

Project Statement

BC Coastal Forest Sector Development Initiative

Program	Harvesting and Conversion
Project Title	Identify and Demonstrate Opportunities to Improve Efficiency of Fibre Delivery
Project Number	H.01
Project Leader	Colin Campbell
Project Team	Tony Sauder, Ray Krag, Chris Gaston, Gerry Middleton and Paul Bicho
Start Date	October 1, 2007
Completion Date	March 31, 2009

Rationale:

The steep terrain and remote locations associated with many BC coastal harvest operations contribute to higher delivered log costs for the forest products mills. Although these challenges can never be completely overcome, it is important to ensure logs are delivered as safely, efficiently, and quickly as possible to take advantage of a market-driven production process. In addition to reducing the direct costs of harvesting, costs associated with harvest planning, development and regulatory compliance need to be examined to ensure they are competitive, and the industry must continually scan for new technologies to make all harvesting phases more effective.

For the mills to take advantage of high-margin markets, they need timely access to logs with the right attributes. Logs in transit for extended periods risk value loss from insect damage, moisture loss or salt impregnation. Logs also need to reach their destinations with the least amount of handling to retain the quality attributes needed to produce high-margin forest products.

As the coastal harvest is in transition from old to 2nd growth stands, there is a critical need to reassess harvesting practices and equipment applications. Mechanical felling should be utilized as much as possible, both to improve worker safety and to increase the efficiency of log extraction. Wherever feasible, ground-based equipment such as skidders and excavator forwarders should be applied for primary log transportation. Finally, mechanical processors equipped with bucking optimization and real-time access to mill order lists should manufacture the tree-length stems into the desired log lengths. When cable yarding systems are required to overcome terrain or environmental constraints, they should be supported with ground-based equipment to make them as productive as possible.

The overall goal of this project is to identify and demonstrate changes in the harvesting and delivery of wood fibre that can reduce the cost and the time for logs to reach the conversion facility.

Key Objectives:

- To identify changes in practices, technologies, management or regulatory policies that could be applied to reduce delivered log costs.

- To demonstrate how changes identified above reduce costs and quantify. This project has a cost reduction goal of 15% (or \$15/m³).
- To develop benefit/cost values for the application of alternative harvest methods and technologies and identify the range of sites over which they may be applicable.

Project Methodology:

Surveys and brainstorming sessions will be organized to identify log costs by phases, the time for logs to progress from the felling site to arrival at the mill and inefficient regulatory and operating practices. Feric will continue to monitor the literature for innovative harvesting solutions appropriate for the coast.

1. Continue to survey the staff of coastal operations to determine delivered log costs and representative elapsed times for log deliveries from the harvest site to the mill.
2. Continue to survey both industry and MoF&R staff to identify current regulations, and planning, harvesting and transportation practices that do not add margin and their magnitudes.
 - Identify opportunities for reducing the regulatory, planning and delivered log costs, and their magnitudes and identify more efficient strategies to achieve similar or better results.
3. Brainstorm with industry and MoF&R staff to determine where costs of meeting regulatory obligations may be reduced or eliminated, where total delivered log costs can be reduced, and where the time for logs to get from the harvest site to the mill can be reduced; identify the potential savings that could be achieved.
 - Organize three brainstorming sessions.
4. Test and demonstrate innovative technology that has potential for reducing the costs associated with delivering wood fibre, adapt when necessary and demonstrate its effectiveness; compare results to benchmark values.
5. Identify alternate harvesting methods, the range of sites where they may be applied, the costs of capitalization and the potential savings associated with their implementation.

Project Milestones:

Activities	Planned Completion Date
Survey 6 logging divisions and 3 major contractors for logging phase costs and timelines for log flows.	June 2008
Survey 4 BC Timber Sales Business Area offices for logging phase costs and timelines for log flows.	June 2008
Survey operations and MoF&R staff to identify inefficiencies associated with regulations and operations.	September 2008
Brainstorm with industry and MoF&R staff to determine where costs of meeting regulatory obligations may be reduced or eliminated, where total delivered log costs can be reduced, and where the time for logs to get from the harvest site to the mill can be reduced.	December 2008
Identify alternate harvesting methods, the range of sites where they may be applied, the costs of capitalization and the potential savings associated with their implementation	March 2009

Key Deliverables:

- A summary of coast delivered log costs.
- A summary of current regulations, and planning, harvesting and transportation practices that do not add margin.

- A comprehensive list of recommendations for reducing the regulatory, planning and delivered log costs and their magnitudes.
- A comprehensive list of new strategies and innovative technology for achieving similar or better results more efficiently.
- A flow chart identifying the range of time logs remain in various stages from the time a block is designated for harvest to when the logs arrive at different mills with recommendations on where in-transit time or storage time can be reduced.
- Recommendations for changing harvest and transportation systems to reduce the cost of delivered fibre while maintaining worker safety and environmental standards.

Expected Long-term Outcomes:

- A coast forest industry that can efficiently deliver logs, to the most appropriate mill, in a timely manner, on a pre-determined schedule with a work force that works safely and maintains the environmental standards required for certification.
- The costs of delivering logs are offset by the margins obtained from manufacturing the logs.

Potential Impact:

- An overall reduction of \$10-15/m³ in delivered log costs.
- An overall reduction in the time it takes for a log to reach a mill.

Collaboration:

1. External contacts
 - Accountants and engineers at WFP corporate, regional and divisional levels and at Teal Jones (manufacturing and woodlands): provide information on log costs to specific mills and the time for logs to reach mill from when the cutblock was planned.
 - BC Timber Sales program (Paul Nuttall to co-ordinate): information on bid prices for cutblocks and the time for logs to reach logyard from when the trees were cut.
2. Internal contacts
 - Peter Lister and Bruce Lehmann – Forintek: suggestions for mills to survey for log delivery timelines; contacts at mills to be surveyed.
 - Björn Andersson, Bruce McMorland, Kris Kosicki, Brian Boswell, Marv Clark, Ray Krag, Eric Amlin and Doug Bennett – Feric: innovative harvesting techniques.
 - Feric library: literature searches.
3. Linkages to other projects
 - Products and markets program: provide information on the costs for delivered fibre to assess margins when evaluating new product opportunities, and the time for new supplies of wood and fibre with desired wood qualities and attributes to reach conversion facilities.