

ecoregions

The Wernecke Mountains form part of the Mackenzie Mountains ecoregion. This is Mount Royal, a well-known landmark on the Wind River. [JP]



The Peel Plateau contrasts sharply with the Mackenzie Mountains ecoregion. [JP]



The Peel River watershed falls within portions of six different ecoregions. Each ecoregion is a natural region with a distinctive combination of physical characteristics, such as climate, landforms, soils, plants and animals. Many of the previous maps in this atlas show information that was used by scientists to develop these ecoregion boundaries.

Ecoregions are commonly used in many jurisdictions for land use and protected area planning. Strategies often involve the establishment of core protected areas to include key natural features and ecosystems that represent each ecoregion. The Yukon Protected Areas Strategy was based on this principle that is widely accepted across Canada. Protecting core areas within each ecoregion will help ensure that all plants and animals and the habitats they depend will remain for generations to come. The principle of using ecoregions as one building block for creating protected areas is a scientifically acceptable method, but many

additional tools are needed to conserve ecosystems, such as critical habitat areas, assessment of focal species needs, and the conservation of rare or vulnerable species and special features.

The following descriptions are adapted from Yukon Wild: Natural Regions of the Yukon (CPAWS, 2002).

Mackenzie Mountains Ecoregion

This is a diverse ecoregion with three major mountain ranges running across it: the South Ogilvie, Wernecke and South Mackenzie mountains. These mountains separate the boreal forest from the subarctic forest to the north. During the last glaciation they acted as a barrier, preventing the vast continental glaciers from moving further north.

Much of this ecoregion is at a high elevation and

is either unvegetated rock and scree, or alpine tundra and birch-willow shrubland. Wildflowers carpet rich alpine areas. The Long-tailed Jaeger, generally found much further north, also inhabits the tundra. Valleys below 1,200 metres are usually forested by black and white spruce. Sometimes cold air pools in valley bottoms and this, in combination with permafrost, can inhibit tree growth.

This largely undisturbed ecosystem is home to healthy populations of Gyrfalcons, grizzly bears, wolves, moose and the largest herds of woodland caribou in the Yukon, including the Bonnet Plume herd. The barren-ground Porcupine caribou herd, with a range that extends to the north slope of Yukon and Alaska, sometimes winters in the region.

Peel Plateau Ecoregion

The Peel Plateau ecoregion is a land of



The North Ogilvie Mountains, unlike most other mountain ranges in the Yukon, were not glaciated. Instead they were shaped by long periods of weathering. [JP]

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glaciated foothills, plateaus and basins, including lower portions of the Bonnet Plume, Wind and Snake River drainages. The spectacular Peel River canyons, including Aberdeen Canyon, were created when glaciers blocked the river from its original route.

The wide valleys and wetlands of this region are forested mainly by the permafrost-tolerant black spruce. Larch is common on poorly drained sites while white spruce and paper birch grow on better drained areas. Aspen and balsam poplar prefer warmer locations. Hummocky sedge tussocks grow under black spruce and in treeless areas.

The Porcupine caribou herd, the largest herd in the Yukon, uses this region as part of its wintering ground.

Wolverines, river otters and mink are found along major waterways and waterfowl such as loons, ducks and swans nest in wetlands.

Peregrine Falcons, Gyrfalcons, Ospreys and eagles nest along the Peel and its tributaries.

North Ogilvie Mountains Ecoregion

The North Ogilvie Mountains are part of a unique unglaciated region called Beringia. Unlike most of Canada where glacial ice has sculpted the landscape, the flat-topped and rounded mountains and V-shaped valleys of this region have been shaped by extremely long periods of weathering. These features are the eroded remnants of a former plain. The limestone mountains are mainly devoid of vegetation, but long gradual slopes beneath them support extensive "tussock tundra" – hummocky sedges, shrubs, willows and lichens. White spruce occurs in protected areas and well-drained river valleys. Black spruce, along with paper birch, grows on low elevation wetlands. Aspen and balsam poplar thrive on warmer sites and floodplains.

Rare plants and relict species uncommon elsewhere in Canada have survived in Beringia because it was unglaciated. Relicts are species that had a much greater range before the last glaciation. Unusual butterflies in the Ogilvie Mountains include a species whose female members are unable to fly. These mountain ranges are also known for their sheep habitat.

Eagle Plains Ecoregion

The sub-arctic Eagle Plains ecoregion straddles the Arctic Circle and the permafrost is almost continuous here. This frozen ground causes "drunken forests", black spruce that lean and tilt at awkward angles. Although the trees sometimes approach 100 years of age, they grow small and spindly under the harsh conditions.

Fire has shaped this landscape, forming a mosaic of different aged forests. White spruce and paper birch grow on well-drained sites, while some

The Eagle Plains ecoregion has extensive black spruce forests that have been shaped by fire. [JP]



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The Peel River flowing through the Peel Plateau ecoregion. [RR]



The eastern portion of the Mackenzie Mountains ecoregion is not yet represented in a protected area. [JP]



balsam poplar and aspen are found in warmer areas such as floodplains.

The dense mats of lichens found beneath black spruce are an important winter food source for the migrating Porcupine caribou herd. Lemmings live in tundra and bog areas. In autumn, the willows, scrub birch and groundcover transform the landscape with a blaze of bright colours.

British Richardson Mountains Ecoregion

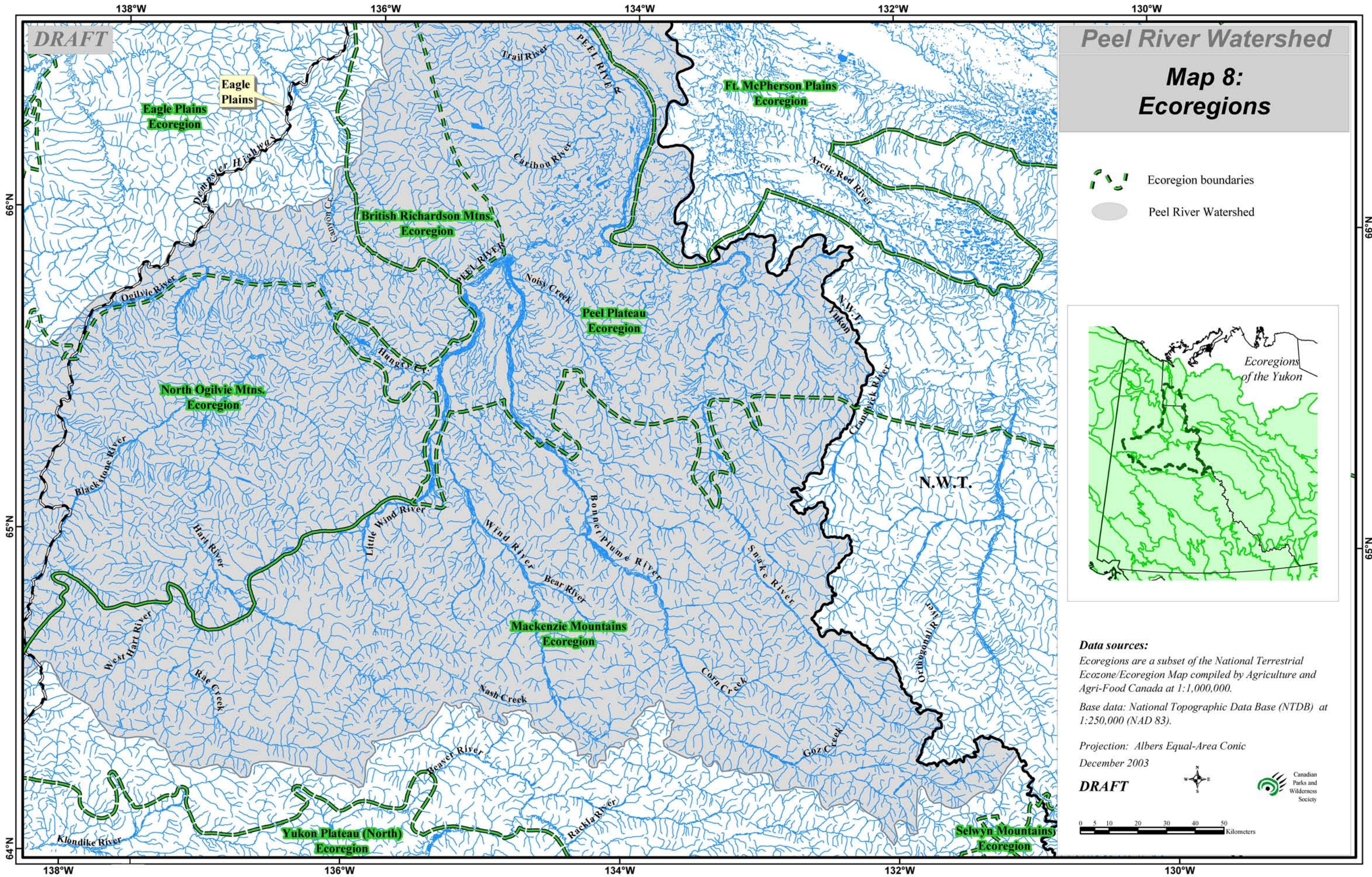
The rolling British and Richardson ranges are the northernmost mountains on the Canadian continental mainland. They rise prominently above the plains and basins of the adjacent Yukon River watershed and the Mackenzie River delta. This ecoregion lies within the zone of continuous permafrost and, except for the easternmost part of the Richardson Mountains, is unglaciated. Much of this ecoregion is

treeless, but spruce and balsam poplar along the Firth River are the northernmost of their kind in Canada. Sedge and cottongrass tussocks are the most common vegetation, with shrub birch, willow and alder in warmer sites. The windswept mountain slopes and ridges provide caribou with some relief from bloodthirsty mosquitoes and parasitic flies.

Fort McPherson Plains Ecoregion

Fort McPherson Plains includes the lower Peel River basin. The majority of this ecoregion is located in the Northwest Territories. This ecoregion is low-lying and very flat. It contains extensive frozen peatlands.



The Peel River empties into the Mackenzie Basin which is forested all the way to the Beaufort Sea. This means that some species, such as songbirds, range farther north here than in other parts of the Yukon.

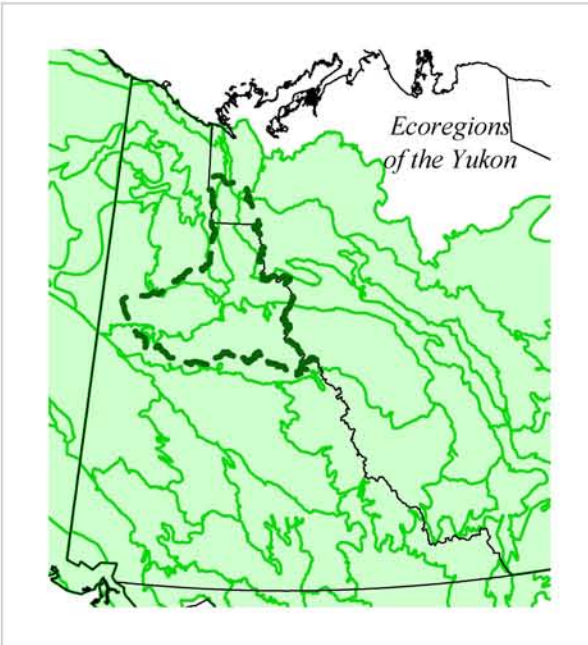


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Peel River Watershed

Map 8: Ecoregions

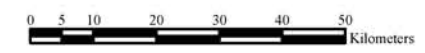
-  Ecoregion boundaries
-  Peel River Watershed



Data sources:
 Ecoregions are a subset of the National Terrestrial Ecozone/Ecoregion Map compiled by Agriculture and Agri-Food Canada at 1:1,000,000.
 Base data: National Topographic Data Base (NTDB) at 1:250,000 (NAD 83).

Projection: Albers Equal-Area Conic
 December 2003

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138°W 136°W 134°W 132°W 130°W

66°N
65°N
64°N

66°N
65°N

138°W 136°W 134°W 132°W 130°W