

INVITATION TO TENDER

Solicitation # 5P423-14-6492

Annex A

SCOPE OF WORK

For

**HAZARDOUS TREE REMOVAL
GROUND-BASED LOGGING**

WHISTLER CAMPGROUND LOOP 25 & POCAHONTAS CAMPGROUND

JASPER NATIONAL PARK OF CANADA, ALBERTA

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1.0 INTRODUCTION

This document outlines the scope of work to perform selective hazardous tree removal of timber in Whistler Campground Loop 25 and Pocahontas Campground in Jasper National Park. This work is highly specialized, requires ground-based logging methods, and will be performed in partnership with Parks Canada in a setting where environmental, social and economic values differ from most traditional harvesting operations.

2.0 BACKGROUND

Completion of this project will facilitate the park goal to provide a safe environment for the camping public within campgrounds of Jasper National Park.

This project prescribes mechanical measures to reduce the density of the forest canopy to lessen danger to visitors and park infrastructure.

3.0 FOREST MANAGEMENT OBJECTIVES

The objectives of this project are to reduce the amounts of forest vegetation in defined Operating Areas as described in this scope of work and reduce hazards to the camping public as well as parks infrastructure. These treatments will also reduce forest density and decrease fuel accumulations on the forest floor.

To achieve these objectives, mechanical vegetation treatments (i.e. selective thinning using ground based short-wood harvesting systems), mechanized brush piling, and manual treatments such as pruning, piling, and burning are required. These are scheduled to take place from freeze-up (tentatively late October 2013 to March 31st, 2014) on approximately 3 hectares of forest within Loop 25 in Whistler Campground and 17 hectares in Pocahontas Campground.

This project will undertake work at Whistler Campground located approximately three (3) km south of the Town of Jasper and Pocahontas Campground located forty five (45) km east of the Town of Jasper. Public safety and consideration of residents and visitors are vital while undertaking this work.

The goal of this project is to reduce hazardous tree risk as efficiently and completely as possible.

Operating Areas

It is the goal of Jasper National Park that all identified areas be completed by March 31st, 2014. This end date is a notional deadline for the termination of work that is weather-dependent. Variable spring thaw conditions may cause the operating season to be shortened or extended and will be

determined by Parks Canada in consultation with the Contractor.

Parks Canada and the Contractor will negotiate to blend priorities with operational practicalities as much as possible within the specified time frame prior to contract approval. Parks Canada reserves the right to make final decisions as to which portions of operating areas (OA's) will be included in the contract according to fiscal constraints.

Section 11.0 describes each of the Operating Areas, including information about the timber, terrain, access, and the prescribed treatments to be implemented by the Contractor in each of the OA's. The prescribed treatments are highly selective and vary according to proximity of values at risk, dominant tree species, fire history of the stand, forest density, age structure and understory vegetation. The primary tree species within the project area are lodgepole pine (*Pinus contorta*), Douglas-fir (*Pseudotsuga menziesii*), white spruce (*Picea glauca*), and aspen (*Populus tremuloides*).

Unusable tree tops and limbs must be removed or burned by the Contractor in a manner that simplifies the subsequent manual process of debris disposal. The Contractor is to describe proposed methods for managing debris in ways that facilitate work required.

Usable wood will be moved to designated landing areas as described below.

Total number of trees has been estimated by Parks Canada at:

1. Whistler Campground Loop 25: Sixty-five (65) trees
2. Pocahontas Campground: Three hundred and seventy (370) trees.

Ownership of all timber remains with Parks Canada.

Equipment

This project requires removal of existing trees using highly manoeuvrable "at-the -stump" wood processing equipment, and forwarding of logs to designated landing areas for transport. Whole tree ground-based logging systems and traditional skidding will not be considered for this work.

4.0 WORK SCHEDULE AND PRIORITIES

As part of their proposal, Bidders will prepare and submit a work schedule that clearly identifies how, when and where the work will be completed.

Providing that the Contractor has worked diligently towards the objective of completing the work listed by March 31, 2014 and has successfully performed the work according to this scope of work but has been unable to complete the work due to weather or other unforeseen conditions, Parks Canada may extend the end date of the contract into the new fiscal year at its' discretion.

Operational factors will play a large role in finalizing the priority of the two working areas for completion and will be negotiated with the successful contractor to determine the final schedule prior to contract approval. However, the following guidelines need to be taken into account by the contractor when preparing the proposal and planning work:

- 4.1 The operating period for the contract is scheduled to commence as soon as the ground is sufficiently frozen to minimize impacts.
- 4.2 Spring thaw conditions are unpredictable and may result in the work being terminated prior to March 31st 2014
- 4.3 Altered hours of work will be arranged in order to reduce impacts and reduce the need for early shut-downs. The Contractor should allow for this when preparing the work schedule.
- 4.4 Parks Canada reserves the right to shorten or lengthen the operating period as it deems necessary in order to maintain impacts within acceptable limits.
- 4.5 The Contractor will be permitted to run shifts between the hours of 0600 and 2100 hours. Work can be conducted seven days a week
- 4.6 Hauling of logs through the Town of Jasper is not permitted on Sundays. All regular industry and Provincial highway traffic and safety regulations apply. Log haul from Pochahontas Campground to Marmot Pit is 55km and the log-haul from Whistler Campground to Marmot Pit is 7.0km.
- 4.7 Operations for conventional thinning may be suspended on terrain with slopes greater than 15% in the event of heavy rainfall and thawing temperatures and in all OA's when spring thaw occurs.

4.8 Whistlers Campground is located along Highway #93 approximately 3 km south of the Town of Jasper on Hwy 93 and Pocahontas Campground is accessed via Highway #16 and Miette Road about 45 km from the Town of Jasper. Both of these locations require use of single-tree processing equipment and forwarders that are mounted on rubber-tired vehicles to protect sensitive roads in that area.

5.0 CONTRACTOR'S RESPONSIBILITIES

The Contractor is responsible for performing thinning operations for cutting, forwarding, transporting, and slash disposal in accordance with this scope of work.

The range of contractor responsibilities includes cutting and removal of timber in accordance with environmental and safety standards, transportation of timber to forwarding site, disposal of slash and debris, and various administrative and supervisory roles.

The Contractor is responsible for all the costs of undertaking the work including but not limited to the following: labour, materials, equipment, supplies, accommodation, lodging, meals, transportation of workers and the Contractor's equipment, planning, cutting, limbing, clean-up, valid Parks Canada Business license and vehicle work permits, special permits and all other services necessary for proper performance of the work.

5.1 The Contractor shall submit the following to the Parks Canada Representative:

5.1.1 Within five (5) working days of notification of contract award:

- a) a detailed work plan and time line for review and approval. Any contemplated changes to the work schedule must have prior approval of the Parks Canada Representative.
- b) a site specific Health and Safety Plan.
- c) a site specific Traffic Safety Plan.

5.1.2 Within 14 days of notification of contract award and prior to commencing any onsite work, the Contractor shall submit the following to the Parks Canada Contracts Officer:

- a) Provide proof and maintain insurance while performing work within the Park for all phases of harvesting and transportation of timber in accordance with Insurance

Conditions (Annex 5)

- i) Commercial General Liability - \$5,000,000
- ii) Automobile and other vehicular coverage - \$2,000,000 per accident minimum.
- iii) Proof of Workers' Compensation or Employer's Liability Insurance

5.3 In the case that additional services may be required at any time during the course of the contract, the Contractor shall provide cost estimates for conducting work in these areas before starting any additional work. If mutually acceptable, the contract will be amended to incorporate increased scope of work.

No additional work will be done without prior approval by Parks Canada.

5.4 Performing work in accordance with the ordinances, laws, rules and regulations set out in the National Parks Act. The Contractor shall comply with the Dangerous Goods Act, applicable provincial transportation and motor vehicle legislation, and Regulations for Workplace Hazardous Materials Information System (WHMIS).

The Contractor shall observe safety measures of the Federal Government, Provincial Government and Worker's Compensation Board. In any case of conflict or discrepancy, the more stringent requirements shall apply. The Contractor is responsible for notifying a Parks Canada Representative if any portion of the work or any OA Boundary poses an unnecessary risk to the contractor, the contractor's equipment, the public or public property.

The Contractor shall obtain a valid Jasper National Park Business Licence, a Park Vehicle Pass for each operating period of the contract (included with the business license) and will be issued a tree removal permit at the initial start up meeting.

5.5 The Contractor shall comply with special considerations and environmental mitigations noted in sections 7.0 and 8.0 of this scope of work, as identified in Environmental Screening Report J13-061 (Annex 4).

Failure to comply with or observe environmental protection measures as identified in this scope of work and the environmental assessment report may result in work being suspended pending rectification of the problems and operators of equipment being charged under the National Parks Act. Parks Canada will not be responsible for any costs incurred as a result of any such work stoppage.

- 5.6 Employing a competent superintendent and necessary assistants, empowered to act on behalf of the contractor, who shall be in attendance at the work site at all times during progress of the work.
- 5.7 Conducting an onsite safety briefing for all personnel identified by the Parks Canada Representative who will be working in proximity to the Contractor's equipment and machinery.
- 5.8 Maintaining daily operational contacts with the Parks Canada Representative or Surveillance Officer and ensuring there is one person on site at all times who is competent, qualified, experienced and trained in all aspects of this contract and who is responsible for training, orientation and proper performance of its' employees and has the authority to receive and implement, on behalf of the Contractor, any order, direction or other communication that may be given under the contract.
- 5.9 Complying with direction given by the Parks Canada Representative and Surveillance Officer.
- 5.10 Working with Parks Canada to minimize conflicts and ensure the safety of Park users, businesses, and residents.
- 5.11 The Contractor must ensure public and traffic safety by adhering to designated haul routes through populated areas, maintaining signs or notices provided by the Contractor or Parks Canada, etc. The Contractor will notify the Parks Canada Representative prior to felling trees within two tree-lengths of a designated public trail, so that Parks Canada staff can be onsite to ensure public safety. The Contractor shall supply, erect, move and maintain all traffic control devices, flag persons, signs (regulatory and warning) and other safety measures and provide staff to ensure safe passage of all traffic over the project from date of commencement of work to date of acceptance by the Parks Canada Representative (i.e. in accordance with Alberta Transportation and Utilities, Traffic Engineering Section). Typical signing lay out diagrams are available from Parks Canada on request. The Contractor must conform to Alberta Highway Traffic regulations when moving equipment and provide required warning lights, signing, pilot vehicle, etc.
- 5.12 Clearing of snow or packing of snow on unpaved haul roads and periodic maintenance of

these (e.g. fill potholes and/or gravelling for traction).

- 5.13 Ensuring that all vehicles, chainsaws, and heavy equipment are appropriately maintained, refuelled and repaired in a timely manner.
- 5.14 Ensuring that all equipment has been thoroughly cleaned/pressure washed prior to entering the park, so it does not contain or carry residual soil, seeds, or vegetation from outside Park.
- 5.15 Ensuring all fixed fuel storage tanks are located in areas well removed from any watercourse including both standing and moving water. An impervious berm (or double walled tank) shall be constructed around the tanks and any other potential spill areas. The berm shall be capable of holding 110% of tank storage volumes. Portable slip-tanks as noted in section 8.9 are also permitted for use to aid in re-fuelling.
- 5.16 Providing and maintaining spill kits, shovels, and rubberized mini-berms onboard all of the Contractor's Equipment at all times for rapid initial response to spills or mechanical breakdowns, as well as sufficient additional spill kits at the project site to handle all potential spills. Equipment will be parked on tarps overnight to detect leaks. Harvesting heads shall be placed in mini-berms to catch dripping oil and ensure positive public image.
- 5.17 Loss to or damage of any of the Contractor's vehicles, equipment, supplies, etc. while on Parks Canada's property or in performance of this contract.
- 5.18 In the event that significant wildlife or cultural features are discovered, the Contractor will immediately stop work and report the feature (e.g. dens, artifacts, carcasses) to the Surveillance Officer or Jasper Park Dispatch. The Contractor shall not resume work in the particular area until an appropriate response is taken and the Contractor is so notified by Parks Canada. Parks Canada will not be responsible for any costs incurred as a result of such work stoppage.
- 5.19 Submission of a proposal is deemed to be confirmation that the Contractor (is familiar with or) has inspected the sites and is conversant with all conditions affecting execution and completion of the Work. Failure to do so will not relieve the Contractor of any obligations under this contract.

6.0 PARKS CANADA'S RESPONSIBILITIES

The range of Parks Canada responsibilities include monitoring the Contractor's performance regarding environmental protection, safety, public safety and communications; liaison with other Parks Canada departments, external agencies and utility companies; maintaining close contact with the Contractor in the field and responding promptly when decisions are required.

- 6.1 Arranging for and conducting a pre-work on site meeting for the Contractor's personnel to describe the project; identify the role of the Parks Canada Representative and Surveillance Officer; provide information on pertinent National Park Regulations; identify routes, landing locations, equipment exclusion areas, stream crossings, sensitive environmental or cultural areas; provide information pertaining to toxic spill responses; and discuss other relevant issues.
- 6.2 Identifying to the Contractor, the Parks Canada personnel who will be working in proximity to the contract equipment and machinery and ensuring all identified personnel attend the onsite safety briefing provided by the Contractor.
- 6.3 Utilizing industry protocols to flag the perimeter of the project area, Operating Area boundaries, sensitive environmental or cultural areas, equipment exclusion areas, habitat trees and marking of trees designated for removal in "Training sites" or entire areas. Parks Canada will negotiate with the contractor and agree upon the location of all primary equipment and log hauling routes and access routes, and provide maps of these prior to initiation of work.
- 6.4 Designating adequate and accessible landing areas, and working with the Contractor to identify and approve an acceptable access plan as well as responding promptly to requests from the Contractor if additional decking areas are required.
- 6.5 Conducting public relations and communications necessary to maintain the high level of public awareness and support for the project and timber removal activities in particular.
- 6.6 Working with the Contractor to minimize operational conflicts with Park users, businesses and residents. When necessary, to ensure safe operations and the safety of the public, Parks

Canada will temporarily close work areas, trails, roadways and/or reroute traffic as required. Where these concerns arise, every effort will be made to schedule operations during periods of less use (weekdays rather than weekends). Parks Canada will notify the public as required.

6.7 Provision of a storage area for the Contractor's vehicles, portable fuel storage tank and equipment at the Government Compound and field locations behind a locked gate. Parks Canada is not responsible for any loss to or damage of the Contractor's vehicles or equipment.

6.8 Ensuring that the Surveillance Officer or Parks Canada Representative is available at all times (either on site or available on cellular phone or radio) when the Contractor is performing work on-site and responding promptly when consultation is required by the Contractor.

6.9 Monitoring the Contractor's performance to ensure the principle of "maximum value" for wood cut, adherence to this scope of work, application of environmental protection measures, and all other directions are being followed; contacting the Contractor's field representative immediately to inform them of problems; working with the Contractors' field representative to remedy concerns; informing the Contractor of concerns, in writing, if necessary. Parks Canada reserves the right to stop the Contractor's work at its sole discretion in order to rectify any problem situations. Parks Canada will not unreasonably invoke a stop work order. Parks Canada will not be responsible for any costs incurred as a result of such work stoppage.

7.0 OPERATIONAL AREA DESCRIPTIONS AND PRESCRIBED TREATMENTS

Introduction

The following sections describe each of these OA's regarding stand composition, stand density, height, diameter, access, and gives details of the prescribed treatments. Prescribed treatments should be carefully examined and considered. Unless otherwise stated, stand densities are based on actual counts of conifers greater than 10 cm. DBH in representative 100 x 100 metre or 50 x 50 metre samples, and on random counts in additional 30 x 30 metre plots. Unless stated as "estimated", measurements of height, age and DBH values are the result of direct field sampling in

representative areas of each forest type. To assist potential contractors, the menstruation data provided pertains to the forest component to be removed and does not factor in the size of fully mature Douglas fir or pine that are to be retained.

Slash Management

The Contractor is to describe proposed methods for mechanically managing and piling debris and facilitating work by manual crews. All slash piles are to be completely disposed of through the contract.

7.1 Operating Area: Whistler Campground Loop 25

Description: 3 hectares of mature closed canopy, Spruce is the predominate species of this forested area, making up to 90% with very scattered aspen making up the remaining 10%. Internal campground roads provide access to most of the area to be thinned or subjected to single-tree treatments. This area is very level with few topographic variations. Campground infrastructure and assets will require special attention by equipment operators to avoid damages but access is excellent; no tracked vehicles on asphalt. Understory is very light in most areas; conifer regeneration is light and requires careful protection. Stand is about 90% white spruce and scattered aspen. Mean spruce DBH is 28cm with range from 45 - 20cm; stems per hectare are not relevant in this OA; average height 20 metres. Stand is approximately 110 years old. Little mortality and very few downed logs. Access is along existing campground road network. Decking is allowable along road in areas without shrubs or trees, on roads, and in campsites. Internal powerlines are located within the campground and require care.

Prescribed Treatments:

- The primary objective in this OA is removal of dead, dying, and trees deemed hazardous to the campground users. Mostly, these are the larger mature trees.
- ALL TREES (approx. 65) TO BE REMOVED IN THE CAMPGROUND WILL BE IDENTIFIED BY PARKS CANADA. (identified by flagging, tagging or GPS coordinates)
- Trees with twin stems, stem defects, fire scars, visible signs of decay, extensive mechanical damage or root compaction will be removed for public safety reasons.
- Variation in tree spacing for ecological reasons is secondary to safety considerations.
- Slash may be piled (off of asphalt) to facilitate follow-up disposal as per the Contractor's proposal. Burning will only be allowed during the winter months.
- Existing coniferous regeneration (<5 metres tall) is to be carefully protected from impacts due to felling trees or equipment.

- All trees to be transported to the Marmot Pit

7.2 Operating area: Pocahontas Campground

Description: 17 hectares of mature closed canopy, Spruce is the predominate species of this forested area, making up to 70% with scattered aspen making up the remaining 30%. Internal campground roads provide access to most of the area to be thinned or subjected to single-tree treatments. This area is level with some steeper topographic variations. Campground infrastructure and assets will require special attention by equipment operators to avoid damages but access is excellent; no tracked vehicles on asphalt. Understory is very light in most areas; conifer regeneration is light and requires careful protection. Stand is about 75% white spruce and 25% scattered aspen. Mean spruce DBH is 28cm with range from 45 - 20cm; stems per hectare are not relevant in this OA; average height 20 metres. Stand is approximately 110 years old. Little mortality and very few downed logs. Access is along existing campground road network. Decking is allowable along road in areas without shrubs or trees, on roads, and in campsites. Internal powerlines are located within the campground and require care.

Prescribed Treatments:

- The primary objective in this OA is removal of dead, dying, and trees deemed hazardous to the campground users.
- ALL TREES (approx. 370) TO BE REMOVED IN THE CAMPGROUND WILL BE IDENTIFIED BY PARKS CANADA. (identified by flagging, tagging or GPS coordinates)
- Trees with twin stems, stem defects, fire scars, visible signs of decay, extensive mechanical damage or root compaction will be removed for public safety reasons.
- Variation in tree spacing for ecological reasons is secondary to safety considerations.
- Slash may be piled on site (off of asphalt), but is to be reasonably piled (off of asphalt) to facilitate follow-up disposal as per the Contractor's proposal. Burning will only be allowed during the winter months.
- Existing coniferous regeneration (<5 metres tall) is to be carefully protected from impacts due to felling trees or equipment.
- All trees to be transported to the Marmot Pit.

Annex 2

GENERAL TREATMENT STANDARDS AND SPECIAL CONSIDERATIONS

- 1 Stump heights will not exceed 15.2 cm and will be as short as possible given limitations of the equipment used. Stumps may be ground down or flush cut but will not be removed from skid trails, landings, or other areas of the block.
- 2 Salvageable trees will be limbed, topped and cut to length on-site rather than at landing sites using “at the stump” wood processors with low ground pressure tires or tracks. Modified “bunching” combined with on-site processing may be deployed in locations where associated impacts are acceptable.
Salvageable timber will be transported to the nearest landing with forwarders, rather than with conventional skidders, similarly equipped with low pressure tires or tracks.
- 3 All timber or wood products cut within the Park will remain the property of Parks Canada.
- 4 Parks Canada will retain all timber as firewood.
- 5 Limbs, tops, and trees that are too small to be salvageable will be managed on site by the contractor.
- 6 All timber shall be hauled from Pocahontas Campground to Marmot Pit located on Highway 93A via Highway #16 and #93. Log or heavy equipment transportation along Highway #93 South past the South Gate will require a permit. The maximum vehicle load weights allowed on the identified Contractor travel routes within Jasper National Park are equal to what the Contractor is legally entitled to transport on roads in the Province of Alberta. Should weather conditions be unusually warm and lead to the thawing of road beds, weight restrictions would be applied within the Park in the identical manner as on Provincial roads.
- 7 No mobile camps or accommodation facilities will be permitted within the Park. The Contractor is responsible for all accommodation required for the Contractor’s personnel and must use existing accommodation.
- 8 The Contractor will take all necessary measures to ensure that no trees, other vegetation or soils outside the designated flagged areas are damaged or removed.

Annex 3

AVOIDANCE OF ENVIRONMENTAL IMPACTS

The original environmental screening for this project was completed in August of 2013 and was subjected to public review before receiving approval by Parks. The Canadian Environmental Assessment Act requires that both the Contractor and Parks Canada comply with the mitigative measures contained in these assessments. These are summarized below as conditions within the scope of work and are designed to minimize the environmental impact of this project.

1 General Protection Measures

- Actions related to clearing or thinning the forest canopy will be undertaken in the late fall and winter months while the soil is frozen.
- Heavy equipment will be equipped with high flotation rubber tires or low pressure tracks with modified grousers.
- Tree boles will be limbed and cut to length in the field rather than at the landing sites. Logs will be forwarded rather than skidded.
- The Contractor will be required to reduce stumps to the minimum that can be achieved by the equipment (i.e. 10 - 15 centimetres or less).
- No on-site disposal or storage of garbage is allowed.
- Area closures will be required during tree-felling operations, but will be of a temporary nature. The public will be informed of closures by Parks Canada through the Jasper Fitzhugh and by appropriate signage.
- In the event that significant wildlife or cultural features are discovered, the Contractor will immediately stop work and report the feature (e.g. dens, artefacts, carcasses) to the Surveillance Officer or Jasper Park Dispatch. Work will not be resumed in the particular area until an appropriate response is taken and the Contractor is so notified by Parks Canada.
- Industry protocols for flagging the outer perimeter of work sectors, and areas that are not to be entered with equipment will be followed in this project.
- All primary equipment and log hauling routes and access routes will be agreed upon by the two (2) parties and maps of these routes will be provided by Parks Canada prior to initiation of work.
- To avoid importing noxious or restricted weed species, the Contractor will ensure that all equipment to be used off paved roads will be thoroughly pressure washed before

entering the Park. Equipment will be inspected by Parks Canada prior to being deployed in the field and further cleansing may be required.

- Forwarding and ghost trails shall be laid out to avoid habitat trees and snags > 25 cm DBH wherever possible. Known habitat trees will be flagged by Parks Canada.
- At all times, Parks Canada will assign a designated Surveillance Officer available to the Contractor to help avoid or resolve potential or actual environmental concerns.

2 Protection of Cultural Resources

To protect cultural resources:

- Vehicle travel in the vicinity of known ceremonial areas will be restricted or prohibited. Parks Canada will visibly mark them as “no go” zones for equipment.
- In areas where treatments are required, all haul, forwarding and ghost trails will be pre-flagged by Parks Canada and off-trail travel is prohibited.
- The location of new ceremonial or gathering sites and the significance of them will be kept in confidence by the Parks Canada Representative, Jasper National Park Cultural Resource Specialist and the Contractor and shall not be extended to others without the prior consent of the Foothills Ojibwa and Parks Canada.

3 Protection of Roads and Motorists

- Only routes designated by Parks Canada will be used by the Contractor for log hauling and heavy equipment movement.
- Both parties will minimize sharp turning on pavement by providing and using “flow-through” routes wherever possible.
- Permits are required for use of municipal roads and can be obtained by the Contractor at the Municipal Office.
- Seasonal weight restrictions will be respected.
- Travel by machinery fitted with chains or grousers on asphalt surfaces will not be permitted unless adequate measures to prevent damage are taken and approved by Parks Canada.
- Flag persons and speed controls will be implemented as required by Alberta Transportation and Utilities for public safety.
- Log transport trucks will not be permitted to move randomly through the Town of Jasper.

4 Operations near Riparian Areas

- The Contractor will ensure that equipment buffer zones of 20 metres from lakes are observed within this project. Where buffers are less than 20 metres, it is in locations where gradients are low and with the approval of Parks Canada.
- In the event of small depressions which provide wetland habitats but open water is absent, these areas will be flagged as “no go” zones by Parks Canada and will not be treated to project standards.

5 Internal Access Routes (Forwarding Trails and Ghost Trails)

- Forwarding trails shall not be placed closer than 25 metres apart and shall meander as much as possible to reduce aesthetic impacts and potential for future trail development throughout the treatment areas. Forwarding trails will “dog-leg” at least thirty degrees within the first 25 metres of intersections with haul routes or the forest edge to avoid creating noticeable sight lines that could invite future recreational use.
- Ghost trails shall meander to the maximum extent possible to avoid damage to regenerating conifers and large diameter woody debris on the forest floor.
- The Contractor is responsible for hauling of snow, branches, gravel or chips and icing unpaved trails to further insulate and pad the ground where required or repair potholes.
- Equipment operators shall avoid aquatic or wetland areas (e.g. black spruce “bogs”).
- Stump removal will NOT be permitted on any routes used in this project.
- Parks Canada will provide early season snow removal and continue routine maintenance of the Reservoir access road.

6 Log Landings

- In order of preference, landings will be located in existing disturbed areas, along existing rights-of-way, and in existing forest openings and openings created as part of forest restoration. Landings will be chosen and marked by Parks Canada in consultation with the Contractor, but will avoid all ecologically and culturally significant sites.
- Landings will be located strategically throughout the project area.

7 Log Loading and Transport

- Log loading onto highway transport vehicles will take place at approved landings located adjacent to main haul routes only.
- Transport of logs on public highways will be in accordance with the Provincial Highway Traffic Acts (Alberta and British Columbia) and applicable forestry regulations.

8 Equipment Maintenance and Servicing

- The Contractor shall inspect equipment daily for leaks and stressed hoses, perform preventative repairs over an impervious mini-berm (the mini-berms are re-usable and contacts for the purchase of such berms can be obtained from Parks Canada), ensure that appropriate spill kits are kept on the equipment and on-site and report any spills immediately to a Parks Canada Representative or Parks Dispatch (911 or 852-6155).
- Repairs requiring draining or replacement of petro-chemical based fluids will be conducted over impervious containment
- Re-fuelling and maintenance of chainsaws shall be performed over impervious mini-berms with small (18"x 18") spill pads onsite
- Re-fuelling of machinery from approved slip-tanks (i.e. tanks equipped with automatic shut-off nozzles and break-away couplings) is permitted in the field over impervious spill containment mini-berms located more than 100 metres from any water body or wetland.
- Fuel storage in greater quantities is not permitted in the field. Fuel for chainsaws (25 litre jugs or less) may be kept on site, but within spill containment mini-berms.
- In the event of fuel or lubricant spills, absorbent material will be used for clean-up and any contaminated soils removed to an approved landfill. Equipment will be parked on tarps overnight to detect leaks. Harvesting heads shall be placed in mini-berms to catch dripping oil and ensure positive public image.
- Used fluids and other hazardous wastes will not be disposed of on site.
- Toxic spill responses will be outlined in Contractor briefings and responsibilities for co-ordinating and conducting responses identified.

9 Operations Adjacent to Power Lines

- Fire protection and forest restoration activities adjacent to power lines require special precautions. Contact Parks Canada representative to deactivate power lines in working areas as required.