

NC-RWU-4154

PROBLEM 3

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meetings

Advance Summaries of Presentations

Central-Lake States Regional Meeting

May 22-23, 2001

*Doubletree Hotel
Bloomington, Minnesota*

Shiley, Stephen R.; Sullivan, Neal. 2001. Growth, production, and consumption of forest resources in the Upper Great Lakes region of the United States. In: Advance summaries of presentations: Central-Lake State regional meeting, 2001 May 22-23; Bloomington, MN. [City, State unknown: National Council for Air and Stream Improvement (NCASI)]: 3 p.

REGIONAL



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LS-FOREM / NCASI FORESTRY SESSION

STRATEGIC OPPORTUNITIES AND INFORMATION NEEDS IN GREAT LAKES FOREST AND ENVIRONMENTAL MANAGEMENT

Tuesday
May 22, 2001

8:00 A.M. - 5:00 P.M.

- 8:00 A.M. Welcoming Remarks
Dr. James Shepard, NCASI
Dr. David Karnosky, Michigan Tech. University and LS-FOREM
Dr. Alan Ek, University of Minnesota
- Forest Resource Conditions**
- 8:15 A.M. Growth, Production, and Consumption of Forest Resources in the Upper Great Lakes Region of the United States
Dr. Steven Shifley, USDA Forest Service
- 8:45 A.M. An Overview of Ontario's Forest Resources and the Framework for Evaluating Forest Sustainability
Betty van Kerkhof, Ontario Ministry of Natural Resources
- 9:15 A.M. Progress in Implementing the Annual Forest Inventories - Initial Results from Minnesota
Dr. Ron McRoberts, USDA Forest Service
- 9:45 A.M. Break
- Silviculture**
- 10:00 A.M. Recipes and Models for Productivity
Dr. Alan Ek, University of Minnesota
- 10:30 A.M. Opportunities in Larch Silviculture and Breeding
Dr. David Karnosky, Michigan Tech. University
- 11:00 A.M. Larch Wood, Fiber, and Pulp Properties
Gary Wyckoff, Mead Corporation
- 11:30 A.M. Opportunities in Aspen Silviculture and Breeding
Dr. Andrew David, University of Minnesota
- NOON - 1:00 P.M. BUFFET LUNCHEON**
- 1:00 P.M. Preliminary Assessment of Aspen as a Future Fiber Resource in Ontario
Dr. Wayne Bell, Ontario Forest Research Institute
- 1:30 P.M. Vegetation Management on a Lake States Hybrid Poplar Fiber Farm
Dr. Tom Nichols, Boise Cascade Corp.
- 2:00 P.M. Forest Soil Productivity - Opportunities for Enhancement in the Great Lakes Region
Dr. Kurt Pregitzer, Michigan Tech. University and USDA Forest Service
- 2:30 P.M. Break

Environment - Part 1

- 3:00 P.M. Air Quality and Climate Change
Dr. David Karnosky, Michigan Tech. University
- 3:30 P.M. An Update on Forest Water Quality, Wetlands, and Silvicultural Chemicals
Dr. James Shepard, NCASI
- 4:00 P.M. Riparian Management Research in Minnesota
Dr. Jim Perry, University of Minnesota
- 4:30 P.M. Biodiversity and Endangered Species
Dr. Ben Wigley, NCASI

**Wednesday
May 23, 2001**

8:00 A.M. - 3:00 P.M.

Environment - Part 2

- 8:00 A.M. Demographic Trends Affecting Forest Management: Northern Wisconsin Case Studies
Dr. Volker Radeloff, University of Wisconsin
- 8:30 A.M. Industry Approaches to Landscape Management -Examples from the Pacific Northwest
Dr. Craig Loehle, NCASI
- 9:00 A.M. Environmental Issues and Opportunities Related to Forest Biotechnology
Dr. Alan Lucier, NCASI
- 9:30 A.M. Break
- Markets, Production Systems, and Strategic Fibers**
- 10:00 A.M. Global Trends and Their Implications for Regional Issues
Dr. Peter Ince, USDA Forest Service
- 10:30 A.M. Regional Opportunities to Produce Strategic Fibers
Sam Radcliffe, George Banzhaf & Company
- 11:00 A.M. Regional Strategic Fiber Challenges in a Global Market
Fred Souba, Stora Enso North America
- 11:30 A.M. Quality Forestry: The Challenge to Change
John McCoy, UPM Kymmene

Noon - 1:00 P.M. LUNCH (on your own)

Forestry Research Panel

- 1:00 P.M. Research Needs, Opportunities and Priorities
Dr. Don Riemenschneider, USDA Forest Service
Dr. David DeYoe, Ontario Ministry of Natural Resources
Dr. Alan Ek, University of Minnesota
Dr. Alan Lucier, NCASI

GROWTH, PRODUCTION, AND CONSUMPTION OF FOREST RESOURCES IN THE UPPER GREAT LAKES REGION OF THE UNITED STATES

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The Lake States (MN, WI, MI) have 47 million acres of forest—36 percent of the total land area. Nearly all of that acreage is capable of producing commercial crops of timber. The growing stock volume on those forests is 60 billion cubic feet. In addition to growing stock volume there are 7 billion cubic feet of volume on trees of noncommercial species, trees with poor form, and trees with excessive decay; some of these non-growing tock trees are also used for forest products. The annual volume growth on growing stock trees is about 1.6 billion cubic feet or 2.7% of inventory. Annual timber removals for forest products and other reasons such as land clearing are equivalent to about half of net growth (*i.e.*, growth adjusted for mortality). Consequently, since the 1950's, the volume of timber in the Lake States has increased from 25 to 60 billion cubic feet of growing stock on timberland. This pattern is consistent with the remainder of the North Central Region (Lake States plus IN, IL, IA, MO).

Wood harvested in the North Central Region is utilized for sawtimber (31%), pulp products (31%), composite panels (12%), veneer (2%), and fuelwood (22%). Although there are more than 2,000 sawmills in the North Central Region, the 39 pulp mills annually process a volume of roundwood that is nearly equal to that of all sawmills combined. Substantial volumes of recycled fiber supplement fiber from roundwood in pulp production.

In the Lake States, volume growth exceeds removals, and this is projected to continue. From this perspective the timber supply in the Lake States region appears to be sustainable. However, when we talk about sustainable timber supplies, we rarely frame the discussion in the context of consumption of timber products. We each consume the equivalent of 73 cubic feet of wood annually, and the people living in the Lake States consume the equivalent of 1.5 billion cubic feet of wood each year. This consumption amounts to nearly the total growth on growing stock in the Lake States and far exceeds the harvest of growing stock volume. Even after accounting for the volume of non-growing stock material that is utilized for products, consumption of forest products by the people who live in the Lake States is not balanced with the volume that is harvested and processed. Expanding the comparisons to the entire North Central Region increases the imbalance; the large metropolitan areas of Chicago, Indianapolis, Des Moines, and St. Louis are large centers of consumption within sparsely forested landscapes.

Currently, the forests of the South, Southeast, and the Pacific Northwest provide the majority of wood and paper products that are consumed in the United States. Net imports amount to 10 percent of U.S. consumption (primarily softwood lumber imports from Canada). Consumption by the expanding U.S. population is expected to push the volume of domestic roundwood harvest from about 20 billion cubic feet to more than 26 billion cubic feet in the next 50 years (Haynes, 2001). Draft projections of long term U.S. timber supply and demand have recently been completed through 2050 as part of the RPA Timber Assessment. Projections based on current trends in forest change, in economic indicators, and in technological improvements show a scenario for the next 50 years where: U.S timber harvest increases by

38 percent; Eastern timber harvest increases from 79 % to 83 % of total U.S. harvest; Southern forests account for 60% of U.S. harvest; the expanding consumption of wood and paper products continues to be predominantly drawn from domestic timber supplies; and imports increase in a total volume but decrease as a percent of total consumption (Haynes *et al.*, 2000, Haynes, 2001).

If we look back over the previous 50 years at the magnitude of changes in forest management techniques, in the forest products industry, and in public attitudes, it seems inevitable that the next 50 years will also bring great changes. At state and local levels we will certainly experience conflict over forest management practices and timber harvesting. Increasingly, we have the opportunity to view our own role in the growth, production, and consumption of forest resources at multiple scales: from local to state to regional to national to global. This raises a number of interesting and important questions about how we manage and utilize wood locally within the context of all the commodities and amenities that forests provide. Specifically, we might consider:

- How much wood will we consume?
- How much wood can we produce?
- How much wood should we produce?
- How can we balance growth, harvest, and consumption in a way that is sustainable?
- What productivity gains are possible through science?
- What are other options (e.g., conserve, recycle, substitute other materials)?
- What will the larger forest landscape be like under various options?
- What is the local impact on forest ecosystems if we locally grow and harvest more timber?
- What is the global impact on forest ecosystem sustainability if we do not?

Many of these questions are difficult to answer definitively, but they are questions that we should be cognizant of whether our interaction with wood resources is as a land owner, wood processor, land manager, or consumer.

Acknowledgement: Substantial financial and technical support for this work was provided by the Forest Inventory and Analysis Research Work Unit of the North Central Research Station, St. Paul, MN.

Literature Cited

- Haynes, Richard W. (tech. coord.). 2001 (Draft) The 2000 RPA Timber Assessment: An Analysis of the Timber Situation in the United States, 1996 to 2050.
Available online at www.fs.fed.us/pnw/sev/rpa/ (May 7, 2001).
- Haynes, Richard W. (tech. coord), Darius Adams, Ralph Alig, David Brooks, Irene Durbak, James Howard, Peter Ince, David McKeever, John Mills, Ken Skog, Xiaoping Zhou. 2000. Projections of the U.S. Timber Supply and Demand Situation to 2050 Draft Findings from the USDA Forest Service 2000 RPA Timber Assessment.
Available online at www.fs.fed.us/pnw/sev/rpa/ (May 7, 2001)

For more information about the forest resources of the Lake States see:

Forest Inventory and Analysis data base and table generator website at
<http://www.srsfia.usfs.msstate.edu/scripts/ew.htm> (May 7, 2001)

Forest Inventory and Analysis Mapmaker Website at
<http://www.ncrs.fs.fed.us/4801/FIADB/index.htm> (May 7, 2001)

The Great Lakes Ecological Assessment Website at
<http://www.ncrs.fs.fed.us/gla/> (May 7, 2001)

The library of on-line publications at the North Central Research Station at
<http://www.ncrs.fs.fed.us/> (May 7, 2001)

or write to

Publications Distribution
Forest Products Lab
One Gifford Pinchot Drive
Madison, WI 53705-2898

For Further Reading

A thought-provoking series of articles and replies related to consumption of forest resources can be found in the October, 2000, issue of the *Journal of Forestry*:

Goetzl, A. 2000. Consumption and concerns: a delicate balance. *J. For.* 98:19-21.

Lemons, J. 2000. The heavy footprint—and moral burden—of consumers. *J. For.* 98:15-18.

Luzadis, V. A. 2000. On consumption and the land ethic: a moral and professional imperative. *J. For.* 98:16-18

MacCleery, D. W. 2000. Aldo Leopold's land ethic: is it only half a loaf? *J. For.* 98:5-7

Skog, K. E. and P. J. Ince. 2000. Industrial ecology and sustainable forestry. *J. For.* 98:20-21.

Wernick, I. K., P. E. Waggoner, and J. H. Ausubel. 2000. The foresters lever; industrial ecology and wood products *J. For.* 98:8-14