ENVIRONMENTAL ASSESSMENT
SCREENING REPORT

Forest Development Plan for the Quill Creek Bench Harvest Planning Area in the Haines Junction Area

Prepared by:
Yukon Government
Forest Management Branch
November 2005

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EXECUTIVE SUMMARY

This environmental assessment screening report has been completed for 32 blocks in the Quill Creek Bench Harvest Planning Area, in the Haines Junction area. The approximate area and volume of these blocks is 780 ha. and 165,000 m^3 of timber, respectively.

The Director of the Yukon Forest Management Branch and the Manager of Land Use (Lands Branch) are delegated as the representative of the Responsible Authority (the Minister) for purposes of carrying out environmental assessments for forest management projects (under Section 4.1 of the *Environmental Assessment Act).* Given the mitigations provided in this screening report, the Responsible Authority is satisfied that this project is not likely to cause significant adverse environmental effects. Accordingly, the *Environmental Assessment Act* determination is that, subject to the mitigation requirements contained in this screening report, this project is hereby authorized and may proceed.

1. TOMBSTONE DATA

Table 1. Environmental Assessment File Information

Proponent Name	Yukon Government Forest Management Branch
Contact Information	Gary Miltenberger, Director, Forest Management Branch Box 2703 (K-918); Whitehorse, YT Y1A 2C6 Phone: (867) 456-3838 Fax: (867) 667-3138
Project Title	Environmental Assessment Screening Report - Forest Development Plan for the Quill Creek Bench Harvest Planning Area in the Haines Junction Area
Physical Work or Activity	Timber harvesting, road construction and all associated activities
Multiple Activity	No
E. A. Start Date	September 22, 2005
E. A. Finish Date	November 27, 2005
E. A. Determination	This project is not likely to cause significant adverse environmental effects (s. 16) of *EAA.*
Subject Descriptor	Forestry
Project Category Code	Aerial

Table 2. Responsible Authority Identification

Lead Responsible Authority	Department of Energy, Mines and Resources
Responsible Authority Contact Information	c/o Gary Miltenberger, Director, Forest Management Branch Box 2703 (K-918) Whitehorse, YT Y1A 2C6 Ph: (867) 456-3838 Fax: (867) 667-3138
Other Responsible Authority	Marg White, Manager of Land Use
Date EAA Coordination Regulations Triggered	September 22, 2005
Project Trigger	(s. 8) Inclusion List Regulations; timber volume >1000 m^3
Lead Type of Approval	Commercial timber permits
Status of Approval	Ongoing
Integrated Screening	Yes
Other Triggers	Land use permit
Other Types of Approval	YG - Highways and Public Works – Highway Access Permit
Project File Location	Forest Management Branch, Whitehorse, YT

Table 3. Project Location

Region	Yukon Territory
NTS Map #s	115A/11
Geographic Location Name	Quill Creek
Latitude/Longitude	Approximately 60°41’N., 137°21’W.
Watershed/Drainage Region	Alsek watershed via Dezadeash and Kathleen watersheds
Nearest Community	Haines Junction, YT
First Nation Traditional Territories	Champagne and Aishihik First Nations
Surrounding Land Status	Yukon land, Highway Right of Way, Kluane National Park and Reserve
Special Designation	None

2. BACKGROUND

The Department of Indian Affairs and Northern Development (DIAND), Forest Resources completed two resource reports for forest fire hazard reduction and timber salvage in 2001. The purpose of these resource reports was to continue wildfire hazard and risk reduction initiatives for the Haines Junction, YT area and to provide economic opportunity for local industrial demand. One of these resource reports, "*Final Resource Report: Hazard Reduction and Timber Salvage Forest Management Plan in the Vicinity of Haines Junction Planning Area*" (DIAND Forest Resources 2001) is referred to in both the project description (Government of Yukon, Energy, Mines and Resources (EMR) - Forest Management Branch 2005) and this environmental assessment screening report.

The Strategic Forest Management Plan (SFMP) in the Champagne and Aishihik Traditional Territory (CATT) was completed in the fall of 2004, which initiated the second phase of the Integrated Landscape Planning (ILP). The ILP analysis classifies broad areas for forest development and provides strategies for reducing or eliminating negative impacts on other resource values.

In January 2005, the Forest Development Plan (FDP) for Haines Junction Planning Area (PA) 2, Operating Unit (OU) 3 was completed. Consultation for this FDP occurred in February and March 2005. The environmental assessment for PA 2, OU 3 was completed in July 2005.

In September 2005, the FDP for the Quill Creek Bench Harvest Planning Area in the Haines Junction Area was completed. Consultation for this FDP occurred in September and October 2005 and comments received from stakeholders can be found in Appendix 2 of this environmental assessment screening report.

3. THE PROJECT

The *Environmental Assessment Act* (EAA; Statutes of the Yukon 2003) describes a project as:

> *(a) "an undertaking in relation to a physical work such as any proposed construction, operation, modification, decommissioning, abandonment or other undertaking"* or *"any proposed physical activity not relating to a physical work that is listed in the regulations to EAA."* (pg.6)
>
> or

> *(b) "any proposed physical activity not relating to a physical work that is prescribed, or is within a class of physical activities that is prescribed, pursuant to regulations made under paragraph 47 (b)."* (pg.6)

The Inclusion List Regulation *"Order-in-Council 2003/Environmental Assessment Act,"* (Yukon Territory Canada 2003) states the forestry activities requiring an environmental assessment. Section 8 of the Inclusion List Regulation states:

> *"the cutting and removal of timber under a timber harvesting agreement entered into by the Minister in accordance with the Territorial Lands (Yukon Act or the cutting and removal of more than 1,000 m^3 of timber that requires a permit pursuant to the timber regulation."* (pg.3)

This project consists of timber harvesting and the activities associated with timber harvesting of 32 blocks (2A, 2C, 2E, 2F, 2H, 2I, 3A, 3B, 3D, 3E, 3F, 3G, 3H, 4A, 4B, 4C, 4D, 4N, 4P, 6A, 6B, 6C, 6F, 6G, 6J, 6M, 6N, 6O, 7A, 7B, 7H and 7J) located in the Quill Creek Bench HPA (Figure 1). The proposed harvest volume associated with this project is approximately 165,000 m^3, totaling an area of approximately 780 ha (Table 4).

Table 4. Blocks in the Quill Creek Bench HPA in the Haines Junction Area

Block	Approx. Opening Size (ha.)	Approx. Volume (m^3)/ha.	Approx. Block Volume (m^3)	Avg. DBH (cm)	Avg. Height (m)
2A	10	164.8	1,648	17.4	11.4
2C	28.5	201.4	5,739.9	19.8	14
2E	13.5	192.7	2,601.5	20.3	13.3
2F	50.8	210.6	10,698.5	25.4	15.1
2H	27.5	156.6	4,306.5	21.6	12.3
2I	10.5	187.2	1,965.6	25.9	15.6
3A	3.4	180.9	450	19.9	13.3
3B	27.5	186.2	3,850	17.9	12.3
3D	7.1	215.6	1,278	23.7	13.7
3E	9.0	153.5	1,260	21.6	13.0
3F	6.0	251.4	1,380	25.7	15.6
3G	8.4	199.6	1,512	22.6	15.2
3H	8.8	205.2	1,540	28.9	15.8
4A	18.4	293.5	5,400.4	21.6	13.9
4B	92.9	204.3	18,979.5	22.1	14.7
4C	43.7	163.1	7,127.5	23.3	13.9
4D	33.1	266.2	8,811.2	22.4	14.6
4N	17.1	295.5	5,053.1	23.1	14.8
4P	62.7	201.6	12,640.3	27.2	15.7
6A	22.7	151.9	3,448.1	24.6	13.7
6B	7.9	193.2	1,526.3	27.5	16.1
6C	8.3	290.3	2,409.5	22	15
6F	9.7	173.9	1,686.8	28.2	16.9
6G	28	164.2	4,597.6	27.8	14.5
6J	29	317.8	9,216.2	25.3	16.8
6M	8.6	204.8	1,761.3	26.7	16.5
6N	37.4	250.1	9,353.7	27.6	16.8
6O	46.8	172.7	8,082.4	26.2	15
7A	10	247.1	2,471	23.1	15.5
7B	28.5	122.3	3,485.6	28.4	15.6
7H	13.5	357.2	4,822.2	26.5	18
7J	50.8	281	14,274.8	27.2	16.7

Short descriptions of the blocks as well as block maps were provided in the project description (Appendix 1). The blocks range in size from 3.4 ha. (Block 3A) to 92.9 (Block 4B) and the silviculture system for each of the blocks is either natural shelterwood (overstory removal) or variable retention (if in the wildlife value area classification).

As described in the FDP, >90% of the white spruce (*Picea glauca*) trees over the 16 cm diameter class in the area have been attacked by spruce bark beetle (*Dendroctonus rufipennis*) and between 38-80% of the tallied trees are standing dead.

Block reforestation will be monitored with scheduled post-harvest assessment activities (i.e. conducting a stocking assessment or survey to determine the number of understory spruce stems and their distribution). If after forest harvesting, the number and distribution of the spruce understory is <750 stems per ha. target, then a fill plant will be required.

a. Project Location

The Quill Creek Bench HPA is located south of the Village of Haines Junction, adjacent to the Haines Highway near Quill Creek (Figure 1). The Quill Creek Bench HPA straddles the border of the Yukon Southern Lakes and Ruby Range ecoregions of the Boreal Cordillera Ecozone.

In the Yukon Southern Lakes ecoregion, open forest communities generally consist of alpine fir (*Abies lasiocarpa*), white spruce and occasional lodgepole pine (*Pinus contorta*; Environment Canada 2005). In the Ruby Range ecoregion, white spruce, black spruce (*Picea mariana*), dwarf willow (*Salix herbacea*), birch (*Betula* sp.), ericaceous shrubs and occasional lodgepole pine form extensive forests. Black spruce, scrub willow, birch and mosses are generally found within poorly drained sites of the Ruby Range ecoregion (Environment Canada 2005).

The proposed harvest blocks within the Quill Creek Bench HPA are pure white spruce or white spruce leading (with trembling aspen; *Populus tremuloides*) stands. Understory vegetation consists of white spruce regeneration, willow (*Salix* sp.), alder (*Alnus* sp.), rose (*Rosa* sp.) and twinflower (*Linnaea borealis*; Government of Yukon, Department of Energy, Mines and Resources - Forest Management Branch 2005).

Some of the characteristic wildlife species inhabiting the forested areas within proximity to the project area include: grizzly (*Ursus arctos horribilis*), caribou (*Rangifer tarandus*), moose (*Alces alces*), black bear (*Ursus americanus*), coyote (*Canis latrans*) beaver (*Castor canadensis*), fox (*Vulpes* sp.), wolf (*Canis* sp.), hare (*Lepus* sp.), raven (*Corvus corax*) and many birds of prey, waterfowl and migratory bird species. The southwest Yukon is a major bird migration route; some 118 species bird species have been observed nesting in the region (Alsek Renewable Resource Council et al., 2004).

All waterways flow into the Alsek watershed via the Dezadeash and Kathleen watersheds. Kokanee (*Oncorhynchus nerka*), dolly varden (*Salvelinus malma*), round whitefish (*Prosopium cylindraceum),* Arctic grayling (*Thymallus arcticus),* lake trout (*Salvelinus namaycush*) and rainbow trout (*Oncorhynchus mykiss)* have been documented in Kathleen River (Fisheries and Oceans 2001). Lake whitefish (*Coregonus clupeaformis),* dolly varden, round whitefish, lake trout, longnose sucker (*Catostomus catostomus),* burbot (*Lota lota),* northern pike (*Esox lucius)* and slimy sculpin (*Cottus cognatus*) have been documented in Dezadeash River (Fisheries and Oceans 2001).

Figure 1 will replace this page… (Overview map)

4. PROJECT TRIGGERS AND RESPONSIBLE AUTHORITIES

According to *EAA*, an environmental assessment is required for a project requiring a timber permit for a volume >1,000 m^3 or if the project requires an environmental screening for any of its components. Since the project involves the timber harvesting and associated activities, as well as land use activities for 32 blocks in the Quill Creek HPA in the Haines Junction District, the Government of Yukon Department of EMR, Forest Management Branch and Lands Branch (Land Use) are representatives of the Responsible Authority (RA), the Minister of EMR. A RA is an authority that either has proposed the project or has been asked to provide support or approval in the form of funding, land, or a permit, license or other approval specified by regulation (Statutes of the Yukon 2003).

5. SCOPE

Scope is defined as those components of the proposed development that are considered part of the project for the purposes of environment assessment (Government of Yukon 2003).

a. Scope of the Project

The scope of the project identifies the development activities. The scope of this project includes:

- All phases of the project, including but not limited to, the construction of new roads and the upgrade of existing roads, construction of stream crossings, decommissioning of roads and stream crossings, regeneration of the blocks and associated activities such as regeneration surveys
- The operation of equipment and machinery
- Potential accidents and malfunctions related to the project, or that may occur in connection with the project (i.e. spills, etc.)

b. Scope of the Assessment

The scope of the assessment identifies the environmental components of the environmental assessment screening. The temporal scope of this assessment includes the environmental effects of the project for 15 years (allowing for harvesting, regeneration, monitoring and regeneration surveys, deactivation and rehabilitation), plus the duration of any adverse environmental effects during that time period. After 15 years, forest recovery should be

well underway and crop trees should be at a stage where they can reasonably be expected to continue to develop without significant additional intervention.

The spatial scope of this assessment includes the environment (land, water, air) contained within the proposed project boundaries and the environment outside the project that could be potentially affected through the administration of the project.

6. FACTORS CONSIDERED IN THIS ASSESSMENT

This assessment considers the following factors from Section 12 of *EAA*:

- The environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative effects that is likely to result from the project in combination with other projects or activities that have been, or will be carried out
- The significance of the above environmental effects
- Technically and economically feasible mitigation measures, implemented to mitigate potentially significant adverse environmental effects related to the project
- Comments from the public

a. Changes in the Environment Caused by the Project

Timber harvesting in Quill Creek Bench HPA will cause changes to the environment. Changes in the environment may include, but are not limited to: changes in the seral stage of the forest, wildlife habitat for forest dependent wildlife species, habitat fragmentation, visual quality, roads and landings, hydrology and pollution. Some of the possible environmental effects caused by forest harvesting in Quill Creek Bench HPA are described in Table 5.

Table 5. Possible Environmental Effects Caused by Forest Harvesting in the Quill Creek Bench HPA

Alterations	Possible Environmental Effects
Harvesting	Wildlife habitat for forest dependent species; changes in seral stage; industrial noise; habitat fragmentation and visual quality, etc.
Reforestation	Brush competition, increased snow press damage, etc.
Roads and landings	Reduction in habitat for forest dependent species; erosion and sedimentation, increase in access, etc.
Hydrology	Stream erosion and sediment, etc.
Pollution	Oil, litter, wood smoke, etc.

b. Health and Socio-economic Conditions

No known health conditions will be likely caused by this project; however, an individual expressed a concern for wood smoke. To help prevent wood burning pollution, burning activities in the area will be limited to:

- Burning only in the winter season (October 1 - March 31)
- Burning on days when the ventilation index indicates good or high ventilation
- Burn piles shall contain no dirt
- Windrows require breaks every 25 m and burn piles shall be located 15 m away from standing timber
- Burn only on stumped ground (landings or Right-of Ways) when possible
- Igniting piles that promote the smoke to move directly up into the sky (i.e. lighting piles from all sides)
- Ensuring burning piles are out and not smouldering before the start of fire season
- Contacting the Zone Protection Manager in Haines Junction prior to burning

The following socio-economic conditions have been raised:

- Economic effects on guide outfitters and other tourism-related activities
- Increased access for hunters
- Effects on visual quality and other recreational experiences

c. Physical and Cultural Heritage

A mapping exercise was completed where potential archaeological locations and known historic and archaeological sites were recorded. An overview heritage assessment is currently being completed and the draft overview report indicates that the Quill Creek Bench area has low heritage potential. Detailed heritage field assessments have not been conducted in the project area; however, if issues arise upon completion of the overview assessment, detailed field assessments shall be conducted and site plans may be altered in order to minimize the impacts.

Although it is not anticipated that heritage sites will be uncovered during road development or harvesting operations, if heritage sites are uncovered, the cessation of all operations shall occur until the CAFN and Government of Yukon, Archaeology and Heritage Resources and the Forest Management Branch are notified and site inspections are performed as required.

d. Current Uses of Lands and Resources for Traditional Purposes by Community Members

Some of the traditional uses of lands and resources by community members include trapping, hunting and fishing, berry picking and recreation.

e. Structures or Site that are of Historical, Palentological or Architectural Significance

In relation to this project, there was no structure or site that was considered of historical, palentological or architectural significance documented.

f. Any Change to the Project Caused by the Environment

It is difficult to determine or predict whether there will be any change to the project caused by the environment. Some examples of possible changes to the project caused by the environment include, but are not limited to:

- Unusual weather occurrences
- Insect and disease outbreak
- Forest fire

7. CUMULATIVE EFFECTS

A cumulative environmental effect is defined as the effects on the environment (i.e. Valued Ecosystem and Cultural Components; VECC) which result from effects of a project when combined with those of other past, existing and imminent projects and activities, occurring over a certain period of time and space (Government of Canada 1994). The cumulative effects evaluation considers past and proposed forest harvesting and other activities that have occurred, are occurring or are forecasted to occur in the vicinity of Quill Creek Bench HPA. Ten evaluations were conducted as part of the cumulative effects review; refer to Appendix 3 for the analysis and the associated user guide (Hegmann and Green 1997) that assisted with the evaluation of cumulative effects.

a. Scope of the Cumulative Effects

The purpose of defining the scope of the cumulative effects section is to identify the environmental effects to be considered in regards to a project; identify the likely cumulative environmental effect and set appropriate geographic and temporal boundaries. The scoping of the cumulative effects section has been divided into: regional issues of concerns; appropriate regional VECCs; spatial and temporal boundaries; other actions that may affect the same VECCs and uncertainty.

b. Regional Issues of Concern

Forest harvesting has occurred in the Haines Junction, YT area; mainly for sawlogs, commercial and personal fuelwood; however, there is a limited history of forest harvesting within the Quill Creek Bench HPA. OU 3, blocks A, B, D, E, F, G and H were environmentally assessed in the spring/summer of 2005 and currently Block 3F has a fuelwood cutter harvesting wood in the northern part of the block. Future proposed forest harvesting activities in the Quill Creek Bench HPA include proposed blocks in OUs 1, 2, 3, 4, 6 and 7, which will contribute to the cumulative effects of the area.

Development projects and activities have occurred within the vicinity of Quill Creek Bench HPA and these activities contribute to the cumulative effects of the area. For example, the Haines Highway was completed in 1943 by the United States Army and roads and trails have been established within Quill Creek Bench HPA. First Nation settlement lands and dwellings have been established adjacent to Quill Creek and the Kathleen River/Rainbow/Crescent Lake areas and commercial (such as guiding, etc.) and recreational activities occur within Quill Creek Bench HPA and across the Haines Highway in Kluane National Park.

c. Appropriate Regional VECCs

The regional VECCs are discussed in Tables 6 and 8.

Table 6. Regional Valued Ecosystem and Cultural Components

Component Type	VECCs	Justification
ENVIRONMENTAL		
Ungulates	Moose and other ungulates	Maintain quality habitat
Carnivores	Bears and other carnivores	Maintain quality habitat
Forest Birds	Forest birds	Maintain quality habitat
Aquatic Resources	Fish and fish habitat, water quality, etc.	Maintain aquatic quality
CULTURAL		
Traditional and Community Lifestyle	Trapping, hunting, gatherings, berry picking	Maintain traditional and cultural lifestyles
Wilderness Values	Recreation, visual quality, tourism, etc.	Maintain wilderness values of the area

d. Spatial and Temporal Boundaries

The purpose of the spatial and temporal boundaries section establishes a frame of reference for assessing cumulative environmental effects and facilitates their identification (CEAA 2003). This section will discuss the spatial and temporal bounds of this project, the availability of existing data and knowledge and the relevant ecological boundaries.

e. Spatial and Temporal Bounds of this Project

Regarding the spatial scope of this assessment, this project is located in the Quill Creek Bench HPA and east of the Haines Highway. This project encompasses a total area of approximately 780 ha.

The temporal scope of this cumulative effects assessment includes the environmental effects of any past projects in the Quill Creek Bench HPA, the environmental effects caused by the current project for 15 years (including the period for forest harvesting, regeneration, regeneration establishment and monitoring, plus the durations of any adverse environmental effects triggered during that time period) and any future projects forecasted for the Quill Creek Bench HPA.

f. The Availability of Existing Data and Knowledge

The availability of existing data is important in assessing the cumulative effects. Current and past forest harvesting in the Haines Junction area has occurred where information has been obtained and was useful for this project (regeneration, operability, etc.).

There are knowledge gaps for the Quill Creek Bench HPA. These data and knowledge gaps include: field heritage assessments, fisheries, bird and wildlife inventory and habitat assessments. However by being conservative and using precautionary measures and the existing data and knowledge, there is sufficient data and knowledge of the Quill Creek Bench HPA to effectively assess the cumulative effects of this project. The precautionary approach has been taken in relation to mitigative measures prescribed. These measures include: riparian management areas, wildlife value areas, variable retention in the wildlife value areas, natural shelterwood (overstory removal), retaining deciduous trees and coniferous trees <17.5 cm and a buffer to the Haines Highway. It is believed that the mitigations proposed in this environmental

assessment screening report minimize risk with regard to the likelihood or magnitude of significant adverse environmental effects.

g. Relevant Ecological Boundaries

Currently there are no known ecological boundaries (such as physiographic, vegetation, land use, habitat, soil and surface materials) that are limiting to this project.

h. Other Actions That May Affect The Same VECCs

Other actions that may affect the VECCs are listed below:

- Increase in noise
- Increase in road access and usage
- Increase in hunting
- Decrease in cover
- Changes to visual quality
- Changes in habitat

i. Uncertainty

There will always be some uncertainty associated with any environmental assessment (CEAA 2003). According to CEAA (2003), uncertainty can be related to scientific methodology, data availability and accuracy, new or unproven technology, new or unfamiliar environmental setting, or the uncertainty of future projects. In the preparation of this screening report, the most up to date information and professional knowledge and judgment was used.

j. Cumulative Effects Evaluation

The likelihood and significance of the cumulative effects was determined to be low (Appendix 3, Form 10). The forms in Appendix 3 summarize the cumulative effects evaluation.

8. COMMENTS/RECOMMENDATIONS RECEIVED THROUGH CONSULTATION PROCESS

The goal of this environmental assessment is to focus on significant and potentially significant environmental effects. Stakeholder groups and individuals, identified in Table 7, were asked to review the FDP (including maps and site plans and associated 2001 Resource Report). As part of the review process, the FMB Environmental Assessment Coordinator

reviewed and compiled all of the responses received by the FMB. All documentation received by the FMB is attached to this report (Appendix 2).

Table 7. Consultation/Referral List

Organization	Contact Person	Incoming Comments
FEDERAL GOVERNMENT		
Environment Canada/Canadian Wildlife Service	Scott Herron 393-7975/Benoit Godin 667-3402 Mile 91782 Alaska Hwy Whitehorse, YT Y1A 5B7	No response
Indian and Northern Affairs Canada	Laura Spicer 667-3326 415-300 Main St. Whitehorse, YT Y1A 2B5	No response
Fisheries and Oceans Canada	Eero Karanka 393-6703 100-419 Range Road Whitehorse, YT Y1A 3V1	No response
Parks Canada	Mike Walton/Kluane National Park Wardens 634-7250 Box 5495 Haines Junction, YT Y0B 1L0	Received October 21, 2005
YUKON GOVERNMENT	**Box 2703 Whitehorse, YT Y1A 2C6**	
Community Services - Community Development Branch	Gerry Gerein 667-5707	No response
Community Services - Protective Services, Wildland Fire Management	Ken Colbert 456-3904	No response
Community Services - Land Development	Brian Ritchie 667-3093	No response
ECO - Environmental Assessment	Shane Andre 456-3803	No response
Economic Development - Investment, Trade and Business Development	Rick Sudeyko 667-3430	No response
EMR - Assessment and Abandoned Mines	Marg Crombie 393-7098	No response
EMR- Agriculture Branch	David Beckman 667-5838	No response
EMR - Client Services and Inspections Branch	John Jennings 634-2256 Mile 143 Haines Road Haines Junction, YT Y0B 1L0	No response
EMR Library	Aimee Ellis 667-3108	No response
EMR - Mineral Development Branch Yukon Geology Survey	Ken Galambos 667-5996	No response

Table 7. Consultation/ Referral List cont'd.

Organization	Contact Person	Incoming Comments
EMR - Mineral Management Branch	Robert Holmes 667-3126	No response
EMR - Minerals Management Branch	Dave Wiebe 456-3822	No response
EMR - Oil and Gas Business Development and Pipeline Branch	Brian Love 667-3566	No response
EMR - Oil and Gas Management Branch	John Masterson 667-5026	No response
EMR - Sustainable Resources	Greg Komaromi 667-3140	No response
Environment - Deputy Minister's Office	Ken Kiemele 667-5093	Received October 27, 2005 and October 31, 2005
Highways and Public Works - Lands and Granular Resources	Florian Vedress 633-7905	No response
Justice - Solicitor	Laurie Henderson 667-5391	No response
Tourism and Culture - Tourism Product Development and Research	Robert Clark 667-5632	No response
Tourism and Culture - Tourism Product Development and Research	Cathryn Paish 667-5433	Received October 24, 2005
Tourism and Culture - Yukon Archaeology	Ruth Gotthardt 667-5983	Received September 29, 2005
INTEREST GROUPS		
Alsek Renewable Resources Council	Box 2077 Haines Junction, YT Y0B 1L0	No response
Association of Yukon Renewable Resources	-	No response
Canadian Parks and Wilderness Society	Theresa Gulliver 393-8080 Box 31095 Whitehorse, YT Y1A 5P7	Received October 24, 2005
Carolyn Hayes (local resident)	Box 5499 Haines Junction, YT Y0B 1L0	No response
Council of Yukon First Nations	11 Nisutlin Dr. Whitehorse, YT Y1A 3S4	No response
Dieter Gade	Box 5488 Haines Junction, YT Y0B 1L0	Received October 21, 2005
Fuel Abatement Technical Working Group	Damien Burns/John Trotter	Received October 21, 2005
Ken Anderson	Box 5367 Haines Junction, YT	No response
Kluane Land Use Working Group	P.O. Box 2131 Haines Junction, YT Y0B 1L0	No response

Table 7. Consultation/Referral List cont'd.

Organization	Contact Person	Incoming Comments
INTEREST GROUPS		
Quill Creek Wilderness Adventures Ltd.	Robert Perren Lot 1050 Quad 115 A11 Plan 98-156 Haines Junction, YT Y0B 1L0	Received October 20, 2005
Residents Intent on a Sustainable Kluane	P.O. Box 2044 Haines Junction, YT Y0B 1L0	No response
Rick Staley (resident and cross-country skier in area)	c/o Parks Canada Box 5495 Haines Junction, YT Y0B 1L0	Received November 25, 2005
St. Elias Chamber of Commerce	Box 5419 Haines Junction, YT Y0B 1L0	No response
Tourism Industry Association	#3-1109 1st Avenue Whitehorse, YT Y1A 5G4	No response
Village of Haines Junction	Colin Dean	No response
Wilderness Tourism Association	Blaine Walden #4-1114 1st Avenue Whitehorse, YT Y1A 1A3	Received October 21, 2005
Yukon Agricultural Association	203-302 Steele Street Whitehorse, YT Y1A 2C5	No response
Yukon Chamber of Mines	3151 B 3rd Avenue Whitehorse, YT Y1A 1G1	No response
Yukon Conservation Society	Karen Baltgailis 668-5678 302 Hawkins Street Whitehorse, YT Y1A 1X6	Received October 20, 2005
Yukon Fish and Game Association	4061-4th Avenue Whitehorse, YT Y1A 1H1	No response
Yukon Fish and Wildlife Management Board	Box 31104 Whitehorse, YT Y1A 5P7	No response
Yukon Forestry Association	Jean-Francois Nantel Box 10190 Whitehorse, YT Y1A 7A1	No response
Yukon Land Use Planning Council	201-307 Jarvis Street Whitehorse, YT Y1A 2H3	No response

Table 7. Consultation/Referral List cont'd.

1Organization	Contact Person	Incoming Comments
INTEREST GROUPS		
Yukon Prospectors Association	3151 B 3rd Avenue Whitehorse, YT Y1A 1G1	No response
Yukon Outfitters Association	B4 302 Steele Street Whitehorse, YT	No response
Yukon Trappers Association	Carmen Nantel 4194A 4th Avenue Whitehorse, YT Y1A 1J8	No response
FIRST NATIONS		
Champagne and Aishihik First Nations	Diane Strand Box 5309 Haines Junction, YT Y0B 1L0	Received October 26, 2005

This assessment will examine the significant and potentially significant effects that the project will have on the environment under the authority of *EAA*, as well as determine if any mitigation is required. Table 8 describes the VECCS and the potential impact from harvesting and the significance that the proposed forest harvesting will have on the Quill Creek Bench HPA. The mitigation, if required, is also described in Table 8.

a. Mitigation

Mitigation is the elimination, reduction, or control of a project's adverse environmental effects, including restitution for any damage to the environment caused by such effects through replacement, restoration, compensation, or any other means (Canadian Environmental Assessment Agency 1994).

b. Stakeholders and Yukon and Federal Government Agencies

Specific comments or recommendations and suggested mitigations have been identified in Table 8.

Table 8. Valued Ecosystem and Cultural Components, their Significance and Mitigation Required

VECC	Potential Impact From Harvesting	Mitigation Required	Significant Effects
Moose Population	Sensitive harvesting areas for moose but not identified as critical, seasonal ranges located east of OU #3 (wetland complex)	Variable retention ≥25% and winter harvesting only in wildlife value areas, with the exception that summer/fall harvesting is permitted in the commercial fuelwood blocks in OU 3.	None
Aquatic Resources	The potential impact to the aquatic resources from this project is low	Mitigations have been addressed for aquatic resources. Riparian management areas will reflect suggested guidelines in THPOG (DIAND Forest Resources 1999).	None
Wilderness Values (Visual Quality, Recreation, Tourism)	Visual quality will be impacted	Buffer the Haines Hwy. and all riparian areas; monitor visual quality from specific locations in Kluane National Park. Blocks shall be ≥100 m from the Haines Hwy.	Low
Forest Birds	Destruction of bird nests	Harvesting will not occur between May 1 and July 31. Also, avoid harvesting and disturbing nest sites of hawks and owls; leave buffer ≥100 m diameter around active (birds of prey) nests if found. There shall be ≥25% variable retention and winter harvesting only in the wildlife value areas, with the exception that summer/fall harvesting is permitted in the commercial fuelwood blocks in OU 3.	Low
Maintenance of Traditional and Community Lifestyle (Trapping, Wilderness Values, Hunting, Berry Picking, Traditional Gathering Sites)	No known cultural sites or cultural issues exist within the harvest area of the blocks	Contact Government of Yukon, Archaeology and Heritage Resources and the Forest Management Branch and the CAFN if any heritage sites are uncovered.	None

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures

Organization: Government of Yukon, Department of Environment		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Access management	Complete an access management plan	A land use and highway access permit application for the Quill Creek Bench HPA was submitted to the EA Coordinator on November 10, 2005 and was included as part of the EA (see Appendix 4).
Direction on the Fire Risk Abatement initiative is not included	There is no account taken for mitigation for fuel or slash accumulations, slash disposal and stand conversion to species that are less flammable or intimately hazardous. Logging slash can create a more hazardous situation than presently exists and managing blocks during and after harvest to return them to a coniferous stand may conflict with abatement requirement.	Slash shall be machine piled and burnt during the periods of low fire hazard rating (see Protection Services for specific instructions). Post harvest surveys shall be conducted to determine whether slash accumulations and slash disposal create an increased fire risk or if slash accumulations impede wildlife movement.
Economic expansion of the timber and wood residue industries that may reduce the number of years of wood supply	Is the potential timber expansion part of the Environmental Assessment?	Under *EAA*, environmental effects of a project are assessed. Socio-economic effects of a project are components of Yukon Environmental Socio-economic Assessment Act and not requirements of EAA. Socio-economic guidelines for project proposals will be provided to the Government of Yukon when the YESAA regulations come into force.
The finalization of OU 7 and OU 1	The FDP indicates that the blocks in OU 1 and OU 7 will be finalized as needed. The FDP states that OU 1 will receive an EA in the future, but OU 7 is not clear.	Since the ground reconnaissance for OU 1 has not been completed, the blocks are very preliminary and a future EA shall be completed on the blocks associated with OU 1. Final block layout has not been completed in OU 7. Blocks 7H and 7J have been deferred from this environmental assessment until further work has been completed for the wildlife value areas by the Resource Assessment Technical Working Group (RATWG); however, final layout for blocks 7A and 7B will be conducted after the EA has been completed.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures

Organization: Government of Yukon, Department of Environment cont'd…		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Fisheries assessment	Lack of information in the FDP on what fisheries information is being collected.	A fisheries stream crossing assessment was completed associated with the proposed road crossings within the Quill Creek Bench HPA. This assessment was used in this EA to determine the appropriate stream crossing structures required. Also a fisheries research project was conducted within the non-overlap areas of the CATT. This project included mapping of known and inferred fish species distribution, some interpretation of fish values and identifying data gaps for future fish sampling. This information was used in this EA to determine fish-bearing and non fish-bearing streams and can be used for future forest management planning in the CATT.
Trail users	The issues around the trail system should be resolved in the planning process.	The issues around the trail system shall be resolved in future planning processes. With the exception of OU 2 and OU 3, the majority of the trails are situated between blocks that will be harvesting during winter only. Direct impacts shall be minimal and where impacted, the trails shall be left in a useable condition.
Some block prescriptions are incomplete	The variable retention prescription should consider dispersed and aggregated retention. A green hatched zone is not a value and abrupt transitions between valued and non-valued areas provides little insight into the forest and stand requirements to address specific values. The FMB could have helped people decide whether more or less retention would be adequate, if an initial suggestion was provided.	The green hatched zone is the wildlife value area, where areas have been identified of high value of riparian areas, wetlands, extensive movement corridors and habitat, especially for moose and grizzly bears. In this wildlife value area, there shall be ≥25% variable retention and harvesting shall only occur during the winter; with the exception that summer/fall harvesting is permitted in the commercial fuelwood blocks in OU 3. Blocks 7H and 7J have been deferred from this environmental assessment until further work has been completed for the wildlife value areas by RATWG.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures

Organization: Government of Yukon, Department of Environment cont'd…		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Forest health	Avoid the disease infected areas and removing them from the blocks would be the best mitigation if the FMB is not prescribing specific action.	The disease infected areas include spruce broom rust along with evidence of heart rot and brown cubical butt rot. Block 7H has spruce broom rust and root rot in the eastern portion of the block; however, Block 7H (and 7J) has been deferred from this EA until further work has been completed for the wildlife value areas by RATWG. Heart rot and broom rust were also noted in Block 4B. Broom rust is a fungal disease that requires a coniferous and an alternative herbaceous host to complete its lifecycle. Mortality of conifers is not directly related to this fungal infection but infected trees are often killed by other pathogens or insect attacks. Removal of infected trees is currently the best control method available. Root disease control methods will be included in the post-harvest silviculture assessments, where planting resistant species or establishing mixed stands may be required if regeneration layers are infected.
Netting out the Kathleen River system	Netting out of the Kathleen River system by the height of land should be more accurate with the objective of keeping forest harvesting out of sight from the Kathleen River/Crescent Lake/Rainbow Lake chain.	Winter harvesting and variable retention $\geq$25% shall be applied in the wildlife value area; with the exception that summer/fall harvesting is permitted in the commercial fuelwood blocks in OU 3. However, blocks 7H and 7J have been deferred from this EA until further work has been completed for the wildlife value areas by RATWG.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures

Organization: Government of Yukon, Department of Environment cont'd…		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Economic activity areas and the green hatched areas/Appendix A maps	Is white spruce the only economic opportunity?	White spruce is the target species in the Quill Creek Bench HPA.
Recreation and visual impact	Trails in the Quill Creek area may be used more frequently than the waterway.	Trails in the Quill Creek Bench area may be used more than the waterway. With the exception of OU 2 and OU 3, the majority of the trails are situated between blocks that will be winter harvesting only. Direct impacts shall be minimal and where impacted, the trails shall be left in a useable condition.
Block 7H	Block 7H has special conditions that refer to a 80 m riparian reserve zone and a 120 m riparian management zone requirement. Please clarify.	Blocks 7H and 7J have been deferred from this environmental assessment until further work has been completed for the wildlife value areas by RATWG. Therefore, no riparian management zones are necessary at this time for blocks 7H and 7J. All RMZs in the Quill Creek Bench HPA will be prescribed as per requirements in the THPOG (DIAND 1999).
Kathleen and Dezadeash corridors	The undeveloped corridor along the Kathleen and Dezadeash River systems needs to contain not only riparian vegetation but also mature deciduous and conifer forest. These corridors need to be at least 2 km wide on each side of the river to be meaningful as long term protection for wildlife.	There will be ≥25% variable retention and winter harvesting only in the wildlife value areas; with the exception that summer/fall harvesting is permitted in the commercial fuelwood blocks in OU 3. Retention will include both mature deciduous and coniferous trees as well as snags and advanced regeneration. The wildlife value areas on the Kathleen and Dezadeash rivers shall not be 2 km wide on each side of the rivers.
Resources in the wildlife corridors along the Dezadeash and Kathleen Rivers	There should be no exploitation at any level of the resources designated for wildlife along the Dezadeash and Kathleen Rivers.	The areas south of the Dezadeash River and west and east of the Kathleen River are considered wildlife value areas. The blocks in OU 1 (south of the Dezadeash River) will be environmentally assessed in the future. Currently the blocks in OU 2 are approximately 3 km from the Dezadeash River.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures

Organization: Government of Yukon, Department of Environment cont'd…		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Quill Creek	Quill Creek is very important for moose wintering and travel between Kluane National Park and Yukon lands and a corridor for Quill Creek needs to be considered for habitat and travel.	There is a wildlife corridor and a wildlife value area on the north and south sides of Quill Creek. The commercial fuelwood blocks that lie within the wildlife value area north of Quill Creek shall have ≥25% variable retention and shall be considered for summer/fall and winter harvesting.
Organization: Government of Yukon, Tourism Branch		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Blocks 7H, 7I, 7J	Withdrawal of these blocks from harvesting until discussions on forest practices appropriate to the application of riparian buffers that maintain fish and wildlife habitat and/or culture and recreation values take place.	Blocks 7H and 7J have been deferred from this environmental assessment until further work has been completed for the wildlife value areas by RATWG. Therefore, no riparian management zones are necessary for blocks 7H and 7J at this time. All RMZs in the Quill Creek Bench HPA will be prescribed according to the THPOG (DIAND 1999). Also, Block 7I was dropped from the FDP and was not part of this EA.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures cont'd…

Organization: Government of Yukon, Archaeology/Heritage Resources		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
High potential areas	An archaeological impact assessment is generally required either in advance of the project or as a post-impact assessment.	A mapping exercise was completed where potential archaeological locations and known historic and archaeological sites were recorded. An overview heritage assessment is currently being completed and the draft overview report indicates that the Quill Creek Bench area has low heritage potential. Detailed heritage field assessments have not been conducted in the project area; however, if issues arise upon completion of the overview assessment, detailed field assessments shall be conducted and site plans may be amended to minimize the impacts. If heritage sites are uncovered, the cessation of all operations shall occur until the CAFN and Government of Yukon, Archaeology and Heritage Resources and the Forest Management Branch are notified and site inspections are performed as required.
Section 2.2.4 Cultural Heritage Resources and Archeological Sites	No archeological sites have been documented for the Quill Creek Bench HPA and it should be stated that any historic sites or features will be avoided and buffered from further disturbance just to be comprehensive.	No archaeological sites have been documented for the Quill Creek Bench HPA and any historic sites or features shall be avoided. Although it is not anticipated that heritage sites will be uncovered during road development or harvesting operations, if heritage sites are uncovered, the cessation of all operations shall occur until the CAFN and Government of Yukon, Archaeology and Heritage Resources and the Forest Management Branch are notified and site inspections are performed as required.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures cont'd…

Organization: Fuel Abatement Technical Working Group		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Logging Operations	Schedule logging operations in a timely matter to reduce the risk or hazard to the community of Haines Junction. Efforts should be made to schedule operations close to Haines Junction first.	The schedule of logging operations will be determined by Forest Operations staff and will be dependent on equipment and seasonal constraints, etc.
Organization: Dieter Gade (Resident of Haines Junction Area)		
Limit scope of the FDP to interim wood supply	The scope of the FDP should be restricted to provide an interim wood supply until the ongoing regional planning process is implemented. The EA for an IWS must include all known future developments in that area (OU 1, 2, 3, 4, 6 and 7) in order to properly evaluate possible cumulative impacts of proposed present and future developments. Maps should include 1:5,000 scale maps. The remaining OUs of Quill Creek Bench HPA should be dealt with in the ongoing forest planning process for the CATT and not be included in this FDP.	The EA for an IWS shall include all known future developments in OU 1, 2, 3, 4, 6 and 7. It will be recommended for future FDPs that maps shall be 1:5,000 scale.
Winter operating only	Restrict all timber operations to winter.	Winter logging shall occur in all blocks that lie completely within the wildlife value areas; with the exception that summer/fall harvesting is permitted in the commercial fuelwood blocks in OU 3. The winter only blocks include: 4A, 4B, 4C, 4D, 4N and 4P, 7A and 7B, blocks 2H, 2I, 6N, 6A, 6B and 6C.
Air pollution caused by wood smoke	Reduce air pollution caused by wood smoke. Air pollution from wood smoke related to timber operations should be included in the EA for the interim wood supply FDP. Wood waste management should be included as part of the ongoing forest planning process for the CATT.	Wood smoke shall be minimized as much as possible. Burning shall only be conducted when the ventilation index is rated as high as per Protective Services Branch advice. Standard terms and conditions of timber permit require approval by the forest officer prior to burning. See section 6B of this report-Health and Socio-economic Conditions.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures cont'd…

Organization: Wilderness Tourism Association of the Yukon (WTAY)		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Blocks 7H, 7I and 7J	These blocks are located in the visual corridor and are close to the Kathleen River, where we are concerned about possible impacts on water quality due to erosion caused by timber harvesting. WTAY recommends withdrawing these blocks as a cautionary approach.	Blocks 7H and 7J have been deferred from this environmental assessment until further work has been completed for the wildlife value areas by RATWG. Therefore, no riparian management zones for these blocks are necessary at this time. All RMZs in the Quill Creek Bench HPA will be prescribed according to the THPOG (DIAND 1999). Also, Block 7I was dropped from the FDP and was not part of this EA.
Organization: Yukon Conservation Society		
FDP precedes the ILP	Reduce the proposed harvest area and volume for this IWS to more accurately reflect real interim needs of industry. Plan the rest of the area in accordance with the conditions set out in the ILP. Any block locations layouts and prescriptions that are approved for this FDP must be open to changes to be consistent with the final ILP. There must be no long-term tenures until the ILP is complete.	An evaluation of industry needs was completed and indications were that the current plan meets industry needs while meeting the intentions of RATWG and the SFMP (with regard to the harvesting of blocks proposed in this FDP).
Adaptive management	The final FDP must clearly commit to adaptive management. If concerns arise when harvesting gets going, the FDP must be open to changes.	Changes will be considered only if an action will result in a significant adverse environmental effect.
Block layout before EA	The EA must consider mitigations that include changing blocks, block boundaries and road layouts.	This EA shall consider mitigations that include changing blocks, block boundaries and road locations.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures cont'd…

Organization: Yukon Conservation Society cont'd…		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Incompleteness of the FDP	Defer the FDP for most of the OUs until the ILP and a better FDP provide answers to questions; i.e. such as % of variable retention, avoidance of diseases, special values in the cross-hatched zones and why logging is justified in these zones, protection of ski trails, closure of access, what measures will be taken to ensure that logging does not increase fire hazard through slash or increased public access into the area, OUs 1 and 7 and information the fisheries survey is meant to produce and how it will be incorporated into the plan.	RATWG has recommended that harvesting is acceptable in the wildlife value area. Logging can occur in the wildlife value areas; however in this area, logging shall only occur during the winter (with the exception of the commercial fuelwood blocks north of Quill Creek) and $\geq$25% variable retention shall be applied. Also, deferral of blocks 7H and 7J has been prescribed, along with a burning window, and the deactivation of access upon the completion of harvesting activities. Two members of the ski club received copies of the FDP. Meetings shall occur between the local ski club and the FMB prior to harvesting to discuss the local trails in the area. With the exception of OU 2 and OU 3, the majority of the ski trails are situated between blocks that will be winter harvesting only. Direct impacts shall be minimal and where impacted, the trails shall be left in a useable condition. A fisheries stream crossing assessment was completed associated with the proposed road crossings within the Quill Creek Bench HPA. This assessment was used in this EA to determine the appropriate stream crossing structures required. Also a fisheries research project was conducted within the non-overlap areas of the CATT. This project included mapping of known and inferred fish species distribution, some interpretation of fish values and identifying data gaps for future fish sampling. This information was used in this EA to determine fish-bearing and non fish-bearing streams and can be used for future forest management planning in the CATT.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures cont'd…

Organization: Yukon Conservation Society cont'd…		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
In-block retention of large trees	Maintain 10% of the merchantable sized trees scattered throughout blocks larger than 10 ha. In addition, maintain patches of in-block retention of merchantable sized trees. The scattered retention and patches should add up to approximately 25%. These can be trees that are large, but not economically desirable. In the green-hatched areas and RMZ, 25% in-block retention should be a minimum requirement.	There shall be ≥10% retention of trees (coniferous, deciduous, snags and advanced regeneration) scattered throughout the blocks > than 10 ha. In the green-hatched areas and the RMZs, ≥25% variable retention (coniferous, deciduous trees, snags and advanced regeneration) shall be applied.
Protection of healthy large trees	Do not harvest trees that have not been attacked. Leave all attacked trees that do not show signs of stress/red needles, as they may still repel beetles.	Mature and overmature spruce trees are all susceptible to attack by the spruce bark beetle and shall be considered as part of the harvestable timber profile unless prescribed in the site plans as retention.
Riparian management zones	In any places that the FDP proposes variable retention and all RMZs and all green-hatched zones, scattered and clumped in-block retention should exceed 25%.	The areas that are proposed for variable retention (such as the wildlife value areas) and all RMZs shall have retention ≥25%.
Green-hatched areas	All of OU 3 should have at least 25% scattered and clumped in-block retention.	Since some OU 3 blocks are within the wildlife value area, blocks 3D, 3E, 3G and 3H shall have ≥25% retention. Blocks 3A and 3B do not lie within the wildlife value areas and ≥25% variable retention shall not be applied. Although Block 3F is situated in the wildlife value area, an operator is currently harvesting in the block, and because of this, ≥25% variable retention shall not be applied to this block.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures cont'd…

Organization: Yukon Conservation Society cont'd…		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Season of logging	Winter logging is recommended.	Winter logging shall occur in all blocks that lie completely within the wildlife value areas or that are slated for winter harvesting only; with the exception that summer/fall harvesting is permitted in the commercial fuelwood blocks in OU 3. Blocks 4A, 4B, 4C, 4D, 4N and 4P, 7A and 7B, blocks 2H, 2I, 6N, 6A, 6B and 6C are winter harvest blocks only. Blocks 7H and 7J have been deferred from this environmental assessment until further work has been completed for the wildlife value areas by RATWG.
Proposed road through the wetland between OU 3 and OU 4	The trail between OUs 3 and 4 must not be upgraded to a road. Other access to OU 4 must be found.	The wetland between OUs 3 and 4 is very wet during the spring and summer months and therefore OU 4 has been restricted to winter harvesting only. Accessing OU 4 during the winter will have minimal effects on the wetland.
Forest health	Avoid logging stands that are infected with diseases. The FDP needs to provide much more information about the diseases that have been identified in the area and how to avoid spreading or intensifying them.	There are tree diseases in the eastern portion of Block 7H; however Block 7H (and 7J) have been deferred from this environmental assessment until further work has been completed for the wildlife value areas by RATWG. Heart rot and broom rust were noted in Block 4B. Broom rust is a fungal disease that requires a coniferous and an alternative herbaceous host to complete its lifecycle. Mortality of conifers is not directly related to this fungal infection but infected trees are often killed by other pathogens or insect attacks. Removal of infected trees is currently the best control method available. Root disease control methods will be included in the post-harvest silviculture assessments, where planting resistant species or establishing mixed stands may be required if regeneration layers are infected.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures cont'd…

Organization: CPAWS - Yukon Chapter		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Proposed blocks 1A, 1D, 1E, 1I, 2H, 3D, 3E, 3F, 3G, 3H, 4A, 4D, 4N, 6M, 6O, 7B, 7H, 7J	Eliminate all proposed cut blocks that lie within the identified wildlife corridors including flagging from those blocks that were laid out prior to completion of the EA	RATWG has recommended that harvesting is acceptable in the wildlife value area. High standards have been applied in the wildlife value zone (variable retention (≥25%) and winter harvesting only, with the exception that summer/fall harvesting is permitted in the commercial fuelwood blocks north of Quill Creek).
OU 1	Remove OU1 from FDP because a separate environmental assessment will be required for OU 1.	Having OU 1 as part of the FDP allows for the cumulative impacts of all OUs to be assessed. OU 1 will be environmentally assessed in the future.
Fisheries assessment	Wait until fisheries assessment for the harvest area is complete before implementing development planning and block layout.	A fisheries stream crossing assessment was completed associated with the proposed road crossings within the Quill Creek Bench HPA. This assessment was used in this EA to determine the appropriate stream crossing structures required. Also a fisheries research project was conducted within the non-overlap areas of the CATT. This project included mapping of known and inferred fish species distribution, some interpretation of fish values and identifying data gaps for future fish sampling. This information was used in this EA to determine fish-bearing and non fish-bearing streams and can be used for future forest management planning in the CATT.
Retention levels	Ensure dispersed and aggregate retention levels meet or exceed 25% in the entire harvest plan area.	Variable retention in the wildlife value area shall be ≥25%. Also, there shall be ≥10% retention of trees scattered throughout the blocks > 10 ha.
Winter logging	Allow winter logging only, in all OUs.	Site conditions throughout the entire Quill Creek Bench HPA do not require winter harvesting only. However, several blocks (2H, 2I, 4A, 4B, 4C, 4D, 4P, 4N, 7A, 7B, 6A, 6B, 6C and 6N) shall be harvested during the winter only.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures cont'd.

Organization: CPAWS - Yukon Chapter cont'd…		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Future implementation of the FDP	Ensure that implementation of the FDP is dependant on local demand for timber products and permit applications. Reduce proposed volume to less than 200,000 m^3 in order to achieve an accurate, ecologically sustainable forest industry.	Timber permitting shall be based on the demand for timber and the appropriate harvest ceiling will be it is established by the participating governments prior to long term industrial commitments being undertaken.
Organization: Brenda and Terry Berezan (area residents)		
Site conditions and the regeneration of trees	Logging in the proposed areas is not viable in the long-term due to the short growing season, the thin, acidic soils and the limited capacity to produce much biomass. The regeneration of the removed trees back to a moderate size would take close to a century.	This FDP is part of an overall strategy to manage the forest as per Chapters 5 and 6 of the SFMP.
Economic loss	There are currently 70 wilderness tourism operators in the area and if the logging plans are implemented, many tourism businesses would move elsewhere causing an economic loss to Haines Junction as tourists will not be pleased to see logging.	Forest harvesting will benefit the Haines Junction area. Variable retention and winter harvesting only in the wildlife value area; with the exception that summer/fall harvesting is permitted in the commercial fuelwood blocks in OU 3. Riparian management areas and deferring blocks 7H and 7J shall provide mitigation for the forest harvesting in the Quill Creek Bench HPA.
Habitat loss	The impact of the logging will affect large mammals and birds and other species.	Mitigations such as not logging during the bird breeding season, variable retention $\geq$25% and winter harvesting only in the wildlife value area (with the exception of the commercial fuelwood blocks in OU 3), as well as riparian management areas and deferring blocks 7H and 7J from the FDP shall mitigate species in the area.
Organization: Parks Canada, Kluane National Park Representatives		
Wording	Remove the word "currently" from the sentence, "The maintenance of access roads into the HPA for use in fire fighting is not currently considered a suitable objective, so all new development currently requires deactivation.	The word currently shall be removed from the Final FDP.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures cont'd.

Organization: Parks Canada, Kluane National Park Representatives		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Disturbance of wildlife habitat by access roads	Preferable to evaluate alternate routes so the road through the wetland could be avoided.	The wetland between OUs 3 and 4 is very wet during the spring and summer months and therefore OU 4 has been restricted to winter harvesting only. Accessing OU 4 during the winter will have minimal effects on the wetland. Although another existing trail does pass through the wetland near OU 2; the proposed road will be west of the wetland and not pass directly through it.
Season of harvesting	Harvesting "should be restricted to the winter months. All greenwood harvesting be restricted to winter.	Harvesting shall be restricted to winter months for blocks that lie within the wildlife value area; with the exception that summer/fall harvesting is permitted in the commercial fuelwood blocks in OU 3. Also winter harvest only where there are concerns with access and site suitability during the summer months.
Cross hatched areas	Increased levels of detail to values of cross hatched areas should be provided	Details to values of cross hatched areas shall be provided in the final FDP. The cross hatched areas are wildlife value areas that were identified from local and traditional knowledge, professional experience and survey data.
Block 4N	Remove Block 4N from plan as it is situated entirely within a wildlife corridor	Block 4N shall not be removed from the FDP; but will be a winter harvest only block and since it is within the wildlife value area, variable retention ($\geq$25%) shall be prescribed.
Moose Meadows ski trail	Meet with the local ski club to discuss the future of the trails in the area	Two members of the ski club received copies of the FDP. Meetings shall occur between the local ski club and the FMB prior to harvesting to discuss the local trails in the area.
Size and volume of FDP	Should be reduced in size and volume to operating Units 2, 3, and 4 (northern portion). If the size cannot be reduced blocks in OU #2, 3, 4 should be utilized before OU 6 & 7 are opened up.	There shall be no sequencing framework for utilization of blocks as block sequencing shall be determined based on demand for timber, on operator's equipment, seasonal constraints, etc.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures cont'd.

Organization: Robert Perren, Quill Creek Wilderness Adventures Ltd.		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Disturbance from logging	Logging trail within OU3 should be moved northward, which will lead the traffic further away from house and the noise disturbance caused by the machinery will be less.	If operationally feasible, the proposed road between 3F and 3G shall be relocated so that Block 3G shall be accessible from a proposed road from Block 3E.
Organization: Champagne & Aishihik First Nations		
Skills to recognize heritage sites	Proper assessment of the OUs and the access roads is necessary prior to development.	An overview assessment of the entire CATT was conducted in the fall of 2005 and areas of potential heritage concern were mapped. The proposed blocks were overlaid with the potential heritage concerns. If heritage sites are uncovered, the cessation of all operations shall occur until the CAFN and Government of Yukon, Archaeology and Heritage Resources and the Forest Management Branch are notified and site inspections are performed as required.
Impact assessment work	Proper impact assessment of the operating unit and access roads is necessary, prior to development. Impact assessment requested for high potential areas that overlap with targeted operating units and/or existing or planned access roads. Impact assessment must include CAFN's criteria for heritage sites.	Areas of heritage potential were mapped in November 2005. If heritage sites are uncovered, the cessation of all operations shall occur until the CAFN and Government of Yukon, Archaeology and Heritage Resources and the Forest Management Branch are notified and site inspections are performed as required.
Organization: Rick Staley (resident of area)		
Season of harvesting	A summer or fall harvest would be better for skiers.	The majority of the ski trails are within close proximity to OU 3 and OU 4. Access and site suitability during the summer months for OU 4 is a concern; therefore OU 4 shall be harvested in during the winter only.

Table 9. Identified Concerns, Suggested Mitigation and Mitigation Measures cont'd.

Organization: Robert Zimmerman (private landowner)		
Identified Concerns	**Suggested Mitigation**	**Mitigation Measures**
Block 7H	Block 7H is too large and too close to Crescent Lake and the Kathleen River. The area of Block 7H should be reduced by relocating the most easterly proposed boundary. The boundary should be relocated to the west side of the cat trail and the most easterly proposed road on Block 7H should be removed.	Instead of relocating the block boundary for Block 7H, blocks 7H and 7J have been deferred from this environmental assessment because of stakeholder concerns and until further work has been completed for the wildlife value areas by RATWG.
Visual quality and wilderness values	Visual quality and wilderness values of property could be affected.	The wilderness values of the private property could be affected. Blocks 7H and 7J have been deferred from this environmental assessment at this time because of stakeholder concerns and until further work has been completed for the wildlife value areas by RATWG.
Roads	The 2 wheel drive road and the most easterly proposed road (marked P on the map) could promote vandalism and lack of privacy to property.	Blocks 7H and 7J have been deferred from this environmental assessment at this time because of stakeholder concerns and until further work has been completed for the wildlife value areas by RATWG. The remaining blocks in OU 7 are winter harvesting only and the construction of roads for these blocks will be developed to a winter standard only (THPOG; DIAND 1999).

9. REASONS FOR DECISION

On April 1, 2003, the Director of the Yukon Government Forest Management Branch (Director FMB) was delegated as representative of the RA (the Minister) for purposes of carrying out environmental assessments under Section 4.1 of the *Environmental Assessment Act* by the Department of Energy, Mines and Resources Deputy Minister (for matters relating to forest management for the Yukon Territory). Accordingly, it is the responsibility of the Director FMB to render a decision on this environmental assessment.

Similarly, the Manager of Land Use has been delegated under Section 3 of the *Land Use Regulation* for the purposes of administering the *Lands Act* and *Land Use Regulation* and is therefore the decision authority on environmental assessments that are required prior to issuing Land Use permits.

a. Decision Options

Section 16.1 of the *Environmental Assessment Act* requires that:

"*The responsible authority shall take one of the following courses of action in respect of a project after taking into consideration the screening report and any comments filed pursuant to subsection 14(3):*
(a) subject to subparagraph (c)(iii), where taking into account the measures that the responsible authority considers appropriate, the project is not likely to cause significant adverse environmental effects, the responsible authority may exercise any power or perform any duty or function that would permit the project to be carried out and shall ensure that any mitigation measures that the responsible authority considers appropriate are implemented;
(b) where, taking into account the implementation of any mitigation measures that the responsible authority considers appropriate, the project is likely to cause significant adverse environmental effects that cannot be justified in the circumstances, the responsible authority shall not exercise any power or perform any duty or function conferred on it by any other Act that would permit the project to be carried out in whole or in part; or
(c) where:

- *the project, taking into account the implementation of any mitigation measures that the responsible authority considers appropriate, is likely to cause significant adverse environmental effects and paragraph (b)does not apply, or*
- *public concerns warrant a reference to a mediator or review panel, the responsible authority shall refer the project to the Minister for a referral to a mediator or a review panel in accordance with Section 25.*

b. Screening Decision

Having reviewed and considered the likely environmental effects of this project, the issues raised in the referral responses by individuals and agencies and after due consideration, the RA has concluded that the final screening report for this project accurately and appropriately addresses the significant and/or potentially significant environmental effects that have been identified.

Given the mitigations provided in the screening report, combined with the analysis and mitigations provided above, the RA is satisfied that this project is not likely to cause significant adverse environmental effects. Accordingly, the *Environmental Assessment Act* determination is that, subject to the mitigation requirements contained in the screening report and in the Reasons for Decision as per above, this project is hereby authorized.

Authorization: original signed — original dated
Gary W. Miltenberger, R.P.F (BC) — Date
Director, Forest Management Branch

Authorization: original signed — original dated
Marg White — Date
Manager, Land Use, Lands Branch

10. REFERENCES

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