Ecosystem Enhancement Program

Columbia Valley Sub-Region 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 rearing, spawning, overwintering, foraging from valley bottom to upper basin headwaters • mainstem spawning • cold water refugia • lakes and ponds • lake foreshore • shallow open water • alluvial fans and creek mouths • perched ponds • groundwater-surface water interface (warm water spring; mineral springs; cold water source)	• native fish (Westslope Cutthroat Trout, Burbot, Bull Trout, Burbot, Kokanee, Columbia Sculpin, Sculpin spp., Dace, whitefish) • waterbirds (American Avocet, Horned Grebe, Eared Grebe, Western Grebe, Marsh Wren, Double breasted Cormorant, American White Pelican), Black Swift. • freshwater mussels • invertebrates • species at risk	• fish passage • connectivity • water availability • water temperature and quality (nutrients, turbidity) • productivity • geomorphic processes (erosion, sedimentation, levees, large woody debris, gravel recruitment) • habitat complexity (large woody debris, gravel, rocks, sediment) • invasive plant management
Wetland/Riparian		
Conservation, restoration and enhancement of wetlands and riparian areas		
Priority Habitat	*Priority Species*	*Priority Processes*
• low elevation wetlands • floodplain ecosystems • cottonwood stands • mid elevation riparian habitats and benchland wetlands • steep-sided clay banks • interconnected floodplain wetlands • breeding and nesting areas • migratory stopover sites • ecosystems at risk	• western toad • Columbia spotted frog • northern leopard frog • western painted turtle • migratory birds and waterfowl (American bittern, Great Blue Heron, Western Screech-Owl, Osprey, Long-billed Curlew, Swallows (all), Olive-sided Flycatcher, Virginia Rail, Sora, Pied-billed Grebe, Eared Grebe, American Coot, Sandhill Crane) • bats • American beaver • muskrat	• wetland and floodplain connectivity • wetland-upland corridors • hydrologic processes (filtering, recharge, flooding, storage) • geomorphic processes (erosion, levees, gravel, sedimentation, woody debris) • nutrient dynamics • wildlife movement and migration • beaver wetland creation • carbon storage • resiliency • biodiversity

	• rare plants • macroinvertebrates • species at risk	
Terrestrial		
Protection, enhancement and identification of corridors and linkage areas • Priority: Columbia Wetlands Spillimacheen- Brisco; Radium Corridor; and Columbia Lake Corridor.		
Conservation and restoration of upland habitats that support species at risk and focal species		
Priority Habitat	*Priority Species*	*Priority Processes*
• open forests and grasslands • mature aspen • mature riparian cottonwood • alpine and high elevation grasslands • climax grasslands • rare plant communities old growth forests • deciduous forests • ungulate winter range • ice fields/glaciers • rock outcrops and caves • nesting and/or roosting sites • burrows or denning areas • hibernacula • wildlife trees and snags • mineral licks • calcareous rock / soilsecosystems at risk • wildlife habitat areas (WHAs) and wildlife habitat features (WHFs)	• mountain caribou • grizzly bear • mountain goat • elk, mule deer, moose • bighorn sheep • wolf • bats • American badger • northern pocket gopher • porcupine • wolverine • Lewis' Woodpecker • Bobolink • Clark's Nutcracker • Common Nighthawk • Flammulated Owl • Short-eared Owl • Peregrine Falcon • rubber boa • whitebark pine • limber pine • huckleberry • species at risk • pollinators and other invertebrates • plants – species at risk and culturally important fungi	• valley bottom to mountain top connectivity • climate refugia • food web interactions (predator-prey, seed dispersal, pollination) • natural vegetation succession • natural fire regime • climate refugia • deciduous regeneration • genetic and structural diversity • resiliency
Cultural		
Supporting Indigenous Stewardship through: • Indigenous-led conservation • Incorporating Indigenous knowledge, values and approaches		

Columbia Valley Subregion Emerging Issues

- Climate Change
- Invasive Species
- Biodiversity loss
- 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)
- Loss of snowpack and cold water creeks
- Water quality and availability
- Conifer encroachment on native grasslands

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