



## Ecodistrict Profile Ecological Landscape Summary Ecodistrict 560: Chignecto Ridges

An objective of ecosystem-based management is to manage landscapes in as close to a natural state as possible. The intent of this approach is to promote biodiversity, sustain ecological processes, and support the long-term production of goods and services. Each of the province's 38 ecodistricts is an ecological landscape with distinctive patterns of physical features. (Definitions of underlined terms are included in the print and electronic glossary.)

This Ecological Landscape Analysis (ELA) provides detailed information on the forest and timber resources of the various landscape components of Chignecto Ridges Ecodistrict 560. The ELA also provides brief summaries of other land values, such as minerals, energy and geology, water resources, parks and protected areas, wildlife and wildlife habitat.

The 745-square-kilometre Chignecto Ridges Ecodistrict is part of the Northumberland / Bras d'Or Lowland Ecoregion that stretches from West Apple River in Cumberland County, to Glace Bay in Cape Breton County. In Chignecto Ridges, areas around Shulie Lake, Apple River, Muddy Plains, and the Barnhill River have elevations in the 140 to 160 metre range, but rarely do elevations exceed 120 metres above sea level.

Occupying most of western Cumberland County, this ecodistrict is a plain tilting toward Chignecto Bay. The western boundary is the Bay of Fundy. Ridging in this ecodistrict is easily observed on satellite imagery or aerial photography. This ridging of



Black spruce and jack pine forests occur on the better drained ridges of this ecodistrict with forests of red maple and tamarack on the wetter soils between the ridges.

underlying grey sandstones, siltstones, and shales, can be observed throughout the ecodistrict.

The Joggins Fossil Cliffs, located along the Chignecto Bay at Joggins, is a UNESCO (United Nations Educational, Scientific and Cultural Organization) World Heritage Site known for its world-class fossils.

Chignecto Ridges contains almost all of the Chignecto Game Sanctuary. This large sanctuary was established in 1937 partly to protect moose. Mainland moose are listed as endangered under the Nova Scotia Endangered Species Act and have been reported in low numbers throughout the area. *Most of the game sanctuary became part of the Kelley River Wilderness Area in 2012, when the Raven Head Wilderness Area also received provincial designation.*

The total area of Chignecto Ridges Ecodistrict is 74,550 hectares, with private land ownership totaling 38,797 hectares. A total of 34,102 hectares is under provincial management, which considers multiple values through an Integrated Resource Management (IRM) approach.

Nearly 86% of Chignecto Ridges is forested. Softwood stands of black spruce and jack pine dominate on imperfectly drained soils. Red spruce, jack pine and white pine thrive on side slopes and on well-drained soils. The remainder is hardwood and mixedwood stands. In the past, frequent disturbances driven by fire, insects or major storms have affected the development of forests in ecodistricts. Today, landscapes and forests have been further shaped other disturbances such as land clearing, forestry, agriculture, and highway development.

A distinct feature of Chignecto Ridges is the lack and size of fresh water lakes and wetlands. Overall, wetlands, such as bogs, swamps, and salt marshes, account for 9% of the landbase. The major rivers in this ecodistrict are the Maccan River and River Hébert.

Species at risk or of conservation concern include the wood turtle, mainland moose, Atlantic salmon that are part of the Bay of Fundy population, northern blueberry, and several fresh water mussel species.

Landscapes are large areas that function as ecological systems and respond to a variety of influences. Landscapes are composed of smaller ecosystems, known as elements. These elements are described by their physical features – such as soil and landform – and ecological features – such as climax forest type. These characteristics help determine vegetation development.

Element descriptions promote an understanding of historical vegetation patterns and the effects of current disturbances. This landscape analysis identified and mapped seven key landscape elements – one dominant matrix element, five smaller patch elements, and a corridor element– in Chignecto Ridges.

Red and Black Spruce Hummocks is the matrix element comprising more than two-thirds of the ecodistrict and dominated by late successional softwood stands of red and black spruce, with scattered jack pine and white pine.



Jack pine forests are typically associated with well drained sandy loams and bracken fern is abundant.

The largest patch is **Jack Pine Hummocks and Ridges**, distinctive because of the jack pine and parallel ridges. The Wetlands **element** is a series of small, medium, and large wetland patches that are extremely important for water collection, filtering, groundwater recharge, and moose habitat. **Tolerant Mixedwood Hills** is the only large patch where a significant amount of shade-tolerant sugar maple is found. **Tolerant Mixedwood Slopes** has a mixedwood covertime but is now dominated by softwoods and some mature hardwoods. **Spruce Pine Flats** has several small softwood patches, dominated by black spruce, red spruce, and white pine. Connecting the matrix with the patches is the **Valley Corridors** element, which features several prominent river corridors. *Two tiny elements, Floodplain and Salt Marsh, are also part of the ecodistrict.*