



Ecodistrict Profile

Ecological Landscape Analysis Summary Ecodistrict 530: **Northumberland Lowlands**

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 Northumberland Lowlands Ecodistrict 530. 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.

This low plain area in northern Nova Scotia, where elevations rarely exceed 50 metres, follows the Northumberland Strait coastline from the New Brunswick border in the west to northeastern Pictou County. The ecodistrict is bordered on the south by the Cobequid Mountains, Pictou Antigonish Highlands, and the Cumberland Hills.



Mixedwood forests of aspen, spruce and red maple cover the hummocky topography along the Northumberland Strait near Wallace Bay, Cumberland County. Many wetlands associated with estuaries of major rivers are important migratory bird areas.

The ecodistrict has a significant moisture deficit during the growing season, second only to the Annapolis Valley.

Twenty-one rivers are found in the ecodistrict, most of which flow in a northeast direction, emptying into the Northumberland Strait through numerous saltwater harbours. Freshwater in lakes and rivers comprise only 1.6% of the ecodistrict.

The surficial till of the ecodistrict is derived from the underlying Carboniferous sedimentary rocks. The most prominent of these are the fine red sandstones, siltstones, and shales that are conspicuous on the cliffs along the Northumberland shore. Scattered throughout the ecodistrict are deposits of coal, gypsum, and salt.

Quarrying of building stone has been an important industry since the 1800s. The famous Wallace Quarries supplied sandstone for some of the most important buildings in North America, including Province House in Halifax, Confederation Building in Charlottetown, and the Parliament Buildings in Ottawa.

The ecodistrict is dominated by coniferous forest, with black and red spruce the main species. Following a disturbance, either by natural causes or forest harvesting, sites are usually invaded by early successional species such as balsam fir, red maple, white birch, grey birch and aspen, both trembling and largetooth.

The better-drained, upper slopes and hilltops of the ecodistrict will naturally support a forest of tolerant hardwoods but these are uncommon. Eastern white cedar is found scattered throughout the ecodistrict, most notably near Oxford and Pugwash, on poorly and imperfectly drained soils.

Private land ownership accounts for nearly 91% of the ecodistrict, which has a total area of approximately 287,000 hectares. Northumberland Lowlands is the largest of the six ecodistricts in the Northumberland / Bras d'Or Ecoregion. Less than 6% of the ecodistrict is under provincial Crown management.

The beaches and coastal flats are important feeding areas for shorebirds, particularly in the spring and fall as they migrate to and from their northern breeding areas.



Cormorants nest on the shore and on piers at the Harvey A. Veniot Causeway in Pictou.

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 eight key landscape elements – one dominant matrix element, six smaller patch elements, and a corridor element– in Northumberland Lowlands.

Spruce Pine Hummocks is the matrix element, representing 49% of the ecodistrict. This element naturally supports a softwood forest of red and black spruce and white pine, but land use and harvesting has left only 40% of the forest with vegetation types comprising these species.

Red Spruce Hummocks, the largest patch element, has had about one-third of its area converted to agriculture and other human uses. Other patch elements, in order of size, are **Tolerant Mixedwood Hills**, **Red and Black Spruce Hummocks**, **Jack Pine Hummocks and Ridges**, and **Wetlands**. *Two other tiny patch elements, Coastal Beach and Salt Marsh, are also found in the ecodistrict.* **Valley Corridors** is a linear element associated with several prominent river corridors in the ecodistrict.