

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	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 natural lake foreshore and shallow water habitat alluvial fans and creek mouths cold water refugia migratory stopover sites groundwater-surface water interface (warm water spring; mineral springs; cold water source) Wetland/Riparian 	 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 quality nutrient cycling and exchange productivity geomorphic processes (erosion, levees, gravel, sedimentation, woody debris) habitat complexity (large woody debris, gravel, rocks, sediment) fish overwintering fish spawning and rearing 		
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 natural shoreline wildlife corridors wildlife trees Heron rookeries and raptor nests rare ecosystems 	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 macroinvertebrates	connectivity; valley bottom to mountain top 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		

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 Priority Habitat Priority Species Priority Processes

Priority Habitat	Priority Species	Priority Processes
 old growth forests inland temperate rainforest dry interior forests brushlands and grasslands grassland open forest alpine and high elevation meadows climax grasslands ungulate winter range rare ecosystems 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 trees wildlife trees avalanche chutes 	 mountain caribou grizzly bear elk moose 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, pale jumping slug, magnum mantleslug, banded tigersnail) 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

Priority Habitat	Priority Species	Priority Processes
 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 	 culturally significant and medicinal plants furbearers wide ranging carnivores ungulates species at risk broadleaf trees traditional fisheries anadromous salmon 	 Indigenous knowledge and traditional practices Indigenous-led conservation Cultural heritage resources Maintain fish habitat and connectivity Wildlife food resource conservation Connectivity

fire maintained ecosystemsspecies at riskungulate winter range	Bioculture connections (traditional travel and trade routes)
caribou habitat	routes)
camas meadows	
wildlife habitat areas (WHAs)	
and habitat features (WHFs)	
 biodiversity 	

Kootenay Lake Subregion Emerging Issues

- Climate change
- Invasive species
- Imminent species/habitat decline
- Emergent and persistent diseases/pests
- Wildfire and fire management
- Cumulative effects (dams, forestry, agriculture and range management, recreation and access management, rural/urban development, shoreline/foreshore development)
- Human wildlife conflicts
- Loss of snowpack and cold water creeks

Key References (Priorities and Emerging Issues):

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Wildsight. Creston Valley Green Map.