NATIONAL FOREST HARVEST POLICIES

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Trees, particularly on National Forests, seem to be the center of much controversy. We hear that Canadian trees are too cheap. We also hear that U.S. trees are too expensive. Standing trees are too valuable to cut and cut trees are not worth beans. What does this all mean? Today I plan to discuss how the U.S. Department of Agriculture, Forest Service harvesting policies relate to these issues.

The Issues

The last three years have not been good for the forest products industry. Throughout the nation the recession has reduced demands for wood products. These reductions have been exacerbated by increased Canadian imports of inexpensive softwood lumber. Even in the South, Douglas-fir from Canada has had an important effect. For example, a spokesman for Kirby Forest Industries recently estimated that over half of Georgia's softwood lumber purchases came from Canada. As a result, the U.S. Coalition for Fair Canadian Lumber Imports has sought relief through countervailing duties on Canadian softwood lumber, shakes, shingles, and fence exports to the U.S. More will be said about this situation in the following papers.

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At the same, wood products firms on the West Coast are concerned about high stumpage prices on National Forest timber sales. These high prices have produced numerous sales which are unprofitable to harvest at today's prices. For example, lumber prices in February were about $175 per thousand board feet while average Forest Service sales contracts were about $270 per thousand.\(^1\) The result has been an understandable reluctance to harvest on the part of industry and a build up of approximately 36 billion board feet of uncut timber on National Forests under contract.\(^2\) This amounts to over a 5 year supply at present cutting rates. Most (72 percent) of this contracted timber is located in California, Oregon, Washington, and northern Idaho.

On another front the Ninth Circuit Court of Appeals has ruled that the Forest Service environmental impact statement for our roadless area review (RARE II) is legally inadequate as a basis for allocating National Forest lands to nonwilderness in California. This may put in jeopardy all activities, including harvesting, on roadless lands in the National Forests (about 23 million acres). Since 1979 about 500 timber sales totaling 1.6 billion board feet have been made in these areas.\(^2\)

If all these problems are not enough, there are also continuing concerns over the long run timber supply situation.

\(^2\) John B. Crowell, Jr., Assistant Secretary of Agriculture in speech to Western Timber Association, Sacramento, California, Feb. 25, 1983.
Past as well as present projections point to a shortage of timber in the future, particularly for softwoods. Whether this shortage is measured in terms of a gap between supply and demand or in terms of rising real timber prices matters little. It exists in our projections and has focused concerns on softwood harvest levels. Because the National Forests contain over 50 percent of the softwood sawtimber inventory in our country and because they provide only 23 percent of the annual harvest, many of these concerns have been directed toward harvest rates on National Forests, particularly in the West.

Some, such as Clawson (1976), have argued that National Forest harvests could be increased so that the public could achieve a better rate of return on its investments in timber. Others have argued that increased harvests should be used to dampen price fluctuations and counter inflationary trends. Still others have called for using harvests from National Forests to provide employment stability where harvests from private lands may be decreasing (e.g., Beuter et. al., 1976). However, not everyone is calling for increased harvests; a number of groups with concerns for wilderness, endangered wildlife and plant species, water quality, scenic beauty, and the asset value of private timber have argued for decreased harvesting.

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These then are some of the issues that National Forest harvest policies must address. The rest of this paper will cover the long term policies concerned with timber harvest schedules and to a lesser extent the short term polices concerned with sales. While these policies have the most impact in the West, there are some implications for the South.

**Harvest Scheduling Policy**

The Forest Service's harvest scheduling policies are based on statements found in the National Forest Management Act of 1976. The law specifies that timber harvest schedules: provide for multiple uses, maintain a sustained yield, reflect intensive management practices, usually harvest at culmination of mean annual increment and do not exceed the long term sustained yield capacity (LTSYC) except under certain conditions. Though these considerations are subject to varying interpretations, the Forest Service has provided more specific regulations (USDA 1982) based on our understanding of both the language and the intent of the law.

I do not intend to review in detail how these regulations impact harvest scheduling, but instead, point out a few implications. First, consideration of nontimber forest uses usually requires a reduction in harvest from the biological potential. In fact, on a number of National Forests, these uses are more restrictive than the consideration of nondeclining flow. For example, Fight et. al., (1978) found that multiple use and legal considerations were important in constraining harvest on five of the seven forests they studied. Departure alternatives have little meaning in these situations.
Second, limiting harvest to those stands which have reached culmination of mean annual increment of growth can reduce harvest levels, though exceptions are made for silviculture treatment, salvage, and multiple-use purposes. Johnson et al., (1977) found that permitting harvesting below culmination of mean annual increment increased the harvest level an average of 12 percent on the western forests they studied.

Finally, I wish to discuss the policy on departures. Departures occur when harvest levels greater than those defined in the base sale schedule are planned. The base sale schedule is defined as the timber sale schedule in which the quantity of timber planned for sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade of the planning period, and this planned sale and harvest for any decade is not greater than the long-term sustained yield capacity. This is better known as nondeclining flow.

The regulations (USDA 1982) specify that departures will be considered where better attainment of overall multiple-use objectives can be realized and any of the following conditions exist:

1. None of the base sale schedules achieve the RPA program goals.

2. Large mortality losses can be significantly reduced or prevented.

3. Timber age class distributions can be improved, thereby facilitating the achievement of a regulated forest.
4. Implementing the base sale schedule would cause a substantial adverse economic impact.

In all cases, the regulations do not specify the magnitude, duration, incremental change, or minimum level for departures. These are based on the multiple-use objectives, environmental impacts, community considerations, mill capacity, and private timber supply documented in the individual forest plans.

Planning Policy

Now let me digress for a minute to explain how these harvest scheduling policies relate to the land and resource management planning process. As most of you know, Forest Service planning is carried out at the National, Regional, and Forest levels with appropriate interconnections. The 1980 RPA Program and Policy (USDA 1980) established targets which are being incorporated in the regional plans. These, in turn, guide forest plans, where implementation occurs and where most of our efforts are presently being concentrated. At the same time, alternatives being developed by the Forest Service are providing input for the 1985 RPA program.

The planning process at the forest level involves the use of FORPLAN; a computerized linear programming model with the capability to simultaneously assign land for different uses and schedule various resource outputs. It is through FORPLAN that the previously discussed timber harvest scheduling policies are applied.
Certain options are required by the regulations, (USDA 1982). The first series of required FORPLAN runs in the analysis phase establishes benchmarks. These include but are not limited to:

1. The minimum level of management which complies with applicable laws and regulations—a stewardship option.

2. The maximum capability to provide various mixes of goods and services including timber—in a sense the maximum potential.

3. The maximum present net value of outputs considering those that have established market prices. Constraints for nondeclining flow, culmination of mean annual increment, and budget are omitted.

4. The maximum present net value of outputs considering assigned monetary values, but not nondeclining flow, culmination of mean annual increment, or the budget.

5. The level of goods and services provided if present management direction continues.

If the timber resource is significant, runs 3 and 4 are to be recalculated with the nondeclining yield and culmination of mean annual increment constraints added. These benchmarks establish reference points to display trade-offs and opportunity costs.
The second series of required FORPLAN runs show alternatives that address:

1. The current program.

2. RPA program targets assigned in the Regional Plan.

3. Marketed and nonmarketed outputs.

4. Other alternatives designed to respond to public issues and management concerns.

5. A range of outputs and expenditures.

As part of the analysis phase, departures from base sale schedules are to be considered at least for the preferred alternative.

Together these benchmarks and alternatives enable the analysis of a wide range of base sale schedules dealing with such issues as biological impacts, economic and social factors, land use policies, multiple-use considerations, regulations and other policies.

From the wide range of land use decisions and harvest schedules developed in the analysis phase, a preferred alternative is selected and presented in the forest plan and environmental impact statement. The selection is based on the maximization of net public benefits which is interpreted to mean:
- Outputs that have monetary values exhibit the largest excess of discounted values over discounted costs.

- Outputs and uses that cannot be valued are achieved at least cost.

- Economic and environmental impacts are acceptable.

- Biological and physical conditions of the land are maintained or improved.

Consequently, maximization of net public benefits is largely a judgment based on qualitative and quantitative considerations which are national, regional, and local in scope. It is the umbrella objective function for National forest management, and encompasses the many policies, conditions, and criteria previously described in determining the level and trajectory of timber harvest.

It is through this planning process that the question of wilderness designation will be addressed unless Congress decides otherwise. Here in the South only Missouri is exempted because of previous legislation.

Sales Policy

Now let me return to my discussion on policy with a brief review of where we stand on sales policies. As I mentioned earlier, forest industry particularly on the West Coast has bought some very expensive National Forest timber. We estimate that nearly one-fourth of this timber under
contract in Oregon, Washington, and California could not be operated profitably at even the highest prices projected for the future.\textsuperscript{5/}

Thus, extension of contract terms will not help many firms out of their predicament.

What to do? The Forest Service has already granted about 1,500 timber contract extensions since October 1979. In addition, we have also changed sales procedures to discourage further speculation and have offered some short term, small volume timber contracts. Except for extending contracts further this is about all the Forest service can do without new legislation.

Senators Hatfield and McClure have proposed bills to provide some relief. However, as long as Senator Jesse Helms and the Administration oppose these measures, there seems to be little hope for their passage. It seems that southern firms are not as anxious for a bailout as some of the western firms are.

In the meantime, the Forest Service has made a study of the consequences of a number of options ranging from doing nothing to forgiving all, in hopes that some fair solution might be found. Some of the ideas considered included allowing purchasers to buy out their contracts at reduced prices, forgiving part of the contracts for each firm and

\textsuperscript{5/} Crowell, op. cit., for this and following figures.
extending contract deadlines further. The results of this study should be available shortly.

Policy Impacts on the South

The National Forest harvesting policies I have discussed will all have major impacts on the West because that is where much of the Forest Service timber is and many of the problems arise. What is less clear is how these policies will impact the South. Certainly, there are National Forests in the South and they do have timber—about 1.1 billion board feet was harvested last year. Thus, there may be some direct impacts. However, I suspect that the main impacts in the South will be indirect and come through competition between western and southern producers for market shares.

The RPA Assessment (USDA Forest Service, 1981) projects that an increasing share of the softwood consumption will come from the South as the West Coast runs low on timber. This share is expected to increase from 45 percent in 1976 to almost 50 percent by 2000. These projections do not consider changes in National Forest harvest of uncut backlog under contract, departing from nondeclining flow or reconsidering roadless areas. What the impacts of such actions might be will depend on the specifics of the actions themselves. But, judging from the interest that the prospects have generated, the impacts are obviously perceived as being potentially significant. Some preliminary analyses using the Timber Assessment Market Model (Adams and Haynes, 1980) indicate that the Canadian and not the Southern producers should have concerns for increased West Coast harvests.
Conclusion

In conclusion, the controversy surrounding National Forest harvesting policies stems from the perceived impacts of these policies. Even in the South where National Forests play a minor role in timber supply, concerns have been expressed. But I would argue that we do not know with any degree of certainty what these impacts will be.

For the long run, the harvest levels determined through the planning process have not yet been set for many forests. In the plans that have been completed, there has been no clear trend toward increased or decreased harvest levels, even though some forests have selected a departure as their preferred alternative. The roadless area re-evaluation adds another dimension of uncertainty. Thus, the results and impacts in the aggregate to date are not conclusive.

For the short run, the problems with all the high priced Forest Service timber under contract have not been resolved. The Administration is presently considering the results from the study of implications of alternative policies before suggesting a resolution to this problem. Sales policies to avoid the problem in the future by reducing speculation have been implemented and others may be considered. Congress has proposed legislation to resolve the situation, but not inacted any. Again, the results to date are not conclusive.

In a nutshell, all this reminds me of the ancient curse attributed to Confucius, "May you live in interesting times." These times certainly are interesting.


