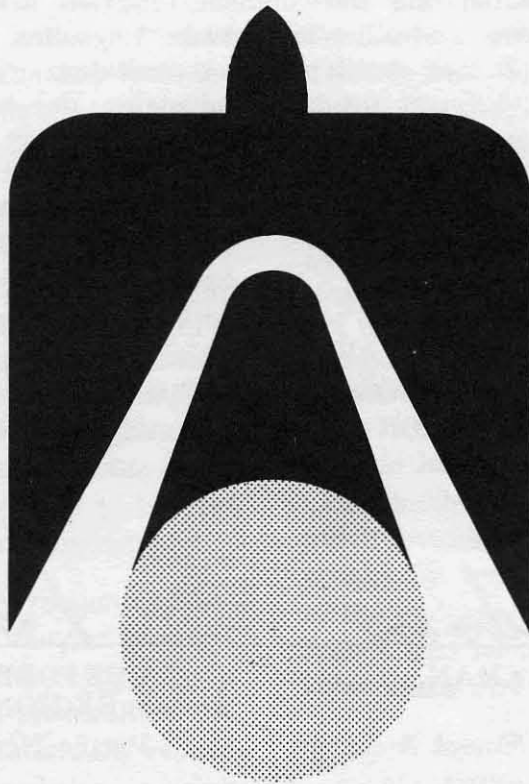


FALCON

A Research and Development Program
for
Advanced Logging Systems



FOREWORD

March 3, 1972

To provide more wood products for a growing population and, at the same time, accommodate an increasing concern over the natural environment are the major challenges facing forest land managers. Indeed, it may well be the challenge of the "Seventies."

A portion of this national concern is rooted in timber harvesting methods and associated roadbuilding activities. The concern is genuine and heartfelt. And it is not going to go away. Since roadbuilding, tree cutting, and the tending of forests for intensive production clearly have a place in future forestry, new or improved harvesting systems are needed where significant environmental impacts would otherwise result from conventional logging techniques.

In response to this challenge, the Forest Service has developed a plan for a nationwide Research and Development program using balloons, helicopters, cable systems, and other log transport systems. This program is called FALCON. It was developed in consultation with environmental groups, logging and forest products industries, universities, and other private and public agencies. FALCON activities already have a small start from funds and manpower redirected by the Forest Service and its cooperators. FALCON will reach its planned level of operation as funds become available from Congress.

We are pleased to present for your information the Forest Service's FALCON program. Later, to keep you informed of significant developments and accomplishments occurring under FALCON, the program headquarters office in Portland, Oregon (P.O. Box 3141, zip 97208) will issue a newsletter called FALCON FACTS.



ROBERT E. BUCKMAN,
DIRECTOR

Pacific Northwest Forest & Range
Experiment Station



REXFORD A. RESLER,
REGIONAL FORESTER

Pacific Northwest Region

THE FALCON¹ PROGRAM

The biggest single problem in American forestry today is how to supply expanding demands for timber products and, at the same time, maintain a high-quality forest environment. Mounting concern for environmental quality, the rising timber cut, and an increasing dependency upon difficult-to-manage areas for timber production all underlie the sense of urgency behind FALCON.

FALCON's major purpose will be to improve the ability of resource managers to predict the economic and environmental consequences associated with the use of conventional and new logging methods such as balloons, helicopters, and cable systems, singly or in combination, with the aim of providing less damaging timber harvesting methods for environmentally sensitive areas.

FALCON is expected to cost about \$10 million a year for 5 years. About one-third of this budget will be for research and development concerned with environmental questions; two-thirds will be for research and development of aerial logging equipment and methods. Approximately half of the budget will be used by the administrative and research groups of the Forest Service; the other half will support contracts and grants to universities, non-profit organizations, and industry.

FALCON will represent a mobilization and acceleration of the relatively small but growing research and development effort now under way in the Forest Service, industry, and universities. A number of aerial methods that substantially reduce environmental impacts of logging are already being tested. Considerable progress will come through integration of ideas from the aerospace industry, from manufacturers and users of logging equip-

ment, from forest-land managers, and from educators and researchers in the environmental sciences.

FALCON will be a nation-wide effort. It will begin in the Pacific Coast states. From there the effort will extend to the interior-West, the South, and the East. Some regional differences are mainly matters of magnitude and detail; others are due to vastly differing ecosystems. The steep slopes of the Appalachians, the wetlands of the South, and the fragile soils of the interior-West—each calls for an array of harvesting alternatives having the same capability for meeting environmental needs as those to be developed for the Pacific Coast states. In addition, the results of FALCON might prove useful for those parts of the world where surface land transportation systems are presently nonexistent or limited. Much of Africa, Asia, and Latin America presently contains a large proportion of the world's untapped hardwood resource.

FALCON promises better methods to salvage windthrown and fire-killed timber. Such losses often occur in patches and pockets that are impossible to harvest with traditional methods. FALCON methods, especially helicopters, also may prove invaluable to prevent insect and disease outbreaks by removing infested and diseased trees at the endemic rather than epidemic stages. The restrictions being imposed upon the use of pesticides make this alternative attractive.

There are currently an estimated 50 million acres of commercial forest land in the United States requiring special logging methods. One of FALCON's jobs will be to improve this estimate. Not counted in these 50 million acres are lands in wilderness or other special areas whose reservation, jurisdiction, and use are separate and apart from the FALCON program.

¹ Forestry, Advanced Logging, and CONservation.

