



## Recent Work from The Sustainable Wood Production Initiative

## Timber Supply and Forest Resource Projections for the Pacific Northwest: A Progress Report

Darius M. Adams and Gregory S. Latta



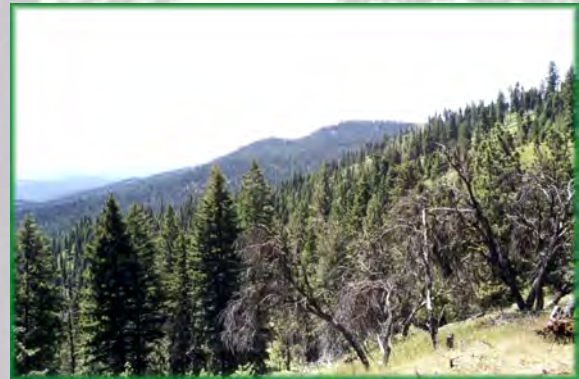
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### Key Findings

This update from the Sustainable Wood Production Initiative (SWPI) highlights recent work by Darius Adams and Gregory Latta (Department of Forest Resources, Oregon State University) presented at the March 2005 client meeting in Troutdale, Oregon. Previous work by Adams and Latta with SWPI

involved examining the roles of forest policy and private investment in sustaining future timber harvest in the Pacific Northwest. Key findings included that if forest policy and investment levels are left unchanged, private lands as a whole should be able to maintain recent historical levels of harvest. New forest policies that reduce available land for timber harvest on private lands will lead to roughly proportional reductions in timber harvest. Also, due to the scarcity of larger trees and older stands on private lands, focusing harvest in these areas will have a larger proportional impact on timber harvest.

At a SWPI client meeting in March of 2005, Darius Adams presented new findings that integrated private and public resource projections and market simulations, timber quality projections, and inventory data.



Photo—USFS

Owing to increased risk of fire, insects, and disease as a result of overstocking in National Forests, several restoration thinning programs have been proposed. These proposals vary by the volume of trees to be harvested and the total area to be treated.

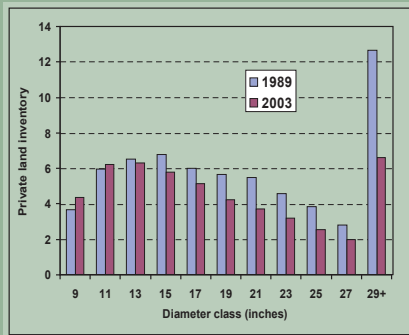
### Linking the Public and Private Resource

With a special emphasis on the role of restoration thinning in eastern Oregon, Adams and Latta are linking resource projections and market simulations across ownerships—from private to public lands. Because of increased risk of fire, insects, and disease as a result of dense stocking in forests, several restoration thinning programs have been proposed. Each of these proposals varies by the volume of trees to be harvested and the total area to be treated. The current research asks: What effect would such programs have on mills and the management of private lands, where would the programs make an impact, and for how long? Even based on conservative estimates of restoration thinning, it appears that thinning opportunities would be numerous and dispersed, and that large volumes of

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potential sawtimber would be available for harvest. In one modeling scenario where only unrestricted lands—holdings excluding wilderness and designated roadless areas—were included, harvest extended to 4.4 billion board feet on 1.5 million acres. Restoration thinning would come at a critical time to supplement declining harvest on industrial lands. However, these programs would likely only postpone and not eliminate the rapid decline in the number of mills. In general, subsidizing areas where the prospective costs of treating unmerchantable material exceed the values of any sawtimber removed is the most economical option. However, identifying these areas and estimating their costs and merchantable removals, may entail high administrative costs that can outweigh the benefits of subsidies.

## Timber Quality Projections



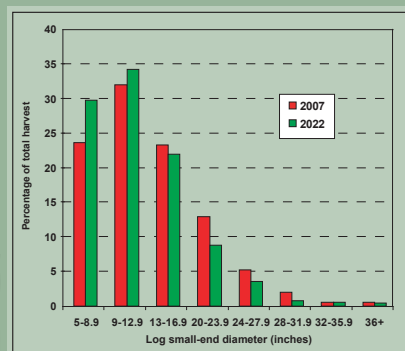
Projected distribution of western Oregon timber harvest by small-end diameter: all species.

Increasing the resolution of timber quality measures has numerous benefits for private and public resource managers. The current work by Adams and Latta includes extending timber harvest projections to include measures of log size and grade—important information for mills and for wood procurement planning. And by projecting tree height and crown characteristics, managers can make more informed decisions regarding fish and wildlife habitat quality. Growth of individual stems can be projected through time, and

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harvested tree data can be reduced to log volumes by using bucking rules. Finally, inventory characteristics could be tracked in a similar way, but this effort would require large data storage capabilities.

## Updating Inventories



Aggregate results of updating process—total private board foot inventory.

Adams and Latta use harvest projection models to update older inventories so that resource projections in the Pacific Northwest can be based on estimates from a common point in time. In western Washington, for example, the more comprehensive 1989 inventory was updated to overcome limitations in the most recent 2000 inventory when only partial sampling occurred. In this process, a harvest scheduling model was used to mimic historical harvest patterns and update the inventory to 2003. The updating process proceeds year by year (from 1989 to 2003), with harvest constrained to follow historical levels by county and owner for total harvest, by half-state for different tree species, and matches historical patterns of period-to-period variation in harvest.



Photo—Courtesy of Erik Aderson

## More on the Sustainable Wood Production Initiative

We serve our clients by providing accessible information to increase the utility of science in natural resource decisionmaking. For more information about the Sustainable Wood Production Initiative or other related projects, visit our Web site (<http://www.fs.fed.us/pnw/about/programs/fsd/sustain-wood.shtml>) or contact:

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