



Worker Safety Impacts Associated with Legislation, Policy, Planning and Implementation of Forest Harvesting Activities in British Columbia

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EXECUTIVE SUMMARY

In 2005, 43 fatalities and 110 serious injuries occurred in British Columbia's forests. In response, the Forests and Range Practices Advisory Committee requested that the Forest and Range Evaluation Program (FREP) investigate some of the reasons behind these deaths and injuries.

In fulfilling the request, this FREP evaluation project examined the planning and design of partial cutting, wildlife tree retention, and forest road building in British Columbia to:

- identify and evaluate the causes of any impacts on worker safety related to these activities;
- identify whether the Forest and Range Practices Act or other legislation mandates unsafe practices or restricts the ability to implement safe practices; and
- identify planning practices to eliminate or minimize the known safety-related impacts of these activities for potential inclusion in an Industry Recognized Practices (IRP) safety-planning handbook.

To meet these objectives, the project team conducted the following activities:

- an analysis of a WorkSafeBC database describing more than 12 000 forest-sector accidents with accepted injury claims from 2000 to 2005;
- the development of a safety survey that was delivered to 770 forest industry workers; and
- an analysis of relevant legislation and regulations pertaining to worker-identified safety issues.

The analysis of the WorkSafeBC database provided a snapshot of prevalent safety issues over a 6-year period. It showed, for instance, that fallers sustained the highest rate of serious injury (6.8%). The data also revealed a generally declining annual number of injuries, from 2704 accepted claims in 2000 to 1698 claims in 2005; however, the percentage of serious injuries reported over this period increased, particularly in the falling and transport categories.

The survey format was developed to elicit direct responses from two groups of forest industry workers ("planners" and "loggers") about



their safety-related experiences. The survey obtained both statistically significant findings and valuable qualitative perspectives, which are often unattainable through strictly quantitative means.

The survey distribution achieved broad geographic coverage and canvassed a wide range of occupations, experience levels, and employer types. The email distribution to forest planners through the Association of BC Forest Professionals (ABC FP) yielded 509 respondents, a sample size estimated by BC Stats as accurate to within $\pm 4.4\%$. Forest operations workers completed 261 surveys, a sample size estimated by BC Stats as accurate to within $\pm 6.1\%$.

Survey responses identified many specific factors that commonly influence worker safety. Production pressures, fatigue, lack of training, and lack of experience were the factors most commonly cited as affecting worker safety. Environmental policies associated with the planning and design of partial cutting, wildlife tree retention, and road-building practices were considered a much lesser issue for worker safety. Survey participants' responses also revealed that little direct communication occurred between forest planners and operations workers. Almost all respondents felt that improved communications, and greater knowledge of the others' work, would greatly improve worker safety. In addition, survey participants contributed 80 specific suggestions when asked to identify practices to improve worker safety. With further refinement, these responses could form the basis of a "best practices" handbook.

Respondents' most frequently articulated environmental policy concerns involved a perceived lack of flexibility for workers to adjust block boundaries or leave unsafe areas unharvested, and the inability to achieve safety-related appraisal cost allowances. Ministry of Forests and Range (MFR) legislation and policy specialists were asked to review these concerns in relation to the current management requirements of the Forest and Range Practices Act (FRPA). The analysis indicated that although FRPA does provide considerable flexibility to address safety issues, this flexibility is not always clearly understood or consistently applied. This apparent difference in observations between the survey respondents and the MFR policy specialists underscores the timing of survey administration during the transitional environment that surrounded implementation of FRPA. It is likely that some survey participants based question responses on their experiences with the previous Forest Practices Code (FPC) rather than on management under FRPA. The difference in observations does, however, highlight a need for enhanced communication of current policy to forest industry planners and workers, and government staff.

REPORT RECOMMENDATIONS

In light of these safety-related initiatives, the findings of this evaluation report clearly represent just one component of a large and complex process. The insightful contributions of the 770 forest industry workers who responded to the safety survey, along with the policy analysis included in this report provide valuable perspectives for the other high-profile safety initiatives currently under way. Drawing on these results, the project team offers the following recommendations for MFR to consider when developing its Action Plan for Forest Worker Safety.

1. To ensure safety roles and responsibilities are agreed to and understood, a safety responsibility and accountability framework should be developed. This framework should include individual roles, responsibilities, rights, and obligations for forest safety. To ensure this framework is utilized, it should be delivered along with an awareness campaign.
2. To ensure that harvest plans can be designed and carried out safely and to help build a stronger province-wide safety culture (e.g., worker safety comes first), the following are recommended:
 - a. a training, mentoring or apprenticeship program for planners and forest workers,
 - b. ongoing information-sharing safety forums that involve government, professional bodies, and industry associations, and
 - c. pre-harvest and (or) post-harvest safety meetings or other effective forms of on-site information sharing, between planners, supervisors, and loggers.
3. To increase overall awareness of existing forest policy and procedures, the methods used to communicate cutting permit and appraisal policy and procedures to licensee and government staff should be reviewed.¹

¹ For example, procedures that allow for timely, safety-related amendments to block boundaries, reserve areas, and leave-tree locations, and allowances for engineered cost and appraisal estimates. The communication chain between and within organizations (government and industry) should also be reviewed to ensure that knowledge and awareness of policies and procedures is better conveyed to end-users of this information.

4. To help ensure adequate road maintenance, and thereby enhance the safety of those using forest roads in British Columbia, "Road Use Agreements" are recommended where more than one licensee is operating on a road, or road network.²

5. To determine whether our safety record is improving, it is imperative that the forest sector, including industry, government agencies, WorkSafeBC, and the BC Forest Safety Council, work collaboratively in developing an information system that will clearly establish appropriate baseline safety data.³

6. To aid the development of guidelines for forest roads by the ABCFP and the Association of Professional Engineers and Geoscientists of British Columbia, the Joint Practices Board should consider the following recommendations:

- Describe professional responsibilities and accountabilities for the design, construction, safety standards, and maintenance of forest roads;
- Include a section on relevant policy that incorporates limitations and opportunities for flexibility; and
- Include the "Best Safety Practice" recommendations identified by planners and loggers during this survey.

² Licensees should be encouraged to work co-operatively to develop, approve, and implement these agreements.

³ This data system would ensure that the appropriate information is gathered, evaluated, and freely shared in a timely manner to continually improve safety performance for everyone using British Columbia's forest resources.