

Ecosystem Enhancement Program

Arrow Slocan 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 spawning, rearing, foraging, overwintering valley bottom to upper basin headwaters mainstem spawning side channel habitat ponds and lakes lake foreshore shallow open water cold water refugia alluvial fans and creek mouths groundwater-surface water interface (warm water spring; mineral springs; cold water source) 	 native fish (Rainbow Trout, Burbot, Bull Trout, White Sturgeon, Kokanee, Westslope Cutthroat Trout, Umatilla Dace, Columbia Sculpin, Shorthead Sculpin, Sculpin spp.) waterbirds (American Dipper, Black Swift, Cliff Swallow, Kingfisher, Eared Grebe, Western Grebe, Great Blue Heron) freshwater mussels invertebrates periphyton 	 fish passage fish overwintering, spawning and rearing connectivity water availability water temperature, water quality, nutrient cycling productivity geomorphic processes (erosion, sedimentation, levees, large woody debris, gravel recruitment) habitat complexity (large woody debris, gravel, rocks, sediment) 		
Wetland/Riparian				
Conservation, restoration and e	nhancement of wetlands and ripa	arian areas		
Priority Habitat	Priority Species	Priority Processes		
 wetland and riparian systems from Summit Lake and Bonanza Creek south to Slocan Lake and along the Slocan River mid elevation benchland wetlands floodplain ecosystems mature riparian cottonwood forests riparian habitats directly adjacent to rivers interconnected floodplain wetlands 	 western toad Columbia spotted frog western painted turtle migratory birds and waterfowl (Great Blue Heron, Osprey, Western Screech- Owl, Barn Swallow, Bank Swallow, Olive-sided Flycatcher) bats Coeur d'Alene salamander Coeur d'Alene Oregonian American beaver 	 landscape connectivity valley bottom to top ecological corridors hydrologic processes (filtering, recharge, flooding, storage) geomorphic processes (erosion, levees, gravel, sedimentation, woody debris) productivity wildlife movement and migration 		

migratory stopover sites	American marten	carbon storage
 rare plant communities 	river otter	breeding and nesting
	rare plants	 beaver wetland creation
	 macroinvertebrates (vivid 	biodiversity
	dancer damselfly)	resiliency

Terrestrial

Protection, enhancement and identification of corridors and linkage areas

 Priority: Slocan River Valley, Bonanza biodiversity corridor, valley bottom to mountain top connectivity, cross valley-corridors (Lemon Creek Corridor, Passmore Corridor) Retallack-Hwy 31A.

Conservation and restoration of upland habitats that support species at risk and focal species

Priority Habitat	Priority Species	Priority Processes
 old growth forests inland temperate rainforest dry interior open forest types alpine and high elevation grasslands ungulate winter range deciduous forests huckleberry patches rare plant communities rock outcrops and caves nesting and/or roosting sites burrows or denning areas hibernacula wildlife trees and snags mineral licks calcerous rock / soils 	 mountain caribou grizzly bear black bear mountain goat elk moose wolf wolverine porcupine bats Common Nighthawk Lewis' Woodpecker Clark's Nutcracker Pileated Woodpecker Great Grey Owl Pacific Wren Vaux's swift rubber boa western skink northern alligator lizard rubber boa whitebark pine huckleberry camas rare plants pollinators and other invertebrates (Western bumblebee, Coeur d'Alene Oregonian Snail) fungi 	 wildlife movement and migration connectivity climate refugia food web interactions (predator-prey, seed dispersal, pollination) natural fire regime biodiversity resiliency

Cultural Protection and enhancement of Indigenous cultural values				
 cultural use areas camas meadows 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 ungulate winter range caribou habitat wildlife habitat areas (WHAs) and habitat features (WHFs) biodiversity 	 culturally significant and medicinal plants furbearers wide ranging carnivores ungulates species at risk traditional fish food sources 	 Indigenous knowledge and traditional practices Indigenous-led conservation Eco-cultural restoration of camas meadows Cultural heritage resources Maintain fish habitat and connectivity Salmon reintroduction Wildlife food resource conservation Connectivity Bioculture connections (traditional travel and trade routes) 		

Arrow Slocan Subregion Emerging Issues

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

Key References (Priorities and Emerging Issues):

Arrow Lakes Environmental Stewardship Society. Available at: https://arrowless.wordpress.com/

BC Hydro. Southern Interior Water Use Plans.

[CKISS] Central Kootenay Invasive Plant Society. 2019. Working Together to Promote Invasive Species Prevention. West Kootenay Conservation Sites: <u>Invasion to Restoration (COL-F19-W-2688)</u>

Craig, J. 2023. Kootenay Conservation Program: Conservation Priorities in the Kootenays.

Fish and Wildlife Compensation Program. 2023-2024. <u>FWCP Columbia Region 2023–2024</u> Project List

Fish and Wildlife Compensation Program. 2019. <u>Updated Columbia Region Action Plans:</u> Reservoirs & Large Lakes, Rivers & Riparian Areas, Small Lakes, and <u>Upland & Dryland</u>.

KNC Forestry. 2022. <u>Ktunaxa Forestry Standards Document For Forestry within ?AMAK?IS KTUNAXA</u>.

Kootenay Connect. 2021. Slocan River Valley Corridors Workshop.

Kootenay Connect. 2023. <u>Kootenay Connect: Riparian Wildlife Corridors for Climate Change.</u> <u>Year 4 Summary Report.</u>

Kootenay Conservation Program. 2022. Slocan Valley Local Conservation Fund.

Kootenay Native Plant Society. 2014-2023. Kootenay Camas Project.

[ONA] Okanagan Nation Alliance Fisheries Department. 2023. <u>Lower Columbia River Tributary</u> Temperature Monitoring.

Proctor, M. and Mahr, M. 2021. <u>Kootenay Connect: Riparian Wildlife Corridors for Climate Change – Year 2 Annual Report</u>. Kootenay Connect, Kaslo BC. 160pp.

Province of BC. Kootenay Boundary Land Use Plan Higher Level Plan Order.

Province of BC. 2024. Chronic Wasting Disease.

Stream. 2020. <u>Preliminary DNA Data. Columbia Basin, BC. Water Quality Monitoring- Nakusp and MacDonald Creeks.</u>

Syilx Okanagan Nation. 2023. Restoration of ki?lawna? (Grizzly Bear) to the US North Cascades Ecosystem.

Syilx Okanagan Nation. 2023. Years of Syilx Okanagan Nation Actions Bring Awareness to the Protection of the Last Remaining styilc'? (Caribou).