

## WINTER TRAILS PROGRAM

### 1.0 Objective

Perform all operational and maintenance work required to offer:

- a) the Gatineau Park cross-country ski trail program; and
- b) the Gatineau Park winter companion program (snowshoe and hiking trails).

### 2.0 Context

Gatineau Park is considered a leading North American cross-country skiing destination. More than 200,000 day visits are recorded annually. Approximately 50,000 additional day visits are attributable to hikers and snowshoers.

The Park offers a wide range of ski-related activities, from front country to backcountry outings, allowing all types of cross-country skiing (for example, classical and freestyle, on and off-trail). Snowshoeing and hiking are complementary activities whose popularity has increased steadily during the past few years.

The winter trail network includes some 220 km of trails that require preparation and maintenance, of which approximately 190 km are designated for skiers. The ski trail network has been arranged in hierarchical order and includes primary (100 km), secondary (41 km), and tertiary (50 km) trails. Trail width and the possible combinations of recreational activities are the main factors differentiating the three types of trail. The Park also provides several snowshoeing and hiking trails (30 km).

Ten (10) shelters, ten (10) woodsheds, a large number of small furniture structures (tables, benches, sign posts, etc.) and equipment (two-way radios, woodholders, candleholders, axes, etc.) and some forty toilets (pit and chemical) located along the ski trail network require maintenance.

Four (4) Ski patrollers and about 40 Volunteers, supported by conservation officers, are responsible for public safety.

The period required for services associated with snowshoeing and hiking is the same as for skiing (See Article 3.0 below).

Note that the ski trail network is used mainly during daylight hours, however there is a growing number of skiers using these trails during the evening and even at night.

### **3.0 Operational Calendar**

The Contractor will be able to provide the required services for all or some of the trails from November 15<sup>th</sup> until April 15<sup>th</sup> each year. All facilities must be operational by November 1.

Because of snow accumulation on the trails, grooming must be initiated as early as possible in the season to establish conditions conducive to cross-country skiing and other winter outings in the Park.

### **4.0 Specific Sites**

The cross-country trail network covers a large portion of Gatineau Park, particular in the southern and central areas. The Gateway Sector (Gatineau, Hull sector) includes all trails located in the Park's urban sector, bounded to the north by Pink Lake. The vast majority of the ski and hiking trails are found in the Park Core and Parkway Loop sectors. This is the main hub of activity, bounded to the north by Highway 5 and the north shore of Meech Lake. These are considered "high use" sectors.

In addition to cross-country skiing, the Lac Philippe sector offers more diversified recreational possibilities, such as longer snowshoeing trails, winter camping, overnight stays at shelters and back-country skiing. This is considered a "light use" sector.

The Gatineau Park winter trails map provides additional information concerning specific sites on the trail network and associated programs and services.

### **5.0 Required Services**

#### **5.1 Ski trail maintenance**

##### **5.1.1 Network construction and modifications**

Following construction work in accordance with new operational requirements, the trail network may be modified during the term of this Contract. Said modifications may effectively lengthen or

shorten one or more of the trails covered by this Contract. Modifications to the ski trail network (primary, secondary, and tertiary trails) shall not affect this Contract (rates paid to the Contractor) unless the trail distance to be maintained is greater than 15 km longer than the original total distance.

#### 5.1.2 Work schedule and hours of operation

The Contractor will begin to maintain the ski trails once the base snow covering on the trails is 10 cm thick. All other facilities shall be maintained continuously on a seasonal basis. It is understood that hours of operation are from 9 a.m. to 6 p.m. daily. During the season, trails are expected to afford optimum skiing conditions during this timeframe.

The work schedule will be structured to provide optimum ski conditions during business hours. The systems approach has been developed for this reason (See charts in Annex 1 of this Subsection).

Unless otherwise indicated, the Contractor will maintain the trails at night (after 6 p.m.) so that they are ready by 9 a.m. each morning. From time to time (during snow storms, under difficult snow conditions, icy skiable surfaces, etc.), work may continue during the day (after 9 a.m.) so as to meet standards set for such situations, in consultation with the NCC.

The Contractor may use snowmobiles to maintain tertiary ski trails and hiking trails during the day, not later than noon.

#### 5.1.3 Preparing the trail base

In late fall, the Contractor will begin maintenance work (the major fall cleanup). He will prepare all winter trails and facilities to permit optimum operating conditions for the winter season. The Contractor will remove all debris, obstacles or threats to public safety (See Section 5.0; Subsection 5.10).

The tertiary network (back-country) will require a series of interventions to facilitate crossing of brooks where water accumulates and does not freeze in winter. The number of such sites varies according to weather conditions. The Contractor will take the necessary measures to create a solid trail base to preserve the snow covering. These measures will consist of placing bridging

(temporary) made of different materials (plywood-covered cedar logs, or other).

At the start of the season, compact, level, and develop all primary trails once 10 cm of snow have accumulated. Compact, level and develop secondary and tertiary trails once accumulations are between 10 and 30 cm (See the chart in Annex 1 of this Subsection).

#### 5.1.4 Building and maintaining a high quality ski surface

Snow covering on the trails must be groomed using mechanical and manual methods to accelerate maturing and compacting of newly fallen snow or to restore worn and/or hard-packed, icy surfaces. It is incumbent upon the Contractor to use the mechanical grooming methods required to produce optimum daily ski conditions suitable classical and freestyle (skate) skiing (See chart in Annex 1 of this Section).

The Contractor will carry out the following mechanical operations to groom the snow-covered trail surfaces:

- a) Packing and compacting;
- b) Levelling and repair;
- c) Track-setting; and
- d) Renovations.

Trails must be mechanically groomed across their entire width, with each border determined by the start of vegetation and/or an abrupt change in elevation. The purpose of establishing a base early in the season is to create a skiable surface that will cover imperfections in the trail, including ditches and depressions. The Contractor is expected to be especially careful to avoid damaging trees bordering the trails. In the event of such damage, notify Park natural resources staff and take remedial action, as required.

The number of tracks set for classical technique skiing depends upon the type of trail on which the tracks are set. Trail configuration is detailed in the "Ski Conditions and Work Report" table (Annex 2 of this Subsection).

Tracks should be as linear as possible, with angles and curves forming a continuous arc. All uphill portions, as well as certain downhill portions, should be track-set while slopes of 10% or greater should not be track-set, unless the NCC indicates otherwise.

Classical technique tracks should normally be set at the sides of the trail away from vegetation to prevent contact between skiers and vegetation. The central portion of the trail will usually be used as a service road for snowmobiles and/or reserved for freestyle techniques (skate skiing). These snowmobiles will be equipped at all times with a carpet type groomer that leaves a ridged surface on the snow. These groomers erase the treadmarks of the snowmobiles and tracked utility trailers.

The Contractor will make sure that space between double-track courses on either side of the trail (e.g. on the parkways) are 1.3 m apart, measured from the centre of one track to the centre of the other. Freestyle lanes should be at least 2 m wide with ridged surface.

The NCC will inform the Contractor of the configurations for each trail at the start of each ski season.

#### 5.1.5 Other trail maintenance

- a) The Contractor will remove from the full width of the trails any stones, dead or fallen trees, and trimmed branches that could threaten public safety, and any other obstacles that could hinder safety or negatively affect skiers' enjoyment.

The Contractor will obtain NCC approval before removing some or all of any healthy tree that could threaten skiers' safety.

It is incumbent upon the Contractor to establish lines of communication with the ski patrol so that they will be informed as soon as possible of any problems associated with trail maintenance.

- b) Some trail sections are more exposed to the elements (wind, sun, and precipitation) and could lack snow. The Contractor will ensure that such areas are completely recovered with snow as soon as possible (within a maximum 12 hours). To this end,

he may install snow fencing, to be provided by the Contractor, as required.

- c) The Contractor will collect any refuse scattered along the trails.
- d) The Contractor is expected to be prepared to deal with difficult winter climate conditions. Abrupt weather changes could result in precipitation in the form of rain and/or freezing rain, or sharp drops in temperature followed by milder weather. These variations cause considerable damage to the skiable surfaces of the trails, which must be returned to skiable condition as quickly as possible.

5.2 Maintaining other winter trails (complementary snowshoeing and hiking program)

Cross-country skiing is the main winter activity in Gatineau Park. However, although not as well-known, other activities, such as snowshoeing and hiking, are also offered.

Enthusiasts may learn to snowshoe or hike on approximately thirty (30) kilometres of Park trails. Of these, approximately ten (10) kilometres of trail, mainly located near the Gatineau Park Visitor Centre, are currently devoted to Winter hiking. Twenty (20) more kilometres are available for snowshoeing. These are located mainly in the Lac Philippe sector.

Trail maintenance required for these activities:

- Compact all new snow accumulations (5 cm or more, immediately after precipitations) or at a minimum once a week on Fridays;
- Remove overhanging branches and other obstacles from the path;
- Maintain three (3) rest areas along the snowshoe trails (2 at Philippe and 1 at Carman-Herridge) including facilities therein, such as fire pits, firewood, shovels, axes, benches, etc.; and
- Any other ski trail maintenance work that may apply to this section (See Paragraph 5.1 above).

Snowshoeing and Hiking Trails:

- Hiking
  - Pionniers: 1.3 km
  - Sugar Shack: 1.8 km

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- Asticou-Gamelin: 2.6 km
- Lauriault: 3.6 km
- Total: 9.3 km
  
- Snowshoeing
  - Chelsea: 2 km
  - Wolf: 2.8 km
  - Carman-Herridge: 7.6 km
  - Lac Philippe: 9.9 km
  - Total : 22.3 km

Modifications to the snowshoeing and hiking trails will in no way affect the Contract price (rate paid to the Contractor), unless said modifications exceed the current total of 31.6 km by 5 km or more.

### 5.3 Building maintenance

The Contractor will maintain the following structures: ten (10) shelters, ten (10) woodsheds, including the Sugar Shack, which is stocked daily, roughly forty (40) dry and chemical toilets, accessories such as smoke and carbon monoxide detectors, fire extinguishers, bird feeders, ski racks, fire pits, etc. and furnishings.

#### 5.3.1 Shelters

The ten (10) shelters are:

- Parkway Sector: Sugar Shack, Keogan, Shilly Shally, Huron, Western and McKinstry;
- Lac Philippe Sector: Herridge, Healy (date of operation predicted for December 2006) Renaud and Lusk.

Each shelter is equipped with a wood shed. See Subsection 5.1 for maintenance instructions.

#### 5.3.2 Toilets

A little more than forty (40) toilets are located along the trail network. The majority are dry pit toilets. They are located at trail access points (parking areas), at shelters and huts and along the trails.

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There are fifteen (15) toilets at the various trail access points, fourteen (14) attached to the shelters, six (6) in the huts and nine (9) along the trails (Hickory, Pink, Mica, Penguin, Lauriault, Étienne-Brûlé, Champlain, the boat concession at Philippe Lake and T17 at Taylor Lake).

The toilets must be cleaned according to the instructions in Subsection 5.1.

The other four (4) are sealed pit toilets (chemical), which the Contractor is expected to provide and maintain. During the operating season, these toilets are located at parking areas P1 and P13. The toilet at the P6 parking area is installed for the same period as previously and remains in place until the opening of the MacKenzie King Estate in early May of each year. The toilet at the Breton beach parking area is required solely during the spring period when the Philippe Lake Parkway is open as far as Breton beach.

None of the other toilets is used during the winter. Appropriate notices should be posted to this effect.

### 5.3.3 Accessories and furnishings (See Subsection 5.1)

Furnishings and accessories requiring maintenance are located inside and outside each hut and shelter. Picnic tables, fire extinguishers, detectors, notice boards, matchboxes, wood holders, axes, etc. are found inside, while birdfeeders, ski racks, picnic tables, and, in some cases, Park benches are found outside each hut and shelter.

### 5.3.4 Maintenance required at all huts and shelters, wood sheds, toilets and other structures.

5.3.4.1 The Contractor will perform the appropriate tasks described in Subsection 5.1, as well as the following:

- a) inspect, clean, paint, repair or replace all wood-burning stove parts, including chimneys, which must be swept as required;
- b) inspect, test, repair or replace all parts of emergency radios, including solar panels, batteries, radios, notice boards, instruction panels, etc.;



- c) maintain the supply of firewood in the huts and shelters, and in the adjacent wood boxes (See Article 5.6.1 f) of this Subsection;
- d) remove ashes from the wood-burning stoves and discard them at the dry dump;
- e) wash and disinfect tables and toilets, and sweep and clean the floors of the various buildings;
- f) perform more thorough cleaning and dusting once weekly (on Friday). Remove spider webs in corners, dust window frames, clean windows (inside) as needed, etc. ;
- g) restock sunflower seeds in the bird feeders located near some of the buildings;
- h) manually clear all snow and ice for a distance of two meters around entrances following a snowfall or ice build-up;
- i) remove snow and ice from picnic tables and other furnishings (benches, ski racks) outside the shelters and huts located along the trails and replace them appropriately at ground level; and
- j) inspect, test, repair or replace the various detectors (smoke; carbon monoxide) and fire extinguishers.

#### 5.4 Parking areas (snow and ice removal)

To facilitate access to the trail network, skiers may park their vehicles at any of the seventeen (17) official parking areas located in or near the Park. Two (2) of these, located in the Gateway Sector, do not require specific maintenance: P1 (Asticou) and P2 (Relais Plein-Air du parc de la Gatineau).

See Subsection 5.1 for a list of the fifteen (15) parking areas and expected maintenance standards (snow removal).

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## 5.5 Winter ski patrol program

The Contractor will operate a ski patrol program designed to provide assistance to any trail network user requiring such assistance. The patrol system will be organized to be able to quickly resolve all problems (within a minimal amount of time), ranging from minor injuries (such as cuts and abrasions) to serious problems (such as hypothermia, fractures, heart attacks, and major trauma). Patrollers are also expected to implement preventative measures. To do this, for example, they must spend as much time as possible on the trails, all to be coordinated directly from the main First-Aid station (located at Camp Fortune Volunteers' Lodge).

Patrol service requirements:

- a) Patrols are on duty daily, 9 a.m.-6 p.m., during the operating season;
- b) The main First-Aid station is located at Camp Fortune, in an NCC building known as the Volunteers' Lodge or "Roost". The Contractor is expected to make specific arrangements with the Camp Fortune operator to determine parking areas for off-duty patrol vehicles;

Another building in the Lac Philippe sector (main entrance) is also available;

- c) Patrollers will monitor the entire trail network (ski, snowshoeing, hiking) during business hours. Patrollers must be able to reach any accident site along the network within twenty (20) minutes after being advised. It is possible, under special circumstances, such as inclement weather, miscommunication, distance, or required evacuation method, that patrollers may be unable to meet this deadline. If so, document the reasons for non-compliance. The Contractor will ensure that at least four (4) patrollers are on duty during business hours, seven days a week;
- d) The patrollers must be trained and certified in the delivery of First-Aid in ski areas, including CPR. The training programs of the Canadian Ski Patrol System should be considered. Copies of said certification must be submitted to the NCC at the start of the winter season;
- e) Patrollers must wear appropriate uniforms (ski, snowmobile), showing nametags and employer identification while on duty;

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- f) Patrollers must be bilingual (Federal Public Service Level C), familiar with Park facilities, programs and services, trails and roads of and around the Park, and able to provide general information concerning these features;
- g) Patrollers must be in contact at all times with NCC emergency services, conservation officers, the Contract officer, the Park Visitor Centre, and trail maintenance crews;
- h) Patrollers must detect dangers and maintenance problems (damage to trails, as well as maintenance of utilities in the huts and shelters, accessories, signage, etc.) throughout the network, inform those who are responsible for correcting them and ensure that appropriate follow-up is conducted in a timely manner. To reduce risks, patrollers are expected to resolve these problems either temporarily or permanently;
- i) Patrollers will develop and operate a warning sign system, including signs to indicate danger, such as thin ice, closed trail, warning, trail not recommended, etc., install barricading tape and/or other information notices, as well as any other such signage required on the trails;
- j) Patrollers will assist with all their equipment and supplies, in public safety systems during special Park events (Keskinada Loppet, Ski Fest, etc.) that take place on the winter trails;
- k) Patrollers must maintain and submit incident reports to the NCC (See Section 6.0);
- l) Patrollers will support the day-to-day activities of the volunteer ski trail patrol program, i.e.:
  - welcome volunteers to the Park Visitor Centre, a total of around forty divided into four (4) teams.
  - maintain, provide and refresh First-Aid kit supplies and radios and assign these to the patrollers.
  - monitor reserves of equipment and supplies.
  - check control sheets (in/out signatures).
  - assign patrols to various locations in the network.
  - management of radio communications (patrol station).
  - participate in search and rescue and First-Aid operations.

- conduct evaluation sessions with team leaders and the Contract officer.
- participate in the volunteer patrol training program.
- inspect huts regularly.
- inspect snowshoeing trails regularly.

## 5.6 Liaison with Visitor Centre

Clients' need for precise updated information on trail conditions, snow and air temperatures and waxing suggestions are important. This information has a considerable impact on the quality of the client experience on the trails. The Contractor must produce reports on ski conditions and will forward the information to the Visitor Centre at least three times daily (8 a.m., 11 a.m. and 3 p.m.). The reports must include the following details:

- The most recent mechanical maintenance or other work performed on the trail network. The appropriate form is included in Annex 2;
- The current weather conditions at the centre of the network (Camp Fortune sector). These data must include air and snow temperatures, wind chill and relative humidity factors;
- Waxing suggestions for classical style according to the Swix products chart;
- Advice concerning safety or difficult skiing conditions located at specific network sites;
- All other specific information requested by the information officers.

## 5.7 Machines, equipment and supplies

### 5.7.1 The Contractor will provide:

- a) Motorized equipment, to include the following:

For the maintenance of primary and secondary ski trails, industrial grooming machines specially designed for the cross-country skiing industry, equipped with multi-position blades and variable-width snow tillers, as well as track setters. At least one of these grooming machines must have the capacity to be equipped with smooth rubber tracks, without metallic adhesion feature, in order to be operational when the first ten (10) centimetres of snow are on the ground.

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For the maintenance of tertiary and hiking trails, various suitably equipped snowmobiles.

All machines and equipment must meet cross-country ski industry standards.

Classical technique trail characteristics will comply with the standards set by commercial track-setting specialists. "Bächler" is the recognized reference equipment brand.

The Contractor will not be released in any way from his obligations in the event of breakdown, repairs, etc. that could cause delays in the operating and maintenance schedule. In the event of a mechanical breakdown (fluid leak, such as gas, oil, coolant, etc.), the operator will cease field operations and take action to avoid any further contamination or dispersal, apply absorbents and/or remove the contaminated snow, and notify the NCC immediately. Contaminated materials must be dumped outside the Park at an approved dump (See Section 4.0 and Subsection 5.1).

All business vehicles must be clearly identified, especially service and/or emergency vehicles. Use of snowmobiles and other vehicles (4-wheel drive ATVs) will not be allowed on the trails from the office to reach the First-Aid station; this to avoid damage to the trails and to disturb skiers as little as possible.

Any vehicle on the ski trails must drag a resurfacers to erase treadmarks on the snow-covered surface and leave a ridged texture.

N.B. Snowmobiles cannot circulate on the Philippe and Carman-Herridge snowshoe trails, except on specified shoulders in order to transport firewood and in emergency situations.

- b) All cleaning and maintenance products required to complete the work.
- c) All walkie-talkie radios for Contractor staff, said radios to operate on the Park ski patrol frequencies.

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- d) Snow fencing to protect snow-covered surfaces on wind-swept trail portions.
- e) Sunflower seeds to maintain supplies in the twenty-odd birdfeeders.
- f) Hardwood, cut to 40-cm lengths and split, at least one year old, to be used to heat the huts and shelters. The Contractor may stack this wood at the Lac Philippe and Crawley facilities. During an average season, approximately two hundred fifty (250) face cords of wood (16") are used in the huts and shelters. The Contractor may use dead or fallen trees within the trail path for heating purposes.
- g) Bridging material for tertiary trails.
- h) The patrol program requires:
  - 4-wheel drive trucks, trailers, 4 strokes snowmobiles, emergency sleds and toboggans, spine-boards, and radios.
  - Complete First-Aid supplies, including First-Aid kits and contents, beds, sheets, pillows, etc.
  - Uniform, helmets, and clothing.
  - Emergency signage, barricading tape, barricades, traffic cones, and snow fencing.
  - All sorts of manual tools.
  - Necessary office furniture and equipment.

5.7.2 The NCC will provide:

- a) Two (2) buildings (Volunteers' Lodge and Philippe Lake main entrance) for the patrol.
- b) To establish a base of operations facilitating easy access to the trail network. See proposals in Section 4.0, Article 3.3.3

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