

Ecosystem Enhancement Program

Kootenay Lake Ecological Priorities

The following ecosystem priorities were identified through a review of regional plans and research, and by seeking input from community groups, First Nations representatives, government agencies, and subject matter experts. Priorities are listed in random order; no ranking is intended. Species, habitats, and processes are not limited to those listed below.

Aquatic		
Conservation, restoration, and enhancement of aquatic habitat		
Priority Habitat	Priority Species	Priority Processes
• rivers and tributary streams that support spawning, rearing, overwintering, foraging from valley bottom to upper basin headwaters • ponds and lakes • lake foreshore and shallow water habitat • alluvial fans and creek mouths • cold water refugia • migratory stopover sites • ice fields and glaciers • groundwater-surface water interface (warm water spring; mineral springs; cold water source)	• native fish (Kokanee, Rainbow Trout (including Gerrard Rainbow Trout, Westslope Cutthroat Trout, Bull Trout, White Sturgeon, Burbot) • waterbirds (, American Dipper, Black Swift, Forster's Tern, Western Grebe, American White Pelican, Vaux's Swift, Osprey) • native freshwater mussels • invertebrates	• connectivity • fish passage • water availability • water temperature, water quality (nutrients, turbidity) • productivity • geomorphic processes (erosion, levees, gravel, sedimentation, woody debris) • habitat complexity (large woody debris, gravel, rocks, sediment) • fish overwintering • fish spawning and rearing
Wetland/Riparian		
Conservation, restoration and enhancement of wetlands and riparian areas		
Priority Habitat	Priority Species	Priority Processes
• low elevation historic wetlands • floodplain ecosystems • cottonwood stands • riparian habitats • alluvial fans and creek mouths • wildlife corridors • wildlife trees • rare plant communities	• western toad • northern leopard frog • Columbia spotted frog • western painted turtle • at risk migratory birds and waterfowl (American Avocet, American Bittern, Swallows (all), Long-billed Curlew, Great Blue Heron, Western Screech-Owl, Yellow Breasted Chat, Olive-sided Flycatcher) • bats • Coeur d'Alene salamander • American beaver	• connectivity; valley bottom to mountain top connectivity • hydrologic processes (filtering, recharge, flooding, storage) • geomorphological function • productivity • nutrient dynamics • beaver wetland creation • breeding and nesting • carbon storage • wildlife movement and migration • resiliency • biodiversity

	• macroinvertebrates • rare plants	
Terrestrial		
Protection, enhancement and identification of corridors and linkage areas		
• Priority: Lardeau Duncan Corridor, Retallack – Hwy 31A, Creston Valley		
Conservation and restoration of upland habitats that support species at risk and focal species		
<i>Priority Habitat</i>	<i>Priority Species</i>	<i>Priority Processes</i>
• old growth forests • inland temperate rainforest • dry interior forests • brushlands and grasslands • grassland open forest • alpine and high elevation grassland • climax grasslands • ungulate winter range • rare plant communities • rock outcrops and caves • nesting and/or roosting sites • burrows or denning areas • hibernacula • wildlife trees and snags • mineral licks • calcareous rock / soils • climate change refugia • climax grasslands • huckleberry patches • wildlife corridors • wildlife trees • avalanche chutes	• mountain caribou • grizzly bear • elk • mountain goat • bats • rubber boa • western skink • wolverine • American badger • Bobolink • Common Nighthawk • Northern Goshawk • Lewis's Woodpecker • Peregrine Falcon • Sandhill Crane • Short-eared Owl • Clark's Nutcracker • whitebark pine • huckleberry • pollinators and other invertebrates (western bumblebee, jumping slug) • rare plants • fungi • Northern alligator lizard • Northern pocket gopher • Red tailed chipmunk	• connectivity habitat (valley bottom to top) • wildlife movement and migration • connectivity • climate refugia • food web interactions (predator-prey, seed dispersal, pollination) • natural fire regime • carbon storage • breeding and nesting • resiliency • deciduous regeneration
Cultural		
Protection and enhancement of Indigenous cultural values		
<i>Priority Habitat</i>	<i>Priority Species</i>	<i>Priority Processes</i>
• cultural use areas • cold water refuge sites for salmonids • riparian areas and wetlands • fisheries sensitive watersheds • berry habitat • old growth • grizzly bear habitat and connectivity corridors • fire maintained ecosystems • species at risk	• culturally significant and medicinal plants • furbearers • wide ranging carnivores • ungulates • species at risk • broadleaf trees • traditional fish food sources	• Indigenous knowledge and traditional practices • Indigenous-led conservation • Cultural heritage resources • Maintain fish habitat and connectivity • Wildlife food resource conservation • Connectivity • Bioculture connections (traditional travel and trade routes)

• ungulate winter range • caribou habitat • camas meadows • wildlife habitat areas (WHAs) and habitat features (WHFs) • biodiversity		
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Kootenay Lake Subregion Emerging Issues

- Climate change
- Invasive species
- Imminent species/habitat decline
- Emergent and persistent diseases/pests
- Wildfire and fire management
- Recreation and access management
- Agriculture, grazing and range management
- Human wildlife conflicts
- Loss of snowpack and cold water creeks

Key References (Priorities and Emerging Issues):

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