



SAFETY ON THE SLOPES

Logging on steep slopes is the most hazardous environment for a forest worker according to **John Sessions**, University Distinguished Professor and Strachan Chair of Forest Operations Management at Oregon State. Sessions is part of a team of investigators researching innovative technologies to improve logger safety on steep slopes. Other research team members include **Woodam Chung**, **Ben Leshchinsky**, **Francisca Belart**, **Tamara Cushing**, **John Garland**, **Jeff Wimer** and **Brett Morissette** from the College of Forestry and **Laurel Kincl** from the College of Public Health and Human Sciences. The three-year project is funded by the National Institute for Occupational Safety and Health.

“Logging has consistently been one of the most hazardous industries in the U.S. It has a fatality rate 30 times higher than the national occupation average,” Sessions says. “Increasing mechanization of felling and skidding has removed workers from the forest floor in flat terrain, however, workers remain on the forest floor for felling and extraction in steeper terrain.”

The study examines strategies for replacing forest workers on forest slopes with tethered and non-tethered felling, forwarding equipment, and combining mechanized felling with traditional cable yarding methods. The research would improve safety in the steep forest workplace.

Preston Green, a graduate research assistant on the project, focuses specifically on harvesting productivity, cost and environmental impacts of cable-assisted harvesting systems.

“I conduct detailed time studies of harvesting, forwarding and cable yarding equipment, with and without the use of cable-assistance, to quantify the differences in harvesting system productivity and environmental impacts,” Green says.

Green says he first became interested in cable-assisted harvesting as an undergraduate forest engineering student at Oregon State. Industry internships peaked his interest in the subject, and Green decided to attend graduate school to conduct additional research.

"My family has worked in the timber industry for four generations, and I've seen the long-term effects that logging injuries can have on families and communities," Green says. "We're striving to make improvements in the industry, not just improve statistics. We are dealing with real people that live and work in our communities."

The project has 15 collaborating companies. The research team includes forest engineers, forest operations specialists, occupational health and safety specialists and a geotechnical engineer.

"Due to the steep slopes throughout Oregon's forests, we believe the introduction of cable-assisted harvesting equipment can be a paradigm shift that will improve safety and economic competitiveness for the industry in Oregon and beyond. It will provide the ability to implement safe forest restoration practices across the difficult terrain in many public forests," Sessions says. "Our research results and the widespread interest about the study from forest owners, logging contractors, equipment

manufacturers, and state and federal agencies suggest we are on the right track. This technology and our research will likely save lives." ●

