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### YANKEE FOREST SAFETY NETWORK'S SKIDDING/FORWARDING COURSE

*Logger Education Programs: skidding*

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**INTRODUCTION:** The Yankee Forest Safety Network (YFSN) is dedicated to reducing logging injury rates and lowering the cost of Workers' Compensation insurance in New England.

As part of its safety training program, the YFSN developed two separate logging systems courses, entitled Productive Skidding and Forwarding, that combine techniques to increase logging productivity and safety while maintaining adequate distance between workers.

Concern about the number of logging crews in New England using "hot" systems, in which men and machines often work in close proximity to one another, led to the development of these courses. Analysis of 125 on-the-job visits conducted by the Network in 1999 indicated that greater than 50% of loggers who worked on crews used what could be classified as a "hot" system. "We believe many injuries are partially the result of a lack of separation between workers. The rule of thumb is people should work at least two tree-lengths apart. The importance of worker separation cannot be stressed enough," says YFSN Director Jim Hourdequin. The "two-tree-length rule" is, in fact, an OSHA requirement.

**GENERAL FEATURES:** The course focuses on the benefits of advance harvest planning in achieving three primary goals of safety, quality, and profitability.

Through the use of detailed pre-harvest planning, cost-accounting methods, and careful field layout procedures, communication among workers improves and productivity increases, as do overall job safety and quality.

**OPERATION:** On the first day of the two-day course, after a brief introductory classroom session, participants divide into small groups and walk through a proposed timber sale. The instructors discuss the layout and how flagging tape is used to communicate to both the feller and the machine operator.

Following the tour, the group returns to the classroom for a presentation on analyzing productivity on a per-minute basis. The instructors present realistic production figures, including annual production and gross revenues and costs, for a model three-person logging business. This



*Fig. 2: Flagging with specific colors indicates direction of skidder travel, with location of knots indicating the center of the trail.*



*Fig. 1: Instructor John Adler emphasizes the value of clear communications on the job.*



information is used to determine the amount of wood that a feller or machine operator must produce per unit of time to cover costs and turn a profit. Later, this information figures into a time-in-motion study to assess the efficiency of the system.

In the afternoon, the group returns to the timber sale for two exercises: one in selecting felling direction based on cues from the flagging and the other in laying flagging tape to organize trails for maximum safety, minimum site impact, and productivity.

“This course deals with worker separation issues,” says John Adler, a Chester, Vermont logger and head instructor. “We’re teaching a method of trail organization and layout system that allows loggers to work apart from each other. And we’re showing how this can be done in a profitable and productive way. For any system to be actually adopted, it needs to make financial sense.”

Next day, participants test and revisit concepts presented the day before, in a “time-in-motion” study. Using stop watches, the group returns to the timber sale and records actual forwarding (or skidding) time, sorting time, delays, and other information, while one of the instructors moves logs from the woods to the landing. After each hitch or load, the information is collated and analyzed to assess safety, quality, and productivity on a per-minute basis. Quality of the harvest is measured in degree of residual stand damage. The group observing the operator’s actions assesses safety elements as the operator carries out the pre-planned harvest.

**APPLICATION:** Participants discover that when trails are appropriately flagged and hitches are properly planned, job execution runs smoother, the wood comes out faster, *and the workers know each other’s location at all times.*

More than 40 loggers from across New England and New York State attended the four YFSN courses in 2000. Participant response has been very positive, and more courses are planned for 2001.

**SPECIFICATIONS AND COST:** The two-day course registration fee is \$200<sup>1</sup>. Additional costs may occur for participants’ food and lodging in the area of the workshop.

For more information on the Yankee Forest Safety Network and its programs, contact Jim Hourdequin, Director, at 603/448-5338 or e-mail: [safetynetwork@tpk.net](mailto:safetynetwork@tpk.net).

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**FRA STAFF COMMENT:** The Timber Harvesting and Transportation Safety (THATS) Foundation, for which FRA serves as secretariat, provided part of the funding for the development of the YFSN Productive Skidder/Forwarder course.

**REVIEWED BY:**

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<sup>1</sup> Price subject to change without notice.



Fig. 3: A portion of the class is devoted to discussing location of trails and other pre-planning details.