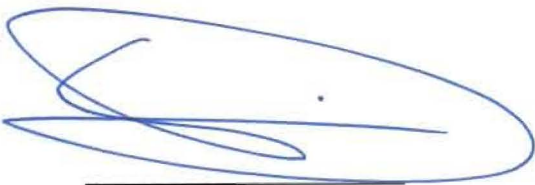


Government of Yukon – Energy, Mines and Resources  
Forest Management branch

# Little Salmon River Burn Timber Harvest Plan

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Carmacks Annual Limit Region



Approved By  
Lyle Dinn, Director  
Forest Management Branch

June 16, 2015  
Date

# Little Salmon River Burn Timber Harvest Plan

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## 1 Executive Summary

This Timber Harvest 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 that authorizes harvesting in an amount greater than 25m<sup>3</sup> (FRA, Section 29(4)(d)(ii).).

This THP is located between the communities of Carmacks and Faro along the Robert Campbell Highway. The area encompassed by this THP is an approximately 3,500 hectare section of burned forest that is a part of two large forest fires that occurred simultaneously in the summer of 2013.

Throughout Yukon there is a strong demand for dry dead wood that can be harvested as fuel wood, typically used for home heating. The Little Salmon River burn is a relatively easy to access area containing large volumes of merchantable standing dead timber which is in high demand in the communities close to this THP area.

The objectives of this Timber Harvest Plan are to set the framework for commercial fuel wood harvesting activities within the Little Salmon River burn, create economic opportunities, and support the supply of firewood to communities throughout Yukon.

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## 2 Background and Purpose

In the summer of 2013 two large areas were burned by forest fires in the Carmacks district. One area was centred around Mandana Lake and the second was centred around the Little Salmon River. These two fires covered a total area of approximately 28,000 hectares.

One third of the fire area near Mandana Lake – approximately 7,500 hectares – is located on Little Salmon/Carmacks First Nation (LSCFN) settlement land. The remaining two thirds of this burn are located on public land. However, access to this area is impeded by the Yukon River to the north and steep mountainous terrain to the east.

The burn near the Little Salmon River is much more accessible than the Mandana Lake area as it is bisected by the Robert Campbell Highway. It is located almost entirely on crown land and covers an area of approximately 7,000 hectares. The portion of burned area to the south of the Little Salmon River has been excluded from this THP due to low timber values and difficult access. The remaining 3,500 hectare area to the north of the Little Salmon River is the focal area of this THP. A map showing the THP area can be found in Section 5 of this document.

The Little Salmon River burn area represents the first significant opportunity for fuel wood harvesting in the Carmacks area since the Minto Burn Commercial Fuelwood Timber Harvest Project was established in October of 2007. This burn occurred in 1995 and the majority of merchantable fuel wood within the plan area near Minto has been harvested. This area is no longer a reliable source of fuel wood.

There is a significant demand for fuel wood in this region of Yukon. The closest communities to this THP – Carmacks, Faro, Ross River and Pelly Crossing – all rely on firewood as a significant fuel source for home heating throughout the year. The central location of this burn to these communities and the lack of other significant standing dead fuel wood sources in the vicinity make this THP area an ideal location for both personal use and commercial fuel wood harvesting.

The objective of this THP is to implement a forest resource management strategy that will create both personal use and commercial fuel wood harvesting opportunities, help meet the current firewood supply needs of the communities in this area and throughout Yukon, and support economic activity.

### 2.1 Introduction

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The location of this THP is approximately 50km to the east of Carmacks. It is bisected by the Robert Campbell Highway. The THP covers the northern extent of the 2013 Little Salmon River burn area, extending south to the Little Salmon River.

This THP lies within the Yukon Plateau-Central ecoregion within the Boreal Cordillera Ecozone. This area is dominated by extensive boreal forest and characterized by relatively low levels of



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precipitation and frequent forest fires which have helped to create and maintain vast areas of relatively young aspen and lodgepole pine forests (Yukon Ecoregions Working Group, 2004).

The climate in this region is generally cool with low amounts of precipitation. Mean annual temperatures are close to -4°C. There are large temperature fluctuations between winter and summer with winter lows dropping down to extremes of -60°C and summer highs reaching up to 35°C. Parts of this region also experience temperature inversions where cold air gets trapped in valley bottoms and creates distinct temperature variations based on elevation (Yukon Ecoregions Working Group, 2004).

## 2.1.1 Forest Stand Composition

Prior to being burned, this THP area was a mixed coniferous forest dominated by white spruce (*Picea glauca*) and lodgepole pine (*Pinus contorta*). Black spruce (*Picea mariana*) was also a major species within this area and was found most often in poorly drained lowland areas. Trembling aspen (*Populus tremuloides*) was a minor component of the stand and is typically found on dry, exposed, south facing slopes. White birch (*Betula papyrifera*) and balsam poplar (*Populus balsamifera*) also occurred sporadically throughout the THP area.

The vast majority of this THP area is now dead standing timber and blowdown that was killed during the forest fire of 2013. However; variously sized pockets of live trees that survived the burn exist throughout the THP area. These are typically found in wet lowlands or riparian corridors.

A more thorough description of forest stand composition, timber types, and volumes available for harvest can be found in section 4.1.3 of this plan. Detailed stand information will also be provided in the site plan of each commercial cutting permit authorized within this timber harvest plan.

## 2.1.2 Forest Health

There are no significant threats to forest health in the Carmacks area at this time. As this stand is composed primarily of fire-killed white spruce and lodgepole pine it is unlikely that there will be any significant forest health concerns in this THP area.

The Forest Management branch releases an annual forest health report which summarizes the current state of forest health in Yukon. The Forest Health Report and information relating to forest pests and diseases in Yukon can be found on the Forest Management branch's web site at <http://www.emr.gov.yk.ca/forestry/foresthealth.html>.

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## 2.1.3 Objectives and Location of Timber Harvesting

There is a strong demand for fuel wood in the communities closest to this THP area. As well, all of the communities and municipalities within Yukon rely heavily on the use of fuel wood throughout the year. The primary objective of timber harvesting within this THP is to create opportunities for fuel wood harvesting that can meet the needs of these communities and all Yukon people.

Specific locations for timber harvesting within this THP will be proposed by clients who submit an application for a commercial harvesting licence or cutting authority. These applications and the proposed harvesting activities and locations for harvesting will be evaluated by the Forest Management branch (FMB). The Forest Management branch will either authorize the proposed activities subject to terms and conditions, vary the proposal in consultation with the client, or reject the application.

The process for issuing harvesting licences and the factors influencing the decision to issue a harvesting licence and authorize certain activities within this THP are discussed in greater detail in Section 4 of this timber harvest plan.

Areas within this THP that have significant ecological value such as riparian areas or areas containing significant wildlife features will be protected from harvesting disturbance in accordance with the Forest Management branch's operational standards and guidelines. These values and features, and the mitigations or reserve areas created to protect them will be included in the site plan of any commercial cutting permit. These factors will also be taken into consideration when deciding on the potential issuance of any forest resource permit (FRP).

## 2.1.4 Personal Use Harvesting

Personal use harvesting opportunities are highly sought after by members of the communities in the vicinity of this timber harvest plan. Members of the Little Salmon/Carmacks First Nation, the Carmacks Renewable Resource Council, the Town of Faro, and the public clearly expressed the need for local personal use fuel wood harvesting opportunities.

In order to help meet this need, the existing personal use fuel wood (PUFW) areas that predated the Little Salmon River burn of 2013 have been significantly expanded. As of December 2014, the approved personal use harvesting area within the Little Salmon River burn now covers an approximate area of 500 hectares.

The rate of harvest in these PUFW areas will be monitored by the Forest Management branch and these areas may be modified again in the future to meet the needs of fuel wood harvesting clients. Any further modifications to the PUFW areas will be done in consultation with the Little Salmon/Carmacks First Nation and the Carmacks Renewable Resource Council.

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At the time of establishment these personal use fuel wood areas contained an estimated 28,500m<sup>3</sup> of fuel wood. This is approximately equal to 12,000 cords of wood. It should be noted that these estimates do not take into account clearing done for the purposes of maintaining the hydro line right of way within these PUFW areas. Data used to establish volume estimates for these areas was collected at a very low sampling intensity and actual fuel wood volumes may vary significantly from those provided here. Table 1 shows the volume estimates for these PUFW areas.

Operating Unit #	Approximate Total Area (hectares)	Gross Fuel Wood Volume per Hectare (m <sup>3</sup> /ha)	Total Gross Fuel Wood Volume(m <sup>3</sup> )
PUFW	500 Ha	57m <sup>3</sup> /Ha	28500m <sup>3</sup>

Table 1: Volume Estimates for Personal Use Fuel Wood Areas.

A person wishing to harvest fuel wood for personal use within these PUFW areas must obtain a permit from the Forest Management branch. As stated in the *Forest Resources Act (FRR, Section 48(a))* a person may harvest up to 25m<sup>3</sup> of personal use fuel wood per year under a forest resources permit free of stumpage fees.

## 3 Forest Resource Management Planning Considerations

At the time of writing this THP a Forest Resource Management Plan (FRMP) has not been established in the Carmacks Annual Limit Area to direct forest resource management strategies. In the absence of an FRMP, a timber harvest plan must take into account various sustainable forest management principles as required by the Forest Resources Act and associated Forest Resources Regulation (FRR, Section 5).

### 3.1.1 Sustainability and Integrated Resource Management

Sustainable forest management has been defined by the Canadian Forest Service as, "Management that maintains and enhances the long-term health of forest ecosystems for the benefit of all living things while providing environmental, economic, social and cultural opportunities for present and future generations.", (Canadian Forest Service, 2001).

The primary activity regulated under this timber harvest plan is salvage harvesting of timber that was killed in the 2013 forest fire. Forest fire intervals in this region are short and fires occur frequently. The boreal forests of this region have evolved with fire as the primary disturbance mechanism and have adapted regeneration strategies to recover following a forest fire.

Management of salvage harvesting activities will be done in a manner that maintains the integrity of the ecosystem processes in this THP and an integrated resource management approach has been taken in the development of this timber harvest plan.



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Consultation has been undertaken with various departments of the Yukon Government, the Little Salmon/Carmacks First Nation, the Carmacks Renewable Resource Council, traditional land users, and members of the public. The intent of this consultation is to account for the multiple interests and values present in the operating area and to ensure that these values are not negatively impacted by forest resource harvesting operations. These values will be discussed in greater detail further on in this section of the THP.

It is often not possible to identify all of the values within a given area during the THP planning process. Many values such as wildlife features are dynamic in nature or difficult to identify during the planning stages of a timber harvest plan. The Forest Management branch has an extensive suite of standards and guidelines to direct the actions of operators when additional values are identified. All of the standards and guidelines that apply to forest operations in Yukon and within this THP can be found on the Forest Management branch website at: [http://www.emr.gov.yk.ca/forestry/operational\\_standards.html](http://www.emr.gov.yk.ca/forestry/operational_standards.html).

## 3.1.2 Traditional Knowledge

This timber harvest plan is situated within the traditional territory of the Little Salmon/Carmacks First Nation. The Little Salmon/Carmacks First Nation will be notified of any harvesting licence applications and provided no less than a 30 day period to make representations to the Director of the Forest Management branch on each application (FRA, Section 18).

There were no traditional knowledge concerns brought to the Forest Management branch during the planning and consultation process of drafting this THP. Any representations received by FMB relating to the traditional knowledge and practices of the Little Salmon/Carmacks First Nation will be considered during the decision making process when evaluating applications for timber harvesting within this THP.

## 3.1.3 Economics of Timber Supply

Historically, timber harvesting in the Carmacks area has been small scale with very little commercial harvesting. In the past, the majority of timber harvesting in Carmacks has been under small volume permits for personal use.

The large size of the burn covered by this THP – approximately 3,500 ha – as well as the relatively high volume of merchantable timber potentially available for salvage, makes this area ideal for supporting varying degrees of commercial and personal use harvesting activities.

Prior to the development of this THP many residents of Carmacks, Faro, Ross River, and other northern communities bought firewood from operators based out of Haines Junction and other distant locations. The long haul distances between harvesting areas and consumers resulted in significant transportation costs. This has made it difficult for some people in these communities to reliably purchase affordable firewood.



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This THP provides a significant opportunity for economically viable commercial fuel wood harvesting. It creates an opportunity for commercial harvesting operators to benefit economically by supplying nearby communities and other locations within Yukon with firewood. Commercial harvesting activities within this THP may also benefit local consumers by potentially providing a more reliable and affordable wood supply source closer to their community.

## **3.1.4 Soil Conservation and Hydrology**

Protecting the integrity of soils and their hydrological function is essential to maintaining a healthy and productive forest ecosystem. The Forest Management branch's Soil Conservation Standards and Guidelines have been established to conserve soil productivity and hydrological function during harvesting operations. All activities carried out under this THP must adhere to these standards. These standards can be found on the Forest Management branch web site at: [http://www.emr.gov.yk.ca/forestry/operational\\_standards.html](http://www.emr.gov.yk.ca/forestry/operational_standards.html).

Site specific soils information and protection measures will be outlined in the site plan of any commercial cutting permits issued within this timber harvest plan. The Soil Conservation Standards and Guidelines will determine the season of harvest based on the hazard ratings of the soil type within the harvest area and clearly state mitigation strategies for the protection of soil properties.

## **3.1.5 Wildlife and Biodiversity**

No key wildlife habitat areas were identified during the planning process of this timber harvest plan. Any significant wildlife features previously existing in this area were likely lost during the forest fire of 2013. However; it is expected that as this area naturally regenerates, new habitat niches will emerge and the area will continue to be used by a wide variety of wildlife species.

In order to maintain a level of biodiversity within the burn and provide for varying wildlife habitat, patches of green forest that survived the burn will typically be retained and reserved from harvest. Small amounts of green tree harvesting may be permitted in certain circumstances such as the necessary removal of trees for access development.

Within the overall timber harvest plan area, a minimum of 10% of the total burned area will be reserved from harvest to provide for wildlife habitat and structural diversity.

All activities within the timber harvest plan area will follow the Forest Management branch's established Wildlife Features Standards and Guidelines. These standards provide direction in the event a significant wildlife feature is encountered during harvest operations. These standards can be found on the Forest Management branch's website at: [http://www.emr.gov.yk.ca/forestry/operational\\_standards.html](http://www.emr.gov.yk.ca/forestry/operational_standards.html).

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## 3.1.6 Riparian Management and Fish Habitat

The most significant riparian feature within this timber harvest plan is the Little Salmon River. This river is important fish habitat and is also a popular river for recreational canoe tripping. The Forest Management branch's operational standards on Riparian Management on Streams and Lakes will be implemented to maintain the integrity of this river. The buffers placed on the Little Salmon River will meet or exceed the maximum reserve zone width buffers set out in the standards and guidelines.

Within this THP there are also numerous small streams and wetlands. Wherever harvesting operations have the potential to impact riparian features, the Forest Management branch's operational standards and guidelines must be followed. Copies of Riparian Management on Streams and Lakes and the Wetlands Riparian Management Standards and Guidelines can be found at: [http://www.emr.gov.yk.ca/forestry/operational\\_standards.html](http://www.emr.gov.yk.ca/forestry/operational_standards.html).

## 3.1.7 Heritage Resources

Heritage features and historic resources are culturally important to all Yukon people and their preservation is an important consideration when planning any type of development or resource management activity.

There is relatively little current data on existing heritage features and archaeological potential within the area encompassed by this timber harvest plan. However; there are areas within this THP that may have significant heritage value or contain undiscovered archaeological features. In particular, areas overlooking the Little Salmon River and minor wetland creeks may have high heritage potential.

Although this area has been burned in a forest fire there is still the potential for negatively impacting heritage resources during operations, particularly during road development activities or activities that will create significant soil disturbance, such as site preparation for silviculture activities. Any proposals for road development or activities such as scarification with the potential for significant subsurface impacts will be referred to the Heritage branch of Yukon Government for consultation. Heritage inventories or assessments may be required to be completed prior to the approval of these activities.

All operations must be in compliance with the Forest Management branch's Historic and Archaeological Resources Standards and Guidelines. A copy of these standards and guidelines can be found on the Forest Management branch's website at: [http://www.emr.gov.yk.ca/forestry/operational\\_standards.html](http://www.emr.gov.yk.ca/forestry/operational_standards.html).

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## 4 Timber Harvesting Considerations

### 4.1 Fuel Wood Harvesting Overview and Methodology

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#### 4.1.1 Licencing Process for Commercial Fuel Wood Harvesting

A person wishing to harvest timber in this timber harvest plan must submit an application to the Forest Management branch stating the type of harvesting authority they require, the quantity of timber they propose to harvest and the period of time in which they intend to harvest that timber.

Prior to commencing commercial fuel wood harvesting activities, operators must obtain a fuel wood licence (FWL) and cutting permit from the Forest Management branch (FRA, Section 24 e)) that meets the requirements of the *Forest Resources Act* and the objectives of this timber harvest plan. The cutting permit will have terms and conditions, and a site plan which must be followed during harvesting operations.

The site plan will outline the specific management plan to be followed in the permit area and will contain detailed information on the timber resources in the area and the harvesting methods to be applied. Site plan requirements are defined in the Forest Resources Act (FRR, Section 22).

Affected First Nations and the public will be notified of licence applications and provided no less than a 30 day period to make representations to the Director of the Forest Management branch on each application (FRA, Section 18).

Applicants submitting proposals to harvest large volumes of timber for commercial purposes may be required to have their proposal undergo an assessment under the *Yukon Environmental and Socio-economic Assessment Act*. More information on the *Yukon Environmental and Socio-economic Assessment Act* and the assessment process can be found on the Yukon Environmental and Socio-economic Assessment Board's website at: [www.yesab.ca](http://www.yesab.ca).

If the Forest Management branch receives a large number of applications for harvesting licences and cutting permits within this timber harvest plan an allocation strategy may be developed in the future to direct the allocation of forest resources in a transparent, fair, and equitable manner.

The Little Salmon/Carmacks First Nation (LSCFN), the Carmacks Renewable Resource Council (CRRC) and members of the community of Carmacks expressed a strong desire to ensure that the allocation of timber resources within this THP is done in a fair and transparent manner that can meet the needs of the community of Carmacks. Any allocation strategy developed for this timber harvest plan will be done in consultation with LSCFN and the CRRC.



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## 4.1.2 First Nation Harvesting

The Little Salmon/Carmacks First Nation expressed the desire to have some area allocated within this THP for the purpose of harvesting fuel wood for non-commercial community use as per their rights under Chapter 17 of their Final Agreement. The Forest Management branch supports this activity and will work with the Little Salmon/Carmacks First Nation to try to identify and allocate an area within this THP where the LSCFN can harvest wood for non-commercial community purposes in an amount up to 500m<sup>3</sup> per year. The Forest Management Branch will continue to consult and work with the Little Salmon Carmacks First Nation on an ongoing basis during the lifetime of this THP to try and help meet the wood supply needs of the First Nation.

## 4.1.3 Operating Unit Descriptions and Volumes Available for Harvest

As stated earlier, the majority of this area is covered by standing dead and downed white spruce, black spruce, and lodgepole pine, with scattered patches of trembling aspen, balsam poplar and white birch. Timber harvesting will primarily focus on removing coniferous fuel wood of merchantable size.

This area has been stratified into five distinct operating units. In section 5.2 of this plan there is a map showing the location and extent of each operating unit.

Operating unit descriptions and an estimate of the gross fuel wood volumes found in each area are provided below. Only coniferous tree species are included in the gross volume estimates. The volume estimates provided are based on a very low intensity forest inventory of post-burn conditions. Many areas within each operating unit were not sampled and volumes provided are a very rough approximation of actual stand conditions. Actual volumes may vary considerably from the estimates provided and applicants who are interested in applying for cutting permits within these operating units are encouraged to collect their own site specific stand and volume information.

The general descriptions provided are meant only to give a basic overview of the operating units. Due to the large areas covered in this plan and the diversity of stand and site conditions within these areas it is not practical to provide very detailed stand descriptions in this document. Detailed stand descriptions will be provided in the site plan developed for each commercial cutting permit issued within this timber harvest plan.

### Operating Unit 1:

This operating unit is characterized by relatively gentle terrain compared to the majority of the THP with gradually undulating hills throughout. There are a couple of small wetlands in the western portion of this operating unit, and both the northern and eastern boundaries of this unit are defined by small streams.



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This stand is generally dominated by white spruce and lodgepole pine. Black spruce is a minor component of the stand and is primarily found in the western portion of the operating unit in lowland areas and around wetlands.

The size and density of timber in this operating unit is highly variable. There are large areas within this stand where timber size and volume per hectare is too low to support economically viable commercial harvesting. However; good patches of merchantable timber can be found throughout this operating unit as well. Approximate gross volume estimates for this area can be found in Table 2.

Operating Unit #	Approximate Total Area (hectares)	Gross Fuel Wood Volume per Hectare (m <sup>3</sup> /ha)	Total Gross Fuel Wood Volume(m <sup>3</sup> )
1	412 Ha	85m <sup>3</sup> /Ha	35020m <sup>3</sup>

Table 2: Gross Volume Estimates for Operating Unit 1

## Operating Unit 2:

Operating unit 2 covers an approximate area of 1200 hectares. The topography within this unit is extremely rugged. Steep south facing slopes with large diameter white spruce characterize the vast majority of this area. This area provides the greatest challenges for developing access within this timber harvest plan but also contains the highest concentrations of large sized merchantable timber. There will be many areas within this operating unit that will be inaccessible due to terrain constraints.

An estimate of gross fuel wood volumes contained in this area is shown in Table 3. Although overall gross volumes per hectare shown for this stand are fairly consistent with those found throughout the rest of this timber harvest plan it should be noted that the average tree size in this unit is generally larger than anywhere else in this burn. Also there are many large areas within this unit where merchantable timber volumes are as high as 160m<sup>3</sup>/ha.

Operating Unit #	Approximate Total Area (hectares)	Gross Fuel Wood Volume per Hectare (m <sup>3</sup> /ha)	Total Gross Fuel Wood Volume(m <sup>3</sup> )
2	1200 Ha	80m <sup>3</sup> /Ha	96000m <sup>3</sup>

Table 3: Gross Volume Estimates for Operating Unit 2

## Operating Unit 3:

There is a very steep, exposed, south facing slope in the south-eastern half of this operating unit which separates it into two distinct areas. There is a minor but significant component of trembling aspen within this operating unit that dominates the dry exposed south facing slopes. Generally, the lower portions of this slope and the areas extending south of the slope to the

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Robert Campbell Highway are productive sites with large quantities of good sized merchantable white spruce and lodgepole pine. Stands with high timber value can also be found along the eastern edge of this operating unit near the stream that forms the boundary between operating unit 3 and operating unit 4.

The sites in the northern portion of this area are less productive, with stands containing smaller diameter trees and lower merchantable volumes. The topography in this section of the operating unit is less steep than the southern section and is characterized by rolling hills separated by fairly level plateaus. Table 4 provides volume estimates for this operating unit.

Operating Unit #	Approximate Total Area (hectares)	Gross Fuel Wood Volume per Hectare (m <sup>3</sup> /ha)	Total Gross Fuel Wood Volume(m <sup>3</sup> )
3	760 Ha	78m <sup>3</sup> /Ha	59280m <sup>3</sup>

Table 4: Gross Volume Estimates for Operating Unit 3

### Operating Unit 4:

Operating unit 4 is the smallest unit in this timber harvest plan. It is similar in composition to operating unit 1 with variable stand conditions and generally small diameter timber. The northern half of this area is unsuitable for timber harvesting. This northern portion was also burned in the forest fire of 1998. As a result it is largely open barren ground with very little tree cover.

The southern portion of this operating unit where any potential harvesting activities would likely be focused is fairly level and easy to access. An estimate of the fuel wood volumes found in the productive portion of this operating area is provided in Table 5.

Operating Unit #	Approximate Operable Area (hectares)	Gross Fuel Wood Volume per Hectare (m <sup>3</sup> /ha)	Total Gross Fuel Wood Volume(m <sup>3</sup> )
4	327 Ha	85m <sup>3</sup> /Ha	27795m <sup>3</sup>

Table 5: Gross Volume Estimates for Operating Unit 4

### Operating Unit 5:

This operating unit covers the entire area that was burned south of the Robert Campbell Highway. Its southern boundary is the Little Salmon River and this is the most significant feature within this area.

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Almost 40% of this operating unit is set aside for personal use fuel wood harvesting. This area is the most accessible in the THP as there are a number of cat guards that were established here as fire breaks. These will be used primarily as access trails for personal use harvesting.

The topography of this operating unit is generally flat with some gentle rolling hills. The exception to this is the steep slopes that drop down to some sections of the Little Salmon River.

Spruce and lodgepole pine co-dominate this operating unit fairly evenly and lodgepole pine is more prevalent in this area than anywhere else in the THP. Stem size in this unit is generally smaller than all other areas of the timber harvest plan and large sections of this area are unsuitable for timber harvesting due to a lack of merchantable timber. Gross volume estimates are provided in Table 6.

Operating Unit #	Approximate Total Area (hectares)	Gross Fuel Wood Volume per Hectare (m <sup>3</sup> /ha)	Total Gross Fuel Wood Volume(m <sup>3</sup> )
5	593 Ha	69m <sup>3</sup> /Ha	40917m <sup>3</sup>

Table 6: Gross Volume Estimates for Operating Unit 5

## 4.1.4 Timber Harvesting Methods

Within this THP, harvesting operations will focus on salvaging merchantable standing dead and downed stems to be utilized as fuel wood.

It is expected that a wide range of timber harvesting methods will be used within this THP. Applicants that wish to harvest fuel wood within this THP must propose to the Forest Management branch the methodology they intend to use for harvesting. The site plan submitted by each applicant under a commercial cutting permit must include the proposed harvesting methodology and must be approved by the Director of the Forest Management branch.

Considerations of acceptable harvesting methodologies will be based on how the proposed activities meet the following:

- The requirements and intent of this timber harvest plan.
- The requirements of the *Forest Resources Act* and *Forest Resources Regulation*.
- The requirements of the Forest Management branch's operational standards and guidelines

## 4.1.5 Reforestation

At the time of writing this THP, standards and guidelines for silviculture and reforestation, used to guide forest management activities within Yukon are in the process of being developed. Any



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applicable silviculture or reforestation standards and guidelines that are developed for Yukon by the Forest Management branch will be applied to operations within this timber harvest plan.

It may be desirable to supplement natural reforestation processes within this burn in order to encourage forest stand development. A reforestation plan may be developed to achieve this goal and may propose activities such as tree planting or aerial seeding.

## 4.1.6 Schedule for Undertaking Timber Harvesting

Detailed schedules for timber harvesting will be provided in the site plan of each cutting permit issued within this timber harvest plan.

Initial assessments of values such as soil conservation and wildlife habitat within this THP area indicate that harvesting operations may be proposed in any season. However; the timing of harvesting operations may be restricted by factors related to soil conservation, wildlife values, heritage values, traditional activities, and other factors. All harvesting schedules will be in compliance with the Forest Management branch's operational standards and guidelines.

## 4.2 Access Management

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### 4.2.1 Access Considerations

There is very little existing access within this timber harvest plan. There are a series of cat guards south of the Robert Campbell Highway that were created as fire breaks by Yukon Wildland Fire Management. These trails will be used to provide some limited access to personal use fuel wood harvesting areas. There are no other pre-existing access routes in the section of the burn south of the Robert Campbell Highway.

The section of the burn north of the Robert Campbell Highway does not have any pre-existing access points designed for forest resource harvesting purposes. There are a number of gravel pits along the north side of the highway bordering the burn. The development of access to harvesting areas through these gravel pits will be at the discretion of the Department of Highways and Public Works. Applications proposing access through gravel pits will be assessed on a case by case basis and may or may not be permitted.

Any new access that is developed that connects to the Robert Campbell Highway will require a temporary access permit from the Department of Highways and Public Works. Also any work that is to be done within a Department of Highways and Public Works highway right of way will require a work within the right of way permit.

The development of access routes into this THP will be done on an as needed basis. Any new roads established within this THP for the purposes of harvesting timber will be constructed as forest resource roads under the *Forest Resources Act* and will be regulated under this legislation and associated policies.



## Little Salmon River Burn Timber Harvest Plan

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All forest resource roads developed within this timber harvest plan will follow the applicable operational standards and guidelines of the Forest Management branch. Only authorized persons as defined in the *Forest Resources Act* will be allowed to use forest resource roads (FRR, Section 60(2)). The Forest Management branch may restrict access to any forest resources road constructed within this THP. Once management activities in an area accessed by a forest resources road have been deemed completed by the Forest Management branch the associated forest resources road may be decommissioned.

Proposals for the development of forest resource roads within this timber harvest plan will be evaluated by the Forest Management branch. Proposals will be evaluated to assess potential environmental impacts, economic costs and benefits, the impacts on potential heritage values and traditional land uses, and other factors. Any proposals for road development will be referred to the Heritage Branch of Yukon Government for consultation. Cumulative disturbance from road development must not impact more than 5% of the total area of this timber harvest plan as per the Forest Management branch's Soil Conservation Standards and Guidelines. Road development proposals may also require an assessment under the Yukon Environmental Socio-economic Assessment Act.

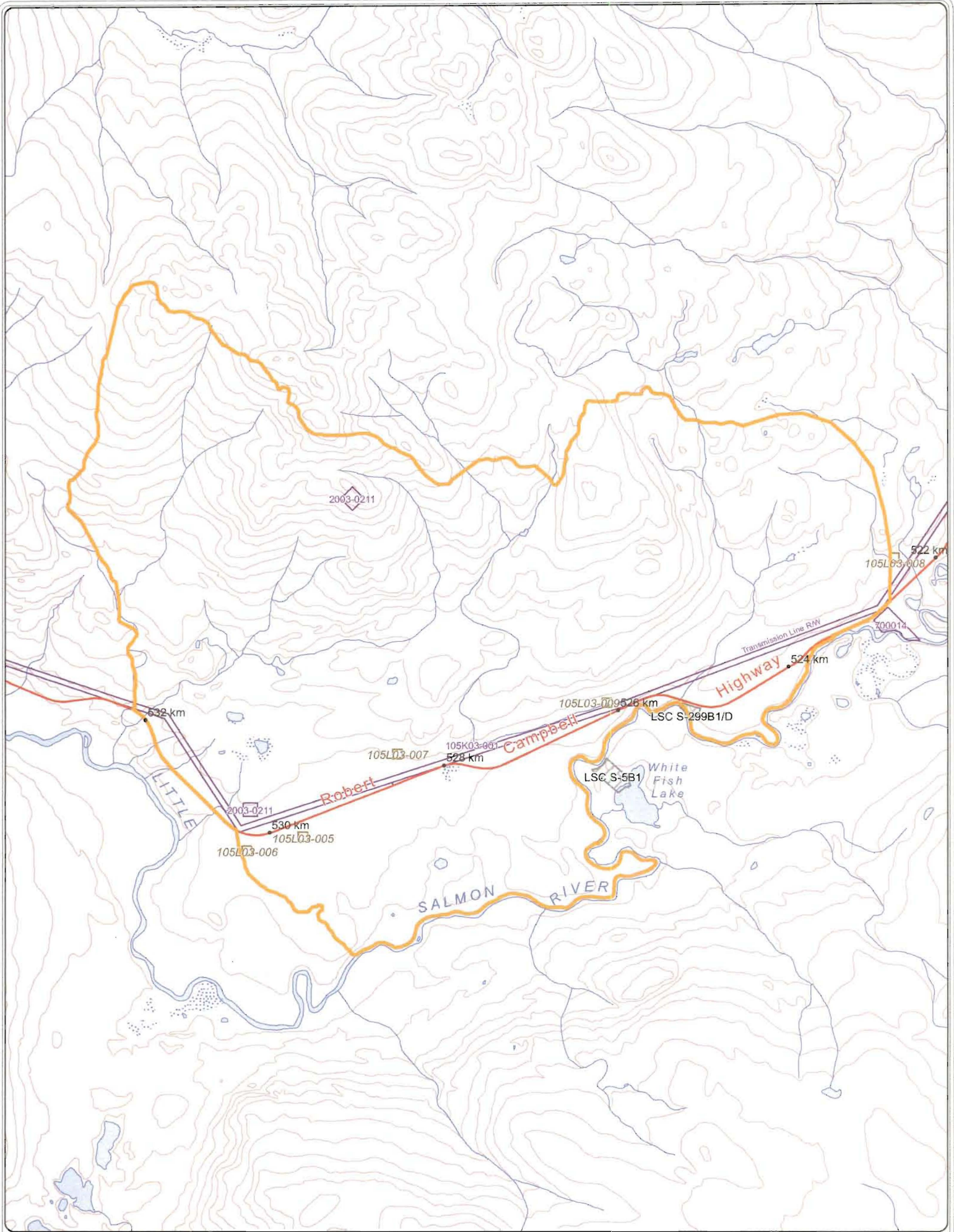
# Little Salmon River Burn Timber Harvest Plan

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## 5 THP Maps

### 5.1 Overview Map

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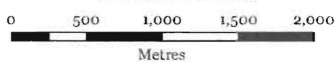
## Little Salmon River Burn Timber Harvest Plan Area

Northern Tutchone District  
Carmacks Annual Limit Region

For more timber harvest information

Web: [www.emr.gov.yk.ca/forestry](http://www.emr.gov.yk.ca/forestry)  
Phone: 1.867.456.3999

Date: January 16, 2015



1:50,000 Yukon Albers  
NAD 83

Forestry spatial data managed and maintained by the Forest Management Branch, Yukon Government. All other spatial data provided by Geomatics Yukon.

**Yukon**  
Energy, Mines and Resources  
Forest Management Branch

### Project Specific Features

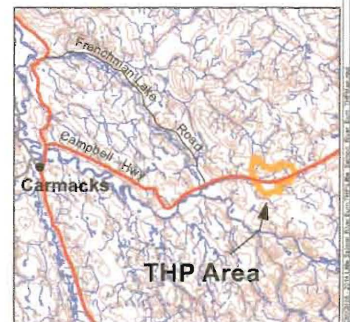
- Timber Harvest Plan Area

### First Nation Administration

- A: Surface and Subsurface Rights
- B: Surface Rights
- FS: Fee Simple

### Land Administration

- Notations
- Land Dispositions
- Surveyed Land Parcels



- Highway
- Primary Roads
- Local Roads

## 5.2 Operating Unit Map

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## 6 References

Canadian Forest Service, *The State of Canada's Forests: 2000-2001*, Ottawa, 2001, p. 38.

Yukon Ecoregions Working Group, 2004. Yukon Plateau – Central. *In: Ecoregions of the Yukon Territory: Biophysical Properties of Yukon Landscapes*, C.A.S. Smith, J.C. Meikle and C.F. Roots (eds.), Agriculture and Agri-Food Canada, PARC Technical Bulletin No. 04-01, Summerland, British Columbia, p. 187-196.



## 7 Representation Summary

The following is a summary of the comments received during the development of this timber harvest plan and how those comments were addressed.

#	Name/ Organization	Comments (paraphrased from e-mails/phone calls*) <small>*comments have been paraphrased as accurately as possible</small>	Consultation Comment Response	How comment/s have been addressed.
1	Dept. of Environment	<ul style="list-style-type: none"> <li>Environment would like to see the maximum buffer afforded within the Forest Management Branch's Wetlands Riparian Management Standards and Guidelines placed on the Little Salmon River. This is due to the soil instability that is typically found in burned areas.</li> </ul>	Forest Management Branch agrees with these comments and will apply maximum buffers afforded under the standards and guidelines.	Addressed in Section 3.1.6
2	Dept. of Highways and Public Works (HPW)	<ul style="list-style-type: none"> <li>Access to the Campbell Highway and any other HPW maintained road will have to be temporary and removed / reclaimed once the harvest block is harvested and no longer needs to be accessed. Temporary Access Permits from HPW will be required for this.</li> <li>Access to lands beyond/through HPW gravel pits is not desirable but will be looked at on a case by case basis and may or may not be permitted. Operators are encouraged to find other access locations.</li> </ul>	All comments except the last comment regarding salvage of wood on expanding gravel pits have been incorporated into the timber harvest plan. Wood will be salvaged during gravel pit development as per the terms and conditions of a forest resources permit for incidental timber harvesting which is required before tree harvesting begins.	Addressed in Section 4.2.1.



		<ul style="list-style-type: none"> <li>Any work within maintained or unmaintained HPW right of ways will require a work within the right of way permit.</li> <li>There may be gravel pits within the THP area which may be expanded. Highways and public works can work with the Forest Management Branch to utilize any incidentally harvested timber.</li> </ul>		
3	Dept. of Tourism and Culture: Heritage Resources Branch	<ul style="list-style-type: none"> <li>The Heritage Resources Branch would like any proposals for road development within the THP to be referred to them for consultation.</li> <li>Heritage inventories may be required prior to the approval of road development.</li> </ul>	The Forest Management Branch supports the comments and has incorporated them into the THP.	Addressed in Section 3.1.7 and Section 4.2.1
4	Carmacks Renewable Resource Council	<ul style="list-style-type: none"> <li>The Carmacks Renewable Resource Council supports the development of the Little Salmon River Burn Timber Harvest Plan.</li> </ul>	N/A	N/A
5	Little Salmon/Carmacks First Nation	<ul style="list-style-type: none"> <li>The Little Salmon/Carmacks First Nation expressed the desire to have an area within the THP where they could harvest trees for non-commercial community purposes.</li> </ul>	The Forest Management Branch supports this request.	Addressed in Section 4.1.2