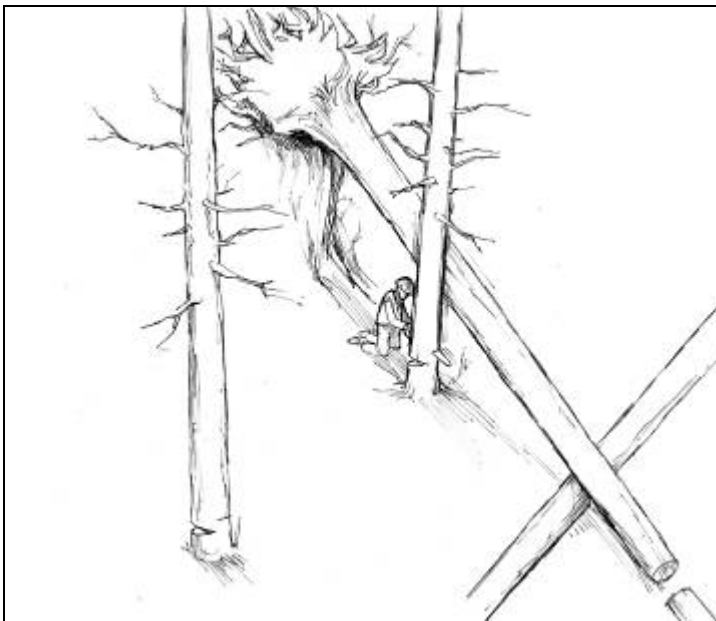




## Windfall slides off rock bluff, crushing faller

A group of four fallers were working in a forestry cut block. Each faller was working independently in his own quarter. The faller involved in the incident was attempting to fall two hemlock trees at the base of a rock bluff by using the second tree to push the first. To make the cut on the second tree, he placed himself between the standing tree and a wind-fallen tree's root wad located on a rock bluff behind him. As he began the cut, the windfall slid forward off the rock bluff. The faller was fatally crushed between the root wad and the standing tree.



### Purpose of this report

The purpose of this online incident investigation report is to identify the causes and contributing factors of this incident to help prevent similar incidents and to support preventive actions by industry and WorkSafeBC. This online version is not the official WorkSafeBC report. It has been edited to remove personal identifying information and to focus on the main causes and underlying factors contributing to this incident.

### Notice of Incident information

Number: 2005137160100

Outcome: Fatal

Core activity: Manual tree falling and bucking

Location: Vancouver Island

Date of incident: April 2005

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# 1 Factual Information

## 1.1 Firms

There were several firms involved in this incident:

- The forest licence holder for this timber.
- The general contractor, a company that was contracted to prepare, fall, and yard all logs within this forest licence. The general contractor employed a full-time falling supervisor to conduct routine site inspections at a number of active logging areas, including the cut block where the incident occurred.
- The falling company, which was subcontracted by the general contractor for the falling and bucking of the cut block where the incident occurred. This company normally hired a crew of up to 12 fallers, who were divided into a number of cut blocks and supervised either by the owner or by the company's bullbucker.
- The deceased faller, who was the principal of his logging firm and was subcontracted to the falling company for this project.

## 1.2 Worksite

Situated off the coast of Vancouver Island, the cut block was accessible by helicopter. The fallen logs were to be helicopter-yarded out of the cut block. The fallers had bucking cards with the desired dimensions for various species and timber quality. These cards are developed to assist the fallers so that the wood with the best quality and suitable length is harvested. These cards also take into account the weight restrictions of the helicopter.

The fallers were assigned areas off of a map, and potential helicopter pads were discussed. The fallers were then transported by helicopter into the area as close as possible to their respective worksites. The fallers then travelled on foot to the pre-selected helicopter pad areas and constructed timber landing pads for future use. The fallers then proceeded to their "quarter." A quarter is the faller's work area, and access by other workers into this area is restricted due to the falling tree hazard.

About 10 days before the incident, the fallers arrived at the camp and a pre-job safety meeting was held with all fallers present. On the first actual work day, the helicopter lifted the fallers into the lake area. From there they travelled on foot to the assigned areas to construct helipads and to begin opening up their respective quarters.

## 1.3 Sequence of events

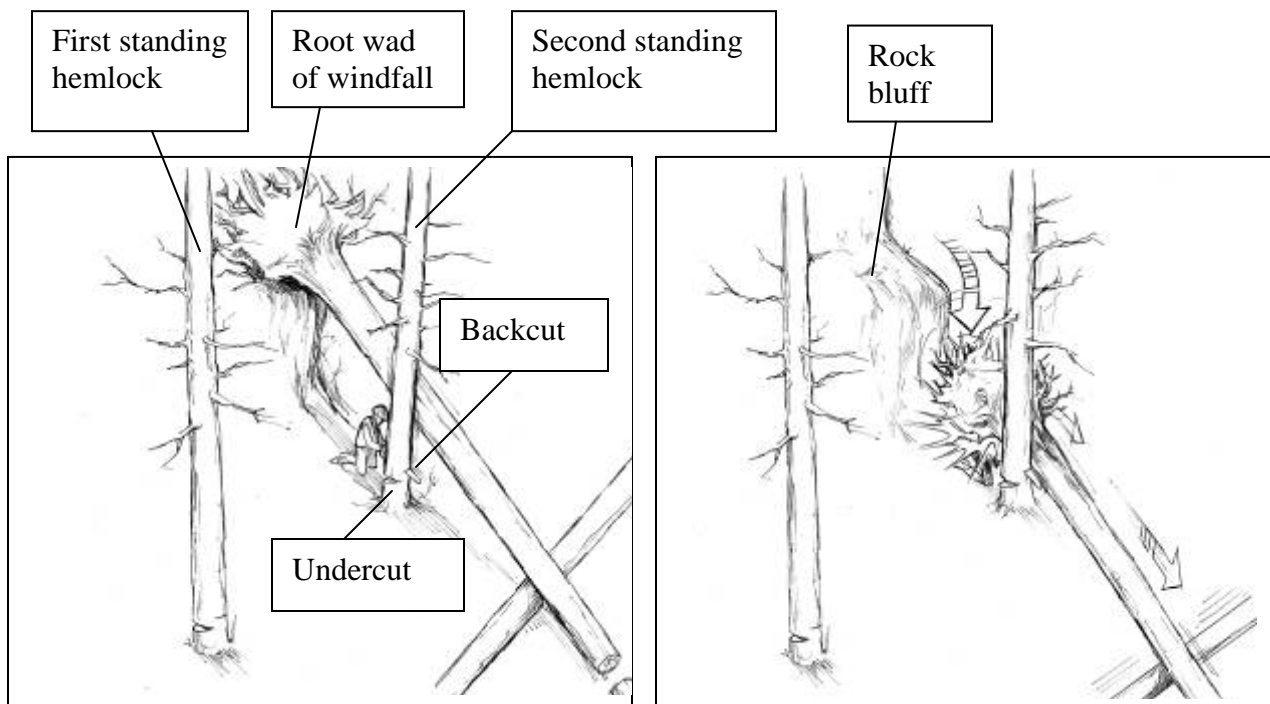
There were four fallers in this cut block on the day of the incident. The faller and his partner were on one side and the bullbucker and his partner were on the other.

The faller and his falling partner were flown to the work site at approximately 0700 hours. They moved to their respective work areas, which were separated by a retention zone. They spent the morning falling trees. They communicated throughout the morning by radio and voice.

Shortly after 1230, the faller and his falling partner were separated by approximately 150 yards. The faller radioed his falling partner that he had a couple more trees to fall and then would break for lunch. When the falling partner started his lunch, he could hear the faller working in his quarter.

The faller was at the foot of the rock bluff where two hemlocks were standing. This was near the falling boundary. Immediately up the slope and on the rock bluff there was a wind-fallen tree lying downhill; its root wad was on the bluff and its trunk was touching one of the standing hemlock trees. The faller placed his cuts into the first standing tree and then moved to the second one. He was going to use this tree to push the first one, thereby laying both down in the intended direction along the slope.

The faller placed himself in a position that was somewhat under the trunk of the wind-fallen tree and between the root wad and the standing tree (see Drawing 1, left). He had his back to the root wad. He placed his undercut and began his backcut in the second tree. The wind-fallen tree slid downhill off the rock bluff and into the faller, pinning him against the second standing tree (see Drawing 1, right).



Drawing 1: Left, showing the faller's position before the incident. Right, showing the root wad slipping off the rock bluff.

While having lunch, the falling partner realized that the faller's saw had been idling for a few minutes. He attempted to reach the faller by radio but received no answer. At approximately 1245 hours the falling partner radioed the bullbucker that he heard the faller's chainsaw idling, that he was concerned, and that he would head over to the faller's quarter to check it out. It is not normal for a faller to allow his saw to idle for long periods.

It took the falling partner only a couple of minutes to travel to the faller's quarter. The saw noise guided him to a tree with a root wad wedged at the base of it. Here he saw the faller pinned by the root wad. He

notified the bullbucker. He attempted to reach the faller but could not because of the size and position of the root wad. The faller's chain saw was still in the tree.

The falling partner noticed the first standing tree with its falling cuts approximately 20 feet away from the tree the faller had been attempting to fall. The two trees with their falling cuts were a hazard to the other fallers, so he placed a cut above the faller's chain saw and felled the second tree into the first standing tree. This caused the first tree to be pushed, and both fell onto the ground.

The first aid attendant arrived but no pulse could be found. The windfall was cut and the root wad slung away by helicopter to allow access to the faller. The photo shows the scene after the incident.



The faller's position at the time of the incident is shown by the oval.

## 1.4 Workers

### 1.4.1 The faller

The faller had been employed as a faller for more than 10 years and was reported to be a very experienced faller. The owner of the falling company spoke highly of the faller's workmanship. The faller had completed a course on assessing danger trees and was a certified faller under the BC Fallers Training Standard program.

### 1.4.2 Bullbucker

The bullbucker was working as a faller as well as being the supervisor employed by the falling company for this harvest area. The bullbucker was expected to take one day out of every five to inspect the fallers for safety and workmanship.

### **1.4.3 Falling supervisor**

The general contractor employed a falling supervisor who did routine inspections of falling areas under contract to the company and held startup safety meetings with the fallers. A few days before the incident, the falling supervisor inspected the faller involved in the incident, other fallers, and the bullbucker. The records of this inspection show no safety concerns.

### **1.4.4 Owner of falling company**

The owner of the falling company has been falling for more than 25 years and was a certified faller under the BC Faller Training Standard program.

## **1.5 Standard work process**

In a harvest area fallers are assigned quarters or work areas. This assists them to work safely by helping to maintain the minimum two-tree-length distance from other fallers. Generally in this type of terrain, the faller will attempt to lay the timber down, sideways in lay across the hillsides without creating cross-ups of the fallen trees. This makes it safer for the following workers as this reduces the movement of other logs when they are being rigged and yarded.

The faller will move to a standing tree, assess the area for hazards, select and prepare an escape route, and slash out any smaller trees or stems that may interfere with the fall of the selected tree or cause problems when the tree strikes the ground. This may include bucking wind-fallen trees. The faller will select a falling path, place the undercut into the tree, and then follow with the backcut. When the tree begins to move, the faller retreats to a safe area away from the stump and observes. The faller watches the fall, the canopy, and the movement on the ground while the tree hits and settles. Once everything has settled down and the faller has assessed the tree for stability, the faller may climb up and walk the stem, removing or bucking the limbs and measuring the desired bucking lengths of the log. The faller repeats these actions throughout the day.

There are some general rules that are followed when falling trees; in no way is this a comprehensive summary. Fallers should normally be on the high side of the proposed fall line. Fallers must assess each tree and all the associated hazards and they must be constantly aware of what is on the slope above them as trees or rocks may roll down. Fallers should not position themselves where there is no escape route—for example, between a potential movement hazard and another solid object. If fallers need to access such an area they should eliminate any potential hazard first.

Fallers will assess and plan the fall of each tree. If they encounter a problem that they are uncomfortable with or cannot solve, they call their falling partner for assistance. If the faller and partner cannot solve the problem together, then a supervisor is called. If the tree is too difficult or unsafe, the tree is marked and reported to the general contractor, who will employ some other means of having the tree removed. The above steps are common industry practice and were in place at this cut block. It is also allowable to “high stump” to overcome a problem. This is where the tree is cut higher than normal, thereby leaving a high stump. These decisions would be questioned as to the faller’s reasoning for placing the high cut. There is a monetary loss to this action and it also may cause some interference while the logs are being yarded.

The harvest area is surveyed and marked with a falling boundary ribbon before the fallers arrive. This marks out the allowable cut area. Fallers must not cross or fall trees out of the falling area into the standing timber. Creeks, streams, and other watershed areas also have restrictive measures when working near or over them.

On the morning of the incident, the faller had fallen a tree into the standing timber. This is not desirable and may reflect poorly on a faller's skills. This tree was probably leaning uphill so the faller made his cuts in an attempt to fall it with the lay along the hill but was unsuccessful. This tree may have broken backwards into the standing timber.

Wind-fallen trees are common throughout harvest areas. These trees have been uprooted and blown over by wind or other natural occurrence. Windfalls can be in any configuration on the ground or hung up against other trees. Fallers must assess their work area and include these hazards in the work planning.

In some areas where retention is desired, a certain number or type of trees may have to be left standing. This causes extra problems for fallers as it is much more difficult to fall a tree without it brushing or contacting other trees that will be left. The resulting hazard is broken debris hanging in the remaining canopy that may fall and strike following workers or the faller. Fallers make their own decisions about what trees are to be left although they must consider species, value, and, above all, personal safety.

## **1.6 Harvest area**

The block where the incident occurred was approximately 8,000 cubic metres of timber bucked to helicopter specifications. Most of the block was clear-cut (16.1 hectares) and there were a few areas of 90% retention (3.1 hectares). There was a 10-metre riparian zone along one side of the block.

The owner of the falling company walked through the block boundaries with representatives of the timber licence holder before the work started. This was to check on some old slide areas and creek beds, to ensure that they were properly recorded and that the waterway protection systems were communicated. The owner stated that there was no completion pressure as the scheduling for the helicopter lift left them a lot of time to fall the area.

### **1.6.1 Incident site**

The incident occurred in a moderately sloping area, approximately 65 percent, ending in a rock bluff feature. At the foot of the rock bluff there were two standing hemlock trees that the faller was in the process of falling when the incident occurred. The falling boundary was running along the rock bluff approximately 50 feet away. The area had a significant number of windfalls, in particular the one that slipped down the bank into the faller. There had been no rainfall in the previous five days.

### **1.6.2 Standing trees at the incident site**

The two standing trees were hemlocks and were roughly side by side approximately 20 feet apart. The faller had placed cuts into the first tree and then moved to the second tree. He was attempting to fall the second tree and use it to push the first tree over. There was no clear falling problem with the trees that would require this action.

The faller had placed an undercut and a backcut into the first standing tree. There were markings on the stump consistent with marks made from a wedge. This indicates that the faller had a wedge inserted in the backcut to hold or lever the tree's direction.

The second standing tree was more difficult to fall. The root wad of a wind-fallen tree was resting on the rock bluff above and the trunk angled downhill and touched the second standing tree. Scarring on the second tree trunk indicates that the windfall would have been leaning against the second standing tree about 3.5 feet above the ground (see Drawing 1). The faller placed the undercut into the second standing tree.

The faller's backcut was then started in the second tree at a height of 1.5 feet above ground. The position of the windfall forced the faller to crouch down and somewhat under the windfall to make his backcut. This resulted in him having his back to the rock bluff and root wad of the windfall. As he was making this cut, the windfall slid forward off the rock bluff and crushed the faller between the tree and the windfall's root wad.

### **1.6.3 Windfalls at the incident site**

There were two wind-fallen trees involved in this incident. The first windfall, approximately 75 feet long, was the windfall that pinned the faller. Its root wad was located behind the second standing hemlock tree on the edge of a rock bluff approximately 10 feet behind the tree and 6 feet above the ground level. The root wad shows evidence of some rotted rooting. When the helicopter crew removed the root wad, they estimated that it weighed approximately 2000 pounds. This windfall was angled straight downhill from the rock bluff and was in contact with the second standing tree. A rub mark on the windfall shows where it was in contact with the standing tree. The rub mark is about 10 feet, 5 inches from the root wad.

There were a number of saw cuts in the first windfall approximately 38 feet from the root wad on the downhill end. These saw cuts had removed a 3-foot chunk from the windfall. It is not known whether the faller did these saw cuts the day of the incident or the day before when he was travelling around the retention area. It is also not known if he made these cuts to open a travel route through here or if he was testing the stability of the windfall.

The first windfall was resting on a second windfall, which was located approximately 6 feet in front of the second standing tree. It was lying across the hill.

On the rock bluff, there was another large windfall immediately above and beside the first windfall. This one was angled almost straight downhill. It was not involved in the incident.

## **1.7 Communication**

The fallers had radios for communication among themselves and the helicopter firm that supported them. They were each issued a list of numbers and details on emergency procedures. The day-to-day person-check between fallers was informal. Their positioning was known to the others as they all had maps of the area.

As is standard practice, each faller would instinctively listen to the saw or falling tree noise of his partner or other nearby faller. They would usually chatter on the radio or by voice to each other when they were re-fuelling or taking a break. This was done so that the other fallers would be aware that they were not in difficulty. If a saw is idling for a period of time it may be an indication that the faller has been injured or otherwise disabled. There was no pre-set timing or schedule for communication between fallers.

## 1.8 Supervision

Fallers were working in two different cut blocks on the day of the incident. The bullbucker was in the cut block where the incident occurred and the owner of the falling company was working with some fallers in the other cut block. The bullbucker was a supervisor and also a working faller. He was working with his partner across on the other side of the cut block from the faller.

Although the owner of the falling company had walked the boundaries with the forest licence holder to determine slide areas and watershed conditions, neither the bullbucker nor owner walked or physically reviewed the work areas for hazards before these quarters were assigned to the fallers. The fallers were assigned these work areas from the harvest map.

It is a commonly accepted industry practice for a bullbucker or supervisor to inspect a faller at five-day intervals. This inspection should take place at the stump and should include equipment, work process, and work standard. The bullbucker was therefore expected to inspect the fallers on one day of every five.

The bullbucker walked through the area where the faller and his falling partner were working some time before the incident. The bullbucker walked through the faller's quarter to see the trees and talked with him for a few minutes. He also talked to the falling partner at the same time. There was no comment made regarding inspection but the bullbucker reported that there was no indication the faller was having any difficulty in falling the timber in his quarter. The date of this meeting or site inspection cannot be confirmed as there is no written record and neither the falling partner nor bullbucker can accurately remember when this occurred. This is the only time the bullbucker was physically in the faller's immediate work area. There are no records of inspection prior to the incident.

The bullbucker visually checked areas as he was arriving or leaving by the helicopter transport and saw no problems with the faller's area. In this visual check he would observe such things as how the fallers were laying down the timber on the slope and trees fallen against the lay.

The supervisor employed by the general contractor conducted a site inspection of the block two days before the incident, including an inspection of the work of the faller and his falling partner. There are no evident problems on the written record of this inspection. There were no previous formal inspections done as the fallers were initially opening up their quarters and doing landing pad construction.

## **1.9 Safety program**

At the time of the incident, the falling company had a written job safety program that included the firm's responsibility on certain topics, each topic followed by a sentence or short paragraph.

The general contractor required safety programs from sub-trades but expected them to follow the one available at the camp location. When the falling contract was awarded, the general contractor required fallers to have BC faller certification/registration. The general contractor did not have a written record of any site orientation or job procedure for this project. There is a record of the initial site meeting.

## **2 Analysis**

Although there were no witnesses to the actual incident, the details of what happened can be deduced from the positions of the trees and the other evidence on the ground. It appears that the faller was not aware of all the conditions on the ground and this may have influenced his risk assessment as well as his actions.

### **2.1 Windfall hazard**

The windfall that crushed the faller was unstable. The faller made some cuts at the downhill (or top end) of the windfall, removing a 3-foot chunk from the top portion. This effectively removed the binding action of the top and limbs that were holding the windfall from sliding down off the rock bluff. The root wad was sitting on the very forward edge of the rock bluff. The windfall may have appeared to be stable to the faller as the root wad was on the rock bluff and the top was resting on another windfall approximately 6 feet in front of the tree he was cutting. He may have reasoned that it had not moved when he removed the 3-foot chunk so there would be no reason for it to move now. We do not know if the faller did any checks on the rock edge where the root wad was sitting.

The rub marks on the hemlock tree that the faller was falling and the rub marks on the windfall indicate that they were in contact with each other. This contact was the only support that was preventing the windfall from dropping forward off the rock bluff. When the faller started his backcut, the tree released slightly and the windfall was free to move forward down the hill.

### **2.2 Decision to push the first tree**

After placing his cuts into the first tree, the faller moved to the second tree to use it as a pusher. The condition or lean of the first tree may have concerned the faller about the direction of fall. The owner of the falling company stated that the first tree may have settled onto the backcut. The faller may have decided to push the first tree with the second hemlock to overcome any potential uphill fall of the first tree. This would have concerned the faller as he would not want to lose a tree into the standing timber. He wanted to ensure the lay in his quarter was well done and may have been overly concerned with keeping all of the trees lying in one direction.

There was another option. The first tree could have been felled in the opposite direction so that it fell across the windfall that was in contact with the second tree. This may have eliminated any potential hazard from the windfall.

## **2.3 Risk assessment**

The faller did not adequately assess the hazards in this area. When planning his work on the two hemlock trees, the faller may have believed that the windfall was stable. The cuts he had made previously in the windfall's top had not resulted in any known movement of the tree and he may have believed it to be safe. Beside and above this windfall was another in a similar position. The faller had not taken any action with this other windfall.

When working on the second tree, the faller would have been concerned about the first tree. It was cut up and potentially could fall at any time. If he had been focusing on the hazard of the first standing tree, he may not have fully appreciated the hazard of the windfall.

The actions of placing himself under the windfall may have been partially a work habit. As he began his backcut, the faller may not have been fully under the windfall but slightly offset. As he was cutting, he may have instinctively looked around the trunk to see the location of his bar tip. This is a natural action to ensure that the cut is level and accurate. This would have placed him more under the windfall for that instant when the incident occurred.

## **2.4 Escape route**

The position that the faller took to make his cuts in the second tree would have greatly limited any potential escape route. The rock bluff was directly behind him and the windfall created a barrier that would have impeded the more normal action of departing away from the stump. He would have had to go under the windfall to take this route. The only other direction open to the faller would have been with the fall of the tree.

## **2.5 Supervision**

The supervision was ineffective in preventing this incident. In the 10 days that the fallers were working here, the bullbucker walked through this area once. The supervisor for the general contractor also inspected the fallers once just shortly before the incident.

These visits would not have been effective in identifying the hazards throughout the worksite. The two supervisors were content with the way the timber was being handled, including the way it was lying on the hillside and the processing of the limbs. There is no evidence that any supervisor actively inspected for hazards in this quarter. This was left as the faller's responsibility to identify and effectively handle these situations.

Currently it is industry practice that a faller be inspected by a supervisor once every five days. The inspection criteria are not formal and are developed by the firm involved. In other industries there is no similar scheduling but rather the onus is placed on the employer to effectively supervise all of their workers. This accepted supervisory scheduling in falling has resulted in some employers having part-time supervisors or inspectors. Fallers' work areas are easily recognizable as hazardous conditions. Work can be done to remedy these conditions or give the fallers effective support and assistance to perform their work safely. Pre-planning could include a supervisory assessment of the work area to

identify potential hazards or hazard areas and to develop a plan to address these hazards. This inspection was not done by the falling company, and all decisions regarding handling of hazards within the assigned quarters were left with the faller.

## 2.6 Habitual acceptance of the risk

Because of the type of work conducted, fallers routinely work alone and unassisted within a specified area. The challenges of performing the work safely, maintaining individual productivity, making decisions about retention and other things—these are squarely placed onto the faller within this area. There is a multitude of decisions to be made continually throughout the work day and the faller’s reputation and future employment is dependent on these decisions.

Current industry practice is that if a faller encounters a falling or other difficulty that he is unsure of, then he is to call on his falling partner for assistance. If these two cannot solve the problem, then a supervisor is called for assistance with the problem. If the issue still cannot be resolved, then the hazard is marked and left with the general contractor to deal with. This type of support system leads to the faller making most decisions on his own and somehow attempting to overcome the difficulty by himself, and tragically, sometimes this is not successful. In situations where there are numerous hazards such as windfall, terrain challenges, and overhead hazards, a faller could require assistance continually throughout the day. Under this system it could result in constant travel between quarters and loss of production. It would also negatively affect the faller’s reputation and perhaps future employment. For these reasons faller may accept the risk and find their own solution to the hazard. Success in avoiding injury while dealing with these difficulties would make these actions routine. Infrequent supervision may be ineffective in discovering possible close calls or unsafe work practices. There is little consequence to the faller if he avoids injury and has good marketable timber on the ground.<sup>1</sup>

## 2.7 Certification

The industry has accepted that falling is a unique trade within the forest industry. Once a worker has been trained, he is often given an area and put to work falling the timber. There may be little or no further supervision. The BC Fallers Training Standard was developed to address the quality of this training and to develop and promote safe work habits in the industry.

The current experienced fallers are normally not required to take any additional training but are evaluated in the field with a basic exam and a competency check. This “grandfathering” does not consider or address the training that the working faller may or may not have had previously. The faller is prepared for the certification exam with information booklets and other aids, and for his field evaluation he is coached on best practices, etc. This does not allow the faller’s normal work practice to be effectively evaluated.

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<sup>1</sup> David Curry, Robert Quinn, David Atkins, and Tage Carlson, “Human factors: Injuries and the experienced worker,” *Professional Safety* (No. 9, September 2004): 30–34.

Unlike an experienced faller, a new faller is required to complete the 30-day training program for faller certification, which emphasizes three main points:

- Completing a risk and hazard assessment of each situation prior to making any cuts so that the faller is able to formulate an effective falling or bucking plan
- Seeking qualified assistance when the faller is unsure of his abilities or requires help
- Continuously improving workmanship and practice

The short contact that the experienced faller has with the evaluator would not permit the above points to receive the same level of emphasis. The experienced faller is issued information booklets and other literature that describe these points as well as other equally important procedures and methods. Applying the first two of the three points above would have prevented this incident.

The value of these points and the implementation of the fallers' training standard are ineffective if it is not being routinely applied by the experienced fallers and enforced by supervisors and employers. New workers entering this occupation will be extensively trained and supervised in falling and bucking best practices before commencing any employment. The current experienced faller does not benefit from any of this training and may apply old habits in their day-to-day work after the evaluation stage is completed.

## **2.8 Personal factors**

The faller may have become frustrated and hurried with these particular trees. He had previously fallen a tree into the standing timber, which is not a good practice and may have been upsetting to the faller as he was an experienced faller who was known for his good work. The lay of his wood on the hillside would have been interrupted by this tree and it would have been visible to some of the other fallers accessing the blocks by helicopter. It is possible that one of the trees he was falling at the time of the incident was similar to the one that had been felled into the timber.

The faller may have felt compelled to incorrectly overcome a falling difficulty or to move into an unsafe position to maintain the lay of the timber. Supervision was very intermittent and the faller had complete control over his work area so there would have been no consequence to any of these actions, especially if he was successful in maintaining the lay.

The faller was at his lunch time but delayed eating until he had dealt with a couple more trees. It is an extreme hazard to leave cut-up trees, and as a professional faller he would have recognized this. He may have been hurried and feeling pressure to complete these last two trees before lunch.

## **3 Conclusions**

### **3.1 Findings as to causes**

#### **3.1.1 *Instability of the wind-fallen tree***

The windfall was prevented from moving forward and downhill by the branches and top, which were in contact with the ground. By removing the top of the tree, the faller created a situation where the windfall was free to travel. The windfall's point of contact with the second standing tree was the only thing preventing this downhill travel. Releasing the pressure by cutting into the standing tree resulted in the windfall moving downhill and the root was dropping from the rock bluff into the faller.

#### **3.1.2 *Inadequate risk assessment***

The faller did not carry out an effective assessment of the windfall and associated hazards before beginning his falling cuts on the trees.

#### **3.1.3 *No escape route and unsafe position***

The faller did not have an effective escape route from the second tree. He was working in an unsafe position beside and under the windfall.

### **3.2 Findings as to underlying factors**

#### **3.2.1 *Inadequate supervision***

There were no effective and routine inspections of the faller's work practices. The bullbucker was through this area only once in a 10-day period. The condition of the timber on the ground appears to be the main focus of concern. The falling company and general contractor made no hazard assessment of the individual quarters before assigning them to the fallers.

#### **3.2.2 *Personal factors***

The faller's pride in his work and his reputation for doing a good job may have contributed to the decision he made in falling the trees to maintain the lay of the timber even though it was more hazardous.

#### **3.2.3 *Fallers' habitual acceptance of risk***

Fallers routinely work alone and do not find it practical to ask for assistance with all the hazards and challenges. As a result, fallers may accept risks and find their own solutions to falling difficulties.

## 4 Orders Issued after the Investigation

WorkSafeBC issued orders after the investigation. An order requires an employer to take steps to comply with the *Workers Compensation Act* or Occupational Health and Safety Regulation, to take measures to protect worker health and safety, or to fix a hazardous condition. An order is not intended to identify fault on the part of the employer but to ensure that unsafe conditions are identified and corrected and that the employer complies with the Act and the Regulation. An employer may ask the Review Division to review an order; the Review Division may confirm, vary, or cancel an order.

In addition to issuing orders, WorkSafeBC may recommend proceeding with an administrative penalty against an employer. In order to protect the privacy of individuals, this report does not give details of any penalty proceeding arising from this incident as that would identify the employer. Penalties are fines for health and safety violations of the *Workers Compensation Act* and/or the Occupational Health and Safety Regulation. For information on when penalties are considered and how the amount of the penalty is calculated, see the [penalty FAQs](#) on WorkSafeBC.com. [Companies that have been penalized](#) are also listed on the web site.

### 4.1 Order to the falling contractor

This section summarizes two orders to the falling contractor, the employer of the deceased worker.

The first order states that this employer was in contravention of the *Workers Compensation Act*, [section 115\(2\)\(e\)](#), which states that an employer must provide to the employer's workers the information, instruction, training, and supervision necessary to ensure the health and safety of those workers in carrying out their work and to ensure the health and safety of other workers at the workplace. This employer was ordered to implement a system of effective supervision for all workers without delay. Although current industry practice calls for a minimum of one inspection every five days, this may not be sufficient due to worker competency, and/or ground conditions, and/or hazards. The employer was ordered to ensure that all workers are informed of and instructed in the processes developed to ensure the safety of those workers, including information and instruction on the hazards in each worker's location.

The second order states that this employer was in contravention of the Occupational Health and Safety Regulation, [section 26.27\(1\)](#), which states that fallers and buckers must not work in a location where they or other workers will be endangered. This employer was ordered to ensure fallers are not assigned work in areas where they are endangered. The work locations must be assessed, potential hazards identified, and effective controls developed prior to assigning work in those locations.

### 4.2 Order to the general contractor

This section summarizes an order to the general contractor (acting as a prime contractor within this forest licence). The investigation found that this employer was in contravention of the *Workers Compensation Act*, [section 118\(2\)\(b\)](#), which states that the prime contractor of a multiple-employer workplace must do everything that is reasonably practicable to establish and maintain a system or process that will ensure compliance with Part 3 of the *Workers Compensation Act* and the Occupational Health and Safety Regulation in respect of the workplace.

This employer was ordered to implement a system to ensure that all sub-contractors are in compliance with the *Workers Compensation Act* and the Occupational Health and Safety Regulation, and in particular to enforce the requirements for work area hazard assessments and effective supervision.

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