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MISCELLANEOUS REPORT NO. 18

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



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Miscellaneous Report No. 18

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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).



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 1.--Net timber drain resulting from cutting sawlogs and saw bolts 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.	I cu.ft.	Tops		M bd.ft.	M cu.ft.	I cu.ft.	Tops
White pine	62,410	14,400	1,670	2,730	Birch	49,640	10,000	7,700	2,300
Minnesota	12,980	3,000	350	570	Minnesota	2,100	430	330	100
Wisconsin	30,590	7,060	820	1,340	Wisconsin	9,730	1,970	1,510	460
Michigan	18,840	4,340	500	820	Michigan	37,810	7,660	5,860	1,800
Red pine	55,030	13,570	2,340	2,410	Basswood	34,560	6,990	5,350	1,640
Minnesota	23,700	5,850	1,010	1,040	Minnesota	7,960	1,610	1,230	380
Wisconsin	23,290	5,740	3,730	1,020	Wisconsin	14,150	2,860	2,190	670
Michigan	8,040	1,980	340	350	Michigan	12,450	2,520	1,930	590
Jack pine	48,760	16,270	7,820	2,130	Elm	48,510	9,830	7,520	2,310
Minnesota	34,990	11,680	4,540	1,530	Minnesota	10,310	2,090	1,600	490
Wisconsin	5,430	1,810	700	240	Wisconsin	17,500	3,560	2,720	840
Michigan	8,340	2,780	1,340	360	Michigan	20,690	4,180	3,200	980
Spruce	9,800	3,000	1,000	430	Beech	15,790	3,200	2,450	750
Minnesota	4,020	1,230	640	180	Minnesota	--	--	--	--
Wisconsin	1,100	340	110	50	Wisconsin	640	130	100	30
Michigan	4,680	1,430	480	200	Michigan	15,150	3,070	2,350	720
Balsam	5,590	1,710	890	240	Oak	80,810	16,370	12,520	3,850
Minnesota	3,070	940	320	130	Minnesota	9,400	1,900	1,450	450
Wisconsin	1,820	210	70	30	Wisconsin	49,120	9,950	7,610	2,340
Michigan	1,820	560	190	80	Michigan	22,290	4,520	3,450	1,060
Tamarack	3,010	920	310	130	Maple	58,730	35,480	9,310	26,170
Minnesota	1,780	550	180	80	Minnesota	20,870	12,610	3,310	9,300
Wisconsin	1,970	290	100	40	Wisconsin	24,750	14,950	3,920	11,030
Michigan	260	80	30	10	Michigan	13,110	7,920	2,080	5,840
Cedar	7,180	2,210	740	320	Cottonwood	9,190	1,870	1,430	440
Minnesota	810	250	80	40	Minnesota	5,530	1,120	850	260
Wisconsin	1,630	500	170	70	Wisconsin	1,580	330	250	80
Michigan	4,740	1,460	490	210	Michigan	2,080	420	320	100
Hemlock	181,840	39,390	2,310	7,950	Miscellaneous	18,960	3,840	2,940	900
Minnesota	--	--	--	--	Minnesota	3,050	620	470	150
Wisconsin	58,320	12,630	740	2,550	Wisconsin	7,650	1,530	1,190	360
Michigan	123,520	26,760	1,570	5,400	Michigan	8,260	1,670	1,280	390
Softwood total	373,620	91,470	15,270	16,340	Hardwood total	479,750	120,780	74,590	46,220
Minnesota	81,350	23,500	6,890	3,570	Minnesota	61,040	20,750	9,530	11,820
Wisconsin	122,030	26,580	5,700	5,340	Wisconsin	167,460	43,870	26,040	17,630
Michigan	170,240	39,390	4,680	7,430	Michigan	251,250	56,160	33,330	17,170
Maple	165,560	33,140	7,800	--	All species	853,370	212,250	134,420	61,490
Minnesota	1,820	570	90	--	Minnesota	142,390	32,250	22,670	18,110
Wisconsin	42,290	8,570	2,020	--	Wisconsin	289,490	72,450	45,580	21,530
Michigan	119,450	24,200	5,690	--	Michigan	421,490	95,550	66,270	21,850



Table 2.--Net timber drain resulting from cutting veneer logs and bolts in the Lake States - 1950

Species and state	Net timber drain by size classes				Species and state	Net timber drain by size classes			
	Total		Tops			Total		Tops	
	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	460	80	70	10	Birch	18,530	2,880	2,870	10
Minnesota	30	5	5	--	Minnesota	140	20	20	--
Wisconsin	400	70	60	10	Wisconsin	4,160	650	640	10
Michigan	30	5	5	--	Michigan	14,230	2,210	2,210	--
Red pine	--	--	--	--	Basswood	12,240	2,130	1,890	240
Minnesota	--	--	--	--	Minnesota	3,500	560	540	20
Wisconsin	--	--	--	--	Wisconsin	4,930	930	760	170
Michigan	--	--	--	--	Michigan	3,810	640	590	50
Jack pine	--	--	--	--	Elm	12,930	2,120	2,000	120
Minnesota	--	--	--	--	Minnesota	1,450	220	220	--
Wisconsin	--	--	--	--	Wisconsin	6,700	1,130	1,040	90
Michigan	--	--	--	--	Michigan	4,780	770	740	30
Spruce	--	--	--	--	Spruce	6,520	1,010	1,010	--
Minnesota	--	--	--	--	Minnesota	--	--	--	--
Wisconsin	--	--	--	--	Wisconsin	200	30	30	--
Michigan	--	--	--	--	Michigan	6,320	980	980	--
Balsam	--	--	--	--	Oak	3,790	590	590	--
Minnesota	--	--	--	--	Minnesota	360	60	60	--
Wisconsin	--	--	--	--	Wisconsin	2,500	390	390	--
Michigan	--	--	--	--	Michigan	930	140	140	--
Tamarack	--	--	--	--	Aspen	540	680	90	590
Minnesota	--	--	--	--	Minnesota	230	100	40	60
Wisconsin	--	--	--	--	Wisconsin	310	580	50	530
Michigan	--	--	--	--	Michigan	--	--	--	--
Cedar	--	--	--	--	Cottonwood	--	--	--	--
Minnesota	--	--	--	--	Minnesota	--	--	--	--
Wisconsin	--	--	--	--	Wisconsin	--	--	--	--
Michigan	--	--	--	--	Michigan	--	--	--	--
Hemlock	1,770	340	290	50	Miscellaneous	2,725	440	430	10
Minnesota	--	--	--	--	Minnesota	480	80	80	--
Wisconsin	--	--	--	--	Wisconsin	645	110	100	10
Michigan	1,770	340	290	50	Michigan	1,600	250	250	--
Softwood total	2,230	420	360	60	Hardwood total	90,605	15,120	14,040	1,080
Minnesota	30	5	5	--	Minnesota	6,770	1,130	1,050	80
Wisconsin	400	70	60	10	Wisconsin	28,785	5,350	4,460	890
Michigan	1,800	345	295	50	Michigan	55,050	8,640	8,530	110
Maple	53,530	5,270	5,160	110	All species	92,835	15,540	14,400	1,080
Minnesota	610	90	90	--	Minnesota	6,800	1,135	1,055	80
Wisconsin	9,340	1,530	1,450	80	Wisconsin	29,185	5,420	4,820	890
Michigan	23,580	3,650	3,620	30	Michigan	56,850	8,955	8,825	110





Table 3.--Net timber drain resulting from pulpwood 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 M bd.ft.	Saw tbr. POL tbr. M cu.ft.	Tops M cu.ft.		Total M bd.ft.	Saw tbr. POL tbr. M cu.ft.	Tops M cu.ft.	
White pine	--	--	--	Birch	1,680	1,390	300	1,090
Minnesota	--	--	--	Minnesota	--	--	--	--
Wisconsin	--	--	--	Wisconsin	1,220	980	220	760
Michigan	--	--	--	Michigan	460	410	80	330
Red pine	--	--	--	Basswood	--	--	--	--
Minnesota	--	--	--	Minnesota	--	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--	--
Michigan	--	--	--	Michigan	--	--	--	--
Jack pine	13,100	27,590	2,110	Elm	770	750	130	620
Minnesota	7,320	14,910	1,180	Minnesota	--	--	--	--
Wisconsin	3,470	7,420	560	Wisconsin	310	300	50	290
Michigan	2,310	5,260	370	Michigan	460	410	80	330
Spruce	12,530	25,200	1,990	Beech	--	--	--	--
Minnesota	7,320	14,830	1,180	Minnesota	--	--	--	--
Wisconsin	1,160	2,480	190	Wisconsin	--	--	--	--
Michigan	3,850	7,890	620	Michigan	--	--	--	--
Balsam	12,530	25,350	1,980	Oak	1,530	1,320	270	1,050
Minnesota	5,010	10,050	810	Minnesota	--	--	--	--
Wisconsin	2,700	5,500	430	Wisconsin	310	240	50	190
Michigan	4,620	9,800	740	Michigan	1,220	1,080	220	860
Tamarack	--	80	80	Aspen	24,860	57,050	4,000	53,050
Minnesota	--	80	80	Minnesota	8,880	20,390	1,430	18,960
Wisconsin	--	--	--	Wisconsin	7,100	16,020	1,140	14,880
Michigan	--	--	--	Michigan	8,880	20,640	1,430	19,210
Cedar	--	--	--	Cottonwood	--	--	--	--
Minnesota	--	--	--	Minnesota	--	--	--	--
Wisconsin	--	--	--	Wisconsin	--	--	--	--
Michigan	--	--	--	Michigan	--	--	--	--
Hemlock	50,430	10,170	6,510	Miscellaneous	620	490	100	390
Minnesota	--	--	--	Minnesota	--	100	--	100
Wisconsin	14,630	3,650	2,360	Wisconsin	310	150	50	100
Michigan	25,800	6,520	4,150	Michigan	310	240	50	190
Softwood total	78,190	88,390	12,590	Hardwood total	30,680	61,980	5,010	56,970
Minnesota	19,650	39,870	3,170	Minnesota	8,880	20,490	1,430	19,060
Wisconsin	21,960	19,050	3,540	Wisconsin	9,860	18,120	1,610	16,510
Michigan	36,580	29,470	5,880	Michigan	11,940	23,370	1,970	21,400
Maple	1,220	980	210	All species	108,870	150,370	17,600	129,690
Minnesota	--	--	--	Minnesota	28,530	60,360	4,000	54,980
Wisconsin	610	390	100	Wisconsin	31,820	37,170	5,150	31,150
Michigan	610	590	110	Michigan	48,520	52,840	7,850	43,560

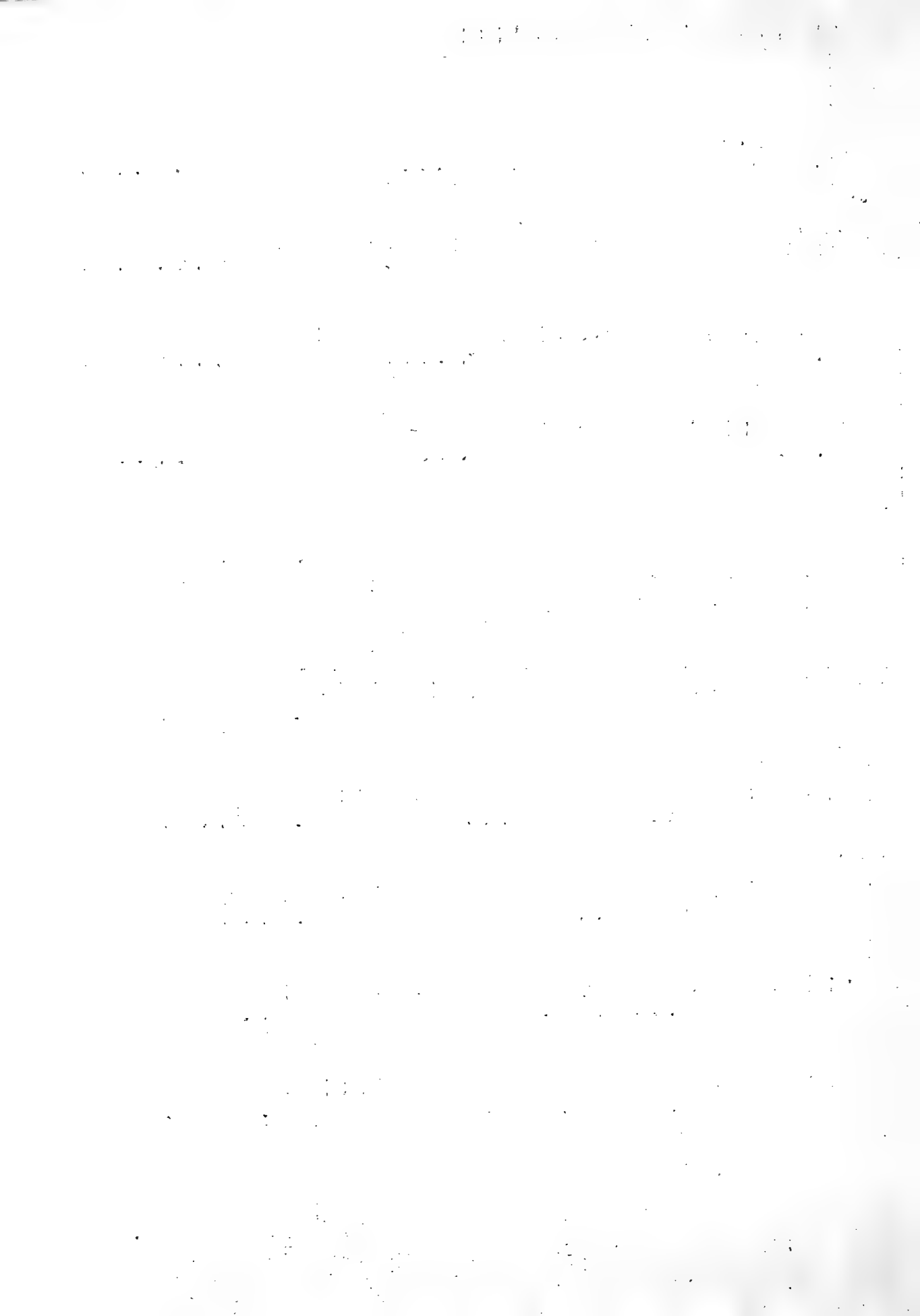










Table 6.--Net timber drain resulting from chemical wood cutting in the Lake States - 1950

Species and state	Net timber drain by size classes			Net timber drain by size classes				
	Total	Saw tbr.	Pole tbr.	Tops	Total	Saw tbr.	Pole tbr.	Tops
	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	--	--	--	--	3,380	970	790	150
Minnesota	--	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	140	40	30	10
Michigan	--	--	--	--	3,240	900	760	140
Red pine	--	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--	--
Jack pine	--	--	--	--	140	40	30	10
Minnesota	--	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--	--
Michigan	--	--	--	--	140	40	30	10
Spruce	--	--	--	--	1,080	300	250	50
Minnesota	--	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--	--
Michigan	--	--	--	--	1,080	300	250	50
Balsam	--	--	--	--	140	40	30	10
Minnesota	--	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--	--
Michigan	--	--	--	--	140	40	30	10
Tamarack	--	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--	--
Cedar	--	--	--	--	270	70	60	10
Minnesota	--	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--	--
Michigan	--	--	--	--	270	70	60	10
Hemlock	--	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--	--
Softwood total	--	--	--	--	11,860	3,150	2,640	510
Minnesota	--	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	410	110	90	20
Michigan	--	--	--	--	10,950	3,040	2,550	490
All pine	6,350	1,700	1,480	290	11,860	3,150	2,640	510
Minnesota	--	--	--	--	--	--	--	--
Wisconsin	270	70	60	10	410	110	90	20
Michigan	6,080	1,630	1,420	270	10,950	3,040	2,550	490





Table 7.--Net timber drain resulting from cutting excelsior bolts 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	--	--	--
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	--	--	--
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	--	--	--
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

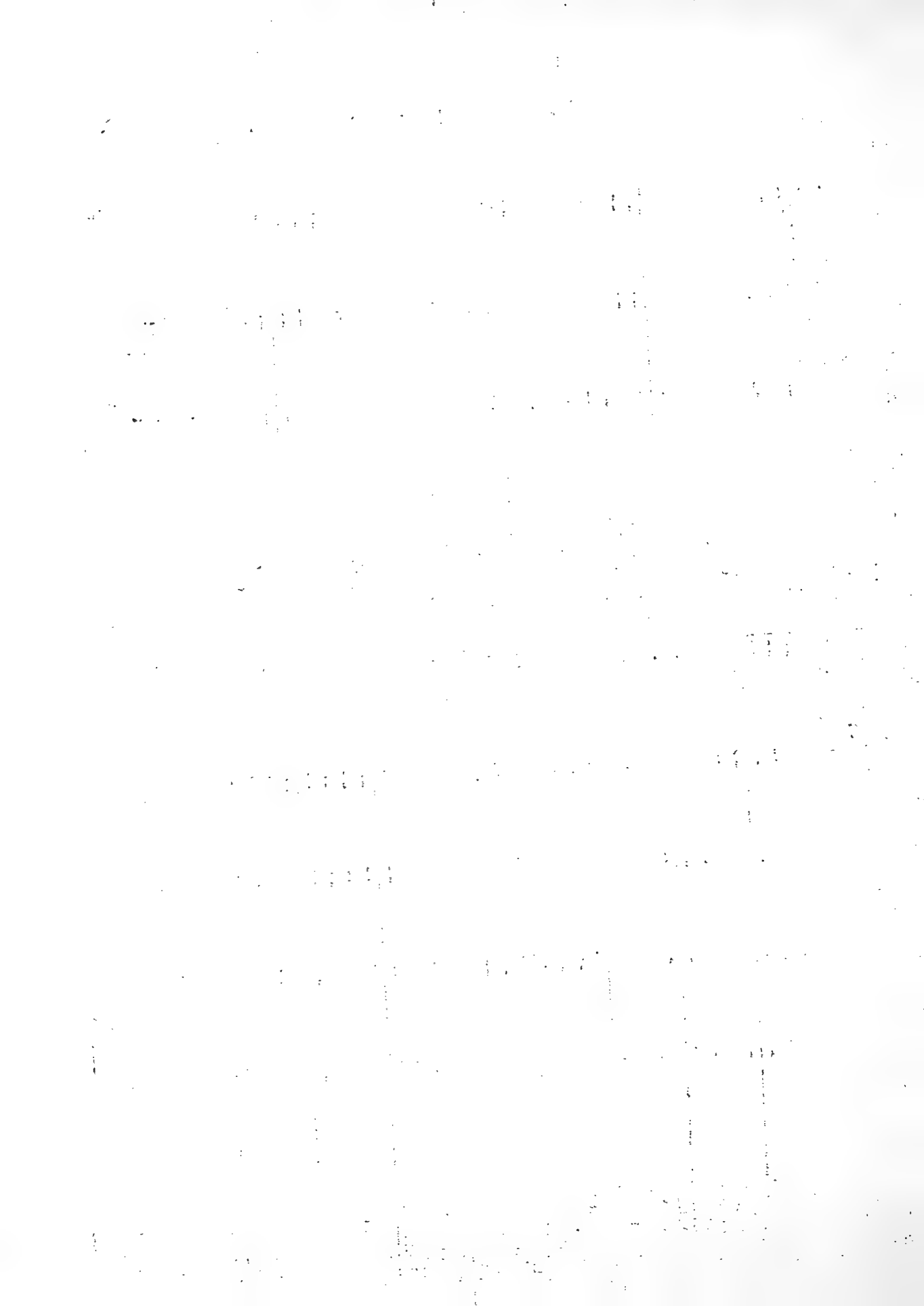


Table 8.--Net timber drain resulting from fence post cutting in the Lake States - 1950

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	640	570	130	390	Aspen	1,260	1,030	250	780
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

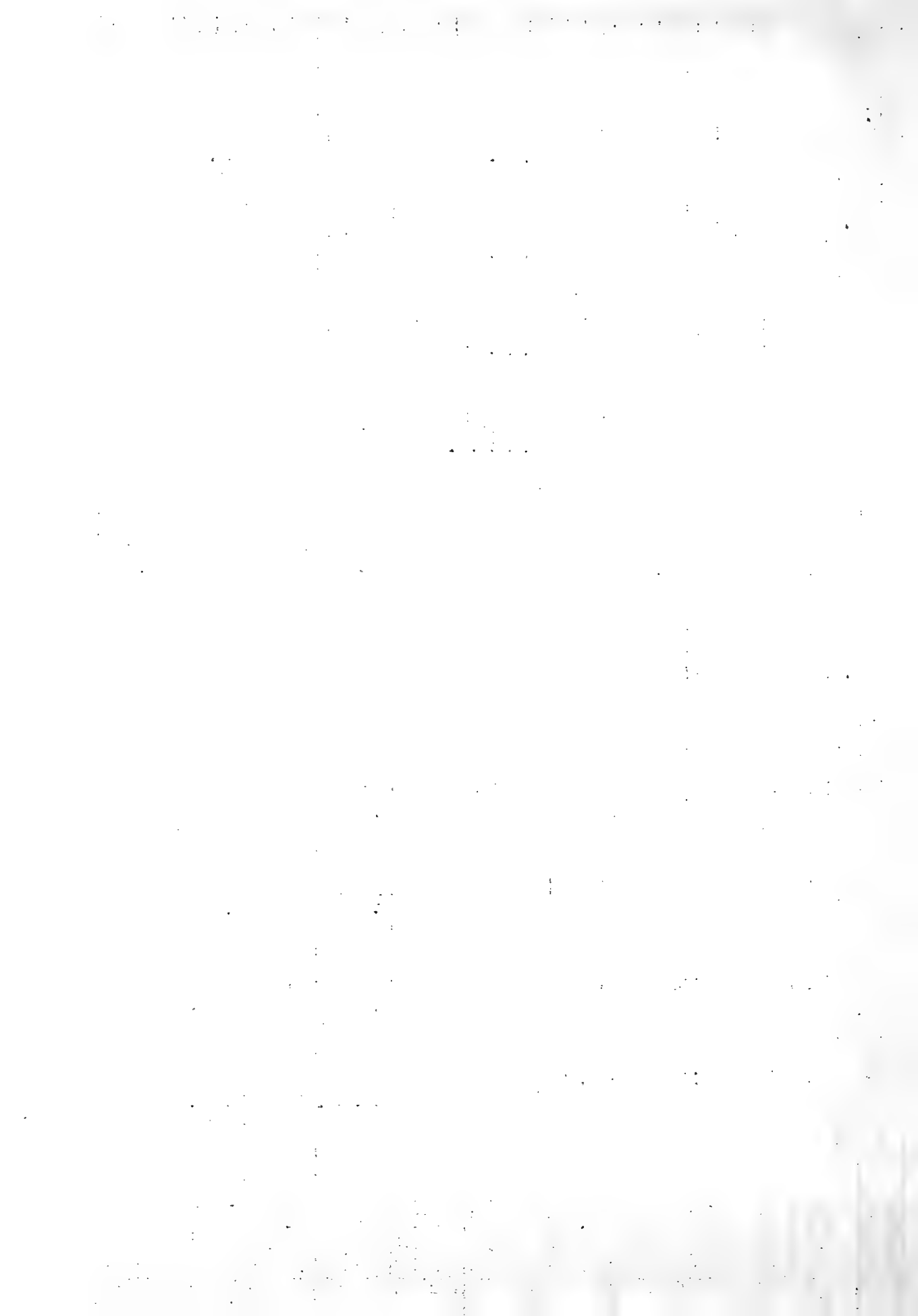


Table 9.--Net timber drain resulting from cutting utility poles in the Lake States -- 1950

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	158	55	15	88	55	--
Minnesota	410	145	50	15	80	50	--
Wisconsin	30	10	5	--	5	5	--
Michigan	--	--	--	--	--	--	--
Spruce	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--
Balsam	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--
Tamarack	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--
Cedar	2,660	1,040	340	110	530	340	--
Minnesota	1,510	550	180	60	310	180	--
Wisconsin	250	90	30	10	50	30	--
Michigan	1,100	400	130	40	230	130	--
Hemlock	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--
Softwood total	3,300	1,195	395	125	675	395	--
Minnesota	1,920	695	250	75	390	250	--
Wisconsin	280	100	35	10	55	35	--
Michigan	1,100	400	130	40	230	130	--
Maple	--	--	--	--	--	--	--
Minnesota	--	--	--	--	--	--	--
Wisconsin	--	--	--	--	--	--	--
Michigan	--	--	--	--	--	--	--
All species	3,800	1,195	395	125	675	395	125
Minnesota	1,920	695	250	75	390	250	75
Wisconsin	280	100	35	10	55	35	10
Michigan	1,100	400	130	40	230	130	40

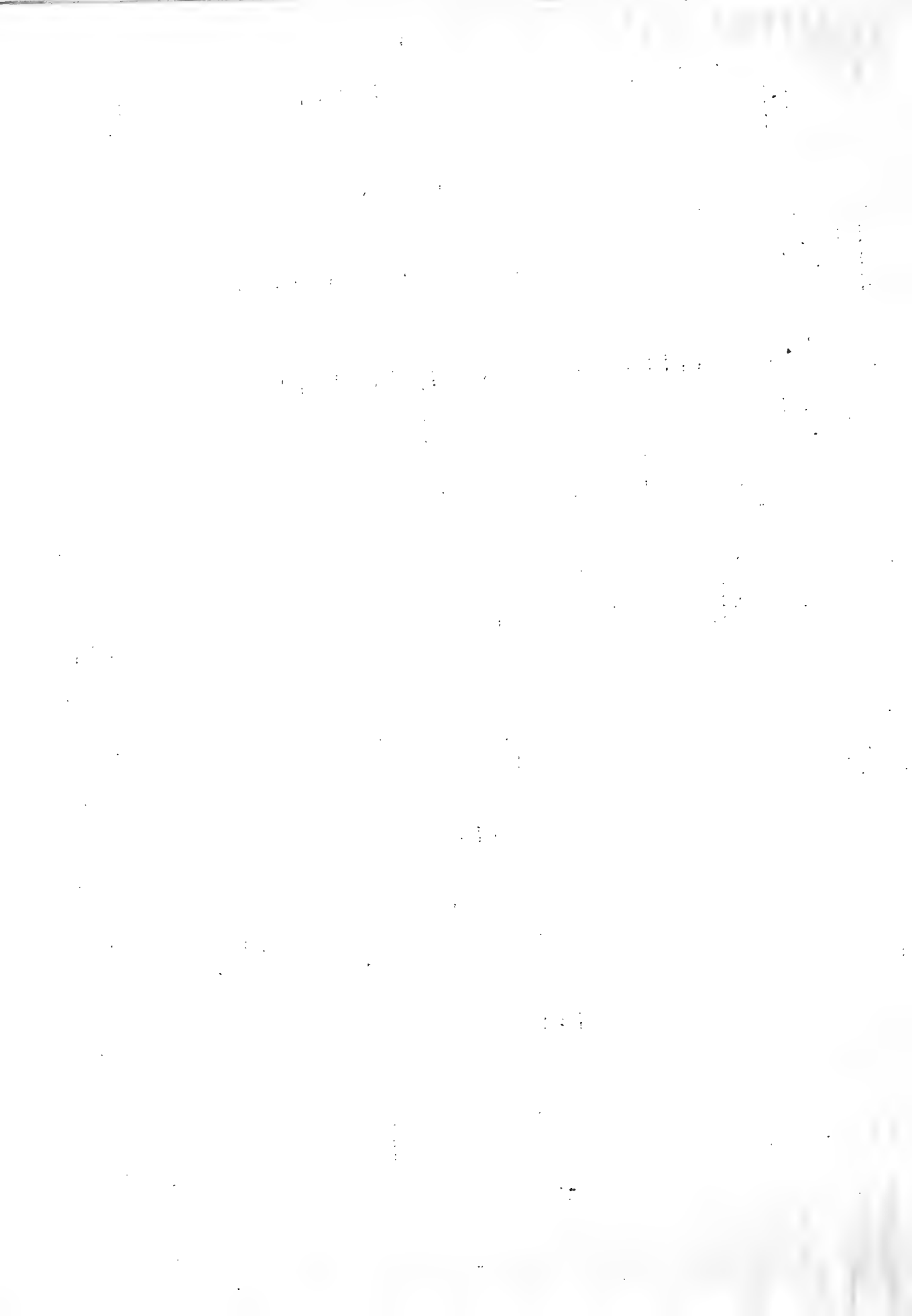


Table 10.--Net timber drain resulting from hemlock cutting in the Lake States - 1950

Species and state		Net timber drain by size classes			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







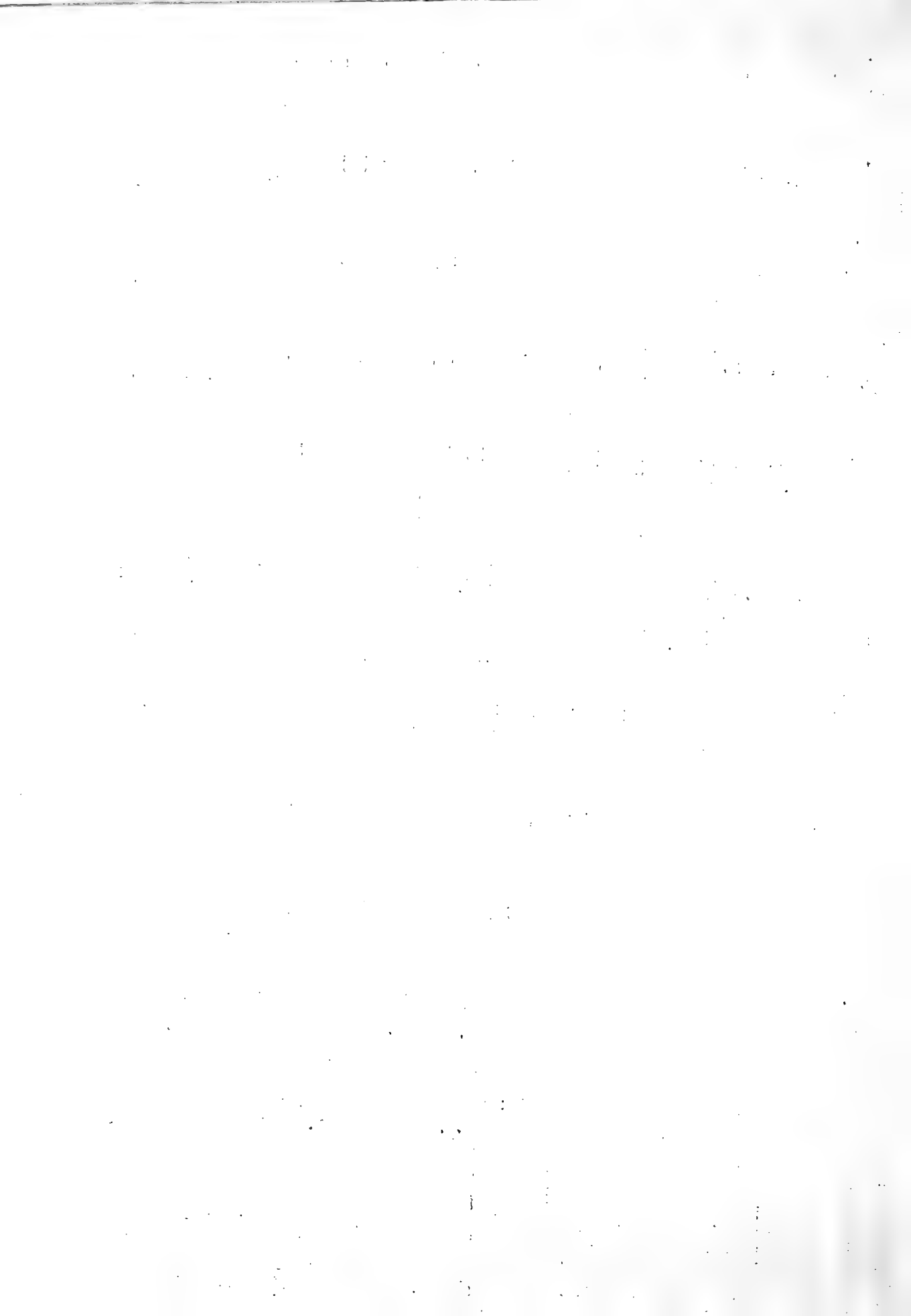


Table 12.--Net timber drain resulting from coeprage log cutting in the Lake States - 1950

Species and state	Net timber drain by size classes			Species and state	Net timber drain by size classes		
	M bd.ft.	M cu.ft.	M cu.ft.		Total	M bd.ft.	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	230	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 Minnesota Wisconsin Michigan	--	--	--	Hardwood total Minnesota Wisconsin Michigan	2,690	410	410
Maple Minnesota Wisconsin Michigan	300	50	50	All species Minnesota Wisconsin Michigan	1,330	200	200
	300	50	50		1,360	210	210
	--	--	--		--	--	--
	--	--	--		2,690	410	410
	--	--	--		1,330	200	200
	--	--	--		1,360	210	210
	--	--	--		--	--	--
	300	50	50		2,690	410	410
	300	50	50		1,330	200	200
	--	--	--		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	Net timber drain by size classes				
	M bd.ft.	M cu.ft.	Saw tbr.	Pole tbr.		Tops	M bd.ft.	M cu.ft.	Saw tbr.	Pole tbr.
White pine	540	210	90	90	30	970	230	160	70	--
Minnesota	180	70	30	30	10	780	190	130	60	--
Wisconsin	180	70	30	30	10	140	30	20	10	--
Michigan	180	70	30	30	10	50	10	10	--	--
Red pine	320	100	50	50	--	600	180	120	60	--
Minnesota	140	40	20	20	--	300	80	50	30	--
Wisconsin	70	20	10	10	--	270	70	50	20	--
Michigan	110	40	20	20	--	90	30	20	10	--
Jack pine	680	230	110	100	20	300	80	50	30	--
Minnesota	290	100	50	40	10	--	--	--	--	--
Wisconsin	140	40	20	20	--	--	--	--	--	--
Michigan	250	90	40	40	10	300	80	50	30	--
Spruce	170	60	30	30	--	2,700	690	450	240	--
Minnesota	70	20	10	10	--	--	--	--	--	--
Wisconsin	40	20	10	10	--	--	--	--	--	--
Michigan	60	20	10	10	--	2,700	690	450	240	--
Balsam	440	170	80	70	20	440	100	70	30	--
Minnesota	180	70	30	30	10	50	10	10	--	--
Wisconsin	40	20	10	10	--	90	10	10	--	--
Michigan	220	80	40	30	10	300	80	50	30	--
Tamarack	170	60	30	30	--	6,150	1,570	1,030	540	--
Minnesota	70	20	10	10	--	3,900	990	650	340	--
Wisconsin	40	20	10	10	--	1,530	400	260	140	--
Michigan	60	20	10	10	--	720	180	120	60	--
Cedar	2,250	760	370	310	80	--	--	--	--	--
Minnesota	290	100	50	40	10	--	--	--	--	--
Wisconsin	500	170	80	70	20	--	--	--	--	--
Michigan	1,440	490	240	200	50	--	--	--	--	--
Hemlock	140	40	20	20	--	370	100	70	30	--
Minnesota	--	--	--	--	--	--	--	--	--	--
Wisconsin	70	20	10	10	--	90	30	20	10	--
Michigan	70	20	10	10	--	280	70	50	20	--
Softwood total	4,690	1,630	780	700	150	14,410	3,670	2,420	1,250	--
Minnesota	1,220	420	200	180	40	5,030	1,270	850	430	--
Wisconsin	1,080	380	180	170	30	2,480	630	420	210	--
Michigan	2,390	830	400	350	80	6,900	1,770	1,160	610	--
Maple	2,820	720	470	250	--	19,100	5,300	3,200	1,950	150
Minnesota	--	--	--	--	--	6,250	1,690	1,050	610	40
Wisconsin	360	90	60	30	--	3,560	1,010	600	380	30
Michigan	2,460	630	410	220	--	9,290	2,600	1,560	960	80

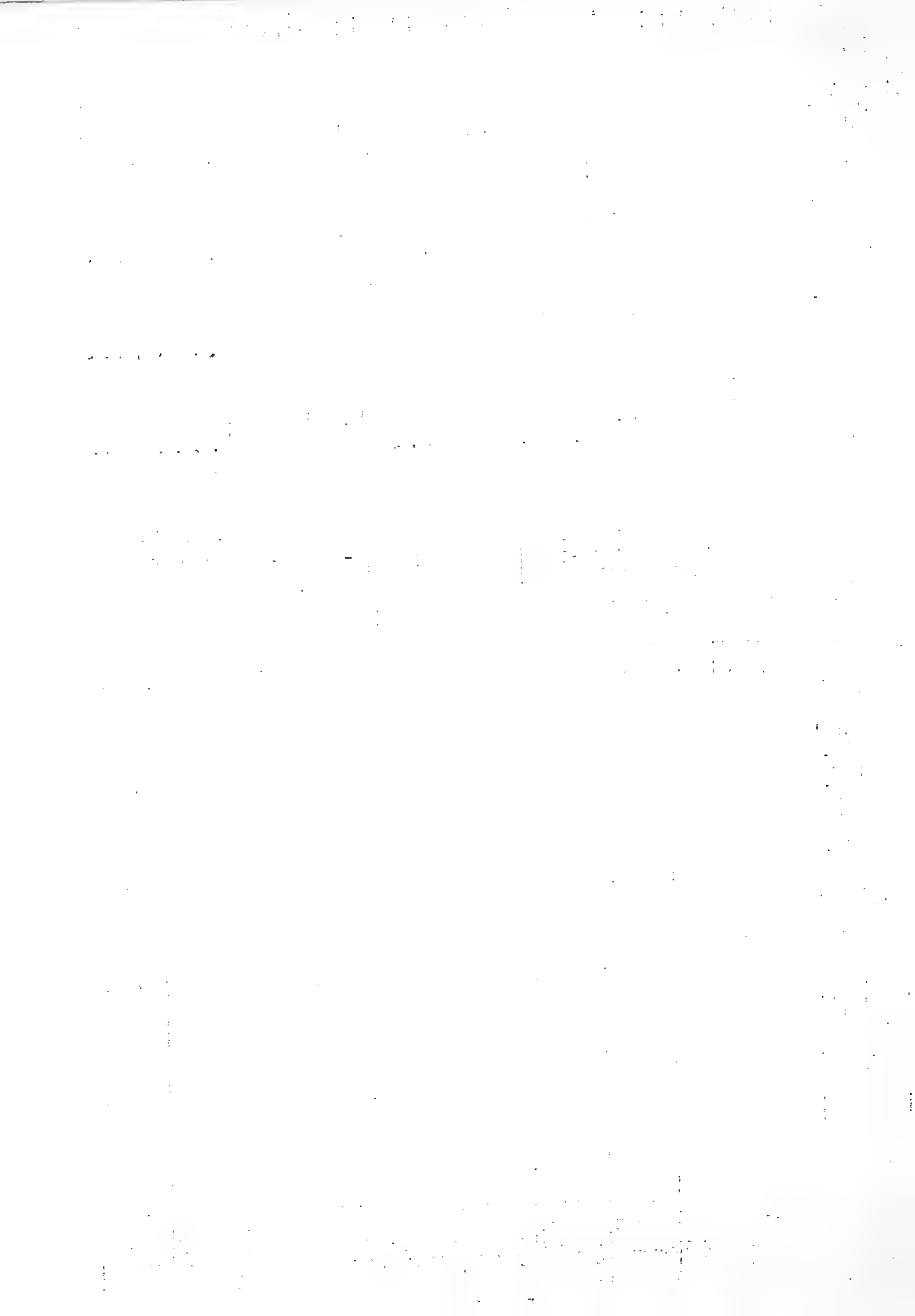
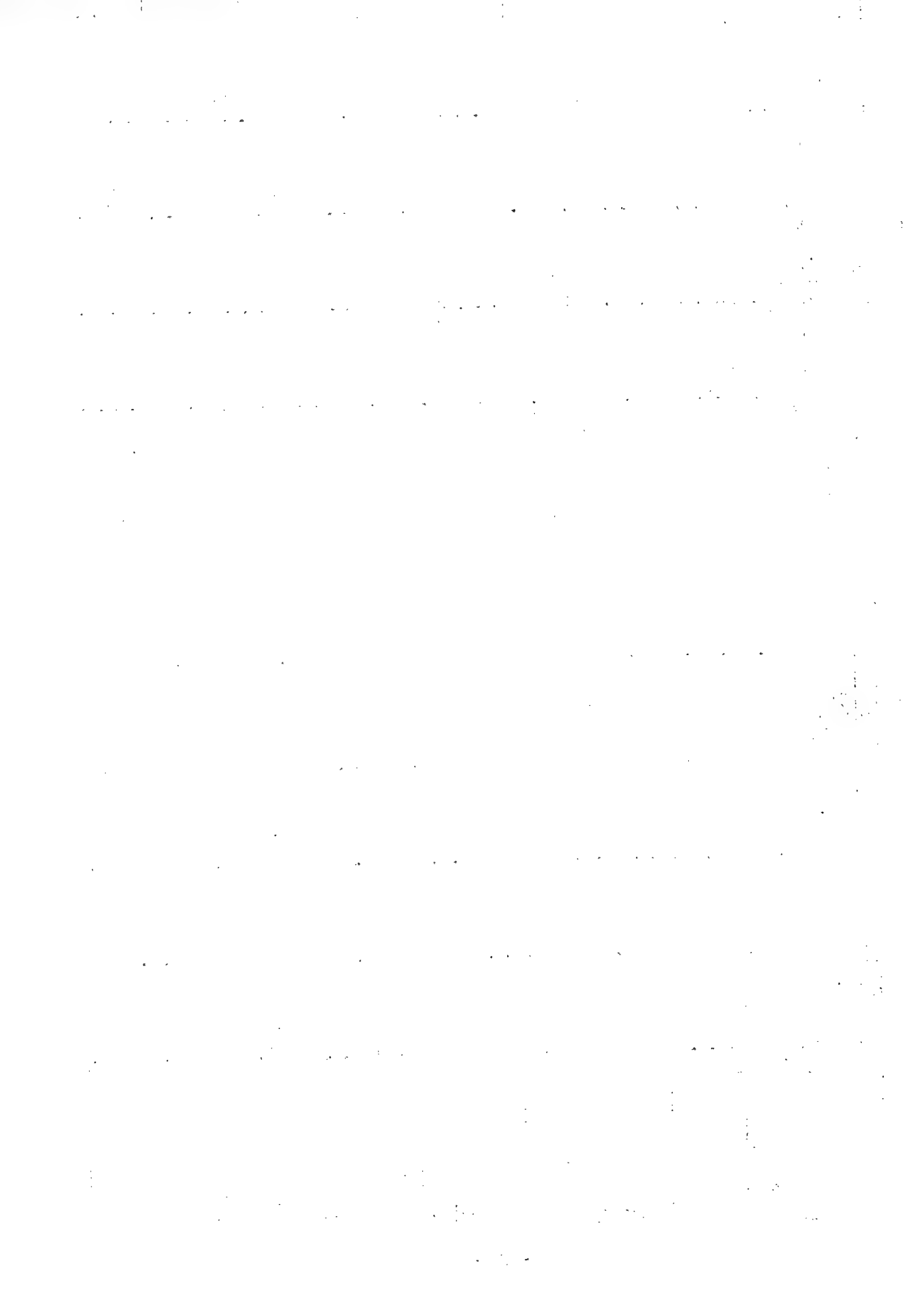


Table 14.--Total net timber drain resulting from cutting in the Lake States - 1950

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	68,840	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	28,120	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	66,760	19,870	46,830
Michigan	226,535	78,280	36,685	31,940	Wisconsin	250,425	100,990	41,820	59,170
Michigan	227,820	53,945	36,975	16,970	Michigan	382,310	126,570	65,280	63,310
Minnesota	3,250	660	330	330	All species	1,243,900	498,900	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	38,500	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 : origin : Total : Minn. : Wis. : Mich.					and : 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

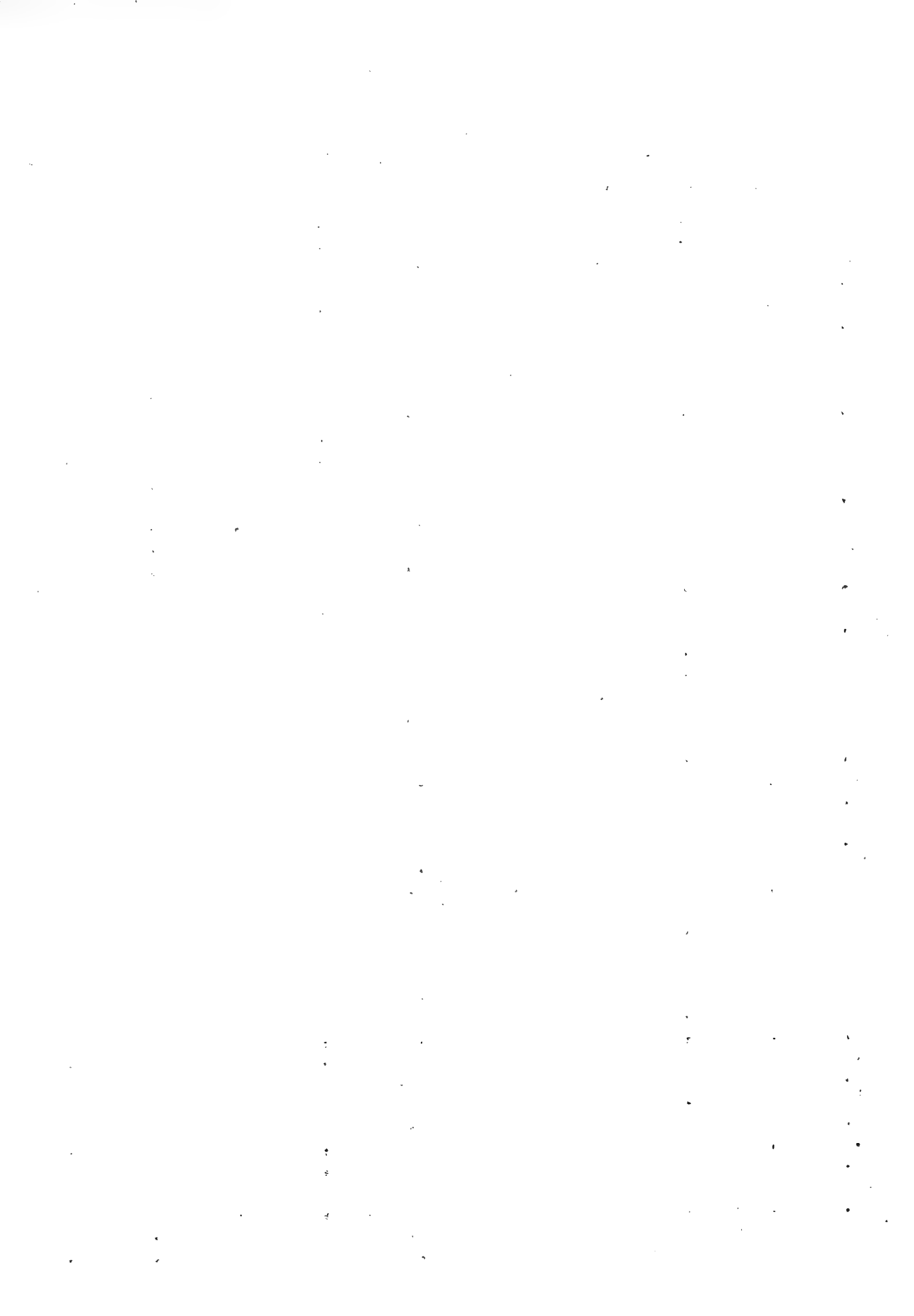


Table 16.--Production of logs and bolts for veneer industry in the Lake States  
1950

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	--	3,378	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	86,587	1,331	51,034	33,652	570	16,470	1,434	14,260
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.

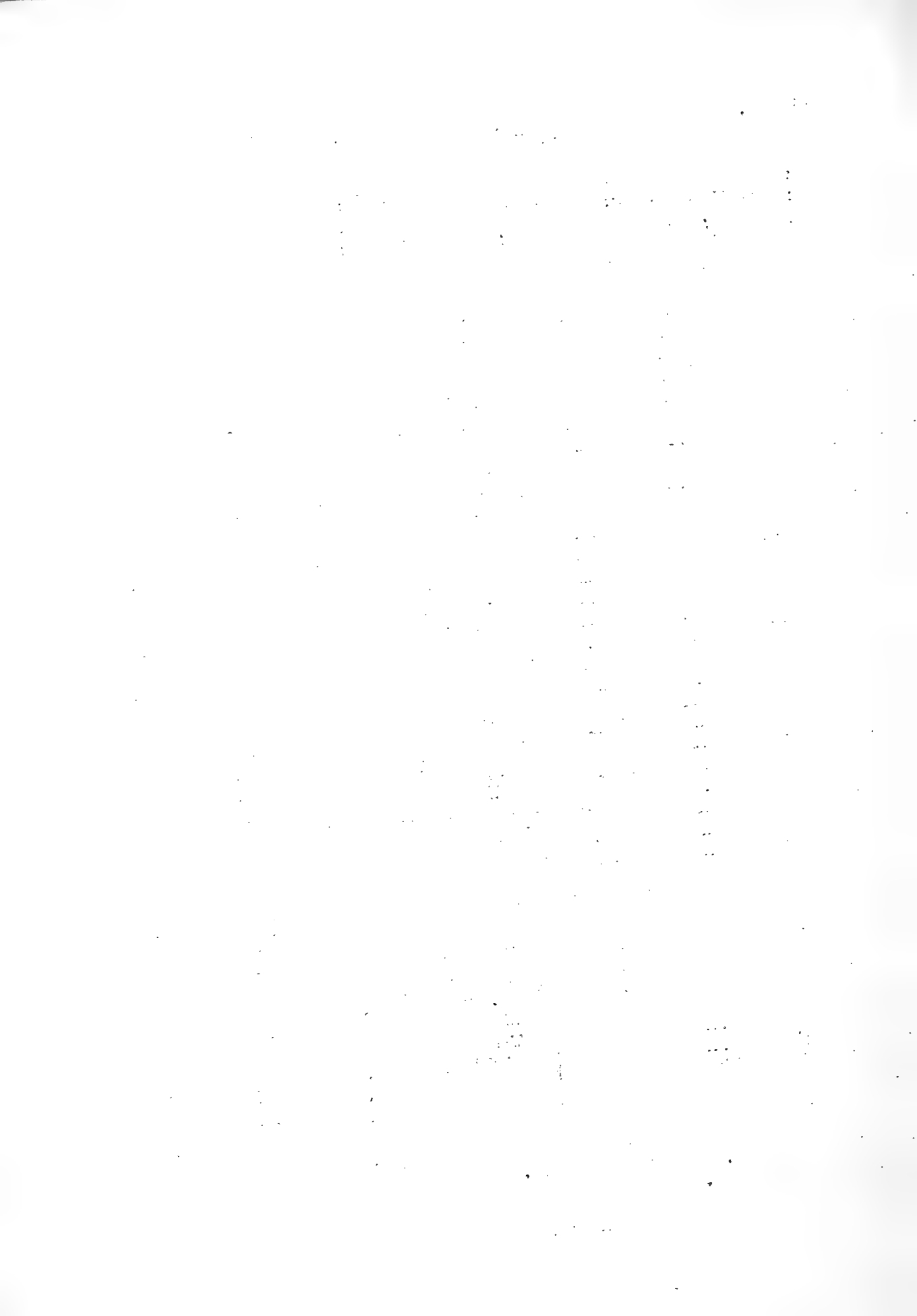


Table 19.--Production of miscellaneous piece products  
in the Lake States - 1950

Species :	:	:	:	:	Species :	:	:	:	:
and :	Piling :	Poles :	Posts :	Hewn :	and :	Piling :	Poles :	Posts :	Hewn :
origin :	:	:	:	ties :	origin :	:	:	:	ties :
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

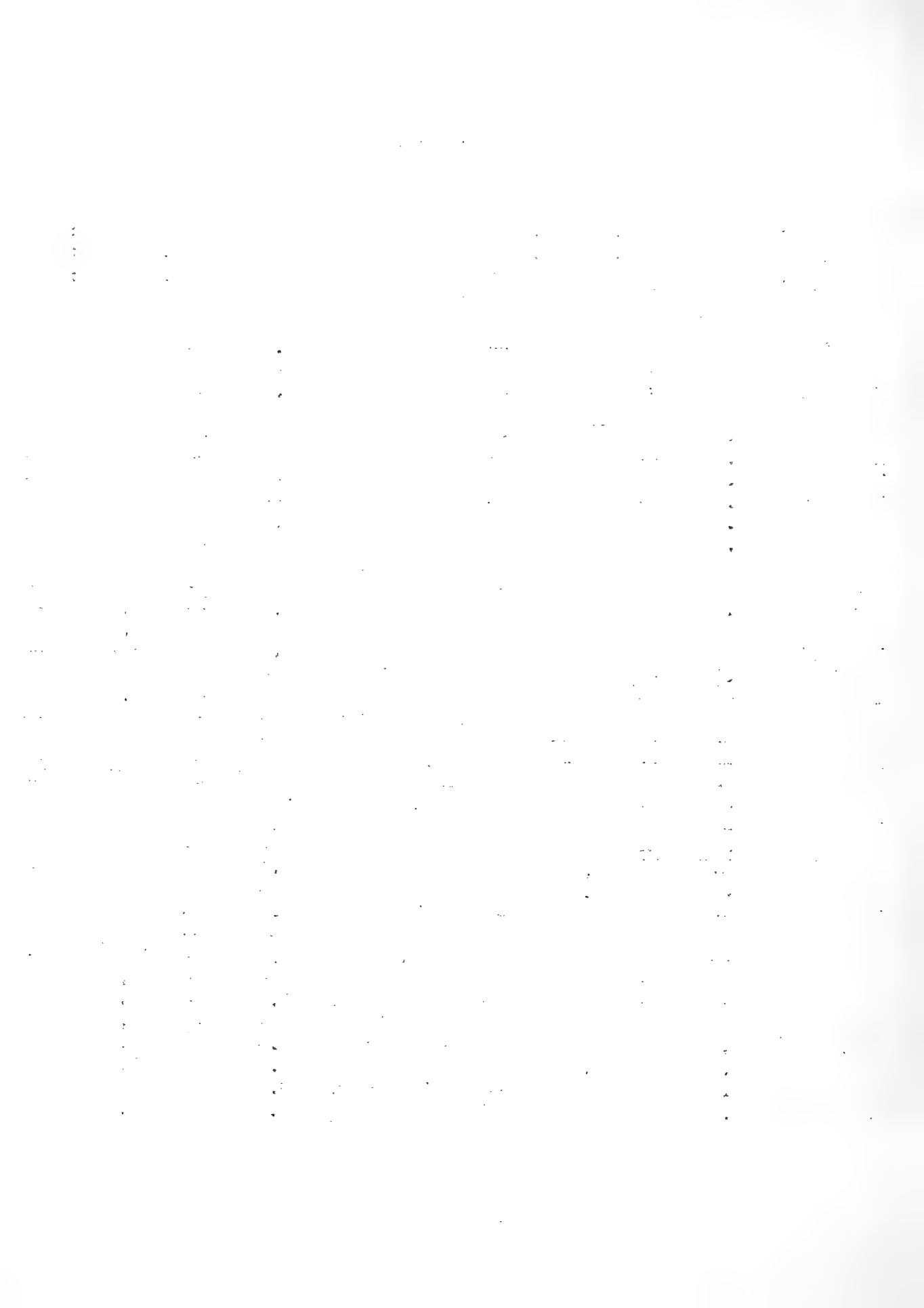


Table 20.--Production of mine timbers and other mine products  
in the Lake States - 1950

Species and origin	Total	Mine timbers	Mine lagging	Other <sup>1/</sup>	Species and origin	Total	Mine timbers	Mine lagging	Other <sup>1/</sup>
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

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

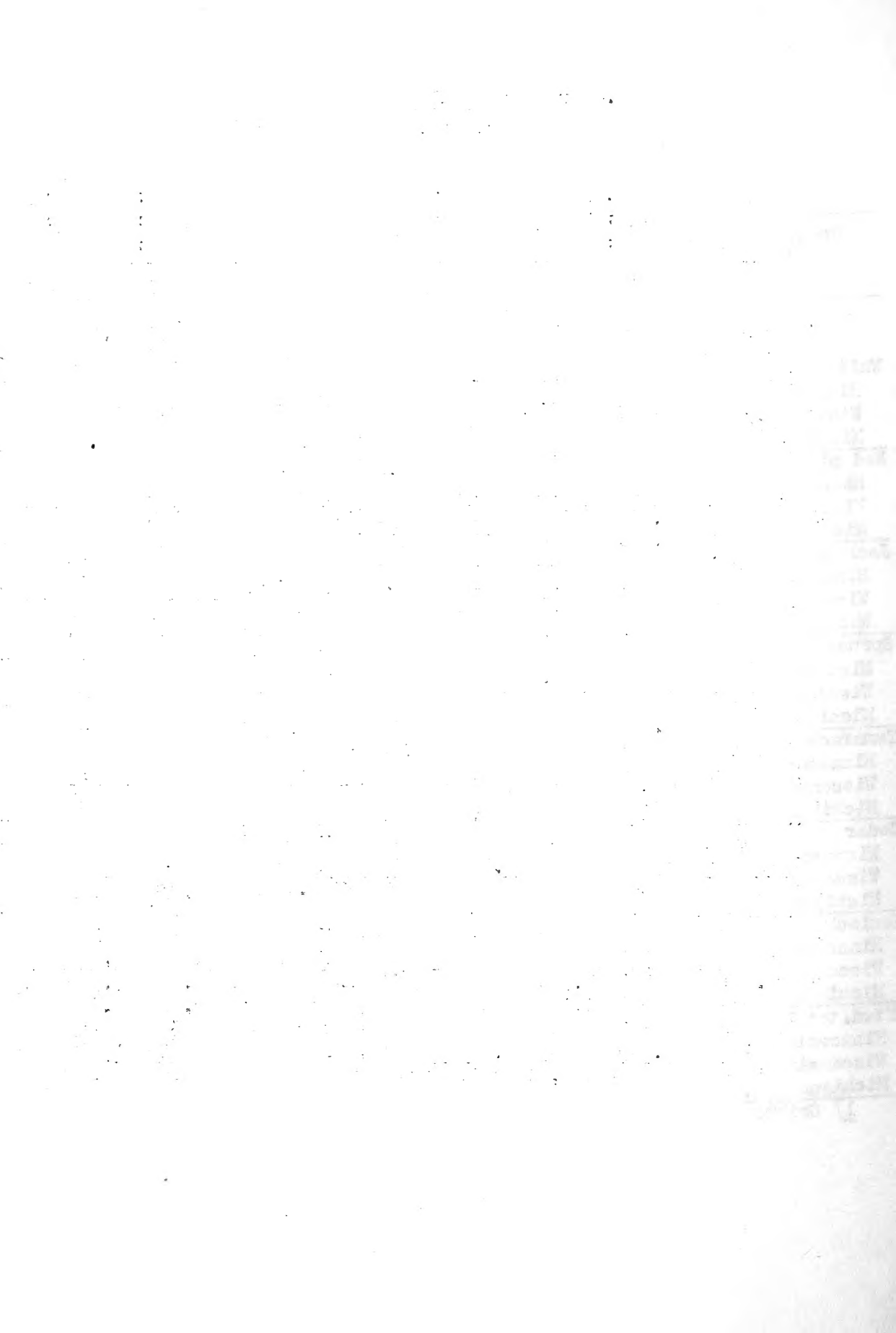


Table 21.--Production of cooperage logs and bolts in the Lake States - 1950

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.

