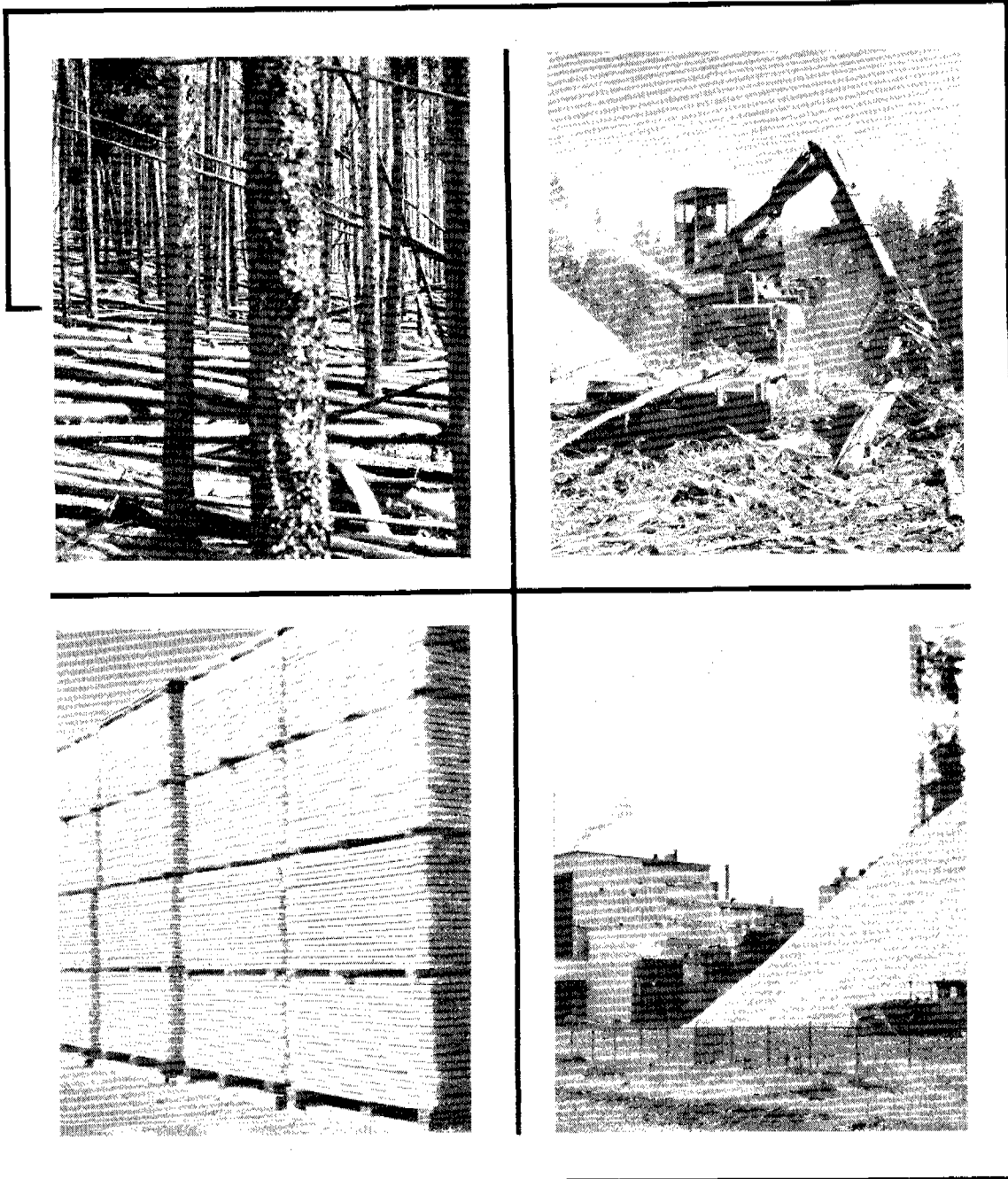


HARVESTING AND UTILIZATION OPPORTUNITIES FOR FOREST RESIDUES in the northern rocky mountains



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

USDA Forest Service General Technical Report INT-110
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LEGISLATION AND POLICY INFLUENCING WOOD RESOURCE UTILIZATION

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ABSTRACT

The framework for harvesting and utilization opportunities for forest residues includes a number of long standing as well as recently enacted statutes. Air and water quality standards as set forth in additional legislation also have an affect on utilization opportunities. A further emerging factor pertaining to the harvesting and utilization of the forest biomass is our land base, and its availability. Recently the Senate has enacted a number of bills dealing with the question of timber economics.

KEYWORDS: residue utilization, forest policy, legislation

National materials policy has, as a framework for harvesting and utilization opportunities for forest residues, long standing as well as recently enacted statutes. Beginning with the now repealed Organic Administration Act of 1897, it has been made clear that the establishment of national forests is "...to furnish a continuous supply of timber for the use and necessities of citizens of the United States." The Monongahela court decision, which raised questions about the Forest Service's ability to sell timber unless it consisted of, "...the dead, matured, or large growth of trees found upon such national forests as may be compatible with the utilization of the forests thereon," caused Congress to enact the 1976 Forest Management Act. Originally Congress merely wanted to clear up the uncertainty created by the Monongahela issue; however, in the process a major piece of legislation emerged, supplementing and amending the historic Forest and Rangeland Renewable Resources Planning Act. During the legislative process leading to the passage of the 1976 Forest Management Act a wide range of forest users and other interested members of the public contributed. This interest has carried forward in the preparation of regulations, which it is fair to say, has been highly controversial.

It is useful for our purposes to quote from Section 3 of the 1976 Forest Management Act:

Reports on Fiber Potential, Wood Utilization by Mills, Wood Wastes and Wood Product Recycling

(c) The Secretary shall report in the 1979 and subsequent Assessments on:

(1) the additional fiber potential in the National Forest System including, but not restricted to, forest mortality, growth, salvage potential, potential increased forest products sales, economic constraints, alternate markets, contract considerations, and other multiple use considerations;

(2) the potential for increased utilization of forest and wood product wastes in the National Forest System and on other lands, and of urban wood wastes and wood product recycling, including recommendations to the Congress for actions which would lead to increased utilization of material now being wasted both in the forests and in manufactured products; and

(3) the milling and other wood fiber product fabrication facilities and their location in the United States, noting the public and private forested areas that supply such facilities, assessing the degree of utilization into product form of harvested trees by such facilities, and setting forth the technology appropriate to the facilities to improve utilization either individually or in aggregate units of harvested trees and to reduce wasted wood fibers. The Secretary shall set forth a program to encourage the adoption by these facilities of these technologies for improving wood fiber utilization.

(d) In developing the reports required under subsection (c) of this section, the Secretary shall provide opportunity for public involvement and consult with other interested governmental departments and agencies.

The Forest Service reports it is not ready with an assessment on this section at this time. The Resources Planning Act (RPA) Assessment is due to be submitted to Congress on January 22, 1980.

The Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, was enacted in 1976, and it has caused concern in other industries because of the tentative regulations concerning the definition of hazardous waste. The implications in the wood fiber field are yet to be assessed, but because of the volume of fiber involved, as well as the diverse conditions, the impact on future use and planning is likely to be significant. Clean air and water laws will continue to have a major impact on all phases of forestry activities.

Energy programs and policy are developing rather rapidly as we grapple with our goal to be less dependent on foreign sources of oil. The Society of American Foresters in a study report of a task force titled Forest Biomass as an Energy Source, reports:

Forest biomass--a renewable, versatile source of energy--can contribute the equivalent of approximately 9.5 quads to U.S. energy needs. (This value is exclusive of wood required for conventional products, but includes

aboveground biomass in net growth from commercial forests; mortality; and wood from land clearing, noncommercial lands, urban tree removals, and urban wastes.) If commercial forestland were fully stocked and intensively managed, biomass available for energy could increase to the equivalent of 18.9 quads by mid-21st century.

Biomass can be burned directly or converted to gas, oil, and char. Many forest industries, particularly pulp and paper manufacturers, now burn biomass for up to half their fuel needs. Blending biomass-derived alcohol with gasoline and using biomass in electrical generation may become practical.

The Federal Energy Administration (FEA) estimated in 1976 that annual energy use in the United States was about 75 quadrillion BTUs (or 75 quads), and that use in 1985 would be 98.9 quads. The agency also estimated that even under the most favorable conditions the United States cannot expect to gain more than six quads from emerging technology by 1990. A more realistic figure, it indicated might be two quads.

The emerging technologies evaluated by FEA included solar, geothermal, and synthetic fuels, but evidently excluded forest biomass. Energy currently obtained from wood is estimated at 1.1 to 1.7 quads. Members of the task force are confident that wood use for energy is increasing greatly, but we have no way of knowing the extent.

The comment that FEA evaluation excluded forest biomass potential reinforces similar comments, which emphasized the lack of attention by FEA to forest biomass potential. Despite the apparent lack of overall planning and assessment of this energy resource, there are many local and regional examples of increasing utilization of fiber for energy production. Studies and actual use of efficient wood stoves are being conducted by the Tennessee Valley Authority. The Eugene (Oregon) Water and Electric Board^{1/} uses large amounts of sawmill residue (hog fuel) for steam generation. Washington Water Power in Spokane has announced plans to build a wood fired generating plant. Pullman Swindell Company gave a presentation to the U.S. Senate staff last summer on their woodex pellet production from wood waste. More and more individuals are discovering the small chain saw and using spare time to gather firewood from a variety of sources.

Private companies have expressed interest in installing medium-size power generating plants using wood waste transported for up to 50-mile radius. The main problem in finalizing plans is the inability to reach agreement between the land manager and the power company over a long term supply of fiber at an assured price.

Pending legislation, including Synfuels, the promotion of the development of energy from agricultural commodities, forest products, and their wastes and residues, and rural energy conservation practices, and windfall profits (biomass property), which allows 20 percent tax credit, provide more substance for utilizing the energy potential of wood.

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Discussions with the staff members in the office of the Chief of the Forest Service in the past few years indicate they have about all the authority they need to develop a more comprehensive utilization of wood fiber for our energy needs. The key factors involved in moving ahead seem to be economics, and supply and demand. One has only to note the rapid change in the price of foreign oil--and our dependence on it--along with Middle East uncertainties to estimate where our energy situation is heading. A prudent person would have to consider all of our energy options, especially underutilized domestic options such as wood biomass.

Forest products industries continue to face the roller coaster effect of the price of money and its relation to the housing market. With the interest rates at 15 percent and up, some experts predict housing starts at a 1.1 million level next year. Should the price of lumber and plywood drop, mills having timber sales with super-high bid prices, and no cheap timber to mix, will have a tough time during this economic period. Since the only certainty in the lumber business is "uncertainty," the secondary source of wood biomass is likely to be affected. Our softwood imports have recently risen from 20 to 26 percent of United States consumption, which becomes more of a factor in our balance of payments.

There are other factors that have an effect on our land base, its availability, and the potential for utilization of wood biomass. The ultimate disposition of the Forest Service roadless areas (RARE II) is yet to be determined. The Senate recently passed a central Idaho wilderness bill, followed by an Oregon wilderness bill. The Idaho bill ordered RARE II lands in central Idaho released with report language, while the Oregon bill released remaining RARE II lands with statutory release language. It is likely the disposition of RARE II by the Congress still has a long way to go. This, of course, leaves a cloud over the planning process for wood fiber management.

A bill by Montana's Senator Melcher authorizes the recovery of wood residues in the national forests for use as fuel, and for conversion to use as petrochemical substitutes or wood products. This is done through the use of residue removal incentives. Residue recovery as a function of brush disposal, slash disposal, site preparation, timber stand improvement, and other relevant forest practices has not yet been thoroughly examined. Again, markets, costs, supply and demand, and other factors need to be thoroughly examined.

A current battle is emerging over timber economics, especially in the Northern, Intermountain, and Rockies areas of our National Forest system. Whether timber management can meet a test of 5 percent or 10 percent on investment is being challenged. This is another important factor in the fiber potential picture. Along with this goes road construction policy and other harvest requirements under the 1976 Forest Management Act and subsequent regulations.

The previous discussion suggests there are many conflicting and vague policies that address, or fail to, the opportunity for wood biomass management. We have a new challenge to be creative, and unique new markets to consider that are in the national interest. Wood biomass management can have a beneficial effect on tomorrow's forests. We hope we can develop a positive policy to utilize this opportunity.