

## Teaching Outline – Tailgate Version

**Teaching Topic:** Quarter Management

**Delivery Date:**

**Type of Session:** Tailgate Session

**Session Length:** 12-14 minutes

### Materials Required:

- Facilitator should bring:
  - OHS Regulations for reference (see excerpts Appendix 1)
  - A copy of Safe Work Procedures for Falling and the BC Faller Training Standard info-flips
  - Narrative Notes for video (see Appendix 2)
- Facilitator will need to set-up:
  - Computer, iPad/Tablet or TV with DVD player to show the SAFER video (may need external speakers for laptop/iPad)

### Session Requirements:

- Space of sufficient size to accommodate the size of the group
- Instructor will need to note any unresolved questions and make an effort to seek answers

### Class Outline:

1. Introduce Module and its purpose (1-2 minutes)
2. Present the Video (6 minutes)
3. Use Teaching Notes to instigate Discussion (3-4 minutes)
4. Competency Evaluation (2 minutes)
5. Closing (brief)

### Detailed Outline:

1. Introduce the module – Explain “what” it is
2. Present the video
3. Discussion – use the following ideas as a guide:
  - What does it mean to ‘bypass’ a dangerous tree<sup>1</sup> (OHS Reg. 26.26)?
  - Assessing ‘hazard trees’ will help to ensure trees are felled when it is safest
    - Evaluate its position in relation to where you are working and where it could strike
  - Discuss when to change plans and emphasize the importance of being flexible and having the confidence to change your plan as needed
    - If a plan needs to be changed: Stop and Reassess; develop a new plan; execute your new plan
  - Emphasize that fallers must have the support of their supervisor and partner
  - Fallers must have access to the means needed to safely control hazards (blasting, second opinion, machine assistance, area deletion, pusher trees, etc.)
4. Competency Evaluation – suggested questions to ensure competency:
  - Describe the requirements for the 1<sup>st</sup> and 2<sup>nd</sup> tree length parameters
  - What are the alternative danger falling methods available to fallers?
5. Closing remarks
  - Re-emphasize that Quarter Management is all about safety of your crew– you need to remember that safety is the primary concern

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<sup>1</sup> Bypassing a dangerous tree: OHS Reg 26:26 refers to the requirement to fell a tree deemed ‘dangerous’ progressively with the falling of the face and before falling the adjacent live tree; and to fall such a tree into an opening. Failure to do so, or to work under a dangerous tree, is bypassing a dangerous tree. Bypassing is a deadly sin.

## Appendix 1: Regulatory References, Part 26: Forestry Operations and Similar Activities

### *Section 1: Definitions - Dangerous Tree*

**Dangerous Tree:** Means a tree that is a hazard to a worker due to

- (a) its location or lean,
- (b) its physical damage,
- (c) overhead conditions,
- (d) deterioration of its limbs, stem or root system,
- (e) or any combination of the conditions in paragraphs (a) to (d).

### *Section 2: Planning and conducting a forestry operation*

- (1) The owner of a forestry operation must ensure that all activities of the forestry operation are both planned and conducted in a manner consistent with this Regulation and with safe work practices acceptable to the Board.
- (2) Every person who has knowledge and control of any particular activity in a forestry operation must ensure that the activity is both planned and conducted in a manner consistent with this Regulation and with safe work practices acceptable to the Board.
- (3) The planning required under this section must
  - (a) Include the identification of any work activities or conditions at the workplace where there is a known or reasonably foreseeable risk to workers,
  - (b) To be completed before work commences on the relevant activity, and
  - (c) Be documented at the time of planning.
- (4) If, after any planning referred to in subsection (3), there is a change in the workplace circumstances, including the work activities and the conditions of the workplace, and the change poses or creates a known or reasonably foreseeable risk to workers that was not previously identified, then
  - (a) The plan must be amended to identify and address the risk and provide for the health and safety of the workers at the workplace, and
  - (b) The amendment must be documented as soon as is practicable.

### *Section 11: Dangerous Trees*

- (1) If it is known or reasonably foreseeable that work will expose a worker to a dangerous tree,
  - (a) the tree must be felled, or
  - (b) a risk assessment of the tree must be undertaken by a person who has completed a training program acceptable to the Board.

- (2) If a risk assessment under subsection (1) determines that a tree poses a risk to a worker, the recommendations made in the risk assessment for eliminating or minimizing the risk must be implemented before the work referred to in that subsection starts.
- (3) Despite subsections (1) and (2), if work in a forestry operation is to be carried out in an area that has more than 500 dangerous trees per hectare, the Board may approve a request to work without felling or assessing all the dangerous trees, if before the work starts,
  - (a) a person who has completed a training program acceptable to the Board conducts a risk assessment of a representative sample of the dangerous trees, and
  - (b) any recommendations made in the risk assessment for eliminating or minimizing the risks are implemented.

#### *26.22.1 Falling supervisors for forestry operations*

- (1) A qualified supervisor must be designated for all falling and associated bucking activities in a forestry operation.
- (2) The supervisor designated under subsection (1) must
  - (a) ensure that the falling and bucking activities are planned and conducted in accordance with this Regulation,
  - (b) inspect the workplace of each faller at time intervals appropriate to the risks, and
  - (c) keep a record of every inspection conducted under paragraph (b).
- (3) The supervisor designated under subsection (1) must not undertake or be assigned activities which interfere with performance of the supervisor's duties under subsection (2).

[Enacted by B.C. Reg. 20/2008, effective May 1, 2008.]

#### *26.23 Procedures for falling and bucking*

- (1) In this section and in section 26.24, "**brushing**" means the striking of a standing tree by a tree being felled if the strike is a direct blow or a glancing blow of sufficient force to cause one or more branches to break at or near the stem of the standing tree.
- (2) Fallers and buckers associated with falling activities must be provided with and follow written safe work practices acceptable to the Board for the type of work activity they perform, including procedures for the following:
  - (a) establishing minimum and maximum distances between fallers and other workers;
  - (b) planning and constructing escape routes;
  - (c) controlling the fall of trees;
  - (d) minimizing unnecessary brushing;
  - (e) dealing with dangerous trees;
  - (f) bucking trees and logs;
  - (g) using mechanical assistance to fall trees;

- (h) summoning and rendering assistance to manage a falling difficulty or to deal with an emergency;
- (i) conducting special or innovative harvesting techniques;
- (j) ensuring the well-being of each faller and buckler at least every half hour and at the end of the work shift.

#### *26.24 Responsibility for falling and bucking*

- (1) Subject to section 26.29 (3), before a tree is felled, all workers must be clear of the area within a 2 tree-length radius of the tree.
- (2) Before falling or bucking starts, all obstructions to the activity must be cleared and a safe escape route to a predetermined safe position must be prepared.
- (3) A tree must not be felled if it could strike any stationary or running line of any operational equipment.
- (4) 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 in.).
- (5) The falling of a tree must be conducted in accordance with the following procedures:
  - (a) a sufficient undercut must be used;
  - (b) the undercut must be complete and cleaned out;
  - (c) sufficient holding wood must be maintained;
  - (d) the backcut must be higher than the undercut to provide a step on the stump;
  - (e) wedging tools must be immediately available and, unless the tree has a pronounced favourable lean, wedges must be set.
- (5.1) When a tree is being felled, the tree must not brush standing trees if that can be avoided.
- (6) A tree must not be used to cause another partially cut tree to fall in succession unless
  - (a) it is necessary to do so to overcome a specific falling difficulty, and
  - (b) the succession falling is done in accordance with subsection (6.1).
- (6.1) The following apply for the purposes of subsection (6):
  - (a) only one tree may be used to cause another partially cut tree to fall in succession;
  - (b) only those trees necessary to deal with the falling difficulty referred to in subsection (6) are partially cut;
  - (c) a wedge is driven into the backcut of each partially cut tree.
- (7) When a tree starts to fall, the faller and any other worker present must move quickly to a predetermined safe position, at least 3 m (10 ft) away from the base of the tree where possible, and take cover if available.
- (8) All workers must be clear of the hazard area before a tree or log is bucked.

*26.25 Dangerous trees and logs*

- (1) Falling or bucking must not be started if
  - (a) a tree or log is in a condition that, if felled or bucked in that condition, the tree or log would pose a reasonably foreseeable risk to a worker, or
  - (b) it appears that the tree cannot be completely felled or the bucking cut cannot be completed, as the case may be.
- (2) If for any reason a partially cut tree cannot be completely felled and must be bypassed or left unattended, then the following apply:
  - (a) the tree must be clearly marked;
  - (b) work, other than that necessary to complete the falling of the tree, must stop in the hazard area until the tree is felled;
  - (c) any worker who could enter the hazard area must be alerted to the hazard;
  - (d) the supervisor for that falling activity must be notified.
- (3) The supervisor referred to in subsection (2) (d) must ensure that
  - (a) all workers at risk are notified, and
  - (b) the tree is safely felled before other work is undertaken in the hazard area.
- (4) If a bucking cut cannot be completed and the partially bucked log must be bypassed or left unattended, then the following apply:
  - (a) if possible, a distinct cross must immediately be cut or marked on the top of each end of the log;
  - (b) the supervisor for the bucking activity must be notified at the end of the work day;
  - (c) the supervisor for the bucking activity must notify all workers at risk.
- (5) Subsections (2) to (4) do not apply if the incomplete falling or bucking is part of a planned process in which safe work practices acceptable to the Board are implemented.

*26.26 Falling dangerous trees*

- (1) Where practicable, dangerous trees must be felled
  - (a) progressively with the falling of other timber but before falling adjacent live trees, and
  - (b) into open areas.
- (2) When falling a dangerous tree,
  - (a) dangerous bark must be removed, where practicable,
  - (b) stump height must, in the judgment of the faller, allow maximum visibility and freedom of action,
  - (c) the tree must be felled in the direction of lean whenever possible, and the undercut must be as deep as necessary to minimize the use of wedges and resulting vibration,
  - (d) pushing with a green tree must only be undertaken to overcome a falling difficulty, and

(e) wedging over must be used only if there is no alternative, and after a careful assessment of the ability of the dangerous tree to withstand wedging.

(3) If conventional methods cannot be safely employed to fall a dangerous tree, blasting or other acceptable methods must be used.

(4) Falling, bucking or limbing activities must not be undertaken in an area made hazardous by a dangerous tree, or a dangerous tree which has been brushed by a felled tree, until the dangerous tree has been felled.

## Appendix 2: Quarter Management Facilitator's Notes

### KEY THEME

Fallers must take responsibility for, and ownership of, their quarter. The management of hazards (e.g., potentially dangerous trees) must be incorporated into their falling plan. This takes a determined effort to assess their quarter for hazards, make a plan for timely mitigation, and then strategically implementing their plan, with the resolve to adjust their plan when needed.

### VIDEO NARRATIVE NOTES

The number one takeaway from this video is to have a plan of action and the confidence to follow through with your falling plan. Fallers need to have a good plan and be able to defend that plan.

The three important steps of Quarter Management are:

1. Assess the quarter for hazards;
2. Develop a plan; and
3. Execute your plan with confidence

If a tree has all of the characteristics of a dangerous tree but after close inspection, it is assessed and found to be sound, there is no sense prematurely felling the tree. Instead, let the tree stay temporarily. Make an adequate opening to safely fell the tree. Safely clear the timber out of the way to eliminate the chance of brushing.

You do not want to remove trees prematurely. Premature falling may cause more damage on the way down, where you will still have to work. You must have an intimate knowledge of the situation and have assessed the tree. If it doesn't have to go right away, make a place for the tree and then remove the tree at the safest and earliest opportunity.

When viewed from the road, the assessed 'hazard trees' may stand out like sore thumbs. However, the faller must be confident that because he has assessed these trees and has created a good plan, he can fall right up to them and then take them out according to his plan. Avoid chasing trees for optic reasons alone.

If anything changes, you need to:

1. Stop and reassess;
2. Develop a new plan; and
3. Execute your new plan.

When managing your quarter you need to have knowledge of the hazards within 2 tree-lengths from where you are working.

- 1<sup>st</sup> tree length: requires an intimate knowledge of the surroundings and a careful assessment of any 'hazard tree' that can strike you.
- 2<sup>nd</sup> tree length: requires a visual knowledge of what is in this area with a constant assessment and reassessment as you progress with your falling face.

If during your initial assessment you identify a 'hazard tree', you will need to evaluate its position in relation to where you are working and where it could strike.

- Do this by looking up and around the tree. Complete your risk assessment.
- If this tree is at high risk of collapsing or you may not be able to maintain adequate control (e.g., a lot of loose material hanging from the tree, and/or roots that are severely compromised), seek early intervention.
- Highly unstable trees are often a good candidate for blasting.

You must know what is in your quarter and have the confidence to follow through with your plan. Having a good understanding of what's coming up in your Quarter allows you to develop plans to manage and mitigate dangers in the right sequence.

Consider all of the alternates available to you.

- Qualified assistance
- Blasting
- Machine assist
- Using a suitable push-tree
- Area deletion (no work zone)

If in your initial pre-walk you find a large 'hazard tree' leaning into the falling block but there is not enough room (no safe opening, no escape route) to safely fall the tree, contact your supervisor and develop a plan for the tree. Do not fall this tree without a plan – it will create havoc for you.

Be confident enough to develop a new plan. If plans need to be changed, you need to:

1. Effectively communicate the issues;
2. Consider and develop alternative solutions;
3. Seek a second opinion and get new people involved in the process; and
4. Use your resources to get the best decision.