



# THE LOG

ASSOCIATED • OREGON • LOGGERS

VOLUME 6 NUMBER 6

NOVEMBER, 1982

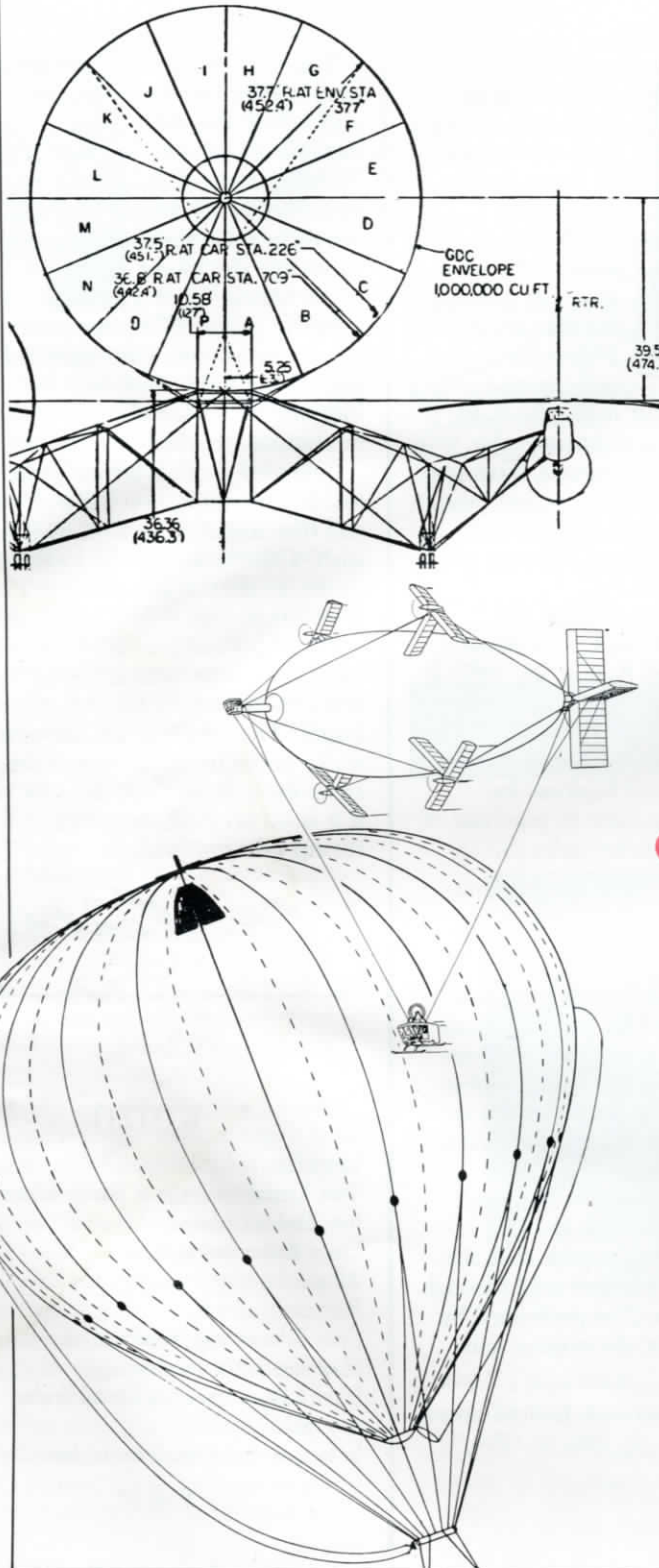
Aerial Log Hauling:  
The Shape of Things To Come

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## Plus Many of our Regular Departments

OUR COVER: This intriguing shot of the Cyclo-Crane at the mooring mast was photographed by commercial photographer, Hal Denison, of Tolovana Park Oregon. The mooring mast is a converted logger's yarding tower, by the way. **Editor**

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the unified voice of the logging industry

AOL is a non-profit association of Oregon contract loggers. It began in Eugene in 1969 as an association to work for and with loggers and now has 670 members and 17 chapters scattered throughout the state. A full time staff means important assistance and representation for every logger and logging contractor.

Members of AOL are concerned about growing regulations, timber supply, workers' compensation premiums, safety, and the decisions of elected officials.

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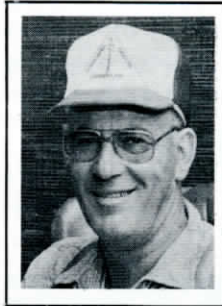
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# MR. CHAIRMAN

## Thoughts on AOL Positions Becoming Laws



A familiar envelope from AOL was on my desk when I arrived home yesterday. In the envelope was an example of what have become familiar results within the association.

Every so often our mail tells of an agency, a firm, or a politician who responds to an AOL request. This particular mailing referred to action taken by the Board eighteen months ago, during our Spring Board Meeting at Kahneeta Lodge.

On my desk was a copy of the Federal Register of the US, Volume 47, Number 163, dated August 23, 1982. It read in part:

**"Small business size standards;** definition of small business for preferential treatment in purchase of special salvage timber sales (SSTS).

**Agency:** Small Business Administration.

**Action:** Proposed Rule.

**Summary:** A change is proposed in the size standard for small business concerns to be eligible for preferential award of special salvage timber sales (SSTS). The proposed size standard would limit the use of subcontractors in the harvest of SSTS timber sold by preferential award. The intent of this rule change is to make clear and to require that the logging of SSTS timber sold through preferential award be performed by the employees of the original purchaser.

**Dates:** Comments are invited on or before October 22, 1982 to SBA."

Yes, even though the wheels of government move slowly, after a year and a half, the AOL position becomes the official rule on October 23, 1982.

Unfortunately, rules must be altered occasionally to correct loopholes. There are those who are using gamesmanship to violate the intent of the plan. That is the reason for this change.

In the past, SSTS sales could be purchased by anyone who qualified as having less than 25 employees. He could hire anyone to log the sale with no limitations on employee count.

But, now there is a new game going on. If you buy it, you log it. You can still hire someone to haul it, if you wish. Otherwise, it is up to the purchaser to do the job with his 25 or fewer employees.

Yes, those familiar AOL envelopes, more and more, contain good news and positive results for the contract logger. That piece of US Government sticky paper in the corner of the envelope is more than dues for postage. If it is on an AOL envelope, it is a **stamp of approval.**

## WOTZIT?

Larry Pitts had it before.  
Tom Kendall uses it in a double behind.  
Roy Zimbrick never had it at all.  
Claud Roden had it once.  
All girls have it.  
Boys can't have it.  
Gene Pollman had it twice in succession.  
Mauldings letter was later.  
Larry Lillegran has two frontal singles,  
and middle duals.  
In fact, he has it much worse than Clem Linlay.

**Wotzit?**

Answer to "Wotzit" on Page 40.

# Reforestation: A Look Into The Future Of Contract Logging

A reforestation contractor takes a look at reforestation techniques and looks to the future with an eye to maximum yield through sound reforestation management practices.

by Bob Zybach

*Bob Zybach is a reforestation contractor and a tree farm manager with 17 years experience in establishing and maintaining tree farms.*

**A**lthough vast tracts of static second growth and old growth timber still exist in Oregon, most of it is located on publicly-owned lands that are either being "preserved" or else managed according to systems and formulas that guarantee a leisurely rate of harvest. Despite recent efforts to deviate from these "sustained yield" or "non-declining even flow" systems, it is possible that these lands will never be harvested in the economically viable manner of privately-owned timberlands. As a result, the contract-logger seeking job stability and financial security, rather than the "booms" provided by timber speculation, must look toward private lands and the crops they contain in order to speculate accurately as to the future of his business. How did this situation occur?

### O & C Lands

In 1905, the National Forests adopted the sustained yield system. This was before the exhaustion of the timber supply east of the Rockies and before the opening of the Panama Canal in 1915. These two circumstances led to the first real demand for western timber, mostly for eastern construction products. The federally-owned commercial timberlands

are located entirely in the west, with the most productive holdings located in Oregon.

In 1916, Congress passed the Chamberlin-Ferris Act which revested title of the remaining 2,900,000 acres granted to the O & C Railway in 1866 to the United States. This act classified the O & C lands into three categories. First, water-power sites were to be designated for disposal in the manner of similar government holdings.

Second, all 40-acre subdivisions containing a minimum average of 7½ MBF per acre were to be classified as timberlands and third, everything else was to be classified "agricultural." Through competitive bidding the act re-

quired that "...timber shall be sold as rapidly as reasonable prices can be secured therefore in a normal market." Following harvest, those lands would then be re-classified as agricultural. All lands classified as agricultural were opened to entry under the provisions of the homestead laws, except for a charge of \$2.50 an acre.

On the timber holdings, this was to be collected from the log sales with the land being made available free to the homesteaders following harvest. These homesteaded lands were not allowed to be commuted. The \$2.50 was divided between the counties, the state school fund, the reclamation fund and the general funds of the United States. Be-



*The author in a stand of trees that were planted 30 years ago, left unmanaged until author thinned stand 3 years ago. Thinned, the trees are growing 2-to-4 times faster than BLM estimated cut projections.*

tween 1916 and 1937, 375,000 acres passed back into private hands in this manner.

### Congress Changes Act

In 1937, Congress passed a new act which placed the remaining O & C lands into the hands of federal land managers and removed them from settlement. The act stated explicitly that these lands were to be managed according to the principles of sustained yield. This was partially defined as "...contributing to the economic stability of local communities and industries." Allowable cut was determined to be 500,000 MBF per year until technical studies determined that the cut could be increased. By 1962, the cut figure stood at 1,127,000 MBF, although the average sales for that 25 year period consistently averaged about 10% less than that provided for by law.

Since sustained yield charts were based directly upon natural growth patterns of timber rather than managed growth potentials and since such a large portion of Oregon (over 1/2) is owned by the federal government, it is easy to see how additional pressures were placed upon the private lands to increase harvest levels. When coupled with the subsidized housing and greatly increased bureaucracy following World War II, it often seemed as if the government was placing unfair demands upon the tax-producing private sector to provide the very crops it was protecting for itself. No one was complaining, of course, for these were boom times for the timber industries and it still seemed as if the timber was virtually limitless and impossible to harvest too fast.

Now, most of the private lands have been cut over and most projections seem to indicate that it will be about two decades before harvest schedules return to anywhere near their past levels. This abrupt, artificial halt in timber supply has caused most land managers to look closely at their regeneration plans and to realize that the primary value of their holdings was not in the timber that naturally existed upon them, but in the soils and weather patterns that produced the timber. As a result, virtually every major private timber producer has adopted some form of an intensive management program. Many of these programs have been simulated, at a great hidden expense to taxpayers, by various government agencies.

### Cornerstones

The cornerstones of intensive management are logging and reforestation. If the

land contains predominately merchantable trees, the first step is to determine property boundaries and cruise the holdings. Based upon these findings and also such things as market conditions; the Forest Practices Act of 1972, esthetics, other potential uses and future market conditions, harvest and regeneration plans are made. The land is then unitized and, if needed, road rights are secured to the individual units.

When the time comes to log a given unit, the next step is usually to design a permanent harvest road system within its boundaries. This system must consider permanent harvest needs as best as possible, as well as taking into account future reforestation plans. Using all of the above considerations, in addition to any immediate concerns such as available equipment and market shifts, road-building and then logging are started. Upon their conclusion, the reforestation process generally begins.

If the land contains predominantly unmerchantable or sub-merchantable trees or brush, or is in need of some form of timber stand improvement (TSI) prior to any harvest considerations, then it is usually ready for some form of reforestation procedure. Again, the first step is to determine the property boundaries.

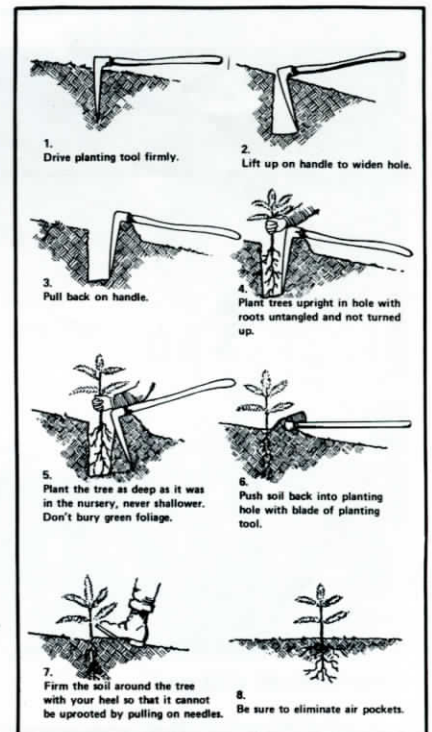
Although a cruise is generally unnecessary during this stage of management, some form of inventory or stand examination is usually made if it is determined to manage the existing trees to a commercial thin or clear cut stage. With the singular exception of TSI programs in which some merchantable material is harvested to partially off-set overhead or accrues during the enhancement procedures, road building or maintenance is rarely associated with reforestation practices. Using many of the same considerations listed above, the land is then unitized and necessary road rights obtained. At this point the land manager is generally ready to begin the implementation of his reforestation plan.

The next consideration is to determine the quality and type(s) of tree the manager wishes to establish on the unit. In the case of managing flat or gently sloping east side pine tree units, this is often done by the natural seeding of the remaining "leave" trees from a commercial thin or shelterwood approach to regeneration. In the case of clear cuts, it is usually necessary to obtain seed or seedlings through any one the several channels.

### Seed Banks

Cooperatives such as the Industrial Forest Association exist that develop seed banks and seedlings for its members. Private concerns such as Simpson Timber near Crawfordsville and Tyee Nursery near Elkton exist that have an excellent record in dealing with land owners interested in developing and maintaining high grade seed banks and seedling supplies. In competition with these firms are federal nurseries, such as the one near Wind River and the D.L. Phipps Nursery, operated by the state of Oregon.

Since conifers only produce cones in sufficient quantities to justify harvesting sporadically (about 7 to 12 years for Douglas Fir), it is usually necessary for land owners to build up their reserves at those times. Cones are often purchased from local pickers or through hiring reforestation contractors during the "good cone years" and the seed is then processed, inventoried and stored for future years. This forms the basic seed bank and the seed, if stored properly, is good for at least 10 or 15 years. "Super" trees are developed by selecting cones



Proper use of a Hoe-dad.

from specific parent trees or by grafting scions from those parents onto root stock located in convenient sites. Through such methods as artificial pollination, establishing progeny test sites or even cloning, these trees can be improved genetically. Physical methods

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of improvement include root pruning, fertilizing, transplanting, containerized growing and chemical treatments to reduce animal damage.

### Site Preparation

As the seedlings are being developed for a specific site, the site itself is usually prepared in some manner so as to reduce competition from vegetation and animals, reverse soil compaction or to otherwise encourage the establishment of the seedlings. Good site preparation reduces future maintenance costs as well

as immediate planting labor costs. Although site prep can involve such procedures as boomer (mountain beaver) trapping, hand brush piling or plowing, it is usually accomplished by the aerial application of herbicides, scarification or broadcast burning. Flat areas are generally scarified into piles or windrows that are often burned as flat terrain does not carry a flame well. Although steep slopes have been scarified through various means, this practice has been discontinued due to problems with erosion.

Broadcast burning is accomplished

by fire-trailing the boundaries of a unit, slashing unmerchantable materials prior to, or following, a logging operation to eliminate unwanted vegetation and to provide fuel, spraying with a dessicant to reduce moisture, and then igniting by hand with drip torches or with jelly gas by helicopter. This is the most natural form of site prep and probably the best for long term management needs. It is also the most dangerous and potentially the most costly.

### Planting

After the site is prepared it is then planted. This is done as quickly as possible to maximize the advantages provided by the preparation. The stock is almost always one-to-three years of age and is planted between September and June while it is dormant. Most planting is now done according to the micro-site method. The desired density, usually between 250 and 500 trees per acre, is determined by the land manager. The planter maintains an average grid of 9 to 14 feet, depending upon the requested density. Variations from this average are made on almost every seedling, depending upon such variables as soil density, slope, vegetation, required shading, animal signs, etc.

Once the planter has determined his exact planting spot, he then prepares it for the plant. This is usually accomplished through some form of "scalping," or removing undesired duff, slash, roots, snow or charcoal from the immediate area. The tree is planted in the scalp as centrally as possible.

There are four basic methods of planting seedlings by hand. Bare-root seedlings are usually planted by means of a hoe-dag, a shovel or a chain saw motor-powered auger. These trees are two or three years old and six inches to three feet in height. Plugs are planted at one year of age with a dibble or hoe-dag. Good planters will plant 500 to 2000 trees a day, depending upon contract specifications, the seedlings used, and the terrain and weather. The planting is continually monitored, as this is definitely the most critical phase of any intensive management program.

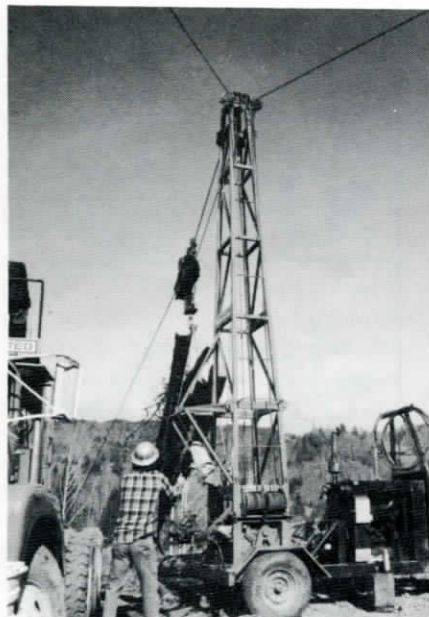
### SMR

Following planting, a wide variety of procedures insuring the establishment of the plantation can take place. Due to the potential diversity of these processes, my firm has taken to categorizing them all under the general heading of seedling maintenance and replacement, or SMR.

(Continued on Page 37.)

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# Reforestation

(Continued from Page 28.)

Included are bud-capping to discourage deer browse, staking and tubing to discourage boomer kill, aerial applications of herbicides, replanting in units with excessive mortality, hack and squirt, trapping, mechanical release, etc. Usually the land manager determines which process is to be done based upon stand exams, past history or the results of a continuous forest inventory (CFI).

After the seedlings are established, a term used when the leaders of the trees are above browse height and above competing vegetation (about five feet) and the basal diameter is large enough to discourage most damage by rodents, (about three-quarters of an inch), very little, if anything, is done for several years.

Once the canopy has closed in, however, a situation in which lateral growth from the trees has filled in most available space between stems, further treatment becomes necessary. Two things can occur at this point. In some areas the shade created by this condition becomes intense enough to kill most ground vegetation. Animals, such as the boomer, may then take to eating the bark on the saplings. If the tree is not killed by girdling, it at least is stunted by the damage and the open wound can be an entryway for any of several diseases. If this were the only problem associated with a closed canopy, the situation could be easily solved with a trapping program.

The basic problem, though, is that the trees begin competing directly with one another for all available light and moisture. If this situation is left untended it results in the addition of several years or even decades to the rotation cycle.

## Thinning

Statistics seem to show that 200 trees will produce about the same fiber per acre over a period of time as 400 or 600 trees will. If so, it only stands to reason that the lesser number of trees will be cheaper to harvest, cheaper to move and worth more at the mill than the pecker poles, although there are a few exceptions to this rule. As a result, most land managers consider pre-commercial thinning (PCT) the most critical and most valuable investment, following planting.

Cross sections of tree stems will show that trees begin growing slower at the point that their canopy closes. By thinning to a desired density at that time, in-

dividual rapid growth continues. By waiting much beyond this point the trees become dependent upon one another for support against the weather, as top growth is not slowed appreciably by the closure. This is what is known as "dog hair." If the trees are thinned too late, they often become subject to wind and snow damage until they can recover their previous growth patterns and extend their roots into the opened areas. This often takes several years and is a critical phase for trees that are thinned late.

Most PCT programs were not implemented until the early seventies and foresters were often too conservative as to their desired specifications. The result has been that thousands of acres have needed to be re-thinned (an expensive process). Now trees are usually thinned between the ages of 9-to-15 years at a density of around 200 to 250



*Staking and tubing is the most widely used method used for protecting young trees. It is costly, requires follow-up maintenance and the boomers still climb up and eat away the top of the tree.*

stems per acre. Besides reducing potential rodent damage and greatly increasing individual growth patterns, PCT has the distinct added advantage of removing deformed and diseased trees, undesired species and competitive brush, as well as favoring healthy, large and well-formed trees of desired species over their less fortunate neighbors. The humus provided by this process is probably also desirable, although it can form a potential fire hazard for a year or two. This is exactly the same approach taken by a vegetable gardener when weeding and thinning his carrots.

## Additional TSI

Between PCT and a commercial thin or clear cut, situations can arise or

specifications be desired in which further reforestation procedures are needed. These might include fertilizing a low-site stand, treating a mistle-toe infestation, removing bug or wind kill, etc. These procedures are known collectively as TSI (referred to earlier). Usually, though, TSI contracts are performed in marginally merchantable or sub-merchantable stands that have gone previously unmanaged.

Management roads might be constructed to remove an over-story of trees, suppressing the bulk of the stand, a multi-stage thinning program may be implemented to compensate for the lack of PCT as a way to increase stand quality without exposing the trees to sun scald, wind or snow damage excessively, pulp trees may be removed from a lodgepole stand in an attempt to make the leave trees vigorous enough to withstand an approaching beetle infestation, or brush may be



*Bud-capping is designed to reduce animal browse damage. This method is not 100% effective as photo indicates.*

piled or broadcast-burned to reduce a potential fire hazard. As a general rule of thumb, if most of the material removed is merchantable as logs, then the process is probably a logging procedure. If not, it is probably a reforestation procedure.

Obviously, the procedures out-lined above, if performed throughout the life of a stand (40-to-100 years), would be expensive. With the price of money today, it is easy to see how foresters are becoming more and more conscious of the economics of tree farm management. Investments totaling hundred of dollars per acre that are compounded for decades, must be made in as judicious a manner as possible. However, once a site has been prepared and a permanent

(Continued on Page 39.)



## Teamwork: It stands the test of time.

Some things endure. Real teamwork is one of them. A logger knows his livelihood depends on it.

Teamwork makes it possible to do the tough jobs. You can count on those you've learned to trust. People who know how you work and what it takes to get the job done.

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No fast talk. No insurance company shuffle. Just lower costs and help when you need it. It's teamwork that works for you.



**SAIF CORPORATION**  
The Oregon Company



(Continued from Page 37.)

harvest road system installed, all further rotations become far less costly to manage.

Another factor is the crop itself. No more widow makers, dog hair, snags, or walls of salal. Mainly, just high grade, well-spaced, uniform trees with good access between them. The perceptive contract logger can easily see that as time goes on, he will be building less roads, paying less insurance, using smaller equipment (less payments) and having to be more efficient to compensate for these factors. This translates to greater investments in job training and accounting.

Where the ground is flat or gently sloping, he can see that the logger is becoming far more mechanized than he was even a decade ago. In these instances, additional investments into modern harvesting equipment is more than compensated by dramatically reduced payroll costs. Since the bulk of Oregon's log dollars are located on steep ground, however, it is unlikely that we will ever become as mechanized as the southern logging industry. Fallers and choker setters are apt to be with us for quite a while.

### Forest's Future

We have looked at what the private forest of the future is going to be like and how the logger is likely to be affected, but what effect does reforestation have on the logger now? Besides the obvious changes in harvesting procedures implemented over the past several years, additional job opportunities are becoming available.

Many loggers use their large Cats to



*Brush and slash clean-up on the author's land. House in left background was built of beetle-killed pine entirely.*


scarify units during the summer. Small Cats are used to fire-trail and brush pile in the summer and can be used to plant certain areas during the winter and spring. Snag falling is being performed more often than in the past and many cutters are slashing during seasonal down-time or in conjunction with the falling.

As managers see the needs of an improved harvest road system, additional roads are being built and existing roads are being re-opened and maintained more than ever. Loggers with access to helicopters are yarding slash to portable chippers, spraying herbicides, fertilizing, burning and transporting seedlings to areas with poor access.

During depressed times, such as we are currently experiencing, this potential for diversity is proving to be a great benefit to many contractors. As harvest levels increase, these procedures will guarantee a safer, more productive work environment in the decades to follow.

### The Years Ahead

The next twenty years are projected as difficult ones for the Pacific Northwest timber industry. After that, there should be a resurgence of interest in forest products from this region, much as is being experienced in the south today. Reasonably projected demands for timber in the next century often make it appear as if the primary variable for the future of the logging industry is the stability of civilization itself.

Assuming present population trends, the present (although decreasing) per capita demands for wood fiber and the rapid development of new wood products by the forest industries, it seems probable that there will soon be a demand for all of the wood Oregon can produce. Modern reforestation practices are insuring that there will be trees when they are needed. And trees are the best job insurance there is for logging. Working together, we can obtain the maximum yield, now and forever, from Oregon's forests. 



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