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MISCELLANEOUS REPORT NO. 19

✓ COMMODITY DRAIN FROM FORESTS OF THE LAKE STATES

1949 X

By Arthur G. Horn, Forest Economist

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

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Miscellaneous Report No. 19

COMMODITY DRAIN FROM FORESTS OF THE LAKE STATES - 1949

By Arthur G. Horn, Forest Economist^{1/}
Lake States Forest Experiment Station^{2/}

INTRODUCTION

An important continuing project of the Lake States Forest Experiment Station is a survey of forest resources. Its purpose is to gather and make available information on the timber supply of the region. One phase of the work is the collection and compilation of timber drain statistics.

Industries and public agencies frequently request data on forest products production and timber drain. To meet these demands effectively the station periodically prepares summaries which give Lake States production and drain data such as that presented here for 1949. Similar reports have been prepared each year since 1946.^{3/}

In using the data given in this report one should keep in mind the standards and definitions used in compiling the information (see definitions). 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 future reports only when adequate data are available to make the necessary calculations.

Basis for Production Statistics

By means of a sample survey the Bureau of Census collected and published regional lumber production statistics for 1949. For lack of statewide figures production ratios of the past several years were applied to obtain a breakdown of the estimated quantity of lumber produced in Minnesota, Wisconsin, and Michigan. These lumber production figures and the 1948-50 average of interstate log shipments were used as a basis for saw log and saw bolt production estimates.

^{1/} The author gratefully acknowledges the information obtained 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.

^{2/} Maintained by the U. S. Department of Agriculture, Forest Service, in cooperation with the University of Minnesota at University Farm, St. Paul 1, Minnesota.

^{3/} Miscellaneous Report No. 7 (1946), Miscellaneous Report No. 9, (1947), and Station Paper No. 20 (1948).

For pulpwood, a complete canvass was made of all pulp mills. The volume of logs and bolts received at these mills during the calendar year was used as a basis for production estimates.

Production statistics for commercial and container veneer, chemical wood, excelsior and cooperage were obtained by interpolating between 1948 and 1950 figures.

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 1947-49; 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 byproduct 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 +5 percent per billion cubic feet, which would permit a standard error of slightly more than 6 percent on the 1949 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 foot), 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.

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

CUTTING DRAIN ON PRIMARY GROWING STOCK

1949

Table 1.- Net timber drain resulting from cutting sawlogs and sawbolts in the Lake States - 1919

Species and state	Total		'Saw tbr.' Pole tbr.!		Tops		Species and state	Total		'Saw tbr.' Pole tbr.!		Tops	
	bd.ft.	cu.ft.	bd.ft.	cu.ft.	bd.ft.	cu.ft.		bd.ft.	cu.ft.	bd.ft.	cu.ft.	bd.ft.	cu.ft.
White pine	39,110	9,250	6,450	1,040	1,760		Birch	47,600	9,670	7,380	2,290	-	-
Minnesota	8,270	1,950	1,360	220	370		Minnesota	2,150	430	330	100	-	-
Wisconsin	19,090	4,520	3,150	510	860		Wisconsin	11,260	2,290	1,750	540	-	-
Michigan	11,750	2,780	1,940	310	530		Michigan	34,190	6,950	5,300	1,650	-	-
Red pine	34,760	8,780	5,740	1,480	1,560		Basswood	31,860	6,480	4,940	1,540	-	-
Minnesota	15,100	3,810	2,490	640	680		Minnesota	7,040	1,430	1,090	340	-	-
Wisconsin	14,530	3,670	2,400	620	650		Wisconsin	12,820	2,610	1,990	620	-	-
Michigan	5,130	1,300	850	220	230		Michigan	12,000	2,440	1,860	580	-	-
Jack pine	31,170	10,580	5,140	4,040	1,400		Elm	44,830	9,110	6,950	2,160	-	-
Minnesota	22,310	7,570	3,630	2,890	1,000		Minnesota	8,960	1,820	1,390	430	-	-
Wisconsin	3,290	1,120	540	430	150		Wisconsin	16,810	3,420	2,610	810	-	-
Michigan	5,570	1,890	920	720	250		Michigan	19,060	3,870	2,950	920	-	-
Spruce	6,270	1,950	1,030	640	280		Beech	14,500	2,940	2,240	700	-	-
Minnesota	2,440	760	400	250	110		Minnesota	-	-	-	-	-	-
Wisconsin	710	220	120	70	30		Wisconsin	540	110	80	30	-	-
Michigan	3,120	970	510	320	140		Michigan	13,960	2,830	2,160	670	-	-
Balsam	3,270	1,030	540	340	150		Oak	73,810	14,990	11,440	3,550	-	-
Minnesota	1,950	610	320	200	90		Minnesota	8,370	1,700	1,300	400	-	-
Wisconsin	490	150	80	50	20		Wisconsin	44,530	9,040	6,900	2,140	-	-
Michigan	830	270	140	90	40		Michigan	20,910	4,250	3,240	1,010	-	-
Tamarack	1,840	580	310	190	80		Aspen	53,160	32,130	8,500	23,680	-	-
Minnesota	970	300	160	100	40		Minnesota	19,030	11,520	3,040	8,480	-	-
Wisconsin	710	220	120	70	30		Wisconsin	21,510	13,020	3,440	9,580	-	-
Michigan	160	60	30	20	10		Michigan	12,620	7,640	2,020	5,620	-	-
Cedar	5,050	1,580	830	520	230		Cottonwood	8,530	1,730	1,320	410	-	-
Minnesota	490	150	80	50	20		Minnesota	4,490	920	700	220	-	-
Wisconsin	1,240	390	200	130	60		Wisconsin	2,340	470	360	110	-	-
Michigan	3,320	1,040	550	340	150		Michigan	1,700	340	260	80	-	-
Hemlock	116,610	25,970	19,240	1,480	5,250		Miscellaneous	16,260	3,310	2,520	790	-	-
Minnesota	37,820	8,450	6,260	480	1,710		Minnesota	2,440	500	380	120	-	-
Wisconsin	78,690	17,520	12,980	1,000	3,540		Wisconsin	6,730	1,360	1,040	320	-	-
Michigan	238,080	59,720	39,230	9,730	10,710		Michigan	7,090	1,450	1,100	350	-	-
Sfwd. total	51,530	15,150	8,490	4,350	2,310		Hwd. total	44,920	111,170	68,760	42,410	-	-
Minnesota	77,530	18,740	12,870	2,360	3,510		Minnesota	54,150	18,600	8,490	10,170	-	-
Wisconsin	108,570	25,330	17,920	3,020	4,390		Wisconsin	156,580	40,460	24,380	16,080	-	-
Michigan	151,370	30,760	23,470	7,290	-		Michigan	231,190	52,050	35,390	16,160	-	-
Maple	1,670	340	260	80	-		All species	680,000	170,890	108,040	52,140	-	-
Minnesota	40,040	8,140	6,210	1,930	-		Minnesota	105,680	33,810	16,980	14,520	-	-
Wisconsin	109,560	22,280	17,000	5,280	-		Wisconsin	234,560	59,200	37,250	18,440	-	-
Michigan							Michigan	339,760	77,880	53,810	19,180	-	-

Table 2.- Net timber drain resulting from cutting veneer logs and bolts in the Lake States - 1949

Species and state	Total			Species and state	Total			Pole tbr. ft. cu.ft.	Pole tbr. ft. cu.ft.	Tops ft. cu.ft.
	bd.ft.	cu.ft.	'Sav tbr. ft. cu.ft.		bd.ft.	cu.ft.	'Sav tbr. ft. cu.ft.			
White pine	370	75	65	Birch	22,100	3,435	3,420	15		
Minnesota	20	5	5	Minnesota	210	30	30	-		
Wisconsin	280	60	50	Wisconsin	4,650	730	720	10		
Michigan	70	10	10	Michigan	17,240	2,675	2,670	5		
Red pine	-	-	-	Basswood	12,460	2,145	1,930	215		
Minnesota	-	-	-	Minnesota	3,430	540	530	10		
Wisconsin	-	-	-	Wisconsin	5,140	1,000	800	200		
Michigan	-	-	-	Michigan	3,890	605	600	5		
Jack pine	-	-	-	Elm	15,670	2,490	2,420	70		
Minnesota	-	-	-	Minnesota	1,700	260	260	-		
Wisconsin	-	-	-	Wisconsin	7,580	1,220	1,170	50		
Michigan	-	-	-	Michigan	6,390	1,010	990	20		
Spruce	-	-	-	Beech	8,840	1,370	1,370	-		
Minnesota	-	-	-	Minnesota	-	-	-	-		
Wisconsin	-	-	-	Wisconsin	130	20	20	-		
Michigan	-	-	-	Michigan	8,710	1,350	1,350	-		
Balsam	-	-	-	Oak	4,550	700	700	-		
Minnesota	-	-	-	Minnesota	370	60	60	-		
Wisconsin	-	-	-	Wisconsin	3,190	490	490	-		
Michigan	-	-	-	Michigan	990	150	150	-		
Tamarack	-	-	-	Aspen	930	725	145	580		
Minnesota	-	-	-	Minnesota	240	70	40	30		
Wisconsin	-	-	-	Wisconsin	660	650	100	550		
Michigan	-	-	-	Michigan	30	5	5	-		
Cedar	-	-	-	Cottonwood	-	-	-	-		
Minnesota	-	-	-	Minnesota	-	-	-	-		
Wisconsin	-	-	-	Wisconsin	-	-	-	-		
Michigan	-	-	-	Michigan	-	-	-	-		
Hemlock	-	-	-	Miscellaneous	3,190	540	500	40		
Minnesota	-	-	-	Minnesota	420	70	70	-		
Wisconsin	-	-	-	Wisconsin	990	160	150	10		
Michigan	-	-	-	Michigan	1,780	310	280	30		
Sf'd. total	370	75	65	Hwd. total	107,140	17,625	16,595	1,030		
Minnesota	20	5	5	Minnesota	7,090	1,140	1,100	40		
Wisconsin	280	60	50	Wisconsin	31,680	5,310	4,900	910		
Michigan	70	10	10	Michigan	68,370	10,675	10,595	80		
Maple	39,400	6,220	6,110	All species	107,510	17,700	16,660	1,030		
Minnesota	720	110	110	Minnesota	7,110	1,145	1,105	40		
Wisconsin	9,340	1,540	1,450	Wisconsin	31,960	5,370	4,950	910		
Michigan	29,340	4,570	4,550	Michigan	68,440	10,635	10,605	80		

Table 3.- Net timber drain resulting from pulpwood cuttings in the Lake States - 1949

Species and state	Total		'Saw tbr.'		'Pole tbr.'		Tops		Species and state	Total		'Saw tbr.'		'Pole tbr.'		Tops	
	bd.ft.	cu.ft.	bd.ft.	cu.ft.	bd.ft.	cu.ft.	bd.ft.	cu.ft.		bd.ft.	cu.ft.	bd.ft.	cu.ft.	bd.ft.	cu.ft.	bd.ft.	cu.ft.
White pine	-	-	-	-	-	-	-	-	Birch	770	1,340	150	1,190	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	Minnesota	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	Wisconsin	310	920	60	860	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	Michigan	460	420	90	330	-	-	-	-
Red pine	-	-	-	-	-	-	-	-	Basswood	310	250	60	190	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	Minnesota	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	Wisconsin	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	Michigan	310	250	60	190	-	-	-	-
Jack pine	10,400	21,760	1,670	19,680	410	410	-	-	Elm	730	670	140	530	-	-	-	-
Minnesota	6,160	12,990	990	11,760	240	240	-	-	Minnesota	-	-	-	-	-	-	-	-
Wisconsin	2,700	5,740	430	5,200	110	110	-	-	Wisconsin	-	-	-	-	-	-	-	-
Michigan	1,540	3,030	250	2,720	60	60	-	-	Michigan	730	670	140	530	-	-	-	-
Spruce	12,330	25,520	1,990	23,040	490	490	-	-	Beech	90	90	20	70	-	-	-	-
Minnesota	7,320	15,150	1,180	13,680	290	290	-	-	Minnesota	-	-	-	-	-	-	-	-
Wisconsin	1,160	2,640	190	2,400	50	50	-	-	Wisconsin	-	-	-	-	-	-	-	-
Michigan	3,550	7,730	620	6,960	150	150	-	-	Michigan	90	90	20	70	-	-	-	-
Balsam	12,320	25,420	1,980	22,960	480	480	-	-	Oak	1,100	1,010	210	800	-	-	-	-
Minnesota	4,620	9,320	740	8,400	180	180	-	-	Minnesota	-	-	-	-	-	-	-	-
Wisconsin	3,080	6,220	500	5,600	120	120	-	-	Wisconsin	-	-	-	-	-	-	-	-
Michigan	4,620	9,880	740	8,960	180	180	-	-	Michigan	1,100	1,010	210	800	-	-	-	-
Tamarack	160	310	20	290	-	-	-	-	Aspen	17,410	39,940	2,790	37,150	-	-	-	-
Minnesota	120	230	10	220	-	-	-	-	Minnesota	4,620	10,940	740	10,200	-	-	-	-
Wisconsin	40	80	10	70	-	-	-	-	Wisconsin	6,750	15,190	1,080	14,110	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	Michigan	6,040	13,810	970	12,840	-	-	-	-
Cedar	-	-	-	-	-	-	-	-	Cottonwood	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	Minnesota	-	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	Wisconsin	-	-	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	-	-	Michigan	-	-	-	-	-	-	-	-
Hemlock	33,500	8,390	5,400	1,680	1,310	1,310	-	-	Miscellaneous	-	-	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	Minnesota	-	-	-	-	-	-	-	-
Wisconsin	14,630	3,650	2,360	720	570	570	-	-	Wisconsin	-	-	-	-	-	-	-	-
Michigan	18,870	4,740	3,040	960	740	740	-	-	Michigan	-	-	-	-	-	-	-	-
Sfwd. total	68,710	81,400	11,060	67,650	2,690	2,690	-	-	Hdwd. total	20,500	43,390	3,390	40,000	-	-	-	-
Minnesota	18,220	37,690	2,920	34,060	710	710	-	-	Minnesota	4,620	10,940	740	10,200	-	-	-	-
Wisconsin	21,610	18,330	3,490	13,990	850	850	-	-	Wisconsin	7,060	16,110	1,140	14,970	-	-	-	-
Michigan	28,880	25,380	4,650	19,600	1,130	1,130	-	-	Michigan	8,820	16,340	1,510	14,830	-	-	-	-
Maple	90	90	20	70	-	-	-	-	All species	89,210	124,790	14,450	107,650	-	-	-	-
Minnesota	-	-	-	-	-	-	-	-	Minnesota	22,640	48,630	3,660	44,260	-	-	-	-
Wisconsin	-	-	-	-	-	-	-	-	Wisconsin	28,670	34,440	4,630	28,960	-	-	-	-
Michigan	90	90	20	70	-	-	-	-	Michigan	37,700	41,720	6,160	34,430	-	-	-	-

Table 4.- Net timber drain resulting from fuelwood cutting in the Lake States - 1949

Species and state	Total			'Sav tbr.'			'Pole tbr.'			Tops			
	'M	bd.ft.	'M cu.ft.	'M	cu.ft.	'M	cu.ft.	'M	cu.ft.		'M	cu.ft.	'M
White pine	1,140	1,850	830	940	80								
Minnesota	130	230	110	110	10								
Wisconsin	670	1,050	450	550	50								
Michigan	340	570	270	280	20								
Red pine	210	330	150	180	-								
Minnesota	70	110	50	60	-								
Wisconsin	70	110	50	60	-								
Michigan	70	110	50	60	-								
Jack pine	1,040	1,700	770	860	70								
Minnesota	470	800	330	390	30								
Wisconsin	540	840	360	440	40								
Michigan	30	60	30	30	-								
Spruce	300	510	240	260	10								
Minnesota	200	340	160	170	10								
Wisconsin	30	60	30	30	-								
Michigan	70	110	50	60	-								
Balsam	330	580	280	280	20								
Minnesota	270	460	220	220	20								
Wisconsin	30	60	30	30	-								
Michigan	30	60	30	30	-								
Tamarack	1,950	3,240	1,510	1,600	130								
Minnesota	1,480	2,500	1,190	1,210	100								
Wisconsin	400	630	270	330	30								
Michigan	70	110	50	60	-								
Cedar	410	640	280	340	20								
Minnesota	70	110	50	60	-								
Wisconsin	270	420	180	220	20								
Michigan	70	110	50	60	-								
Hemlock	2,020	3,230	1,440	1,650	140								
Minnesota	-	-	-	-	-								
Wisconsin	1,350	2,090	900	1,100	90								
Michigan	670	1,140	540	550	50								
Sfwd. total	7,400	12,080	5,500	6,110	470								
Minnesota	2,600	4,550	2,150	2,220	170								
Wisconsin	3,360	5,260	2,270	2,760	230								
Michigan	1,350	2,270	1,070	1,130	70								
Maple	18,270	17,140	8,840	8,300	-								
Minnesota	630	600	310	290	-								
Wisconsin	6,930	6,320	3,170	3,150	-								
Michigan	10,710	10,220	5,360	4,860	-								
Dirch	10,380	9,740	5,020	4,720	-								
Minnesota	2,830	2,710	1,420	1,290	-								
Wisconsin	4,090	3,730	1,870	1,860	-								
Michigan	3,460	3,300	1,730	1,570	-								
Basswood	5,040	4,680	2,400	2,280	-								
Minnesota	2,520	2,400	1,260	1,140	-								
Wisconsin	1,260	1,140	570	570	-								
Michigan	1,260	1,140	570	570	-								
Elm	13,860	13,080	6,790	6,290	-								
Minnesota	4,410	4,200	2,000	2,000	-								
Wisconsin	3,150	2,870	1,440	1,430	-								
Michigan	6,300	6,010	3,150	2,860	-								
Beech	1,420	1,340	700	640	-								
Minnesota	-	-	-	-	-								
Wisconsin	160	140	70	70	-								
Michigan	1,260	1,200	630	570	-								
Oak	37,480	34,970	17,950	17,020	-								
Minnesota	7,560	7,210	3,780	3,430	-								
Wisconsin	18,580	16,940	8,500	8,440	-								
Michigan	11,340	10,820	5,670	5,150	-								
Aspen	27,090	25,510	13,220	12,290	-								
Minnesota	11,970	11,420	5,990	5,430	-								
Wisconsin	7,560	6,380	3,450	3,430	-								
Michigan	7,560	7,210	3,780	3,430	-								
Ash	2,510	2,360	1,210	1,150	-								
Minnesota	630	600	310	290	-								
Wisconsin	940	860	430	430	-								
Michigan	940	900	470	430	-								
Miscellaneous	6,770	6,400	3,330	3,070	-								
Minnesota	4,090	3,910	2,050	1,860	-								
Wisconsin	1,420	1,290	650	640	-								
Michigan	1,260	1,200	630	570	-								
Hwd. total	122,820	115,220	59,460	55,760	-								
Minnesota	34,640	33,050	17,320	15,730	-								
Wisconsin	44,090	40,170	20,150	20,020	-								
Michigan	44,090	42,000	21,990	20,010	-								
All species	130,220	127,300	64,960	61,370	470								
Minnesota	37,330	37,600	19,480	17,950	170								
Wisconsin	47,450	45,430	22,420	22,780	230								
Michigan	45,440	44,270	23,060	21,140	70								

Table 5.- Net timber drain resulting from cutting piling in the Lake States - 1949

Species and state	Total 'M bd.ft.' 'M cu.ft.'	'Saw tbr.' 'Pole tbr.' 'M cu.ft.' 'M cu.ft.'	Tops 'M cu.ft.'
White pine	-	-	-
Minnesota	-	-	-
Wisconsin	-	-	-
Michigan	-	-	-
Red pine	250	45	10
Minnesota	170	25	5
Wisconsin	80	20	5
Michigan	-	-	-
Jack pine	140	25	5
Minnesota	140	25	5
Wisconsin	-	-	-
Michigan	-	-	-
Spruce	-	-	-
Minnesota	-	-	-
Wisconsin	-	-	-
Michigan	-	-	-
Balsam	-	-	-
Minnesota	-	-	-
Wisconsin	-	-	-
Michigan	-	-	-
Tamarack	-	-	-
Minnesota	-	-	-
Wisconsin	-	-	-
Michigan	-	-	-
Cedar	-	-	-
Minnesota	-	-	-
Wisconsin	-	-	-
Michigan	-	-	-
Hemlock	-	-	-
Minnesota	-	-	-
Wisconsin	-	-	-
Michigan	-	-	-
Sfwd. total	390	70	15
Minnesota	310	50	10
Wisconsin	80	20	5
Michigan	-	-	-
Maple	60	10	-
Minnesota	-	-	-
Wisconsin	60	10	-
Michigan	-	-	-

1. The first part of the document is a list of names and addresses.

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Table 6.- Net timber drain resulting from chemical wood cutting in the Lake States -- 1949

Species and state	Total			Species and state	Total			Species and state	Total		
	'M bd.ft.'	'M cu.ft.'	'Saw tbr.' 'M cu.ft.'		'M bd.ft.'	'M cu.ft.'	'Saw tbr.' 'M cu.ft.'		'M bd.ft.'	'M cu.ft.'	'Saw tbr.' 'M cu.ft.'
White pine	-	-	-	Birch	2,970	820	690	130	-	-	-
Minnesota	-	-	-	Minnesota	-	-	-	-	-	-	
Wisconsin	-	-	-	Wisconsin	-	-	-	-	-	-	
Michigan	-	-	-	Michigan	2,970	820	690	130	-	-	
Red pine	-	-	-	Basswood	-	-	-	-	-	-	
Minnesota	-	-	-	Minnesota	-	-	-	-	-	-	
Wisconsin	-	-	-	Wisconsin	-	-	-	-	-	-	
Michigan	-	-	-	Michigan	-	-	-	-	-	-	
Jack pine	-	-	-	Elm	140	40	30	10	-	-	
Minnesota	-	-	-	Minnesota	-	-	-	-	-	-	
Wisconsin	-	-	-	Wisconsin	-	-	-	-	-	-	
Michigan	-	-	-	Michigan	140	40	30	10	-	-	
Spruce	-	-	-	Beech	950	260	220	40	-	-	
Minnesota	-	-	-	Minnesota	-	-	-	-	-	-	
Wisconsin	-	-	-	Wisconsin	-	-	-	-	-	-	
Michigan	-	-	-	Michigan	950	260	220	40	-	-	
Balsam	-	-	-	Oak	140	40	30	10	-	-	
Minnesota	-	-	-	Minnesota	-	-	-	-	-	-	
Wisconsin	-	-	-	Wisconsin	-	-	-	-	-	-	
Michigan	-	-	-	Michigan	140	40	30	10	-	-	
Tamarack	-	-	-	Aspen	410	110	90	20	-	-	
Minnesota	-	-	-	Minnesota	-	-	-	-	-	-	
Wisconsin	-	-	-	Wisconsin	-	-	-	-	-	-	
Michigan	-	-	-	Michigan	410	110	90	20	-	-	
Cedar	-	-	-	Ash	140	40	30	10	-	-	
Minnesota	-	-	-	Minnesota	-	-	-	-	-	-	
Wisconsin	-	-	-	Wisconsin	-	-	-	-	-	-	
Michigan	-	-	-	Michigan	140	40	30	10	-	-	
Hemlock	-	-	-	Miscellaneous	-	-	-	-	-	-	
Minnesota	-	-	-	Minnesota	-	-	-	-	-	-	
Wisconsin	-	-	-	Wisconsin	-	-	-	-	-	-	
Michigan	-	-	-	Michigan	-	-	-	-	-	-	
Sfwd. total	-	-	-	Hdvd. total	10,290	2,850	2,380	470	-	-	
Minnesota	-	-	-	Minnesota	-	-	-	-	-	-	
Wisconsin	-	-	-	Wisconsin	550	150	120	30	-	-	
Michigan	-	-	-	Michigan	9,740	2,700	2,260	440	-	-	
Maple	5,540	1,540	1,290	All species	10,290	2,850	2,380	470	-	-	
Minnesota	-	-	-	Minnesota	-	-	-	-	-	-	
Wisconsin	140	40	30	Wisconsin	550	150	120	30	-	-	
Michigan	5,400	1,500	1,260	Michigan	9,740	2,700	2,260	440	-	-	

Table 7.-- Net timber drain resulting from cutting excelsior bolts in the Lake States - 1949

Species and state	Total		'Saw thr.'		'Pole tbr.'		Tops	
	'M bd.ft.'	'M cu.ft.'	'M cu.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	-	-	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	-	
Michigan	-	-	-	-	-	-	-	
Balsam	-	-	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	-	
Michigan	-	-	-	-	-	-	-	
Tamarack	-	-	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	-	
Michigan	-	-	-	-	-	-	-	
Cedar	-	-	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	-	
Michigan	-	-	-	-	-	-	-	
Hemlock	-	-	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	-	
Michigan	-	-	-	-	-	-	-	
Sfwd. total	-	-	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	-	
Michigan	-	-	-	-	-	-	-	
Maple	-	-	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	-	
Michigan	-	-	-	-	-	-	-	

Species and state	Total		'Saw thr.'		'Pole tbr.'		Tops	
	'M bd.ft.'	'M cu.ft.'	'M cu.ft.'	'M cu.ft.'	'M cu.ft.'	'M cu.ft.'	'M cu.ft.'	
Birch	-	-	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	-	
Michigan	-	-	-	-	-	-	-	
Basswood	30	250	10	240	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	20	170	10	160	-	-	-	
Michigan	10	80	-	80	-	-	-	
Elm	-	-	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	-	
Michigan	-	-	-	-	-	-	-	
Beech	-	-	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	-	
Michigan	-	-	-	-	-	-	-	
Oak	-	-	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	-	
Michigan	-	-	-	-	-	-	-	
Aspen	770	5,890	150	5,740	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	370	2,820	70	2,750	-	-	-	
Michigan	400	3,070	80	2,990	-	-	-	
Cottonwood	-	-	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	-	
Michigan	-	-	-	-	-	-	-	
Miscellaneous	-	-	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	-	
Michigan	-	-	-	-	-	-	-	
Hdwd. total	800	6,140	160	5,980	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	390	2,990	80	2,910	-	-	-	
Michigan	410	3,150	80	3,070	-	-	-	
All species	800	6,140	160	5,980	-	-	-	
Minnesota	-	-	-	-	-	-	-	
Wisconsin	390	2,990	80	2,910	-	-	-	
Michigan	410	3,150	80	3,070	-	-	-	

Table 3.— Net timber drain resulting from fence post cutting in the Lake States — 1949

Species and state	Total			'Saw tbr.' Pole tbr. ' Tops			Species and state	Total			'Saw tbr.' Pole tbr. ' Tops		
	'H bd.ft.' 'H cu.ft.' 'H cu.ft.'	'H cu.ft.' 'H cu.ft.' 'H cu.ft.'	'H cu.ft.' 'H cu.ft.' 'H cu.ft.'	'H bd.ft.' 'H cu.ft.' 'H cu.ft.'	'H cu.ft.' 'H cu.ft.' 'H cu.ft.'	'H cu.ft.' 'H cu.ft.' 'H cu.ft.'		'H bd.ft.' 'H cu.ft.' 'H cu.ft.'	'H cu.ft.' 'H cu.ft.' 'H cu.ft.'	'H cu.ft.' 'H cu.ft.' 'H 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	270	250	60	170	20	20	Basswood	-	-	-	-	-	
Minnesota	130	160	40	110	10	10	Minnesota	-	-	-	-	-	
Wisconsin	90	90	20	60	10	10	Wisconsin	-	-	-	-	-	
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	
Jack pine	630	610	140	420	50	50	Elm	410	340	90	250	-	
Minnesota	450	400	90	280	30	30	Minnesota	50	40	10	30	-	
Wisconsin	140	120	30	80	10	10	Wisconsin	130	150	40	110	-	
Michigan	90	90	20	60	10	10	Michigan	130	150	40	110	-	
Spruce	-	-	-	-	-	-	Beech	-	-	-	-	-	
Minnesota	-	-	-	-	-	-	Minnesota	-	-	-	-	-	
Wisconsin	-	-	-	-	-	-	Wisconsin	-	-	-	-	-	
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	
Balsam	90	90	20	60	10	10	Oak	11,520	9,370	2,300	7,070	-	
Minnesota	90	90	20	60	10	10	Minnesota	2,160	1,760	430	1,330	-	
Wisconsin	-	-	-	-	-	-	Wisconsin	6,390	5,200	1,280	3,920	-	
Michigan	-	-	-	-	-	-	Michigan	2,970	2,410	590	1,820	-	
Tamarack	640	570	130	390	50	50	Aspen	1,080	880	210	670	-	
Minnesota	270	240	50	170	20	20	Minnesota	450	370	90	280	-	
Wisconsin	230	210	50	140	20	20	Wisconsin	360	290	70	220	-	
Michigan	140	120	30	80	10	10	Michigan	270	220	50	170	-	
Cedar	4,560	4,280	980	2,930	320	320	Cottonwood	-	-	-	-	-	
Minnesota	630	560	130	390	40	40	Minnesota	-	-	-	-	-	
Wisconsin	1,080	950	220	660	70	70	Wisconsin	-	-	-	-	-	
Michigan	3,150	2,770	630	1,930	210	210	Michigan	-	-	-	-	-	
Hemlock	140	130	30	90	10	10	Miscellaneous	540	450	110	340	-	
Minnesota	-	-	-	-	-	-	Minnesota	90	80	20	60	-	
Wisconsin	90	90	20	60	10	10	Wisconsin	270	220	50	170	-	
Michigan	50	40	10	30	-	-	Michigan	180	150	40	110	-	
Sfwd. total	6,630	5,930	1,360	4,110	460	460	Edwd. total	14,050	11,430	2,820	8,660	-	
Minnesota	1,620	1,450	330	1,010	110	110	Minnesota	2,890	2,370	580	1,790	-	
Wisconsin	1,630	1,460	340	1,000	120	120	Wisconsin	7,380	6,020	1,480	4,540	-	
Michigan	3,430	3,020	690	2,100	230	230	Michigan	3,780	3,090	760	2,330	-	
Maple	270	240	60	130	-	-	All species	20,730	17,410	4,180	12,770	460	
Minnesota	90	80	20	60	-	-	Minnesota	4,510	3,820	910	2,800	110	
Wisconsin	90	80	20	60	-	-	Wisconsin	9,010	7,480	1,820	5,540	120	
Michigan	90	80	20	60	-	-	Michigan	7,210	6,110	1,450	4,430	230

Table 9.- Net timber drain resulting from cutting utility poles in the Lake States - 1949

Species and state	Total		'Saw tbr.' Pole tbr.		Tops		Species and state	Total		'Saw tbr.' Pole tbr.		Tops	
	bd.ft.	cu.ft.	bd.ft.	cu.ft.	bd.ft.	cu.ft.		bd.ft.	cu.ft.	bd.ft.	cu.ft.	bd.ft.	cu.ft.
White pine	-	-	-	-	-	-	Birch	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	Minnesota	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	Wisconsin	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	-
Red pine	140	50	30	15	5	5	Basswood	-	-	-	-	-	-
Minnesota	140	50	30	15	5	5	Minnesota	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	Wisconsin	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	-
Jack pine	460	165	90	60	15	15	Elm	-	-	-	-	-	-
Minnesota	410	145	80	50	15	15	Minnesota	-	-	-	-	-	-
Wisconsin	50	20	10	10	-	-	Wisconsin	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	-
Spruce	-	-	-	-	-	-	Beech	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	Minnesota	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	Wisconsin	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	-
Balsam	-	-	-	-	-	-	Oak	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	Minnesota	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	Wisconsin	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	-
Tamarack	-	-	-	-	-	-	Aspen	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	Minnesota	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	Wisconsin	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	-
Cedar	3,240	1,135	670	390	125	125	Cottonwood	-	-	-	-	-	-
Minnesota	1,920	695	390	230	75	75	Minnesota	-	-	-	-	-	-
Wisconsin	220	90	50	30	10	10	Wisconsin	-	-	-	-	-	-
Michigan	1,100	400	230	130	40	40	Michigan	-	-	-	-	-	-
Hemlock	-	-	-	-	-	-	Miscellaneous	-	-	-	-	-	-
Minnesota	-	-	-	-	-	-	Minnesota	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	Wisconsin	-	-	-	-	-	-
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	-
Sfwd. total	3,840	1,400	790	465	145	145	Hwd. total	-	-	-	-	-	-
Minnesota	2,470	890	500	295	95	95	Minnesota	-	-	-	-	-	-
Wisconsin	270	110	60	40	10	10	Wisconsin	-	-	-	-	-	-
Michigan	1,100	400	230	130	40	40	Michigan	-	-	-	-	-	-
Maple	-	-	-	-	-	-	All species	3,840	1,400	790	465	145	145
Minnesota	-	-	-	-	-	-	Minnesota	2,470	890	500	295	95	95
Wisconsin	-	-	-	-	-	-	Wisconsin	270	110	60	40	10	10
Michigan	-	-	-	-	-	-	Michigan	1,100	400	230	130	40	40

Table 10.- Net timber drain resulting from heavy tie cutting in the Lake States - 1949

Species and state	Total		'Saw tbr.' Pole tbr.		Total		Species and state		'Saw tbr.' Pole tbr.		Total		Species and state		'Saw tbr.' Pole tbr.	
	bd.ft.	cu.ft.	bd.ft.	cu.ft.	bd.ft.	cu.ft.			bd.ft.	cu.ft.	bd.ft.	cu.ft.			bd.ft.	cu.ft.
White pine	-	-	-	-	-	-	Birch	-	-	-	-	-	Minnesota	-	-	-
Minnesota	-	-	-	-	-	-	Wisconsin	-	-	-	-	-	Michigan	-	-	-
Wisconsin	-	-	-	-	-	-	Michigan	-	-	-	-	-	Minnesota	-	-	-
Michigan	-	-	-	-	-	-	Minnesota	-	-	-	-	-	Wisconsin	-	-	-
Red pine	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Minnesota	-	-	-	-	-	-	Michigan	-	-	-	-	-	Minnesota	-	-	-
Wisconsin	-	-	-	-	-	-	Michigan	-	-	-	-	-	Wisconsin	-	-	-
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Jack pine	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Minnesota	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Wisconsin	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Spruce	5	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Minnesota	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Wisconsin	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Michigan	5	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Balsam	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Minnesota	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Wisconsin	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Tamarack	5	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Minnesota	5	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Wisconsin	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Cedar	45	20	10	10	10	10	Michigan	-	-	-	-	-	Michigan	-	-	-
Minnesota	5	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Wisconsin	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Michigan	40	20	10	10	10	10	Michigan	-	-	-	-	-	Michigan	-	-	-
Hemlock	10	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Minnesota	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Wisconsin	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Michigan	10	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Sfvd. total	65	20	10	10	10	10	Michigan	-	-	-	-	-	Michigan	-	-	-
Minnesota	10	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Wisconsin	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Michigan	55	20	10	10	10	10	Michigan	-	-	-	-	-	Michigan	-	-	-
Maple	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Minnesota	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Wisconsin	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-
Michigan	-	-	-	-	-	-	Michigan	-	-	-	-	-	Michigan	-	-	-

Table 12.- Net timber drain resulting from coopeage log cutting in the Lake States - 1949

Species and state	Total		'Saw tbr. Pole tbr. Tons		Species and state	Total		'Saw tbr. Pole tbr. Tons	
	bd.ft.	cu.ft.	bd.ft.	cu.ft.		bd.ft.	cu.ft.	bd.ft.	cu.ft.
White pine	-	-	-	-	Birch	-	-	-	-
Minnesota	-	-	-	-	Minnesota	-	-	-	-
Wisconsin	-	-	-	-	Wisconsin	-	-	-	-
Michigan	-	-	-	-	Michigan	-	-	-	-
Red pine	-	-	-	-	Basswood	220	40	40	-
Minnesota	-	-	-	-	Minnesota	100	20	20	-
Wisconsin	-	-	-	-	Wisconsin	120	20	20	-
Michigan	-	-	-	-	Michigan	-	-	-	-
Jack pine	-	-	-	-	Elm	590	90	90	-
Minnesota	-	-	-	-	Minnesota	590	90	90	-
Wisconsin	-	-	-	-	Wisconsin	-	-	-	-
Michigan	-	-	-	-	Michigan	-	-	-	-
Spruce	-	-	-	-	Beech	-	-	-	-
Minnesota	-	-	-	-	Minnesota	-	-	-	-
Wisconsin	-	-	-	-	Wisconsin	-	-	-	-
Michigan	-	-	-	-	Michigan	-	-	-	-
Balsam	-	-	-	-	Oak	1,510	240	240	-
Minnesota	-	-	-	-	Minnesota	480	80	80	-
Wisconsin	-	-	-	-	Wisconsin	1,030	160	160	-
Michigan	-	-	-	-	Michigan	-	-	-	-
Tamarack	-	-	-	-	Aspen	60	10	10	-
Minnesota	-	-	-	-	Minnesota	60	10	10	-
Wisconsin	-	-	-	-	Wisconsin	-	-	-	-
Michigan	-	-	-	-	Michigan	-	-	-	-
Cedar	-	-	-	-	Cottonwood	320	50	50	-
Minnesota	-	-	-	-	Minnesota	320	50	50	-
Wisconsin	-	-	-	-	Wisconsin	-	-	-	-
Michigan	-	-	-	-	Michigan	-	-	-	-
Hemlock	-	-	-	-	Miscellaneous	30	-	-	-
Minnesota	-	-	-	-	Minnesota	30	-	-	-
Wisconsin	-	-	-	-	Wisconsin	-	-	-	-
Michigan	-	-	-	-	Michigan	-	-	-	-
Sfwd. total	-	-	-	-	Hwd. total	2,910	450	450	-
Minnesota	-	-	-	-	Minnesota	1,760	280	280	-
Wisconsin	-	-	-	-	Wisconsin	1,150	180	180	-
Michigan	-	-	-	-	Michigan	-	-	-	-
Maple	180	30	30	-	All species	2,910	450	450	-
Minnesota	180	30	30	-	Minnesota	1,760	280	280	-
Wisconsin	-	-	-	-	Wisconsin	1,150	180	180	-
Michigan	-	-	-	-	Michigan	-	-	-	-

Table 13.- Net timber drain resulting from cutting miscellaneous rough forest products, Lake States - 1949

Species and state	Total			'Saw tbr.' Pole tbr. ' Tops			Species and state	Total			'Saw tbr.' Pole tbr. ' Tops		
	'M bd.ft.'	'M cu.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.'	'M cu.ft.'
White pine	540	210	90	90	30		Birch	770	210	140	70	-	-
Minnesota	130	70	30	30	10		Minnesota	630	170	110	60	-	-
Wisconsin	130	70	30	30	10		Wisconsin	90	30	20	10	-	-
Michigan	180	70	30	30	10		Michigan	50	10	10	-	-	-
Red pine	240	80	40	40	-		Baswood	630	170	120	50	-	-
Minnesota	110	40	20	20	-		Minnesota	270	70	50	20	-	-
Wisconsin	60	20	10	10	-		Wisconsin	270	70	50	20	-	-
Michigan	70	20	10	10	-		Michigan	90	30	20	10	-	-
Jack pine	590	200	100	50	20		Elm	270	70	50	20	-	-
Minnesota	250	90	40	40	10		Minnesota	-	-	-	-	-	-
Wisconsin	120	30	20	10	-		Wisconsin	-	-	-	-	-	-
Michigan	220	80	40	30	10		Michigan	270	70	50	20	-	-
Spruce	180	50	30	20	-		Beech	2,250	530	330	200	-	-
Minnesota	70	20	10	10	-		Minnesota	-	-	-	-	-	-
Wisconsin	40	10	10	-	-		Wisconsin	-	-	-	-	-	-
Michigan	70	20	10	10	-		Michigan	2,250	530	330	200	-	-
Balsam	390	130	60	60	10		Oak	370	90	70	20	-	-
Minnesota	140	40	20	20	-		Minnesota	50	10	10	-	-	-
Wisconsin	70	20	10	10	-		Wisconsin	50	10	10	-	-	-
Michigan	180	70	30	30	10		Michigan	270	70	50	20	-	-
Tamarack	180	50	30	20	-		Aspen	5,210	1,340	870	470	-	-
Minnesota	70	20	10	10	-		Minnesota	3,240	830	540	290	-	-
Wisconsin	40	10	10	-	-		Wisconsin	1,350	350	230	120	-	-
Michigan	70	20	10	10	-		Michigan	620	160	100	60	-	-
Cedar	1,920	660	320	270	70		Cottonwood	-	-	-	-	-	-
Minnesota	250	90	40	40	10		Minnesota	-	-	-	-	-	-
Wisconsin	480	160	80	60	20		Wisconsin	-	-	-	-	-	-
Michigan	1,190	410	200	170	40		Michigan	-	-	-	-	-	-
Hemlock	140	40	20	20	-		Miscellaneous	320	90	60	30	-	-
Minnesota	-	-	-	-	-		Minnesota	-	-	-	-	-	-
Wisconsin	70	20	10	10	-		Wisconsin	90	30	20	10	-	-
Michigan	70	20	10	10	-		Michigan	230	60	40	20	-	-
Sfvd. total	4,180	1,420	690	600	130		Hdvd. total	12,380	3,210	2,120	1,090	-	-
Minnesota	1,070	370	170	170	30		Minnesota	4,190	1,030	710	370	-	-
Wisconsin	1,060	340	130	130	30		Wisconsin	2,160	570	380	190	-	-
Michigan	2,050	710	340	300	70		Michigan	6,030	1,560	1,030	530	-	-
Happle	2,560	660	430	230	-		All species	16,560	4,630	2,810	1,690	-	-
Minnesota	-	-	-	-	-		Minnesota	5,260	1,450	830	540	-	-
Wisconsin	310	80	50	30	-		Wisconsin	3,220	910	560	320	-	-
Michigan	2,250	580	380	200	-		Michigan	8,080	2,270	1,370	830	-	-

Table 14.- Total net timber drain resulting from cutting in the Lake States - 1949

Species and state	Total		'Saw tbr.' Pole tbr.		Tops cu.ft.	Species and state	Total		'Saw tbr.' Pole tbr.		Tops cu.ft.
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.			M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	
White pine	41,230	11,395	7,445	2,070	1,830	Birch	56,570	25,825	17,140	8,685	-
Minnesota	8,650	2,265	1,515	360	390	Minnesota	5,390	3,330	1,900	1,480	-
Wisconsin	20,220	5,700	3,680	1,090	930	Wisconsin	20,670	7,320	4,470	3,350	-
Michigan	12,360	3,430	2,250	620	560	Michigan	60,010	14,625	10,770	3,855	-
Red pine	36,070	9,595	6,035	1,905	1,605	Basswood	50,550	14,015	9,500	4,515	-
Minnesota	15,970	4,255	2,630	865	710	Minnesota	13,360	4,460	2,950	1,510	-
Wisconsin	14,830	3,910	2,495	750	665	Wisconsin	19,630	5,010	3,440	1,570	-
Michigan	5,270	1,430	910	290	230	Michigan	17,560	4,545	3,110	1,435	-
Jack pine	47,260	35,860	8,370	25,440	2,050	Elm	77,460	26,075	16,715	9,360	-
Minnesota	32,970	22,840	5,720	15,710	1,410	Minnesota	15,350	6,440	3,970	2,470	-
Wisconsin	6,340	7,870	1,390	6,170	310	Wisconsin	28,270	7,745	5,345	2,400	-
Michigan	7,450	5,150	1,260	3,560	330	Michigan	33,340	11,890	7,400	4,490	-
Spruce	19,105	28,030	3,290	23,960	730	Beech	28,390	5,660	4,990	1,670	-
Minnesota	10,030	16,270	1,750	14,110	410	Minnesota	-	-	-	-	-
Wisconsin	1,940	2,930	1,350	2,500	80	Wisconsin	830	270	170	100	-
Michigan	7,135	8,830	1,190	7,350	290	Michigan	27,560	6,390	4,820	1,570	-
Balsam	16,400	27,250	2,880	23,700	670	Oak	130,690	61,440	32,970	28,470	-
Minnesota	7,070	10,520	1,320	8,900	300	Minnesota	18,990	10,820	5,660	5,160	-
Wisconsin	3,670	6,450	620	5,590	140	Wisconsin	73,930	31,860	17,360	14,500	-
Michigan	5,660	10,280	940	9,110	230	Michigan	37,770	18,760	9,950	8,810	-
Tamarack	9,995	6,310	2,840	3,050	420	Aspen	106,120	106,535	25,935	80,600	-
Minnesota	5,465	4,050	1,830	1,980	240	Minnesota	39,610	35,160	10,450	24,710	-
Wisconsin	1,760	1,260	520	550	90	Wisconsin	38,970	39,310	8,530	30,780	-
Michigan	2,750	1,000	490	420	90	Michigan	27,540	32,115	7,005	25,110	-
Cedar	20,025	9,705	3,830	4,980	895	Cottonwood	8,850	1,780	1,370	410	-
Minnesota	4,145	1,835	820	850	165	Minnesota	4,810	970	750	220	-
Wisconsin	3,520	2,080	770	1,120	190	Wisconsin	2,340	470	360	110	-
Michigan	12,360	5,790	2,240	3,010	540	Michigan	1,700	340	260	80	-
Hemlock	153,280	38,000	26,260	5,010	6,730	Miscellaneous	30,000	13,250	7,800	5,450	-
Minnesota	54,090	14,300	9,550	2,370	-	Minnesota	7,930	5,220	2,370	2,350	-
Wisconsin	99,190	23,700	16,710	2,340	2,380	Wisconsin	10,450	3,920	2,340	1,580	-
Michigan	343,365	166,145	61,000	90,115	4,350	Michigan	11,620	4,110	2,590	1,520	-
Sfwd. total	343,365	166,145	61,000	90,115	15,030	Hwd. total	741,990	313,670	157,670	156,000	-
Minnesota	84,300	62,035	15,635	42,775	3,625	Minnesota	109,820	67,640	29,300	38,340	-
Wisconsin	106,890	44,500	19,375	20,340	4,735	Wisconsin	252,290	112,635	53,005	59,680	-
Michigan	152,175	59,610	25,990	27,000	6,620	Michigan	379,880	133,345	75,365	57,980	-
Maple	223,360	58,040	41,200	16,840	-	All species	1,085,355	479,815	218,670	246,115	15,030
Minnesota	3,360	1,190	750	440	-	Minnesota	194,120	129,675	44,935	81,115	3,625
Wisconsin	57,200	16,280	10,990	5,290	-	Wisconsin	359,180	157,185	72,380	80,020	4,735
Michigan	162,760	40,570	29,460	11,110	-	Michigan	532,055	192,955	101,355	84,980	6,620

FOREST PRODUCTS HARVESTED

IN THE LAKE STATES

1949

Table 15.- Saw log and saw bolt production in the Lake States - 1949

Species and origin	Volume cut and destination				Species and origin	Volume cut and destination			
	Total	Minn.	Wis.	Mich.		Total	Minn.	Wis.	Mich.
	M bd.ft., Int'l. 1/4-inch					M bd.ft., Int'l. 1/4-inch			
White pine	42,190	8,923	20,989	12,278	Elm	53,275	10,600	20,835	21,840
Minn.	8,923	8,923	-	-	Minn.	10,650	10,600	50	-
Wis.	20,589	-	20,489	100	Wis.	19,975	-	19,935	40
Mich.	12,678	-	500	12,178	Mich.	22,650	-	850	21,800
Red pine	39,704	17,252	16,705	5,747	Beech	17,230	-	850	16,380
Minn.	17,252	17,252	-	-	Minn.	-	-	-	-
Wis.	16,593	-	16,573	20	Wis.	640	-	640	-
Mich.	5,859	-	132	5,727	Mich.	16,590	-	210	16,380
Jack pine	46,556	33,317	5,141	8,098	Oak	87,716	9,800	53,346	24,570
Minn.	33,317	33,317	-	-	Minn.	9,950	9,800	150	-
Wis.	4,919	-	4,919	-	Wis.	52,914	-	52,904	10
Mich.	8,320	-	222	8,098	Mich.	24,852	-	292	24,560
Spruce	8,689	3,380	993	4,316	Aspen	131,606	48,060	52,808	30,738
Minn.	3,380	3,380	-	-	Minn.	47,110	47,110	-	-
Wis.	979	-	899	80	Wis.	53,248	950	51,748	550
Mich.	4,330	-	94	4,236	Mich.	31,248	-	1,060	30,188
Balsam	4,541	2,705	700	1,136	Cottonwood	10,142	5,340	2,780	2,022
Minn.	2,705	2,705	-	-	Minn.	5,340	5,340	-	-
Wis.	682	-	677	5	Wis.	2,780	-	2,780	-
Mich.	1,154	-	23	1,131	Mich.	2,022	-	-	2,022
Lamarack	2,563	1,352	984	227	Ash	15,076	2,671	6,945	5,460
Minn.	1,352	1,352	-	-	Minn.	2,671	2,671	-	-
Wis.	984	-	984	-	Wis.	6,760	-	6,670	90
Mich.	227	-	-	227	Mich.	5,645	-	275	5,370
Cedar	7,004	676	1,785	4,543	Hickory	610	-	100	510
Minn.	676	676	-	-	Minn.	-	-	-	-
Wis.	1,725	-	1,720	5	Wis.	100	-	100	-
Mich.	4,603	-	65	4,538	Mich.	510	-	-	510
Hemlock	119,175	-	41,943	77,232	Cherry	735	15	50	670
Minn.	-	-	-	-	Minn.	15	15	-	-
Wis.	38,753	-	37,053	1,700	Wis.	50	-	50	-
Mich.	80,422	-	4,890	75,532	Mich.	670	-	-	670
Softwood total	270,422	67,605	89,240	113,577	Walnut	220	20	40	160
Minn.	67,605	67,605	-	-	Minn.	20	20	-	-
Wis.	85,224	-	83,314	1,910	Wis.	40	-	40	-
Mich.	117,593	-	5,926	111,667	Mich.	160	-	-	160
Maple	179,576	1,780	57,976	120,120	Misc.	2,690	190	1,050	1,450
Minn.	1,980	1,780	200	-	Minn.	190	190	-	-
Wis.	47,576	-	46,276	1,300	Wis.	1,050	-	1,050	-
Mich.	130,320	-	11,500	118,820	Mich.	1,450	-	-	1,450
Birch	56,560	2,550	18,520	35,490	Hardwood total	593,605	89,040	231,505	273,060
Minn.	2,550	2,550	-	-	Minn.	88,840	88,090	750	-
Wis.	13,377	-	11,877	1,500	Wis.	213,750	950	209,210	3,590
Mich.	40,633	-	6,643	33,990	Mich.	291,015	-	21,545	269,470
Basswood	37,869	8,014	16,205	13,650	All species	864,027	156,645	320,745	386,637
Minn.	8,364	8,014	350	-	Minn.	156,445	155,695	750	-
Wis.	15,240	-	15,140	100	Wis.	298,974	950	292,524	5,500
Mich.	14,265	-	715	13,550	Mich.	408,608	-	27,471	381,137

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

1949

Species and origin	Volume cut and destination					Heading stock	Imports	
	Total	Minn.	Wis.	Mich.	Other U. S.		Other U. S.	Foreign Canada
	11 bd.ft., Int'l.	1 1/4-inch rule				Standard cords	11 bd.ft. Int'l	1 1/4-inch
White pine	350	20	330	-	-	-	-	15
Minnesota	20	20	-	-	-	-	-	-
Wisconsin	270	-	270	-	-	-	-	5
Michigan	60	-	60	-	-	-	-	10
H Maple	37,030	80	18,280	18,590	80	1,900	140	1,120
Minnesota	680	80	600	-	-	-	-	-
Wisconsin	8,650	-	8,640	10	-	1,600	100	500
Michigan	27,700	-	9,040	18,580	80	300	40	620
Birch	20,875	170	13,420	7,285	-	300	-	10,470
Minnesota	195	155	30	10	-	-	-	-
Wisconsin	4,380	15	4,340	25	-	200	-	8,250
Michigan	16,300	-	9,050	7,250	-	100	-	2,220
Basswood	11,360	900	8,930	1,515	15	3,790	480	60
Minnesota	3,220	900	2,300	20	-	250	-	-
Wisconsin	4,470	-	4,450	20	-	3,450	350	40
Michigan	3,670	-	2,180	1,475	15	90	130	20
Elm	14,680	230	9,795	4,620	35	1,240	410	160
Minnesota	1,605	230	1,375	-	-	-	-	-
Wisconsin	7,070	-	7,020	50	-	940	310	40
Michigan	6,005	-	1,400	4,570	35	300	100	120
Beech	8,365	-	855	7,510	-	-	10	-
Minnesota	-	-	-	-	-	-	-	-
Wisconsin	125	-	125	-	-	-	-	-
Michigan	8,240	-	730	7,510	-	-	10	-
Oak	4,300	-	3,600	600	100	20	310	260
Minnesota	350	-	340	10	-	-	-	-
Wisconsin	3,010	-	2,840	170	-	20	150	150
Michigan	940	-	420	420	100	-	160	110
Aspen	605	240	345	20	-	8,150	-	-
Minnesota	210	210	-	-	-	450	-	-
Wisconsin	370	30	340	-	-	7,700	-	-
Michigan	25	-	5	20	-	-	-	-
Ash	1,590	10	1,220	360	-	720	10	-
Minnesota	60	10	50	-	-	-	-	-
Wisconsin	620	-	620	-	-	230	10	-
Michigan	910	-	550	360	-	490	-	-
Walnut	403	-	3	-	400	-	-	-
Minnesota	20	-	-	-	20	-	-	-
Wisconsin	133	-	3	-	130	-	-	-
Michigan	250	-	-	-	250	-	-	-
Other	920	150	285	465	20	70	300	120
Minnesota	310	150	160	-	-	20	-	-
Wisconsin	140	-	125	15	-	30	80	120
Michigan	470	-	-	450	20	20	220	-
All species	100,478	1,800	57,063	40,965	650	16,190	1,660	12,205
Minnesota	6,670	1,755	4,855	40	20	720	-	-
Wisconsin	29,238	45	28,773	290	130	14,170	1,000	9,105
Michigan	64,570	-	23,435	40,635	500	1,300	660	3,100

Table 17.- Pulpwood production and imports in the Lake States - 1949

Species and origin	Volume cut and destination					Imports	
	Total	Minnesota	Wisconsin	Michigan	Other U. S.	Other U. S.	Foreign Canada
Thousand standard cords, rough wood basis							
Pine	273	81	168	24	-	47	69
Minnesota	163	81	80	2	-	-	29
Wisconsin	72	-	72	-	-	47	12
Michigan	38	-	16	22	-	-	28
Spruce	320	102	194	24	-	9	377
Minnesota	190	102	88	-	-	-	12
Wisconsin	33	-	33	-	-	9	301
Michigan	97	-	73	24	-	-	64
Balsam	319	48	241	30	-	-	18
Minnesota	117	48	69	-	-	-	-
Wisconsin	78	-	78	-	-	-	3
Michigan	124	-	94	30	-	-	15
Tamarack	4	2	2	-	-	-	-
Minnesota	3	2	1	-	-	-	-
Wisconsin	1	-	1	-	-	-	-
Michigan	-	-	-	-	-	-	-
Hemlock	108	-	101	7	-	-	-
Minnesota	-	-	-	-	-	-	-
Wisconsin	47	-	47	-	-	-	-
Michigan	61	-	54	7	-	-	-
Sfwd. total	1,024	233	706	85	-	56	464
Minnesota	473	233	233	2	-	-	41
Wisconsin	231	-	231	-	-	56	316
Michigan	320	-	237	83	-	-	107
Birch	15	-	15	-	-	-	-
Minnesota	-	-	-	-	-	-	-
Wisconsin	10	-	10	-	-	-	-
Michigan	5	-	5	-	-	-	-
Aspen	486	125	311	21	29	-	60
Minnesota	133	121	12	-	-	-	19
Wisconsin	185	4	181	-	-	-	22
Michigan	168	-	118	21	29	-	19
Misc. hdwds.	25	-	-	25	-	-	-
Minnesota	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-
Michigan	25	-	-	25	-	-	-
Hdwd. total	526	125	326	46	29	-	60
Minnesota	133	121	12	-	-	-	19
Wisconsin	195	4	191	-	-	-	22
Michigan	198	-	123	46	29	-	19
Slabs, etc.	2	-	2	-	-	-	-
Minnesota	-	-	-	-	-	-	-
Wisconsin	2	-	2	-	-	-	-
Michigan	-	-	-	-	-	-	-
All species	1,552	358	1,034	131	29	56	524
Minnesota	606	354	250	2	-	-	60
Wisconsin	428	4	424	-	-	56	338
Michigan	518	-	360	129	29	-	126

Table 18.- Production fuelwood, chemical wood, and excelsior bolts
in the Lake States - 1949

Species and origin	Volume cut ^{1/}			Species and origin	Volume cut ^{1/}		
	Fuel wood	'Chemical' wood	Excelsior		Fuel wood	'Chemical' wood	Excelsior
	M standard cords				M standard cords		
White pine	170	-	-	Birch	330	22	-
Minnesota	20	-	-	Minnesota	90	-	-
Wisconsin	100	-	-	Wisconsin	130	<u>2/</u>	-
Michigan	50	-	-	Michigan	110	22	-
Red pine	30	-	-	Basswood	160	-	3
Minnesota	10	-	-	Minnesota	80	-	-
Wisconsin	10	-	-	Wisconsin	40	-	2
Michigan	10	-	-	Michigan	40	-	1
Jack pine	155	-	-	Elm	440	1	-
Minnesota	70	-	-	Minnesota	140	-	-
Wisconsin	80	-	-	Wisconsin	100	-	-
Michigan	5	-	-	Michigan	200	1	-
Spruce	45	-	-	Beech	45	7	-
Minnesota	30	-	-	Minnesota	-	-	-
Wisconsin	5	-	-	Wisconsin	5	-	-
Michigan	10	-	-	Michigan	40	7	-
Balsam	50	-	-	Oak	1,190	1	-
Minnesota	40	-	-	Minnesota	240	-	-
Wisconsin	5	-	-	Wisconsin	590	-	-
Michigan	5	-	-	Michigan	360	1	-
Tamarack	290	-	-	Aspen	860	3	71
Minnesota	220	-	-	Minnesota	360	-	<u>2/</u>
Wisconsin	60	-	-	Wisconsin	240	3	34
Michigan	10	-	-	Michigan	240	-	37
Cedar	60	-	-	Ash	80	1	-
Minnesota	10	-	-	Minnesota	20	-	-
Wisconsin	40	-	-	Wisconsin	30	-	-
Michigan	10	-	-	Michigan	30	1	-
Hemlock	300	-	-	Misc.	215	<u>2/</u>	-
Minnesota	-	-	-	Minnesota	130	-	-
Wisconsin	200	-	-	Wisconsin	45	-	-
Michigan	100	-	-	Michigan	40	<u>2/</u>	-
Sfwd. total	1,100	-	-	Hdwd. total	3,900	76	74
Minnesota	400	-	-	Minnesota	1,100	-	<u>2/</u>
Wisconsin	500	-	-	Wisconsin	1,400	4	36
Michigan	200	-	-	Michigan	1,400	72	38
Maple	580	41	-	All species	5,000	76	74
Minnesota	20	-	-	Minnesota	1,500	-	<u>2/</u>
Wisconsin	220	1	-	Wisconsin	1,900	4	36
Michigan	340	40	-	Michigan	1,600	72	38

^{1/} Exclusive of veneer cores, slabs, edgings, etc.

^{2/} Less than 1 M cords.

Table 19.- Production of miscellaneous piece products
in the Lake States - 1949

Species and origin	Piling	Poles	Posts	Hewn ties	Species and origin	Piling	Poles	Posts	Hewn ties
Thousand pieces					Thousand pieces				
White pine	-	-	-	-	Maple	.4	-	300	-
Minnesota	-	-	-	-	Minnesota	-	-	100	-
Wisconsin	-	-	-	-	Wisconsin	.4	-	100	-
Michigan	-	-	-	-	Michigan	-	-	100	-
Red pine	1.5	5	300	-	Birch	-	-	250	-
Minnesota	1.0	5	200	-	Minnesota	-	-	50	-
Wisconsin	.5	-	100	-	Wisconsin	-	-	100	-
Michigan	-	-	-	-	Michigan	-	-	100	-
Jack pine	1.0	17	750	-	Elm	4.0	-	450	-
Minnesota	1.0	15	500	-	Minnesota	-	-	50	-
Wisconsin	-	2	150	-	Wisconsin	4.0	-	200	-
Michigan	-	-	100	-	Michigan	-	-	200	-
Spruce	-	-	-	1	Oak	1.0	-	12,800	-
Minnesota	-	-	-	-	Minnesota	-	-	2,400	-
Wisconsin	-	-	-	-	Wisconsin	1.0	-	7,100	-
Michigan	-	-	-	1	Michigan	-	-	3,300	-
Balsam	-	-	100	-	Aspen	-	-	1,200	-
Minnesota	-	-	100	-	Minnesota	-	-	500	-
Wisconsin	-	-	-	-	Wisconsin	-	-	400	-
Michigan	-	-	-	-	Michigan	-	-	300	-
Tamarack	-	-	700	1	Ash	.1	-	-	-
Minnesota	-	-	300	1	Minnesota	-	-	-	-
Wisconsin	-	-	250	-	Wisconsin	.1	-	-	-
Michigan	-	-	150	-	Michigan	-	-	-	-
Cedar	-	118	5,400	13	Misc.	-	-	600	-
Minnesota	-	70	700	1	Minnesota	-	-	100	-
Wisconsin	-	8	1,200	-	Wisconsin	-	-	300	-
Michigan	-	40	3,500	12	Michigan	-	-	200	-
Hemlock	-	-	150	2	Hwd. total	5.5	-	15,600	-
Minnesota	-	-	-	-	Minnesota	-	-	3,200	-
Wisconsin	-	-	100	-	Wisconsin	5.5	-	8,200	-
Michigan	-	-	50	2	Michigan	-	-	4,200	-
Sfwd. total	2.5	140	7,400	17	All species	8.0	140	23,000	17
Minnesota	2.0	90	1,800	2	Minnesota	2.0	90	5,000	2
Wisconsin	.5	10	1,800	-	Wisconsin	6.0	10	10,000	-
Michigan	-	40	3,800	15	Michigan	-	40	8,000	15

Table 20.- Production of mine timbers and other mine products
in the Lake States - 1949

Species and origin	Total	Mine timbers	Mine lagging	Other 1/	Species and origin	Total	Mine timbers	Mine lagging	Other 1/
Thousand cubic foot					Thousand cubic foot				
White pine	20	15	-	5	Maple	1,250	945	-	305
Minn.	15	15	-	-	Minn.	20	20	-	-
Wis.	-	-	-	-	Wis.	65	45	-	20
Mich.	5	-	-	5	Mich.	1,165	880	-	285
Red pine	65	60	-	5	Birch	390	330	-	60
Minn.	65	60	-	5	Minn.	5	5	-	-
Wis.	-	-	-	-	Wis.	40	25	-	15
Mich.	-	-	-	-	Mich.	345	300	-	45
Jack pine	925	670	145	110	Elm	100	90	-	10
Minn.	925	670	145	110	Minn.	30	30	-	-
Wis.	-	-	-	-	Wis.	10	10	-	-
Mich.	-	-	-	-	Mich.	60	50	-	10
Spruce	5	-	-	5	Beech	75	70	-	5
Minn.	-	-	-	-	Minn.	-	-	-	-
Wis.	-	-	-	-	Wis.	-	-	-	-
Mich.	5	-	-	5	Mich.	75	70	-	5
Tamarack	1,740	305	190	1,245	Oak	15	15	-	-
Minn.	850	255	-	595	Minn.	-	-	-	-
Wis.	120	10	5	105	Wis.	5	5	-	-
Mich.	770	40	185	545	Mich.	10	10	-	-
Cedar	1,500	-	1,485	15	Ash	50	50	-	-
Minn.	260	-	260	-	Minn.	50	50	-	-
Wis.	75	-	75	-	Wis.	-	-	-	-
Mich.	1,165	-	1,150	15	Mich.	-	-	-	-
Hemlock	235	255	5	25	Hdwd. total	1,880	1,500	-	380
Minn.	-	-	-	-	Minn.	105	105	-	-
Wis.	10	5	-	5	Wis.	120	85	-	35
Mich.	275	250	5	20	Mich.	1,655	1,310	-	345
Sfwd. total	4,540	1,305	1,825	1,410	All species	6,420	2,805	1,825	1,790
Minn.	2,115	1,000	405	710	Minn.	2,220	1,105	405	710
Wis.	205	15	80	110	Wis.	325	100	80	145
Mich.	2,220	290	1,340	590	Mich.	3,875	1,600	1,340	935

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

 

Table 21.- Production of cooorage logs and bolts in the Lake States - 1949

Species	Total	Volume cut, by states		
		Minnesota	Wisconsin	Michigan
<u>M bd. ft., Int'l. 1/4-inch rule</u>				
Maple	170	170	-	-
Basswood	205	95	110	-
Elm	560	560	-	-
Oak	1,420	450	970	-
Aspen	60	60	-	-
Cottonwood	300	300	-	-
Ash	25	25	-	-
All species	2,740	1,660	1,080	-

Table 22.- Production of miscellaneous products^{1/} in the Lake States - 1949

Species	Total	Volume cut, by states		
		Minnesota	Wisconsin	Michigan
Thousand cubic feet				
White pine	150	50	50	50
Red pine	70	30	20	20
Jack pine	160	70	30	60
Spruce	50	20	10	20
Balsam	110	40	20	50
Tamarack	50	20	10	20
Cedar	530	70	130	330
Hemlock	40	-	20	20
Total softwoods .	1,160	300	290	570
Maple	570	-	70	500
Birch	170	140	20	10
Basswood	140	60	60	20
Elm	60	-	-	60
Beech	500	-	-	500
Oak	80	10	10	60
Aspen	1,160	720	300	140
Ash	10	-	-	10
Other	60	-	20	40
Total hardwoods .	2,750	930	480	1,340
All species	3,910	1,230	770	1,910

^{1/} Rough forest products used for manufacture of matches, clothes pins, bowling pins, handles, wooden ware, rustic furniture and fences, toys, shingles, lath, log cabin materials, etc.