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MISCELLANEOUS REPORT NO. 18

X COMMODITY DRAIN FROM FORESTS OF THE LAKE STATES )

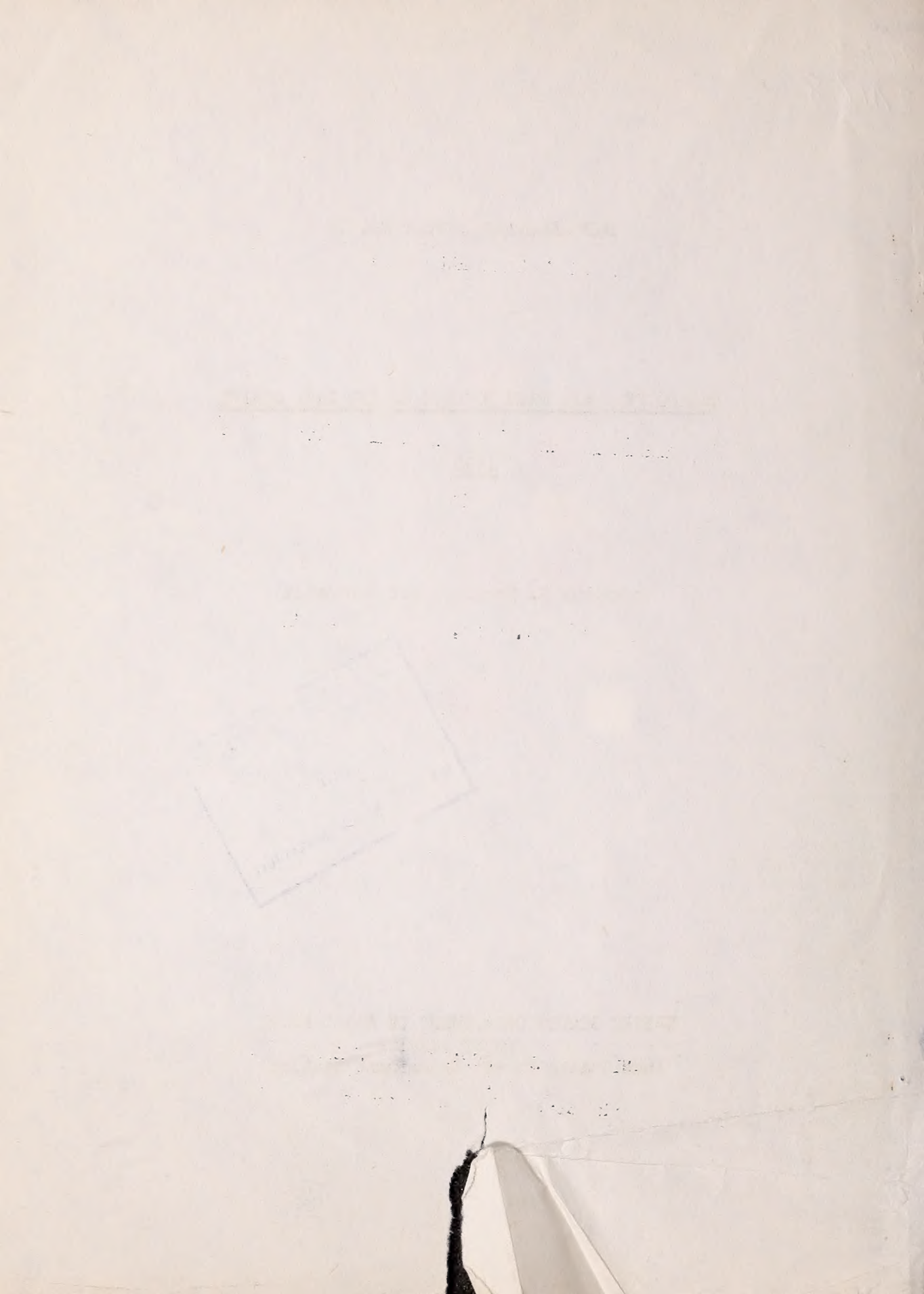
1950 X

By Arthur G. Horn, Forest Economist



UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
Lake States Forest Experiment Station





September 1, 1952

Miscellaneous Report No. 18

COMMODITY DRAIN FROM FORESTS OF THE LAKE STATES - 1950

By Arthur G. Horn, Forest Economist<sup>1/</sup>  
Lake States Forest Experiment Station<sup>2/</sup>

INTRODUCTION

Industries and public agencies frequently request data on forest products manufacture and timber drain. To meet these demands effectively and to provide estimates for forest surveys, the Station periodically prepares summaries such as presented here for 1950. Similar reports have been prepared each year since 1946.<sup>3/</sup>

In using the data given in this report, one should keep in mind the standards and definitions used in compiling the information (see definitions).

BASIS FOR PRODUCTION STATISTICS

By means of a sample survey of representative sawmills, the Bureau of the Census collected and published regional lumber production statistics for 1950. For lack of state-wide figures, the Station applied production ratios to the regional figures to obtain a breakdown of the estimated quantity of lumber produced in Minnesota, Wisconsin, and Michigan. The Bureau of the Census state-wide lumber production statistics for 1947 with some adjustments for closure of several large mills during the interim were used to determine production ratios.

Origin by state and county of logs consumed by large mills in 1950 was also collected by the Bureau of the Census. The Station, in turn, obtained similar information from most of the medium-sized mills. From these data interstate log shipments for 1950 were determined.

State-wide lumber production estimates and interstate log shipments for 1950 were used as a basis for determining state-wide sawlog and saw-bolt production estimates.

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<sup>1/</sup> The author gratefully acknowledges the help from many owners and operators of primary wood-using establishments in the region who so kindly cooperated and furnished the basic information so necessary for this report.

<sup>2/</sup> Maintained by the U. S. Department of Agriculture, Forest Service, in cooperation with the University of Minnesota, University Farm, St. Paul 1, Minnesota.

<sup>3/</sup> Miscellaneous Report No. 7 (1946), Miscellaneous Report No. 9 (1947), Station Paper No. 20 (1948), and Miscellaneous Report No. 19 (1949).



THE HISTORY OF THE UNITED STATES

OF THE

REVOLUTION

The history of the United States is a story of a people who have grown from a small colony of English settlers to a great nation of free men and women. It is a story of struggle and sacrifice, of courage and heroism, of a people who have fought for their rights and their freedom.

The story begins in 1607, when a group of English men sailed across the Atlantic Ocean to establish a permanent settlement in North America. They were the first of many who would come to this land, seeking a better life and a new world.

THE STRUGGLE FOR FREEDOM

As the colonies grew, they began to chafe under the control of the British government. They demanded more say in their own affairs and more freedom from British taxation. The British government, however, refused to grant these demands, and the colonies began to rebel. The struggle for freedom was on.

The struggle for freedom was a long and hard one. It was a struggle of the people against the government, of the colonies against the British. It was a struggle that would shape the future of the United States.

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For veneer, pulp distillation, excelsior, and cooperage industries, a complete canvass was made of all known plants early in 1951. The volume of logs and bolts received at these plants during the calendar year was used as a basis for production estimates.

For such minor items as piling, poles, hewn ties, round and split mine material, etc., production statistics were obtained by using results of a comprehensive survey made in 1947 and comparing with reliable production indexes for 1947-50; i.e., annual underground ore production by states, pole and piling receipts of several large distributors who handle most of the regional output. Because financial limitations precluded making special surveys, estimates for fuel wood, posts, and miscellaneous items were based largely on surveys made during the latter part of World War II. Some adjustments were made on the basis of more recent findings from wholesalers and distributors.

### CONVERSION FACTORS

The Station has collected supplemental information on each product as to (1) percent of wood volume obtained from live, dead, and cull trees, and from by-product materials, and (2) proportion of volume cut from saw-timber and pole-timber trees. Gross volumes of individual products were determined from information furnished by industry. For example, stock records for posts, poles, and piling showed the number of pieces by length, top, and butt diameters. Such information made possible calculations of gross volume for each product. By incorporating these findings with data collected during a previous field survey (1936-37), a set of conversion and waste factors were prepared which are closely in line with present utilization standards of wood-using industries.

### GENERAL LIMITATIONS OF DATA

The Forest Survey accuracy goal for timber drain estimates is  $\pm 5$  percent per billion cubic feet, which would permit a standard error of slightly more than 6 percent on the 1950 estimate for the Lake States. Because of the absence of an accurate survey for fuel wood for that year, the estimates presented here may not be within that limit. We feel, however, that the estimates are the best obtainable at this time and will serve a useful purpose. Figures for most products are within the proposed limits.

### SURVEY DEFINITIONS

#### Commodity Production

The gross volume of a forest product made from any class of material from commercial or noncommercial forest lands. Production has been expressed in the following standard survey units: board-foot log scale, International 1/4-inch rule; cord (4x4x8 feet), rough-wood basis; number of pieces; and number of cubic feet (inside bark).







## Cutting Drain

The net volume of timber removed from growing stock on commercial forest lands through commodity production and logging waste during the year, expressed in board feet, International 1/4-inch rule, and cubic feet (i.b.).

Drain from saw-timber trees.--The net volume (board feet, International 1/4-inch) of the log portion in softwood trees 9 inches and larger and hardwood trees 11 inches and larger, d.b.h., removed during logging operations. The cubic-foot volume shown includes both the saw-timber equivalent plus the volume in the tops of softwood trees to a 4-inch minimum.

This report differs slightly from those of 1946-1948 in that tops of hardwood saw-timber trees have not been included as drain for lack of sufficient data. Such material will be included in the future only when adequate data are available to make the calculations.

Drain from pole-timber trees.--The net volume in cubic feet (i.b.) of pole timber removed through cutting during the year. Included in this class are softwood trees from 5.0 to 8.9 inches and hardwood trees from 5.0 to 10.9 inches d.b.h. It includes cubic-foot volume found in the tree stems to a minimum top diameter of 4 inches (i.b.).





CUTTING DRAIN ON PRIMARY GROWING STOCK

1950





















Table 4.--Net timber drain resulting from fuel wood cutting in the Lake States - 1950

Species and state	Net timber drain by size classes			Species and state	Net timber drain by size classes				
	Total				Total				
	M cu.ft.	M cu.ft.	M cu.ft.		M cu.ft.	M cu.ft.	M cu.ft.		
White pine	1,650	1,360	370	90	50	7,576	5,810	1,766	4,050
Minnesota	210	170	50	110	10	2,210	1,690	510	1,180
Wisconsin	960	790	210	530	50	2,840	2,180	660	1,520
Michigan	480	400	110	260	30	2,520	1,940	590	1,350
Red pine	350	290	70	200	20	3,470	2,650	800	1,850
Minnesota	140	120	30	80	10	1,890	1,450	440	1,010
Wisconsin	140	120	30	80	10	1,790	600	180	420
Michigan	70	50	10	40	--	790	600	180	420
Jack pine	1,590	1,290	300	870	80	10,080	7,770	2,360	5,410
Minnesota	690	570	150	380	40	3,150	2,430	740	1,690
Wisconsin	830	670	180	450	40	2,360	1,820	550	1,270
Michigan	70	50	10	40	--	4,570	3,520	1,070	2,450
Spruce	490	410	100	270	40	1,260	970	300	670
Minnesota	280	230	60	150	20	160	120	40	80
Wisconsin	70	60	10	40	10	1,100	850	260	590
Michigan	140	120	30	80	10	27,090	20,850	6,320	14,530
Balsam	480	410	110	270	30	5,510	4,250	1,290	2,960
Minnesota	340	290	80	190	20	13,070	10,060	3,050	7,010
Wisconsin	70	70	20	40	10	8,510	6,540	1,980	4,560
Michigan	70	50	10	40	--	20,630	15,880	4,810	11,070
Tamarack	2,820	2,320	620	1,540	160	9,290	7,160	2,170	4,990
Minnesota	2,130	1,750	470	1,160	120	5,040	3,870	1,170	2,700
Wisconsin	550	450	120	300	30	6,300	4,850	1,470	3,380
Michigan	140	120	30	80	10	1,890	1,450	440	1,010
Cedar	550	460	120	310	30	470	360	110	250
Minnesota	140	120	30	80	10	790	600	180	420
Wisconsin	340	290	80	190	20	630	490	150	340
Michigan	70	50	10	40	--	4,890	3,760	1,140	2,620
Hemlock	2,950	2,420	640	1,620	160	2,840	2,180	660	1,520
Minnesota	--	--	--	--	--	1,100	850	260	590
Wisconsin	1,990	1,630	430	1,090	110	950	730	220	510
Michigan	960	790	210	530	50	90,120	69,320	21,010	48,310
Softwood total	10,830	8,960	2,370	5,980	610	25,680	19,760	5,990	13,770
Minnesota	3,930	3,250	870	2,150	230	31,190	23,970	7,260	16,710
Wisconsin	4,950	4,080	1,080	2,720	280	33,250	25,590	7,760	17,830
Michigan	2,000	1,650	420	1,110	100	101,000	78,280	23,380	54,290
Maple	13,240	10,180	3,080	7,100	--	29,610	23,010	6,860	15,940
Minnesota	320	240	70	170	--	36,140	28,050	8,340	19,430
Wisconsin	5,040	3,870	1,170	2,700	--	35,250	27,220	8,180	18,940
Michigan	7,880	6,070	1,840	4,230	--				









Table 6.--Net timber drain resulting from chemical wood cutting in the Lake States - 1950

Species and state	Net timber drain by size classes			Species and state	Net timber drain by size classes		
	M bd.ft.	M cu.ft.	Tops		M bd.ft.	M cu.ft.	Tops
White pine	--	--	--	Birch	3,380	970	150
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	140	40	10
Michigan	--	--	--	Michigan	3,240	900	140
Red pine	--	--	--	Basswood	--	--	--
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--
Michigan	--	--	--	Michigan	--	--	--
Jack pine	--	--	--	Elm	140	40	10
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--
Michigan	--	--	--	Michigan	140	40	10
Spruce	--	--	--	Beech	1,080	300	50
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--
Michigan	--	--	--	Michigan	1,080	300	50
Balsam	--	--	--	Cork	140	40	10
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--
Michigan	--	--	--	Michigan	140	40	10
Tamarack	--	--	--	Aspen	--	--	--
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--
Michigan	--	--	--	Michigan	--	--	--
Cedar	--	--	--	Ash	270	70	10
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--
Michigan	--	--	--	Michigan	270	70	10
Hemlock	--	--	--	Miscellaneous	--	--	--
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--
Michigan	--	--	--	Michigan	--	--	--
Softwood total	--	--	--	Hardwood total	11,360	3,150	510
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	410	110	20
Michigan	6,350	1,760	290	Michigan	10,950	3,040	490
Minnesota	--	--	--	All species	11,360	3,150	510
Wisconsin	270	70	10	Minnesota	--	--	--
Michigan	6,080	1,690	270	Wisconsin	410	110	20
				Michigan	10,950	3,040	490





Table 7.--Net timber drain resulting from cutting excelsior belts in the Lake States - 1950

Species and state	Net timber drain by size classes			Species and state	Net timber drain by size classes		
	M bd.ft.	M cu.ft.	Tops		M bd.ft.	M cu.ft.	Tops
White pine	--	--	--	Birch	--	--	--
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--
Michigan	--	--	--	Michigan	--	--	--
Red pine	--	--	--	basewood	40	330	10
Minnesota	--	--	--	Minnesota	--	--	320
Wisconsin	--	--	--	Wisconsin	30	250	10
Michigan	--	--	--	Michigan	10	80	80
Jack pine	--	--	--	Elm	--	--	--
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--
Michigan	--	--	--	Michigan	--	--	--
Spruce	--	--	--	beech	--	--	--
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--
Michigan	--	--	--	Michigan	--	--	--
Balsam	--	--	--	Cak	--	--	--
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--
Michigan	--	--	--	Michigan	--	--	--
Tamarack	--	--	--	Aspen	640	4,970	130
Minnesota	--	--	--	Minnesota	--	--	4,840
Wisconsin	--	--	--	Wisconsin	290	2,240	60
Michigan	--	--	--	Michigan	350	2,730	70
Cedar	--	--	--	Cottonwood	--	--	--
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--
Michigan	--	--	--	Michigan	--	--	--
Hemlock	--	--	--	Miscellaneous	--	--	--
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--
Michigan	--	--	--	Michigan	--	--	--
Softwood total	--	--	--	Hardwood total	680	5,300	140
Minnesota	--	--	--	Minnesota	--	--	5,160
Wisconsin	--	--	--	Wisconsin	320	2,490	70
Michigan	--	--	--	Michigan	360	2,810	70
Maple	--	--	--	All species	680	5,300	140
Minnesota	--	--	--	Minnesota	--	--	--
Wisconsin	--	--	--	Wisconsin	320	2,490	70
Michigan	--	--	--	Michigan	360	2,810	70





Table 8.--Net timber drain resulting from fence post cutting in the Lake States - 1950

Species and state	Net timber drain by size classes				Species and state	Net timber drain by size classes			
	Tct. l.		Pole tbr.			Tops		Tops	
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.		M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	--	--	--	--	Birch	230	200	50	150
Minnesota	--	--	--	--	Minnesota	50	40	10	30
Wisconsin	--	--	--	--	Wisconsin	90	80	20	60
Michigan	--	--	--	--	Michigan	90	80	20	60
Red pine	450	400	90	280	Basswood	--	--	--	--
Minnesota	360	310	70	220	Minnesota	--	--	--	--
Wisconsin	90	90	20	60	Wisconsin	--	--	--	--
Michigan	--	--	--	--	Michigan	--	--	--	--
Jack pine	360	770	180	530	Elm	410	340	90	250
Minnesota	630	560	130	390	Minnesota	50	40	10	30
Wisconsin	140	120	30	80	Wisconsin	180	150	40	110
Michigan	90	90	20	60	Michigan	180	150	40	110
Spruce	--	--	--	--	Beech	--	--	--	--
Minnesota	--	--	--	--	Minnesota	--	--	--	--
Wisconsin	--	--	--	--	Wisconsin	--	--	--	--
Michigan	--	--	--	--	Michigan	--	--	--	--
Balsam	90	90	20	60	Oak	12,060	9,810	2,410	7,400
Minnesota	90	90	20	60	Minnesota	2,700	2,200	540	1,660
Wisconsin	--	--	--	--	Wisconsin	6,390	5,200	1,280	3,920
Michigan	--	--	--	--	Michigan	2,970	2,410	590	1,820
Tamarack	610	570	130	390	Aspen	1,260	1,030	250	760
Minnesota	270	240	50	170	Minnesota	630	520	130	390
Wisconsin	230	210	50	140	Wisconsin	360	290	70	220
Michigan	140	120	30	80	Michigan	270	220	50	170
Cedar	6,480	5,710	1,300	3,980	Cottonwood	--	--	--	--
Minnesota	1,350	1,190	270	830	Minnesota	--	--	--	--
Wisconsin	1,080	950	220	660	Wisconsin	--	--	--	--
Michigan	4,050	3,570	810	2,490	Michigan	--	--	--	--
Hemlock	140	130	30	90	Miscellaneous	540	450	110	340
Minnesota	--	--	--	--	Minnesota	90	80	20	60
Wisconsin	90	90	20	60	Wisconsin	270	220	50	170
Michigan	50	40	10	30	Michigan	180	150	40	110
Softwood total	8,660	7,670	1,750	5,330	Hardwood total	14,770	12,070	2,970	9,100
Minnesota	2,700	2,390	540	1,670	Minnesota	3,610	2,960	730	2,230
Wisconsin	1,630	1,460	340	1,000	Wisconsin	7,380	6,020	1,480	4,540
Michigan	4,330	3,820	870	2,660	Michigan	3,780	3,090	760	2,330
Maple	270	240	60	180	All species	25,430	19,740	4,720	14,430
Minnesota	90	80	20	60	Minnesota	6,310	5,350	1,270	3,900
Wisconsin	90	80	20	60	Wisconsin	9,010	7,480	1,820	5,540
Michigan	90	80	20	60	Michigan	8,110	6,910	1,630	4,990



Table 9.--Net timber drain resulting from cutting utility poles in the Lake States -- 1950

Species and state	Net timber drain by size classes			Total	Net timber drain by size classes		
	M bd.ft.	M cu.ft.	Tops		M bd.ft.	M cu.ft.	Tops
White pine	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--
Red pine	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--
Jack pine	440	155	85	15	55	15	--
Minnesota	410	145	80	15	50	15	--
Wisconsin	30	10	5	--	5	--	--
Michigan	--	--	--	--	--	--	--
Spruce	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--
Balsam	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--
Tamarack	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--
Cedar	2,660	1,040	530	110	340	110	--
Minnesota	1,510	550	310	60	180	60	--
Wisconsin	250	90	50	10	30	10	--
Michigan	1,100	400	230	40	130	40	--
Hemlock	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--
Softwood total	3,300	1,195	675	125	395	125	--
Minnesota	1,920	695	390	75	250	75	--
Wisconsin	280	100	55	10	35	10	--
Michigan	1,100	400	230	40	130	40	--
Maple	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--
All species	3,300	1,195	675	125	395	125	305
Minnesota	1,920	695	390	75	250	75	230
Wisconsin	280	100	55	10	35	10	35
Michigan	1,100	400	230	40	130	40	130





Table 10.--Net timber drain resulting from hemlock cutting in the Lake States - 1950

Species and state		Net timber drain by size classes			Species and state			Net timber drain by size classes		
		Total	Saw thr.	Pole tbr.	Tops	Total	Saw thr.	Pole tbr.	Tops	
		M bd.ft. M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M bd.ft. M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.	
White pine	Minnesota	--	--	--	--	--	--	--	--	
	Wisconsin	--	--	--	--	--	--	--	--	
	Michigan	--	--	--	--	--	--	--	--	
Red pine	Minnesota	--	--	--	--	--	--	--	--	
	Wisconsin	--	--	--	--	--	--	--	--	
	Michigan	--	--	--	--	--	--	--	--	
Jack pine	Minnesota	--	--	--	--	--	--	--	--	
	Wisconsin	--	--	--	--	--	--	--	--	
	Michigan	--	--	--	--	--	--	--	--	
Spruce		5	--	--	--	--	--	--	--	
	Minnesota	--	--	--	--	--	--	--	--	
	Wisconsin	--	--	--	--	--	--	--	--	
	Michigan	5	--	--	--	--	--	--	--	
Balsam		--	--	--	--	--	--	--	--	
	Minnesota	--	--	--	--	--	--	--	--	
	Wisconsin	--	--	--	--	--	--	--	--	
	Michigan	--	--	--	--	--	--	--	--	
Tamarack		5	--	--	--	--	--	--	--	
	Minnesota	5	--	--	--	--	--	--	--	
	Wisconsin	--	--	--	--	--	--	--	--	
	Michigan	--	--	--	--	--	--	--	--	
Cedar		55	20	10	10	--	--	--	--	
	Minnesota	5	--	--	--	--	--	--	--	
	Wisconsin	--	--	--	--	--	--	--	--	
	Michigan	50	20	10	10	--	--	--	--	
Hemlock		10	--	--	--	--	--	--	--	
	Minnesota	--	--	--	--	--	--	--	--	
	Wisconsin	--	--	--	--	--	--	--	--	
	Michigan	10	--	--	--	--	--	--	--	
Softwood total		75	20	10	10	--	--	--	--	
	Minnesota	10	--	--	--	--	--	--	--	
	Wisconsin	--	--	--	--	--	--	--	--	
	Michigan	65	20	10	10	--	--	--	--	
Maple		--	--	--	--	75	20	10	10	
	Minnesota	--	--	--	--	10	--	--	--	
	Wisconsin	--	--	--	--	--	--	--	--	
	Michigan	--	--	--	--	65	20	10	10	





Table 11.--Net timber drain resulting from mine timber cutting in the Lake States - 1950

Species and state	Net timber drain by size classes			Total	Species and state	Net timber drain by size classes			
	M bd.ft.	L cu.ft.	Saw tbr.: Pole tbr.: Tops			M bd.ft.	L cu.ft.	Saw tbr.: Pole tbr.: Tops	
White pine	50	10	--	50	Birch	2,060	490	340	150
Minnesota	50	10	--	50	Minnesota	20	--	--	--
Wisconsin	--	--	--	--	Wisconsin	200	50	30	20
Michigan	--	--	--	--	Michigan	1,840	440	310	130
Red pine	220	70	20	220	Basswood	--	--	--	--
Minnesota	220	70	20	220	Minnesota	--	--	--	--
Wisconsin	--	--	--	--	Wisconsin	--	--	--	--
Michigan	--	--	--	--	Michigan	--	--	--	--
Jack pine	3,270	980	350	3,270	Elm	520	120	90	30
Minnesota	3,270	980	350	3,270	Minnesota	160	40	30	10
Wisconsin	--	--	--	--	Wisconsin	40	10	10	--
Michigan	--	--	--	--	Michigan	320	70	50	20
Spruce	20	--	--	20	Beech	380	90	60	30
Minnesota	--	--	--	--	Minnesota	--	--	--	--
Wisconsin	--	--	--	--	Wisconsin	--	--	--	--
Michigan	20	--	--	20	Michigan	380	90	60	30
Balsam	--	--	--	--	Oak	60	10	10	--
Minnesota	--	--	--	--	Minnesota	--	--	--	--
Wisconsin	--	--	--	--	Wisconsin	20	--	--	--
Michigan	--	--	--	--	Michigan	40	10	10	--
Tamarack	6,220	1,830	600	6,220	Aspen	--	--	--	--
Minnesota	3,020	890	320	3,020	Minnesota	--	--	--	--
Wisconsin	440	130	50	440	Wisconsin	--	--	--	--
Michigan	2,760	810	290	2,760	Michigan	--	--	--	--
Cedar	5,350	1,620	570	5,350	Ash	290	70	50	20
Minnesota	930	290	100	930	Minnesota	290	70	50	20
Wisconsin	270	90	30	270	Wisconsin	--	--	--	--
Michigan	4,150	1,240	440	4,150	Michigan	--	--	--	--
Hemlock	1,020	300	110	1,020	Miscellaneous	--	--	--	--
Minnesota	--	--	--	--	Minnesota	--	--	--	--
Wisconsin	30	--	--	30	Wisconsin	--	--	--	--
Michigan	990	300	110	990	Michigan	--	--	--	--
Softwood total	16,150	5,810	1,710	16,150	Hardwood total	10,010	2,380	1,670	710
Minnesota	7,490	2,240	1,220	7,490	Minnesota	580	140	100	40
Wisconsin	740	220	80	740	Wisconsin	600	140	100	40
Michigan	7,920	2,350	840	7,920	Michigan	8,830	2,100	1,470	630
L. pine	6,700	1,000	480	6,700	All species	26,160	7,190	4,290	2,420
Minnesota	110	30	10	110	Minnesota	8,070	2,380	1,320	830
Wisconsin	340	80	20	340	Wisconsin	1,340	360	220	120
Michigan	6,250	1,490	450	6,250	Michigan	16,750	4,450	2,750	1,470



Table 12.--Net timber drain resulting from coeprage log cutting in the Lake States - 1950

Species and state	Net timber drain by size classes			Species and state	Net timber drain by size classes		
	M bd.ft.	M cu.ft.	:Saw tbr.:Pole tbr.: Tops M cu.ft.		Total M bd.ft.	Total M cu.ft.	:Saw tbr.:Pole tbr.: Tops M cu.ft.
White pine Minnesota Wisconsin Michigan	--	--	--	Birch Minnesota Wisconsin Michigan	--	--	--
Red pine Minnesota Wisconsin Michigan	--	--	--	Basswood Minnesota Wisconsin Michigan	140	20	20
Jack pine Minnesota Wisconsin Michigan	--	--	--	Elm Minnesota Wisconsin Michigan	250	40	40
Spruce Minnesota Wisconsin Michigan	--	--	--	Beech Minnesota Wisconsin Michigan	--	--	--
Balsam Minnesota Wisconsin Michigan	--	--	--	Oak Minnesota Wisconsin Michigan	1,720	260	260
Tamarack Minnesota Wisconsin Michigan	--	--	--	Aspen Minnesota Wisconsin Michigan	80	10	10
Cedar Minnesota Wisconsin Michigan	--	--	--	Cottonwood Minnesota Wisconsin Michigan	220	30	30
Hemlock Minnesota Wisconsin Michigan	--	--	--	Miscellaneous Minnesota Wisconsin Michigan	--	--	--
Softwood total	--	--	--	Hardwood total	2,690	410	410
Maple Minnesota Wisconsin Michigan	300	50	50	Minnesota Wisconsin Michigan	1,330	200	200
	300	50	50	All species	2,690	410	410
	--	--	--	Minnesota Wisconsin Michigan	1,360	210	210
	--	--	--				





Table 13.--Net timber drain resulting from cutting miscellaneous rough forest products in the Lake States - 1950

Species and state	Net timber drain by size classes				Total	Species and state	Net timber drain by size classes			
	M bd.ft.	M cu.ft.	Pole tbr.	Tops			M bd.ft.	M cu.ft.	Pole tbr.	Tops
White pine	540	210	90	30	970	Birch	230	160	70	70
Minnesota	180	70	30	10	780	Minnesota	190	130	60	60
Wisconsin	180	70	30	10	140	Wisconsin	30	20	10	10
Michigan	180	70	30	10	50	Michigan	10	10	--	--
Red pine	320	100	50	--	600	Basswood	180	120	60	60
Minnesota	140	40	20	--	300	Minnesota	80	50	30	30
Wisconsin	70	20	10	--	270	Wisconsin	70	50	20	20
Michigan	110	40	20	--	90	Michigan	30	20	10	10
Jack pine	680	230	110	20	300	Elm	80	50	30	30
Minnesota	290	100	50	10	--	Minnesota	--	--	--	--
Wisconsin	140	40	20	--	--	Wisconsin	--	--	--	--
Michigan	250	90	40	10	300	Michigan	80	50	30	30
Spruce	170	60	30	--	2,700	Beech	690	450	240	240
Minnesota	70	20	10	--	--	Minnesota	--	--	--	--
Wisconsin	40	20	10	--	--	Wisconsin	--	--	--	--
Michigan	60	20	10	--	2,700	Michigan	690	450	240	240
Balsam	440	170	80	20	440	Oak	100	70	30	30
Minnesota	180	70	30	10	50	Minnesota	10	10	--	--
Wisconsin	40	20	10	--	90	Wisconsin	10	10	--	--
Michigan	220	80	40	10	300	Michigan	80	50	30	30
Tamarack	170	60	30	--	6,150	Aspen	1,570	1,030	540	540
Minnesota	70	20	10	--	3,900	Minnesota	990	650	340	340
Wisconsin	40	20	10	--	1,530	Wisconsin	400	260	140	140
Michigan	60	20	10	--	720	Michigan	180	120	60	60
Cedar	2,250	760	370	80	--	Cottonwood	--	--	--	--
Minnesota	290	100	50	10	--	Minnesota	--	--	--	--
Wisconsin	500	170	80	20	--	Wisconsin	--	--	--	--
Michigan	1,440	490	240	50	--	Michigan	--	--	--	--
Hemlock	140	40	20	--	370	Miscellaneous	100	70	30	30
Minnesota	--	--	--	--	90	Minnesota	30	20	10	10
Wisconsin	70	20	10	--	280	Wisconsin	70	50	20	20
Michigan	--	--	--	--	--	Michigan	--	--	--	--
Softwood total	4,690	1,630	780	150	14,410	Hardwood total	3,670	2,420	1,250	1,250
Minnesota	1,220	420	200	40	5,030	Minnesota	1,270	850	430	430
Wisconsin	1,080	380	180	30	2,480	Wisconsin	630	420	210	210
Michigan	2,390	830	400	80	6,900	Michigan	1,770	1,160	610	610
Maple	2,820	720	470	--	19,100	All species	5,300	3,200	1,950	1,950
Minnesota	--	--	--	--	6,250	Minnesota	1,690	1,040	610	610
Wisconsin	360	90	60	--	3,560	Wisconsin	1,010	600	380	380
Michigan	2,460	630	410	--	9,290	Michigan	2,600	1,560	960	960





Table 14.--Total net timber drain resulting from cutting in the Lake States - 1950

Species and state	Net timber drain by size classes				Species and state	Net timber drain by size classes			
	M bd.ft.	M cu.ft.	Saw tbr.: Pole tbr.:	M cu.ft.		M bd.ft.	M cu.ft.	Saw tbr.: Pole tbr.:	M cu.ft.
White pine	65,110	16,060	10,540	2,660	Birch	84,060	22,000	13,970	8,030
Minnesota	13,450	3,255	2,175	490	Minnesota	5,300	2,370	1,000	1,370
Wisconsin	32,130	7,990	5,200	1,380	Wisconsin	18,520	5,980	3,130	2,850
Michigan	19,530	4,815	3,165	790	Michigan	60,240	13,650	9,840	3,810
Red pine	56,680	14,485	9,115	2,890	Basswood	51,110	12,300	8,190	4,110
Minnesota	24,730	6,415	3,980	1,350	Minnesota	13,740	3,710	2,270	1,440
Wisconsin	23,620	5,975	3,795	1,140	Wisconsin	20,220	4,720	3,200	1,520
Michigan	8,330	2,095	1,340	400	Michigan	17,150	3,870	2,720	1,150
Jack pine	66,840	47,310	11,195	35,185	Elm	74,270	21,145	12,365	8,780
Minnesota	47,740	28,970	7,750	19,190	Minnesota	15,350	4,860	2,640	2,220
Wisconsin	10,040	10,070	1,665	7,975	Wisconsin	27,520	7,065	4,465	2,600
Michigan	11,060	8,270	1,780	6,020	Michigan	31,400	9,220	5,260	3,960
Spruce	22,815	28,670	3,690	24,020	Beech	27,730	6,260	4,520	1,740
Minnesota	11,690	16,310	1,890	13,930	Minnesota	--	--	--	--
Wisconsin	2,370	2,900	390	2,400	Wisconsin	1,000	280	170	110
Michigan	8,755	9,460	1,410	7,690	Michigan	26,730	5,980	4,350	1,630
Balsam	18,930	27,730	3,080	23,860	Oak	127,780	49,370	22,500	23,870
Minnesota	8,690	11,440	1,430	9,640	Minnesota	18,430	8,480	3,410	5,070
Wisconsin	3,510	5,800	570	5,080	Wisconsin	72,950	26,070	12,610	13,460
Michigan	6,730	10,490	1,080	9,140	Michigan	36,400	14,820	6,480	8,340
Tamarack	12,865	5,780	2,250	3,010	Aspen	112,890	116,670	19,630	97,040
Minnesota	7,275	3,530	1,300	1,920	Minnesota	43,880	41,780	7,740	34,040
Wisconsin	2,230	1,100	400	600	Wisconsin	39,380	38,350	6,670	31,680
Michigan	3,360	1,150	550	490	Michigan	29,630	36,540	5,220	31,320
Cedar	24,705	11,820	4,430	6,260	Ash	11,875	3,490	2,010	1,480
Minnesota	5,035	2,500	950	1,310	Minnesota	6,510	1,580	1,050	530
Wisconsin	4,070	2,090	740	1,150	Wisconsin	2,385	930	430	500
Michigan	15,600	7,230	2,740	3,800	Michigan	2,980	980	530	450
Hemlock	228,300	52,790	36,780	6,230	Miscellaneous	26,120	9,080	4,790	4,290
Minnesota	75,130	18,020	12,160	2,620	Minnesota	6,460	3,760	1,230	1,830
Wisconsin	153,170	34,770	24,620	3,610	Wisconsin	10,780	2,910	1,670	1,240
Michigan	498,245	274,645	81,760	102,115	Michigan	11,580	3,110	1,890	1,220
Minnesota	118,610	72,420	19,475	47,830	Hardwood total	745,655	294,260	124,950	169,310
Wisconsin	153,100	53,945	24,920	22,345	Minnesota	112,920	66,700	19,870	46,830
Michigan	226,535	78,280	36,685	31,940	Wisconsin	250,425	100,990	41,820	59,170
Maple	227,820	53,945	36,975	16,970	Michigan	382,310	126,570	63,280	63,310
Minnesota	3,250	660	830	330	All species	1,243,900	498,905	206,130	271,425
Wisconsin	58,370	14,685	9,475	5,210	Minnesota	231,530	139,120	39,345	94,660
Michigan	166,200	38,060	26,970	11,430	Wisconsin	403,525	154,935	66,740	81,515
					Michigan	608,845	204,650	99,945	95,250



FOREST PRODUCTS HARVESTED

IN THE LAKE STATES

1950





Table 15.--Sawlog and saw-bolt production in the Lake States - 1950

Species: Volume cut and destination					Species: Volume cut and destination				
and :					and :				
origin :	Total	Minn. :	Wis. :	Mich. :	origin :	Total	Minn. :	Wis. :	Mich. :
M bd.ft., Int'l. 1/4-inch					M bd.ft., Int'l. 1/4-inch				
W. pine	67,326	13,999	33,582	19,745	Elm	57,067	12,029	21,524	23,514
Minn.	13,999	13,999	--	--	Minn.	12,129	12,029	100	--
Wis.	33,002	--	33,002	--	Wis.	20,644	--	20,644	--
Mich.	20,325	--	580	19,745	Mich.	24,294	--	780	23,514
Red pine	62,843	27,065	26,728	9,050	Beech	18,582	--	956	17,626
Minn.	27,065	27,065	--	--	Minn.	--	--	--	--
Wis.	26,598	--	26,598	--	Wis.	756	--	756	--
Mich.	9,180	--	130	9,050	Mich.	17,826	--	200	17,626
Jack pine	72,829	52,264	8,224	12,341	Oak	95,073	10,753	58,383	25,937
Minn.	52,264	52,264	--	--	Minn.	11,053	10,753	300	--
Wis.	8,104	--	8,104	--	Wis.	57,793	--	57,793	--
Mich.	12,461	--	120	12,341	Mich.	26,227	--	290	25,937
Spruce	13,595	5,575	1,617	6,403	Aspen	145,385	52,668	60,202	32,515
Minn.	5,575	5,575	--	--	Minn.	51,668	51,668	--	--
Wis.	1,527	--	1,527	--	Wis.	61,262	1,000	59,162	1,100
Mich.	6,493	--	90	6,403	Mich.	32,455	--	1,040	31,415
Balsam	7,741	4,252	990	2,499	Ctnwd.	10,819	6,510	1,862	2,447
Minn.	4,252	4,252	--	--	Minn.	6,510	6,510	--	--
Wis.	970	--	970	--	Wis.	1,862	--	1,862	--
Mich.	2,519	--	20	2,499	Mich.	2,447	--	--	2,447
Tamarack	4,166	2,469	1,342	355	Ash	17,272	3,339	7,880	6,053
Minn.	2,469	2,469	--	--	Minn.	3,339	3,339	--	--
Wis.	1,342	--	1,342	--	Wis.	7,645	--	7,620	25
Mich.	355	--	--	355	Mich.	6,288	--	260	6,028
Cedar	9,960	1,120	2,322	6,518	Hickory	673	--	114	559
Minn.	1,120	1,120	--	--	Minn.	--	--	--	--
Wis.	2,262	--	2,262	--	Wis.	114	--	114	--
Mich.	6,578	--	60	6,518	Mich.	559	--	--	559
Hemlock	185,835	--	63,930	121,905	Cherry	854	16	65	773
Minn.	--	--	--	--	Minn.	16	16	--	--
Wis.	59,600	--	59,300	300	Wis.	65	--	65	--
Mich.	125,235	--	4,630	121,605	Mich.	773	--	--	773
Softwd.					Walnut	249	18	24	207
total	424,295	106,744	138,735	178,816	Minn.	18	18	--	--
Minn.	106,744	106,744	--	--	Wis.	24	--	24	--
Wis.	133,405	--	133,105	300	Mich.	207	--	--	207
Mich.	184,146	--	5,630	178,516	Misc.	3,255	219	1,149	1,887
Maple	192,423	1,744	60,802	129,877	Minn.	219	219	--	--
Minn.	2,144	1,744	400	--	Wis.	1,149	--	1,149	--
Wis.	49,752	--	49,502	250	Mich.	1,887	--	--	1,887
Mich.	140,527	--	10,900	129,627	Hardwd.				
Birch	58,404	2,472	17,652	38,280	total	640,715	98,431	248,635	293,649
Minn.	2,472	2,472	--	--	Minn.	98,931	97,431	1,500	--
Wis.	11,452	--	11,452	--	Wis.	229,165	1,000	226,765	1,400
Mich.	44,480	--	6,200	38,280	Mich.	312,619	--	20,370	292,249
Basswood	40,659	8,663	18,022	13,974	All				
Minn.	9,363	8,663	700	--	species	1,065,010	205,175	387,370	472,465
Wis.	16,647	--	16,622	25	Minn.	205,675	204,175	1,500	--
Mich.	14,649	--	700	13,949	Wis.	362,570	1,000	359,870	1,700
					Mich.	496,765	--	26,000	470,765



Table 16.--Production of logs and bolts for veneer industry in the Lake States  
1950

Species and origin	Volume cut and destination					Heading stock U. S.	Imports	
	Total	Minn.	Wis.	Mich.	Other U. S.		Other U. S.	Foreign Canada
	M bd.ft., Int'l 1/4-inch rule					Standard cords	M bd.ft. Int'l 1/4-inch	
White pine	2,134	28	411	1,695	--	--	--	21
Minnesota	28	28	--	--	--	--	--	--
Wisconsin	379	--	379	--	--	--	--	7
Michigan	1,727	--	32	1,695	--	--	--	14
Maple	31,312	37	17,656	13,603	16	1,847	147	1,661
Minnesota	581	37	544	--	--	--	--	--
Wisconsin	8,677	--	8,653	24	--	1,347	106	621
Michigan	22,054	--	8,459	13,579	16	500	41	1,040
Birch	17,523	53	10,883	6,582	--	80	6	11,740
Minnesota	133	53	58	22	--	--	--	--
Wisconsin	3,931	--	3,878	53	--	80	--	9,918
Michigan	13,459	--	6,952	6,507	--	--	6	1,822
Basswood	11,093	631	8,897	1,565	--	4,134	372	63
Minnesota	3,269	631	2,605	33	--	351	--	--
Wisconsin	4,327	--	4,293	34	--	2,904	344	34
Michigan	3,497	--	1,999	1,498	--	879	23	34
Elm	11,978	198	8,307	3,434	39	2,039	325	262
Minnesota	1,376	198	1,178	--	--	--	--	--
Wisconsin	6,143	--	6,103	40	--	1,539	268	27
Michigan	4,459	--	1,026	3,394	39	500	57	235
Beech	6,160	--	777	5,383	--	--	--	--
Minnesota	--	--	--	--	--	--	--	--
Wisconsin	182	--	182	--	--	--	--	--
Michigan	5,978	--	595	5,383	--	--	--	--
Oak	3,564	--	2,727	717	120	50	334	326
Minnesota	336	--	321	15	--	--	--	--
Wisconsin	2,351	--	2,080	271	--	50	198	196
Michigan	877	--	326	431	120	--	136	130
Aspen	239	190	49	--	--	8,231	--	8
Minnesota	190	190	--	--	--	814	--	--
Wisconsin	48	--	48	--	--	7,417	--	--
Michigan	1	--	1	--	--	--	--	8
Ash	1,168	18	997	148	5	--	3	2
Minnesota	44	18	23	3	--	--	--	--
Wisconsin	451	--	447	4	--	--	3	2
Michigan	673	--	527	141	5	--	--	--
Walnut	391	--	5	--	386	--	--	--
Minnesota	44	--	--	--	44	--	--	--
Wisconsin	5	--	5	--	--	--	--	--
Michigan	342	--	--	--	342	--	--	--
Other 2/	1,025	176	320	525	4	89	247	172
Minnesota	366	176	190	--	--	18	--	--
Wisconsin	158	--	130	28	--	71	5	172
Michigan	501	--	--	497	4	--	242	--
All species	36,587	1,331	51,034	33,652	570	16,470	1,434	14,266
Minnesota	6,367	1,331	4,919	73	44	1,183	--	--
Wisconsin	26,652	--	26,198	454	--	13,408	924	10,977
Michigan	53,568	--	19,917	33,125	526	1,879	510	3,283

1/ Hemlock

2/ Cottonwood, sycamore, and yellow poplar.





Table 17.--Pulpwood production and imports in the Lake States - 1950

Species and origin	Volume cut and destination						Imports	
	Total	Minn.	Wis.	Mich.	Other U.S.	Other U.S.	Foreign Canada	
Thousand standard cords, rough wood basis								
Pine	346	124	166	56	--	49	92	
Minnesota	187	124	60	3	--	--	54	
Wisconsin	93	--	93	--	--	49	28	
Michigan	66	--	13	53	--	--	10	
Spruce	316	84	202	30	--	13	322	
Minnesota	186	84	102	--	--	--	25	
Wisconsin	31	--	31	--	--	13	226	
Michigan	99	--	69	30	--	--	71	
Balsam	318	41	235	42	--	--	21	
Minnesota	126	41	85	--	--	--	--	
Wisconsin	69	--	69	--	--	--	3	
Michigan	123	--	81	42	--	--	18	
Tamarack	1	1	--	--	--	3	--	
Minnesota	1	1	--	--	--	--	--	
Wisconsin	--	--	--	--	--	3	--	
Michigan	--	--	--	--	--	--	--	
Hemlock	131	--	91	40	--	--	--	
Minnesota	--	--	--	--	--	--	--	
Wisconsin	47	--	47	--	--	--	--	
Michigan	84	--	44	40	--	--	--	
Sfwd. total	1,112	250	694	168	--	65	435	
Minnesota	500	250	247	3	--	--	79	
Wisconsin	240	--	240	--	--	65	257	
Michigan	372	--	207	165	--	--	99	
Birch	11	--	10	1	--	--	--	
Minnesota	--	--	--	--	--	--	--	
Wisconsin	6	--	6	--	--	--	--	
Michigan	5	--	4	1	--	--	--	
Aspen	694	235	387	65	7	--	55	
Minnesota	248	226	22	--	--	--	32	
Wisconsin	195	9	186	--	--	--	1	
Michigan	251	--	179	65	7	--	22	
Misc. hdwds.	49	1	21	27	--	--	--	
Minnesota	1	1	--	--	--	--	--	
Wisconsin	20	--	20	--	--	--	--	
Michigan	28	--	1	27	--	--	--	
Hdwd. total	754	236	418	93	7	--	55	
Minnesota	249	227	22	--	--	--	32	
Wisconsin	221	9	212	--	--	--	1	
Michigan	284	--	184	93	7	--	22	
Slabs, etc.	7	--	7	--	--	--	--	
Minnesota	--	--	--	--	--	--	--	
Wisconsin	7	--	7	--	--	--	--	
Michigan	--	--	--	--	--	--	--	
All species	1,873	486	1,119	261	7	65	490	
Minnesota	749	477	269	3	--	--	111	
Wisconsin	468	9	459	--	--	65	258	
Michigan	656	--	391	258	7	--	121	



Table 18.—Production fuel wood, chemical wood, excelsior bolts  
in the Lake States - 1950

Species and origin	Volume cut <sup>1/</sup>			Species and origin	Volume cut <sup>1/</sup>		
	Fuel wood	Chemical wood	Excelsior		Fuel wood	Chemical wood	Excelsior
	M standard cords				M standard cords		
White pine	120	--	--	Birch	240	25	--
Minnesota	15	--	--	Minnesota	70	--	--
Wisconsin	70	--	--	Wisconsin	90	1	--
Michigan	35	--	--	Michigan	80	24	--
Red pine	25	--	--	Basswood	110	--	4
Minnesota	10	--	--	Minnesota	60	--	--
Wisconsin	10	--	--	Wisconsin	25	--	3
Michigan	5	--	--	Michigan	25	--	1
Jack pine	115	--	--	Elm	320	1	--
Minnesota	50	--	--	Minnesota	100	--	--
Wisconsin	60	--	--	Wisconsin	75	--	--
Michigan	5	--	--	Michigan	145	1	--
Spruce	35	--	--	Beech	40	8	--
Minnesota	20	--	--	Minnesota	--	--	--
Wisconsin	5	--	--	Wisconsin	5	--	--
Michigan	10	--	--	Michigan	35	8	--
Balsam	35	--	--	Oak	860	1	--
Minnesota	25	--	--	Minnesota	175	--	--
Wisconsin	5	--	--	Wisconsin	415	--	--
Michigan	5	--	--	Michigan	270	1	--
Tamarack	205	--	--	Aspen	655	--	60
Minnesota	155	--	--	Minnesota	295	--	(2/)
Wisconsin	40	--	--	Wisconsin	160	--	27
Michigan	10	--	--	Michigan	200	--	33
Cedar	40	--	--	Ash	60	2	--
Minnesota	10	--	--	Minnesota	15	--	--
Wisconsin	25	--	--	Wisconsin	25	--	--
Michigan	5	--	--	Michigan	20	2	--
Hemlock	215	--	--	Miscellaneous	155	(2/)	--
Minnesota	--	--	--	Minnesota	90	--	--
Wisconsin	145	--	--	Wisconsin	35	--	--
Michigan	70	--	--	Michigan	30	(2/)	--
Sfwd. total	790	--	--	Hdwd. total	2,860	84	64
Minnesota	285	--	--	Minnesota	815	--	(2/)
Wisconsin	360	--	--	Wisconsin	990	3	30
Michigan	145	--	--	Michigan	1,055	81	34
Maple	420	47	--	All species	3,650	84	64
Minnesota	10	--	--	Minnesota	1,100	--	(2/)
Wisconsin	160	2	--	Wisconsin	1,350	3	30
Michigan	250	45	--	Michigan	1,200	81	34

<sup>1/</sup> Excludes slabwood, veneer cores, etc.

<sup>2/</sup> Less than 1 M cords.





Table 19.--Production of miscellaneous piece products  
in the Lake States - 1950

Species : and origin :	:	:	:	Hewn ties :	Species : and origin :	:	:	:	Hewn ties :
	Piling	Poles	Posts			Piling	Poles	Posts	
	Thousand pieces					Thousand pieces			
White pine	--	--	--	--	Maple	.2	--	300	--
Minnesota	--	--	--	--	Minnesota	--	--	100	--
Wisconsin	--	--	--	--	Wisconsin	.2	--	100	--
Michigan	--	--	--	--	Michigan	--	--	100	--
Red pine	1.8	--	500	--	Birch	--	--	250	--
Minnesota	1.0	--	400	--	Minnesota	--	--	50	--
Wisconsin	.2	--	100	--	Wisconsin	--	--	100	--
Michigan	.6	--	--	--	Michigan	--	--	100	--
Jack pine	1.0	16	950	--	Elm	3.0	--	450	--
Minnesota	1.0	15	700	--	Minnesota	--	--	50	--
Wisconsin	--	1	150	--	Wisconsin	3.0	--	200	--
Michigan	--	--	100	--	Michigan	--	--	200	--
Spruce	.1	--	--	1	Oak	1.0	--	13,400	--
Minnesota	--	--	--	--	Minnesota	--	--	3,000	--
Wisconsin	--	--	--	--	Wisconsin	1.0	--	7,100	--
Michigan	.1	--	--	1	Michigan	--	--	3,300	--
Balsam	--	--	100	--	Aspen	--	--	1,400	--
Minnesota	--	--	100	--	Minnesota	--	--	700	--
Wisconsin	--	--	--	--	Wisconsin	--	--	400	--
Michigan	--	--	--	--	Michigan	--	--	300	--
Tamarack	--	--	700	1	Ash	.1	--	--	--
Minnesota	--	--	300	1	Minnesota	--	--	--	--
Wisconsin	--	--	250	--	Wisconsin	.1	--	--	--
Michigan	--	--	150	--	Michigan	--	--	--	--
Cedar	--	104	7,200	15	Miscellaneous	.1	--	600	--
Minnesota	--	55	1,500	1	Minnesota	--	--	100	--
Wisconsin	--	9	1,200	--	Wisconsin	.1	--	300	--
Michigan	--	40	4,500	14	Michigan	--	--	200	--
Henlock	--	--	150	2	Hdwd. total	4.4	--	16,400	--
Minnesota	--	--	--	--	Minnesota	--	--	4,000	--
Wisconsin	--	--	100	--	Wisconsin	4.4	--	8,200	--
Michigan	--	--	50	2	Michigan	--	--	4,200	--
Sftwd. total	2.9	120	9,600	19	All species	7.3	120	26,000	19
Minnesota	2.0	70	3,000	2	Minnesota	2.0	70	7,000	2
Wisconsin	.2	10	1,800	--	Wisconsin	4.6	10	10,000	--
Michigan	.7	40	4,800	17	Michigan	.7	40	9,000	17



Table 20.--Production of mine timbers and other mine products  
in the Lake States - 1950

Species and origin	Total	Mine timbers	Mine lagging	Other 1/	Species and origin	Total	Mine timbers	Mine lagging	Other 1/
Thousand cubic feet					Thousand cubic feet				
White pine	20	15	--	5	Maple	1,490	1,130	--	360
Minnesota	15	15	--	--	Minnesota	25	25	--	--
Wisconsin	--	--	--	--	Wisconsin	75	55	--	20
Michigan	5	--	--	5	Michigan	1,390	1,050	--	340
Red pine	75	70	--	5	Birch	460	390	--	70
Minnesota	75	70	--	5	Minnesota	5	5	--	--
Wisconsin	--	--	--	--	Wisconsin	45	30	--	15
Michigan	--	--	--	--	Michigan	410	355	--	55
Jack pine	1,090	790	170	130	Elm	115	105	--	10
Minnesota	1,090	790	170	130	Minnesota	35	35	--	--
Wisconsin	--	--	--	--	Wisconsin	10	10	--	--
Michigan	--	--	--	--	Michigan	70	60	--	10
Spruce	5	--	--	5	Beech	85	80	--	5
Minnesota	--	--	--	--	Minnesota	--	--	--	--
Wisconsin	--	--	--	--	Wisconsin	--	--	--	--
Michigan	5	--	--	5	Michigan	85	80	--	5
Tamarack	2,070	360	230	1,480	Oak	15	15	--	--
Minnesota	1,005	305	--	700	Minnesota	--	--	--	--
Wisconsin	145	10	5	130	Wisconsin	5	5	--	--
Michigan	920	45	225	650	Michigan	10	10	--	--
Cedar	1,785	--	1,770	15	Ash	65	65	--	--
Minnesota	310	--	310	--	Minnesota	65	65	--	--
Wisconsin	90	--	90	--	Wisconsin	--	--	--	--
Michigan	1,385	--	1,370	15	Michigan	--	--	--	--
Hemlock	340	305	5	30	Hdwd. total	2,230	1,785	--	445
Minnesota	--	--	--	--	Minnesota	130	130	--	--
Wisconsin	10	5	--	5	Wisconsin	135	100	--	35
Michigan	330	300	5	25	Michigan	1,965	1,555	--	410
Sftwd. total	5,385	1,540	2,175	1,670	All species	7,615	3,325	2,175	2,115
Minnesota	2,495	1,180	480	835	Minnesota	2,625	1,310	480	835
Wisconsin	245	15	95	135	Wisconsin	380	115	95	170
Michigan	2,645	345	1,600	700	Michigan	4,610	1,900	1,600	1,110

1/ Cribbing, poles, trestle logs, hewed shaft timbers, smelter brands, etc.







Table 21.--Production of cooperage logs and bolts in the Lake States - 1950

Species	Total	Volume cut by states		
		Minnesota	Wisconsin	Michigan
<u>M bd.ft. Int'l 1/4-inch rule</u>				
Maple	284	284	--	--
Basswood	136	89	47	--
Elm	219	219	--	--
Oak	1,622	385	1,237	--
Aspen	78	78	--	--
Cottonwood	207	207	--	--
Ash	--	--	--	--
All species	2,546	1,262	1,284	--

Table 22.--Production of miscellaneous products<sup>1/</sup> in the Lake States - 1950

Species	Total	Volume cut by states		
		Minnesota	Wisconsin	Michigan
<u>Thousand cubic feet</u>				
White pine	150	50	50	50
Red pine	90	40	20	30
Jack pine	190	80	40	70
Spruce	50	20	10	20
Balsam	130	50	20	60
Tamarack	50	20	10	20
Cedar	620	80	140	400
Hemlock	40	--	20	20
Softwood total	1,320	340	310	670
Maple	630	--	80	550
Birch	210	170	30	10
Basswood	150	70	60	20
Elm	70	--	--	70
Beech	600	--	--	600
Oak	90	10	10	70
Aspen	1,360	860	340	160
Ash	10	--	--	10
Other	70	--	20	50
Hardwood total	3,190	1,110	540	1,540
ALL SPECIES	4,510	1,450	850	2,210

<sup>1/</sup> Rough forest products used for manufacture of matches, clothespins, bowling pins, handles, woodenware, rustic furniture and fences, toys, shingles, lath, log cabin material, etc.

