

Improving Safety Related to Road Construction Landslides

Accessing timber through resource road construction is a common activity throughout British Columbia. In order to ensure roads are constructed to a suitable standard, the province relies on qualified professionals, licensee accountability and compliance, and enforcement.

Under the *Forest Planning and Practices Regulation*, the legal requirement is for a person who constructs a road to ensure the road, and other structures associated with the road, are structurally sound and safe for use. In order to aid forest professionals in achieving this requirement, standards of engineering and construction, legislation and professional guidelines have been developed. Despite this fact, we still see landslides being reported both during and post road construction activities throughout the province.

According to recently collected data, there have been 26 construction initiated slides on the coast over the last three years, ranging in severity. Nine of these incidents involved an excavator sliding down slope from the road prism during road construction activities.



Significant construction initiated slide event on BC's coast involving road construction on a moderate to moderately steep slope through a wet draw containing organics over compact sandy-clay soils.

Photo Courtesy of Dustin Meierhofer

from licensees, timberland owners, contractors (Truck Loggers Association) and the United Steelworkers.

My fellow members of the CISWG are Mike McCulley, RFT, BC Timber Sales; Jack Reynolds, RPF, Western Forest Products; Robert Shelley, RPF, Interfor; Tom Jackson, RFT, Ministry of Forests, Lands and Natural Resource Operations (FLNRO); Gino Fournier, RPF, PEng, FLNRO; Clayton Gillies, RPF, RPBio, FPInnovations; Del Ferguson, PGeo, Aztec Geoscience; and Mark Ponting, Ponting Logging.

Our focus as a group is on developing initiatives that support the elimination of slide-related incidents during road construction activities, with an early geographic focus on the BC coast, and sharing learnings with any interested parties throughout the province. We have developed a short to medium term strategy to address quick wins that will have an immediate impact, as well as a longer term strategy to sustain improvement.

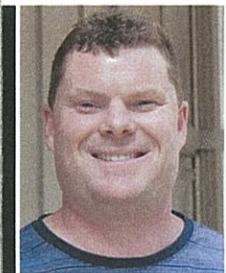
One of the first things we did was investigate, collect and analyze data related to construction initiated slides (CIS) over the past several years. We also reviewed training methods and resources related to CIS for both road crews and professionals, and we continue to explore new ways to identify sensitive zones and options for monitoring and enforcement of road construction standards. In concert with these initiatives, key communications have been developed aimed at building increased awareness and better understanding among professionals and road construction crews about the issue.

Slide Costs are Significant

In looking at slide costs there is a range of potential outcomes; anything from a short interruption in operations to an indefinite shut down of the road construction project and the potential abandonment of timber being accessed for future harvest.

A full shutdown of road construction for five days can cost a company well over half a million dollars, after accounting for personal injury, equipment recovery, loss or damage, administrative measures, site remediation, crew transfer, lost production and other associated costs.

In addition to these direct costs, CIS events can have far-reaching impacts including the potential personal and social costs to workers and their families. All these factors point to the need for industry members to continue to ensure the tools, resources and processes are in place to avoid construction initiated slide incidents. Members of the CISWG are committed to aid in this endeavour. ☘



Dustin Meierhofer, RPF, is director of transportation safety at the BC Forest Safety Council and a member of numerous industry working groups committed to improving safety and efficiency. Dustin is a Registered Forest Professional and has more than 20 years' experience as operations forester within the province of BC.

These incidents have been very serious in nature with considerable human, environmental and operational costs, and consequences.

Over the past several decades or more, a number of groups, some including forest professionals, have explored and developed partial solutions to the issue. To date, however, there has not been a united front across the industry to address the breadth of the challenge.

Construction Initiated Slides Working Group

On October 7, 2014, an informal group of industry, government and consulting practitioners met to explore the issue. The meeting was sponsored by BC Timber Sales (BCTS). One of the actions stemming from the meeting was the formation of a safety working group, the Construction Initiated Slides Working Group (CISWG). This group is supported by the Coast Harvesting Advisory Group (CHAG) which was formed in 2012 when the CEOs of TimberWest, Island Timberlands, Western Forest Products, Interfor and the executive director of BCTS decided to establish a task force to focus on the reduction of fatalities and serious injuries associated with the various phases of logging on the BC coast. CHAG includes representatives