

Employers Responsibilities

It is the responsibility of Apex Forest & Wildfire Services Ltd. to:

- t give every employee a copy of this document and ensure they read, understand and sign it.
- t ensure all employees are covered by WCB
- t provide the required first aid attendant on site and identify this person to each employee.
- t provide the required first aid equipment on site and identify it's location to each employee.
- t record and report all accidents and unsafe work conditions.
- t ensure all employees are properly trained and certified or qualified to British Columbia Ministry of Forests and WCB standards.
- t provide working two-way radios for proper communications and explain correct radio operation methods to each employee.
- t provide a list of emergency contact numbers in each vehicle.
- t provide and/or explain to employees human resource policies and procedures, operational safe work directives, work ethic and attitude that is expected from them.
- t periodically inspect employee's work practices to ensure maximum safety and productivity.
- t ensure all employees are accounted for throughout the entire work day.
- t comply with all O. H. & S. REGULATIONS as stated by WCB
- t make available copies of the O. H. & S. REGULATIONS.

Employees Responsibilities

It is the responsibility of each Apex Forest & Wildfire Services Ltd. employee to:

- t read, understand, and sign the Apex Forest & Wildfire Services Ltd. Safety Program, Human Resource Policies, and any other applicable company documents.
- t discuss any concerns regarding the Safety Program.
- t be able to perform the work that they said they were capable of doing upon being hired.
- t report to work on time with a positive attitude.
- t **FIREFIGHTERS:** supply a WCB / CSA approved high visibility hard hat, approved 8” tall caulked work boots, leather work gloves, safety goggles/glasses or a mesh face shield, cotton clothing, ear protection, bandanna, back pack, rain coat, sweater, sleeping bag, cot or foamy, pup tent, change of clothes, toiletries, towel, wash cloth, laundry detergent, ID, bank card, and enough food and drinking water for the first 24 hour shift. The following items are provided by Apex Forest & Wildfire Services Ltd. ; hi-visibility vest, 1- 4" compression bandage, Nomex, Proban or equivalent flame resistant coveralls or clothing, safety whistle,
- t **FALLERS / POWER SAW OPERATORS:** supply a WCB / CSA approved high visibility hard hat, approved 8”tall caulked work boots (except in winter), leather work gloves, safety goggles/glasses or a mesh face shield, cotton clothing, ear protection, hi-visibility vest, 1- 4" compression bandage, WCB approved leg protection, safety whistle, bandanna, sleeping bag, cot or foamy pup tent, change of clothes, toiletries, towel, wash cloth, laundry detergent, ID, bank card, and enough food and drinking water for the first 24 hour shift.
- t if required, provide a chainsaw and all the necessary chainsaw equipment, and ensure that this equipment is well maintained and in good working condition.
- t be compatible and able to work safely with fellow employees.
- t work within their capabilities and assigned duties, using “common sense”.
- t follow operational safe work directives and procedures, and actively participate in making their work environment safe and productive.
- t be constantly aware of hazards.
- t check for their “ work buddies” at regular intervals.
- t report all unsafe work conditions to their supervisor immediately.
- t understand that it is their legal responsibility to refuse any job that they feel is unsafe or that they are not qualified to do, as stated in the O.H. & S. Regulation manual, 3.24.
- t understand that substance abuse on the job will not be tolerated.

OPERATIONAL SAFE WORK DIRECTIVES

New January 2008

Orientation

A complete company job orientation must occur for any new worker or any returning employee that has been absent from the jobsite for > 6 weeks. This orientation will include Offer of Employment, The Forest Safety Accord, New Employee Information, Fitness requirements, Physical Activity Readiness Questionnaire (PAR-Q), Payroll/Vehicle/Equipment Policies, The Right to Refuse Unsafe Work, Discipline system, Job description(s), Review of the company Safety Plan which includes Accident emergency procedures.

Any equipment or protective clothing that is necessary will be issued at this time. The new employee would then be introduced to the other employee 's

Training & Instruction

Employees **must** present records of certified/qualified training courses prior to being hired. The immediate supervisor will conduct frequent spot checks to confirm the employee's ability to perform the duties assigned to them. Any concerns regarding safety, productivity, and specific skills required to perform the job will be addressed immediately. **Transportation of Dangerous Goods** will be in accordance to current Transport Canada regulations. **W.H.M.I.S.** Training will be required for each worker.

Chain of Command

Each morning, prior to commencement of work, employees will be briefed as to who their supervisor will be for the day. All direction relating to work activities will come from their immediate supervisor on site. Any directions passed on to employees from other sources (i.e. fire boss, line boss, etc.) must first be discussed with and agreed to by their immediate supervisor.

Safety Meetings

An in-depth "Initial Safety Meeting" will be held upon arrival at a new job site. The Apex Forest & Wildfire Services Ltd. "Job Site Safety Information" sheet and "Fire Safety Briefing Checklist" will be completed with all pertinent information.

The identification and location of the on-site first aid attendant, the location of first aid supplies and the location and awareness of new and existing safety hazards will be discussed. Emergency evacuation procedures applicable to the particular job site will also be reviewed. Updates will be given as necessary throughout the day.

Daily safety meetings will follow, in accordance to the O.H. & S. regulations 3.22, 23 in the form of a tailgate meeting.

Safety Inspection

Equipment required for the job will be signed out to employees by their immediate supervisor (crew boss). Once signed out, employees are responsible for the safe use and return of the equipment. Minor maintenance of tools, such as sharpening pulaskis, chain saw repair, etc. is to be performed by the employee as required. Major maintenance of tools, such as broken handles, broken back pumps, etc. will be performed by Apex Forest & Wildfire Services Ltd. as required. General maintenance and safety checks on all vehicles are performed prior to the start of the season. Periodic maintenance and safety checks are conducted throughout the season as required and/or necessary. A trip inspection report will be conducted by a crew member daily. Insurance is purchased for vehicles and for comprehensive general liability before the season starts.

Firefighting Procedures

Firefighting poses a number of safety hazards that include:

- heat
- smoke
- dust
- poor visibility
- insecure footing
- unstable timber
- hot embers and ash
- aircraft
- exhaustion
- rapidly changing conditions

Prior to entering the fire area a number of requirements must first be established:

- predicted fire behavior identified
- hazardous trees identified and felled by a certified dangerous tree faller
- minimum 2 escape routes and 2 safety zones identified
- maps if available

Lookouts will be assigned when fire behavior advisories or extreme fire behavior warnings are issued.

Crew bosses are responsible for the safety and productivity of their crew. Crew bosses and crew members will work as a team to provide the highest level of safety and productivity at all times. This includes:

- remaining calm and knowing the location of crew members at all times.
- keeping crews together.
- being aware and informed of existing and new hazards.
- ensuring that caution is exercised with handholds and footing when working on the fire line.
- 10 foot spacing of crew members when working or traveling with hand tools
- not walking through hot ash unless it is an emergency - holes may be present or material may be burned out below the ground.
- assigning lookouts for rolling rocks or logs when working on steep ground.
- ensuring all personnel are familiar with air travel and air attack procedures.
- reporting and treating **all** minor injuries in order to have documentation for any after effects that may occur.
- watching for and avoiding burning snags.
- handling gasoline, diesel, foam, and oils with caution to personal safety and the environment.
- never working below heavy machinery or other crews.
- never riding on heavy machinery.
- never sleeping on the fire line - if exhausted inform your crew boss.
- shouting, whistling, and /or radioing the other crew members if you see something dangerous.
- notifying personnel/supervisors if fire jumps the line.
- moving the crew if fire jumps the line. If this occurs, move to one of your pre-determined safety zones via the pre-determined escape routes. Move to open ground opposite the fire's direction of spread, down slope on an angle. If necessary, cross through the advancing fire into the burned out or "black" area. (1) taking a deep breath, (2) holding it, and (3) while protecting your face, make a quick run through the fire front to the "black". Ensure that you hold your breath, as hot air and gases can fatally damage lungs and airways.
- being aware that a "warbler" from a "bird dog" airplane indicates an impending air tanker

- drop. A siren indicates all clear.
- knowing what to do if caught in a drop zone.
- report to immediate supervisor or Fire Centre in the event that the fire escapes or threatens to escape
- managing the effects of smoke on workers by rotating workers in and out of smoky areas, using sprinklers when necessary, and using personal protective equipment to reduce smoke inhalation

Danger Tree Assessing Procedures

Anyone who is assigned a position as a danger tree assessor must have attended, completed and passed a recognized Dangerous Tree Assessor's Course that is applicable to the jobsite i.e Wildfire, Harvesting & Silviculture and /or Parks & Recreation Module(s). The assessor can also be the faller to expedite the assessment process. In any case, the following steps must be taken and documented.

1. level of disturbance
2. site assessment overview
3. visual tree assessment
4. management and safety procedures (safe – retain: dangerous – remove tree or hazard or install no work zone)
5. documentation - marking of trees, location on a map and submission of summary report to the supervisor

* **new** Safe Work Procedures require that no fireline personnel are to enter the work area until a Danger tree assessor has examined the given work area and communicated the results of the assessment to the immediate supervisor. The information provided would be as follows;

- a) a copy of a map indicating the trees that have failed and what the failure is i.e.; hung up limb, rotten trunk, heavy lean, etc.
- b) the method in which the trees have been identified i.e.; "Danger Tree" flagging tape with a number printed on it, the tree painted with a "D" and a number, etc..
- c) the method in which the "no work zones" have been identified i.e.; "No work zone" flagging tape, "management zone" flagging tape, etc..
- d) brief written description of the reason for failure of each tree. This can be in a simple table format with corresponding numbers and descriptions

The immediate supervisor would then make this information available to the next person up the chain of command – Division Supervisor, Incident Commander.

Any work area of the fire that has been initially assessed will be re-assessed if any of the following things occur;

- a) the fire has burned continuously for more than 2 days
- b) significant wind event has happened
- c) any heavy equipment, including aircraft that has disturbed the area

Power Saw Operators and Fallers

Power Saw Operators and Fallers employed by Apex Forest & Wildfire Services Ltd. must arrive at work prepared with: One to two chainsaws with greater than 57 cc displacement that are properly maintained, complete with all safety components, and a minimum 24 inch bar with a **sharp** chain. Additional items include: spare parts - sprockets, chain, bar nuts, pull cords, spark plug etc.

- a wedge belt containing - 3 wedges, a wedging tool (single bit axe), bar wrench, carburetor screwdriver, round file, raker file
- a fuel/oil container

- 1- 4" compression dressing

The required training for fallers will be the BC Faller Certification program in conjunction with references and a demonstrated ability to fall the trees in the given area (qualification).

Power saw operators must provide proof of an accepted power saw operator's training course, in conjunction with references and a demonstrated ability to operate the saw safely and efficiently (qualification).

* **new** The following items must be clearly demonstrated and / or communicated prior to the applicant achieving the position of power saw operator (PSO)

Starting chain brake engaged, saw placed on the ground is the preferred method, no finger on the throttle

Sharpening a clear understanding of how to maintain a sharp chain

Carrying at waist height, bar to the rear, chain brake engaged if engine is running

Kickback Awareness knowing where the tip of the bar is at all times and a clear understanding that the upper quadrant of the tip is the kickback zone, wrapping the thumb around the handlebar, keeping the saw close to the body, maintaining solid and balanced footing while cutting, keeping the saw to the side of the body while cutting, assessing tension of logs, limbs and saplings to avoid "throwing" of the saw upon cutting

Boring Cuts the upper quadrant of the bar tip is defined as the kickback zone. Start the boring cuts with either the top or the bottom of the bar. Work from the back of the kickback zone progressing to the front of the bar as an adequate safety pocket is produced to restrict the kickback

Bucking Procedures assessing the logs or limbs for compression and or tension, cutting the compression wood partially and then finishing the cut in the tension wood, continually assessing the thickness of the saw kerf to avoid pinching, the movement of the log or limb as the cut progresses to avoid sweeping or any abrupt movement of the affected material, flush cuts of limbs and saplings to avoid "pigs ears" or unnecessary "spears", use wedges or wedge cuts to assist in reducing pinching, incomplete cuts require marking the log with an "X" and notifying the workers and supervisor

Windthrow always ensure when bucking windthrow that factors such as root mat position, crossed logs and possible fire burning inside of the logs require extra caution and attention to avoid. Ensuring root mats won't close or roll once they are cut, crossed logs won't slide, sweep or pivot unnecessarily and burning logs are bucked open sufficiently to extinguish the fire inside of them

Responsibilities of Power Saw Operators and Fallers before a tree is **felled**, a faller must ensure that all workers are clear of the area by a **minimum two times the height** of the tree.

- before a tree is **bucked**, the bucker must ensure that all workers are clear of the hazardous area.
- fallers and power saw operators must ensure that fellow workers get their attention from a safe distance before **entering** this danger zone.
- once this communication has been made all saw work must cease
- fallers and power saw operators must ensure that fellow workers make visual or voice contact once they have left the danger zone and are in the clear before continuing their work
- falling or bucking must not be started if a tree or log is in dangerous condition, or there is reason to doubt that the cut can't be completed.
- ensure that obstructions to falling and bucking are cleared and a safe escape route(s) to a

- pre-determined safe area is prepared.
- a tree must not be felled if it could strike any stationary or running line of any operating equipment.
- if it is necessary to pack or shovel snow to reduce stump height, the depth of the depression at the base of the tree must not exceed 45 cm(18 inches).
- when falling a tree the faller must ensure that: a sufficient undercut is used, the undercut is complete and cleaned out, the backcut is higher than the undercut to provide a step on the stump, sufficient holding wood is maintained, wedging tools are immediately available, wedges are set unless the tree has a pronounced, favorable lean, and the tree being felled does not unnecessarily brush standing timber.
- a faller may only use one tree to push other partially cut trees to overcome a specific falling difficulty, a wedge is driven into the backcut of each partially cut tree, and only those trees necessary to deal with the falling difficulty are cut up.
- when the tree commits to its fall, the faller must move quickly to a pre-determined safe position, at least 3 meters (10 feet) away from the base of the tree, on a 45-degree angle where possible, and take cover if available.
- if a tree is not completely felled or bucked, the faller or buckler must clearly mark the tree, discontinue work, alert any workers from entering the danger area, notify the immediate supervisor, the supervisor will notify all workers who may be endangered, and then measures must be taken to ensure the tree is safely felled or bucked before other work in the hazardous area proceeds.

Falling Dangerous Trees

- where practicable, dangerous trees must be felled progressively with the falling of other timber, into open areas, but before falling adjacent live trees.
- dangerous bark must be removed, stump height, in the judgment of the faller, must allow maximum visibility and freedom of movement.
- the tree must be felled in the direction of the lean, as much as possible, to minimize the use of wedges and the resulting vibration caused by wedging.
- wedging must only be used if there is no alternative and only after careful assessment of the ability of the dangerous tree to withstand wedging.
- pushing with a green tree must only be undertaken to overcome a falling difficulty.
- if conventional methods cannot be safely undertaken to remove a dangerous tree, blasting or other acceptable methods can be used.
- falling, bucking, or limbing must not be undertaken in an area made hazardous by a leaning, dangerous tree, or a dangerous tree that has been brushed by a felled tree until the dangerous tree has been felled.

Location of Fallers and Buckers

- fallers and buckers must not work in a location where they or other workers will be endangered.
- a faller must not fall a tree in a normally inaccessible area if the faller's safety depends on a lifeline or similar device and the faller does not have the ability to move to a safe position.
- only workers associated with falling and bucking duties may enter into the active falling or bucking area. Before entering the area, the workers must notify the faller or buckler and wait until advised by the faller or buckler that it is safe to enter.
- a worker other than the faller may be at the base of a tree that is being felled if the worker is a supervisor, a trainee, a spotter, or is required to assist the faller overcome a specific falling difficulty.
- if a tree is being felled that may create a hazard to a user of a traveled road, adequate traffic control measures must be used to stop or control traffic.
-

Radio Communications

The Department of Communications (D.O.C.) Canada, has 4 main rules that must be observed:

1. radio equipment will not deliberately operated so as to interfere with another station

2. only transmissions concerned with operations are permitted
3. transmission are not to contain profane or obscene words
4. information other than from a public broadcast shall not be transmitted

Two-way radios will be provided for the crew as well as for the vehicles. Employees will be instructed in the correct operation of the radios. The crew will have a call sign (i.e. Apex1) and individuals will be assigned a specific call sign (i.e. Apex Bravo). A frequency chart that includes all local logging road frequencies and radio operating instructions will be visibly present near the radio.

Before using a radio, the operator will know and adhere to the following:

1. the call sign or station name by which the radio will be identified as well as the call sign or names of the station to be called
2. the required check-in schedule
3. the frequencies to be used and how the radio contacts are to be made

Each driver will announce (at posted 1 km intervals) along the logging road their location, direction of travel and the road name on which they are traveling. In the event that a crew vehicle has a faulty radio, the vehicle will follow one that has an operational radio.

When an injury requires information to be transmitted by radio follow these procedures:

- contact fire center/fire zone, explain call sign, location (long. & lat., geographic), nature of injury, sex of casualty, evacuation method (ground or air), ETA
- be clear with your information
- **Do Not** transmit the name of the casualty
- remain in contact at all times

Job Site Employee Check System

Upon arriving at a job site, the proper chain of command contacts will be established by the crew boss. The fire boss will determine the crew's daily check in schedule.

During normal conditions, employees will work together as a group. When circumstances arise where the group is split up, visual or voice contact must be made every 30 minutes. Two-way radios can act as one method of voice contact. All Apex Forest & Wildfire Services Ltd. employees should be equipped with a safety whistle. The signal when using a whistle is - **one long signal** repeating until a response is established. Every worker must be accounted for by the supervisor throughout the day, and at the end of each shift before leaving the work site.

Under contracts with the British Columbia Ministry of Forests, check-ins with the fire zone office, or the regional fire center will occur (1) upon leaving marshalling point, (2) upon arriving at the job site, (3) every two hours at the job site, (4) prior to leaving the job site, (4) upon arrival at the original or new marshalling point.

Days of Work/Rest

All personnel will work a maximum of fourteen consecutive "**Duty Days**" to increase personal safety and productivity. The suggested days of rest and relaxation – for example- are as follows:

5 days worked - 1 day r & r

14 days worked - 3 days r & r

Days of travel and/or days on standby will not be considered "**Duty Days**".

New November 2007

Injury Management

Apex Forest & Wildfire Services Ltd. is committed to the safety of our employees both at the jobsite and getting to & from the jobsite. In the event of an injury to a worker Apex Forest & Wildfire Services Ltd. and / or the assigned first aid attendant will work with the employee to process forms for submission to WorkSafe BC. The employer will stay in contact with the employee to check on the status of their health and manage their timely return to work. The nature of the work duties that Apex Forest & Wildfire Services Ltd. provides for their employees generally does not involve "light duty" or "alternate" jobs for an injured employee. In most cases

full recovery from an injury would result in return to work.

Helicopter Safety Procedures

Helicopter safety is an integral part of S100 training. Crew bosses will request their crew be given a helicopter briefing with the pilot prior to boarding. Important safety features and procedures must be identified by the pilot to the crew. Examples of these are as follows:

- helicopter danger areas – tail rotor, main rotor, exhaust ducts
- down wash and it's associated affects
- approaching and departing procedures for specified landing sites
- use of seat belts
- operation of on board radio
- how to operate the doors
- how and where to load and unload equipment
- if caulk boots are allowed to be worn on board
- location of the E.L.T. and it's operation
- location of first aid kit and crash survival kit

***Workers that are experiencing head colds may not fly in a helicopter ***

Accident Reporting

All dangerous work conditions must be reported to the supervisor immediately. All injuries and accidents will be reported to the on-site first aid attendant as soon as possible and recorded. Any accident which results in lost time for the employee will be reported to the W.C.B. An investigation will be conducted and recorded.

New January 2008

Fatalities

Fatalities will be reported to the crew supervisor, all other site supervisors, the contractor, the contract officer, the R.C.M.P., WorkSafe BC and the immediate family. Fatalities must be treated in a respectful manner to the deceased. The area where the deceased is located must be sealed off to preserve the site for an investigation. The body must be covered. A person will be assigned to secure the area until the authorities give further direction. Work will be immediately discontinued until an investigation is conducted.

Accident Investigation Procedures

Investigations shall be conducted as soon as practical into the cause of every accident that:

- resulted in an occurrence that had the potential for causing a serious injury,
- resulted in an injury that required medical treatment,
- results in critical injury or death

Joint investigations between the employer and/or the immediate supervisor and an employee representative shall be conducted on all occurrences including "near misses". Any / all contributing factors or causes would be recorded in the form of notes, pictures and/or location on maps. Any applicable forms will be completed and submitted. Findings of the investigation will be relayed to staff in the form of a "Debriefing" to prevent future occurrences.

Other agencies may also conduct investigations depending on the nature of the accident. These could include:

- WCB
- RCMP
- Coroners Office
- Canadian Transportation Safety Board
- Transport Canada

All employees are to co-operate with the investigators and provide information as required.

It is advised that the involved parties seek independent legal advice if legal proceedings are to

occur.

New January 2008

Emergency Response Plan

The template from BC Timber Sales will be used as the company's emergency response plan. This plan will identify whom to contact in the case of a natural disaster – fire, flood, erosion. It will also identify how to respond to spills of various quantities and substances and who to contact if the amount of the spill is greater than the threshold limit for that product. Work Shut Down procedures in relation to any of these incidents will be outlined.

Evacuation Procedures

Evacuation of injured personnel will be directed by the on-site first aid attendant. When medical evacuations are performed by the emergency transport vehicle, on-site staff will be directed to assist in immediate first aid, notify the fire center, prepare the injured person for transport and move the injured person to the emergency transport vehicle.

When aircraft performs medical evacuations, on-site staff will be directed to assist in immediate first aid, notify the fire center, prepare the injured person for transport, move the injured person to the specified aircraft-landing site and load the injured person into the aircraft.

Accident Emergency Procedures

When a serious accident or near miss with potential for serious injury occurs the following procedures **must** be activated:



ensure no further danger exists to injured personnel, rescuers, and investigators

Do Not Move The Casualty unless trained in first aid

provide immediate care to the casualty

report the accident by radio, voice, or whistle - repeating until a response is established

explain location of casualty (geographic location, long, lat)

request the first aid attendant

outline the nature of the injury, age and sex of casualty, **without using the persons name**

keep the casualty calm and comfortable, using the best of your abilities until the first aid attendant arrives

provide continued communications

arrange for transportation of the casualty

preserve the accident scene for other investigating parties

conduct a company investigation

relay the results of the investigation to all employees to prevent recurrence

ensure that the results of the investigation are implemented.

Transportation of Injured Workers

establish and request the appropriate transportation method - by foot, ETV, aircraft

arrange for assistance to move the casualty to the designated site for transport

provide continued first aid

provide continued communications

when **transporting by ground**, establish exact route to be taken and radio frequency to be used

ensure necessary equipment is on board

when **transporting by aircraft**, establish radio frequency to be used and call sign of aircraft

ensure necessary equipment is on board

notify fire center/ fire zone with departure time, destination, ETA, and radio frequency to be used during transport

request fire center/ fire zone to contact B.C. Ambulance to meet transport vehicle at the given destination point

stay with the casualty until the next level of care takes over.