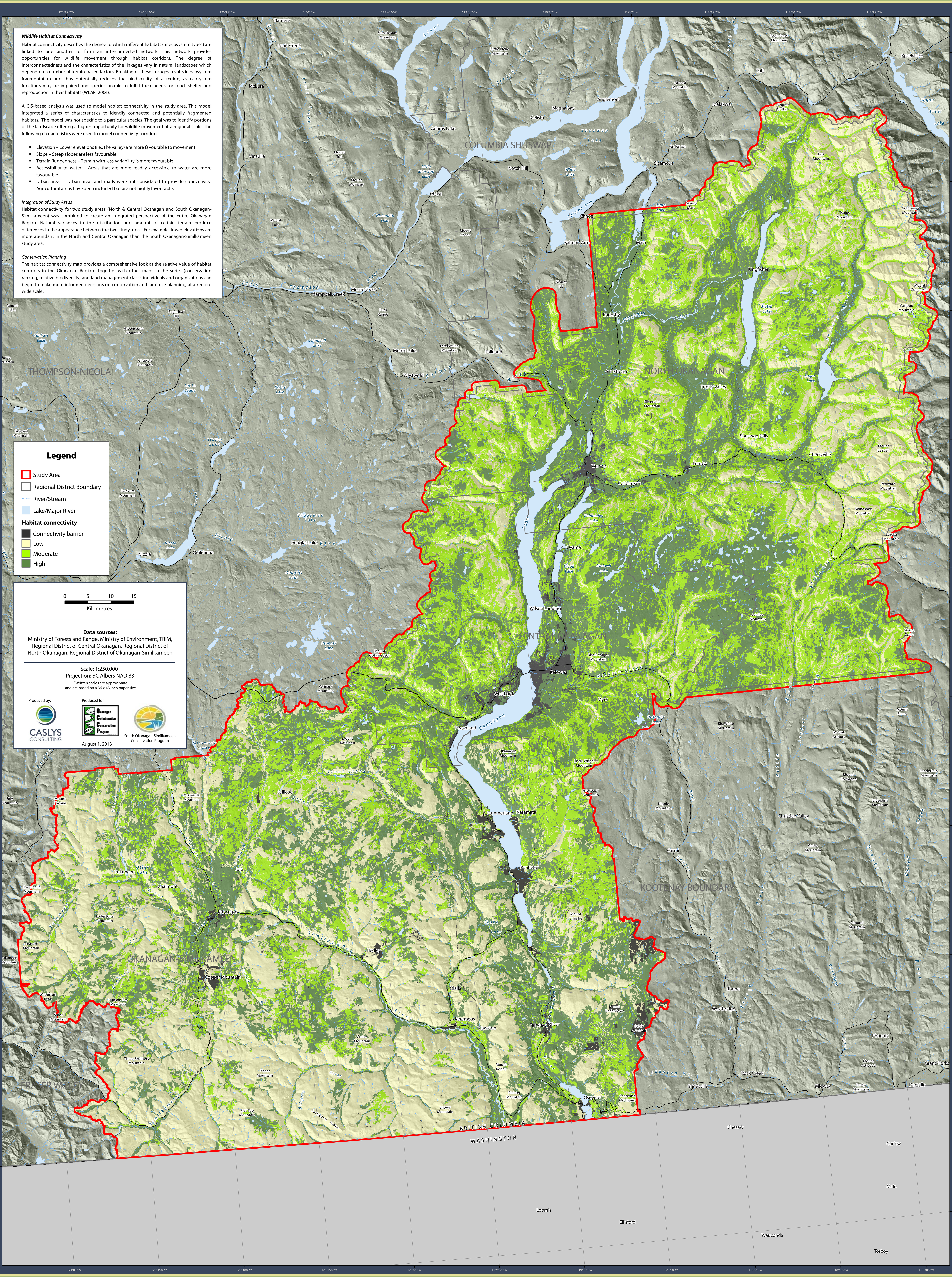
Habitat Connectivity

Okanagan Region Biodiversity Integration

British Columbia
Study Area



Wildlife Habitat Connectivity

Habitat connectivity describes the degree to which different habitats (or ecosystem types) are linked to one another to form an interconnected network. This network provides opportunities for wildlife movement through habitat corridors. The degree of interconnectedness and the characteristics of the linkages vary in natural landscapes which depend on a number of terrain-based factors. Breaking of these linkages results in ecosystem fragmentation and thus potentially reduces the biodiversity of a region, as ecosystem functions may be impaired and species unable to fulfill their needs for food, shelter and reproduction in their habitats (WLAP, 2004).

A GIS-based analysis was used to model habitat connectivity in the study area. This model integrated a series of characteristics to identify connected and potentially fragmented habitats. The model was not specific to a particular species. The goal was to identify portions of the landscape offering a higher opportunity for wildlife movement at a regional scale. The following characteristics were used to model connectivity corridors:

- Elevation – Lower elevations (i.e., the valley) are more favourable to movement.
- Slope – Steep slopes are less favourable.
- Terrain Ruggedness – Terrain with less variability is more favourable.
- Accessibility to water – Areas that are more readily accessible to water are more favourable.
- Urban areas – Urban areas and roads were not considered to provide connectivity. Agricultural areas have been included but are not highly favourable.

Integration of Study Areas

Habitat connectivity for two study areas (North & Central Okanagan and South Okanagan-Similkameen) was combined to create an integrated perspective of the entire Okanagan Region. Natural variances in the distribution and amount of certain terrain produce differences in the appearance between the two study areas. For example, lower elevations are more abundant in the North and Central Okanagan than the South Okanagan-Similkameen study area.

Conservation Planning

The habitat connectivity map provides a comprehensive look at the relative value of habitat corridors in the Okanagan Region. Together with other maps in the series (conservation ranking, relative biodiversity, and land management class), individuals and organizations can begin to make more informed decisions on conservation and land use planning, at a region-wide scale.

Legend

- Study Area
- Regional District Boundary
- River/Stream
- Lake/Major River

Habitat connectivity

- Connectivity barrier
- Low
- Moderate
- High

0 5 10 15
Kilometres

Data sources:
Ministry of Forests and Range, Ministry of Environment, TRIM, Regional District of Central Okanagan, Regional District of North Okanagan, Regional District of Okanagan-Similkameen

Scale: 1:250,000[1]
Projection: BC Albers NAD 83
[1]Written scales are approximate and are based on a 36 x 48 inch paper size.

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