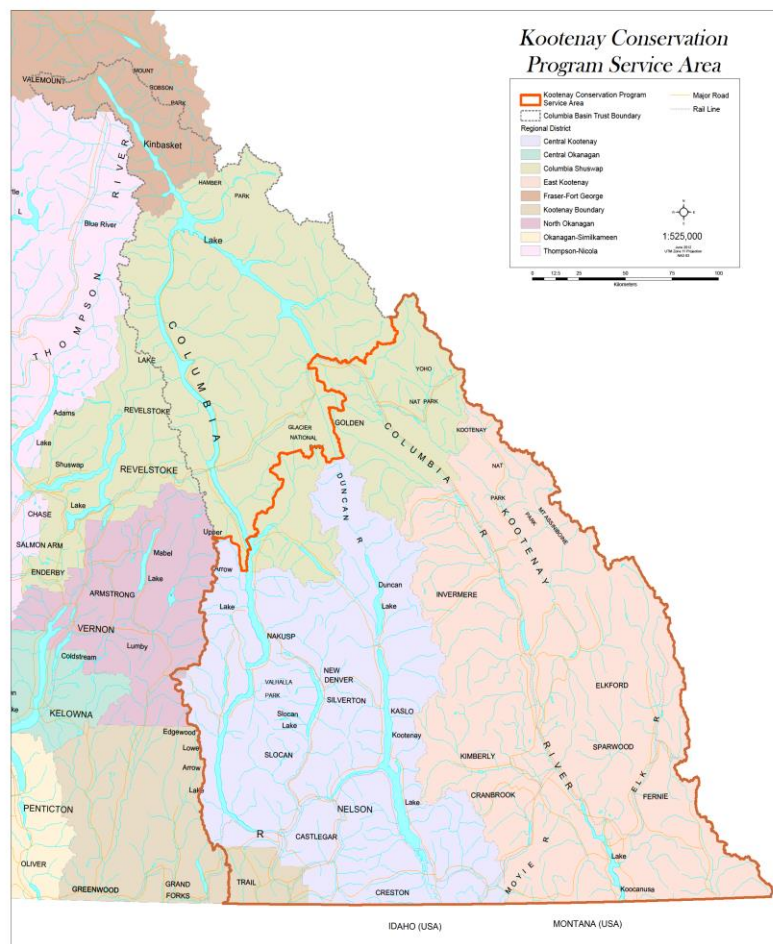
The Kootenay Conservation Program (KCP) is a broad partnership of over 70 organizations from across the Kootenays. It supports partners in conserving landscapes that sustain naturally functioning ecosystems. The KCP envisions vibrant communities that demonstrate the principles of environmental stewardship that can in turn support economic and social well-being.

The Stewardship Framework is a collection of joint stewardship objectives from across multiple KCP partners that provide a collective, unified vision of stewardship priorities in the KCP Service Area (Figure 1). The KCP Service Area includes the Regional Districts of East Kootenay, Central Kootenay, and portions of the Kootenay Boundary and Columbia Shuswap. The

Stewardship Framework provides a platform for both the East and West Kootenay Stewardship Committees to strategically work together, build capacity for stewardship, and create opportunities for deeper, more meaningful collaboration.

For the purpose of the Stewardship Framework, stewardship is defined as “the careful and responsible management of ecosystems”.

The Framework will help focus stewardship activities on projects that help to maintain/create thriving ecosystems. Thriving ecosystems are defined as ecosystems with connected landscapes and high native biodiversity that maintain clean water, clean air, and healthy wildlife populations.



**Figure 1. Kootenay Conservation Program Service Area – Outlined in Red**

## Collaborative Development

The Stewardship Framework has been developed collaboratively by a diverse group of KCP partners including representatives from both government and non-government organizations across the KCP Service Area. The following list outlines the existing documentation and engagement activities used to develop the Stewardship Framework:

- East Kootenay Conservation Program (EKCP) Prospectus 2002
- EKCP Stewardship Committee Terms of Reference 2002
- EKCP Strategic Plan 2008-2013
- 13 one-on-one interviews with KCP partners
- 12 partners provided written feedback
- West Kootenay Stewardship Workshop – May 16, 2012 (10 attendees)
- East Kootenay Stewardship Meeting Minutes – March 6, 2013 (10 attendees)
- West Kootenay Stewardship Committee Meeting – June 4, 2013 (11 attendees)
- KCP Annual General Meeting – October 5, 2013 (27 attendees)
- West Kootenay Stewardship Committee Meeting – Nov 26, 2013 (9 attendees)
- East Kootenay Stewardship Committee Meeting – Nov 28, 2013 (10 attendees)

## Stewardship Framework Goals

The 3 goals of the Framework are:

### Goals of the Stewardship Framework

- 1) Identify common priorities to create efficiencies, synergies, and ultimately greater effectiveness
- 2) Strengthen engagement, collaboration, communication, education and accountability within, and outside of, the partnership.
- 3) Increase the amount of stewardship activity taking place on private lands

## Components of the Stewardship Framework

The structure of the Framework has been based on *Conservation Action Planning* (TNC, 2006) and the Framework for Site Conservation: A Practitioner's Handbook for Site Conservation Planning and Measuring Conservation Success (TNC, 2003).

### Components of the Stewardship Framework

- 1) Identify priority stewardship targets
- 2) Identify threats to priority stewardship targets
- 3) Establish stewardship objectives, strategic actions, and success indicators
- 4) Track, evaluate, and report on success indicators
- 5) Compare objectives versus outcomes and evaluate effectiveness
- 6) Identify gaps in current knowledge and programs

In summary, the Stewardship Framework supports partners to work strategically together by outlining regional stewardship objectives, building capacity, and creating opportunities to collaborate on projects. The Framework will be reviewed annually with a comprehensive review every five years.

## **Priority Stewardship Targets & Threat Assessment**

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The Kootenay Region is known and celebrated for its diverse landscapes that provide habitat for a multitude of rare species such as the badger, flammulated owl, northern leopard frog, and grizzly bear. The most biologically diverse land is concentrated in the valley bottoms, a significant portion of which is privately owned. These low-elevation areas are typically under greater pressure from residential, commercial and recreational development. Stewardship activities should be focused in this valuable low-elevation private and adjacent Crown land.

### **Priority Stewardship Targets**

Stewardship targets including select habitat types, highly valued ecosystems, and special habitat features serve as a compass to guide where to focus stewardship efforts.

Working towards maintaining, restoring, enhancing and monitoring this suite of targets will help protect our natural landscapes and way of life in the Kootenays.

### Habitat Types

KCP partners will collectively focus on the following low-elevation habitats for stewardship activities:

- Grassland/Dry Forest
- Deciduous & Mixed Coniferous Forest
- Lake/Stream

A more detailed description of these habitat types can be found in the Biogeoclimatic Ecosystem Classification Field Guide (Braumandl & Curran, 1992).

### Highly Valued Ecosystems and Special Habitat Features

In addition, priority should also be given to activities that aid in protecting, restoring and/or enhancing the following special highly valued ecosystems/special habitat features:

- Ecosystems-at-risk including (Conservation Data Centre, 2013):
  - Cottonwood and riparian
  - Wetlands
  - Grasslands
- Old growth forests
- Wildlife trees
- Nest/roost/breeding/lambing/denning location for species-of-interest (species-at-risk and species that may be highly impacted by private landowner activities and/or species where private land plays a critical role in preserving the species)
- Special feeding site for species-of-interest (eg. Mineral lick, migratory bird stop over)

### Desired Future Conditions

Priority should be given to projects that work toward developing the following desired future conditions:

- Connected landscapes
- Healthy watersheds
- High native biodiversity
- Reduced abundance and distribution of invasive species
- Private landowners have a strong stewardship ethic and engage in activities that enable the site to reach its full biologic capacity

The East and West Kootenay Stewardship Committees will work together to steward priority habitats and species that rely on them. The Committees are dedicated to engaging, educating, inspiring and supporting landowners to participate in stewardship activities to ensure that thriving ecosystems exist in the Kootenays for generations to come.

### **Assessment of Critical Threats to Targets**

The critical threats to stewardship targets in the Kootenay Region are based on the International Union for the Conservation of Nature classification of direct threats (IUCN, 2012). The following are the most significant threats to stewardship targets in the KCP Service Area:

#### Residential and Commercial Development

- Impacts from housing and urban areas, commercial and industrial areas (including impacts from industrial development and natural resources extraction)
- Impacts from tourism and recreational uses
- Losses, degradation and fragmentation of habitat
- Impacts on water systems from increasing demand in urban areas

#### Climate Change

- Increases in temperature, declining snowpack, and increases in storm intensity (Jost & Weber, 2012)
- Shifts and alterations of habitat
- Effects of droughts, temperature extremes and flooding
- Changes in climate affecting fire and hydrologic regimes, as well as plant and animal distribution and abundance

#### Invasive Species

- Disruptions/degradation of natural ecological processes and habitats
- Loss of biodiversity

### Natural Systems Modifications

- Interruptions of normal fire regime including forest encroachment onto grasslands and in-growth into open forests
- Dams, reservoirs, and water management issues – impacts of altered hydrologic regimes including changes to animal and plant distribution and abundance

### Transportation and Service Corridors

- Impacts from roads, rails, utility and service lines
- Increased rates of wildlife mortality
- Habitat fragmentation

### Human Intrusions and Disturbance

- Impacts of recreational activities resulting in adverse effects such as wildlife disturbance, soil compaction, erosion, and spread of invasive plants

## **Joint Stewardship Objectives, Actions, and Success Indicators**

Joint stewardship objectives, actions, and success indicators provide a starting point for the KCP partnership to work strategically together to achieve the goals of the Stewardship Framework.

Table 1 shows recommendations by partners for priority actions, lead for actions, and success indicators. The success indicators provide a quantitative way to evaluate if the partnership is achieving the joint objectives.

### **Joint Stewardship Objectives of the Stewardship Framework**

1. Increase the resiliency of the Kootenay region to the impacts of climate change and hydroelectric development
2. Improve communication and coordination of the KCP Stewardship Committees and increase knowledge of stewardship tools
3. Contribute to maintaining and/or restoring viable populations of species-of-interest
4. Build capacity within the partnership to increase opportunities for stewardship activities on private land
5. Reduce abundance and distribution of existing priority invasive species as well as prevent establishment of new invasive species



Table 1 - Objectives, Actions, Lead for Actions, and Success Indicators for Stewardship Activities

<b>Objective and Associated Threat</b>	<b>Action</b>	<b>Lead for Action</b>	<b>Success Indicator</b>
<b>Increase the resiliency of the Kootenay region to climate change</b> and hydroelectric development (Threat – Climate Change, Natural Systems Modifications)	Target ecosystem restoration/enhancement on sites that have the capacity to support high biodiversity and/or support rare features (ex. increase water retention in wetlands to mitigate effects of hotter summers)	<b>partners</b>	# of projects, \$ spent, hectares affected, # of target habitat types affected
(Threat – Climate Change, Residential and Commercial Development)	Use stewardship tools to improve landscape connectivity for wildlife across biologically suitable habitats (ex. removing fencing that runs across natural wildlife corridors)	<b>partners</b>	# of projects, \$ spent, # of target habitat types affected
(Threat - Climate Change, Natural Systems Modifications)	Reduce forest encroachment onto grasslands and in-growth into open forests through ecosystem restoration projects following BMP's	<b>partners</b>	# of projects, \$ spent, Hectares affected
(Threat – Climate Change)	Use existing resources to determine the extent and distribution of KCP priority habitat types as well as identify gaps in habitat inventory	<b>KCP &amp; partners</b>	% of KCP priority habitat types inventoried, map created that overlays habitat types with KCP service area, gaps identified for knowledge of extent of priority habitat types.
(Threat – Climate Change)	Use climate change models/research and identify stewardship activities that should reflect possible changes to priorities	<b>KCP</b>	A climate change section is created in the Stewardship Toolbox on KCP website to showcase local research, success stories, and examples of how we can adapt to climate change

Improve communication and coordination of KCP Stewardship Committees and increase knowledge of stewardship tools (Threat - all listed on page 7 and 8)	Develop a relationship map that identifies what KCP partners are doing projects over what landscapes	<b>KCP</b>	Increased understanding of what KCP partners are doing across the region and which KCP partners are collaborating on projects.
(Threat - all listed on page 7 and 8)	Update and distribute East and West Kootenay Stewardship Committee contact list	<b>KCP</b>	contact list is updated and internally distributed
(Threat - all listed on page 7 and 8)	Refine and implement a Stewardship Tracking System for all stewardship activities across KCP partner organizations	<b>KCP</b>	Production and dissemination of an annual stewardship report, coordination to avoid duplication of efforts, identification of, gaps in programs, and increased collaboration between KCP partners
(Threat - all listed on page 7 and 8)	Maintain KCP Stewardship Committees with meetings two times a year that allow partners to showcase best practices, share information, and identify opportunities for collaboration. The Stewardship Committees will continue to use the Securement Committee as a vetting mechanism to assist with planning initiatives that relate to stewardship.	<b>KCP</b>	# of meetings, # of attendees, Stewardship activities are coordinated between organizations and between Crown and private land, ideas and approaches are exchanged, annual objectives are set
Contribute to maintaining and/or restoring viable populations of species-of-interest (Threat - all listed on page 7 and 8)	Develop list of priority species-of-interest (species-at-risk and species that may be highly impacted by private landowner actives and/or species where private land plays a critical role in preserving the species) for both inventory and habitat enhancement projects	<b>KCP &amp; partners</b>	Priority list of species-of-interest has been developed and distributed to partners

Build capacity within the partnership to increase opportunities for stewardship activities on private land (Threat - all listed on page 7 and 8)	Capacity Building – explore the feasibility of the expansion of the Columbia Valley Local Conservation Fund (CVLCF) in the East and West Kootenays as well as developing a capacity re-granting program for KCP partners	<b>KCP</b>	Stewardship groups have increased access to funds to build their internal capacity for stewardship.
(Threat – all listed on page 7 and 8)	Education/Outreach – Develop an online Stewardship Toolbox targeted at private landowners, land managers, and the public	<b>KCP</b>	# of people visiting stewardship tools portion of website
(Threat – all listed on page 7 and 8)	Education/Outreach – Develop, print, and distribute a stewardship tools booklet similar to the TLC’s document “Land Stewardship in the Columbia Basin – Management Tips and References”	<b>KCP</b>	Resource is developed and printed, # of copies given to land owners, # of stewardship activities occurring, volunteer hours.
(Threat – all listed on page 7 and 8)	Education/Outreach – Continue landowner contact through various programs including Environmental Farms Plans.	<b>partners</b>	Land owners are aware of the ecological values on their properties, and of the approaches and resources available to best protect these values. # of projects, # of volunteer hours, \$ spent.
(Threat – all listed on page 7 and 8)	Utilize applicable existing strategic planning documents (See Appendix A)	<b>partners</b>	# of stewardship activities that are being guided by a plan/strategy
Reduce abundance and distribution of existing priority invasive species (plants and animals in aquatic and terrestrial environments) as well as prevent establishment of new invasive species	Collaborate with regional invasive species committees on the prevention and management of high priority invasive species that may occur or are known to occur on KCP priority habitat types	<b>partners</b>	# of projects, \$ spent, hectares effected, # of priority habitat types affected, reduced abundance/distribution of target species, participation/communication with Regional

(Threat – Invasive Species)			Invasive Plant Councils
(Threat – Invasive Species)	Collaborate with regional invasive species committees to increase public awareness about the impacts of priority invasive species and control methods, as well as priority species lists	<b>partners</b>	# of outreach events, \$ spent, # volunteer hours.
(Threat – Invasive Species)	Promote the use of the provincial Invasive Alien Plant Program and ensure priority invasive species inventory and management data is being accurately recorded and entered into the database	<b>partners</b>	# of records entered, # of new infestations recorded

### **Stewardship Tracking System - Measuring Success Indicators**

KCP has developed a Stewardship Tracking System to measure the success indicators for stewardship activities outlined above. On an annual basis, partners will send their stewardship project information to KCP via the Stewardship Tracking Survey. The type of information that will be collected includes: project type, project description, hectares affected, project costs, funders, project location, habitat type, what threat does activity target, and what ecosystem services are provided. KCP will compile this information and provide partners with an annual roll-up of accomplishments in a compelling regional picture of progress on stewardship.

Tracking success indicators will enable the KCP to set an important benchmark against which to evaluate our collective effectiveness at reaching the objectives of the Stewardship Framework. It will also help to identify gaps in the service area, programs, and knowledge of priority habitats and species.

### **Information and Resource Needs of KCP Partners**

In addition to the priority actions listed in Table 1 there were several other information and resource needs identified by partners including:

#### **Funding**

- Create long-term and stable funding for stewardship groups
- Develop a RDCK tax-based funding program for stewardship projects
- Develop, capitalize and implement a Professional Development Bursary Program

## **Knowledge**

- Determine what information is currently available for regional landscape connectivity for wildlife, including fish
- Compile a comprehensive list of opportunities (a.k.a. stewardship activities) that can address each threat listed on page 7 and 8
- Determine if threats are the same for each sub-region or if there are some subtle differences, that therefore require some changes in approach
- Develop a guidance document to ensure best practices with Wildland - Urban Interface Fire Prevention programs
- Facilitate a dialogue between partners to determine what it takes to maintain a functioning ecosystem
- Engage partners in broader discussion around a Biodiversity Plan and possibly select a guild of species to target. Use existing plans such as the Kookanusa Watershed Action Plan, the Biodiversity Plan for the South & Central Okanagan Conservation Program, The Biodiversity Atlas of British Columbia, and Taking Nature's Pulse – the Status of Biodiversity in British Columbia

## **Mapping Needs**

- Create a map that shows the property owners who are currently engaged in stewardship in order to identify where there are gaps in landowner contact
- Identify lands of high conservation values (highly valued ecosystems and lands with special habitat features) to better target stewardship activities (see example South Okanagan - Similkameen Conservation Program)
- Develop a GIS overlay to find out what priority habitat types are on private land as well as overlay threats to determine what are the top threats for each habitat (FWCP is doing this for wetlands)

## **Landowner Contact**

- Create an online Stewardship Toolbox and a booklet that provides easy access to stewardship resources for landowners, land managers, and the public such as the Land Conservancy's document, Land Stewardship in the Columbia Basin: Management Tips and References (TLC, 2010)
- Explore the use of financial incentives for private land owners to protect ecological services on their property
- Establish a stewardship program similar to the South Okanagan Similkameen Stewardship Program (SOSCP, 2013) that provides a one-stop-shop with a wide range of services to landowner including free one-on-one consultation to highlighting ways to protect/enhance the ecological values on their land. (Stetski, 2011 & Mahr, 2013)
- Organize annual workshops and/or webinars that provide expertise and information on stewardship tools for landowners (Stetski, 2011)
- Explore the feasibility of developing a program similar to the Environmental Farm Plan Program but more general and related to all private land (not limited to agriculture lands)

## Closing

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In closing, the Stewardship Framework creates a common vision of how to increase stewardship on private land. By taking a strategic and coordinated approach, the KCP partnership can achieve greater effectiveness at maintaining thriving ecosystems, increasing the credibility of proposals and projects, and securing a vibrant way of life for generations to come. The Framework will help the KCP partnership to achieve their goals by working in priority habitat types with common objectives. The objectives, include improving communication and coordination within KCP Stewardship Committees, increasing the resiliency of the Kootenay region to the impacts of climate change and hydroelectric development, contributing to maintaining and/or restoring viable populations of species-of-interest, building capacity within the partnership to increase opportunities for stewardship on private land, and reducing abundance and distribution of existing priority invasive species as well as preventing the establishment of new invasive species.

The KCP will continue to be a central clearinghouse for broad conservation issues that affect the majority of partners (ex. climate change, landscape connectivity, invasive species). The Stewardship Committees will work together to determine how to collectively educate and inspire landowners to engage in stewardship as well as how to provide landowners opportunities/incentives to participate in stewardship.

The Stewardship Tracking System that is integrated within this Framework will provide KCP partners a joint opportunity to report back on stewardship success. The system will provide a way to annually map and track stewardship activities across the region. Setting strategic priorities and monitoring success overtime will help to abate the many threats that face the valuable habitats and species of the Kootenays.

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## **Appendix A – List of Regionally Applicable Strategic Plans**

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List of applicable plans that should be considered by organizations and individuals to more effectively guide stewardship activities:

- Fish and Wildlife Compensation Program - Columbia Basin Strategic Plan and associated Action Plans:
  - Columbia Basin Plan
  - Large Lakes Action Plan
  - Riparian and Wetland Action Plan
  - Small Lakes Action Plan
  - Species of Interest Action Plan
  - Streams Action Plan
  - Upland and Dryland Action Plan
- Columbia Basin Trust – Environmental Strategic Plan
- East Kootenay and Central Kootenay Invasive Plant Council
- Columbia Basin Watershed Network Strategic Plan
- Columbia Basin Environmental Education Network (CBEEN) Strategic Plan
- Official Community Plans
- Forests Lands and Natural Resource Operations
- Ministry Of Environment
  - Fisheries Program Plan
  - Wildlife Program Plan
  - Ecosystem Program Plan
  - Wetland Ways: Interim Guidelines for Wetland Protection and Conservation in British Columbia
- Nature Conservancy of Canada - Kootenay Rockies Natural Area Conservation Plan
- Forest Stewardship Plans
- Environmental Farm Plans
- Kootenay Lake Partnership – Kootenay Lake Scoping Study
- Teck Metals Ltd.—Lower Columbia Ecosystem Management Plan