Marshall Creek
Timber Harvest Plan

Within
CHAMPAGNE AND AISHIHIK TRADITIONAL TERRITORY

FOREST MANAGEMENT BRANCH
ENERGY MINES AND RESOURCES
YUKON GOVERNMENT

PREPARED: June 7, 2011

Approved by
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Forest Management Branch

June 15/11
Date

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Forest Management

June 15/11
Date

TABLE OF CONTENTS

Executive Summary

The objective of this Timber Harvest Plan (THP) is to create commercial harvesting and fuel abatement opportunities in the forests affected by spruce bark beetle within the Champagne and Aishihik Traditional Territory (CATT). This THP combines the direction found in the Strategic Forest Management Plan (SFMP), the Integrated Landscape Plan (ILP) and meets the requirements of the *Forest Resources Act* (FRA) and regulation.

This THP proposes four operating units for harvesting, totaling approximately 447.5 gross hectares, with an estimated volume of 50,613 m^3, of which an estimated 38,267 m^3 is dead spruce.

1.0 Introduction

1.0 Planning Area

This THP includes four operating units which are located in the Marshall Creek area, approximately 15km north of Haines Junction. This is within the SFMP planning area #4 Pine Lake (Appendix A). Most of these operating units have existing road access and a high percentage of spruce trees that have been killed by the spruce beetle. The approximate combined gross area is 447.5 hectares, with an estimated net volume of 50,613 $m^{3\ is}$ dead.

This THP outlines the management strategies employed, providing details on the harvest units, road access and provides direction for the preparation of the site plans, which will be completed prior to permitting.

This THP is within the *Marshall Creek Special Forest Reserve* (see Appendix A notation #115A14-04) which was created for *the purpose of making an area of making an area available to the Haines Junction population for the procurement of building logs, sawlogs and other timber products*[1]

A *Final Resources Report* was prepared in 1998 in response to the Marshall Creek fire, which identified three separate units for potential salvage harvest within the burn area.

There is an existing road access due to past harvesting, mining and fire guards. Previous logging activities have occurred on six small openings which were planted with white spruce in 1997.

There are also mining claims and a trap line within this area. The THP is approximately two kilometers from the northwest end of Pine Lake, which is a popular recreational lake with a campground and a subdivision nearby. There are important wetlands and streams at the northern end of the lake which have established riparian reserves and habitat corridors[2].

1.1 Background

The Champagne and Aishihik Traditional Territory (CATT) has been the centre of one of the largest spruce bark beetle outbreaks in Canadian history. Since the early 1990s, more than 380,000 hectares of forest in the Southwest Yukon has been affected by this beetle outbreak. The most recent assessment of beetle activity suggests that the outbreak is in decline (NRCan; YG-EMR 2009).

Champagne and Aishihik First Nations (CAFN) and Yukon Government (YG) approved the SFMP in 2004, and in 2007 the Integrated Landscape Plan (ILP) was approved for the non-overlap Traditional Territory of CAFN (Section 2 lists all plans to date within CATT). The ILP identifies where timber harvesting can be planned, priorities for each management zone and guidelines for timber harvest planning.

This THP combines the strategic direction found in the SFMP and ILP and meets the requirements of the *Forest Resources Act* (FRA). The SFMP encourages the development of a forest-based economy that reflects local community needs and

values.

1.3 Eco-region[3]

The THP lies within the Ruby Range of the Boreal Cordillera Eco-zone. This region is one of the driest, as it lies in the rain shadow of the St. Elias Mountains. The elevational range is 575 to 2,745 meters above sea level.

The vegetation is mainly boreal forest, with white spruce dominating the landscape below treeline (1,200 m). Black spruce, larch and pine are absent except for a few isolated trees. Trembling aspen occurs mixed with spruce in younger stands on warmer sites. Balsam poplar occurs along streams and on moister sites.

This ecoregion is characterized by either rolling plateau or subdued mountainous topography overlain by a variety of parent materials including moraine, colluviums, and glaciofluvial materials. The soils in the major valleys near Haines Junction are commonly eutric brunisols.

Land uses reflect high recreational, tourism, and hunting values in alpine and sub alpine sections. The operating units within this THP are all located in the Simple Upland Natural Disturbance Type (NDZ 3) and consist of relatively uniform stands of pure White Spruce or White Spruce with a minor Trembling Aspen component.

2.0 Strategic Forest Planning

This THP is an outcome of the forestry planning processes that have been in progress for many years by CAFN, the Yukon Government and the Alsek Renewable Resource Council.

The proposed timber harvesting activities in this area are consistent with the SFMP for CATT. This plan was approved in 2004 and represents the culmination of many years of collaborative planning and negotiations at all levels of government and public. The SFMP was approved by Yukon and the Champagne and Aishihik First Nations governments for application on public lands and settlement lands specific to forest management activities. The people who use, work, recreate and travel through the project area have indicated through the SFMP that this area is a high priority area for timber harvesting activities with an integrated resource management philosophy.

The ILP was approved in 2007, it identifies where timber harvesting can be planned; priorities for each management zone and guidelines for timber harvest planning.

The following is a list of relevant upper level plans, related plans and agreements that provide direction for this Timber Harvest Plan:

- **Letter of Understanding (CAFN, YG, DIAND, ARRC: 1998)**

  [Agreement to coordinate the development, adoption and implementation of a regional forest management plan].

- **Devolution Transfer Agreement (2003)**

  [Forest Resources on Yukon Lands delegated to Yukon Government from Federal Dept].

- **Strategic Forest Management Plan for the CAFN TT (December 2004)**

  [The strategic plan identifies the main management priorities, and general goals and objectives for sustainable forest management].

- **Allowable Harvest Level (March 2006)**

  [The allowable harvest level was developed through assessing various management scenarios. The selected harvest level was based on the allowable planning area and applying draft ILP management assumptions for net down of available volumes].

- **Integrated Landscape Plan (February 2007)**

  [The ILP review committee developed a condensed version of the ILP and the Steering Group provided the final approval of this plan for use in timber harvest projects. The majority of draft guidelines were maintained, and a clearer set of management priorities were provided].

- **Habitat Connectivity Planning Recommendations for Forest Harvest Planning in the Champagne and Aishihik Traditional Territory (Final Edits, May 2008)**

  [The connectivity planning sub group prepared 17 recommendations and guidelines addressing riparian-based connectivity network, as well as a map with primary and secondary wildlife habitat and movement corridors].

- **Proposed Areas For Forest Development within the Champagne and Aishihik Traditional Territory (March 2010)**

  [Review of all existing plans for the region with an aim to provide direction as to where forest development should occur next]

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- **Strategic Baseline Assessment – Bear Creek Salvage Area Km 1650 (October 1996)**

  [The objective of this plan was to direct salvage harvesting into moderate to heavy beetle infestations with a minimum of known conflicts].

3.0 Measures to Protect Forest Resources

3.1 Resource Management Guidelines

The proposed Operating Units have been field reviewed by Forest Management Branch staff and by a consultant to gather site and stand data. Refer to Appendices F - I for a summary of the site and stand conditions for each operating unit. The final *Site Plan* preparation and *Timber Permit Terms and Conditions* will be completed prior to harvesting and will be consistent with SFMP and the ILP. The *Site Plans* will

be based on this THP and prescribe specifications regarding timber harvesting to manage, protect and to conserve the natural resources located in the operating unit and surrounding area.

The primary stand level management objectives for all of the operating units within this THP, except MC are:

- To salvage harvest spruce bark beetle affected stands.
- Regenerate a healthy stand of trees.
- Minimize impacts on wildlife habitat.
- Reduce the fuel loading in the stand.

Operating Unit MC6 is outside of a Landing Zone as described in the ILP so will have all the same oib0jectives, however, *the reduction of fuel loading in the stand will be a secondary objective.*

3.2 Silviculture Systems

The ILP defines a Silviculture system *as one or more planned series of treatments which sees a stand through at least one complete rotation, including harvesting, regeneration and stand tending. These systems will be chosen based on site conditions, and stand management objectives*[4].

The following guiding principles will be followed when preparing site plans:

- Each operating unit has been field reviewed to assess the site and stand characteristics.
- The most appropriate silviculture system will be chosen based on site specifics to meet management objectives.
- Natural regeneration of spruce and aspen will be the preferred method of reforestation to encourage a mixed wood forest. The site will be assessed approximately 4-7 years post harvest and if deemed necessary the operating units will be planted with spruce.
- The *Site Plan* will be completed prior to harvesting and will document the stand level objectives, silviculture system, ecological information, access management, soils and harvest method/season, and reforestation plan.

3.3 Land Use Coordination

This THP identifies known interests and values within the area and will mitigate concerns where feasible. The following is a list of known interests in this area:

- Natural Resources Canada has established long-term forest health assessment plots within this area and the plot is indicated on the map and in the field.
- An abandoned Goshawk nest has been identified and a buffer has been established around the nesting site.

- There is a Placer mining camp on a landing within the previously harvested units.

3.4 Fuel Abatement Guidelines

Strategic consideration to the size, shape and location of any development that would enhance fuel discontinuity should be a primary management focus in this zone. Silvicultural principles can be implemented to reduce fire hazard[5].

Fuel abatement is one of the primary objectives highlighted in upper level plans. All units have between 60% and 80% mortality by volume of mature spruce trees due to spruce bark beetles and relatively close proximity to Haines Junction and the Canyon Creek Landscape Zone Fuel Abatement objectives as defined in the Integrated Landscape Plan apply to this THP. Conducting fuel abatement treatments in this zone is not economically feasible and is not the intent of this project. On going FireSmart strategies being applied on private and public lands within the community zone combined with fuel abatement treatments in the interface zone, and broader level timber harvesting projects such as this in the landscape zone will all work together to add to overall community safety from large wildland fires. This THP is not a fuel abatement treatment but will work towards supplementing and achieving overall fuel abatement strategies. Removal of fuel load and appropriate guidelines for slash management must be considered.

The following fire hazard abatement strategies will be employed:

- Silviculture strategies will follow the most current and up to date Silvicultural standards.
- Salvage harvesting and subsequent slash reduction will reduce the fire hazard on this site. Excess slash accumulated at landings will be burned to extinguishment.
- Dead spruce trees should be targeted for salvage. This will help reduce fuel loading and continuity in this area.
- Operations within the fire season will adhere to all current fire safety standards. Appropriate gear will be on site and operational closures may be used if fire hazard ratings are deemed too high.

3.5 Wildlife and Biological Diversity

One of the main goals of the SFMP is to maintain functioning forest ecosystems. Many landscape-level wildlife values and habitat requirements have been identified in the ILP, and through the identification of landscape level connectivity corridors. The spruce bark beetle has caused a large disturbance in the region. Timber harvesting is concentrating on beetle affected stands and will help promote regeneration of an early serial stage, healthy and vigorous forest. Harvested stands will continue to provide important wildlife habitat throughout the stages of succession. Several species of wildlife have been confirmed to occupy the THP area including moose, grizzly and black bears, and furbearers. The area has been identified as a moose over wintering area.

- MC2 is within *High Wildlife Value* areas, as described in the ILP, therefore an average of 25% basal area of the stand structure will be retained.
- Buffers, dispersed retention, clumps and clusters will all help to achieve retention targets.
- Advanced regeneration (poles, saplings and regeneration) should all be maintained where feasible.
- Wind throw is a concern in this area and it is preferable to retain clumps of trees within the operating unit as opposed to single trees scattered through out the area in an attempt to minimize wind throw impacts
- A small portion of the western flank of MC6 is within the *CPGS Riparian Connectivity*. Due to the stand conditions of this operating unit, being completely within the burn area, operations will have a significant negative affect on the integrity of the corridor.

This area has been identified as having high value moose habitat and is significant moose corridor. Moose funnel down from the mountains to the north and congregate in the Marshall Creek area in late winter. The primary concern identified with development in the area is in regards to hunting pressure. Proper access management will need to be implemented at the operational level to mitigate possible negative impacts to the area.

Strategies to be considered should include:

- Gating roads to limit access to operational requirements.
- Starting at the farthest point required for access and decommissioning as operations move toward the established access.

3.6 Riparian and Water Resources

The ILP guidelines and the most recent standards will be followed to protect riparian and water resources in the region.

- There are no streams located within the operating unit boundaries.
- The main riparian corridors within this area have been identified and mapped by the *Habitat Connectivity Planning Recommendations for Forest Harvest Planning in the Champagne and Aishihik Traditional Territory (May 2008*). The integrity of these corridors will be maintained.

3.7 Recreation, Tourism and Viewscape

Harvest boundaries are designed to minimize the impact on Viewscape within the major highway corridor. A strategy to protect Viewscape will be to maintain a healthy visual buffer between the highway and operating units.

- Operating unit boundaries have been designed following natural landscape features with irregular boundaries.

- At the Site Plan and permitting phase, trails that have been identified will be left clean of obstacles caused from harvesting operations.

3.8 Heritage Culture

The objective is to protect known or newly identified heritage sites and values deemed valuable for Champagne and Aishihik First Nations and Yukon Government.

Known heritage sites will be identified through agency referral with the Department of Tourism and Culture - Heritage Branch staff as well as by CAFN, which has developed an independent approach for identifying first nation heritage values.

Identified heritage sites will be protected, with no logging allowed in the immediate area. If new sites are discovered during harvesting or access development, the area will be excluded from operations until a detailed assessment is conducted.

Heritage and archaeological assessments will be conducted, prior to harvesting, in a manner agreeable to YG and CAFN.

4.0 Harvest Section

4.1 Operating Unit Area and Volume Summaries

The following table provides an area and volume summary for all operating units covered by this THP. See Appendices B - L for operating unit maps and site and stand data tables.

Table 1: Operating Unit Estimated Area and Volume Summary

Operating Unit #	Gross Area (ha)	*Net Area (ha)	Estimated Total Vol** (m3)	Estimated Dead Vol (m3)	Harvest Method	Soil/Ground Conditions Required for Harvesting
MC2	95.0	76.4	12,835	8,710	Ground based	Frozen
MC3	112.01	26.7	4,806	3,097	Ground based	Dry or Frozen
MC4	222.4	162.8	32,072	25,560	Ground based	Dry or Frozen
BC09	18	18	900	900	Ground based	Dry or Frozen

* Net area is gross area minus reserves
** Volumes based on cruise data
*** Dry or frozen ground are defined as ground where soil displacement does not reasonably occur

Buffers within the operating units have been instituted for a number of varying reasons. They could be for aesthetics, wildlife habitat, heritage or archaeological concerns, riparian reserves, patches of non-desirable timber, or inoperable terrain.

Operating Unit Details:

MC2: This operating unit is located on a side of a slope with a swamp located in the center (excluded from the operating unit). Timber included in the harvestable areas is white spruce of good size and density. Access to and through the operating unit is located in the field (500 rd and 510 rd). See Appendix B for map.

MC3: This operating unit is located on relatively flat ground and the Southern part is currently being logged. There is an existing road leading to the operating unit. See Appendix C for map.

MC4: The Central and Eastern edges of the operating unit are located on flat ground. There are two swampy areas presently located within the operating units both of which have been buffered out. The North West portion is located on a slope up to 35% an incline with several branches. Timber is consistently of very good quality with predominately sawlogs. Over 80% of spruce trees are killed by spruce beetle infestation. There are a large amount of saplings and regeneration present making this operating unit a good candidate for natural regeneration. Access to and through the operating unit is marked and located in the field (600 rd and 610 rd). See appendix D for map.

MC6: This operating unit is located on the East side of Marshall Creek and is within the old Marshall Creek fire area. This unit is completely within the gravel reserve (118A14022). The terrain is level with a slight Southwestern aspect. Virtually all remaining timber is dead standing or wind blown. There are two existing roads running alongside both the Eastern and Western boundaries. See Appendix E for map.

4.2 Harvest Scheduling and Season

Harvesting will be completed by licensees under the *Forest Resources Act*. Forest harvesting licenses are a contractual arrangement with the logging company that creates legally binding terms and conditions that the licensee must meet. Cutting authority will be given to licensees by means of a cutting permit. Specific obligations of the cutting permit will be defined in the permit terms and conditions. These obligations become standards for conducting logging operations and are enforceable under the *Forest Resources Act*.

Logging operations may include hand falling or feller/buncher, rubber tired skidder; manual bucking or tracked processor; tracked or wheeled loader; and logging trucks or any other combination of equipment common to the Yukon Forest Industry.

- Operating units MC3 and MC4 can be harvested under dry and or frozen ground conditions.
- Operating unit MC2 is restricted to harvesting on frozen ground conditions.
- Dry ground conditions means that appropriate actions and methods will be employed to limit compaction and erosion of soils.
- Specifics in the site and stand data will help to determine appropriate terms and conditions at the permitting phase.

5.0 Access Management

Table 2 lists existing and proposed new development for each operating unit.

Table 2. Amount of Existing and Proposed Road in Marshall Creek Operating Units.

Operating Unit	Existing Road (km)	New roads (km)	Spur road construction (km)
MC2	0	2.5	0
MC3	4.8	0.7	0
MC4	0	4.6	0
MC6	1.7	0	08

The *ILP* *and the Habitat* *Connectivity Planning Recommendations* report outline specific access management guidelines and recommendations to help reduce the impact of sustainable resource extraction on wildlife. Those guidelines have been incorporated into this THP.

- Existing road access to and within each unit should be utilized where feasible.
- All existing roads used for access will be maintained at their current level pending operational assessment of license holders' needs regarding size and type of equipment and trucks to be used for hauling.
- Any newly constructed roads will be Forest Resource Roads (FRR). Access on FRR will be restricted as per the Act and corresponding regulations. All FRR will have a designated maintainer and will be decommissioned upon completion of operations.
- All proposed "in-block" roads will be temporary roads and will be decommissioned as per current standards.
- The Site Plans will specify the details regarding restoration, decommissioning and reclamation of specific roads and trails.
- The proposed locations of proposed roads have been identified. Final location and size of these roads may be altered to fit the operational needs of the license holder. Any alterations will be within the intent of the guidelines in this THP.
- As per section 3.5, access should be developed to the back of the operating unit MC4 first, then decommission on the way out.

6.0 Timber Harvest Project Referral and Approval Process

This THP has been reviewed by Yukon Environment, and Champagne and Aishihik First Nations. The Department of Environment has identified known wildlife values. CAFN will work with YG Heritage Branch to conduct archaeological and heritage field assessment. These assessments will be done in a timely manner so as not to impede opportunities for future licensees.

Community consultation has occurred to gather input from local residents. Values identified and concerns expressed to date have been addressed and proposed mitigation has been incorporated into this THP.

Appendices

Appendix A: Marshall Creek Timber Harvest Plan Overview Map

Appendix B: Marshall Creek THP Operating Unit 05 Map

Appendix C: Marshall Creek THP Operating Unit 06 & 08 Map

Appendix D: Marshall Creek THP Operating Unit 09 & 13 Map

Appendix E: Marshall Creek THP Operating Unit 11 & 12 Map

Appendix F: MC02 Site and Stand Data

Appendix G: MC03 Site and Stand Data

Appendix H: MC04 Site and Stand Data

Appendix I: MC06 Site and Stand Data

Appendix J: Representations Summary

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[1] Final Resource Report, Salvage Harvest in the 1998 Marshall Creek Fire.

[2] Habitat Connectivity Planning Recommendations for Forest Harvest Planning in the Champagne and Aishihik Traditional Territory, May 2008.

[3] Information taken from *Ecoregions of the Yukon Territory, Biophysical Properties of Yukon Landscapes, 2004*

[4] Page 13, Section 3.2, Integrated Landscape Plan for the Champagne and Aishihik Traditional Territory, February 21, 200778

[5] *Page 9, Section 2.7.1b)iii)* Integrated Landscape Plan for the Champagne and Aishihik Traditional Territory, February 21, 200

372000

6748000

Marshall

FORESTRY RESERVE 115A14-040

MC-04

MC-02

MC-03

MC-06

115A14-040

115A14-022

115A14-023

2008-0099

2006-0422

2007-0421

115A14-040

CAFN S-182B1

HIGHWAY

ALASKA

POWER TRANSMISSION LINE R/W

FOOTHILLS PIPELINE R/W

Lot 1074

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Project Specific Features

- Existing Access Route
- Proposed Access Route
- Operating Units
- Buffers
- Permanent Sampling Plots
- CFS Forest Health Plots

Administrative Features

- Surveyed Parcel
- Surveyed Easements
- Agriculture Tenure
- Land Disposition
- Notations

Fire History

- 1998 Fire

First Nation Settlement Lands

- Category A
- Category B
- Fee Simple

Past Harvest

- Patch Cut
- Partial Cut
- Patch Cut with Retention
- Landing
- Island

Connectivity Corridors

- CPSG Riparian Connectivity
- Riparian Buffer

Date: June 2, 2011
Projection: NAD 1983 UTM Zone 8

Digital Data Sources

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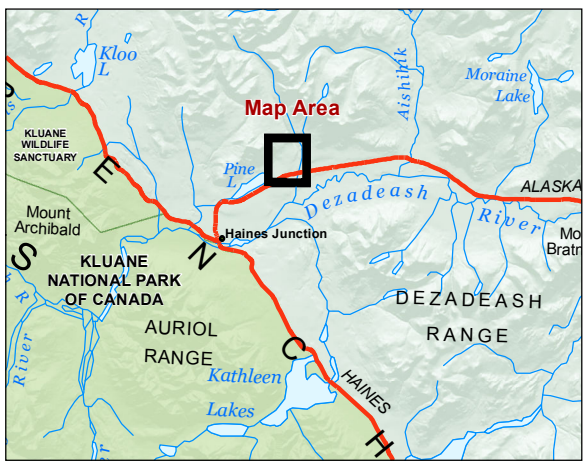
Digital Elevation Models (30 metre and 90 metre) provided by Yukon Government Geomatics spatial data warehouse - www.geomaticsyukon.ca.

Appendix A
Marshall Creek Timber Harvest Plan

Overview



Yukon
Energy, Mines and Resources

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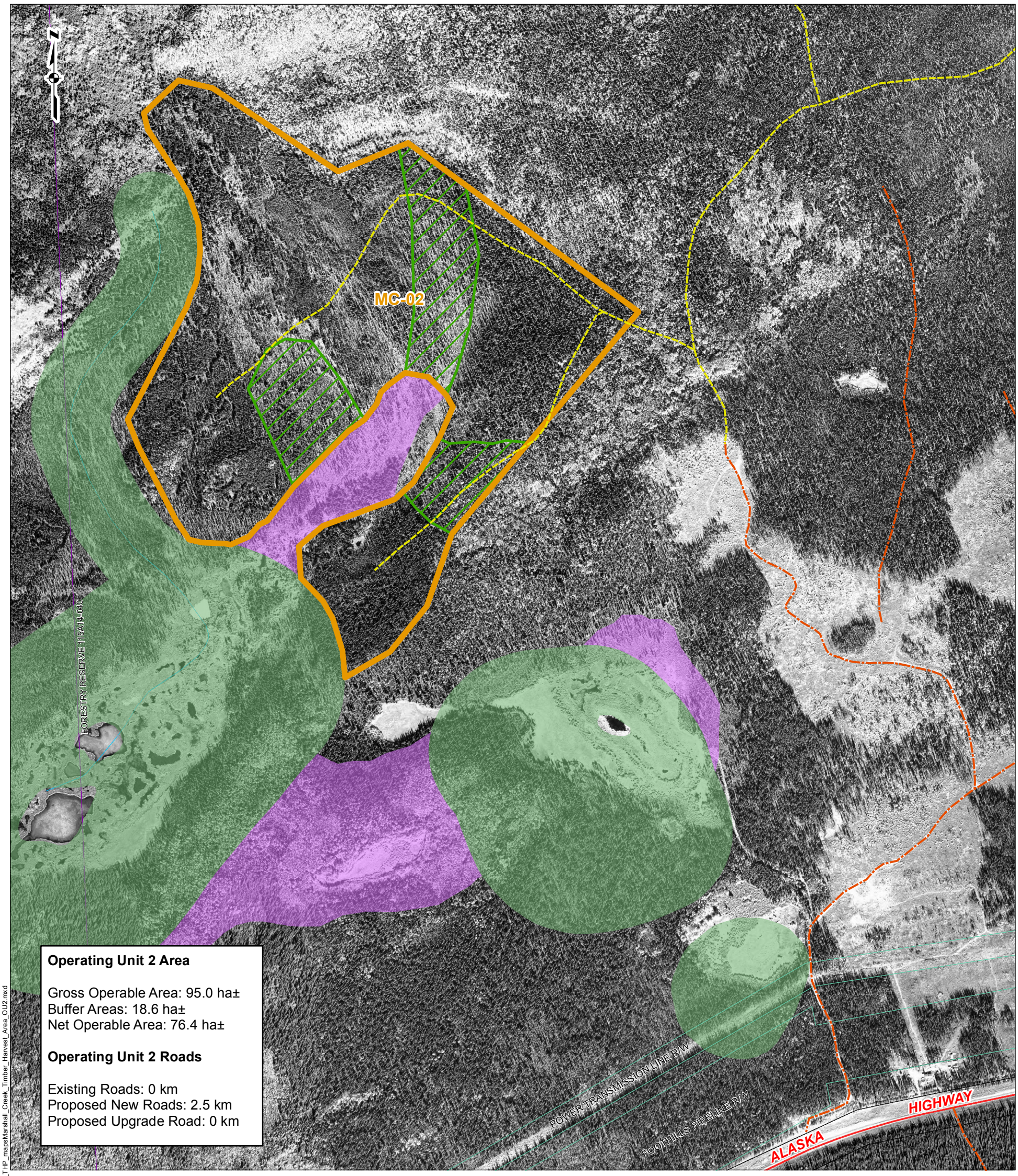
Yukon Territory

0 0.5 1
Kilometers

Map scale 1:20,000 when printing on 11"x17" paper.



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Project Specific Features

- Existing Access Route
- Proposed Access Route
- Operating Units
- Buffers
- Permanent Sampling Plots
- CFS Forest Health Plots

Administrative Features

- Surveyed Parcel
- Surveyed Easements
- Agriculture Tenure
- Land Disposition

Connectivity Corridors

- CPSG Riparian Connectivity
- Riparian Buffer

First Nation Settlement Lands

- Category A
- Category B
- Fee Simple

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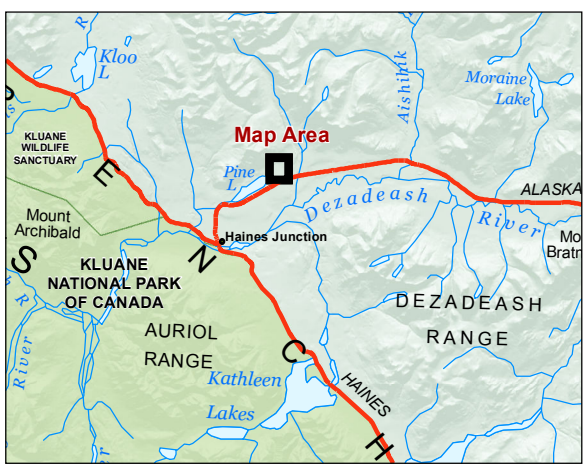
Yukon Territory

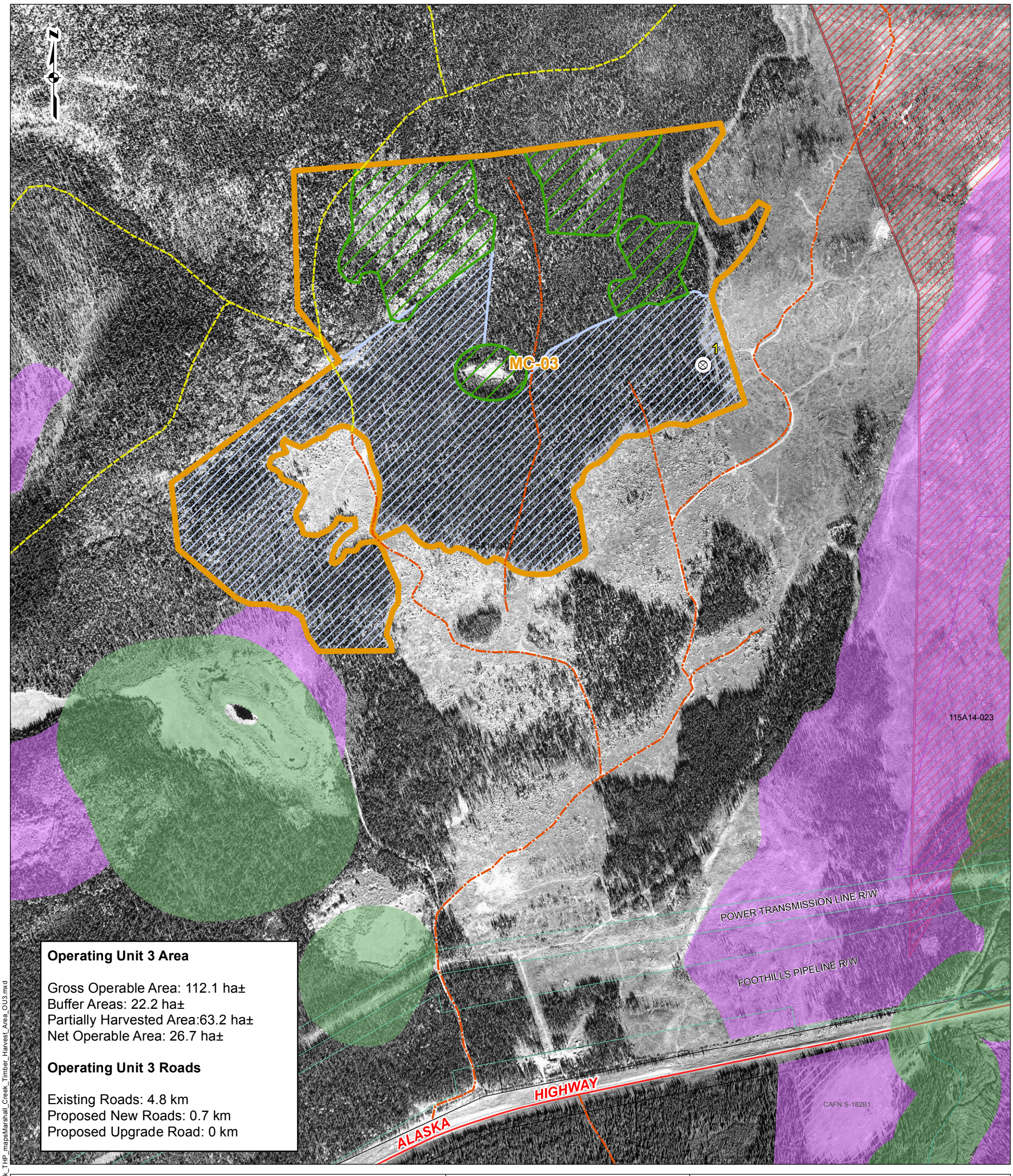
0 125 250 500
Meters

Map scale 1:10,000 when printing on 11"x17" paper.

Appendix B
Marshall Creek Timber Harvest Plan

Operating Unit 2





Operating Unit 3 Area

Gross Operable Area: 112.1 ha±
Buffer Areas: 22.2 ha±
Partially Harvested Area:63.2 ha±
Net Operable Area: 26.7 ha±

Operating Unit 3 Roads

Existing Roads: 4.8 km
Proposed New Roads: 0.7 km
Proposed Upgrade Road: 0 km

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Project Specific Features

- Existing Access Route
- Proposed Access Route
- Operating Unit
- Buffers
- Partially Harvested Areas
- Permanent Sampling Plots
- CFS Forest Health Plots

Administrative Features

- Surveyed Parcel
- Surveyed Easements
- Agriculture Tenure
- Land Disposition

Connectivity Corridors

- CPSG Riparian Connectivity
- Riparian Buffer

First Nation Settlement Lands

- Category A
- Category B
- Fee Simple

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Yukon
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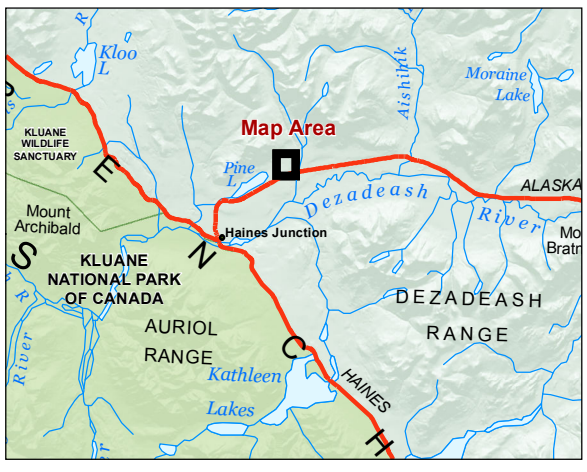
Meters

Map scale 1:10,000 when printing on 11"x17" paper.

Appendix C
Marshall Creek Timber Harvest Plan

Operating Unit 3



FORESTRY RESERVE 115A14-040

MC-04

1

Operating Unit 4 Area

Gross Operable Area: 222.4 ha±
Buffer Areas: 59.6 ha±
Net Operable Area: 162.8 ha±

Operating Unit 4 Roads

Existing Roads: 0 km
Proposed New Roads: 4.3 km
Proposed Upgrade Road: 0 km

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Project Specific Features

- Existing Access Route
- Proposed Access Route
- Operating Unit
- Buffers
- Permanent Sampling Plots
- CFS Forest Health Plots

Administrative Features

- Surveyed Parcel
- Surveyed Easements
- Agriculture Tenure
- Land Disposition

Connectivity Corridors

- CPSG Riparian Connectivity
- Riparian Buffer

First Nation Settlement Lands

- Category A
- Category B
- Fee Simple

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Digital Data Sources

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Digital Elevation Models (30 metre and 90 metre) provided by Yukon Government Geomatics spatial data warehouse - www.geomaticsyukon.ca.

Yukon
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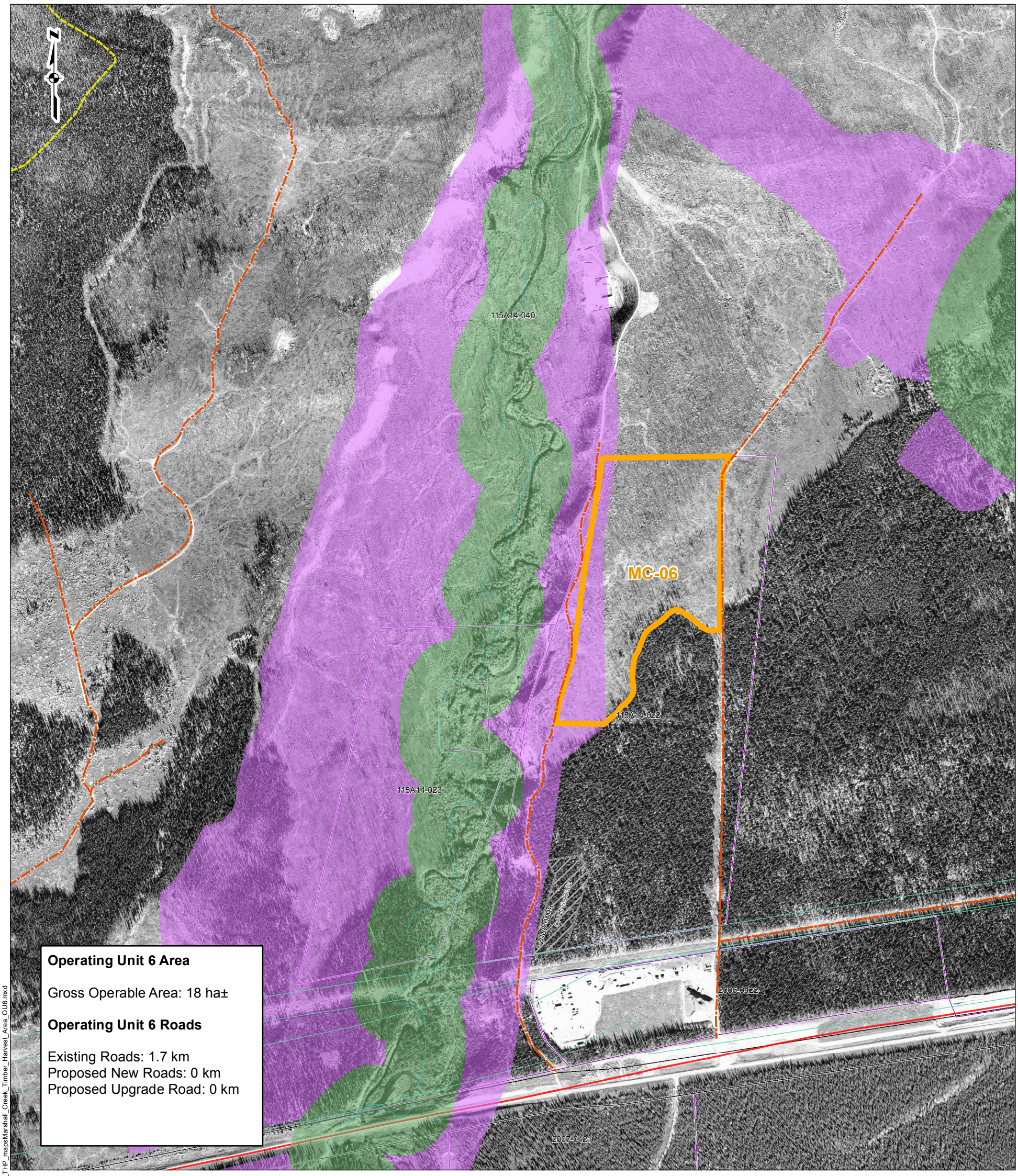
Forest Management Branch
Yukon Territory

0 125 250 500
Meters

Map scale 1:10,000 when printing on 11"x17" paper.

Appendix D
Marshall Creek Timber Harvest Plan

Operating Unit 4



Operating Unit 6 Area

Gross Operable Area: 18 ha±

Operating Unit 6 Roads

Existing Roads: 1.7 km
Proposed New Roads: 0 km
Proposed Upgrade Road: 0 km

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Project Specific Features

- Existing Access Route
- Proposed Access Route
- Operating Units
- Buffers
- Permanent Sampling Plots
- CFS Forest Health Plots

Administrative Features

- Surveyed Parcel
- Surveyed Easements
- Agriculture Tenure
- Land Disposition

Connectivity Corridors

- CPSG Riparian Connectivity
- Riparian Buffer

First Nation Settlement Lands

- Category A
- Category B
- Fee Simple

Date: June 2, 2011
Projection: NAD 1983 UTM Zone 8

Digital Data Sources

1:50,000 Canvec features downloaded from spatial data warehouse - www.geogratis.gc.ca. Her majesty the Queen in Right of Canada, Department of Natural Resources. All rights reserved.

Original map design by EDI Environmental Dynamics Inc. Fall 2009.

Digital Elevation Models (30 metre and 90 metre) provided by Yukon Government Geomatics spatial data warehouse - www.geomaticsyukon.ca.

Yukon
Energy, Mines and Resources

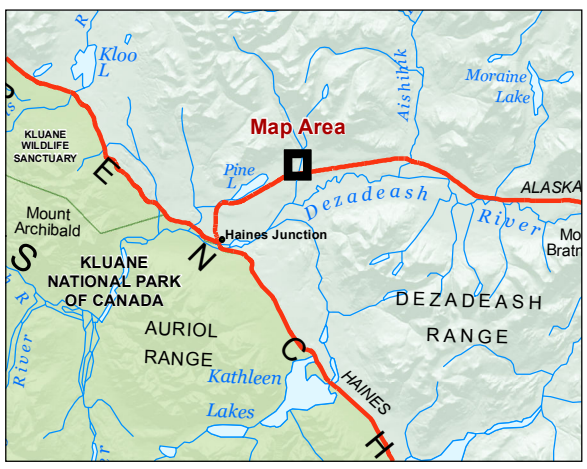
Forest Management Branch
Yukon Territory

0 125 250 500
Meters

Map scale 1:10,000 when printing on 11"x17" paper.

Appendix E
Marshall Creek Timber Harvest Plan

Operating Unit 6



Yukon
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Forest Management Branch

Appendix F

MC2 SITE and STAND DATA

1. LOCATION

Development Area	Operating Unit Number	Geographic Location Name
Pine Lake Landscape Unit Marshall Creeks Blocks	MC-02	Haines Junction Area- Marshall Creek

District	FMU	Map sheet	Latitude	Longitude
Kluane	Y06	115A14	60-51-00	137-22-38.4

2. ECOLOGY AND SITE CONDITION

Eco-Region
Ruby Range/Southern Lakes

Soil Order	Soil Texture (B horizon)	Soil Texture (C horizon)	Coarse Fragments	Moisture Regime	LFH Depth (cm)	Compaction Hazard
Eurtic Brunisol	Silt	Silty Clay Loam	10-40	Very Fresh Moist	10	High

Mature Stems/ha	Poles Stems/ha	Saplings Stems/ha	Regeneration Stems/ha	Predominant under story vegetation
1003	50	275	1600	White spruce-generally good form and abundant

3. OPERATING UNIT AREA SUMMARY

Gross Area (ha)	Reserves/ Buffers (ha)	Perm Roads landings (ha)	Net Area to reforest (ha)	Elevation (m)	lope (%)	Aspect	Terrain	Slope Position
95.0	18.6	0	76.4	700	2-17	W	Even	Lower

4. STAND DESCRIPTION

Species	Crown Closure	Age (years)	Avg. Height (m)	Avg. DBH (cm)	% Mortality by volume	Est. Vol/Ha (m^3/ha)	Est. DeadVol/Ha (m^3/ha)
Sw9A1	30	180	15.1	22.4	67	168	114

Total Estimated Net Harvest Volume (m^3): 12,835

Notes

Comments: *(location, terrain, timber quality, condition of poles, saplings, regen, wildlife, heritage, stand attributes, other issues)*

Operating unit is located on a side slope with a swamp located in the center (excluded from the operating unit). Lower portions closer to the swamp are wetter with horse trails and sphagnum moss present. Upper portions are well drained, but located on heavier soils. Timber included in harvestable areas is white spruce of good size and density.

Road Access: *(proposed and existing access, upgrades)*

Access to and through the operating unit has not been constructed but has been located on the ground. Road location should be reviewed at time of permitting to ensure it meets operational requirements of the

permitee.
Recommendations: *(boundary modifications, reserves, proposed roads, silviculture system, summer harvest, reforestation, other issues to address)* Two reserves are proposed and they contain marginally small spruce stands located on wet ground. Fine soils in B and C horizons with low coarse fragments are prone to soil compaction, erosion and mass wasting. Therefore this unit should be logged only in winter conditions with frozen ground.

Appendix G:
MC3 Site and Stand Data

1. LOCATION

Development Area	Operating Unit Number	Geographic Location Name
Pine Lake Landscape Unit Marshall Blocks	MC -03	Haines Junction Area Marshall Creek

District	FMU	Map sheet	Latitude	Longitude
Kluane	Y06	115A14	60-50-58.8	137-21-11.1

2. ECOLOGY AND SITE CONDITION

Eco-Region
Ruby Range/Southern Lakes

Soil Order	Soil Texture (B horizon)	Soil Texture (C horizon)	Coarse Fragments	Moisture Regime	LFH Depth (cm)	Compaction Hazard
Eutric Brunisol	Silt	Silty Clay	0-40	Very fresh-moist	10	High

Mature Stems/ha	Poles Stems/ha	Saplings Stems/ha	Regeneration Stems/ha	Predominant under story vegetation
953	120	760	2920	White spruce- generally in good form and abundance

3. OPERATING UNIT AREA SUMMARY

Gross Area (ha)	Reserves / Buffer (ha)	Perm. Roads landings (ha)	Net Area to reforest (ha)	Elevation (m)	Slope (%)	Aspect	Terrain	Slope Position
112.1	22.2/63.2	0	26.7	710	5-5	S	Even	lower

4. STAND DESCRIPTION

Species	Crown Closure	Age (years)	Avg. Height (m)	Avg. DBH (cm)	% Mortality by volume	Est. Vol/Ha (m^3/ha)	Est. DeadVol/ Ha (m^3/ha)
Sw9 A1	30	150	17	22	65	180	116

Total Estimated Net Harvest Volume (m^3): 4,806

Notes

Comments: *(location, terrain, timber quality, condition of poles, saplings, regen, wildlife, heritage, stand attributes, other issues)*

Operating unit is located on relatively flat ground close to existing roads. Southern part is currently being logged. Northern part is not developed. There is a research transect line present, but it is located outside the proposed area for logging. Regeneration of white spruce is abundant with almost 3000 stems per ha present.

Road Access: *(proposed and existing access, upgrades)*

There is an existing road leading to the unit. There are several skidding trails present in the southern part of this operating unit. Road location should be reviewed at times of permitting to ensure it meets with operational requirements of the permitee.

Recommendations: *(boundary modifications, reserves, proposed roads, silviculture system, summer harvest, reforestation, other issues to address)*

Fine soils in B and C horizons with low amount of coarse fragments are prone to soil compaction, therefore this unit should be logged only:

- in winter over frozen ground, or
- during dry summer conditions, or
- with low ground pressure equipment

Appendix H:
MC4 Site and Stand Data

1. LOCATION

Development Area	Operating Unit Number	Geographic Location Name
Pine Lake Landscape Unit Marshall Blocks	MC-04	Haines Junction Area- Marshall Creek

District	FMU	Map sheet	Latitude	Longitude
Kluane	Y06	115a14	60-51-34.8	137-21-33.7

2. ECOLOGY AND SITE CONDITION

Eco-Region
Ruby/Range/Southern Lakes

Soil Order	Soil Texture (B horizon)	Soil Texture (C horizon)	Coarse Fragments	Moisture Regime	LFH Depth (cm)	Compaction Hazard
Eutric Brunisol	Sandy loam	Loamy sand	10-40	Fresh	12	Moderate

Mature Stems/ha	Poles Stems/ha	Saplings Stems/ha	Regeneration Stems/ha	Predominant Understory Vegetation
1057	320	1160	1946	White spruce- generally good form and abundance

3. OPERATING UNIT AREA SUMMARY

Gross Area (ha)	Buffers/ Partial Harvest (ha)	Perm. Roads landings (ha)	Net Area to reforest (ha)	Elevation (m)	Slope (%)	Aspect	Terrain	Slope Position
222.4	59.6	0	162.8	800	2-33	S-E	Even	Lower

4. STAND DESCRIPTION

Species	Crown Closure	Age (years)	Avg. Height (m)	Avg. DBH (cm)	% Mortality by volume	Est. Vol/Ha (m^3/ha)	Est. DeadVol/Ha (m^3/ha)
Sw9A1	30	134	15.2	22.6	80	197	157

Total Estimated Net Harvest Volume (m^3): 32,072

Notes

Comments: *(location, terrain, timber quality, condition of poles, saplings, regen, wildlife, heritage, stand attributes, other issues)*

Central and Eastern parts of the unit are located on flat ground. There are two swampy areas present (reserved). North west portion is located on a slope up to 35% steep with several benches.

Timber is consistently of very good quality – predominantly sawlogs. Over 80% of spruce trees are killed by spruce beetle. There is a large amount of saplings and regeneration present, making this a good candidate for natural regeneration.

Road Access: *(proposed and existing access, upgrades)*

Access to and through the block is field located. Road location should be reviewed at time of permitting to ensure it meets operational requirements of the permitee.

Recommendations: *(boundary modifications, reserves, proposed roads, silviculture system, summer*

harvest, reforestation, other issues to address)
Three reserves are proposed. They contain marginal, small spruce stands located on wet ground or a high proportion of aspen.
Soils in this block are mostly sands and sandy loam. There are two pockets of heavier soils identified (around cruise plot 4 and 8 close to northern body), but are small in size.
This block can be logged at any time of the year without restriction.

Appendix I:
MC6 Site and Stand Data

1. LOCATION

Development Area	Operating Unit Number	Geographic Location Name
Pine Lake Landscape Unit Marshall Blocks	MC-06	Haines Junction Area- Marshall Creek

District	FMU	Map sheet	Latitude	Longitude
Kluane	Y06	115a14		

2. ECOLOGY AND SITE CONDITION

Eco-Region
Ruby Range/ Southern Lakes

Soil Order	Soil Texture (B horizon)	Soil Texture (C horizon)	Coarse Fragments	Moisture Regime	LFH Depth (cm)	Compaction Hazard
Eurtic Brunisol	Sil/ sand/ gravel			fresh	<5	Mod

Mature Stems/ha	Poles Stems/ha	Saplings Stems/ha	Regeneration Stems/ha	Predominant under story vegetation
0	0	200	400	Willow /White spruce /Aspen

3. OPERATING UNIT AREA SUMMARY

Gross Area (ha)	Buffers/ Reserves (ha)	Perm. Roads landings (ha)	Net Area to reforest (ha)	Elevation (m)	Slope (%)	Aspect	Terrain	Slope Position
18	0	0	18	700	0-5	SW	even	Level

4. STAND DESCRIPTION

Species	Crown Closure	Age (years)	Avg. Height (m)	Avg. DBH (cm)	% Mortality by volume	Est. Vol/Ha (m^3/ha)	Est. DeadVol/ Ha (m^3/ha)
Sw9A1	0	10	14	30	100	50	50

Total Estimated Net Harvest Volume(m^3): 900

Notes

Comments: *(location, terrain, timber quality, condition of poles, saplings, regen, wildlife, heritage, stand attributes, other issues)*
.operating unit is located on east side of Marshall Creek. Entire unit is within the 1998 Marshall creek Fire. Terrain is flat.

Road Access: *(proposed and existing access, upgrades)*
Access to and through the unit is from two existing roads. One follows the ridge along the Marshall Creek while the other goes through the Highway gravel pit and is gated.

Recommendations: *(boundary modifications, reserves, proposed roads, silviculture system, summer harvest, reforestation, other issues to address)*
Salvage opportunities for fire killed wood. Natural regeneration should be considered and will likely be adequate.

Marshall Creek Timber Harvest Plan

Prepared: June 13, 2011
Prepared by: Colin Urquhart

Appendix J:

Representation Summary

A total of three (3) respondents' submitted comments during the notification period on the Marshall Creek Timber Harvest Plan held from April 15, 2011 to May 16, 2011.

Comments were received from:

- Romeo Leduc
- Government of Yukon – Environment
- Champagne and Aishihik First Nation

The following table contains a summary of the comments received during the notification process, with responses to comments and how the comments have been addressed.

Marshall Creek Timber Harvest Plan

June 13, 2011

Topic <List Table of Content Sections>	Name / Organization	Comment	Consultation Comment Response	How comment/s have been addressed.
General	Romeo Leduc	Your "Timber Harvest Plan Marshall Creek THP" is a Joke. A) You are using 20 year air Photo's taken before the beetle kill happen in the Haines Junction area, so the people evaluating this project can't see what is currently going with the beetle kill in Yukon forest. B) Your paper block boundaries don't even accurately follow timber types C) Your Volume estimate are far too high as Comparable timber across Marshall creek (13B north) only yielded 75m3/ha.! D) After FMB planned a summer access route that went through swamps spruce and running water to get into a summer access block with 4 swamps in it (13B), that had be reengineer to make it operable in 2010. How is anybody suppose to trust FMB to do reasonably operable plans.	No comment required.	No action required.
	Government of Yukon - Environment	The proposed THP area was not previously identified as an area of interest through the approved Pine/Canyon THP process (referenced in schedule 4 of FRA Regulations).	The approved Pine Canyon THP was not intended to be a complete and sole plan for the Pine Lake and Canyon Landscape Units. The Marshall Creek THP area was	

		The addition of new harvest blocks in an area that has an existing THP plan seems to imply that the Pine/Canyon THP should be varied or amended to include the new interest. Otherwise it appears that the existing approved plan has not been followed with respect to identification of new areas that occur within the existing scope of the plan in effect.	identified by the SFMP and ILP as an "area of interest", available for THP development. Marshall Creek THP development is consistent with direction given from these upper level plans. Amendments to THP's is limited to reasons outlined in FRA Regulations section 8(1).	
	Government of Yukon - Environment	To implement CPSG recommendation #7, harvest permits should not be issued and be in effect concurrently on both the east and west sides of Marshall Creek. The Marshall Creek area and adjacent riparian corridor were previously identified by Environment as high value moose habitat, and a significant wildlife migration corridor. Additional timber harvest activities in the area will create additional moose harvest pressure in an area that currently has substantial moose harvest.	Recommendation #4 of the *Habitat Connectivity Planning Recommendations for Forest Harvest Planning in the Champagne and Aishihik Traditional Territory, states:* "Where possible, limit harvest activity to one side of valley during the same harvest season" Recommendations from this plan are considered throughout the planning process and will continue to be considered throughout the operation phases of the plans.	Schedule of harvesting operations will be considered at time of cutting permit issuance.
	CAFN	CAFN has pointed out, "..that there is no existing Trappers' compensation policy in place as contemplated under Chapter 16 of the CAFN Final Agreement."	A draft trapper compensation process is currently under development by Yukon government. CAFN and other	Commitment by FMB to continue to work with

			Yukon First Nations will have the opportunity to review and comment on the draft process. Until the trapper compensation process under section 16.11.13 of the First Nation Final Agreements is in place, FMB is willing to work with First Nations, affected trappers and licencees, to ensure their site specific concerns are identified and addressed, both within the context of the CAFN final agreement section 16.11.13 and section 3.9 of ILP. FMB will be developing standards that will apply to the harvest licences issued within this THP area which will set-up a consultation process consistent with the guidance of these documents. Prior to the issuance of cutting permits, the director is required by section 27 of the Forest Resources Act to consider the impacts of cutting timber on the specific rights granted to trappers under	CAFN. Trappers, and licensees to ensure concerns are identified and addressed.

			the trapping licence.	
	CAFN	Disagrees with adding more operating units to the Pine Lake and Canyon planning units (as defined in SFMP). "Perhaps the biggest concern we have with these plans is with the additional blocks proposed in the Marshall Creek area after we went through a planning exercise for this Landscape Unit (Pine) under the Pine- Canyon THP."	The two overriding plans that give direction on forest development in the CATT are the SFMP and ILP. These two documents describe where THP's may be considered for development. The Bear Creek THP meets all guidelines and follows direction given from these two upper level plans. Amendments to THP's is limited to reasons outlined in FRA Regulations section 8(1).	
Executive Summary				
1.0Introduction				
1.1 Planning Area				
1.2 Background				
1.3 Eco-region				
2.0Strategic Forest Planning	CAFN	It should be noted the reference to "**Proposed Areas for forest development within the CATT"** was shared with CAFN staff after its development, but we were not directly involved with its development, nor have we agreed with all the direction that it provides. When this document was shared with us, it was the first time that further consideration of developing THPs within the Pine Canyon Timber Harvest Plan area was known to us. Soon after, we have expressed a lack of support to develop	The referred to document was developed by FMB and was intended to guide where THP development should be considered next based on existing direction given from higher level plans; the SFMP and ILP. The Bear Creek THP is within the scope of direction given in these upper level plans.	No further Operating Units will be removed from development under this THP

		THPs in areas that we already planned out. In other words, we recognize this document points to Marshall Creek as a possible area for development, but we explained that we did not support this at the time, except for the conclusion of activities for the few small volume wood cutters located in the west Marshall Creek area (block 3).		
3.0Measures to Protect Forest Resources				
3.1 Resource Management Guidelines	CAFN	There are only a few blocks proposed within both THPs that should have **reducing the fuel load** in stands as a primary objective. We acknowledge that there is some value in timber harvesting within a reasonable proximity of communities and other values at risk; however, most of the blocks in these THPs will have a very limited value for providing primary means of reducing threat to surrounding communities and values at risk. We view that is critical to address fuel hazards within the community and interface zone well before trying to address it within the landscape zones. For these THPs, the primary objectives should be the other three points, and fuel abatement should be considered a secondary objective.	The ILP states that a management priority within the Landscape Zone is "Fire hazard reduction through fuel management and integration of other values." Not all of the Marshall Creek Operating Units are within an ILP identified Landscape Zone. Wording will be restated to clarify that areas within the LZ will have fuel reduction as a primary objective. Fuel abatement will be a secondary objective in areas outside of Fuel Abatement zones, as per the ILP.	Clarify wording of objectives to better reflect guidance given from the ILP.
3.2 Silviculture Systems	CAFN	Further to the point made above (3.1), the silvicultural objectives for these stands should look very different if the intention includes fuel	The silvicultural system describe at the cutting permit phase will take into consideration the	

		abatement as a primary objective (i.e. do not plan to regeneration to spruce or mixedwood forest – possibly do not plan to re-forest). Otherwise, this section is reasonable if it is agreed that fuel abatement is a secondary objective.	individual operating unit objectives as reflected in the discussion regarding section 3.1. This is a requirement of the FRA Regulation section 27(4).	
3.3 Land Use Coordination	CAFN	This section should also include: trapping, outfitting, and possibly visual quality objectives if a "user group" could be associated with this value. Specific to trappers' interests, it would be beneficial to specify the mechanism by which those concerns outlined in the introduction will be addressed. It should provide a description of the mechanism that will be used for notifying trappers prior to issuance of permits, and notification process prior to timber harvesting operations commencing. The trapping section should consider the maintenance / protection of suitable habitat types that are reasonably accessible within the registered trapping concession. For context, the trapper affected by the Marshall Creek proposed blocks, there has been a considerable impact of human activity in the last 15-20 years resulting in few if any good places left to trap.	A draft trapper compensation process is currently under development by Yukon government. CAFN and other Yukon First Nations will have the opportunity to review and comment on the draft process. Until the trapper compensation process under section 16.11.13 of the First Nation Final Agreements is in place, FMB is willing to work with First Nations, affected trappers and licencees, to ensure their site specific concerns are identified and addressed, both within the context of the CAFN final agreement section 16.11.13 and section 3.9 of ILP. FMB will be developing standards that will apply to the harvest licences issued within this THP	Commitment by FMB to continue to work with CAFN. Trappers, and licensees to ensure concerns are identified and addressed.

			area which will set-up a consultation process consistent with the guidance of these documents. Prior to the issuance of cutting permits, the director is required by section 27 of the Forest Resources Act to consider the impacts of cutting timber on the specific rights granted to trappers under the trapping licence.	
3.4 Fuel Abatement Guidelines	CAFN	See comments in section 3.1 re: fuel abatement as a primary objective. Although we agree that this issue should be considered, in the given context of block location, location of values at risk, and the greater priority on addressing fuel hazards closer to community, this aspect should be of lesser importance than addressing other principle objectives. This will provide more flexibility into site plans and management of in block retention and coarse woody debris objectives. In general, the bulleted strategies are reasonable, but greater clarification should be made on what is meant by (excess) slash reduction. Excess can only be defined if a clear CWD objective is defined for each site.	The THP will be updated to clarify primary and secondary objectives as per the ILP. Specific site plans will be developed with issuance of cutting permits and will work to ensure client needs can be met as well as meeting all requirements from the THP and FRA.	The THP will be updated to clarify primary and secondary objectives as per the ILP.
3.5 Wildlife and Biological	Government of	Include a sentence describing the Marshall	Agreed. YE has pointed out that	Section will be

Diversity	Yukon - Environment	Creek corridor as having high value moose habitat, and it is a significant wildlife migration corridor.	although this area is not listed as Key Wildlife habitat it does have high value as moose habitat.	updated as per recommendations.
	CAFN	It is good to incorporate the recommendations of the wildlife working group – connectivity recommendations, but it should be noted that these are landscape level recommendations and when developing timber harvest plans, more localized planning is required. We would be curious to see what YG Environment may have recommended at this scale, and assume they had the opportunity to do so. Marshall Creek: We are primarily concerned about the additional blocks proposed for Marshall Creek and do not support this scale of timber harvesting throughout Marshall Creek below Paint Mountain (Block 4) and toward Pine Lake (Block 2). The area in general, is an important overwintering region for moose as well as what our local knowledge tells us about wildlife movement up and down the mountain and in and around Pine Lake and nearby pothole wetlands. The Pine Canyon THP already identified what we agreed as an acceptable level of timber harvesting for this landscape unit. Without any certainty on how much timber harvesting will be planned for landscape units, we cannot address important wildlife	Recommendations made by the wildlife working group are considered in forest management planning. Marshall Creek THP development is consistent with direction given in upper level plans including the SFMP and ILP.	No actions required.

		management requirements such as consideration of cumulative effects.		
	CAFN	With additional timber harvesting comes access development, at an estimated 12.8 kms (in block roads and spurs). Marshall Creek already has a network of access trails and logging roads. Despite best efforts to gate roads and the introduction of the forest road regulations, we believe people will continue to access the land through the easiest means possible (such as walking or using atv's along routes) in high use areas (e.g., Marshall Creek). This will have negative effects on wildlife. It is for this reason (people will use roads despite attempts to gate or block access) that we developed the ILP threshold for road density. Although we have not done a quick calculation of the road density, we highly suspect this proposed development would exceed the ILP threshold of .16 km/km^2 for the Landscape Unit, and/or 0.4 km/km^2 local road density. If this is the case, then we should at least carry out further discussion of this threshold and planning for the area.	Any new roads developed in this THP will be Forest Resource Roads and will have restricted access as per the FRA. Forest Resource Roads are not public roads and are temporary in nature. New resource roads will be gated, will have a designated maintainer, and will be decommissioned upon completion of operations. Not all roads in the THP need be developed at once. It is a requirement of the FRA that the Director must consider if the proposed activity is consistent with the Strategic Forest Management Plan and this THP prior to issuance of cutting permits. The ILP section 3.10(9) states that "…forestry planning should consider…" access density and FMB is committed to do so.	FMB will continue to work with YE and CAFN on access management issues and options.
	CAFN	We support the concept of starting at the farthest point required and then pulling back. What is not mentioned in either of the Draft THPs is the recognition of sequencing operations such that there are no simultaneous	The FRA and regulations provides guidance on Forest Resource Roads. Road construction activities are required to be screened through YESAB and	FMB will continue to work with YE and CAFN on access

		operations on adjacent sides of a valley. This will be important for both Marshall Creek and the Bear Creek plans. The proximity of blocks on either side of the tributary creeks running south and into Bear Creek are very close and they should not have operations carried out at the same time. For Marshall Creek, the landscape area is considerably larger, but it should be noted that there is not a lot of older forest structure left in the valley – so this guidance should also hold. By example, it may not be appropriate to have operations carried out simultaneously in block 14, and block 3 of Marshall Creek.	scheduling of operations will also be considered during the harvest licence application phase.	management issues and options.
	CAFN	The first four bullets in this section are acceptable points. A certain level of dispersed retention is also desired, despite the probability of blowdown. There are examples of older blocks in Marshall Creek where small clumps and individual trees were maintained in the block and they are still standing after close to 20 years. Depending upon the level of "slash" management and level of utilization on the blocks, maintaining dispersed retention may become important for recruitment of coarse-woody debris. The conventional users for fuelwood are likely to leave considerable non-merchantable trees on the block that this will not be a major concern.		No action required.

	CAFN	The last bullet does not make sense. The fact that it is on the edge of a burn does not mean that it is not important for wildlife. In general, these transitions between stand types provide habitat features that are important for a range of wildlife (positive edge influences), and there is ample evidence that wildlife trails are commonly found along such edges. As such, it is reasonable, perhaps desirable, to maintain the integrity of the edge environment. Some ground-truthing may be required.	The last bullet refers to block MC6 which is on the east side of Marshall Creek and is within the old burn. The area has been ground truthed and evidence of animal usage, including moose and bear, has been found.	No action required.
	CAFN	The scale at which the connectivity working group carried out the mapping does not appear to fit well with the scale that the draft site maps indicate (1:250,000 vs 1:10,000). Boundaries are out of alignment and should be corrected. We also have some recommendations about the configuration of block and buffer boundaries in Part 2 – separate document.	FMB is currently in the process of cleaning and correcting spatial data.	Continue cleaning and correcting spatial data.
3.6 Riparian and Water Resources	CAFN	The riparian buffers are good for all proposed blocks.	Agreed.	No action required.
	CAFN	There is no mention in either draft THP on the analysis of the ILP threshold for protecting watersheds. The rough indicator tells us that a hydrologic assessment should be carried out if and when there is any proposed forestry operations that would meet or exceed 20% of the forested area disturbed within a given watershed. This guideline was set in place to	The Director may refuse to issue a cutting permit if the permit is not consistent with the applicable Forest Resource Management Plan or Timber Harvest Plan (Timber Regulations section 27(4)). Section 3.6 of the ILP provides	Continue to ensure commitments in upper level plans are being met.

		protect watershed integrity. The Marshall Creek burn is probably still a long way off from a point of hydrologic recovery. Adding the proposed THPs will likely meet or exceed this 20% threshold. We acknowledge there is considerable uncertainty whether or not there would be much impact from salvage harvesting, but there is certainly evidence from elsewhere (BC Pine Beetle) that salvage harvesting does add to increased runoff, has an effect on changes to the timing of peak flows, etc,.. If there is still interest in including all of the proposed blocks, and if this total area meets or exceeds the 20% threshold, then we expect that we should be conducting a hydrologic assessment for the area.	specific guidance to this issue. Section 3.6 of the ILP provides specific guidance to this issue and proposed forest harvesting will be considered in this context.	
3.7 Recreation, Tourism and Viewscapes				
3.8 Heritage Culture	CAFN	Reads well. Might want to tone down the language in the first sentence about "highly valuable". Where the the word "sites" is used, please add "and values". Please also remove the word "comprehensive" from the second sentence. Please add to the Marshall Creek section 3.8, the last sentence that is provided in the Bear Creek Section 3.8. i.e., "Heritage and Arch assessments will be conducted, prior to harvesting, etc…"	Agreed.	Adopt recommended wording changes into final THP.
4.0Harvest Section	CAFN	It would be useful to provide some level of	The intent of forestry operations is	Consider terms

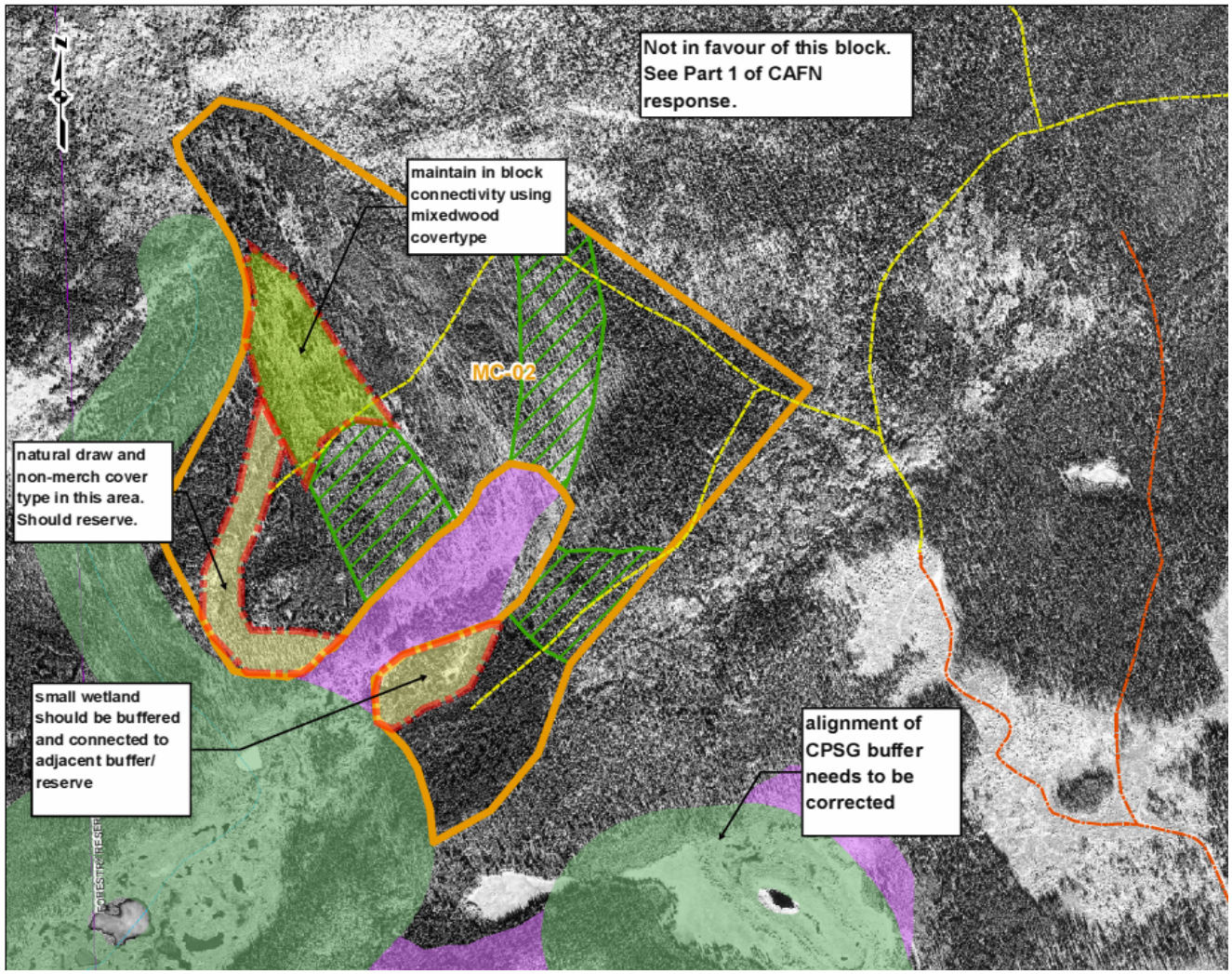
		planning on establishment of camps. The long term presence of operators on these sites is sometimes one of the bigger issues. Camp establishment and management should be regulated carefully. A recent complaint came in to us, that an operator set up camp and blocked a publicly used old road in the Marshall Creek area. No one was around to get camp equipment and vehicles out of the way preventing the citizen from being able to access further up the valley.	not to provide long term residency options. Temporary warming shacks are common practice on forestry operations in the Yukon. Camps are regulated under the Territorial Lands Act. Wording in cutting permit terms and conditions can speak to temporary structures on harvesting licence areas if required.	and conditions for specific cutting permits, regarding use of camps.
4.1 Operating Unit Area and Volume Summaries				
4.2 Harvest Scheduling and Season	Government of Yukon - Environment	The description of harvest timing is somewhat vague and non-prescriptive. Environment would prefer to have operators complete harvesting under a specific temporal scope (2-3 years permit duration), followed by immediate implementation of road and site decommissioning/deactivation. This would provide assurance that operators will get in and then get out in a timely manner, such that land uses won't persist and decommissioning can occur.	Due to operational requirements of clients in the forest industry it is difficult to put restrictive measures on timing into a THP. Expectation will be set at the cutting permit phase to ensure operators are actively operating under their Harvest Licence to ensure the activities get conducted in a timely manner. The FRA directs that roads must have a maintainer which has a corresponding cost associated with that. This is another incentive to conduct operations in	

			a timely manner. Section 27(2) of the FRA restricts cutting permit lengths to "a term not exceeding three years".	
	CAFN	This section would be a good place to describe the intent to follow the connectivity recommendations about sequencing of operations to ensure minimal impact to overwintering moose in the areas.		FMB will continue to work with colleagues at YE to ensure forestry operations address the needs of wildlife populations.
5.0Access Management				
6.0Timber Harvest Project Referral and Approval Process				
CAFN comments specifically for operating unit MC2, MC3 & MC4	CAFN	See Maps 1,2,3 Below	Operating units will be further designed into blocks at the cutting permit phase. The cut block design will be consistent with this THP and all upper level plans and will take into consideration operation requirements of the licencee.	Recommendations specific to cut block design will be considered at the cutting permit phase.

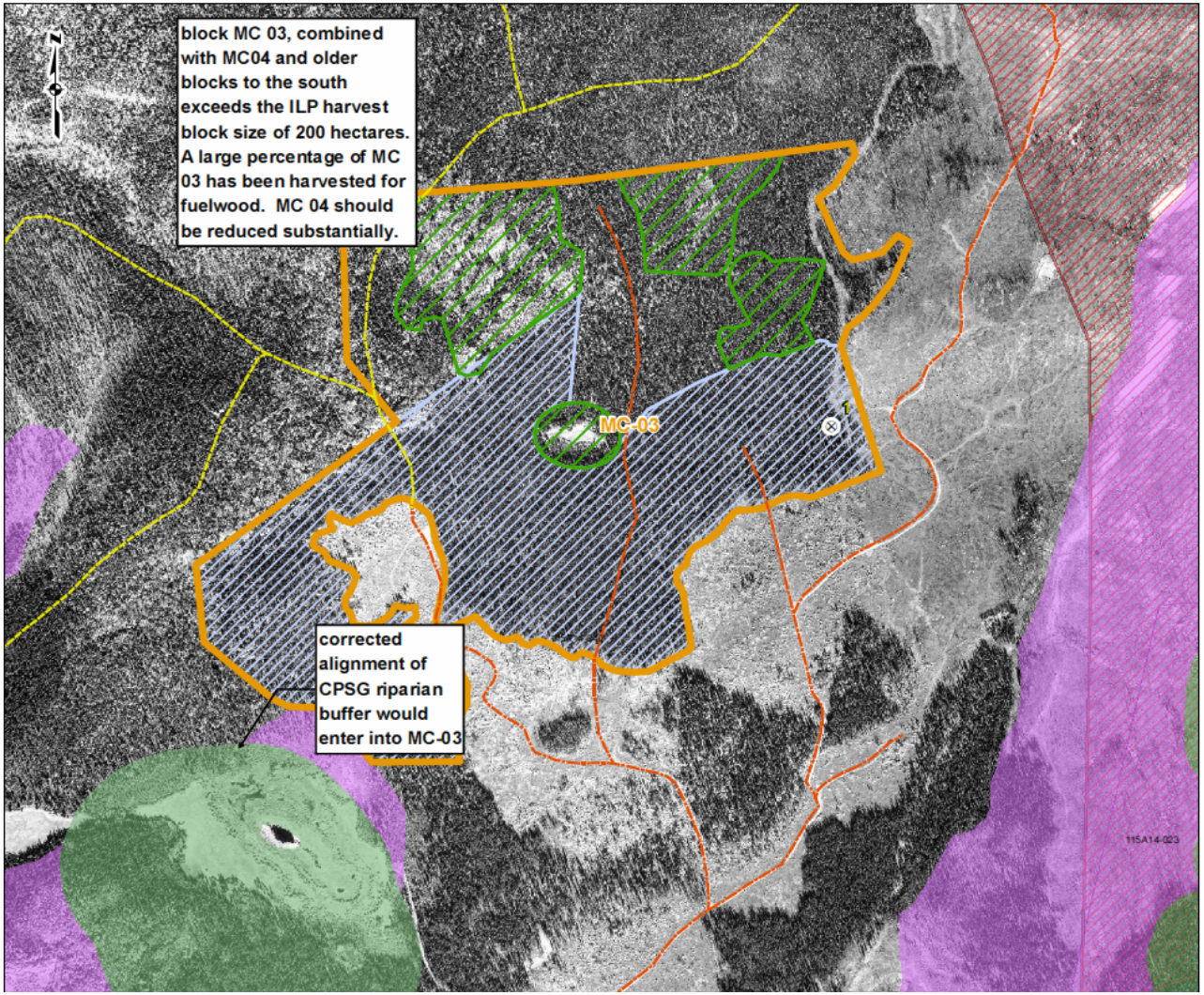
Marshall Creek Timber Harvest Plan

June 13, 2011

Map 1. Comments submitted by CAFN for Operating Units MC02 of the Marshall Creek THP



Map 2. Comments submitted by CAFN for Operating Units MC03 of the Marshall Creek THP



Map 3. Comments submitted by CAFN for Operating Units MC04 of the Marshall Creek THP