



FALLING PLAN TEMPLATE

CAGC INFORMATION ALERT

Version 2 – December 2013

Canadian Association of Geophysical Contractors

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FALLING PLAN TEMPLATE

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1. OBJECTIVE

In relation to felling trees, this project will entail:

- Heliportable hand cut
 - Mulcher hand cut
 - Survey hand cut
 - Road/Lease construction
 - Right of way
 - Other [describe]
-
-

2. MAP(S) ARE CLEAR, CURRENT, ACCURATE AND THOROUGH

The QFS will ensure that all applicable maps are included in the Falling Plan. Included are:

- Site overlay
- Forest health maps
- LiDAR
- Wildlife concerns
- Forest cover
- Radio dead zones
- Site hazards
- _____
- Bogs
- _____
- Blow-down areas
- _____

3. MANAGEMENT OF CHANGE [MOC]

The MOC process shall ensure hazards are identified, risks are assessed, and controls are implemented, and all changes are documented and communicated to all workers on site.

The QFS will use the following methods to continually update workers about changing work circumstances that affect them:

- Review and update hazard assessments
- Radio communication
- Documented meetings
- Report unsafe or hazardous conditions
- Review or revise safe work procedures
- _____

4. HAZARDS ASSESSMENT/WORK PLANNING

4.1 General Assessment Provisions

- Compliant to BC OHSR 26.2, WCA 115(2)(b) and 117 (2)(a)
- Cutting area, drop zones, and helipads assessed by QFS as per: OHS 26.22.1
- Establish written procedures for the following:
 - establishing minimum and maximum distances between fallers and other workers
 - planning and constructing escape routes
 - controlling the fall of trees
 - minimizing unnecessary brushing
 - dealing with dangerous trees
 - bucking trees and logs
 - using mechanical assistance to fall trees
 - summoning and rendering assistance to manage a falling difficulty or to deal with an emergency
 - conducting special or innovative harvesting techniques
 - ensuring the well-being of each faller and bucker at least every half hour and at the end of the work shift
- Higher risk areas have an assessment and planning specific to the zones
- Direction is documented to lead fallers as to what is expected when a high risk scenario is encountered (i.e. Stop work and get the QFS).
- Field inspection intervals continually updated to match risk from such factors as new fallers, steep slopes, difficult lean, areas of danger trees, burn areas, blow-down, beetle kill, new equipment, SIMOPS, etc.
- The manner of field supervision shall be “Active Supervision” [see definition in Glossary], throughout the duration of each phase of the work
- Site drawings posted will include site layout, first aid location, emergency transportation provisions, and the evacuation marshalling station
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4.2 Assessment Methodologies used

- Helicopter flyovers documented compliant to WCA 115(9)(2)(b)
- Hazard scouting team including the QFS via driving/walking
- Water craft
- _____
- _____

4.3 Terrain and Slope Hazards Applicable

- Type 5-6 terrain present and has suitable control plans written and communicated. For more information, please refer to the CAGC Terrain Assessment Guideline.
- Type 3-4 terrain is present and has suitable control plans written and communicated. For more information, please refer to the CAGC Terrain Assessment Guideline.
- Terrain reassessed as the work area changes
- Soil conditions that can be expected, including depth of soils are documented
- Procedures address the risk of materials lying underneath the soil
- Ground roughness including rocky areas, loose soils, or materials
- Impact of operations on the hydrology of the site
- Impact of operations upon terrain stability
- _____
- _____
- _____
- _____

4.4 Timber Type Hazards

- Risks from over-mature aspen
- Risks from beetle-kill areas
- Risks from fire zones
- _____
- _____
- Risks from danger trees
- Difficult lean trees
- Stability assessed per OSHR 26.11

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4.5 Wind/Weather Hazards

- Controls documented to prevent trees downed by wind/storms
- Crew is prepared and equipped to cope with ground conditions changed by weather
- _____
- _____

4.6 Simultaneous [SIMOPS] Operations

- Control plan is documented to ensure adjacent work groups are always aware of new work teams operating in the area
- Workers have been trained in the plan and related procedures
- Procedures include the location for fallers
- Procedures include entry into a falling area
- _____
- _____

4.7 Hierarchy of Hazard Controls

4.7.1 *Eliminate* the hazard:

- The cutting area was re-routed to avoid a hazard
- Removing danger trees in the helicopter drop zone
- _____

4.7.2 *Engineering controls* to prevent or contain the hazard:

- Using equipment to overcome falling areas with significant hazards to the hand faller, i.e. burn areas, blow down, beetle-attacked stands
- Having chainsaw winches or other means to pull down hung trees
- _____
- _____

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4.7.3 *Administrative controls* to minimize the likelihood of the hazard:

- Cut sections of the line in a different season i.e. winter versus summer to allow for equipment to be used on frozen terrain, instead of hand falling
- Following accepted hand falling Safe Work Practice (SWP) as outlined in the OHSR part 26, the BCFTS Info Flips books #1 and #2, and the Enform Oil & Gas Faller Training Standard
- Written safe work procedures to avoid unnecessary brushing
- Written safe work procedures require clearing escape routes
- Written safe work procedures require moving away at least 10 feet from the base of the tree being felled, after making the final cut.
- Written safe work procedures define the sequence of hand cut on a line or area i.e. falling danger trees as the general falling progresses, falling drop zones and or heli-pads, on mulched lines
- Written safe work procedures to define when to have a QFS supervisor travel the line/area to identify which hazard trees need to be removed and when the removal should happen
- Written procedures for falling and bucking operations may include dangerous trees or logs
- Written procedures for harvesting trees, if applicable
- Written procedures for operations that may present similar types of working conditions and hazards as forestry operations
- _____
- _____

4.7.4 *Personal Protective Equipment (PPE)*

- PPE used as a last resort once the other three control types were applied
- The PPE shall be appropriate to effectively control the identified hazards
- _____
- _____

5. ORGANIZATIONAL CHART SHOWS CLEAR CHAIN OF COMMAND

- Names and phone numbers of persons responsible for health safety for each company and those involved in managing the operational phases of the project
- Documentation is available showing when the contact information was last verified or updated.
- _____
- _____

6. ROLES AND RESPONSIBILITIES

6.1 Employers' Responsibilities:

- To ensure the health and safety of their workers and other workers on the worksite
- To ensure workers are aware of all known or reasonably foreseeable hazards
- To establish OHS policies and programs
- To remedy hazards (both physical and human)
- To provide information, instruction, training and supervision
- To provide coordination on multi-employer worksites (e.g. confirm a written agreement with prime contractor is in place, ensure that activities are coordinated, establish and maintain a system to ensure compliance of all employers on site)

6.2 Workers' Responsibilities:

- To take reasonable care to protect themselves and others
- Comply with the Workers Compensation Act
- Comply with Occupational Health and Safety Regulations, orders, etc.
- Follow established safe work procedures
- Follow established procedures
- Ensure their safety or safety of others is not impaired
- Report any unsafe conditions or unsafe acts

6.3 Supervisors' Responsibilities:

- Ensure the health and safety of their workers
- Be knowledgeable about the Act, the Regulation and the Guidelines
- Know the work process, the hazards involved and effective control measures for the hazards
- Ensure their workers are made aware of all hazards known or reasonably foreseeable
- Ensure workers comply with the Act, the Regulation, etc.
- See Section 6.2 of this document for an outline of the Qualified Falling Supervisor's responsibilities
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6.4 Mulcher Operators' Responsibilities:

- Familiarity with the operator's manual
- Model-specific limitations, (i.e. Slope tolerance)
- Conducting pre-use inspections
- Routine in-field equipment servicing, refuelling, etc.
- Emergency procedures such as rollover and fire
- _____
- _____

6.5 Qualified Falling Supervisors' Responsibilities:

A designated, competent Qualified Falling Supervisor must be assigned to all Falling/Bucking operations. In addition to the general duties of supervisors outlined in Section 6.3 of this document, a Qualified Falling Supervisor [QFS] has, at minimum, the following additional responsibilities:

- Actively supervise and engage workers
- Responsible to ensure the falling and bucking operations are well planned and conducted
- Conduct and record worksite inspections
- Conduct competency assessments on fallers to assess level of skill and identify additional training as needed
- Assess and sign off completion of the line to ensure compliance to OHS 26.22.1 (1)(2) and WCA 117, WCA 118(2)(a).
- Ensure additional crews subsequently entering the cut line are not at risk from danger trees
- Verify the skill level of fallers and buckers using all of the following criteria:
 - Verification of a current, valid certification from BCFSC or Enform
 - Review the entries in the worker's logbook to assess experience with the type of timber and terrain likely to be encountered
 - Review the workmanship exhibited in the field
- Inspect fallers and buckers in the field to ensure they are correctly performing their tasks per OHS26.22.2 & OHS 3.5

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6.5.1. Mulcher Operators' Skill Assessment

The QFS will have documented competency assessments on every mulcher operator's skill level including at least these tasks:

- Operator's familiarity with manufacturer's operation manual
- Model-specific limitations
- Pre-use inspections
- In-field equipment servicing
- Refuelling
- Emergency procedures
- _____
- _____

7. TRAINING REQUIREMENTS ARE OUTLINED

- Workers are informed of the assessed hazards compliant to WCA 117(2)(a)
- All fallers are certified, compliant to BC OHSR 26.21, including site competency assessments
- Supervisory training, including defining how qualified persons have been assessed
- Equipment operator (especially mulcher operator), compliant to BC OHSR 16.4
- Danger tree assessors are certified via WSBC approved course
- _____
- _____

8. ORIENTATIONS ARE COMPLETE, INCLUDING, WHERE APPLICABLE:

- General orientation including right to refuse unsafe work per OHSR 3.12 and 3.13
- Site specific hazards and method for summoning first aid
- Safety near helicopters
- _____
- _____

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9. WRITTEN SAFE WORK PROCEDURES ARE AVAILABLE ON SITE

- Mulching
- Hand-Falling must cover:
 - general hand falling requirements
 - danger tree or specialized falling situations (i.e. falling drop zones or heli pads),
 - overcoming falling difficulties (limb-tied trees, hang-ups etc.)
 - OHSR regulations 26.23 (1)(2 a-j) cover the minimum written procedures for hand falling operations
 - OHSR 26.24 (1-8) outlines further key responsibilities that must be addressed in the falling process.
 - compliant to the BC Faller Training Standard info flips books 1 and 2
- Right to refuse unsafe work compliant to OHSR 3.12 (1-5) and 3.13 (1-2)
- Working Alone and Isolated Work
- Journey Management Procedures
- _____
- _____
- _____
- _____

10. EQUIPMENT REQUIREMENTS ARE IDENTIFIED

- Define what is required for the jobs
- Inspection and maintenance of equipment
- Equipment is suitable in size or number for the task at hand
- _____
- _____

11. MEETINGS

As required, the following meetings shall be conducted:

- Pre-job meetings
- Coordination [Prime Contractor/Contractor meetings]
- Daily work plan meetings
- Site Health and Safety Committee meetings
- Tool-box meetings
- _____
- _____
- _____
- _____

12. WORK COORDINATION IS MANDATED WHERE NEEDED

- Supervisors protect their workers from Simultaneous work operations nearby
Traffic control along roadways/lines i.e. areas in which lines/falling zone can be accessed by others is [check one]:

Included Not Applicable

- _____
- _____

13. EMERGENCY RESPONSE PROCEDURES (ERP) ARE IMPLEMENTED

- Contents of all emergency protocols have been communicated to all site personnel
- ERPs must provide guidelines for HETS personnel that ensure appropriate clearance between the injured party and the helicopter, from the risk of canopy debris dropping onto workers in the area
- _____

14. AUDITING REQUIREMENTS

- Verification of falling plan to ensure it is effective and representative of actual field execution as written for Contractors, Supervisors, Fallers, and Workers, at the site
- Prime contractors must audit the Qualified Falling Supervisor in their role per WCA 118(2)(b)
- _____
- _____

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Glossary

Active Supervision	Taking all reasonable care to prevent the occurrence of an incident or event. Active Supervision includes providing information, instruction, training, supervision, verification of knowledge, and correction of all known hazards. Active Supervision is defined as providing a physical presence in the work area at intervals suitable to the risks at hand, and to be physically available to give additional guidance as needed
Employer	Every person having in his/her service under a contract of hiring or apprenticeship, written or oral, express or implied, a person engaged in work in or about an industry, as per BCWCA ss. 1, 106
HETS	Helicopter External Transport System
Prime Contractor	As per BCWCA ss 106.118 (1): In relation to a multiple-employer workplace, (a) the directing contractor, employer or other person who enters into a written agreement with the owner of that workplace to be the prime contractor for the purposes of this Part, or: (b) if there is no agreement referred to in paragraph (a), the owner of the workplace
QST	Qualified Supervisor Trainer, as per BC OSHR
QFS	Qualified Falling Supervisor, as per BC OSHR
Safe Work Practice	Provides specific, documented, step-by-step information to workers, recognized as the most effective approaches to minimize injuries, incidents, and other negative outcomes.
Sub-Contractor	As per BC OSHR
Supervisor	A person who instructs, directs and controls workers in the performance of their duties, as per BCOHS Regulation 1.1
Terrain Types	As per CAGC Terrain Assessment Guideline