Carmacks Small Volume Timber Harvest Plan

FOREST MANAGEMENT BRANCH ENERGY MINES AND RESOURCES YUKON GOVERNMENT

Within The Carmacks Annual Allowable Cut Area

PREPARED: February 7, 2014

Approved by

Lyle Dinn

Director Forest Management Branch

Feb 20, 2014
Date

Submitted by David Swinson A/ Forester

Forest Management Branch

Feb. 20, 2014 Date

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Executive Summary

This Timber Harvesting Plan (THP) has been prepared to meet the requirements of the Forest Resources Act (FRA) and associated Forest Resources Regulation (FRR).

Under the legislation, a THP is required prior to the issuance of any timber harvesting licence or forest resources permit > 25 m3. (FRA, Section 29(4)(d)(ii).)

The Carmacks Small Volume THP is designed to meet the current needs of small volume commercial timber harvesters in the Carmacks area. It provides areas where timber harvesting operators may apply for commercial licences consisting of volumes of up to 250 m³/year, along existing highway corridors within the Little Salmon Carmacks First Nation (LSCFN) Traditional Territory.

The THP is applicable only to Public Land within the defined boundary.

The total area of the THP is 26,969 ha. Settlement Land occupies 4,181 ha and private lands/leases occupy another 2,632 ha for a combined percentage of approximately 25.5% of the area.

Settlement Land and private land is not subject to management under this THP.

All applications received by the Forest Management branch (FMB) for commercial harvest licences or personal use permits will be evaluated to ensure they meet the terms of this THP and the standards and guidelines of the Forest Management branch.

Prior to the issuance of harvesting licences, the public and any First Nations whose Traditional Territory falls within the application area must be notified of the application and given an opportunity to make representations (FRA18(1)). The Carmacks Renewable Resources Council (CRRC) expressed interest in consulting on applications within this THP and will have that opportunity during the public review period. The First Nation, and public may make representations to the Forest Management Branch Director on the application for a period of no less than 30 days.

The Director will then, based on representations, make a decision to issue or refuse to issue the harvesting licence (FRA, Section 19).

Applications that trigger a Yukon Environmental and Socio-economic Assessment will require submission to the local Development Office for review prior to issuance.

1.0 Introduction

1.1 Background

The Carmacks Small Volume THP has been prepared to meet the needs of small-scale, local, forest harvesting operators in the community of Carmacks and the surrounding area, and to provide social and economic benefits for all Yukon People. Historically, approximately a half-dozen operators in the Carmacks area have applied for small commercial harvest permits, of a total volume less than 210 m³ per year of fuel wood. Occasionally there are small personal use applications for green timber to be used as building logs or saw logs. The area to the west of Little Salmon Lake that was burned in a forest fire in the summer of 2013 was proposed to be included in this THP but has since been removed. This area will be managed under a separate THP to be developed, with the intention of focusing on site specific objectives for that area.

Forest Management Branch (FMB) consulted with the Little Salmon Carmacks First Nation (LSCFN) and the Carmacks Renewable Resources Council (CRRC) in early February of 2013 to develop a process for sustainably meeting small volume timber harvesting needs in the Carmacks area, in order to better serve the community and timber harvesting proponents.

The timber harvesting industry in Carmacks consists primarily of small scale independent operations, typically using a pick-up truck and chainsaw, to harvest fuel wood to sell to people in the community. Operational capacity of harvesting contractors is typically small-scale and few operators have the capacity to build roads, and to develop areas any distance from established access corridors.

It was agreed that FMB would prepare a Draft THP and provide it to the LSCFN and CRRC for review and comment. In general the following principles were agreed upon to guide the development of the THP.

- Harvest applications apply to Public Land only. First Nation Settlement Land and private lands are not subject to management under the THP.
- The THP will create opportunities for the use of forest resources within approximately one kilometre on either side of the Klondike and Robert Campbell highways, within the LSCFN Traditional Territory.
- Applications for timber resources would be restricted to licences and cutting permits of less than 250 m3 per year. In areas of fire salvage (dead timber), multi-year or larger volume licences and cutting permits may be considered based on demand.
- Existing access would be used whenever possible, however new access points, roads and trails may be developed where necessary, following the Forest Management Branch's operational standards and guidelines.
- Due to moose and caribou wintering concerns, the area in Operating Unit
 East between the Robert Campbell Highway and Little Salmon River will have
 seasonal operating restrictions to mitigate impacts on wildlife.

1.2 Eco-region and Drainages

The area lies within the Yukon Plateau-Central eco-region of the Boreal Cordillera eco-zone.

This eco-region extends northward from Lake Laberge to the lower Stewart River in the central Yukon. The Yukon Plateau-Central eco-region is composed of several groups of rolling hills and plateaus separated by deeply cut broad valleys. The climate is cold and semiarid. The mean annual temperature for the area is approximately -3.5°C with a summer mean of 12°C and a winter mean of -19°C. Mean annual precipitation varies from 250 mm in the southern areas near Carmacks to 400 mm at higher elevations in the north and east.

White and black spruce, form the most common forest types. Black spruce is usually dominant in wetter areas. Lodgepole pine frequently invades burnt-over areas and very dry sites. Alpine fir occasionally forms the tree line but is sparse and is usually associated with white spruce and occasionally with paper birch. The forests are subject to recurring natural fires such that early seral-stage communities are most common.

Soils consist of loamy morainal and sandy fluvio-glacial materials which are dominant in the eco-region. Much of the eco-region is covered by a veneer of volcanic ash 10–30 cm thick. Permafrost is discontinuous to sporadic with high ice content associated with fine-textured valley deposits.

The planning area lies along the major drainage of the Yukon River North of Carmacks and sub-drainages of the Little Salmon River to the east and the Nordenskiold River south of Carmacks.

There are no known Forest Health issues that impact strategies for forest management within the planning area.

1.3 Socio-Economic Considerations

Government services, including education and health, account for over half of the jobs in the community of Carmacks. The Little Salmon/Carmacks First Nation employs people in administration and in providing services such as elder care. Tourism is a sizeable part of local economic activity. Activity in primary industries, transportation and construction is consistent with averages across the Yukon.

Timber harvesting for local building products and fuel wood occurs throughout the planning area. This THP will allow for the continued creation of small scale, local economic timber harvesting opportunities to support those who use and supply timber products in the community.

2.0 Planning Area Identification

The planning area covers the highway corridors of the Klondike and Robert Campbell Highways within the traditional territory of the Little Salmon Carmacks First Nation.

The planning area extends approximately 1 km on either side of the main road corridors of the Klondike and Robert Campbell Highways. The area is naturally restricted by topography, generally having steep ground on one side of the road corridor and rivers on the other.

2.1 Ecosystem and Stand Composition

The forested land-base is composed of a wide range of ecosystems and forest stands. Smaller diameter black spruce stands are not normally harvested due to piece size, and restrictions due to soil conditions, unless the area has been burned and winter salvage of fire kill is the desire of the harvester.

Ecosystem classification, stand composition and other site features will be identified and confirmed during field assessments of proposed harvest areas, and considered during the preparation of the site plan required for each commercial harvesting authority. These are submitted to FMB for approval by the licencee. FMB staff provide assistance in developing site plans.

2.2 Wildlife

Characteristic wildlife includes caribou, moose, grizzly and black bear, as well as numerous other fur bearers and birds.

Concern has been expressed by the Department of Environment and the Carmacks Renewable Resource Council for overwintering caribou and moose calving habitat in the area between the Robert Campbell Highway and Little Salmon River in Operating Unit East. Harvesting operations will not be allowed from Jan 1 until May 1 in this area to avoid conflicts and disruption of wildlife in this critical habitat. In areas where overwintering habitat has ceased to exist due to a natural disturbance such as wildfire, an exemption from this restriction may be considered and approved by the Director of the Forest Management branch. Applications for green tree harvesting in this area will be carefully evaluated by FMB, and consulted on during the licence application process, to ensure that harvesting activities will not negatively impact calving habitat. Mitigations and site specific measures to protect calving habitat in this area will be a required inclusion in site plans.

All proposed harvesting activities within this THP will follow the Forest Management Branch's established Wildlife Features Standards and Guidelines. They will be used to address site specific issues and concerns related to wildlife within and in the vicinity of any proposed harvest area.

A copy may be found at http://www.emr.gov.yk.ca/forestry/442.html .

2.3 Biodiversity

Forest management within this THP will be implemented in such a manner as to maintain or enhance biodiversity within this management area. Timber harvesting will be conducted in a manner that mimics natural disturbance regimes as closely as possible. The scale of operations proposed in this THP will not allow for the emulation of larger disturbance regimes such as forest fires, but will allow for the emulation of stand level disturbances such as windthrow.

2.4 Riparian and Water Resources

All harvesting operations approved after public and First Nation review will meet the Forest Management Branch's established Riparian Management Standards and Guidelines. A copy of the standards may be found at http://www.emr.gov.yk.ca/forestry/442.html

2.5 Recreation and Visual Impact

The Klondike and Robert Campbell Highway are primary tourist corridors and as such, have recreational and visual sensitivity concerns near rest stops and camping areas within the travel corridor. The THP sits within an area that contains significant and distinct changes in topography, timber type, geological formations, and natural disturbance patterns. This aesthetically broken vista will naturally reduce the visual impacts of any small scale harvesting disturbance.

Potential impacts on recreation and scenery will be considered in site plans to ensure there is minimum visual impact to travelers along the highway corridor. Small scale harvesting operations, high retention levels of forest cover, and visual buffers where required, will be used to mitigate the visual impacts of timber harvesting.

2.6 Cultural Heritage and Archeological Sites

During the review of applications for timber harvest, identified planning areas will be checked for known cultural or heritage information. Heritage overviews and impact assessments will be considered in areas where there is a high probability of encountering cultural or heritage features. All proposed or approved harvesting operations must meet the Forest Management Branch's established Historic and Archaeological Resources Standards and Guidelines. A copy of the standards may be found at http://www.emr.gov.yk.ca/forestry/442.html

2.7 Traditional Land Users

There have been no identified conflicts with the scope of this THP and traditional land users. During the harvest licence application process, a consultation letter will be sent to the holder of any trapping concession whose traditional activities may be affected by the activities proposed in the application. All comments received during this consultation process will be considered when making a decision on the issuance of a harvesting licence or cutting permit.

2.8 Principles of Timber Management in the THP

If a THP is not subject to a higher level Forest Resource Management Plan, the FRA requires the THP to take into account specific matters. Many are discussed in other sections of the THP, and the following operational principles complete the required elements.

- **2.8.1 Sustainability** Historic green timber harvest levels in the District are well below the 5,000 m3 Annual Allowable Cut Limit. Harvesting in this THP will remain within these annual harvest limits.
- **2.8.2** Integrated and Balanced Planning Approach All applications for timber harvesting will be reviewed internally to meet best management practices, and publically to integrate the needs, interests and values of the public and affected First Nations.
- **2.8.3 Higher Level Plans** There are no higher level land use plans in the area. The Nordenskiold Habitat Protection Area has been excluded from the THP area.

2.8.4 Harvesting Rights of First Nations - The THP is not intended to impact the fish and wildlife harvesting rights of first nations as set out in Chapter 16 of a final agreement.

3.0 Harvesting Section

As indicated, the purpose of the THP is to support small volume harvest and use of timber products, but does not direct applicants into specific areas. There are numerous stands of mature spruce and pine throughout the THP and proponents must find and apply for those stands that will meet their needs.

A site plan must be prepared for each commercial harvesting licence application. This plan must include: a map outlining pertinent site specific information including any proposed road or trail construction, seasonal constraints of operations, type of products to be developed from harvested materials, manufacturing details, and how the goals and standards of this THP are being met.

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

- Each harvest area will be field checked to assess the site and stand characteristics. FMB staff shall collaborate with the harvesting proponent to discuss and complete harvest and site plans.
- The most appropriate harvesting system and timing of operations will be chosen based on site specific conditions to meet the THP objectives.
- The site plan will be completed and approved prior to harvesting and will document the stand level objectives, silviculture system, ecological information, access management, soil conservation requirements, harvest method/season, and reforestation plan.

Applications for harvest licences will need to meet the following criteria;

- Individual green timber licences will be limited to a maximum volume of 250 m3.
- Individual commercial fuelwood licences are limited to 250 m3/timber harvest year.
- Cumulative effects of adjacent harvest areas will be considered during the application review. Timing of harvest, proportion of forest cover to be retained, or other mitigation may be considered depending on individual circumstances.

Each licence application will be referred to the Little Salmon Carmacks First Nation, any other affected First Nations and the public for a 30 day review.

If the project requires a screening under Yukon Environmental and Socio-economic Assessment Act, the project will be submitted to the Designated Office in Mayo for the minimum 30 day public review.

Personal Use Forest Resource Permits for green timber will require a site visit by FMB staff to assess values

3.1 Land Area Summary

Table 1 shows the distribution of land by ownership within the Carmacks Small Volume Timber Harvesting Plan. The Community of Carmacks and immediately surrounding lands are not included within the THP area. Settlement Land includes all First Nation Schedule A and B lands within the THP boundary. Private and Urban land includes all fee simple private property, leases, agriculture, highway and power line corridors within the THP boundary.

Table 1: Distribution of Land by ownership within THP

LAND OWNERSHIP	AREA (HA)	PERCENT
Settlement Land	4181	15.5
Private/Urban	2632	10.0
Public	20156	74.5
Total (ha)	26969	100%

Harvesting applications will only be considered on the public land portion of the THP.

The THP is divided into three Operating Units (OU), based on their relative location to Carmacks (see operating unit maps in the Appendix). OU East runs from Carmacks, east along the Robert Campbell Highway to Little Salmon Lake. OU South lies south of Carmacks along the Klondike Highway to about km 318 and OU North lies north of Carmacks along the Klondike Highway ending at km 422.

Table 2: Classification of Public Land by Operating Unit.

OU	TOTAL AREA (HA)	PUBLIC LAND (HA)	PUBLIC LAND CLASS	AREA (HA)
NORTH	10822	8089	Forested	5145
			Lakes	24
			NP	1365
			NSR	1551
			River	3
			Wetland	1
EAST	12465	9146	Forested	5985
			Lakes	75
			NP	2237
			NSR	397
			River	1
			Wetland	451
SOUTH	3682	2921	Forested	1465
			Lakes	4
			NP	1425
			NSR	0
			River	0
			Wetland	27
TOTALS	26969	20156		20156

Table 2 provides a breakdown of Land Classes within the Operating Units of the THP.

Forested public land covers 12,595 hectares or approximately 47% of the entire THP area.

The designated NSR (not satisfactorily restocked) area refers to areas that have not naturally regenerated after a natural disturbance such as fire or are in an early seral stage of development and have not reached commercially viable stocking levels.

The NSR lands indicated in Operating Units North and East are represented by an old fire located at km 520, and the 1998 fire between km 406 and km 422 on the Klondike Hwy. The THP boundary has been extended beyond the 1 km extent in these three areas to encompass as much of the fire as possible for salvage opportunities.

Non-productive (NP) land is primarily the dry south facing grass slopes in the region, where forest cover has not been able to establish itself.

Table 3: THP Area by Leading Species, in the Forested Area on Public Land

OU	FORESTED (HA)	LEADING SPECIES	AREA (HA)
NORTH	5145	Aspen 1833	
		Balsam Poplar	38
		Pine	265
		Black Spruce	13
		White Spruce	2996
EAST	5985	Aspen	1312
		Alpine Fir	75
		Pine	821
		Black Spruce	1721
		White Spruce	2030
		White Birch	26
SOUTH	1465	Aspen	639
		White Spruce	807
		White Birch	19
TOTALS	TOTALS 12595 All S		12595
		Pine	1086
		White Spruce	5833

The total public land within the THP covered by pine and spruce leading timber types is equal to 6,919 ha (Table 3).

Due to the relatively large area covered by this plan, and the dynamic nature of forest ecosystems, species and area specific volume estimates are not being included in this THP. Site specific volume estimates will be included in the assessment of potential harvest areas and in the site plans developed under this THP. In all cases, harvested volumes will not exceed the annual allowable cut limits established under the Forest Resources Act section 16(1), and will comply with all harvesting limitations established in this Timber Harvest Plan (section 3.0).

3.2 Harvest Scheduling and Season

Harvest scheduling will be dictated by proponent applications and needs. Seasonal restrictions will be dictated by site conditions outlined in the Site Plan. Soil conservation standards and hazard assessments provide guidelines for establishing harvest schedules in order to minimize the impact of disturbance on soil productivity.

Seasonal restrictions will also apply to OU East in the area between the Robert Campbell Highway and Little Salmon River to mitigate wildlife concerns (see section 2.2). Harvesting operations will not be allowed in this area from Jan 1 until May 1, to avoid negatively impacting this critical habitat. In areas where overwintering habitat is eliminated due to a natural disturbance such as wildfire, an exemption from this restriction may be considered and approved by the Director of the Forest Management branch.

3.3 Silviculture System

The silviculture system and its application will be outlined in the Site Plan, which is required for each licence application, and must be approved prior to the issuance of a cutting permit.

- In pine stands, a 250m3 harvest may equate to a patch cut of up to 2.5 hectares. In no case will all live mature timber in a stand be permitted to be removed. A minimum of 10% retention of the mature stand will remain for biodiversity and stand regeneration purposes. Group retention is preferred to minimize blow down of residual stems.
- In spruce stands, due to their open multi-canopy structure, shelterwood, diameter limit, or selection systems, with the mandatory protection of understory will be considered.

A reforestation plan is part of the site plan and establishes the stocking goal, preferred regeneration species and time frame in which a new forest must be established after harvesting has been completed. Reforestation may be done by either the Forest Management Branch or the Licence holder.

4.0 Access Management

Where access exists, much of the merchantable timber has been removed, so the construction of new access in the THP is anticipated. In the initial stages, existing access from major highways is to be used wherever possible. There are many access points remaining from the Yukon Electrical Company power line project that could provide access into harvest areas.

Any new proposed road access and development will be considered Forest Resource Roads under the FRA. Any new access created in this THP will be managed in accordance with FMB's Forest Resource Roads Standards and Guidelines.

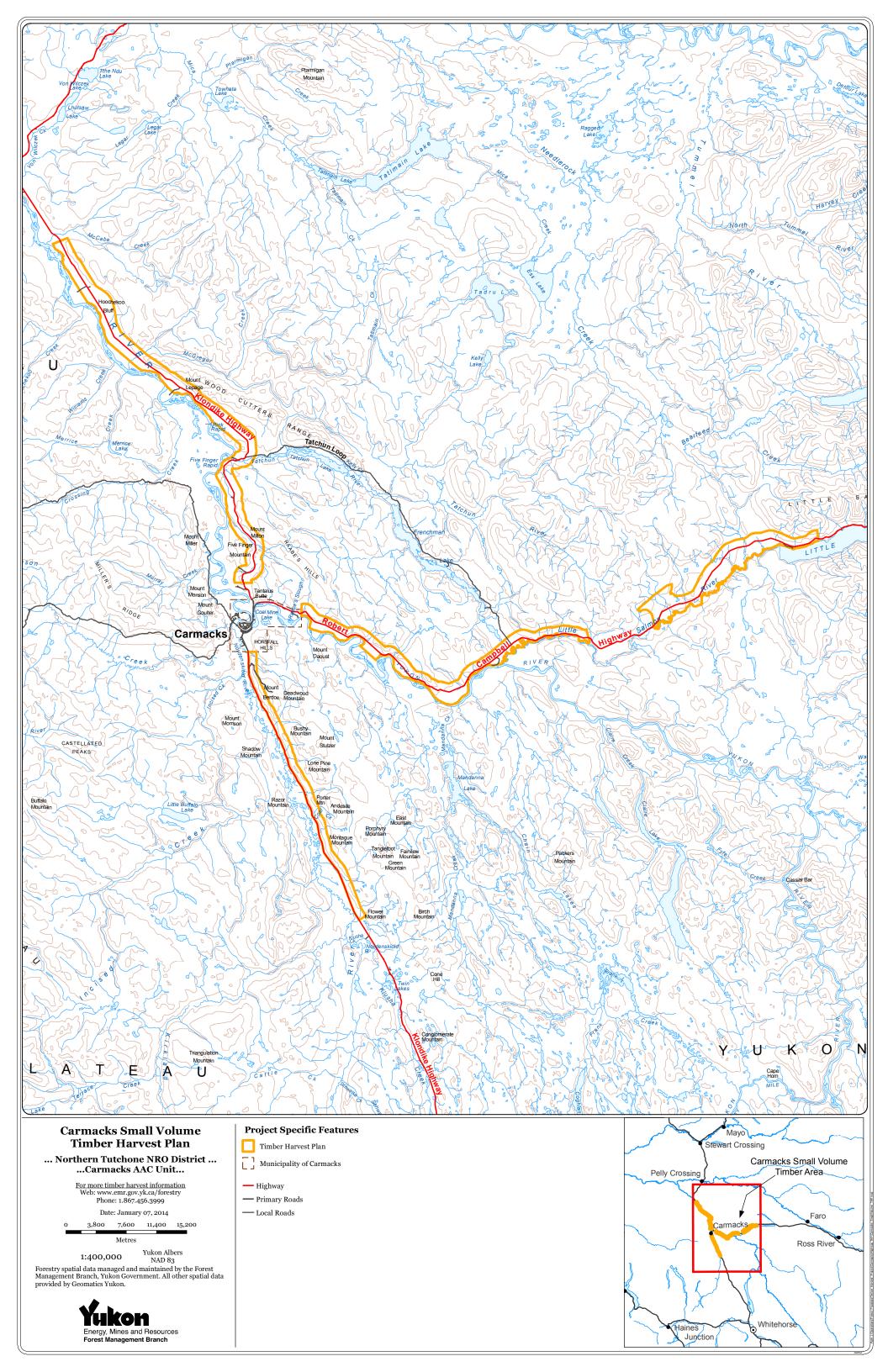
Forest Resource Roads are not public roads and a permit is required to travel on them. To meet objectives of wildlife conservation, safety, environmental protection, seasonal operating restrictions, or other management purposes forest resource roads may be gated to enforce access restrictions.

5.0 Research and Monitoring

There is no formal research planned within this THP. Monitoring of activities will be conducted during the operational period by Compliance Monitoring and Inspections, as local Forest Officers inspect permits and enforce terms and conditions.

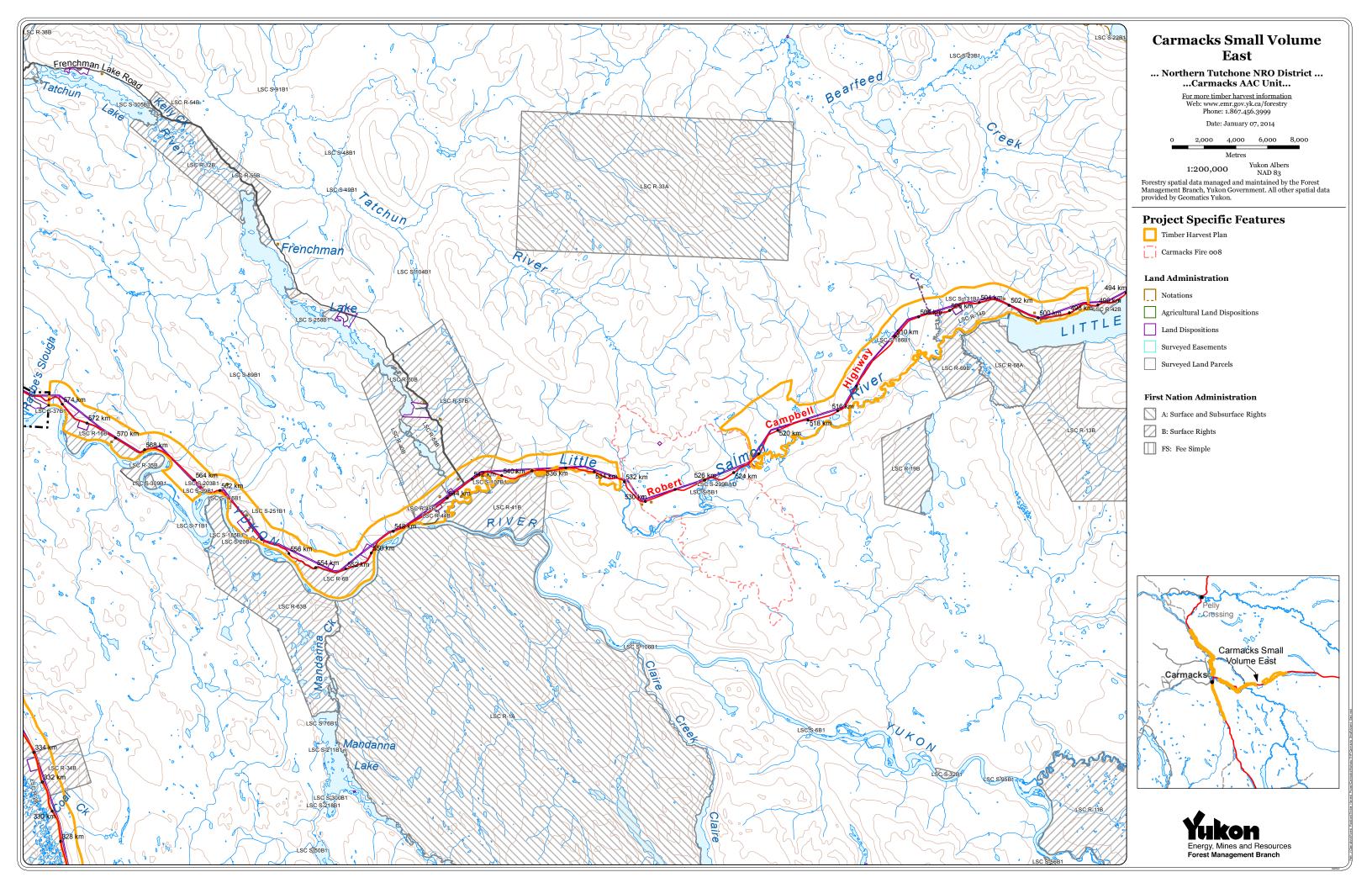
APPENDIX A

Overview Map 1:400,000



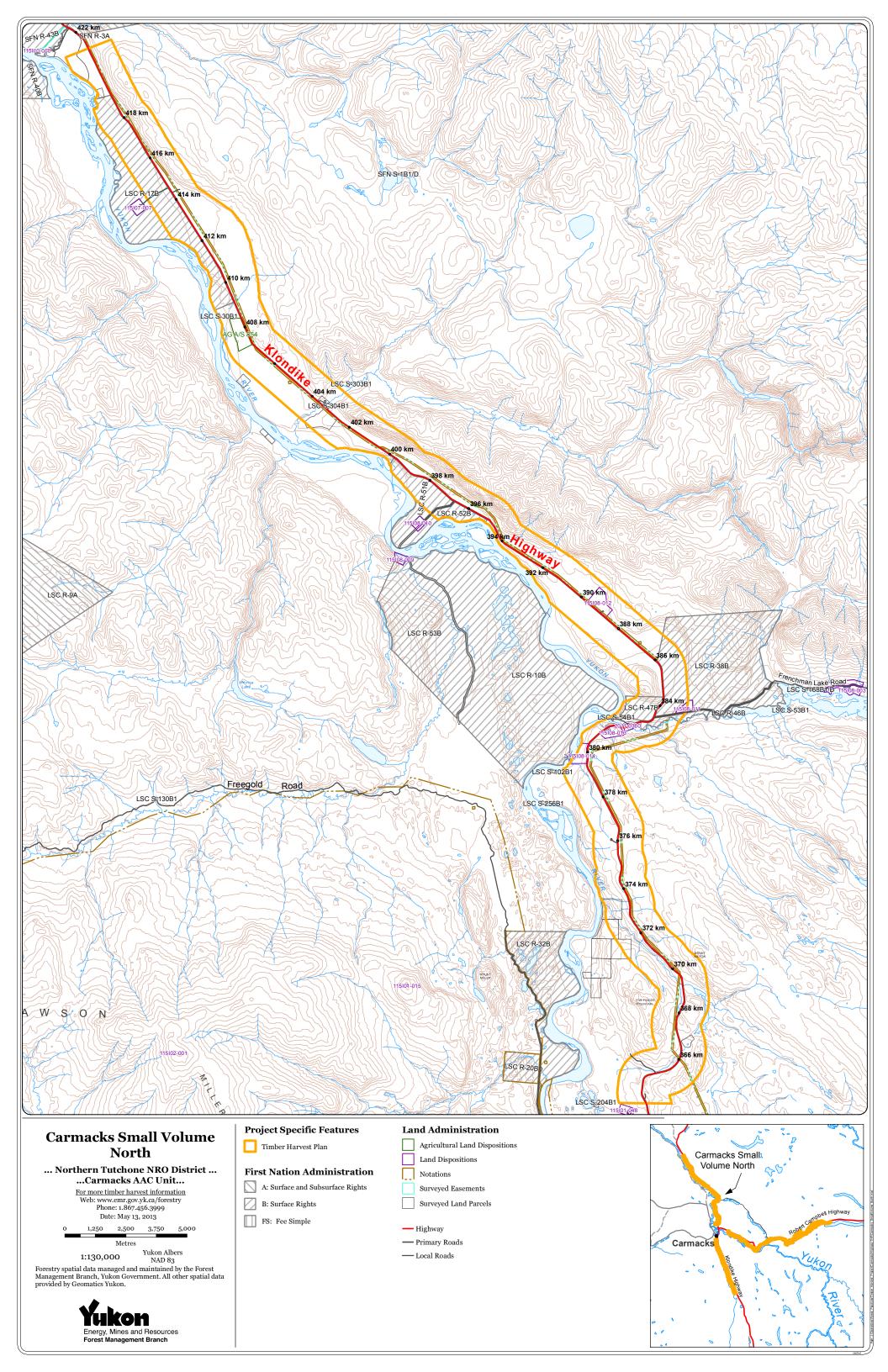
APPENDIX B

Operating Unit East Robert Campbell Highway, Carmacks to Little Salmon Lake 1:200,000



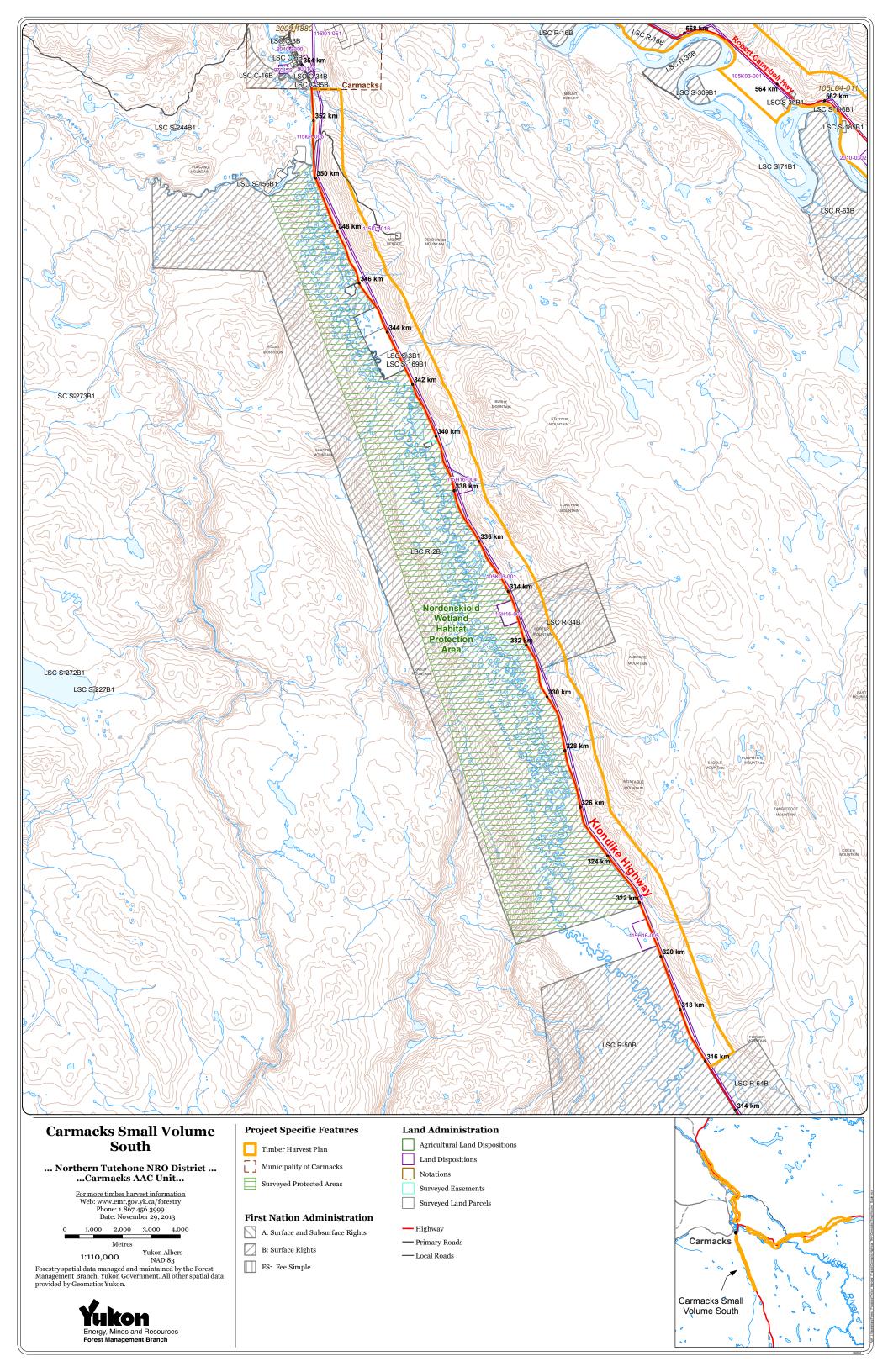
APPENDIX C

Operating Unit North Klondike Highway – Carmacks to Minto 1:130,000



APPENDIX D

Operating Unit South Klondike Highway, Carmacks to Twin Lakes 1:110,000



Appendix E: Representation Summary

Carmacks Small Volume THP Prepared: July 2013 Prepared by: Greg Cowman

A total of 4 comments were received during the notification period on the Carmacks Small Volume THP held from May 24 to June 26, 2013.

Comments were received from:

- YG Department of Environment.
- Trapper Concession Holder #142
- Carmacks Renewable Resources Council
- Little Salmon Carmacks First Nation

The following table contains a summary of the comments received and how the comments have been addressed.

Carmacks Small Volume THP

July – August 2013

Topic <list content="" of="" sections="" table=""></list>	Name/ Organization or person	Comment	Consultation Comment Response	How comment/s have been addressed.
2.2 Wildlife	Dept. of Environment	Concern for wildlife and wildlife habitat is limited due to limited scale of harvesting. Best Management Practices and Wildlife Standards will cover concerns. Please report stick nests/bear dens encountered and maintain agreed to buffers.	Wildlife Standards will be followed and any identified site specific wildlife features will be reported and protected as necessary	Section 2.2 No change in wording required
	Dept. of Environment	The Community-based Fish and Wildlife Work Plan for the Little Salmon-Carmacks First Nation Traditional Territory, 2012-2017 describes the high value riparian habitat along the Little Salmon River for moose and caribou wintering. We recommend that forestry activity in this area should be limited during JanApr. when moose and caribou are concentrated in this area and green tree cutting should be minimal.	This issue has also been raised by the CRRC. The proposed recommendations will be followed for any applications in this area.	Section 2.2 and 3.2 - additional wording to reflect sensitivity in the area.
	Dept. of Environment	The Tsawnjik Chu (Nordenskiold) Habitat Protection Area is a wetland area that has an associated management plan as mandated in the First Nation Final Agreement. It's also Little Salmon/Carmacks First Nation settlement land which means the First Nation manages surface activity there. The HPA plan calls for no commercial cutting in the HPA and for the First Nation to define traditional vs. commercial harvest in this area in their policies managing forestry for the area. The THP must respect this agreement.	This area will be excluded from the THP and applications for harvesting will not be accepted in this area.	This area has been removed from the THP.
2.7 Traditional Land Users	Trapping Concession Holder #142	Concern expressed for family trapper cabin located in proximity to THP.	Met with trapper to review maps and cabin located 2km from proposed activity. This satisfied concerns.	No change in wording required

Carmacks Small Volume THP

July – August 2013

Topic <list content="" of="" sections="" table=""></list>	Name/ Organization or person	Comment	Consultation Comment Response	How comment/s have been addressed.
2.2 Wildlife	Carmacks Renewable Resources Council	Concern for habitat for wintering caribou, calving moose, salmon and other wildlife. Recommend that area between Robert Campbell Highway and Little Salmon River be excluded from THP.	As indicated above in DOE comments, restrictions specific to timing of harvest to ensure protection of wildlife features is the preferred management approach.	Section 2.2 and 3.2 - additional wording to reflect sensitivity in the area.
2.4 Riparian and Water Resources	Carmacks Renewable Resources Council	Concern expressed that small volume timber harvesting may impact values within riparian corridor along Little Salmon River.	Follow best management practices and riparian features standards and guidelines.	Section 2.4 – no wording change required.
Other	Little Salmon Carmacks FN	Questions were raised during the THP preparation, related to the 2013 Carmacks Fire #8. It was felt that larger permits could be issued in this area to maximize the salvage opportunity which will last about 10 years, and provide more economic activity. There was some resistance to raising the licence volumes as the feeling was that local operators could be left out if larger operators from outside the community were allowed to apply for the wood, which goes against the original intent of the THP.	An Implementation Agreement (IA) to manage this area was proposed, between the FN and FMB to address allocation strategies and concerns raised. It was subsequently decided that the best way to manage this burn area is to remove it from this THP and develop a THP specifically designed to manage the burn.	The fire #8 area will be excluded from this THP.