

EXECUTIVE SUMMARY

In November 2015, the electorate from Regional District of Central Kootenay (RDCK) Electoral Areas A, D and E voted to establish the Kootenay Lake Local Conservation Fund (KLLCF). The purpose of the fund is to provide local financial support for relevant projects that will contribute to the conservation values of Kootenay Lake's natural areas, and to the restoration and preservation of a healthy environment. Specifically, the intent is to provide funding for local conservation projects that are not the existing priority of Federal, Provincial or Local governments, but that address known threats to priority terrestrial and aquatic habitats and dependent species. This KLLCF Guidance Document outlines a range of threats to key biodiversity habitat targets identified by the KLLCF as being of specific relevance to the Kootenay Lake region, with a focus on RDCK Electoral Areas A, D and E. In response to the identified threats, priorities and appropriate actions were developed for conservation in Areas A, D and E within the Kootenay Lake region. These will inform the KLLCF Terms of Reference and ensure that funded projects are strategically aligned with identified priorities and actions.

Ten habitat targets were listed as key components of local ecosystem/habitat diversity in the study area and included in order of importance: hydro-riparian systems; fish habitat; at-risk aquatic and terrestrial vertebrates; wetlands; dry forest; connectivity habitats; old forest; cottonwood-dominated floodplain; brushlands/grasslands; shrub and herb-dominated floodplain; and karst (distinctive landforms that result from the dissolving action of water on soluble bedrock). The area of each habitat target on private versus crown land was quantified as was the area protected.

A standard set of global International Union for Conservation of Nature (IUCN) threats and sub-threats were evaluated within a local context for both terrestrial and aquatic habitat targets in the study area. A total of eight threat categories and 55 threat activities were identified. Threats were coarsely ranked to help inform on required conservation actions. The top ranked threats at a local scale included habitat loss, degradation/conversion (due to dams, residential development and other factors), roads (construction, use and maintenance in multiple contexts), overall impact of changing climate, increased fire risk (frequency and severity), resource use (in particular roads on crown land), water management regimes (river flows, flood patterns, and reservoir levels) and were similar to those reported for the region.

In total, 39 broad-based conservation actions were developed that were applicable to aquatic and terrestrial habitat targets on private land identified within the study area. Conservation actions were ranked and summarized by habitat target, relative to the number/severity of threats acting on a target, and the availability and degree of protection for that target in order to obtain an overall ranking for each action: Very High; High; Moderate; or Low. Rankings were designated as follows:

- Very High corresponded to actions that result directly in critical or high value target habitat protection, either via acquisition, covenant establishment, or landowner agreement as well as actions that directly implement recommendations in recovery plans focused on a target listed species/habitat, or where mortality to a listed, rare or regionally sensitive species (or access to its critical habitat) is reduced directly by the action being implemented;
- High ranked conservation actions included: implementation of management plans, regulations, bylaws or guidelines that enhance listed species and/or target habitat protection on private land; implementation of stewardship actions that benefit listed, rare,

or regionally sensitive species and/or target habitats; and, actions involving implementation of assessments, inventories, research and/or monitoring initiatives to identify critical and/or priority habitat and/or threats to listed species or to ecosystems (e.g., climate change);

- Moderate ranked conservation actions included: planning or inventory; research and monitoring actions; stewardship planning; development of assistance programs; associated financial incentives; and, development of management plans, regulations/bylaws, guidelines, or land use planning initiatives on private land; and
- Low ranked conservation actions applied to more indirect measures (which may potentially lead to future conservation actions) that are focused on problem wildlife management, citizen science, public education and awareness, and participation in other planning and management initiatives underway.

In addition, nine other key conservation actions deemed important in a local context, but that are typically addressed on crown land and/or under the responsibility of government were listed for reference.

It is recommended that the broad-based conservation actions matrix developed during this study be used to further evaluate the relative merit of proposed conservation actions. For simplicity, ranking was based on a 10-point system that could be combined with scoring for other criteria (e.g., proposal quality, team experience, project cost) to evaluate proposals for prioritized funding under the KLLCF. Specific examples were also included for each broad-based conservation action, where applicable. The specific examples do not provide an inclusive or exhaustive list of all the possible conservation actions that are applicable to this program as this was beyond the scope of this review.

The following is a list of information gaps and needs identified during this review:

- Consideration of listed invertebrate and plant species and listed ecological communities occurring in the study area;
- Lack of local information on the degree and/or rate of climate change occurring and the need for monitoring habitat change for the identified conservation targets;
- Information gaps related to “climate refugia” for providing habitat diversity and stability needed to enable climate change adaptation and improved resilience at multiple spatial scales;
- Karst abundance and distribution and susceptibility to threats requires further evaluation within the study area;
- Broadening the geographic scope of inventory, management, monitoring and threat evaluations for sensitive habitats and species at risk within the study area that includes greater collaboration and information sharing with larger landowners and managers as well as participation of private landowners;
- Clarification of fish-bearing status and areas of native/non-native fish overlaps for streams, wetlands and small lakes within the study area, which may include fish inventory and spawning surveys in collaboration with provincial agencies;

- Clarification of aquatic connectivity issues associated with water quantity, such as low stream or sub-surface flows; and
- Collaboration with First Nations to ensure that the proposed protection, enhancement, and restoration of ecosystem, habitat, and species targets will align well with the goal of improved protection of cultural and archeological values in the study area.