

Ecosystem Enhancement Program

Upper 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.

Wetland/Riparian		
Conservation, restoration and enhancement of wetlands and riparian areas		
<i>Priority Habitat</i>	<i>Priority Species</i>	<i>Priority Processes</i>
<ul style="list-style-type: none"> • valley bottom wetlands • high elevation wetlands • interconnected floodplain wetlands • riparian areas associated with rivers and streams • mature riparian cottonwood forests • steep-sided clay banks • migratory stopover sites • ecosystems at risk 	<ul style="list-style-type: none"> • northern leopard frog • western painted turtle • western toad • Columbia spotted frog • At risk wetland and migratory birds (Great Blue Heron, Western Screech-Owl, Western grebe, Bobolink, Swallows (all), Long-billed Curlew, Olive-sided Flycatcher, Sandhill crane, American Bittern) • American beaver • culturally important plants • species at risk • macroinvertebrates 	<ul style="list-style-type: none"> • landscape connectivity valley bottom to mountain top • ecological corridors • hydrologic processes (filtering, recharge, flooding, storage) • geomorphic processes (erosion, levees, gravel, sedimentation, woody debris) • productivity • wildlife movement and migration • carbon storage • breeding and nesting • beaver wetland creation • resiliency • refugia and recruitment
Terrestrial		
Protection, enhancement and identification of corridors and linkage areas		
Priority: Golden - Donald, Columbia River and Wetlands, Blaeberry E-W, Kicking Horse Canyon E-W, West Bench N-S/E-W, Canyon Creek to Glacier E-W, Beaverfoot N-S/E-W, Valemount Valley. Climate change connectivity corridors.		
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>
<ul style="list-style-type: none"> • open forest • ungulate winter range • climax grasslands • alpine and high elevation grasslands • mature aspen • old growth forest • inland temperate rainforest 	<ul style="list-style-type: none"> • elk, moose, mule deer • bighorn sheep • mountain caribou • mountain goat • bats • grizzly bear • lynx • wolverine 	<ul style="list-style-type: none"> • landscape connectivity valley bottom to mountain top • ecological corridors • wildlife movement and migration • refugia and recruitment

<ul style="list-style-type: none"> • rare ecosystems • ice fields/glaciers • avalanche chutes • rock outcrops and caves • nesting and/or roosting sites • burrows or denning areas • hibernacula • wildlife trees and snags • mineral licks • calcareous rock / soils • wildlife habitat areas (WHAs) and features (WHFs) 	<ul style="list-style-type: none"> • American badger • American beaver • American marten • Lewis's Woodpecker • Clark's Nutcracker • Peregrine falcon • Common Nighthawk • Bobolink • Short Eard Owl • Red tailed chipmunk • whitebark pine, limber pine • huckleberry • native pollinators and other invertebrates • culturally important plants • species at risk • fungi 	<ul style="list-style-type: none"> • food web interactions (predator-prey, seed dispersal, pollination) • natural fire regime • climate refugia • resiliency
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Aquatic

Conservation, restoration, and enhancement of aquatic habitat

<i>Priority Habitat</i>	<i>Priority Species</i>	<i>Priority Processes</i>
<ul style="list-style-type: none"> • rivers and tributary streams that support rearing, spawning, overwintering, foraging • mainstem spawning • alluvial fans and creek mouths • cold water refugia • lakes and ponds • lake foreshore • shallow open water • groundwater-surface water interface (warm water spring; cold water source) • migratory stopover sites • fisheries sensitive watersheds 	<ul style="list-style-type: none"> • native fish (White sturgeon, Westslope Cutthroat Trout, Bull Trout, Kokanee, Rainbow Trout, Burbot, Sculpin, Dace) • waterbirds (Harlequin Duck, Western Grebe, Horned Grebe, Eared Grebe, Pied billed Grebe, American Dipper, Cliff Swallow, Black Swift, Trumpeter Swan) • freshwater mussels (Rocky Mountain ridged mussel) • invertebrates • species at risk 	<ul style="list-style-type: none"> • fish passage • fish spawning and rearing • fish overwintering • Hydrologic functions (filtering, recharge, scouring, flooding, storage) • connectivity • water quality • nutrient cycling and exchange • geomorphological function (erosion, sedimentation, large woody debris, gravel recruitment) • refugia and recruitment

Cultural

Supporting Indigenous stewardship through:

- Indigenous-led conservation
- Incorporating Indigenous knowledge, values and approaches

Upper Columbia Emerging Issues

- Climate Change
- Invasive Species
- Wildfire and fire management
- Emergent and persistent pests and diseases
- Imminent species/habitat decline
- Cumulative effects (dams, forestry, agriculture and range management, recreation and access management, rural/urban development, shoreline/foreshore development)

Key References (Priorities and Emerging Issues):

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Sperling, J., 2024. [Canada's 2030 Nature Strategy: Halting and Reversing Biodiversity Loss in Canada](#).

Wildsight Golden resources: <https://wildsight.ca/branches/golden/>