

Ecosystem Enhancement Program

North Columbia 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				
Restoration and enhancement of aquatic habitat				
Priority Habitat	Priority Species	Priority Processes		
 rivers and tributary streams spawning, rearing, overwintering areas lakes and ponds lake foreshore and shallow water habitat migratory stopover sites alluvial fans and creek mouths ground surface water interface 	 native fish (White Sturgeon, Burbot, Westslope Cutthroat Trout, Bull Trout, Kokanee, Rainbow Trout (including Gerrard Rainbow Trout), Mountain Whitefish) waterbirds (Harlequin Duck, Western Grebe, American Dipper, Osprey, Cliff Swallow, Black Swift) freshwater mussels invertebrates river otter 	 fish passage connectivity water availability water temperature, water quality, nutrient cycling geomorphic processes (erosion, levees, gravel, sedimentation, woody debris) fish spawning, rearing and overwintering cold water stream refugia 		
Wetland/Riparian				
Conservation, restoration and enhancement of wetlands and riparian areas				
Priority Habitat	Priority Species	Priority Processes		
 low elevation historic ad floodplain wetlands valley bottom cottonwood and coniferous riparian areas high elevation wetlands bird breeding habitat within ponds, shrub-wetland complexes, swamps and marsh riparian habitat directly adjacent to rivers and lakes mature cottonwood forests 	 western painted turtle western toad Columbia spotted frog Coeur d'Alene salamander At risk migratory birds and waterfowl (Great Blue Heron, Western Screech -Owl, Common Nighthawk, Bank Swallow, Barn Swallow, Olivesided Flycatcher, American Bittern) American beaver plants – species at risk and culturally important macroinvertebrates muskrat 	 connectivity, linkage areas valley bottom to top hydrologic processes (filtering, recharge, flooding, storage) geomorphological function productivity carbon storage resiliency beaver and wetland creation 		

Terrestrial

Protection, enhancement and identification of corridors and linkage areas

Lardeau Duncan corridor, cross-valley corridor linking Purcell and Selkirk mountain ranges,
 Retallack corridor

Conservation and restoration of upland habitats that support species at risk and species of conservation concern

Priority Habitat	Priority Species	Priority Processes
 old growth forests grassland and open forest ungulate winter range alpine meadows alpine and high elevation grasslands avalanche chutes rock outcrops and caves nesting and/or roosting sites burrows or denning areas steep-sided slopes ungulate winter range hibernacula wildlife trees and snags calcareous rocks/soils mineral licks climate change refugia cold water sources huckleberry patches ice fields and glaciers 	 mountain caribou moose elk mule deer mountain goat bats grizzly bear Bobolink Pileated Woodpecker Clark's Nutcracker Common Nighthawk northern alligator Ilizard wolverine whitebark pine huckleberry pollinators and other invertebrates rare plants American marten moose porcupine giant cedars 	 wildlife movement and migration connectivity climate refugia food web interactions (predator-prey, seed dispersal, pollination) natural fire regime carbon storage ecological corridors resiliency

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 habitat berry habitat old growth grizzly bear habitat and connectivity corridors fire maintained ecosystems ungulate winter range caribou habitat wildlife habitat areas (WHAs) and wildlife habitat features (WHFs) biodiversity 	 culturally significant and medicinal species furbearers wide ranging carnivores ungulates species at risk 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) 	

North Columbia Emerging Issues

- Climate change
- Invasive species
- Imminent species/habitat decline
- Emergent and persistent diseases/pests
- Wildfire and fire management
- Recreation and access management

Key References (Priorities and Emerging Issues):

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