



Rolling Up Three Years of Progress

Columbia Wetlands Stewardship Partners
AGM

May 16, 2022

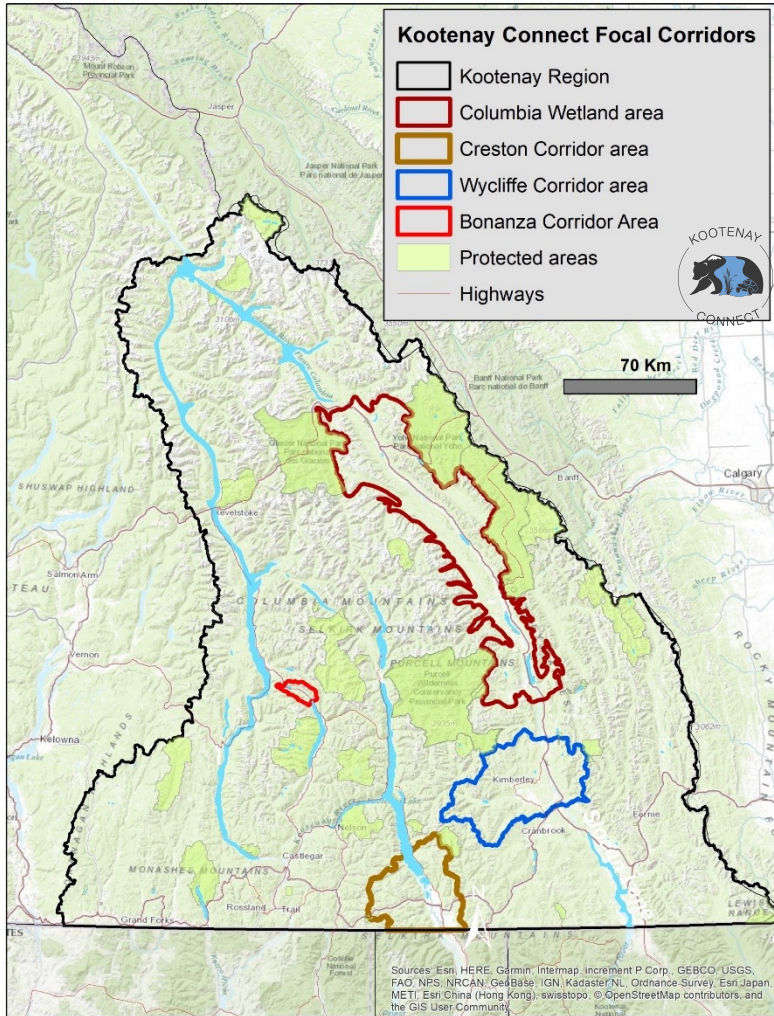


Environment and
Climate Change Canada

Environnement et
Changement climatique Canada

<https://kootenayconservation.ca/kootenay-connect/>

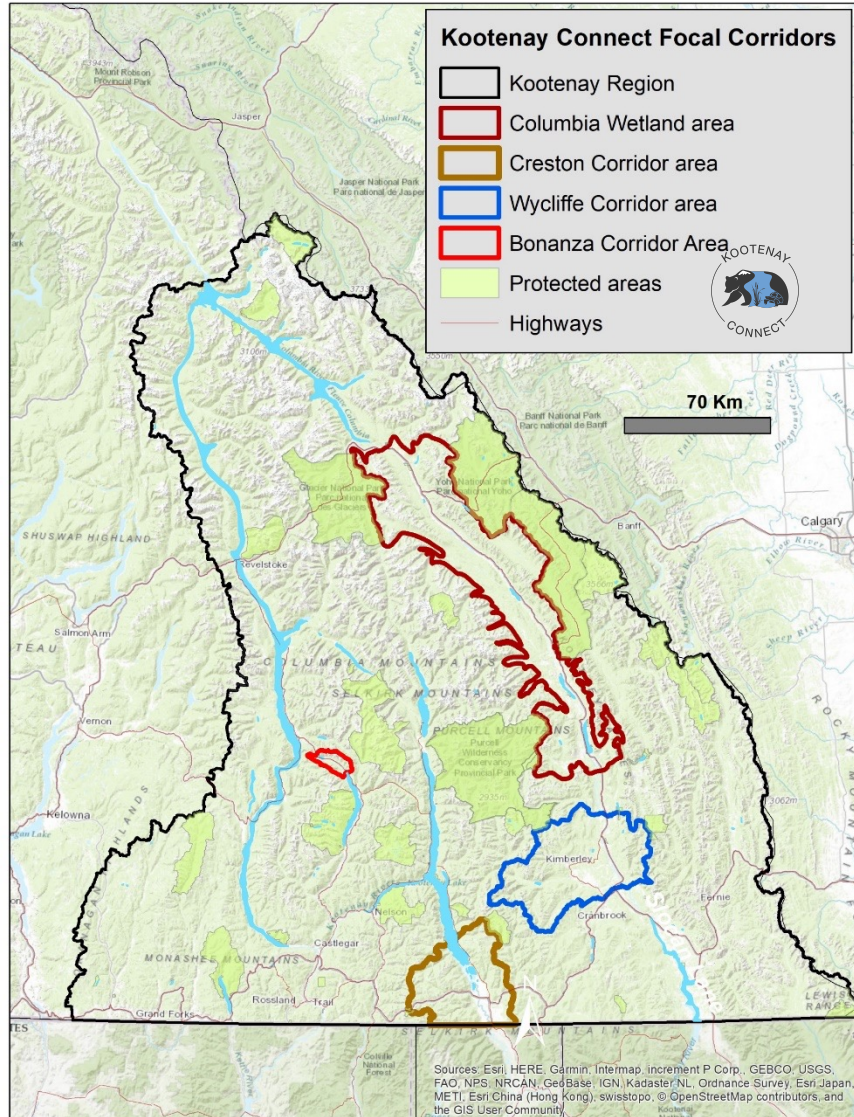
Kootenay Connect Priority Places



4 Focal Areas = 10,000 sq km ... or 1 million hectares

(Clockwise) Photos courtesy of Rachel Darvill, Richard Klafki, Ryan Durand, Marc-Andre Beaucher.

Kootenay Connect – 4 Years (2019-2023)



- 32 Partners & Specialists
- ~50 Subprojects over 4 years
- \$2 million funding from Environment Canada & Climate Change's Community Nominated Priority Places Program (Canada Nature Fund)
- 1:1 Match means \$2 million in local and regional funding = Lots of leveraged \$
- Activities & Outcomes: On-the-ground habitat enhancement & restoration
- Globally-inspired, nationally-recognized, and happening in our own backyard



The goal of this Kootenay Connect is to sustain exceptional places of biodiversity across local landscapes by focusing on habitat connectivity and climate change resiliency within and between valley bottoms and mountain ranges.

Kootenay Connect supports the recovery of:

**32 federally-listed
species at risk**

- American Badger
- Great Blue Heron
- Grizzly Bear
- Lewis's Woodpecker
- Northern Leopard Frog
- Northern Myotis Bat
- Western Painted Turtle

**40 species of special concern &
local interest**

- American Beaver
- Bighorn Sheep
- Kokanee
- Mountain Goat
- Osprey
- Sandhill Crane
- Rocky Mountain Elk



Kootenay Connect: Approach

ECCC funding allowed us to take a **four-year approach and create a package of projects** benefitting species at risk and ecosystems in the Kootenays using these five ingredients that distinguish our approach to conservation and stewardship:

1. Taking a **multi-species, habitat-based approach** rather than focusing efforts on a single species for recovery;
2. Considering the **entire landscape including valley bottoms and uplands** since all types of wildlife need to be able to move;
3. Focusing on **ecological connectivity** as key for ensuring the long-term ecosystem health that will lead to the maintenance or recovery of important species;
4. Incorporating **climate change resilience into our project designs** by predicting potential “climate adaptation corridors and refugia” that will be important for species to adapt to a changing climate; and,
5. Inspiring **diverse partnerships** that allow us to work across private and public lands using a variety of conservation tools and engaging multiple agencies, groups and interests to inspire alignment of mandates and activities for coordinated, long-term conservation success.

Columbia Wetlands: Three Years of Results (2019-2022)



Columbia Wetlands Stewardship Partners

- Goldeneye Ecological Services
- Lake Windermere & District R & G Club
- Ecologic Environmental Consulting
- MacDonald Hydrology Consultants
- Cirque Environmental
- University of Lethbridge
- University of Waterloo
- Vivid Consulting
- Living Lakes Canada
- Farmland Advantage

Wildlife Conservation Society Canada (Bats)

- Integrated Ecological Research

- Literature Review of Species at Risk in the Columbia Valley – 65 SAR and 21 ecological communities at risk
- Field surveys of Lewis's Woodpecker, Osprey, Western Painted Turtle
- LiDAR and orthophotos purchased to produce first habitat mapping for 14,444 ha of the Columbia Wetlands
- Remote-sensing assessment of floodplain hydroperiod and wetland vulnerability
- Upper Columbia Wetlands Climate Vulnerability Assessment
- WHA for Great Blue Heron – 1 application submitted to FLNRORD
- WHA for sensitive Alkali Saltgrass-Foxtail Barley – 3 applications submitted to FLNRORD
- WHF for Mountain Goat mineral licks – 2 applications submitted to FLNRORD
- 24 Western Painted Turtle basking logs in 3 locations – 28 ha improved
- 1 Western Painted Turtle nesting site fenced to prevent predators
- 45 large Cottonwood trees caged to prevent beaver damage
- 2 artificial Beaver dams installed – 54 ha improved
- Removed / replaced 900 m fencing – 3.8 ha riparian habitat improved at Galena Creek Ranch
- 131 Crown (40) and private (91) lands adjacent to CWWMA assessed for biodiversity conservation opportunities
- 6 artificial Brandenbark roosts and 7 wildlife tree roosts created to mimic old growth – 75,000 ha improved for bats

Wycliffe Corridor: Three Years of Results (2019-2022)



Nature Conservancy of Canada

Nature Trust of BC

- MFLNRORD
- East Kootenay Invasive Species Council
- Keefer Ecological Consulting
- Okanagan Wildlife Consulting (Les Gyug)
- Jeff Allen Consulting
- Wayne Choquette
- Momentum Mountain Solutions, Ltd.

- 1109 ha Wycliffe Conservation Complex assessed for Williamson's Sapsucker habitat attributes
- 215 ha Wycliffe Conservation Complex assessed for Lewis's Woodpecker and American Badger habitat attributes
- Grassland Management Plan for grassland health
- Range Use Plan for working range lands
- Invasive Plant Management Plan – inventoried 539 ha; treated 8.5 ha in 2021, 35 ha in 2022
- Wildlife-Friendly Fencing – 5.7 km maintained, removed / replaced, new to improve 362 ha of grassland / dry open forest habitat
- Implemented SAR prescriptions to enhance dry open forest habitats by forest thinning – 58 ha improved; and added stumps for vertical structure for foraging woodpeckers and coarse woody debris of 3-5 debris piles /ha for insect habitat (e.g., colonial ant species) for food for Williamsson's sapsucker



Creston Valley: Three Years of Results (2019-2022)



Creston Valley Wildlife Management Area

- Ducks Unlimited Canada
- Wayne Choquette

Provincial Northern Leopard Frog Recovery Team

- Calgary Zoo

Nature Conservancy of Canada

- Wetland Restoration & Training LLC

- Duck Lake Nesting Area – 12 ha shallow open water enhanced for Northern Leopard Frog breeding habitat
- 1643 m of channel cleared of native and non-native vegetation – 1.2 ha enhanced amphibian habitat
- Replaced derelict water control infrastructure (culverts, gates) with new structures to control water flow / distribution – 300 ha improved benefitting 12 SARs and species of interest
- Monitoring of NLF reproductive success showed immediate response – 28 egg masses in 2020; 31 egg masses in 2021 was highest total since 2000
- 2317 eggs translocated from CVWMA to Brisco NLF reintroduction site in 2020
- Landscape Design and Master Plan: CVWMA Connectivity Enhancement of Duck Lake Nesting Area & Frog Bear Corridor – designed to improve 5 sq km of connectivity habitat
- 3 Wetlands Restored on Nature Conservancy of Canada's Frog Bear property – 1.6 ha wetland creation
- Recontouring of Wilds Creek Channel – 6 ha improved

Bonanza Biodiversity Corridor (BBC): Three Years of Results (2019-2022)

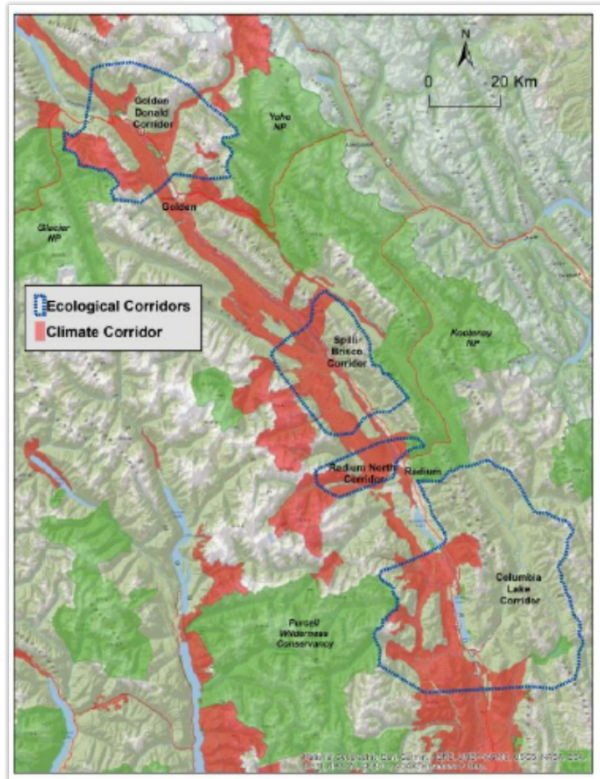


Slocan Lake Stewardship Society Okanagan Nation Alliance

- EcoLogic Environmental Consulting
- Mountain Station Consultants
- Upstream Ecological Consulting

- 3 Wetlands Restoration Sites: Hunter Siding, Upper Bonanza Creek, Summit Lake Marsh – 17 ha improved wetland / riparian floodplain
- Breeding western toads & tadpoles at Hunter Siding post-restoration
- 1600 native trees and shrubs planted
- 150 Black Cottonwoods planted
- 5 log deflectors create habitat for fish – 1.5 km improved
- 9 swales to allow hydrologic connectivity – 15 ha improved
- Wooden pedestrian walkway @ Summit Lake – protect migrating toadlets from recreation impacts
- 10 Wildlife Cameras installed and analysed for beaver and other wildlife use of key habitats
- Beaver Habitat Assessment – active beaver population of 45 beavers inhabiting 9 distinct colonies
- LiDAR and Terrestrial Ecosystem Maps (TEM) used to produce first habitat mapping for 12,875 ha Bonanza Watershed (SAR habitat, sensitive habitats, old growth)
- Species at Risk – 1425 species; ~50 SAR; 20 1st species record
- Bonanza Conservation Values Assessment – maps highlight high priority areas for conservation
- Bonanza Biodiversity Corridor Conservation Management Plan

Kootenay Connect Science: Three Years of Results (2019-2022)



Trans-Border Grizzly Bear Project

- Vivid Consulting
- Kutenai Nature Investigations

Wildlife Conservation Society of Canada (Bats)

- Multi-species wetland-upland corridors identified in Columbia Valley for Grizzly Bear, Elk, Mountain Goat, Badger, Wolverine
- Important habitats identified and mapped for SAR and biodiversity in the Columbia Valley
- Climate research and analysis for each Kootenay Connect landscape to inform and shape conservation planning in Columbia Valley, Wycliffe Corridor, Creston Valley, Bonanza Corridor – underscored importance of tributaries to river and wetlands systems
- 6 NABat cells were established in Year 1 and monitored in Years 2-3 in the all Kootenay Connect focal areas – 12 species of bats identified
- New Eastern Red Bat and Yuma Myotis detections from acoustic and field surveys in Columbia Wetlands – suggest a range expansion for Eastern Red Bat in to the Kootenays

Land Acquisition that supports Kootenay Connect

Hoodoos-Columbia Wetlands

Conserved by Nature Trust of BC



- Located near Fairmont Hot Springs
- Acquired by Nature Trust of BC in December 2021
- 54 hectares (134 acres) of conserved private land
- Types of habitat protected: wetlands, deciduous riparian, grasslands
- Plant communities / ecosystems at risk expected to benefit: Cattail Marsh, Cottonwood-Spruce-Dogwood (mid-bench floodplain), Swamp Horsetail Marsh, and Bulrush Marsh
- Species at risk expected to benefit: American Badger; Lewis's Woodpecker; Long-Billed Curlew; Great Blue Heron; Bank Swallow; Vivid Dancer (dragonfly); Pale Bulrush (wetland plant)

A scenic landscape photograph of a mountain range with a lake in the foreground and a bird in flight. The mountains are rugged and covered in green forest, with some peaks showing snow. The sky is blue with scattered white clouds. In the foreground, there's a calm lake reflecting the sky and mountains, and a small evergreen tree on the left side.

Many great projects to share today!

For more information, maps, videos & media:
<https://kootenayconservation.ca/kootenay-connect/>



Photo courtesy of Pat Morrow