3.3.4 TAIGA PLAINS MID-BOREAL (MB) ECOREGION

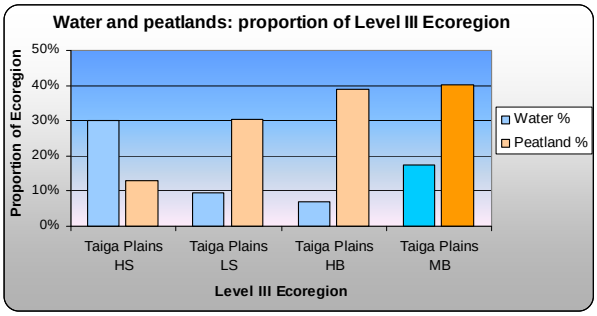
Mixed-wood forests of aspen, balsam poplar, white spruce and occasionally paper birch, containing diverse herb and shrub understories, are typical of early to mid-successional landscapes in the Taiga Plains Mid-Boreal (MB) Ecoregion. White spruce, herbs and feathermosses characterize late-successional stands. Dense to open stands of jack pine, often in combination with shorter, slower-growing black spruce, occur extensively on dry, sandy to gravelly sites. Expanses of flat, poorly drained terrain result in extensive bog and fen development throughout the Ecoregion. Black spruce, larch (in fens), Labrador tea, mountain cranberry, leatherleaf, sedges, mosses and reindeer lichen dominate these cold, wet, poorly drained sites. Lush sedge, grass and willow fens associated with stream floodplains and lakeshores are common. Brunisols and Luvisols are typical upland soils; Organic soils, Organic Cryosols and Gleysols are associated with wetlands.

Diverse stands of white spruce, aspen and balsam poplar are common on well-drained sites within the Taiga Plains MB Ecoregion. Extensive areas of highly productive, large-diameter mixed-wood stands are common in the Liard Plain and Liard Upland, where poplars may grow 30 meters tall in less than 100 years. Understory vegetation is highly diverse, with lush and vigorous low-bush cranberry, prickly rose, red osier dogwood, dwarf red raspberry, meadow-horsetail and other shrubs and herbs.

Prickly rose (*Rosa acicularis*), a small- to medium-sized shrub with a thorny stem, is common and widespread throughout the Taiga Plains and particularly in the Taiga Plains MB Ecoregion. It favours open forests, riverbanks, clearings and burns.

3.3.4 TAIGA PLAINS MID-BOREAL (MB) ECOREGION

Overview: *The Taiga Plains MB Ecoregion has the mildest climatic regime in the Taiga Plains. Extensive till and lacustrine plains, organic blankets and alluvial deposits are typical landforms. Mixed-wood and jack pine stands, large fens and bogs with discontinuous permafrost are characteristic vegetation and wetland types.*



(*water proportion includes part of Great Slave Lake)*

Total area: 106,876 km^2 (22% of Taiga Plains).
Ecoregion shown in red.

General Description

The Level III Taiga Plains MB Ecoregion occurs across the southern third of the Taiga Plains and includes 11 Level IV Ecoregions, part of Great Slave Lake, and the southern reaches of the Mackenzie River. Much of the area was covered by glacial Lake McConnell, and the present-day landscapes are shaped by glacio-lacustrine and till deposits that have been reworked in places by fluvial, eolian, and mass wasting processes. The cold boreal climates and wet conditions in low-lying poorly-drained areas retard organic matter decomposition, and peatlands of varying thickness occur over extensive areas as patterned and horizontal fens, treed bogs, and peat plateaus, the latter on permanently frozen organic soils. On better-drained upland sites, the interplay of parent materials and active processes such as fire and alluvial deposition results in a mix of deciduous, mixed-wood and coniferous forests.

Climate

The Taiga Plains MB Ecoregion is classified as having a Mid-Boreal climate (Ecoregions Working Group 1989) and enjoys the mildest conditions in the Northwest Territories. There are a few stations from which climate models (Agriculture and Agri-Food Canada 1997) have been developed. These models provide the following statistics. The mean annual temperature ranges from –2.0 to –5.5^{o}C. The mean temperature in January, the coldest month, ranges from –25.5 to –28^{o}C, and from 15.5 to 16.5^{o}C in July, the warmest month. Mean annual precipitation is between 310 and 410 mm, with the wettest period in June through August and the driest period in December through April; about 55 percent falls as rain and 45 percent as snow. The mean annual daily solar input (refer to Section 1.4.1 for further explanation) ranges between 10.0 and 11.0 mJ/m^2/day, with low values of 0.5 to 1.5 mj/m^2/day in December and highs of 21.5 to 22.0 mJ/m^2/day in June.

Topography, geology, soils, and hydrology

Most of the Taiga Plains MB Ecoregion is level to gently undulating, but the lower elevation portions of three major hill systems– the Cameron Hills, the Trout Upland, and the Horn Plateau – are partly included. On the plains and lowlands, extensive lacustrine and till deposits are often blanketed by peatlands that have developed since glacial times. Fluvial deposits occur along the Liard, Slave and Mackenzie Rivers. Pronounced slopes of major hill systems are ecologically distinct because of aspect, hydrology and mass movements. Bedrock has a significant effect on landscapes and vegetation in places. Major watercourses include the Mackenzie, Liard, Slave and Hay Rivers; the main lakes are Great Slave, Buffalo, Kakisa and Tathlina Lakes.

Vegetation

Productive mixed-wood, deciduous and coniferous stands occur on imperfectly- to rapidly drained mineral soils and form large continuous forests particularly in areas where fluvial processes are dominant, such as the Slave, Mackenzie and Liard Rivers. Jack pine stands are common after fire on coarse-textured soils. Elsewhere, upland forests occur less extensively on undulating or sloping terrain where drainage and soil conditions support their development. On level landscapes, water tables are usually high and organic materials have developed to varying depths; fens with black spruce, larch, dwarf birch, sedges and mosses are widespread, and peat plateaus (complexes of open, stunted black spruce – lichen forest and wet sedge – moss dominated collapse scars) are common.

3.3.4.1 South Mackenzie Plain MB Ecoregion

Overview: *Level to gently undulating fine-textured lacustrine and alluvial deposits with a patchwork of mixed-wood, deciduous and coniferous forests interspersed with fens are typical landscapes of the South Mackenzie Plain MB Ecoregion.*

Summary:

- Mainly fine-textured level to gently undulating lacustrine deposits, with some coarser-textured alluvial and eolian deposits.
- Not as wet as the Great Slave Lowland MB Ecoregion to the east; wetlands are less extensive.
- A mix of trembling aspen, white spruce and jack pine stands on uplands, with black spruce forests and northern ribbed fens or horizontal fens on wetter sites; forests are more vigorous than those of adjacent ecoregions to the east and north.

Total area: 16,398 km^2 (15.3% of Taiga Plains MB Ecoregion). Ecoregion shown in red.	**Average elevation (range) mASL:** 225 (150-400)

General Description

The South Mackenzie Plain MB Ecoregion parallels the Liard and Mackenzie Rivers in a broad belt between the Horn Plateau and the Trout Upland MB Ecoregion, narrowing toward its northern boundary at the south tip of the Franklin Mountains and surrounding the Sibbeston Upland HB Ecoregion to the west. Its eastern boundary with the Great Slave Lowland HB Ecoregion is indistinct, but the South Mackenzie Plain HB Ecoregion has somewhat more local relief, less extensive wetlands, and more vigorous upland forests. Much of this Ecoregion is a level to gently undulating lacustrine plain on which a complex of northern ribbed fens and horizontal fens has developed in wet depressions, and coniferous or mixed-wood stands on slightly higher uplands. Pure jack pine and trembling aspen stands develop on coarser-textured eolian and alluvial materials.

Geology and Geomorphology

Much of this Ecoregion was flooded by glacial Lake McConnell, and level to gently undulating fine-textured lacustrine plains are the most common landform. Extensive variably-textured alluvial terraces occur along the Liard and Mackenzie Rivers. Coarse-textured eolian deposits occur throughout the Ecoregion, with some large dune fields near Fort Simpson. There are minor deposits of fine-textured till.

Soils

Corridor studies for the Mackenzie Gas Pipeline impact assessment (Mackenzie Gas Project, 2004) indicate that Eutric Brunisols are the most common upland soil type, occurring in association with jack pine and mixed-wood stands on rapidly to moderately drained sites. Gleysols and Organic soils are associated with wet forests and fens. Organic Cryosols are associated with peat plateaus.

Vegetation

About half of this Ecoregion is wet and poorly-drained. The dominant vegetation type is black spruce with an understory of common Labrador tea and feathermosses on very moist to wet, poorly-drained sites, according to studies from the Mackenzie Gas Pipeline impact assessment (Mackenzie Gas Project, 2004). Upland sites having relatively good drainage support mixed trembling aspen – white spruce – jack pine stands with green alder, prickly rose, Canada buffaloberry and low-bush cranberry understories. Jack pine stands with an understory of green alder, prickly rose and lichen develop on coarse-textured eolian and glacio-fluvial deposits. Although horizontal fens and northern ribbed fens are common, they are not as extensive as in the adjacent Great Slave Lowland HB Ecoregion. Black spruce – lichen – cloudberry stands associated with peat plateaus are present throughout the Ecoregion but cover a relatively small proportion of its area.

Water and Wetlands

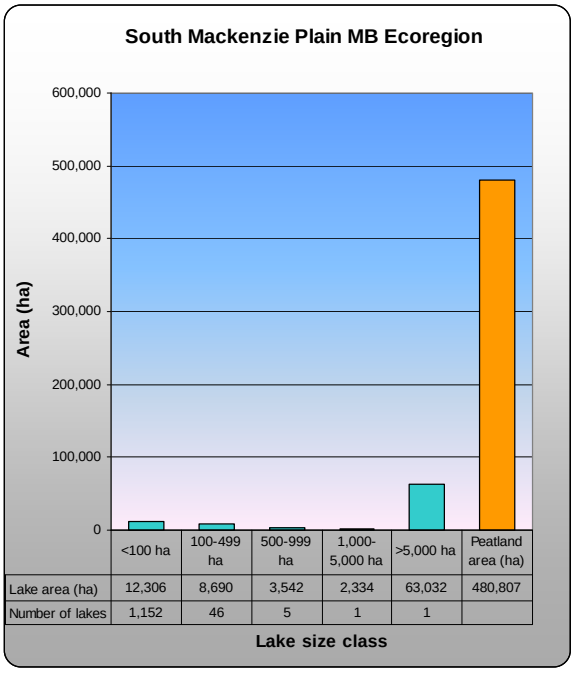
The Mackenzie and Liard Rivers are the dominant watercourses; Jean Marie River is a tributary of the Mackenzie River. Antoine Lake is the largest named standing water body. Peatlands occur throughout the Ecoregion and are typically northern ribbed fens or horizontal fens, with some peat plateaus.

Notable Features

Overall, forest productivity on upland sites in this Ecoregion appears to be higher than in adjacent ecoregions, with the exception of the Liard Plain MB Ecoregion.

Part of the South Mackenzie Plain MB Ecoregion is a level to gently undulating lacustrine plain with mixed-wood and deciduous forests on uplands (lighter green tones), black spruce fens (dark green tones) and shrubby sedge fens surrounding shallow lakes.

This image shows typical mixed-wood and trembling aspen forests on uplands, with white spruce – black spruce forests in lower, slightly wetter positions and horizontal fens with black spruce cover in depressions.



Proportion of Ecoregion occupied by lakes: 5%
Proportion of Ecoregion occupied by bogs and fens: 29%

These linear hummocks are wind-deposited (eolian) dry sands on which jack pine stands with sparse understories grow; ponds surrounded by horizontal fens dominated by sedges and shrubs occur between the sand hummocks.

3.3.4.2 Liard Plain MB Ecoregion

Overview: *The Liard Plain MB Ecoregion, together with the Liard Upland MB Ecoregion, experiences the warmest climatic conditions in the Northwest Territories. Very productive deciduous, mixed-wood and conifer forests grow on the broad low-lying alluvial terraces of the Liard River.*

Summary:

- Warm climate, with Chinook-like winds relatively common in winter
- Productive plant communities on rich alluvial flats and lacustrine deposits

Total area: 3,364 km^2 (3.1% of Taiga Plains MB Ecoregion). Ecoregion shown in red.	**Average elevation (range) mASL:** 250 (150-650)

General Description

The Liard Plain MB Ecoregion includes the broad flat alluvial plains of the Liard River from just south of Fort Liard north to the Nahanni Butte area along the Blackstone River; it is bounded on the east by hills of the Trout Upland, and on the west by the Kotanalee Range. The Liard River flows in broad loops across the plain, depositing silty soils in wide scroll-like patterns. Ponds and rich shrubby or herbaceous wetlands are common in low-lying areas, in abandoned channels, and in gently undulating terrain along the lower slopes of the adjacent uplands. This Ecoregion has the warmest climates of any area in the Northwest Territories, and commonly experiences Chinook-like winds in winter. Warm climates and rich alluvial deposits support the most productive forests in the Northwest Territories, with tree heights exceeding 30 m in older stands.

Geology and Geomorphology

The most important present-day influence on this Ecoregion is the Liard River. Impressive meander scrolls have developed on the floodplain, and indicate an environment of active deposition and change. Together the river and its floodplains occupy about half the area. To the east, adjacent to the Trout Uplands, gently undulating lacustrine deposits and lacustrine veneers over till occur over the remaining half of the Ecoregion.

Soils

Active deposition by the Liard River means that soils in the vicinity of the river are very young (Regosolic); they are often poorly-drained as well. Gleysols and Luvisols occur with lacustrine and till materials; Organic soils occur under wetlands. Permafrost is uncommon.

Vegetation

Upland vegetation of the Liard Plain MB Ecoregion reflects the influences of warm climates and moist, rich site conditions. Willow shrublands occur in belts on recently flooded areas beside the Liard River, young trembling aspen – balsam poplar forests on somewhat drier alluvial terraces, and extensive, mature stands of trembling aspen, balsam poplar, and white spruce on alluvial terraces that are not regularly flooded or on undulating terrain to the east. Forest understories are usually lush and diverse, with low-bush cranberry, prickly rose, red osier dogwood, dwarf red raspberry, meadow-horsetail and other herbs. Rich willow – sedge fens occupy low-lying areas on the alluvial plains and undulating uplands to the east and south.

Water and Wetlands

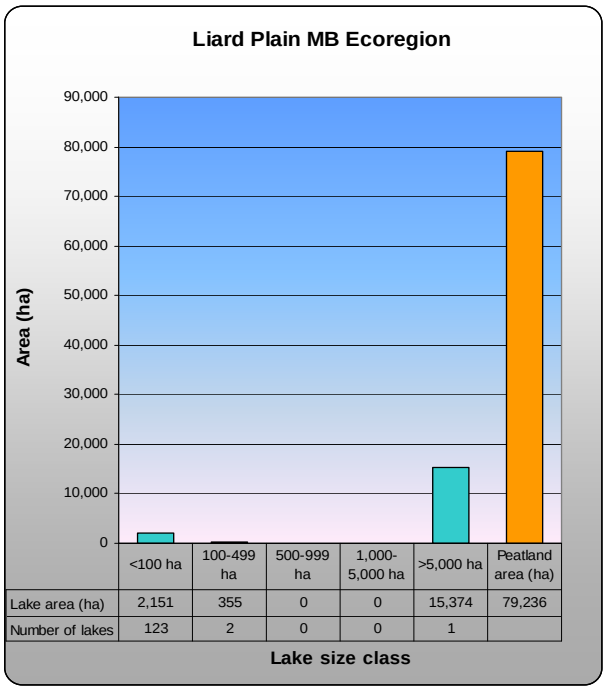
Water covers only about five percent of the total area. The Liard River is the dominant water feature, and numerous linear or crescent-shaped ponds, channel marshes, channel fens and horizontal fens occupy low-lying areas and abandoned river channels on the alluvial flats. Small permanent and intermittent streams drain into the Liard Plain MB Ecoregion from the adjacent Trout Upland MB Ecoregion, and small shallow lakes occur in undulating areas, mainly in the south half of the Ecoregion.

Notable Features

The rich fluvial terraces support productive communities and probably support some relatively uncommon plant and animal species. Along with the Liard Upland MB Ecoregion, this area is casually referred to as the "Banana Belt" of the Northwest Territories.

The Liard River (left), meander scrolls (curved features produced by river migration across the floodplain), and a mix of wet fens (light green) and productive mixed-wood floodplain forests (darker green and grayish tones) are dominant landscape features of the Liard Plain MB Ecoregion near Nahanni Butte.

Highly productive trembling aspen, balsam poplar, and white spruce stands occur along with scattered paper birch on floodplain terraces of the Liard River.



Proportion of Ecoregion occupied by lakes: 5%
Proportion of Ecoregion occupied by bogs and fens: 24%

A former channel of the Liard River is now occupied by a sluggish muddy creek, channel fens and marshes and is bordered by productive mixed-wood floodplain forests. The bright green tones are horsetail (*Equisetum* spp.) stands.

3.3.4.3 Liard Upland MB Ecoregion

Overview: *The Liard Upland MB Ecoregion is the most southwesterly ecoregion in the Northwest Territories. Gently undulating to rolling landscapes support productive mixed-wood forests.*

Summary:

- Warm climate, with Chinook-like winds relatively common in winter.
- Productive tree growth on lacustrine and till deposits.

Total area: 2,933 km^2 (2.7% of Taiga Plains MB Ecoregion). Ecoregion shown in red.	**Average elevation (range) mASL:** 350 (250-400)

General Description

The Liard Upland MB Ecoregion includes the undulating to rolling upland areas south of the Liard Plains MB Ecoregion. It is bounded on the east by the Trout Upland and on the west by the Kotanalee Range. The Liard River occupies a relatively narrow channel. Highly productive mixed-wood forests occur along the Liard River and its tributaries and on the surrounding uplands. This Ecoregion, like the Liard Plains MB Ecoregion, is the warmest in the Northwest Territories, is influenced by the adjacent mountain ranges, and experiences Chinook-like winds (Klock *et al.* 2000) in winter.

Geology and Geomorphology

Fluvial processes dominate in the Liard River Valley and its tributaries, where alluvial terraces and large islands have developed. Elsewhere, undulating to rolling till is the dominant landform. Slumping occurs occasionally in places where the Liard River and its tributaries have cut relatively deep, steep-sided valleys.

Soils

Active deposition and high water tables along the Liard River and its tributaries produces Regosolic and Gleysolic soils on the terraces and banks; Regosols are also associated with areas of slope failure. Across most of the area, Luvisols and Brunisols occur with till materials; Gleysols and Organic soils occur under wetlands. Permafrost is uncommon.

Vegetation

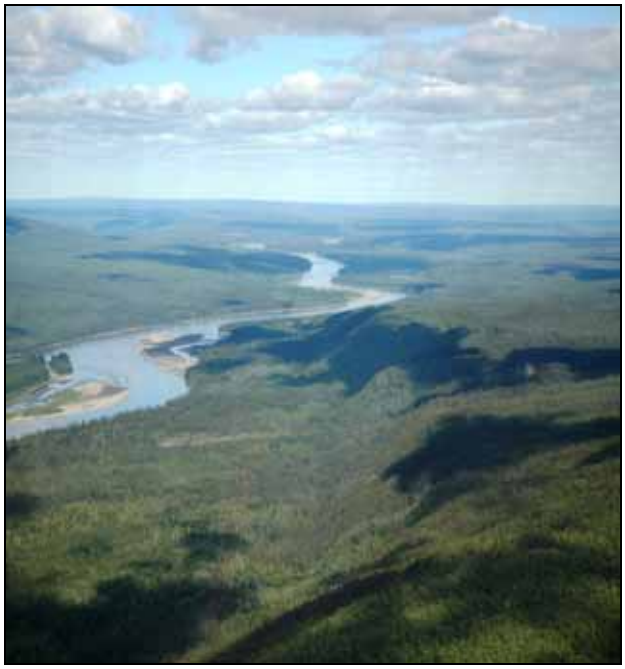
Highly productive deciduous and mixed-wood stands are the dominant vegetation type. Trembling aspen, balsam poplar, and white spruce may grow to 30 m or more in less than a hundred years, and understories are usually lush and diverse, with low-bush cranberry, prickly rose, red osier dogwood, dwarf red raspberry, meadow-horsetail and other herbs. Wetlands are less common in this Ecoregion than in the adjacent Liard Plain MB Ecoregion, and are typically rich, wet horizontal fens vegetated by sparse trees, willows and sedges.

Water and Wetlands

Water covers less than five percent of the total area; the Liard, Petitot, and Muskeg Rivers are the main streams, and Fisherman and Bovie Lakes are the largest standing water bodies. Wetlands are limited in area by the undulating to rolling terrain.

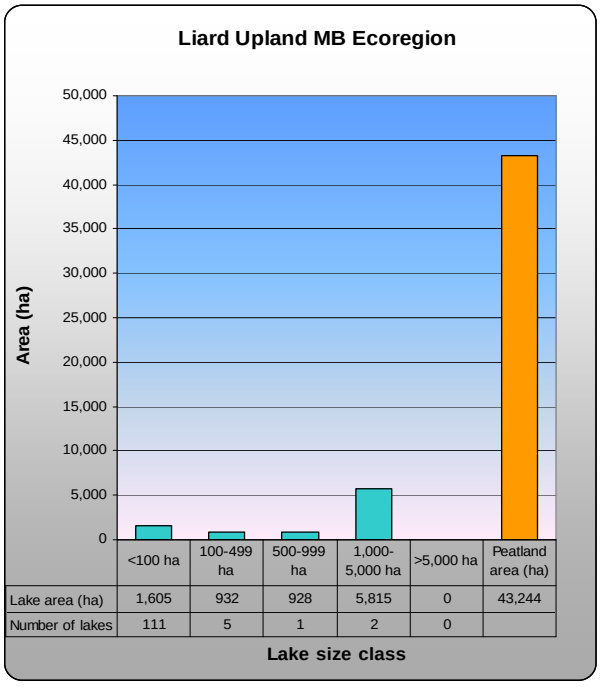
Notable Features

The varied landscapes in this Ecoregion are among the most productive in the Northwest Territories and probably provide habitat for some relatively uncommon plant and animal species.



Within the Liard Upland MB Ecoregion, the Liard River is confined by high banks, unlike the broad floodplain that it occupies in the Liard Plain MB Ecoregion (middle-upper portion of image).

Highly productive stands of trembling aspen, Alaska paper birch, paper birch, and white spruce occupy the valley sides and terraces.



Proportion of Ecoregion occupied by lakes: 3%
Proportion of Ecoregion occupied by bogs and fens: 15%

This balsam poplar is about 50 cm in diameter and nearly 30 m tall; the Liard Upland MB Ecoregion and the Liard Plain MB Ecoregion have the most productive forests in the Northwest Territories.

3.3.4.4 Trout Upland MB Ecoregion

Overview: *Gently sloping treed wetlands with islands of upland forest on a gently sloping south and west facing crescent above the Liard River are typical of the Trout Upland MB Ecoregion.*

Summary:

- Gently sloping till plain blanketed by peatlands.
- Treed wetlands cover much of the area; scattered deciduous, mixed-wood and conifer forests occur on better-drained sites.

Total area: 5,188 km^2 (4.9% of Taiga Plains MB Ecoregion). Ecoregion shown in red.	**Average elevation (range) mASL:** 500 (400-700)

General Description

The Trout Upland MB Ecoregion occupies a roughly crescent-shaped area of higher terrain east of the Liard River on the southern and western slopes of the Trout Upland MB Ecoregion above 400 m ASL and below 600 mASL. This Ecoregion is influenced by a climate similar to that of the Liard Plain MB and Liard Upland MB Ecoregions, but its slightly higher elevation likely produces somewhat cooler conditions. Much of the landscape is occupied by wetlands, with a mix of treed fens on gently sloping till plains and jack pine or mixed-wood stands on ridged or hummocky till and glacio-fluvial deposits. Relatively tall, dense and diverse deciduous and mixed-wood forests occur on lower south-facing slopes and along river and stream valleys.

Geology and Geomorphology

Much of the area is a poorly-drained till plain, covered by organic blankets and veneers. Hummocky and ridged till deposits provide changes in local relief. Small coarse-textured gently undulating glacio-fluvial plains are present, and narrow alluvial terraces occur along streams that have cut deep V-shaped valleys.

Soils

Organic soils and Gleysolic soils are common and are associated with wetlands. Brunisols occur on the coarser-textured upland areas, usually with jack pine or trembling aspen. Finer-textured Luvisols are associated with mixed-wood stands on moderately well-drained sites. Regosols occur along valley walls and on alluvial flats where there has been relatively little time for soil development because of slope movement or sediment deposition.

Vegetation

There is a relatively rapid transition between the diverse and productive upland forests of the Liard Plain MB and Liard Upland MB Ecoregions to the less productive forests of this Ecoregion. Extensive areas of poorly-drained organic and mineral soils characterize sites that are vegetated by closed and open canopied black spruce, scattered larch, and horizontal fens. Jack pine forests occur on well- to rapidly-drained till knobs and scattered glacio-fluvial deposits. Mixed-wood stands occur along river and stream valleys, on warm, southerly aspects, and in scattered islands surrounded by organic terrain.

Water and Wetlands

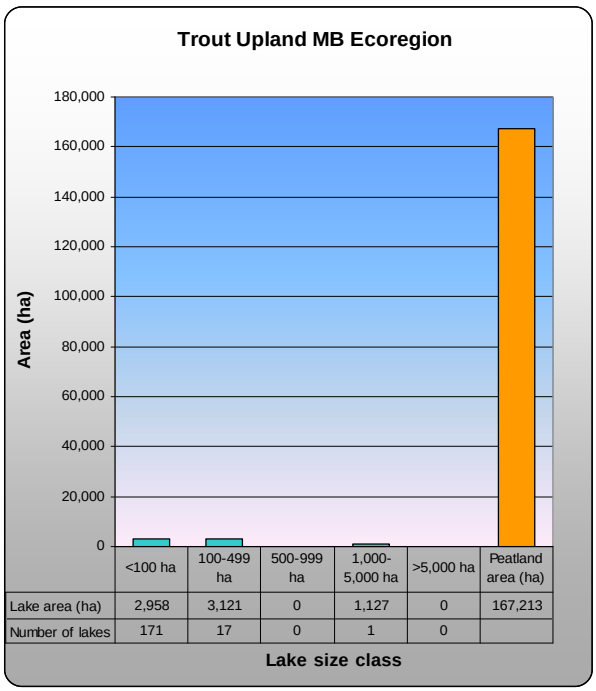
The Muskeg and Arrowhead Rivers are the main watercourses. A number of small permanent or intermittent streams drain into these rivers or into the Liard River. Treed horizontal fens and flat bogs are the dominant landscape feature; peat plateaus are not as common.

Notable Features

There are well-developed glacial flutings across the low hills above Trout Lake.

The Muskeg River valley cuts into the slopes of the western Trout Upland MB Ecoregion and is forested by trembling aspen and mixed aspen – white spruce stands. Closed black spruce – larch forests on wet organic deposits occupy much of the upland areas.

Peat plateaus (dark green bogs with black spruce and brownish collapse scar bogs) are dominant across parts of the Ecoregion and surround lighter green trembling aspen or mixed-wood stands on slightly higher uplands.



	<100 ha	100-499 ha	500-999 ha	1,000-5,000 ha	>5,000 ha	Peatland area (ha)
Lake area (ha)	2,958	3,121	0	1,127	0	167,213
Number of lakes	171	17	0	1	0	

Proportion of Ecoregion occupied by lakes: 1%
Proportion of Ecoregion occupied by bogs and fens: 32%

Glacial fluting patterns on the lower slopes of a hill above Trout Lake are produced by moving ice that scores deep grooves in the underlying bedrock. The uplands are forested by mixed-wood stands, with horizontal fens in the depressions.

3.3.4.5 Horn Slopes MB Ecoregion

Overview: *The Horn Slopes MB Ecoregion includes the gentle to steeply inclined south-facing slopes of the Horn Plateau; mostly young, vigorous forests, massive slope failures, and a belt of mineral-rich ponds and fens along the slope base indicate the active influence of fire and groundwater seepage on this boreal ecosystem.*

Summary:

- Gentle to steep, relatively warm south-facing slopes.
- Mass movements of soil due to groundwater seepage and slumping.
- Mineral-rich ponds and fens along the toe slopes.
- Vegetation is a mosaic of older white spruce and young deciduous stands, the latter on recently burned areas.

Total area: 1,951 km^2 (2% of Taiga Plains MB Ecoregion). Ecoregion shown in red.	**Average elevation (range) mASL:** 400 (300-750)

General Description

The Horn Slopes MB Ecoregion includes the gently to steeply inclined southern slopes of the Horn Plateau. Dozens of small, permanent or ephemeral streams flow down the slopes, pronounced groundwater seepage and slumping occur along the upper third of the slope, and a string of mineral-rich shallow ponds parallel the slope base. Flowing surface and subsurface waters produce moist, rich conditions, and soil temperatures in the rooting zone are probably higher throughout the growing season than on the adjacent plains because of sun exposure. Like the Cameron Hills and Trout Upland, the Horn Plateau exerts a local influence on weather; in summer, thunderstorms are more frequent (Klock *et al.* 2000), and seasonal rainfall amounts are likely higher along the slopes and on the plateau than in the surrounding lowland terrain.

Geology and Geomorphology

Horizontally stratified Upper Cretaceous marine shales and conglomerates underlie the Horn Plateau, and are probably one source of groundwater flow. Studies elsewhere on formation waters in similar geologic formations indicate that sodium carbonate–containing waters might be expected in the Upper Cretaceous formation (Karsten and Bachu 2001), and might partly explain the mineral deposits around ponds at the base of the main slope. The boundary between the Horn Slopes MB Ecoregion and the Horn Plateau LS Ecoregion is abrupt, often because of slope failures. Colluvial deposits occur on and below slumped areas, occupying about 30 to 40 percent of the Ecoregion on upper slopes; the remainder is covered by till materials.

Soils

Regosolic soils are associated with colluvial materials; Brunisolic and Luvisolic soils are associated with till materials. Permafrost-affected soils are relatively uncommon because of groundwater flow and the predominantly south-facing warm aspect.

Vegetation

Characteristic vegetation of the Horn Slopes MB Ecoregion includes young deciduous forests, shrublands, and scattered stands of mature white spruce. Much of the area has burned in the last 20 years. Understory vegetation is similar to that of the Cameron Slopes MB Ecoregion, with prickly rose, low-bush cranberry, willow, green alder, wild sarsaparilla, and reed-bentgrass. Recent slope failures are unvegetated or have sparse herbaceous cover. Treed, shrubby and sedge-dominated wetlands occur along the southern boundary of this Ecoregion where the slopes level out and occasionally behind slumped blocks along the slope.

Water and Wetlands

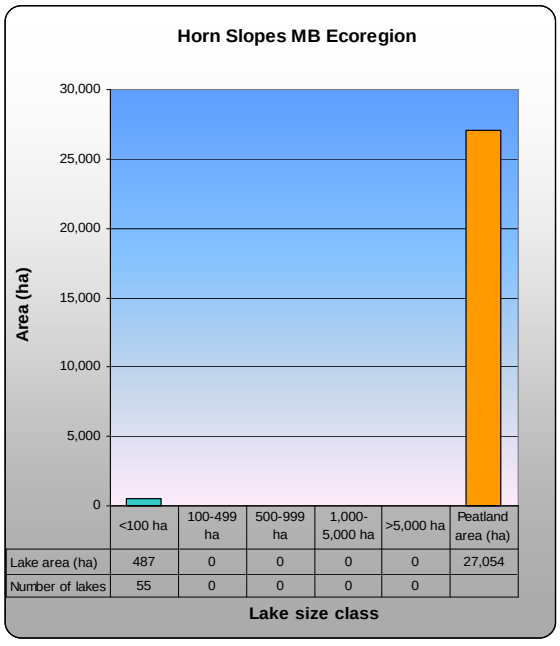
There are no major water bodies in the Horn Slopes MB Ecoregion. Many small permanent and intermittent streams run perpendicular to the slope, and there are a few ponds in mid and upper slope positions where seepage waters have collected behind slumped blocks. Near the slope base, stands of fox-tail barley around ponds and sloughs with whitish mineral shoreline crusts suggest that the groundwater is mineral-rich. Spring fens occur locally in association with groundwater seepage along the slopes. Northern ribbed fens and horizontal fens occur along the southern boundary at the slope base.

Notable Features

The Horn Slopes MB Ecoregion is notable for its consistent southerly aspect for a distance of nearly 140 km, its steepness, and its instability. Plants and wildlife that are characteristic of more southerly areas or that are associated with groundwater discharge areas likely occur in this Ecoregion.

The western Horn Slopes MB Ecoregion is characterized by extensive slumping and mixed stands near the top of the slope; a patchwork of mature white spruce, young deciduous regeneration, and shrublands. The slopes contrast sharply with the Horn Plateau LS Ecoregion above the break.

Along the slopes to the east of the left-hand image, white spruce and regenerating trembling aspen and Alaska paper birch occur on mid- and upper slope positions.



Proportion of Ecoregion occupied by lakes: <1%
Proportion of Ecoregion occupied by bogs and fens: 14%

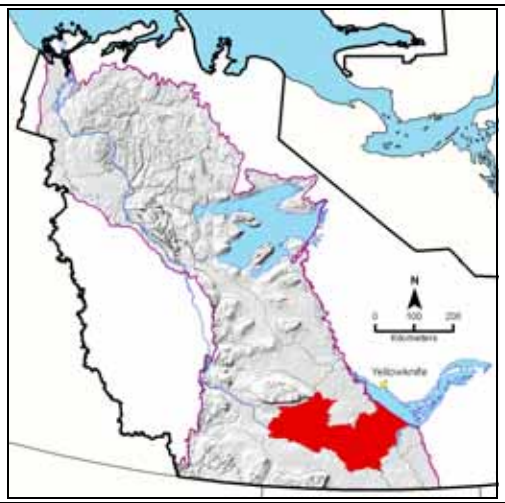
Massive slope failures are common along the length of the Horn Slopes MB Ecoregion; groundwater seepage causes slope instability and produces mudslides like this one.

3.3.4.6 Great Slave Lowland MB Ecoregion

Overview: *The Great Slave Lowland MB Ecoregion, a vast, nearly flat wetland-dominated area, is the largest Level IV ecoregion in the Taiga Plains. Scattered patches of mixed-wood and jack pine forests rise only a few meters above a sea of patterned and horizontal fens and peat plateaus.*

Summary:

- Nearly flat, includes part of Great Slave Lake and the upper reaches of the Mackenzie River.
- Vast northern ribbed fen, net fen, and horizontal fen –upland complexes; small changes in the water table can flood extensive areas.
- Permafrost occurs more frequently west of Great Slave Lake.



Total area: 35,394 km^2 (33% of Taiga Plains MB Ecoregion). Ecoregion shown in red.	**Average elevation (range) mASL:** 175 (125-300)

General Description

The Great Slave Lowland MB Ecoregion is the largest Level IV ecoregion in the Taiga Plains. It includes the area from the base of the long, abrupt limestone escarpment running roughly parallel to the Mackenzie River, north to the Horn Slopes MB Ecoregion, east to the slightly higher terrain of the Great Slave Plain MB Ecoregion, and west towards the confluence of the Liard and Mackenzie Rivers. Sluggish, low-gradient streams drain into the Mackenzie River. Huge northern ribbed fens, net fens, and horizontal fens occupy much of the area; linear beach ridges and other upland areas occur as islands within them and usually support mixed forests of pine, black and white spruce, trembling aspen, and balsam poplar. Because the area is so flat, even a slight rise in the water table can promote extensive flooding, and in the recent past, large tracts of upland forest have been flood-killed.

Geology and Geomorphology

Devonian limestones are exposed along the escarpment forming the boundary between this Ecoregion and the Tathlina Plain MB Ecoregion to the south; in places along the escarpment and below the Horn Plateau, groundwater discharges leave behind calcareous, saline or sulphur deposits. Lacustrine plains overlain by peatlands cover much of the area. Fine- to coarse-textured lacustrine and till materials occur on uplands, with alluvial deposits along the Mackenzie River and in pockets northeast of Great Slave Lake. Beach ridges, prominent linear features running parallel to contour, extend for many kilometers south and west of Great Slave Lake; they mark the former extent of glacial Lake McConnell and are typically coarse-textured alluvial or wave-washed till deposits.

Soils

Organic soils are most common, and Gleysols are probably extensive on low-lying upland areas adjacent to wetlands. Brunisolic soils are associated with coarse-textured beach ridge deposits, while Luvisolic soils occur elsewhere on moderately well-drained sites. Organic Cryosols underlie peat plateaus.

Vegetation

Characteristic vegetation in the Great Slave Lowland MB Ecoregion consists of treed, shrubby and sedge-dominated fens over much of the area. Jack pine and jack pine – trembling aspen stands with sparse shrub, forb and lichen understories occur on dry, coarse-textured soils such as those associated with beach ridges. Pure or mixed stands of trembling aspen, black and white spruce, balsam poplar and Alaska paper birch with understories of low-bush cranberry, prickly rose, green alder and forbs occur on variable-textured soils on other upland areas. Open black spruce – northern and common Labrador tea – lichen stands form complexes with sedge – cotton-grass – peat moss collapse scars on peat plateaus that are most extensive on the flats north of Mills Lake.

Water and Wetlands

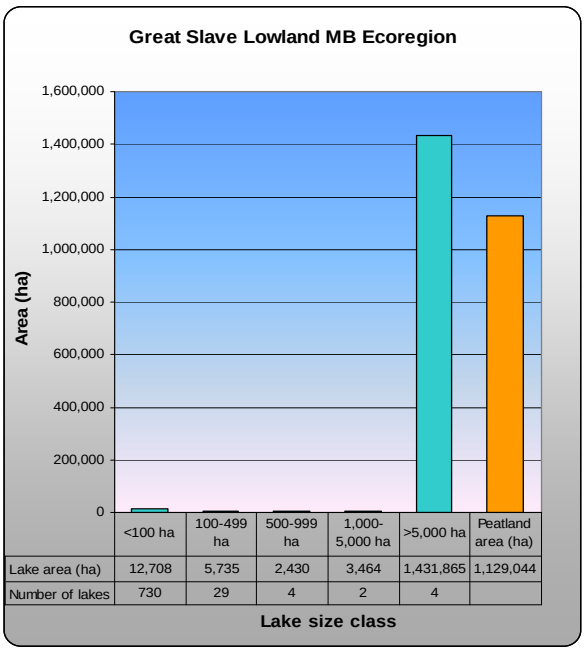
Great Slave Lake occupies 41 percent of the Ecoregion. The upper reaches of the Mackenzie River, Hay River, Buffalo River, Mills Lake, Kakisa Lake, Fawn Lake and Mink Lake are the other main water bodies. Melting permafrost in former peat plateau areas has left behind an intricate network of thermokarst lakes separated by low sparsely treed stringers; these northern ribbed fens and net fens are especially evident west of Hay River near Great Slave Lake.

Notable Features

Unusual saline and sulfur springs with rare plant species occur near Fawn Lake; sulfur springs also occur along the Buffalo River. The limestone escarpments and associated exposed limestone plains provide unique habitats (alvars). The Horn River and Mills Lake are International Biological Program sites (Nettleship and Smith 1975) that are included in the Edéhzhíe candidate protected area under the Northwest Territories Protected Areas Strategy.

The Great Slave Lowlands MB Ecoregion is wetland-dominated, as shown by this complex of wet, rich northern ribbed fens, horizontal fens, and net fens surrounding mixed-wood stands on slightly raised uplands. Flooding mortality has killed trees in low-lying areas (grayish tones).

A thermokarst lake – sedge fen complex is surrounded by mixed-wood (trembling aspen – white spruce) and conifer stands.



(Great Slave Lake accounts for the majority of lake area)

Proportion of Ecoregion occupied by lakes: 41%
Proportion of Ecoregion occupied by bogs and fens: 32%

This is one of several saline sulfur springs near Fawn Lake, in the northwestern corner of the Ecoregion; spring discharges have produced a large dome a few meters high. Diverse plant communities that include several rare plants occur in this area.

3.3.4.7 Tathlina Plain MB Ecoregion

Overview: *Extensive peat plateau, net fens and northern ribbed fens with limited occurrences of upland forest on drier terrain and along rivers and streams are characteristic of the Tathlina Plain MB Ecoregion.*

Summary:

- Peat plateaus, net fens and northern ribbed fens are the dominant landform over much of the Ecoregion.
- Taller and more diverse forests occur on islands of upland terrain and along rivers where drainage and soil temperatures are more conducive to growth.

Total area: 21,935 km^2 (20.5% of Taiga Plains MB Ecoregion). Ecoregion shown in red.	**Average elevation (range) mASL:** 300 (200-550)

General Description

The Tathlina Plain MB Ecoregion occupies the extensive plains below the eastern Trout Upland MB Ecoregion and around the Cameron Hills, east to the Slave Upland HB Ecoregion and north to the edge of the limestone escarpment running parallel to Great Slave Lake. Peatlands dominate the landscape; peat plateaus and northern ribbed fens occupy extensive areas. Gently undulating lacustrine and till deposits provide slightly raised islands and patches on which jack pine, spruce and mixed-wood stands grow. Relatively tall and diverse forests are generally restricted to the vicinity of rivers and streams.

Geology and Geomorphology

Devonian limestones underlie glacial and organic deposits, and are exposed in places along the wave-cut escarpments and alvars that form the northern boundary of the Ecoregion and extend south of Kakisa Lake; west of Kakisa Lake, there are locally extensive limestone plains that have thin, discontinuous soil and dominantly jack pine cover. Thick organic blankets have developed over a complex of fine-textured lacustrine and till materials. Permafrost features are common; peat plateaus with large collapse scars cover large areas, and thermokarst lakes and intricately structured net fens and northern ribbed fens have formed where the permafrost has thawed. Beach ridges, deposits of coarse-textured wave-washed till and lacustrine materials, are common near Buffalo Lake. Alluvial and colluvial deposits originating from the Cameron Hills and Caribou Mountains and provide moist, rich mineral soils that support diverse plant communities.

Soils

Organic Cryosols are probably the most common soil, and are associated with peat plateaus. Brunisols occur on the coarser-textured upland areas, usually covered with jack pine or trembling aspen. Luvisols occur with mixed-wood stands on moderately well-drained sites; Gleysols are associated with poorly-drained lowland forests and wetlands.

Vegetation

Vegetation patterns are similar to those reported for the Northern Mixedwood Natural Subregion in Alberta (Natural Regions Committee 2006). Characteristic sites are vegetated by closed and open grown black spruce stands with scattered larch on extensive areas of poorly-drained organic and mineral soils. Open black spruce – lichen – northern Labrador tea stands are distributed across frozen peat plateaus, with sedges, cotton-grass, and mosses in the associated collapse scars. Jack pine forests (often with black and white spruce components) having low shrub and lichen ground cover occur on well- to rapidly drained sites such as remnant beach ridges and shallow soils over bedrock. Trembling aspen, balsam poplar, white spruce and black spruce occur in mixed or pure stands on mineral uplands and along the banks and alluvial flats of watercourses. The most vigorous forests grow in linear belts in riparian zones and on alluvial and colluvial fans south of Buffalo and Tathlina Lakes. Northern ribbed fens are extensive, and larch, black spruce, and sedges are common associates.

Water and Wetlands

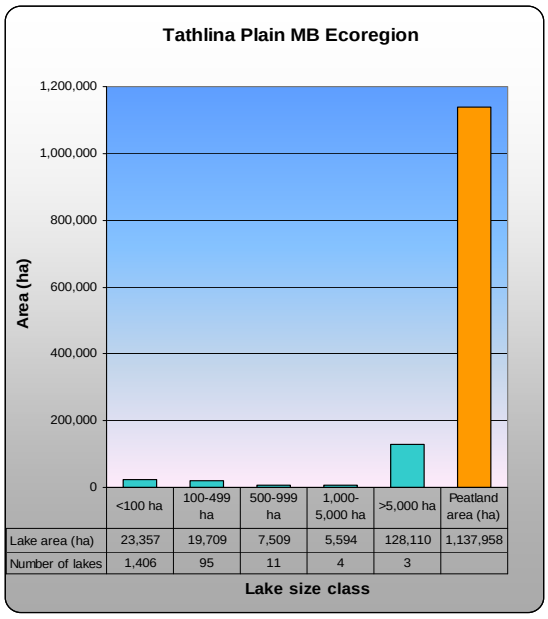
The Hay, Buffalo and Kakisa Rivers are the dominant watercourses. Tathlina, Kakisa, Buffalo and Copp Lakes are the main standing water bodies. Wetlands associated with organic materials are quite extensive. Thermokarst lakes and palsa ridges form vast netlike patterns (net fens and northern ribbed fens) in former peat plateau areas where the permafrost has melted.

Notable Features

Alexandra and Louise Falls plunge from bedrock ledges along the Hay River. Elsewhere, bedrock exposures above the escarpment and near Kakisa Lake provide unique habitats ("alvars") that support unusual plant communities. The gentle alluvial-colluvial slopes above Buffalo and Tathlina Lake are excellent wildlife habitat.

Peat plateaus typical of the Tathlina Plain MB Ecoregion are in the foreground, with a large northern ribbed fen in the mid-upper image (light green).

This low-level oblique view of a peat plateau shows the typical open black spruce cover and lichen on the raised permafrost area and large brownish collapse scars where the permafrost has melted.



Proportion of Ecoregion occupied by lakes: 8%
Proportion of Ecoregion occupied by bogs and fens: 52%

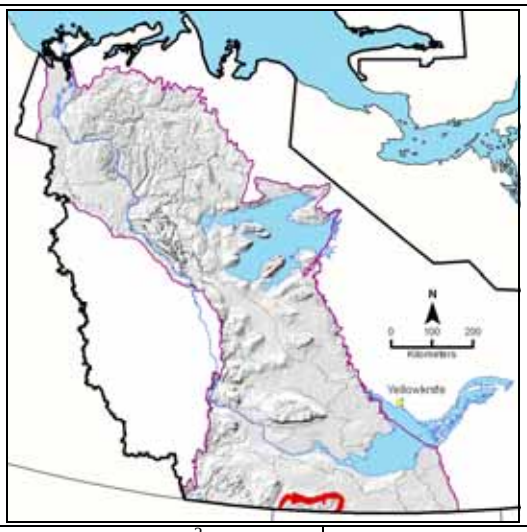
This image shows an ***alvar***, a limestone exposure near the escarpment. In the foreground is exposed bedrock with sparse moss and lichen cover. Junipers, dryland sedges, and grasses and forbs typical of dry areas far to the south are in the midground, and jack pine – paper birch – trembling aspen forests grpw on shallow soils in the background. These are uncommon features in the Northwest Territories.

3.3.4.8 Cameron Slopes MB Ecoregion

Overview: *Gentle to moderately inclined and often unstable side slopes of the Cameron Hills, forested by productive mixed-wood stands on mid to upper slope positions and rich fens on lower slopes are characteristic of the Cameron Slopes MB Ecoregion.*

Summary:

- Gentle to moderate slopes with frequent groundwater seepage and slope failures.
- Slopes are generally moist, rich sites that support productive deciduous, mixed-wood and white spruce forests.



Total area: 2,710 km^2 (2.5% of Taiga Plains MB Ecoregion). Ecoregion shown in red.

Average elevation (range) mASL: 450 (250-850)

General Description

The Cameron Slopes MB Ecoregion includes the gentle to moderate slopes between the low-elevation Tathlina Plain MB Ecoregion and the higher-elevation Cameron Plateau LS and Cameron Upland HB Ecoregions. Many small or intermittent streams flow down the slopes, and groundwater seepage and slumping are common. Flowing surface and subsurface waters produce moist, rich conditions. Soil temperatures in the rooting zone are probably higher throughout the year than on the adjacent plains because of sun exposure on easterly or southerly aspects and organic deposits that are not thick enough to insulate the soil and prevent summer thawing. The Cameron Hills exert a local influence on weather; in summer, thunderstorms are more frequent (Klock *et al*. 2000), and rainfall amounts are likely higher in this Ecoregion than in the surrounding lowland terrain.

Geology and Geomorphology

Parent materials are till and colluvium, the latter associated with slumping areas. The gentle fan-shaped landscape above Tathlina Lake is a complex of alluvial and colluvial materials that supports a diverse array of plants and wildlife.

Soils

Luvisolic and Brunisolic soils are probably most common. Gleysols occur along stream drainages and on seepage areas where drainage is poor and water tables are high, with Organic soils in fens. Regosols occur in areas of recent deposition or mass movement.

Vegetation

Vegetation in the Cameron Slopes MB Ecoregion is probably very similar to that described for the adjacent Low Boreal Highlands in Alberta, where characteristic vegetation includes pure or mixed stands of trembling aspen, balsam poplar and white spruce, with understories dominated by prickly rose, low-bush cranberry, willow, green alder, wild sarsaparilla, and reed-bentgrass (Natural Regions Committee 2006). At higher elevations near the boundary with the Cameron Plateau and Cameron Upland Ecoregions, lodgepole pine – jack pine hybrids also occur. In the wettest areas near the lower boundary, rich northern ribbed fens with larch, sedge and mosses occur in a narrow band, grading into the peat plateaus of the surrounding Tathlina Plain MB Ecoregion.

Water and Wetlands

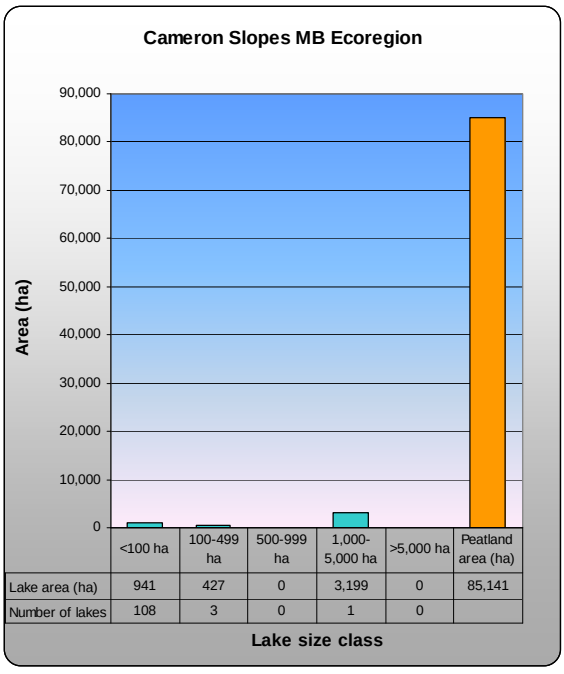
Hundreds of small, permanent or intermittent streams drain from the Cameron Plateau LS and Cameron Upland HB Ecoregions. Dogface Lake and Cameron River are the largest water bodies. Northern ribbed fens are locally extensive near slope bases. Spring fens occur along slopes in association with groundwater seepage.

Notable Features

Productive forest communities that support diverse plant and wildlife populations occur on the gently sloping floodplain above Tathlina Lake. Slope failures create an intricate array of topographic features and moisture conditions; ecosystems along the slopes are correspondingly complex.

The alternating dark and light green bands on the south-facing failing slopes of the Cameron Slopes MB Ecoregion are forested by white spruce and trembling aspen; the permafrost-dominated stunted wetland forests of the Cameron Plateau LS Ecoregion to the right contrasts sharply with the slopes.

Vigorous mixed-wood forests grow along the lower Cameron Slopes and include trembling aspen, white spruce, and paper birch. Tall green alder and willow shrublands are also common.



Proportion of Ecoregion occupied by lakes: 2%
Proportion of Ecoregion occupied by bogs and fens: 31%

Slopes are actively failing as shown by the whitish scar in mid-image and the dark gray mudslide directly above it. A spring-fed pond is visible in the left center.

3.3.4.9 Slave Upland MB Ecoregion

Overview: *Glacial deposits over limestone bedrock have produced a complex landscape within the Slave Upland MB Ecoregion; sinkholes, thousands of calcareous fens and ponds, and ridges left behind when an ancient glacial lake receded produce an intricate mosaic of forest and wetland communities.*

Summary:

- Lacustrine, alluvial, till and eolian deposits of varying thickness blanket highly calcareous Devonian bedrock.
- Thousands of calcareous sedge fens and shallow ponds, karst topography (sinkholes in bedrock).
- Jack pine, trembling aspen, and white spruce occur on dry to moist sites, and black spruce – white spruce forests on wet sites; recent fires have burned over large areas.

Total area: 7,514 km^2 (7% of Taiga Plains MB Ecoregion). Ecoregion shown in red.

Average elevation (range) mASL: 200 (150-300)

General Description

The Slave Upland MB Ecoregion is bordered to the east by a wave-cut bedrock escarpment below which the Slave Lowland MB Ecoregion occurs, to the west by the wetter Tathlina Plain MB Ecoregion, to the north by Great Slave Lake, and to the south by the Alberta border. This Ecoregion is distinguished from its neighbours by the variety of glacial deposits – lacustrine, alluvial, till, and eolian – and the presence of highly calcareous Devonian limestone close to or at the surface. Hundreds of sinkholes, shallow calcareous ponds and calcium-rich fens dot the landscape. These features, along with extensive coarse-textured dry uplands, produce a patchwork of forest and wetland vegetation communities.

Geology and Geomorphology

Dolomite, limestone and sandstone of Cambrian to Devonian age underlie this Ecoregion. In the northeast, fine- to coarse-textured lacustrine deposits overlie bedrock to a depth of several meters. Beach ridges and wave washed till deposits, left behind as glacial Lake McConnell receded, occur parallel to the lakeshore of Great Slave Lake; extensive veneers and blankets of wave-washed till over bedrock occur along the highway to Fort Smith. The underlying limestone has dissolved in many places, pockmarking the landscape with sinkholes (karst topography) and contributing mineral-rich groundwater to calcareous ponds and wetlands.

Soils

Brunisolic and Luvisolic soils occur with variable-textured materials on well- to moderately well-drained uplands. Gleysols are common in the wetland – upland complexes that occur throughout, and Organic soils and Organic Cryosols are associated with peat plateaus in the south.

Vegetation

Vegetation patterns are strongly controlled by landforms and geology in this Ecoregion. On the driest uplands, such as beach ridges, coarse-textured washed till and eolian deposits, young fire-successional jack pine with a secondary component of trembling aspen form large densely stocked stands with sparse shrub and herb understories. Regenerating young jack pine stands and remnant white spruce stands occur extensively across a dry ridge that occupies the western third of the Ecoregion. Elsewhere, mixed black spruce and white spruce stands, often with larch, occur on wet upland patches between numerous calcareous fens and shallow ponds; dwarf birch, willows, mosses and sedges are typical understory associates. Willow and dwarf birch or sedge-dominated horizontal fens grow on the wettest mineral soils. Peat plateaus with open, stunted black spruce – Labrador tea – lichen woodlands on raised permafrost areas and peat mosses, sedges and cotton-grasses in collapse scars occur mainly in the southernmost parts of the Slave Upland MB Ecoregion.

Water and Wetlands

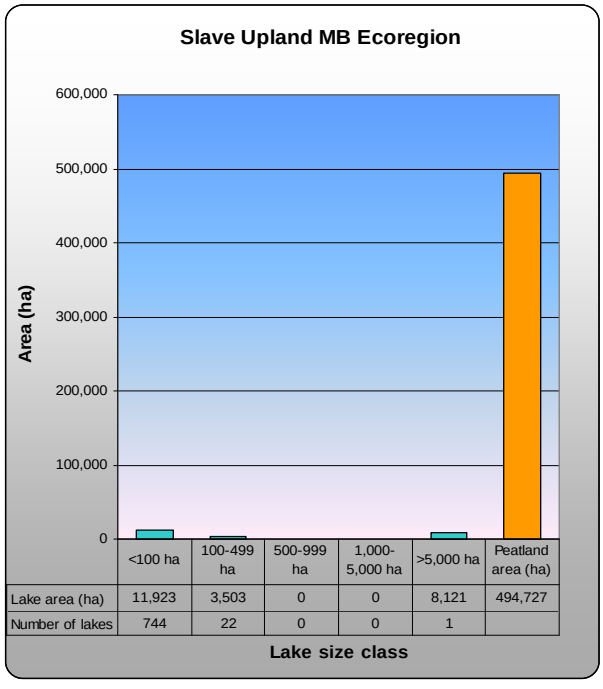
The Nyarling and Sass Rivers flow through this Ecoregion. The western third is relatively dry and there are few wetlands. Much of the remaining area is occupied by thousands of shallow calcareous ponds; sulfur springs may occur occasionally. Wetlands (mainly northern ribbed fens and net fens) occur mainly on fine-textured mineral soils, and there are locally extensive peat plateaus (bogs with stunted black spruce cover on permafrost and collapse scars) in the southern third.

Notable Features

The extent of karst topography, calcareous fens and ponds is unique in the Taiga Plains MB Ecoregion; the Nyarling River actually disappears in places and runs underground through bedrock caverns. This Ecoregion contains the only known nesting grounds of whooping cranes in the world. It was formerly part of the Boreal Plain Ecozone in the 1995 Ecozone and Ecoregions classification (Ecological Stratification Working Group 1995) but a review of available climate information led to its reassignment to the Taiga Plains.

In this typical landscape in the Slave Upland MB Ecoregion, a beach ridge marking the former elevation of a glacial lake runs through the center of the image; it is vegetated by mixed-wood forests, with calcareous thermokarst ponds and net fens in wet areas on either side.

The Ecoregion contains a high concentration of calcareous ponds, fens and moist to wet uplands forested by black spruce, white spruce and larch. Some of these complexes are important whooping crane habitat.



	<100 ha	100-499 ha	500-999 ha	1,000-5,000 ha	>5,000 ha	Peatland area (ha)
Lake area (ha)	11,923	3,503	0	0	8,121	494,727
Number of lakes	744	22	0	0	1	

Proportion of Ecoregion occupied by lakes: 3%
Proportion of Ecoregion occupied by bogs and fens: 66%

A water-filled sinkhole is a karst feature that is formed when underlying limestone bedrock dissolves and the ground surface collapses.

3.3.4.10 Slave Delta MB Ecoregion

Overview: *The Slave Delta MB Ecoregion is a wide, actively expanding freshwater delta over 70 kilometers across, with diverse mixed-wood forests on river terraces and wetlands in abandoned channels and low-lying floodplains.*

Summary:

- Active delta, with young, vigorous upland forests, rich willow, black spruce and sedge fens, and marshlands.
- Flooding mortality is common especially along the lower third of the Delta.

Total area: 3,803 km^2 . (3.6% of Taiga Plains MB Ecoregion). Ecoregion shown in red.	**Average elevation (range) mASL:** 150 (150-175)

General Description

The Slave Delta MB Ecoregion includes the actively growing Slave River Delta, one of the largest freshwater deltas in the Northwest Territories. It is bounded on the east by the Level II Taiga Shield Ecoregion, on the west by the Little Buffalo River and a low rise, and on the south by slightly higher terrain where delta-forming processes are currently inactive. Flooding and deposition of fine-textured materials produces a mosaic of young, vigorous deciduous and mixed-wood stands and rich treed, shrubby, and sedge fens. There is often less than a meter of elevation difference between upland and wetland sites. Flooding mortality is common especially on the northern half of the Delta.

Geology and Geomorphology

Flooding and deposition are the dominant processes in this Ecoregion. The Slave River meanders east to west across the Delta, deposits broad, low relief alluvial terraces, and leaves abandoned water-filled channels where the river once flowed. Glacial Lake McConnell covered this area thousands of years ago, but fluvial processes have since replaced lacustrine sediments with alluvial deposits.

Soils

Active deposition and high water tables produce Regosolic and poorly-drained, fine-textured Gleysolic soils on the terraces. Organic soils and Gleysols occur under wetlands. Permafrost is uncommon.

Vegetation

Young deciduous, mixed conifer – deciduous, and pure coniferous stands grow well on better drained terrain, such as slightly raised alluvial terraces and levees. On these comparatively dry sites, trembling aspen, balsam poplar, white spruce and black spruce occur as pure stands or in mixtures with understories of typical boreal species such as low-bush cranberry, prickly rose, and reed-bentgrass. Black spruce and mixed black and white spruce stands occur where the water table is closer to the mineral soil surface. Horizontal fens dominated by black spruce, willow – alder shrublands and sedge occur on wet mineral and organic soils; shrub and sedge communities are most common along the outer parts of the Delta where it builds into Great Slave Lake. Bulrush and sedge-dominated active and inactive delta marshes occur in places where the water table is consistently above the mineral soil surface.

Water and Wetlands

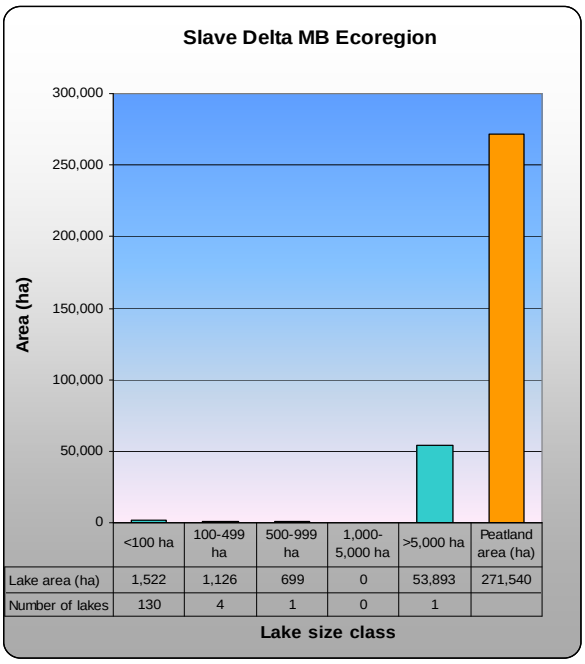
The Slave River is the only large water feature in the Slave Delta MB Ecoregion, and accounts for about 20 percent of the total area. The Taltson River flows along the east side, and numerous small oxbow lakes and abandoned channels occur within the delta. Channel fens, channel marshes, and active and inactive delta marshes occur throughout the Ecoregion, the latter near the river mouth.

Notable Features

The vegetation and landform complex on the Delta produces a rich array of habitats for moose and furbearers, and important winter range for willow ptarmigan. This Ecoregion was formerly part of the Boreal Plain Ecozone in the 1995 Ecozone and Ecoregions classification (Ecological Stratification Working Group 1995) but a review of available climate information led to its reassignment to the Taiga Plains.

Near its mouth, the Slave River Delta is an intricate complex of wet sedge and shrub-dominated channel fens (light green), drier terraces with young mixed-wood, deciduous and conifer forests, and horizontal fens with black spruce cover in abandoned river channels.

The Slave River Delta inland from the delta mouth supports tall white spruce – black spruce forests (dark green patches), trembling aspen – balsam poplar forests (medium green) and small horizontal fens (light green and grayish tones).



(Water area includes Slave and Taltson Rivers)

Proportion of Ecoregion occupied by lakes: 15%
Proportion of Ecoregion occupied by bogs and fens: 71%

The mouth of the Slave River Delta is densely vegetated by willow – alder – birch shrublands; a sedge-dominated channel marsh is a lighter green tone along the shore of Great Slave Lake.

3.3.4.11 Slave Lowland MB Ecoregion

Overview: *Nearly level lacustrine and alluvial deposits with a mosaic of sedge and grass meadows, diverse forests and wetlands typify the Slave Lowland MB Ecoregion, paralleling the Slave River between the Canadian Shield to the east and a bedrock escarpment to the west.*

Summary:

- Formerly a bay of Glacial Lake McConnell that has since filled in with lacustrine and alluvial deposits.
- Rich sedge and grass meadows, upland forests, and extensive wetlands.

Total area: 5,686 km^2 (5.3% of Taiga Plains MB Ecoregion). Ecoregion shown in red.	**Average elevation (range) mASL:** 200 (150-300)

General Description

The Slave Lowland MB Ecoregion is bounded on the east by the Level II Taiga Shield Ecoregion, on the west by a wave-cut bedrock escarpment marking the former extent of glacial Lake McConnell, on the north by the active portion of the Slave River Delta, and on the south by the Alberta border. This area occupies a former bay of glacial Lake McConnell that over time has filled with lacustrine and alluvial deposits. Large fens, sedge and grass meadows, and diverse upland forests are the main vegetation types.

Geology and Geomorphology

A former bay of glacial Lake McConnell defines the current extent of the Slave Lowland MB Ecoregion. Wave action cut the escarpment on the west side, and the Precambrian Shield contained the lake on the east. As the lake receded, the Slave River Delta grew progressively northward, the bay filled with alluvial and lacustrine deposits, and the Slave River carved channels through these mostly fine-textured sediments as the land surface gradually rose following deglaciation (isostatic rebound). An immense sand delta formed near Fort Smith with banks 30 m higher than the Slave River. Active alluvial processes still operate along the Slave and Taltson Rivers. Saline groundwater discharges from Devonian formations containing gypsum and salt produce local saline meadows near the western bedrock escarpments.

Soils

Fluvial processes close to the river produce Regosolic soils; Gleysolic soils are dominant on the generally poorly-drained terrain. Organic soils also occur with wetlands. Permafrost is uncommon.

Vegetation

Vegetation patterns are similar to those of the Slave Delta MB Ecoregion, but flooding mortality is not as widespread. Trembling aspen, balsam poplar, white spruce and black sprucegrow in pure stands or in mixtures with understories of typical boreal species such as low-bush cranberry, prickly rose, and reed-bentgrass on drier sites such as raised alluvial terraces and levees. Moist meadows dominated by awned sedge, reed-bentgrass, and other grasses, sedges and forbs occur on imperfectly- to poorly-drained fine-textured mineral soils; groves of trembling aspen and willow occur within and around the meadows. Pure and mixed black spruce and white spruce stands grow where the water table is closer to the mineral soil surface. Large horizontal fens with black spruce, willow and sedge components occur on wet alluvial and lacustrine plains. Saline meadows occur near the western edge of the Ecoregion below the escarpment and belts of salt-tolerant vegetation such as red glasswort and fox-tail barley form concentric rings around saline sloughs and seepage areas.

Water and Wetlands

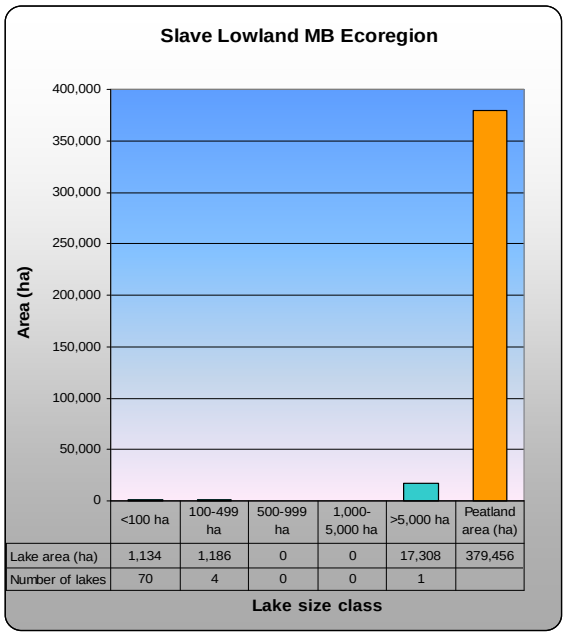
The Slave River is the largest water feature in the Slave Delta Ecoregion, and accounts for about five percent of the total area. The Taltson River flows along the east side, and numerous, intricately braided abandoned channels indicate the current and past extent of the Slave River. Horizontal fens cover large areas, and are interspersed with drier sedge and grass meadows and upland forests.

Notable Features

A mosaic of grass and sedge meadows is a unique feature of this Ecoregion, and provides important bison and moose habitat. White pelicans nest on islands in the Slave River and feed in the rapids along the Slave and Taltson Rivers. Saline meadows occur below the western escarpment; uncommon species such as red glasswort and saline plantain occur there. This Ecoregion was formerly part of the Boreal Plain Ecozone in the 1995 Ecozone and Ecoregions classification (Ecological Stratification Working Group 1995) but a review of available climate information led to its reassignment to the Taiga Plains.

Mixed lacustrine and alluvial deposits, with a complex of light green meadows (mixed shrub, sedge, and grass communities) and horizontal fens occupy the foreground, with vigorous mixed-wood forests in the mid and upper image.

Bison trails are faintly visible in the middle and upper image in this near-ground view of a relatively dry meadow. The whitish patches are weakly saline lacustrine materials that support a mix of grasses and sedges. The meadow is surrounded by mixed-wood forests and shrublands.



	<100 ha	100-499 ha	500-999 ha	1,000-5,000 ha	>5,000 ha	Peatland area (ha)
Lake area (ha)	1,134	1,186	0	0	17,308	379,456
Number of lakes	70	4	0	0	1	

Proportion of Ecoregion occupied by lakes: 3%
Proportion of Ecoregion occupied by bogs and fens: 67%

Red glasswort (red tinted vegetation) grows in areas of high salinity in this ground view of a saline meadow. A belt of fox-tail barley surrounds the glasswort, and awned sedge and reed-bentgrass meadows in the foreground occupy less saline areas.