

Review of Faller Certification in the BC Forestry Sector



December 6, 2015

Table of contents

Executive Summary 1

Introduction..... 3

Evolution of the BC Faller Certification Program 5

Current governance of the BC Faller Certification Program 8

Current state of the industry..... 11

Observations 12

Recommendations 20

Conclusions..... 24

Executive Summary

Background

Manual tree falling has historically been one of the most dangerous occupations in British Columbia, with the rate of serious injuries and fatalities in the forest sector consistently exceeding other high-risk sectors in the province. Due to the high number of faller fatalities and serious injuries, a formal Faller Certification requirement was introduced by WorkSafeBC through Occupational Health and Safety (OHS) regulation in 1998, with a phase-in period from 2003 'grandfathering' existing fallers and culminating in mandatory certification for all fallers by 2006. The BC Forest Safety Council (BCFSC) was established to work closely with WorkSafeBC and industry representatives to promote safety within the forestry industry in British Columbia, including the administration of the BC Faller certification program across the forestry industry. During this entire period a number of industry-led programs have been implemented to action the recommendations and objectives of WorkSafeBC, BCFSC and the various industry associations

After almost a decade of program delivery, the BCFSC and WorkSafeBC have determined that the faller training and certification programs and associated administrative processes at WorkSafeBC should be reviewed to assess their effectiveness and to identify opportunities for improvement based on stakeholder input and a review of leading practices for other sectors and in other jurisdictions.

As such, Deloitte was engaged in November 2014 to perform an independent review of the faller training and certification programs within the BC forestry industry. The governance of the BC Faller Standard by WorkSafeBC within the Province was within the scope of this review, however faller training and certification programs within the oil and gas industry, both as they apply within BC and across provincial boundaries were beyond the scope of this review. Our approach included interviews with WorkSafeBC, the certifying bodies (BCFSC and Enform), the BC Forest Service Wildfire Management Branch, as well as a number of employers, contractors and industry representatives. We also identified and reviewed similar programs and practices in other industry sectors (e.g. oil and gas, construction, manufacturing, electrical, etc.) as well as other jurisdictions (not only across Canada, but also Australia, New Zealand, Scandinavia and the US). Our review culminated with a 2-day workshop with a number of stakeholders in July 2015 where the recommendations in this report were validated and a plan of action agreed upon.

Findings

During our review we identified five themes relating to concerns and issues affecting the BC Faller Training Standard and certification program, specifically as it pertains to the forestry industry:

1. Governance and responsibilities for the maintenance of the standard require update;
2. The standard is not current with regard to acceptable industry practices;
3. The certification examination is not as consistent, reliable and defensible as it could be;
4. The certification program lacks an effective recertification and rigorous quality assurance process; and
5. The administration of the program lacks sufficient reporting and safety trend analysis.

Our observations are discussed in detail in the body of this report.

Key Recommendations

In order to effectively address these key risks and issues, we have developed a number of recommendations for WorkSafeBC and the BCFSC, presented in two phases: those that could be commenced in the short term (e.g. the next 90 days), and those longer term recommendations that will require more investigation and discussion but could be largely implemented over the next 12 months.

Short term recommendations:

1. Align the roles & responsibilities for maintaining BC Faller standards and certification programs.
2. Adopt a modularized, competency-based certification program.
3. Perform a complete review of the BC Faller Training Standard.
4. Develop a standardized faller competency assessment program for employers.
5. Review and update the certification examinations, ensuring they are standardized, reliable and defensible.
6. Consider the implementation of faller training and safety tracking and monitoring tools.
7. Develop an actionable roadmap with clear accountabilities.

Longer-term Recommendations:

8. Review and update the standard and related certification programs on a regular basis.
9. Review and update the training programs to ensure they are consistent and current.
10. Develop and implement an industry-wide faller quality assurance program

Conclusions

The implementation of the findings and recommendations from the 2004 BC Forest Industry Task Force made a significant difference, with a sharp decline in fatality and injury statistics that has continued in recent years. This reduction in injury rates reflected the concerted efforts to address safety in the woods through numerous initiatives launched by WorkSafeBC, the BC Forest Safety Council, and industry stakeholders. However, despite this outcome, there seems to be a significant level of dissatisfaction around the current BC Faller Training Standard and certification program within the BC forestry industry.

Despite the significant number of impacted stakeholders within the forestry industry and the differing levels of opinion and independent action underway, we did find almost every group or organization to be moving in the same direction, and certainly there appeared to be universal agreement and support for the general nature of the key issues, themes and recommendations we have identified. In many cases, efforts are underway by various stakeholder groups to partially or completely address a number of the recommendations identified.

Given this fact, we feel improved clarity in the roles and responsibilities of the governing bodies around maintenance of the standards process; an alignment of the interests of the industry participants through a rejuvenated standards setting committee; an update and streamlining of the standard setting process; and an equitable representation of the various stakeholders will reduce the level of uncertainty and frustration over the certification process.

However, to continue to further protect the faller, we believe a significant effort is required to evolve the current single certification program towards a modular program based on evidencing the competencies fallers require to manage the different hazards faced in different terrains with differing timber types. Improved quality assurance and audit programs are required to confirm the effectiveness of the training, certification and supervision processes, as well as stronger remediation and re-certification processes. Better education and guidance for employers and falling contractors in the assessment of qualification and competence of a faller; and effective use of log books and experience records will also reduce the likelihood of injury.

Introduction

Background

Manual tree falling has historically been one of the most dangerous occupations in British Columbia. The rate of serious injuries and fatalities in the forest sector has been consistently higher than for other high-risk sectors in the province. Due to the high number of faller fatalities and serious injuries, Occupational Health and Safety (OHS) regulation supporting Faller Certification was introduced in 1998 and a formal Faller Certification program was initially launched by WorkSafeBC in 2003. From 2003 to 2006, certification under the standard was phased in as existing fallers were 'grandfathered' into the program. Mandatory certification for all fallers was required by 2006. The BC Forest Safety Council (BCFSC) was established in 2004 to work closely with WorkSafeBC and industry representatives to promote safety within the industry, including the administration of the BC Faller certification program.

WorkSafeBC provides annual funding to the BCFSC for the delivery of health and safety programs to the forest industry in BC, including the administration of faller training and certification in the forestry industry. After almost a decade of program delivery, the BCFSC and WorkSafeBC have determined that the faller training and certification programs and associated administrative processes at WorkSafeBC should be reviewed to assess their effectiveness and to identify opportunities for improvement based on stakeholder input and a review of leading practices for other sectors and in other jurisdictions.

During this time the oil and gas industry established a parallel, independent faller training and certification program, designed to be compliant with the WorkSafeBC Faller Training Standard. This program is delivered through Enform for the oil and gas industry in western Canada and has evolved into a modular competency based certification program, administered independent of the forestry industry. Although interviews were held with oil and gas representatives to determine the scope and maturity of their respective programs, the Enform Faller Training Program is beyond the scope of this review.

Scope & Objectives

Our approach and methodology was designed to perform an independent assessment and evaluation of the faller certification system's effectiveness within the forestry industry and to ensure that the program is delivered in a manner that ensures the best possible safety outcomes for fallers. Amongst other objectives, our review focused on the following key elements:

1. Compliance with safety requirements in the course of training delivery, and implementation of administrative controls to ensure regulatory compliance;
2. Identifying risks to a safe testing, learning and work environment for students, candidates, instructors and examiners;
3. Adherence to the fundamentals of the BC Faller Training Standard ('the Standard') and ensuring that leading practices contained in the Standard are instilled in new fallers;
4. Overall effectiveness of the certification programs to prepare newly certified fallers for the challenges of their work;
5. The issue of lifetime certification and its efficacy, skills currency and skills monitoring, remedial training and proactive intervention to ensure faller safety;
6. Effectiveness of training tools, guidelines, and instructor resources developed as aids to ensure consistent delivery of training according to the Standard;
7. Overall effectiveness of quality assurance measures, including oversight of instructors/evaluators, curriculum content delivery, and the fairness, objectivity, consistency, and accuracy and reliability of evaluations and certification processes;
8. Implementation of appropriate administrative controls to ensure adherence to leading practices in the delivery of training and certification, including but not limited to, ensuring respectful learning

and work environments, and fair and impartial review and resolution processes to address potential training and certification issues, complaints, or disputes;

9. Clarification and communication of the roles and accountabilities between WorkSafeBC and BCFSC with regard to the administration of the program within the forestry industry;
10. The role and accountabilities of working groups and committees such as the Falling Technical Advisory Committee (FTAC) and the Faller Training Standard Advisory Committee (FSAC); and
11. Mechanisms and processes in existence within WorkSafeBC and designed to facilitate effective collaboration with the BCFSC on faller training and certification program delivery.

Approach

The purpose of this assessment was to obtain a clear understanding of the current state of the faller certification program in BC's forestry industry, and to identify strengths, challenges and opportunities for improvement. This was to be delivered through interviews, document review and research into leading practices associated with certification standards for other sectors and in other jurisdictions. To accomplish this, we employed a four-phased approach with a focus on engaging key stakeholders, including the BCFSC, WorkSafeBC, industry, contractors and other key stakeholders. Our review commenced in November 2014.

The four phases of our approach, and the associated key activities, are outlined in the table below.

Phases	Key Activities
Phase 1 – Project Planning & Documentation Review	<ul style="list-style-type: none"> • Validate project plan and approach • Review available information regarding the program and standard • Validate project stakeholder list and confirm confirmed interview schedule • Conduct preliminary interviews to validate internal definitions and criteria • Contacted other jurisdictions to identifying potential comparators
Phase 2 – Interviews & Current State Analysis	<ul style="list-style-type: none"> • Conduct detailed interviews • Connect with SME's in other jurisdictions to understand their models and programs • Confirm leading practices in forestry OH&S regulations policies and procedures • Review available safety training materials • Conduct interviews with other jurisdictions
Phase 3 – Program Assessment & Analysis	<ul style="list-style-type: none"> • Evaluate the certification program and processes • Evaluate the various jurisdictional approaches in the context of the BC environment • Summarize relative strengths and opportunities in the current model • Identify recommendation options • Identify transition and implementation strategies and considerations, as well as risk of adoption • Identified key factors for implementation success
Phase 4 – Recommendations & Reporting	<ul style="list-style-type: none"> • Consolidate findings from the interview and review activities • Develop final recommendations, key considerations and risk mitigation strategies • Validate observations and recommendations with key stakeholders • Presented draft report for review • Facilitated a 2-day workshop on July 7-8, 2015 with stakeholders from the forestry and oil and gas sectors to review the draft report and recommendations • Presented final report

The remainder of this report provides an overview of the current state of the BC Faller Training Certification program in the forest industry; our observations and findings; and our recommendations to further improve and enhance the effectiveness of the program.

Evolution of the BC Faller Certification Program

Pre-2004

Prior to 2004, injury rates in the forestry sector were significantly higher than in any other sector in BC. Between 1993 and 2002, there were 250 forestry-related deaths reported, and between 1998 and 2003 more than 1,400 falling injuries were reported. Approximately two-thirds of injuries and deaths in the forest sector occurred in small business operations¹

By 2003, injury rates in the forestry sector had shown a steady decline over the preceding decade. However, in 2003 the rate of 7.2 workers injured per 100 person-years of employment, was still 2.5 times higher than the average injury rate for all other sectors. Further, despite improvements in overall injury rates over this decade, the rate of serious injuries and deaths was significantly higher than in other high-risk industries and was increasing². In 2003, a BC Faller Training Standard was first introduced by WorkSafeBC; however, certification was not mandatory for working as a faller in BC.

2004 Forest Safety Task Force

To address the unacceptably high number of deaths and injuries observed in the forest sector, a Task Force was established by the Minister of Skills Development and Labour in July of 2003. The objective of the Task Force, as outlined in the associated Terms of Reference, was to create an action plan to reduce the rates of serious injuries and deaths in the BC forest sector. The initial goal was a 50% reduction within three years, with additional reductions thereafter. The Task Force committed to exceeding this target by aiming to eliminate all avoidable deaths and serious injuries in the sector as soon as possible³. The Task Force was comprised of organizations representing industry, unions, independent contractors, forestry associations, and WorkSafeBC,

The Task Force identified and reviewed five key drivers of serious injuries and fatalities in the sector:

1. Cultural and Social Factors:
 - a. Lack of safety culture and communication between interested parties in the workplace
 - b. Lack of ownership and public awareness
2. Human Factors:
 - a. Lack of experience, personality traits of forest workers, stress, environment
3. Structural and Technological Factors:
 - a. Large reliance on contractors and sub-contractors which lead to the establishment of smaller firms and independent owner-operators which lack the resources and expertise
 - b. Lack of training and qualified supervision
4. Regulatory Factors:
 - a. Significant changes had been made to the Forest Policy in BC which required the industry to react and adjust accordingly

¹ http://worksafebc.com/news_room/news_releases/2004/fact_sheets/new_04_11_04.asp

² Forest Safety Task Force. 2004. A report and action plan to eliminate deaths and serious injuries in British Columbia's Forests. 102 pp.

³ Ibid.

5. Economic Factors:

- a. Economic factors create pressures for companies to increase productivity and efficiency which impacts the safety of the workers

The resulting action plan was structured into twenty recommendations and a proposed implementation strategy for each recommendation was provided. One of the key recommendations arising from the Task Force was that WorkSafeBC create a Faller Certification Standard to be implemented across the sector. The goal of the Standard was to ensure that all Fallers receive appropriate and standardized training and the necessary knowledge, skills, abilities, work practices and attitude to guarantee that they are safe and productive workers. Any Fallers with more than two years of experience were 'grandfathered' into the new Faller Certification Program once they passed the 'Faller Training Standard Course Challenge'. Fallers with less than two years of experience were required to meet additional requirements as set out by the Task Force in addition to the certification process. A Qualified Supervisor/Trainers (QS/T) training program was also created.

2004 to 2012

Over the course of the subsequent decade after the release 2004 Task Force Report and the resulting actions, there was a significant and steady overall reduction in both the injury rate and serious injury rate in the forestry sector. This reduction in injury rates reflected the concerted efforts to address safety in the woods through numerous initiatives launched by WorkSafeBC, the BC Forest Safety Council, and industry stakeholders. Many of these initiatives and programs either specifically targeted faller safety, or included focus on tree falling as a key element, such as in the case of WorkSafeBC's Forestry High Risk Strategy, which focuses workplace inspections on high risk work processes including manual tree falling. While much effort was being directed toward better training of fallers and ensuring that they have the requisite knowledge, work practices, and skills to enable them to function safely and productively, the various prevention strategies also addressed the responsibility that employers, supervisors, and owners of forestry operations, all share in fallers' safety.

WorkSafeBC introduced amendments to the *Occupational Health and Safety Regulation* in August, 2006 adding Section 26.21 (Faller Qualifications) and Section 26.22 (Forestry Operation Faller Training). This introduced the requirement for all fallers to be certified as "Competent Fallers", and the Faller Training Standard was developed with industry to standardize training and certification in the province. By 2006, all fallers in BC were obligated to obtain a 'Safe Work Practices Certificate'. Later that year, the BCFSC assumed responsibility of the faller training certification from WorkSafeBC and Enform was granted approval to administer the Faller Certification program for the Oil and Gas sector. Various training and certification initiatives were implemented over this timeframe, with a number of fallers obtaining certification under the new programs.

A study assessing the impact of the certification program on safety outcomes was conducted after the introduction of mandatory training and certification. The study measured injury rates for manual tree fallers and also assessed whether the certification process reduced the risk of injury for a select population of manual tree fallers. With respect to the impact of certification on injury rates, the study noted that by 2008 (two years after mandatory certification was introduced), injury rates were at their lowest recorded levels. It was noted that this was likely a result of the exclusion of unqualified fallers from the workforce following the introduction of mandatory training and certification. The study also noted that the risk of injury for experienced fallers before and after certification were not significantly different. It was noted that the safety intervention with grandfathering clause did not reduce the risk of injury for qualified tree fallers' (Source: Evaluating OHS Interventions: The Case Study of BC's Faller Certification Program⁴). Overall, however, the changes introduced by the 2004 Forest Safety Task Force appeared to have made a significant improvement.

In 2009 WorkSafeBC released the results of a study⁵ (*Occupational Health & Safety: Faller Serious Injury and Fatal Review 2009*) conducted on the results of 32 falling related fatalities that had occurred in the 2000-2008 period. The report concluded that the most frequent contributors were: lack of adequate

⁴ <http://pwhr.sites.olt.ubc.ca/files/2012/04/BC-Forest-Safety-Council-Presentation.pdf>

⁵ https://www2.worksafebc.com/pdfs/forestry/Faller_Review_2009.pdf

planning; poor supervision; poor work procedures; and poor decision making processes. In essence the conclusion was that the responsibility not only lay with the faller, but also with those responsible for planning, supervision and quality control around the falling activity. Of greater interest to the authors was the fact that no fatalities occurred in 2006 and 2007, as noted in the paragraph above. This was attributed to the intense focus on safety across the industry after the release of the 2004 Task Force report and the subsequent mandatory faller training and certification program. By 2008 the injury rate had climbed again, and the study concluded the industry had reverted to less safe falling practices. 2012 to Present

In 2012, a new Director of Falling was hired by the BCFSC and tasked with developing a “Falling Sustainability Plan” to monitor and improve the Program. The resulting action plan focused on five themes:

- 1) Certifying falling supervisors
- 2) Training Qualified Supervisors/Trainers and Industry Trainers
- 3) Training new fallers
- 4) Creating a tracking system to support faller re-certification
- 5) Providing in-field services to the falling community

The New Faller Training program includes 30 days of supervised field and classroom training followed by a period of up to 180 days of falling activity under close supervision prior to taking the faller certification exam. Once a Faller is certified, they are certified indefinitely, and there are no requirements for the Faller to obtain further training or perform additional assessments. There is currently no mechanism or process in place to perform an ongoing quality assurance review by the BCFSC of their certification or for BCFSC to temporarily suspend or remove a faller’s certification. The QS/T and industry training program has been created and formalized and recognized as a certification by WorkSafeBC. Each QS/T may have differing levels of forestry or training knowledge and experience as such their guidance may vary as there is a lack of uniformity in the administration of the QS/T training program to all industries.

The BCFSC, Wildfire Management Branch, Enform and HortEducationBC continue to support and evolve their respective training programs across a variety of falling-related occupational roles today.

Current governance of the BC Faller Certification Program

The forest industry in BC, similar to other industry sectors, is diverse and multi-faceted, and as such, there exist many stakeholders with an active interest in the safety of the faller and the current provisions of the BC Faller Standard. Primarily, these include the regulatory bodies, the training and certification organizations, the various industry associations and technical committees, the employers, falling contractors, and of course the employees and their labour organizations. These organizations all play a role in the evolution and maintenance of the BC Faller Standard, the Certification Training Program, and the ongoing supervision and education of fallers in BC.

Regulatory Oversight

WorkSafeBC plays a critical role with regard to the safety of fallers in BC, particularly through the enforcement of *The Workers Compensation Act* and in particular, the *Occupational Health and Safety Regulation* Part 26, which provide the regulatory requirements for faller certification and training, the employer assessment of qualification and competence of fallers, and the various safety requirements related to manual and mechanical falling, equipment operation, yarding, skidding, hauling, silviculture and other forestry related activities. WorkSafeBC originally developed the BC Faller Training Standard in conjunction with industry and currently chairs FSAC (which with the WorkSafeBC Certification Services division, are considered to be the *de facto* faller standards setting bodies representing the industry). However, WorkSafeBC has partnered with the BCFSC to administer and oversee the related training and certification programs. Within WorkSafeBC the Industry and Labour Services (ILS) group works with the forest industry to design and implement safety measures; the Certification Services group provides an approval of the faller certification programs; and the Forestry Field Officers are the front line personnel enforcing *The Workers Compensation, Act*, safety regulations and policies.

Training & Certification Bodies

Two organizations have been approved by WorkSafeBC to deliver the BC Faller Certification Training: the BC Forest Safety Council and Enform, with the BC Forest Service, Wildfire Management Branch awaiting formal approval.

The **British Columbia Forest Safety Council (BCFSC)** was created in September 2004 as a not-for-profit society dedicated to promoting forest safety in the sector. The initial focus and tasks of the Council were set out in the 2004 Forest Safety Task Force report, which created a comprehensive strategy to dramatically improve the safety record of the BC forest sector. The mission of the BCFSC is to “assist industry to eliminate all fatalities and serious injuries in the forest sector of British Columbia”. Primarily this is achieved through the training, education and support of the employers, employees and contractors across the industry. As part of their mandate the BCFSC is responsible for the administration of the BC Faller Certification program and related certifications and qualification programs (such as the Qualified Supervision/Trainer, Certified Falling Supervisor, Certified Trainer, etc.). The BCFSC represents such organizations as the Council of Forest Industries (COFI), the Interior Logging Association (ILA), the Truck Loggers Association (TLA), Western Silvicultural Contractors' Association (WSCA), the United Steelworkers Wood Council (USW), the BC Ministry of Forests, Lands and Natural Resource Operations (FNLRO), and the major employers (such as Western Forest Products, Interfor, Island Timberlands, etc.).

The BCFSC also provides support to the **Coast Harvesting Advisory Group (CHAG)**, a task force established in December 2012 by the major coastal employers and the BC government focused on the reduction of fatalities and serious injuries associated with the various phases of logging on the coast of British Columbia.

Enform is a not-for-profit safety association created to support the upstream oil and gas industry in British Columbia, Alberta and Saskatchewan. Enform's mission is "to help companies achieve their safety goals by providing practices, assessment, training, support, metrics and communication". Enform represents such organizations as the Canadian Association of Geophysical Contractors (CAGC), Canadian Association of Oilwell Drilling Contractors (CAODC), Canadian Association of Petroleum Producers (CAPP), Canadian Energy Pipeline Association (CEPA), Petroleum Services Association of Canada (PSAC), and the Explorers and Producers Association of Canada (EPAC). The intersection of the industry to the forestry sector is in the area of right of way clearing, seismic falling, and other logging activities required to support the expansion and maintenance of oil and gas facilities and pipelines. As such, the fallers operating in this area are often transient or seasonal contractors or work crews, often based in other jurisdictions and occupations. Enform also provides certification and training services to these fallers, but the focus is on the smaller diameter trees found in the relatively flatter terrain of north eastern BC. The **Chainsaw Certification Committee (CCC)** is the body responsible for the technical update and maintenance of the faller certification programs within Enform. The CCC is comprised of industry representatives, falling contractors, and also WorkSafeBC.

The BC Forest Service **Wildfire Management Branch (WMB)** of the BC Ministry of Forests, Lands and Natural Resource Operations was originally formed in 1912 to respond to wildfires and provide emergency support on behalf of the BC government. The WMB is tasked with managing wildfires on both Crown and private lands outside of organized areas such as municipalities or regional districts. In executing this mandate, the WMB maintains a workforce of approximately 200 seasonal fallers focused on supporting the emergency response teams by clearing fire breaks, removing hazardous trees, and other related falling activities. Safety of emergency response workers and the general public is a core value of the WMB, and as such, WMB also provides extensive training and (with support from BCFSC) certification of their fallers. The WMB provides support and guidance to the BCFSC and is an active participant in the BC Faller Training standard, certification and technical committees.

In addition, it should be noted that **HortEducationBC (HEBC)** is also a limited certification body. HEBC is the voice for the ornamental horticulture and agriculture based trades in British Columbia, and is actively focused on supporting education and training of apprenticeship trades for arborists and other horticultural and agricultural specialists. In particular, arborists are seen as requiring various skills and competencies common to fallers and, as such, the HEBC is also a stakeholder to the faller certification program in BC.

Standards Technical Oversight

The falling industry is evolving relatively quickly as innovations relating to mechanical harvesting, differing timber types, falling on steeper terrain, and falling techniques continue to evolve. In addition, new research and findings are constantly being identified and debated with the goal of keeping fallers safe through improved techniques and guidance. The BCFSC **Falling Technical Advisory Committee (FTAC)** is a key body responsible for researching and providing this guidance. It consists of approximately 28 members representing Falling Supervisors, QS/Ts, falling contractors, licensees, the USW, the BC Wildfire Management Branch, WorkSafeBC, and various industry associations, arborists, and silviculture contractors.

The **Falling Standards Advisory Committee (FSAC)** is responsible for the ongoing maintenance and update of the BC Faller Training Standard. The members of FSAC include the BCFSC, Enform, the WMB and other industry representatives. As the owner of the Falling Standard, WorkSafeBC currently chairs the committee, approves updates to the standard and administers who is permitted to provide certification under the standard. FSAC also receives input and guidance from FTAC and the Enform CCC.

Other Industry Bodies

Aside from the Ministry of Forests, Lands and Natural Resource Operations (FLNRO) and the above stakeholders, the other primary contributors to safety in the forestry industry, particularly with regard to falling in BC, include the following:

The **United Steelworkers of Canada** (USW) represent a significant number of forestry and mill employees in BC, and as such has a significant focus on worker safety. The USW is also an active contributor to the BCFSC and the FTAC, amongst other industry related safety initiatives – including the **Safety Advisory Foundation for Education and Research** (SAFER). SAFER's mission is to assist workers and employers in the B.C. Forest Industry to improve accident prevention and create a healthy environment, on and off the job. SAFER is jointly managed by the USW and the Coastal and Southern Interior forest industry.

The **Council of Forest Industries** (COFI) is a trade association incorporated in 1960. COFI is the provincial voice of the British Columbia Forest Industry and represents over 100 forest companies and six forest industry trade associations.

The **Truck Loggers Association** (TLA) represents independent logging contractors, phase contractors, small tenure holders, woodlots, market loggers, log brokers, independent sawmills, remanufacturing mills and heavy equipment, fuel, camp and other suppliers in the coastal region of British Columbia. Their industrial members employ more than 7,500 people and account for well over 50 per cent of the trees harvested in the coastal region of B.C.

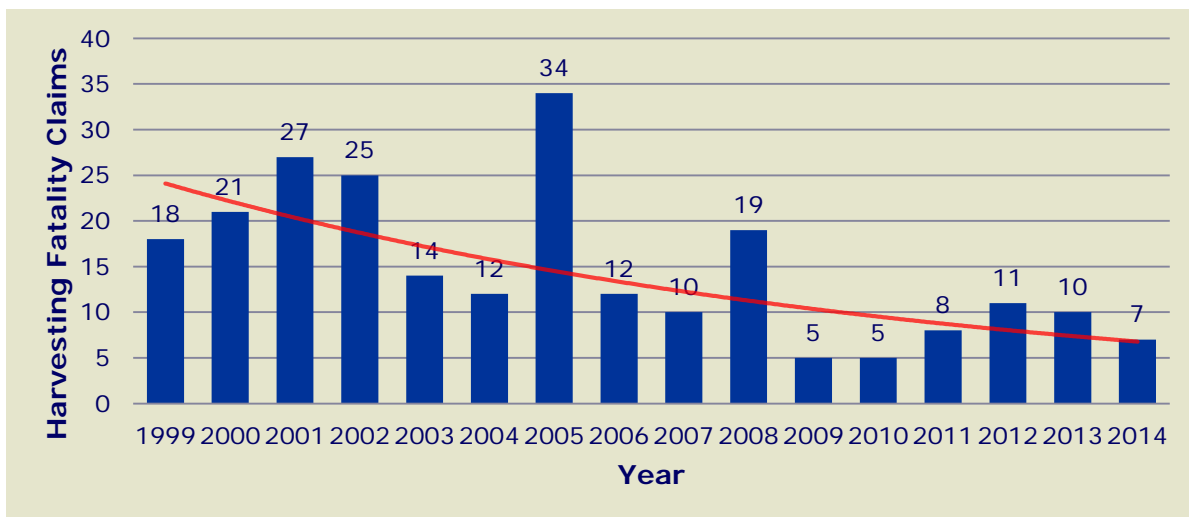
The **Interior Logging Association** (ILA) similarly represents the interests of independent loggers throughout the interior of BC.

The **Western Silvicultural Contractors' Association** (WSCA) represents the silvicultural contracting industry to both federal and provincial governments on forest policy, industry regulation, and health and safety. Their members include tree planting, stand tending, wildfire fighting, site preparation and ecosystem restoration contractors, including approximately 10,000 seasonal workers.

These organizations are all active contributors to safety in the logging industry in BC and their committees and members provide ongoing input into the faller certification program as well as faller education.

Current state of the industry

With few exceptions, as illustrated by the trend line below⁶, the number of fatalities in the BC forestry industry has been in decline since 2001 as a result of the increased attention on safety in the industry, including the focused efforts of the BCFSC and other actions recommended by the January 2004 Forest Safety Task Force Report. Despite these efforts, however, the injury rate continues to remain high in the sector relative to many other occupations.



The forestry industry is currently emerging from a long recessionary period, and as such, demand is increasing for qualified, competent fallers. It is expected that this demand will increase into the foreseeable future. At the same time, the industry is facing a potential shortfall of skilled fallers due to a number of demographic changes including: a reduction in younger workers selecting tree falling as a career; an increased number of retirements as the workforce ages; and a shortage of experienced fallers as the industry continues its push into harder to access, challenging terrain with differing timber types.

Within the forest industry there is a significant variability between employer resources and safety education and mentoring programs. While the larger employers can afford to provide strong education, supervision and training to their employees; the remainder of the fallers tend to be independent forestry contractors with comparatively limited resources to devote to such training initiatives.

One other concerning trend is the continued recognition of falling as a dangerous occupation, despite the efforts and actions of the various organizations promoting safety in the industry. Inherently manual or mechanized tree falling is a dangerous industry, but the research and efforts of the BCFSC and others indicate that this does not necessarily have to result in injury or fatality if the appropriate training and correct safety procedures are employed for the specific conditions and hazards at a particular time. The primary concern relates to the incorrect perception that risk is unavoidable in the industry and therefore a certain rate of serious injury or fatality is therefore acceptable. Changing this mindset in the industry is critical to reducing the tolerance for and expectation of injury to fallers.

Overall, our review concluded there is a strong demand for qualified, competent fallers in BC, specifically those trained to address the difficult falling conditions across the Province. We also note, within the forestry industry, there is a strong desire to try to continue to drive the harvesting fatality rate toward zero.

⁶ <http://www.bcforestsafe.org/SafetyAlert-Fatality-Summary-2014-12-31>. Note: this chart reflects all harvesting related fatalities in the sector, including manual hand falling.

Observations

Throughout this assessment, we conducted stakeholder interviews, reviewed relevant documentation and conducted research into certification programs in other sectors and jurisdictions to understand the key issues facing the industry and to identify opportunities for improving the current certification program. This section describes the results of this work by providing a series of observations, issues and our conclusions, which have been grouped into the following six common themes:

1. Industry-related challenges
2. Governance of the Standards
3. Clarity of understanding of the Regulations and Standards
4. Faller Certification examination
5. Program Quality Assurance
6. Administration of the Program

An overall summary of our individual recommendations to address the challenges identified are provided in the following section. We did identify a number of positive trends and activities in the industry, however, the primary focus of our review was on the areas we felt offered the most opportunity to reduce faller injury and fatality.

1. Industry-related challenges

1.1 Limited incentives for safe production

Many of the recommendations of the 2004 Task Force focused on enhancing the safety culture within the forest sector through the development and implementation of an overarching commitment to safety and the creation of a standardized certification program and associated support programs (among other themes). It is generally recognized that there has been an improvement in the priority placed on safety across the sector, but opportunities to build on this progress exist. The overall focus of the forestry industry in BC continues to focus on production volumes and sound sustainable forest management practices.

WorkSafeBC and the BCFSC actively promote and support the design of strong, auditable safety models within the forest industry, including the SAFE Company certification. However, the structure of the industry is such that the owner of the land (often the Crown) often does not harvest their own land. The large employers who purchase timber licenses in many cases outsource the actual logging to a logging or falling contractor, who in turn often hires contract loggers (operating as self-employed entities). The timber licensing and permitting agreements have some reference to safety (e.g. requirement for the purchaser to be a SAFE certified organization), but little other contractual safety requirements. Certainly the responsibility for safety, however, is well defined in *The Workers Compensation Act*, OHSR and case law. The accountability for safety spans all of the harvesting organizations and individual fallers, similar to other industry sectors but does differ in that there are fewer large employers investing in and enforcing safety culture and standards.

The forestry industry should continue to enhance contractual safety requirements at all levels. Ideally, this could include auditable safety models with specific measurable metrics that would assist in the identification of unsafe behaviours (e.g. baseline production statistics, maximum/average hours per day falling, etc.) where appropriate.

1.2 Industry competency assessment

The *Occupational Health and Safety Regulation* requires the employer to assess the qualifications and competence of the faller prior to hiring them. There are few industry-led mechanisms available to the employer to do this and a limited number formal direction or guidelines exist to assist the employer in meeting these criteria. Relative to others, such as the oil and gas industry, it appears formal competency assessments are not often performed. Many incorrectly view the existence of Faller Certification as a sufficient measure of both qualification and competency, combined with reference checking and, in most cases, limited observation of the individual. Also no formal background database or other mechanism exists to assist the employer in assessing the prior record of the faller at hire (although there is interest within some of the employers to create such a system). Given that the Faller Certification is a lifetime qualification at issue and can be achieved in significantly different terrain and conditions, this practice increases the risk that a faller who uses improper harvesting methods for the terrain or timber type, or with inadequate experience could be hired.

BCFSC should develop a formal guideline and direction to employers as to what is an acceptable competency check. The Faller Certification program should support the ability to differentiate between the qualifications of fallers trained in different timber types and terrains. A system or process should be implemented (with consideration given to applicable privacy rules) to support a formal background check by the employer on the safety record, specific terrain and timber type experience, and training certifications achieved.

1.3 Investment in faller training

In many instances the faller themselves are solely responsible for their own training, education and overall advancement. The certification process for a production faller can cost close to \$30,000 and is generally paid for up-front by faller themselves before they can enter the industry. It should also be noted that this training program is currently ineligible for the type of federal or provincial student loans or grants available to many other similar industry trade certification programs.

The training takes approximately 30 days for a production faller, with a subsequent 180 days of supervision to reach certification. To reach their potential as a competent faller can take a further three to five years. The focus for the faller at this point is to maximize their production in an effort to recover their investment in the initial training and certification.

Licensees and employers are not always active in investing in their fallers. Unlike a number of other common industry certifications or industry trades and apprentice programs (e.g. electrical, crane operator, machinist, etc.) there is no modularized program beyond the basic certification. The lack of modularized training, which supports the progression from simple to more complex or hazardous environments, is restricting the number of new fallers entering and moving up through the industry. This also increases the risk for those that do progress onto coastal logging and other steeper terrain/larger diameter tree operations. In some cases the largest employers have created mentoring and education programs for their employees, but this is not the norm.

In addition, onboarding, orientation and supervisory programs differ between employers – and are non-existent for many. The BCFSC have introduced a Certified Falling Supervisor qualification, but this is still in its infancy as a program. Once in the field, unlike other sectors such as oil and gas, employers, supervisors and inspectors are often not enforcing the use of the log book or other mechanism to track progress and remedial needs. Without consistent supervision, ongoing education and remedial training, the industry has in effect created a transient, self-educated, part-time, variable workforce.

The introduction of a modularized certification process will assist the employers and fallers in developing an ongoing education program that correlates to safety hazards and working conditions. Remedial training required and performed should also be tracked by faller in some form of centralized records. The use of onboarding, orientation and ongoing supervisory and education programs should be supported by all employers, safety councils and industry associations.

2. Governance of the Standards

2.1 Alignment of interests and responsibilities

Given the multi-faceted nature of the forestry industry in BC and the evolution of faller education and certification, there are challenges in the governance and oversight of the various aspects of the Faller Certification and education across the many parties. In particular, now that the BCFSC and the various organizations supporting forest safety have matured, there is an opportunity to continue to innovate and evolve the programs and processes supporting standards maintenance, certification of training, quality assurance audits and other related activities to the BCFSC and the other certification bodies. The various forestry industry associations and representative bodies are not always coordinated, or consistently and effectively engaged in the standard setting and certification process. In some cases they have developed their own guidance or practices independent of consultation with others. In general, there is some frustration within the industry with regards to the standard setting and update process, as well as oversight of the examination process.

WorkSafeBC, the BCFSC and other key industry stakeholders should revisit and continue to align their respective roles and responsibilities with the intent of continuing to further delegate responsibilities for the maintenance of the standards, certification, and training and quality assurance programs. In addition, WorkSafeBC and FSAC should consider appointing an independent or industry-led chair on a rotational basis.

2.2 Falling Standards Advisory Committee

The overall body most responsible for input to, and to some extent oversight of, the BC Faller Training Standard is the FSAC. WorkSafeBC chairs the FSAC and its constituents represent the three certification bodies (the BCFSC, the Enform CCC, and the WMB – who are currently awaiting formal approval) as well as other key industry associations who have a standing invitation to attend. Although the FSAC is supposed to meet in-person at least quarterly, a declining attendance has resulted in a shift to conference calls replacing some meetings. Feedback from the participants indicates that the meetings are not always effective at collaborative issue resolution and, in general, have not been an effective mechanism to support the ongoing update of the standard. In addition, there is little desire on the part of some stakeholders to change the status quo given their investment in the standard. Given the context of a changing industry and logging conditions, this is resulting in a risk that the standard and the supporting programs falls behind safe industry practices.

The FSAC should comprise those stakeholders most invested in faller safety in BC. Meetings of the group should be on at least a quarterly basis and attendance should be mandatory. Formal terms of reference should define the mandate, structure and roles of the FSAC and its subcommittees. A published agenda for these meetings should be produced in advance and every effort should be made to collaborate on decision making with the view to progressing the standard and the faller certification program.

3. Clarity of understanding of the Regulations and Standards

3.1 Occupational Health and Safety Regulation

Given the diverse range of employers, contractors and employees in the industry, there are limited programs to effectively educate fallers, Qualified Supervisor/Trainers (QS/Ts) and supervisors on the nature, intent and direction of the regulations and supporting guidelines across all geographies and sectors. The practice of falling can be very complex and relies heavily upon the experience of the faller given the specific forest conditions, timber type, terrain, physics and mechanics of the specific situation, as well as the physical and mental condition of the faller amongst many other variables. It is extremely difficult for WorkSafeBC to provide prescriptive guidance around the practice of falling. Even where the regulations are considered well understood, and simplified OHSR Guidelines exist, the interpretation or action of the employer or faller is often driven from industry peers, observations or other interactions.

An opportunity exists for WorkSafeBC and BCFSC to continue to leverage OHSR Guidelines, bulletins and other communication tools to provide further clarity where the regulations might be misunderstood by employers and fallers. Ultimately, Faller, QS/T and Certified Falling Supervisor (CFS) training and

ongoing education is best placed to incorporate this information to further reduce uncertainty and the risk of misinterpretation.

3.2 BC Faller Training Standard

The BC Faller Training standard has been in place for over a decade. It was introduced to address the need for consistent, standardized tree falling practices. However, given the increased complexity of the falling industry and given the lack of a requirement for formal review and update, aspects of the standard are considered to be falling out of date. It appears to conflict itself in some areas and is inconsistent with many higher risk operating conditions now facing BC fallers (e.g. newer harvesting techniques, more challenging timber types such as north coast yellow cedar or '1908 timber', personal risk factors, etc.) as well as an increasing variety of occupations involving tree falling (e.g. ski area slope maintenance, tree topping, etc.). In addition, the standard itself does not adhere to many of the basic requirements of an industry certification standard found in other sectors or jurisdictions (e.g. the ANSI 1100 certification standard or the ISO39001 Traffic Safety standard, for example). As such, it could be argued it has more in common with a training course more than a formal certification standard.

The BC Faller Training Standard should undergo a full review, overseen by FSAC, with the intention of bringing it up to date. This review should consider the typical requirements of a global certification standard and ensure these are incorporated in the enhancements. The standard should then be maintained and a full review scheduled every three to five years to ensure it remains current.

3.3 Inconsistent Certification Programs

Fallers in BC can technically become certified under four accredited bodies: the BCFSC, Enform, HEBC, and the BC Forest Service, WMB. Each of these entities serves a different industry purpose: the BCFSC is focused on forest worker safety in all sectors and timber types; while Enform is focused on serving fallers working on right of way clearing, seismic falling, and other logging activities required to support the expansion and maintenance of oil and gas facilities and pipelines; HEBC supports the apprenticing of arborists; and the WMB is focused on falling for fire prevention and emergency wildfire response. Our review indicates that the objectives of the three organizations are generally aligned; however, the certification programs do differ. The level of rigour and oversight is consistent, but the conditions under which a faller may be certified are quite different. Enform-certified fallers tend to operate in work teams on gentler terrain with smaller diameter trees; while WMB-certified fallers are often required to resort to manual, mechanized and blasting of trees in precarious wildfire situations. In contrast, BCFSC fallers are often full-time, year round contractors operating in a variety of geographies with varying timber types. There is a potential for increased risk as fallers achieve their lifetime certification under these varying conditions but consider moving into more hazardous logging conditions.

In some cases, as demand for fallers grow, employers are beginning to accept Enform-certified fallers in higher-risk coastal logging operations. In addition, the staggered approach to certification taken by Enform is seen by many new fallers as an opportunity to enter the industry at lower personal cost, allowing the faller to assume a production role earlier and work across multiple western Provinces. Currently, as described earlier, no formal mechanism exists to match and enforce the certification process with the working conditions, or to restrict fallers from working in these areas.

We believe that each of the certification programs has their merits and that WorkSafeBC should continue to oversee the accreditation of any new certification bodies in the near term to ensure consistency within and between the certification bodies and the certification process, especially as it undergoes review and update. A modularized certification program (as is common in a number of other industry sectors) should be introduced to support employers in their determination of whether a faller is qualified to work in a particular geography, terrain or timber type or other hazardous situation. Fallers should be required to carry their certification cards to evidence their training and qualifications to prospective employers or WorkSafeBC field officers.

4. Faller Certification and Examination

4.1 Grandfathered Fallers and early Certified Fallers

Following the introduction of the BC Faller Certification program in 2004, the majority of the existing fallers in BC were 'grandfathered' into the new program. This has resulted in a continuation of a variety of practices and experience amongst certified fallers, trainers and supervisors across the industry. Since the introduction of the standard the harvesting conditions have continued to evolve. Because the certification is a lifetime program, there is no expiry timeframe, no recertification requirement, no process to temporarily suspend certification, and no mechanism to introduce remedial training where it is needed.

In common with other industry certification programs, an expiry period for certification should be introduced, with recertification and ongoing education requirements for continued certification.

4.2 Faller Training

Under OHRS regulation, fallers entering the industry are required to complete a 30-day one-on-one training program, to complete an examination and then operate in a supervised capacity for "up to 180 days" (as per the OHSR) depending on an assessment of competency by a supervisor or trainer. The standard is not clear on exactly what time period below 180 days is required or what competency-based criteria would determine completion. Once a faller leaves the 30-day training program, the nature and extent of the supervision is generally not formally tracked.

There is no formal pre-screening assessment performed on fallers prior to the commencement of the training program (e.g. such as that performed by BC Hydro in the Pre-Apprentice Line Technician (PLT) process). Training guidelines and materials are well defined and the 30-day program has been well received, but in some cases trainers are not using up-to-date WorkSafeBC training videos and other materials. Outside of the Enform program, there is no formal curriculum or DACUM to support the program, particularly as it relates to faller training for the higher risk scenarios. In addition, the training does not consistently address all personal high risk factors (e.g. alcohol/drug impairment, nutrition, home conflict, personal trauma, and other relevant impediments).

Trainers are required to hold the QS/T certification, but the experience and implementation of the training does differ from trainer to trainer. Also, the training sites and conditions can vary widely, and although not formally required, they may not always be representative of the hazards or environment the trainee faller may eventually be facing in production. For example, in some cases the training site has been deemed too dangerous for training purposes, yet represents the ultimate terrain the faller may be working on.

A formal pre-screening program should be introduced for more hazardous certification modules to filter out those who may not have the requisite physical capabilities. The standard should be updated to require a minimum period of supervised oversight, depending on the module the faller is being certified under. The DACUM and training materials used should be current in its content, incorporating appropriate learning tools and techniques to the audience; and be consistent in its implementation across all trainers, regardless of employer. A quality assurance program should be introduced to oversee the QS/Ts and ensure the training is working effectively and the trainee faller is progressing appropriately.

4.3 Faller Certification Field Examination

The trainee faller is required to sit a 23-page field examination at the completion of their 30-day training program before moving into a supervised production environment. The QS/T performing the training oversees the invigilation of the examination, generally in the field upon completion of the practical aspects of the examination. Our review of the exam itself and the process for conducting it identified a number of concerns, as follows:

- The field examination appears to have been informally updated over time resulting in improvements to the exam, but also creating inconsistency in its delivery;
- The scoring criteria in the examination contain weightings inconsistent with the complexity or risk of the subject matter and allow for significant subjectivity on the part of the examiner;
- Given the subjectivity of the scoring criteria, the final score for candidates can differ markedly between QS/T's and certifying bodies;

- The instructor and examiner are generally the same person, which in conjunction with advertised pass rates, can create the perception of a bias toward passing the candidate;
- Examination setting and scoring conditions in the field, combined with the complicated scoring criteria, could potentially result in human error in the marking and final scoring of an examination. There is no secondary review or verification process to validate the final score.
- There is no formal guidance provided to examiners regarding the scoring of the more subjective areas in the exam scoring.
- The training and the structure of the examination does not necessarily support fallers with learning disabilities and challenges (e.g. dyslexia, etc.).

Ultimately, it is critical that the examination must provide valid, reliable, consistent and defensible results. The examination format and scoring should follow recognized weighting and marking standards; follow globally recognized learning and delivery methodologies; and be supported by detailed guidance for the trainers and examiners to ensure it is delivered in a very consistent manner. The examiner should be independent of the trainer, and an objective secondary review should also be performed to validate and verify the results.

5. Program Quality Assurance

5.1 Quality Assurance

There is no formal quality assurance program that extends over the faller training and certification process, as well as the field supervision and ongoing activities of the certified faller. This includes the activities of the QS/T and the CFS. QS/Ts are not required to go into the field during the 180-day supervisory period to perform spot checks or any form of quality assurance review of their fallers following certification. There is also no formal tracking and reporting required for weekly field assessments and monthly audits where they might be performed by a Falling Supervisor. Each certification body and training agency has a different standard of quality control and assurance. There is no process to summarize and update the Faller Training standard and supporting training and examination materials for any significant issues identified in the various quality assurance activities and reviews which may be performed.

In order to achieve the desired level of consistency and quality, a formal quality assurance program should be considered for the Faller training, Faller Certification examination, QS/T program, CFS program, and other associated educational and certification activities. Ideally this quality assurance program would track the success/failure rate of the participants based on safety records and outcomes.

5.2 Ongoing Recertification

Currently, there is no process within the standard to revoke, de-certify, expire or suspend certification once all other remedial and supervisory mechanisms are exhausted. Fallers often consider themselves 'certified for life'. Although the regulation does not allow for decertification or revocation, WorkSafeBC does have the ability to prevent an unsafe faller from continuing to operate. There is limited appetite within the industry to suspend certification, except in extreme circumstances, as it does represent the fallers 'livelihood'. The preferred option would be some form of remedial training. However, it is also accepted that at some point the likelihood of a fatality may increase if unsafe behaviour is consistently exhibited by a certified faller.

Remedial training is not always enforced by employers, or tracked and communicated when delivered. There is no ongoing certification maintenance or educational requirement. It is accepted that any change to the regulation to create a revocation or expiration of the certification would require appropriate industry consultation in advance, as well as the implementation of a formal appeal process.

An ongoing education and recertification process should be designed and implemented, with an expiration threshold for noncompliant fallers. Similarly, continued unsafe practices should result in the revocation or suspension of a certification until the appropriate remedial training is completed.

5.3 WorkSafeBC Field Inspections

WorkSafeBC Field Officers currently conduct regular inspections and reviews and are notified in advance of falling operations. However, WorkSafeBC is not necessarily aware when a newly certified faller is working in a particular forest block. The oversight and responsibility is generally that of the employer or supervisor. However, as described above, and as highlighted in the recent Macatee Report⁷, there have historically been limited tools available to the Field Officer in the event unsafe practices are observed. WorkSafeBC Field Officers often have had to utilize their judgement and experience to create customized responses that may be misinterpreted by employers, fallers or contractors as inconsistent. This can also be attributed to the complexity and differences between different logging operations, as well as inconsistencies and lack of clarity and guidance in the standards themselves. These issues have recently been addressed with the introduction of the *Workers Compensation Amendment Act, 2015* (passed on May 14, 2015) and the new powers and tools it provides.

There exists an opportunity for WorkSafeBC and the BCFSC to continue to provide further clarification, communication and education around the regulations and the associated guidelines, as well as to improve the consistency and currency of the Faller Training Standard, as well as any remedial training.

5.4 Qualified Trainers and Supervisors

The primary certifications (other than Faller Certification) are the supervisor/trainers (QS/T), falling supervisors (CFS) and falling trainers (QFT). The QS/T program has yet to be formalized and recognized as a formal certification. Currently the QS/Ts themselves have differing levels of industry and training experience. There is no mechanism to enforce a minimum standard of knowledge and experience, nor a consistent application of the supervisory and training methods. As described above, the QS/T program does not have a quality assurance or remedial training process or requirement. In addition, there is no formal field guide for the QS/T, and the QS/T Handbook is not updated on a regular basis.

The CFS is a new program and has also not been formalized. The requirement to have a CFS oversee a logging operation is not mandatory, but it is accepted that in a periodic visit capacity they could perform a key quality assurance and safety role. As with all of the certifications and qualifications supporting the Faller Training Standard, the CFS program does require more input and engagement from the industry in order to be successful. The QFT is a subsidiary program to the QS/T and allows training specialists, including within the employers, to deliver the BC Faller Training program. It does still require a QS/T to administer the certification examination, and requires a quality assurance review by the BCFSC.

Efforts should be made by the industry to accelerate the development and implementation of strong defensible QS/T, QFT and CFS programs. Appropriate quality assurance mechanisms should be implemented to ensure consistency and quality. The effective use of a CFS to monitor and promote faller safety across logging operations should be recognized as an industry leading practice.

6. Administration of the Program

6.1 Tracking and Logging

The total number, location and current status of total active fallers certified under the various programs is not known or tracked, nor is there any central repository to track other related information such as safety incidents that are not required to be reported to WorkSafeBC, or remedial training required or taken. Similarly, there is no centralized system within the BC forestry system for potential employers or falling contractors to easily determine the history and safety practices of a faller applying for work. Log books and record books are not being used consistently by the majority of fallers in the forestry sector (such is the case in oil and gas, and other resource industries). While the Notice of Project (NOP) currently provides WorkSafeBC an indication of a new logging operation, no formal mechanism exists to identify the existence of a new faller or trainee on a logging operation.

⁷ *WorkSafeBC Review and Action Plan*, July 1, 2014 - http://www.labour.gov.bc.ca/pubs/pdf/WBC_Review_and_Action_Plan.pdf

There is a need for a centralized repository, designed and implemented in accordance with applicable privacy regulations, to track certification, training and other safety-related information for active and non-active fallers.

6.2 Statistics and Analysis

The lack of a centralized repository of data across a wider variety of falling-related occupations and individual faller experience data in different timber types and terrain also restricts the development of a comprehensive approach for accurate formal reporting of forest industry safety and other related statistics. This also limits the use of data analytics tools to predict or detect safety trends and risks, and perform root cause analysis on the injury trends themselves.

There is a need for a centralized repository of data to perform trend analysis and other predictive data analytics to provide further analysis on the root causes of faller injuries and fatalities in BC.

Recommendations

Based on the observations and findings detailed in the previous section of this report, the following summary recommendations have been developed for the consideration of WorkSafeBC and the BCFSC. Given the overall objective to implement solutions that further the safety and protection of BC fallers, there are a number of recommendations that could be addressed immediately, while others may take longer to implement given the relative complexity and number of stakeholders that are involved. As such, we have presented our recommendations in two phases: those that could be commenced in the short term (e.g. the next 90 days), and those longer term recommendations that will require more investigation and discussion but could be largely implemented over the next 12 months.

Short-term Recommendations

1. Clarify the roles & responsibilities for maintaining BC Faller standards and certifications.

- a. The governance model for the BC Faller certification program should be revisited on a regular basis to ensure the roles, accountabilities and responsibilities for the maintenance of the BC Faller Training Standard and related certification programs are consistent and remain aligned with the objectives of WorkSafeBC, FSAC and the individual entities.
- b. WorkSafeBC should be a proactive contributor through FSAC rather than a retroactive approver of the standard, ensuring industry is engaged, contributing and ultimately owning the development and evolution of the standard through the appropriate consultation process (similar to standards development in other industry sectors, e.g. oil and gas).
- c. A process should be defined to support the regular (e.g. annual) review of the various stakeholders and their responsibilities to ensure the right stakeholders are engaged and actively involved.
- d. The mandate and terms of reference for the FSAC should be reviewed and updated to ensure the objectives are clearly defined and the appropriate stakeholder representation exists. A formal committee structure and supporting policies should be implemented to govern the operations of the FSAC. The appointment of an independent Chair should be considered. Meetings should be held regularly, with attendance by all member organizations mandatory and appropriate records maintained. Representation should be non-partisan and inclusive of other industry safety committees (e.g. FTAC), with a commitment to the safety of the faller placed at the forefront of member responsibilities.

2. Adopt a modularized, competency-based certification program.

- a. Define and implement a modularized, competency certification program that aligns training, experience and testing requirements to the level of hazard to which fallers might be exposed depending on the nature of their occupational roles and activities.
- b. Fallers should be required to carry wallet cards or similar identification to evidence the level of competency and certification achieved.
- c. Develop a centralized database or repository to record and track certifications and competencies by faller.
- d. Fallers should be restricted from working outside of their ticketed hazard environment.
- e. Ensure portability and reciprocity of the basic certifications across Provinces to support Enform's certification objectives (e.g. for oil and gas right of way and seismic clearing, etc.).

3. Perform a complete review of the BC Faller Training Standard.

- a. The BC Faller Training Standard should undergo a periodic review to ensure it remains accurate and current, given the changes within the industry over the past decade. In particular the standard should be aligned to the certification of the faller as opposed to a focus of the training required. The standard itself should also be updated to be compliant with other industry certification standard formats and protocols as defined by recognized standards setting bodies (e.g. ANSI or ISO).
- b. Certification should be based on sufficiency of evidence of competency achieved by the faller rather than an arbitrary training time period (i.e. “up to 180 day” supervised training requirement).
- c. An expiry period for certification should be introduced (e.g. 3 years) with ongoing education requirements defined for continued certification/recertification.
- d. Continued unsafe practices should result in the immediate or delayed revocation or suspension of a certification until the appropriate remedial training is completed.

4. Develop a standardized faller competency assessment program for employers.

- a. Develop a formal qualification and competency assessment framework and guidance for employers to support their assessment of fallers before and after hire.
- b. Support and encourage the development of formal onboarding programs for fallers joining a new employer or logging operation.
- c. Employers should encourage the use of and actively review faller log books in the field to ensure they are current and maintained.
- d. Certified Falling Supervisors should be trained and involved in performing competency assessments. The CFS could be qualified for specific terrain or timber type.

5. Review and update the certification examinations, ensuring they are standardized, reliable and defensible.

- a. It is critical that competency module examinations must provide valid, reliable, consistent and defensible results. The examination format and scoring should follow recognized weighting and marking standards.
- b. The examination should be supported by detailed guidance for the trainers and examiners to ensure it is delivered in a very consistent and defensible manner.
- c. The examiner should be independent of the trainer, likely another QS/T or independent certifying agency (as defined in the updated Faller Standard).
- d. An objective secondary review should also be performed (by another QS/T or credible, independent individual) to validate and verify the results. These results should be recorded and tracked centrally.

6. Implement centralized tracking, monitoring and enforcement tools.

- a. BCFSC should oversee the implementation of a centralized database or system, designed and implemented in accordance with applicable privacy regulations, to track active fallers and their training and safety record to assist in employer background checks and competency assessments.
- b. The consistent use of log and record books should be mandatory and supported by appropriate education around the content.
- c. Record keeping should support the tracking of certifications, training taken, remedial training required, safety incidents, and other relevant information. Any solution will need to meet appropriate privacy and security legislation and standards regarding retention and disclosure.
- d. A centralized repository of data and supporting tools should be considered, to perform trend analysis and other predictive data analytics to provide further analysis on the root causes of faller injuries and fatalities in BC.

7. Develop an actionable roadmap with clear accountabilities.

- a. We recommend WorkSafeBC and the BCFSC collaborate to develop an actionable roadmap and detailed program management framework to further refine and implement the immediate and longer-term recommendations in this review.

Longer-term Recommendations

8. Review and update the standard and related certifications on a regular basis.

- a. WorkSafeBC should leverage guidelines, bulletins and other communication tools to provide regular updates and further clarity where the regulations may be misunderstood or misinterpreted by employers and fallers. Faller, QS/T and Certified Falling Supervisor (CFS) training should incorporate this information to further reduce uncertainty and the risk of misinterpretation.
- b. All recommendations for changes to the standard should be formally submitted to the FSAC for review and consideration. Any resulting proposed changes to the standard should be publicly communicated for a defined period of time as an exposure draft for industry comment prior to finalization.
- c. The standard should then be maintained and a full review scheduled every three to five years to ensure it remains current.
- d. All certification modules should be developed to comply with the standard and to ensure consistency across all training and certification bodies within the Province.
- e. FTAC should develop Industry Recognized Practices (IPRs) to provide specific interpretation of the standard and as technical guidance to fallers and supervisors.

9. Review and update the training programs to ensure they are consistent and current.

- a. A faller pre-screening process should be implemented to allow for the early rejection or redirection of individuals who may not be a good physical or mental fit for the occupation.
- b. The training programs during the 3-day period should be reviewed to ensure they remain consistent with the updated standard and adequately reflect the risk factors and hazards faced in the target environment. The training programs will need to be structured to reflect the proposed modularized certification program.
- c. The DACUM and training materials used should be current in its content, incorporating appropriate learning tools and techniques to the audience; and be consistent in its implementation across all trainers, regardless of employer.
- d. The requirements for the supervisory period following the formal 30-day one-on-one training should be clearly defined. Competency-based achievements and a minimum period of supervised oversight should support the current 'up to 180 days supervision' requirement in the standard. Activities performed during the supervised oversight period should be documented and logged, and regular inspections of the trainee performed during this period (potentially by the QS/T).
- e. Employers should be encouraged to qualify their trainers under the QFT program and to develop and deliver in-house faller training consistent with the requirements of the updated standard.
- f. The training and subsequent certification process should incorporate adult learning techniques as well as support for those with various learning challenges.
- g. A quality assurance program should be introduced to oversee the activities of the QS/Ts and ensure the quality of the training meets the requirements of FSAC and the standard and the trainee faller is progressing appropriately.

10. Develop and implement an industry-wide faller quality assurance program.

- a. Frequent field assessments and formal tracking of progress and safety incidents should be recorded.
- b. A process should be defined to refer an individual to remedial training where a gap in knowledge or practice is exhibited.

- c. In order to achieve the desired level of consistency and quality, a formal quality assurance program should be considered for the Faller training, Faller Certification examination, QS/T program, CFS program, and other associated educational and certification activities. Ideally this quality assurance program would track the success/failure rate of the participants based on safety records and outcomes. Regular audits should be performed of the programs.
- d. Efforts should be made by the industry to accelerate the development and implementation of strong defensible QS/T, QFT and CFS programs. Minimum standards should be developed and enforced for the QS/T program. Detailed field guides and handbooks should be created and updated to support the QS/Ts.
- e. The effective use of a CFS to monitor and promote faller safety across logging operations should be recognized as an industry leading practice.

Conclusions

The implementation of the findings and recommendations from the 2004 BC Forest Industry Task Force have made a significant difference, with a decline in fatality and injury statistics in recent years. However, despite this outcome, there seems to be a significant level of dissatisfaction around the current BC Faller Standard and certification program. Our review identified five themes across these concerns and issues affecting the BC Faller Training Standard and certification program specifically as it pertains to the forestry industry in BC:

1. Governance and responsibilities for the maintenance of the standard require update;
2. The standard is not current with regard to acceptable industry practices;
3. The certification examination is not as consistent, reliable and defensible as it could be;
4. The certification program lacks an effective recertification and rigorous quality assurance process; and
5. The administration of the program lacks sufficient reporting and safety trend analysis.

Despite the significant number of impacted stakeholders within the forestry industry and the differing levels of opinion and independent action underway, we did find almost every group or organization to be moving in the same direction, and certainly there appeared to be universal agreement and support for the general nature of the key issues, themes and recommendations we have identified. In many cases, efforts are underway by various stakeholder groups to partially or completely address a number of the recommendations identified.

Given this fact, we feel improved clarity in the roles and responsibilities of the governing bodies over faller safety; an alignment of their interests; an update and streamlining of the standard setting process; and an equitable representation of the various stakeholders will reduce the level of uncertainty and frustration over the certification process.

However, to continue to further protect the faller, we believe a significant effort is required to evolve the current single certification program towards a modular program based on evidencing the competencies fallers require to manage the different hazards faced in different terrains with differing timber types. Improved quality assurance and audit programs are required to confirm the effectiveness of the training, certification and supervision processes, as well as stronger remediation and re-certification processes. Better education and guidance for employers and falling contractors in the assessment of qualification and competence of a faller; and effective use of log books and experience records will also reduce the likelihood of injury.

The opportunity for the faller profession is to further align the various stakeholders and interests around clear and consistent standards and a continued drive to eliminate faller serious injury and fatalities.

www.deloitte.ca

Deloitte, one of Canada's leading professional services firms, provides audit, tax, consulting, and financial advisory services through more than 8,000 people in 56 offices. Deloitte operates in Québec as Samson Bélair/Deloitte s.e.n.c.r.l. Deloitte LLP, an Ontario Limited Liability Partnership, is the Canadian member firm of Deloitte Touche Tohmatsu Limited.

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee, and its network of member firms, each of which is a legally separate and independent entity. Please see www.deloitte.com/about for a detailed description of the legal structure of Deloitte Touche Tohmatsu Limited and its member firms.

© Deloitte LLP and affiliated entities.