



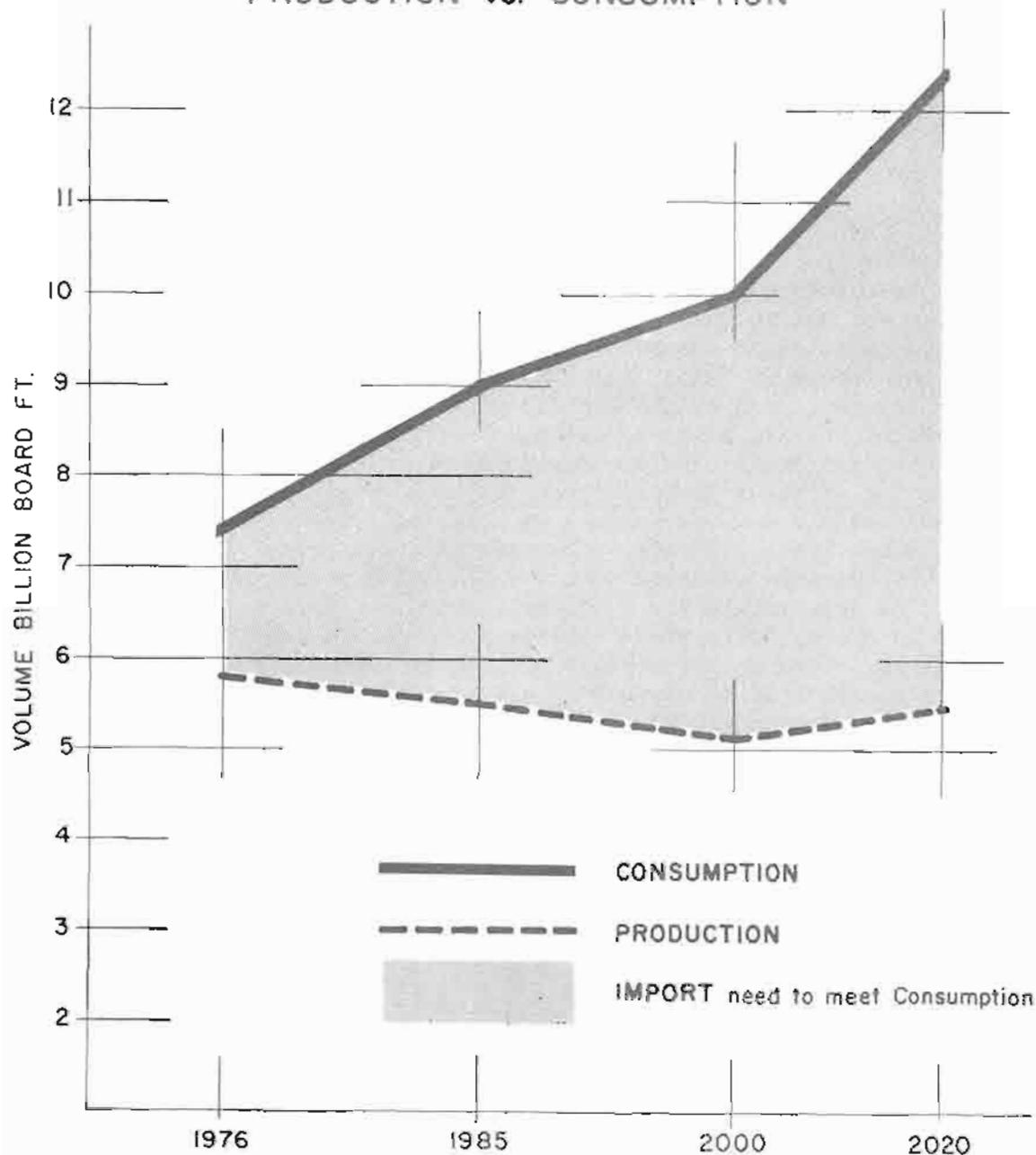
# STATE FOREST NOTES

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## TIMBER PROJECTIONS for CALIFORNIA PRODUCTION vs. CONSUMPTION



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There have been numerous studies of future supply and demand for lumber and plywood in California. Each of the studies uses various assumptions including population projections, or generalized per capita consumption figures, which are based on national averages. Furthermore, logs and lumber have been used interchangeably, further clouding the picture.

For this study, the latest (1978) Department of Finance population projections for California were used (Series 150) which are as follows:

1976	21.500 million
1985	24.546 "
1990	26.292 "
2000	29.287 "
2020	34.861 "

Lumber consumption for 1976 was calculated by using the Western Wood Products Association's 1976 Statistical Yearbook, taking California's production and adding lumber shipped into California from other states. Per capita consumption was calculated by dividing total lumber consumption by population in 1976. The WWPAA source was adjusted by referring to other sources, such as the Pacific Northwest Forest and Range Experiment Station, and the British Columbia Forest Service. For the projected periods, the national trend for lumber consumption was used as published in The Nation's Renewable Resources: An Assessment, 1975, (Table 60), using California's 1976 per capita consumption relative to that projected for the United States. Table 60 assumes that the price of lumber would continue to increase relative to other competing products as it has in the past, at approximately 1.5 percent per year. A larger relative increase in prices would result in lower per capita consumption, while a reduction in prices would increase per capita consumption. There has been some question as to whether or not an adequate supply will exist to meet projected demand in 2020. However, the per capita consumption figures are as follows:

<u>Year</u>	<u>California</u>	<u>United States</u>
1976	305 Board Feet	210 Board Feet
1985	321 " "	220 " "
2000	305 " "	209 " "
2020	303 " "	205 " "

Lumber production for California--based on Oswald's study; the 1968, California Timber Industries report; the 1972 and 1976, California's

Forest Industry reports; Western Wood Products Association data; and personal knowledge--is expected to decline by 5 percent in 1985, an additional 6 percent by 2000, and then increase by 5 percent between 2000 and 2020 due to increased technology and young growth timber reaching merchantable size during this period.

Lumber shipped out-of-State is assumed to decrease from 36.7 percent in 1976 to 30 percent in 1985, and 25 percent in 2000 with this level being maintained between 2000 and 2020. Out-of-State shipments are expected to decrease due to the increasing demand for lumber within California as well as the reduction in the supply of old growth redwood which is heavily shipped out-of-State now.

Plywood production data for California, as reported by the American Plywood Association, can easily be misinterpreted since a large volume of veneer is manufactured in California, but laid up in other states. Data gathered from the 1968, California Timber Industries, and the 1972 and 1976 California Forest Industry reports was used to arrive at the total plywood and veneer production in California, using a conversion factor of 2.66 square feet of 3/8 inch basis plywood per board foot (lumber scale). Personal knowledge and analysis of the industry in California leads to the estimate of a 10 percent decline in production by 1985, and an additional 7 percent by 2000, with no change between 2000 and 2020. Any reductions in output, other than the above, should be offset by increases in technology. It is possible that additional plywood plants utilizing young growth logs may be located in California, but this is assumed to not affect log production as the net result would be an offset of decreased lumber production.

The per capita consumption of plywood, based on Table 61 of The Nation's Renewable Resources report of 1975, is estimated at:

1976	107 square feet (3/8 inch basis)
1985	122 " " " " "
2000	126 " " " " "
2020	131 " " " " "

National averages are used, since no data are available to substantiate a different figure as was the case for lumber.

Plywood and veneer exports (basically veneer to be laid up) are expected to remain at the 52.7 percent level calculated for 1976.

Any change in land area available for commercial operations will obviously have a large influence on future production. The following table is our estimate of land area available.

CALIFORNIA STATISTICS  
 1980 RPA Assessment--PNWFRES  
 Area of Commercial Timberland by Ownership Class

	Thousand Acres					
	1970	1977	1990	2000	2010	2020
National Forest	8,953	8,168	7,866	7,447	7,377	7,335
Other Public	495	507	501	497	494	492
Forest Industry	2,671	2,687	2,773	2,914	2,912	2,902
Farm & Misc Private	4,962	4,941	4,655	4,368	4,289	4,239
TOTAL	17,081	16,303	15,795	15,226	15,072	14,968

Based on the previous assumptions, the following tables were developed.

1976 PRODUCTION AND CONSUMPTION			
	Lumber MMBF Lumber Scale	Plywood MMBF Lumber Scale	Total MMBF Lumber Scale
Production	5,333	462	5,795
Shipped out-of-State	1,509	244	1,753
Shipped into State	2,733	647	3,380
Consumption	6,557	865	7,422

Lumber shipped into California was 45.5 % of consumption (3,380 MMBF)

Lumber shipped out of California was 23.6 % of consumption (1,753 MMBF)

Net shipments into California were 21.9 % of consumption (1,627 MMBF)

ESTIMATED 1985 PRODUCTION AND CONSUMPTION

	Lumber MMBF Lumber Scale	Plywood MMBF Lumber Scale	Total MMBF Lumber Scale
Production	5,066	416	5,482
Shipped out-of-State	1,520	219	1,739
Shipped into State	4,334	929	5,263
Consumption	7,880	1,126	9,006

Lumber shipped into State is expected to be 58.4 % of consumption (5.263 MMBF)

Lumber shipped out-of-State is expected to be 19.3 % of consumption (1.739 MMBF)

Net shipments into State are expected to be 39.1 % of consumption (3.524 MMBF)

ESTIMATED 2000 PRODUCTION AND CONSUMPTION

	Lumber MMBF Lumber Scale	Plywood MMBF Lumber Scale	Total MMBF Lumber Scale
Production	4,762	387	5,149
Shipped out-of-State	1,191	204	1,395
Shipped into State	5,362	1,204	6,566
Consumption	8,933	1,387	10,020

Lumber shipped into State is expected to be 65.5 % of consumption (6.566 MMBF)

Lumber shipped out-of-State is expected to be 13.9 % of consumption (1.395 MMBF)

Net shipments into State are expected to be 51.6 % of consumption (5.171 MMBF)

ESTIMATED 2020 PRODUCTION AND CONSUMPTION			
	Lumber MMBF Lumber Scale	Plywood MMBF Lumber Scale	Total MMBF Lumber Scale
Production	5,000	387	5,387
Shipped out-of-State	1,250	204	1,454
Shipped into State	6,813	1,626	8,439
Consumption	10,563	1,809	12,372

Lumber shipped into State is expected to be 68.2 % of consumption (8.439 MMBF)

Lumber shipped out-of-State is expected to be 11.8 % of consumption (1.454 MMBF)

Net shipments into State are expected to be 56.4 % of consumption (6.985 MMBF)

#### Lumber Shipments into California

Oregon and Washington are by far the most important source of lumber imports for California, with 2.083 billion board feet imported from Oregon and 520 million board feet from Washington. This is 95 percent of the total lumber imports, of 2.733 billion board feet.

As seen from the table below, California is receiving more lumber from Oregon and Washington than in the past.

	1968		1972		1976	
	Volume MMBF	% of Their Prod	Volume MMBF	% of Their Prod	Volume MMBF	% of Their Prod
Oregon	1,793	21.9	2,065	26.0	2,083	28.4
Washington	185	4.8	292	7.8	520	14.2
Total (Average)	1,978	16.4	2,358	20.2	2,603	23.7

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