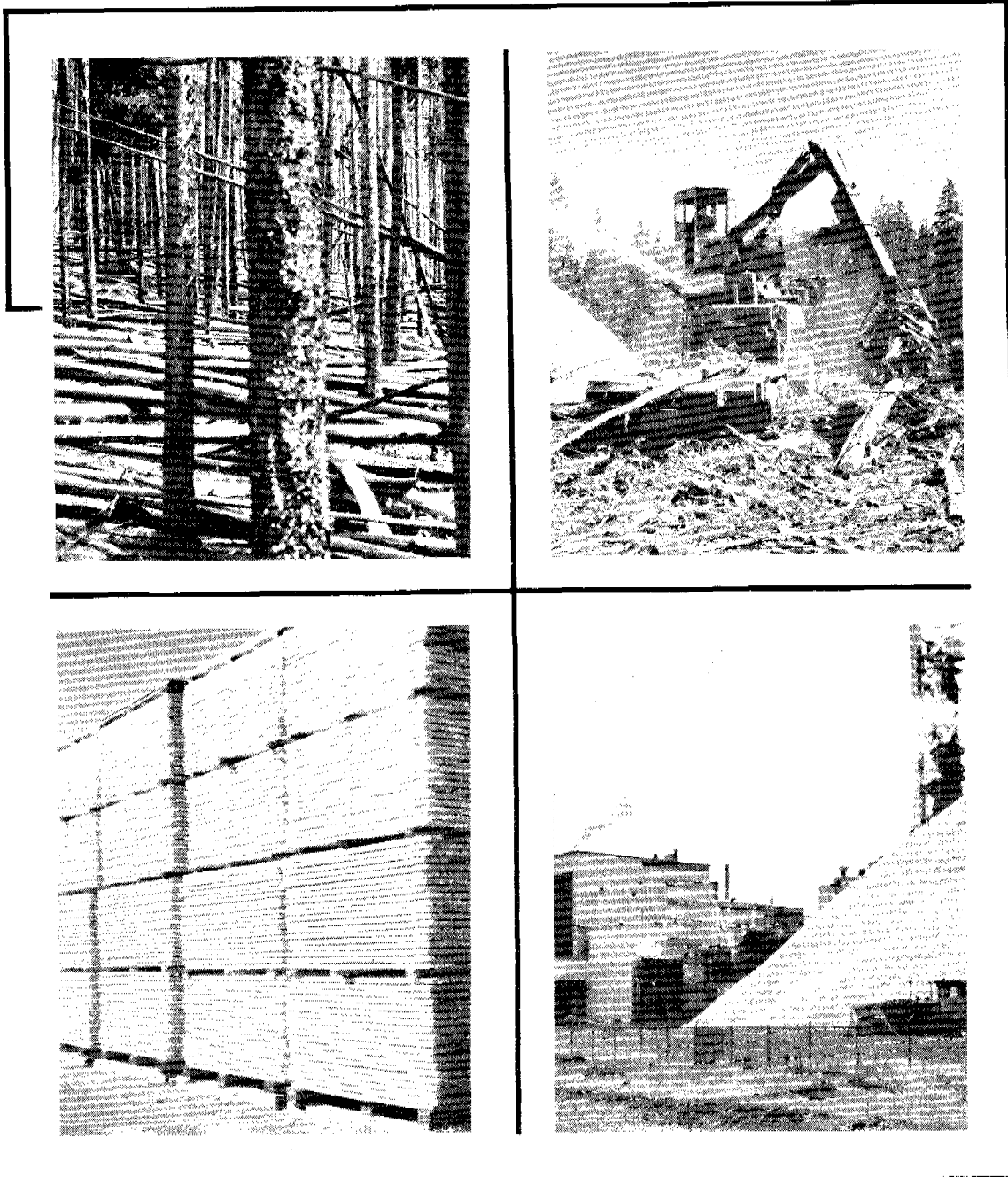


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Symposium Proceedings Nov. 28-30, 1979, Missoula, Mont.

USDA Forest Service General Technical Report INT-110  
Intermountain Forest and Range Experiment Station  
U.S. Department of Agriculture, Forest Service

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March 1981

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Sponsored by:

Intermountain Forest and  
Range Experiment Station,  
Forest Service, USDA

Bureau of Business and  
Economic Research,  
University of Montana

Forest Products Research Society  
Inland Empire Section

INTERMOUNTAIN FOREST AND RANGE EXPERIMENT STATION  
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THE IMPLICATIONS OF IMPROVED RESIDUE UTILIZATION  
ON TIMBER SALE ACTIVITIES

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ABSTRACT

Improved residue utilization on timber sales requires new and innovative economic and practical approaches on timber sales. Varying uses, resource needs, and economic limitations complicate the land manager's task of salvaging this material.

KEYWORDS: residue, utilization, economics, complicate

My purpose is to discuss some of the implications of improved residue utilization on timber sale activities. It would be convenient to simply equate that subject with the day-to-day business of harvesting National Forest timber. However, it is not quite that easy. In many respects it is a whole new ball game.

For that reason my comments on a residue utilization program will be directed toward the economic and practical side of getting material moved with a minimum of problems for both the seller and the buyer. They are also directed principally toward the removal of dead timber, rather than to tighten utilization specifications on otherwise merchantable trees.

First, I must digress a bit. Each time a land manager decides to offer a timber sale, he presupposes he can sell it. Otherwise he accomplishes nothing. While successful sales are the general rule with standard timber and products, a residue utilization program can easily become an administrative nightmare. Ideally, the land manager is not supposed to let economics influence his environmental ethics. Yet in the business of residue utilization, he must do precisely that!

I am not here to recommend national policy to you. Realistically, however, residue is residue only because economics say so! There are most certainly methods of improving the economic picture, but in many ways, there is no golden fleece. With government timber, and perhaps with private stock, residue

utilization depends on how much we are willing to pay for it. We have many options, but in general, each one costs the taxpayer money, at least in today's dollars.

We must also be careful not to restrict our thinking to timber sales themselves. It may be necessary for the government to pay the user, instead of the user paying the government for removing this material. This might be done through land management contracts with salvage provisions. It may be in the form of augmentation, supplementation, or outright construction of road access to the material. Perhaps a less painful way to make ends meet would be through tax incentives to industry. No matter what, if we want to move more residue, the user must somehow gain by his participation, and the government must ultimately pay for any deficit.

### THE NATURE OF RESIDUE UTILIZATION SALES

A number of points must be considered in preparing residue utilization sales. First, a sale of residue by itself is usually a sorry situation. The operation which left the residue is the basic mistake, and the residue sale only the consequence. Removal of the only the high-value element of a stand, such as green timber or cedar salvage, may very well leave behind an economically impossible residue removal chance. The need for advance planning and integration with regular sale programs is obvious.

At first thought complete utilization sounds simple to specify--just take everything down to a minimum size. Let me assure you a deadwood contract is much the opposite. Describing several products, many of which overlap, in a way which is practical and nondiscriminatory to all potential buyers, is a difficult task. It seems each buyer has a different set of product specifications he wants the land manager to use, and nearly all of them result in incomplete utilization. No matter what choice is made, someone is unhappy.

A partial answer to this is a wide variety of sale sizes with varying specifications. Perhaps specifications should not be ironclad, and permit bidders to propose their own utilization standards along with their bid. It is easy to see how such a program would give a manager headaches and a good deal more work.

Measurement of residue is another bugaboo. Conventional scaling is often meaningless. From the government's standpoint, an easy remedy is sale by weight. I am convinced that weight is the best common denominator, but do not overlook the plight of the user who has to deal with inventories, payrolls, and production targets.

Even then the land manager cannot simply ignore end-product estimates. Since Forest Service timber appraisal methods are usually based on traditional measurements such as board feet, conversion to weight in the appraisal process is often troublesome.

One more generality which may be useful is to recognize that yarding unmerchantable material (Y.U.M.) is a key part of the battle. Y.U.M. with optional removal will accommodate industrial specialities, but still permit subsequent resale or use by others of the remaining material. This method has proven merit.

Still, complete utilization is seldom a realistic goal. One simply cannot and probably should not get it all. Even in small-diameter species such as

lodgepole pine, only a small percentage of the total bulk is in small diameter logs and short pieces. You can often afford to specify a larger top diameter or a longer log length on dead material, and still get 90 percent of the volume. Overly restrictive standards can very easily devastate an otherwise good offering.

#### LAND MANAGEMENT IMPLICATIONS

Residue utilization proposals often present uncomfortable situations to the land manager. The real stickler is that once a tree dies, the alternatives dwindle to either cutting it or leaving it. Since total utilization is not a realistic objective, managing residues becomes a pick-and choose proposition. What works well in one situation may be a complete failure elsewhere. Such things as regenerative systems, slash disposal methods, esthetics, wildlife needs, and fuels management are only examples of the complexities.

All this adds up to a time-consuming and burdensome addition to the land manager's regular work. The temptation is, of course, to go on as always and let improved utilization fall by the wayside. In some situations this would matter little, except in the size of the slash piles. At other times, wood utilization problems are inescapable, such as in the Targhee National Forest. In any case, the land manager must display initiative and imagination if meaningful changes are to be realized.

I also suggest that we have at times created our own residue problems. How often have we cut through a stand which is 60 or 70 percent defective, and then wondered what to do with the residue? Perhaps we should have stored that wood on the stump until technology and economics had caught up with us. Wouldn't we love to have back what we used to waste, even five or ten years ago?

#### ECONOMIC GUIDELINES

The subject of waste wood economics is a two-edged sword. As I mentioned earlier, we need to be conscious of the tax dollar. On the other hand, we must offer a profitable venture to prospective buyers. There is no better way to thread this needle than to involve industry all the way. Alternatives are often abundant, if we will only search for them.

You will commonly find that road access is the key to success or failure of a program. An already deficit sale simply cannot support the needed road construction. A well-planned access program supported by appropriated funds solves a myriad of problems and affords many more options to the land manager.

The same principle applies to reforestation. Although the Chief's policy normally requires that reforestation costs be included in minimum charges for timber, this cost can be a backbreaker. It can also be administratively overcome!

The October, 1979 Journal of Forestry contains a thought-provoking editorial on salvage sales in the Rocky Mountain States. It seriously questions the propriety of salvage on marginal sites requiring these high road development and reforestation costs. Indeed, the National Forest Management Act mandate to identify marginal timber sites could very possibly change the entire picture.

Still, we may be wise to look somewhat beyond the end of our noses in evaluating costs and benefits. The eventual cost of high intensity wildfire may make current investments in salvage efforts seem insignificant.

#### THE LAND MANAGER'S STRATEGY

If I had to condense my advice to both land managers and to industry on utilization of residues, I would have to simply say "hang loose". Maximize the involvement of all parties. The buyer and seller should regard each other as equal partners in this game. After all, if one loses, so does the other. Don't worry about being accused of "being in bed" with one another. You'd better be, if you expect to succeed! Search for new ideas, but be wary of big, new deals. Try instead to work with established markets and local industrial outlets. Expect a strong resistance to change. I can assure you that you will encounter it from all sides.

Last of all, don't ever say it can't be done. If you do not take positive steps toward improved utilization, you will soon find that the good old days are gone, and you are left behind. There is no middle ground.