

Summary

Assessment of the Natural Values for ^{← all ready done} The Eagle Plains, Peel Plateau, British & Richardson Mountains and MacPherson Plain Ecoregions

Introduction

This document provides an overview of the essential natural values and describes potential optional areas for protection in the Eagle Plains and northern Peel Plateau ecoregions and adjacent portions of the Fort MacPherson Plain and southern portion British & Richardson Mountains ecoregions. This summary has been prepared Yukon Protected Areas Secretariat to assist in identifying potential protection interests to be withdrawn from the Yukon government's 2001 call area for oil and gas nominations in the Northeast Yukon. Based on the natural values assessment framework prepared in 2000, a comprehensive analysis and detailed technical report will be prepared by March 31, 2001 to fully document this overview. The assessment is based on fieldwork completed in the region in the summers of 1994, 1999 and 2000.

The YPAS report, "Natural Values Criteria and Assessment for the Identification of Protected Areas in the Yukon" describes how expert panels will be used to identify protected areas in the Yukon. "YPAS brings together scientists from many different disciplines when identifying core goal 1 protected areas. These scientists offer expert knowledge of ecosystems, populations, geology, and terrain and landscape structure. The inclusion of people with detailed local or traditional knowledge is critical. The exchange of information among scientists and local experts allows a synthesis that is not possible by any one individual or discipline. Information may become available that may not be quantified or contained in published reports." On December 13, 2000 an expert panel was convened to identify essential features in the northeast Yukon and identify initial options for the natural values assessment.

In addition to these three seasons of field work there have been five previous compilations and assessments of conservation interest for most of this region:

- International Biological Program (1960s & 70s);
- Mackenzie Delta/Beaufort Sea Land Use Plan draft (1990);
- Yukon Parks System Plan Implementation Project for the Porcupine-Peel Landscape (1993);
- Peel River Watershed Advisory Council Report (1996); and
- Gwich'in Land Use Planning Board community area of interest report (1998).

Each of the options outlined below is contained in all or in part in more than one of these assessments.

all ready
adequately
represented by
Goal 1 park

As part of step 1 of the Yukon Protected Areas Strategy (YPAS) process, *Initial Areas of Interest* options will be identified by a government working group by consolidating this natural values assessment with socio-cultural (archaeology, recreation, community, etc....) and resource, other economic values assessments (mineral, oil and gas, renewable energy, tourism, etc....), and third party interests. These options will then lay the groundwork for initiating the YPAS process. A Local Planning Team (LPT) will be established for the Northeast Yukon to evaluate and publicly review these and possibly identify other *Areas of Interest* options. The LPT will recommend to the Yukon Government appropriate study areas for these ecoregions, which will be further evaluated and reviewed toward the delineation and designation of goal 1 protected areas.

Representation and Natural Values Assessment Options

The full assessment of representation for each option will be presented in the final report. Here we conducted an analyses of reconnaissance-level forest cover to provide an indication of the representivity of each of the following options. The information on forest cover is presented in Table 1.

Options for the Eagle Plains Ecoregion

Three options have been delineated based on identification of areas with essential and high protection values for representation and ecological viability. They centre on the Eagle Plains Ecoregion and take in parts of the adjacent British & Richardson Mountains Ecoregion, and Old Crow Basin Ecoregions. These latter two ecoregions are included as they are essential elements to ensure the ecological viability of the options presented for the Eagle Plains Ecoregion. Furthermore, while Ivavik National Park represents the British Mountains component, and Vuntut National Park represents the Barn Mountains, the Richardson Mountains component of this ecoregion is not currently represented.

Eagle Plains Option 1:

This option encompasses;

- the Eagle River and Rock River watersheds in the Eagle Plains Ecoregion;
- the upper Eagle and Rock rivers in the British Richardson Mountains Ecoregion; and
- the lower Eagle and Rock rivers in the Old Crow Basin Ecoregion.

This option features a diverse range of landscape types from the high elevation southern Richardson Mountains, to moderate relief of Eagle Plains, and lowland wetlands of the Old Crow Basin. Ecological viability is established by the inclusion of the complete Eagle River and Road River watersheds, and productive wetlands associated with the lower Eagle and Rock rivers.

Both already have goal 1 parks adequately represented

not ecoregions
 NO commitment to represent these in YPAS by GOAL 1 PARKS!
 should not be included

Essential Features:

- **Whitefish Wetland Complex:** The wetlands at the lower Eagle and Rock rivers are part of the Whitefish Wetland Complex which has been identified by the Yukon Wetlands Technical Committee as significant in the Yukon. This area is a key source of biological productivity and diversity.
- **Eagle River:** The middle to upper Eagle River has been identified as key nesting habitat for birds of prey. This wide oxbows and broad meanders are characterized by important stands of old-growth White Spruce and Balsam Poplar forests. . Forested areas to the west of the middle to lower Eagle River are characterized by stands of White Birch. These stands are characteristic of central Eagle Plains and are not represented elsewhere in this option. The inclusion of the whole Eagle River watershed significantly enhances the ecological viability of this option.
- **Upper Rock River and eastern tributaries of the Eagle River:** The inclusion of upper reaches of watersheds in protected area options is key to maintaining ecosystem function and ecological viability. The eastern tributaries of the Eagle River and the upper Rock River include the foothills and higher elevations of the southern Richardson Mountains. This area establishes key elements of landscape and habitat diversity that are not represented elsewhere in this option. This area supports key habitat for Dall's Sheep. The Mount Cronin Dall's Sheep is a rare instance of a population free from hunting pressure. It is a significant migration corridor and wintering area for the Porcupine Caribou Herd. The transitional character of the habitats here is associated with remarkably diverse and productive wildlife communities. The western foothills of the southern Richardson Mountains are important habitat for grizzly bear.
- **Canyon Creek:** This area is characterized by special geological and hydrological features with a spectacular series of high waterfalls and folded sedimentary rock. It contains key habitats for Dall's Sheep.

Eagle Plains Option 3:

Option 3 differs from Options 1&2 in that it includes portions of the Porcupine River, but does not fully encompass the upper Eagle River, and does not include Canyon Creek. This option encompasses;

- the middle and lower Eagle River watershed, the Rock River watersheds, Schaeffer Creek, and a section of the Porcupine River in the Eagle Plains Ecoregion;
- the upper Rock River and western parts of the upper Eagle River in the British & Richardson Mountains Ecoregion; and
- the lower Porcupine, Eagle and Rock rivers in the Old Crow Basin Ecoregion.

Options for the Peel Plateau Ecoregion

The natural values assessment for the Peel Plateau Ecoregion is limited to the northern portions (i.e. north of the Snake, Bonnet Plume, and Wind rivers) of the ecoregion. Two options have been delineated which centre on the Peel Plateau Ecoregion and take in parts of the adjacent Fort MacPherson Plain and British Richardson Mountains ecoregions. ✕

Peel Plateau Option 1:

This option encompasses;

- the Road River watershed and the upper Vittrekwa River and associated wetlands in the Peel Plateau Ecoregion;
- the headwaters of the Road and Vittrekwa rivers in the British Richardson Mountains Ecoregion;
- Tabor Lake, Three Cabin River, portions of the Satah River, and the Jackfish Creek headwater wetlands in the Fort MacPherson Plain Ecoregion; and
- a significant reach of the Peel River which divides the Peel Plateau and Fort MacPherson Plain ecoregions.

This option features a diverse range of landscape types from the high elevation southern Richardson Mountains in the west to the lowland wetlands of the Fort MacPherson Plain to the east. Ecological viability is established by the inclusion of the complete Road River watershed, a significant stretch of the Peel River, and productive wetlands associated with the Vittrekwa River, Tabor Lake, and the Jackfish Creek headwaters.

Essential features:

- **Jackfish Creek headwaters:** This area has been delineated by the Gwich'in Interim Land Use Planning Board as a proposed "community protected area". The Gwichya Gwich'in have identified the area as an important biological and cultural area. It is significant for hunting, trapping, and fishing. The area is important for beaver, muskrat, moose, and fish species. Caribou occupy the region during summer months. Surveys conducted by the Yukon Government Department of Renewable Resources in 1999 found that this area supports rich and productive biological communities. These wetlands are significant in extent and are unlike other wetlands found in the Yukon. They have been identified by the Yukon Wetlands Technical Committee as a key Yukon wetland. Alternative options do not exist in Yukon for protecting this ecosystem. *what does this encompass?*

- **Tabor Lake and Three Cabin River:** This area has been delineated by the Gwich'in Interim Land Use Planning Board as a proposed "community protected area". The Tetlit Gwich'in use the area for trapping in winter. The area supports diverse wildlife communities including moose, caribou, wolverine, black and grizzly bears, marten, wolf, mink, lynx, beaver, muskrat, fox, waterfowl, and raptors. Surveys conducted by

we YPAS does not "protect" ecosystems!

↑ like HPA?

watershed, a significant stretch of the Peel River, and productive wetlands associated with Turner Lake.

Essential Features:

- **Caribou River, Caribou Mountain, and Caribou Lake:** This area has been delineated by the Gwich'in Interim Land Use Planning Board as a proposed "community protected area". The Tetlit Gwich'in use this area for trapping, hunting, and fishing. The area provides significant winter habitat for furbearers and is also important for moose, caribou, black and grizzly bears, and fish species. Caribou Mountain is a significant wintering area for Porcupine Caribou Herd. The inclusion of the complete Caribou River watershed makes a significant contribution to the ecological viability of this option. Caribou Lake is the largest mid-elevation lake in the ecodistrict.
- **Caribou River headwaters:** The inclusion of upper reaches of watersheds in protected area options is key to maintaining ecosystem function and ecological viability. The headwaters of the Caribou River establish key elements of landscape diversity that are not represented elsewhere in this option.
- **Turner Lakes:** This area has been delineated by the Gwich'in Interim Land Use Planning Board as a proposed "community protected area". The Tetlit Gwich'in use this area extensively as it is significant for fish, waterfowl, and furbearers. Surveys conducted by the Yukon Government Department of Renewable Resources in 1999 found that Turner Lakes and associated wetlands are a key source of biological diversity. The Yukon Waterfowl Management Plan identifies this area as a key Yukon wetland.
- **Peel River:** The Peel River is the dominant drainage in the region and is critical to biological communities, ecological productivity, and ecosystem function. The river supports diverse fish communities including lake whitefish, least cisco, longnose sucker, ninespine stickleback, northern pike, pond smelt, round whitefish, slimy sculpin, trout perch, and walleye. The cutbanks along the Peel River provide key nesting habitat for Peregrine Falcon. Habitat diversity is enhanced by the section of the Peel River at the confluences of the Snake and Bonnet Plume rivers.

Options for the Fort MacPherson Plain Ecoregion

The primary option for the Fort MacPherson Plain is described as a portion of the Peel Plateau Option 1. This area of the Fort MacPherson plain is best considered as linked to Peel Plateau Option 1. However, if the YPAS process ultimately pursues Option 2, then this portion of the Fort MacPherson Plain stands as an essential area for the representation of the Fort MacPherson Plain Ecoregion. This option encompasses;

TABLE 1: FOREST COVER representation using Percent of dominant Forest Cover Types for area of Interest Options for the Peel Plateau Ecoregion (PRP) and Eagle Plains Ecoregion (EP). Data for the adjacent portions of the British-Richardson Mountains (BRM), and Fort MacPherson Plain (FMP) ecoregions are also shown. Source: DIAND Forest Resources forest cover reconnaissance data.

Peel Plateau Options:												
COVERTYPE	Ecoregions			Option 1 (Caribou)			Option 2 (Road)					
	PRP	FMP	BRM	PP1_PRP	PP1_FMP	PP1_BRM	PP2_PRP	PP2_FMP	PP2_BRM			
Hardwood	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00			
Mixed	1.3	0.0	0.0	1.82	0.00	0.00	0.60	0.00	0.00			
Non-forested	11.3	10.5	92.4	15.74	0.21	56.45	16.42	19.77	80.51			
Spruce	85.4	83.7	7.6	82.44	99.79	43.55	79.91	68.38	19.49			
Eagle Plains Options:												
COVERTYPE	Ecoregions			Option 1 (Eagle)			Option 2 (Canyon)			Option 3 (Porcupine)		
	EP	BRM	OCB	EP1_EP	EP1_BRM	EP1_OCB	EP2_EP	EP2_BRM	EP2_OCB	EP3_EP	EP3_BRM	EP3_OCB
Hardwood	0.51	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mixed	18.98	0.0	0.6	5.3	0.0	4.8	5.9	0.0	4.8	21.7	0.0	4.2
Non-forested	27.51	92.4	53.4	26.2	80.9	93.4	30.8	76.8	93.4	37.0	80.9	94.6
Spruce	53.00	7.6	46.0	68.5	19.1	1.8	63.3	23.2	1.8	41.3	19.1	1.2

TABLE 2: FIRE SIZE (km2) and Ecological Viability for Northeast Yukon Natural Values Assessment Area.				
	Total	X 10	X 25	X 100
Average Fire Size	68.8	687.7	1719.3	6877.2
Min Fire Size	0.5			
Max Fire Size	1906.5			
Ecological Viability & Protected Area Size		low	medium	high