

Vermont Information - Forests and Forest Industry

Out of a total land area of 5,919,600 acres, 78 percent (4,628,900 acres) of Vermont is considered forested area. Ninety-seven percent (4,482,500 acres) of Vermont's forested area is considered timberland. The majority of this timberland (81 percent) is privately held by non-industrial owners (North East State Foresters Association, 2004: 2). Despite being one of the nation's most heavily forested states, Vermont possesses only .83 percent of America's forested area (Table 1).

Vermont's history of forest management is poor, with two-thirds of the original forest chopped down to make way for agriculture (as is happening in many parts of the world now). However, the amount of land farmed in Vermont has decreased since the middle of the 19th century and forests have consequently re-established themselves on abandoned land over the past 150 years (Wharton et al., 2003: 1). USDA's last inventory of Vermont's forests (1997) found that the health of Vermont's forests was good (most trees were not suffering from crown dieback—an indicator of disease or insect attack) and that species composition had changed very little during the past 50 years (Wharton et al., 2003: 22). Since the last inventory, however, the forest tent caterpillar has defoliated more than 250,000 acres over the past three years.

However, in an interview with a Vermont Division of Forestry staff person conducted for a Cornerstone Project evaluation, the current re-growth of Vermont's forests was described as being at continued risk of overexploitation from harvesting:

“The challenge for forests in Vermont is that we’ve been living on a surplus through the last 30 years. It is well documented that the eastern United States has enjoyed this laissez faire forest recovery. We’ve gone from the eastern United States being largely deforested to it being heavily forested again, not back to original condition necessarily, but it’s definitely well forested compared to where it was 100 years ago. This happened as a result of benign neglect, not any forest management activity, although there are those that would like to claim that it was the forest products industry’s stewardship of land that made this happen. That’s clearly not the case. During that period, as the forest was recovering a great deal of commercial volume was building up in the forest and beginning in the mid-70s the forest products industry more or less returned to the region, including Vermont. And since that time the harvest for all the state’s forests has largely been on the surplus that developed through that recovery period. Suffice it to say that the rate of harvesting from a simple inventory control standpoint has not been in excess of growth. But that’s a very simple measure. When we look at the rate of harvesting to what the forest has been capable of replacing in terms of commercial volume the result of my analysis is that the forest of Vermont is not in a sustainable condition.”

A USDA Forest Service report sounds a similar warning about future pressure on Vermont's forests from housing development. From 2000 to 2030, the Forest Service projects housing density will increase from 5 to 20 percent throughout most of Vermont (Stein et al., 2005: 9). The rate of change is expected to be even higher in Essex and Windsor Counties: from 16 or fewer housing units per square mile to 16 to 64 housing units per square mile (Stein et al., 2005: 6, 10).

Forest Products Trends

Vermont Trends

Vermont's service sector paralleled the national trend from 1969 to 2000, that is, it increased by 200.97 percent, or roughly 91,153 jobs (Figure 1). The manufacturing sector in Vermont, in contrast to the national trend, increased by 18.89 percent from 1969 to 2000 (a gain of 8,474 jobs).

However, according to the Current Employment Statistics (CES) database of the Vermont Department of Labor (<http://www.vtlmi.info/ces.cfm>), from September 11, 2001 to February 2006, Vermont's manufacturing sector lost an astounding 8,850 jobs (a 19 percent decrease). Vermont Department of Labor covered employment figures for 2006 show Vermont's service sector accounting for 194,741 jobs (64 percent of covered employment), manufacturing accounting for 36,243 jobs (12 percent), construction accounting for 17,332 jobs (6 percent), and all forms of government accounting for 51,613 jobs (17 percent of covered employment, with State government making up 12 percent of that total, or 2 percent of total employment [6,230]).

In recent years, production and exports have gone down in the U.S. forest products sector, while consumption and imports have gone up. How does Vermont's forest products sector compare to national trends? Data on the health of Vermont's forest products sector comes from a variety of sources that are not necessarily consistent or comparable.

Most of Vermont's timber is harvested for industrial products (sawlogs: 30 percent, pulpwood: 25 percent, veneer: 1 percent), 28 percent is logging residue, and 16 percent is used for fuel (Wharton et al., 2003: 17). As Tables 3 through 7 indicated, forest products imports to the United States have generally increased while exports have generally decreased. Figure 2, based on data from the Vermont Department of Forests, Parks & Recreation, shows yearly fluctuations in Vermont's imports and exports of hardwood and softwood logs, with trend lines indicating decreased exports and slightly increased imports. These trends roughly parallel national trends, although Vermont is not a net forest products importer at this point.

Production and consumption figures corresponding to the FAO's estimate for the United States are not available for Vermont. However, a 7.7 percent decrease in total harvest from 1993 to 2004 is one proxy that production is down in Vermont (Figure 3). From 1993 to 2004 Vermont's harvest of pulpwood decreased 37.2 percent, an amount far above the national decrease of 9 percent. Despite an 11 percent downturn in demand for hardwoods and softwoods at Vermont mills from 1993 to 2004, the Vermont Department of Forests, Parks & Recreation reports that the number of mills in Vermont in 2004 (167) is nearly the same as it was in 1993 (170).

Employment figures for the forest products sector in Vermont are easier to ascertain, but there are still discrepancies. For example, a widely cited report prepared by Jeffrey Carr and Karen Robinson in 2001 indicates that Vermont's forest products sector accounts for 18,463 direct and indirect jobs (6.2 percent of total estimated available jobs), as well as \$330 million in personal income and \$24.9 million in tax revenues. The forest products sector is generally considered to consist of wood products manufacturing, paper products manufacturing, furniture manufacturing, and forestry (e.g., logging and foresters). Carr and Robinson also included a portion of the "Trucking and Warehousing" category to capture the storage and transport of forest products. This study relied on the Standard Industrial Classification (SIC) system that has since been replaced by the North American Industry Classification System (NAICS). The usefulness of this report is limited to the extent that it only provides a snapshot for the year 2000. Additionally, with the transition to the NAICS, Carr and Robinson's SIC results are difficult to compare with other years (e.g., the Economic Census, which uses NAICS, does not break the "Trucking and Warehousing" category down to "Forest Products Trucking and Warehousing").

Employment figures can also be found through the Economic Census, which the U.S. Census Bureau conducts every five years. Data classified according to NAICS are available from 1997 forward.

Table 8 includes the traditional sectors—wood product manufacturing, paper manufacturing, furniture manufacturing, forestry and logging—along with retailing and wholesaling. Adding the number of employees in every sector together, we arrive at a figure for 2002 (N = 11,991) that is similar to the figure used by Carr and Robinson for 2000 (N = 11,483), however, Carr and Robinson do not include forest products wholesaling and retailing to arrive at their total. To reiterate, different classification systems make comparisons difficult.

Comparing the Economic Census for 1997 to the Economic Census for 2002, Table 8 reveals that paper manufacturers and wood product manufacturers in Vermont have lost several hundred jobs during that five-year period. These losses are slightly offset by gains in furniture manufacturing and retailing. In total, the Economic Census shows that the number of businesses in the forest products sector has declined slightly while the number of employees has increased slightly. It is worth noting that during this period Vermont gained over 1,000 residential and non-residential construction jobs. Consequently, the possibility exists that the lure of a home in scenic Vermont may put an end to the state's recent gains in forest cover or land available for forest products.

Table 8. Percent Change in Employment in Vermont's Forest Products Sector (1997-2002)

Sector	1997	2002	Percent Change	1997	2002	Percent Change
Forestry & Logging	106	94	-11.3%	100-249	100-249	?
Wood Product Manufacturing	140	129	-7.8%	3,290	2,763	-16%
Paper Manufacturing	16	14	-12.5%	1,735	1,339	-22.8%
Furniture & Related Product Manufacturing	81	93	14.8%	2,662	3,111	16.9%
Furniture & Home Furnishing Wholesale	28	28	No Change	177	183	3.4%
Lumber & Other Construction Materials Wholesale	54	51	-5.5%	417	413	-1%
Furniture & Home Furnishings Retail	171	196	14.6%	849	1,286	51.5%
Building Materials & Supplies Dealers	308	292	-5.2%	2,655	2,796	5.3%
Total	904	897	-0.8%	11,885	11,991	.89%

The percent change in the number of Vermont employees manufacturing wood products or paper products is larger than the percent change nationally: wood product manufacturing shrunk 16 percent in Vermont, compared to about 6 percent nationally, and paper manufacturing employment shrunk by about 23 percent in Vermont compared to about 15 percent nationally. However, Vermont's furniture

manufacturing employment grew (16.9 percent), while the national employment in furniture manufacturing decreased by -1.48 percent.

The last Economic Census took place in 2002 and the next one is not scheduled until 2007. Recent closings at Ethan Allen and other businesses are therefore not included in Table 8. Employment information is also available from data compiled by the State of Vermont Department of Labor's Covered Employment and Wages program. This data refers to employees covered by Vermont's Unemployment Compensation Law. Consequently, self-employed individuals are not included. Additionally, information is not reported if it represents less than three private employers or one private employer represents 80 percent or more of the employment in a sector or community. Data from the Covered Employment and Wages program certainly undercounts employment. For example, data from the Economic Census indicates that 100 (taking the low figure) people were employed in forestry and logging, 2,763 people were employed in wood product manufacturing, 1,339 people were employed in paper manufacturing, and 3,111 people were employed in furniture manufacturing in 2002, for a total of 7,213 jobs. Adding the same categories from 2002 for the Covered Employment and Wages data yields a total of 5,443 people employed in Vermont's forest products sector. Therefore, the difference between the Economic Census and the Covered Employment and Wages program was 1,770 jobs.

Nevertheless, the trend in Vermont's forest products sector—forestry and logging, wood products manufacturing, furniture manufacturing, and paper manufacturing—over the past 16 years is decreasing employment

Inflation adjusted data from the Census Bureau's Annual Survey of Manufactures indicates that the value of shipments in Vermont's forest products sector has decreased approximately 18 percent from 1997 to 2003 (Figure 5). This translates to a decrease from 17.45 percent of the value of all manufacturing in Vermont in 1997 to 12.37 percent in 2003. However, when paper manufacturing is subtracted out, the value of wood product manufacturing and furniture manufacturing shipments decreased by *only* about 2 percent. Growth in the value of Vermont's total manufacturing shipments meant that the contribution of wood product manufacturing and furniture manufacturing shipments to all manufacturing shipments shrank from 11.83 percent in 1997 to 9.56 percent in 2003. When both paper manufacturing and wood products manufacturing are subtracted out, the value of furniture shipments *increased* approximately 69 percent from 1997 to 2003. This equals an increase in the value of furniture shipments from 2.73 percent (1997) to 3.80 percent (2003) of all manufacturing shipments. The value of furniture shipments then dropped nearly 30 percent from 2003 to 2004, but the overall trend is an increase in the value of furniture shipments.

Taken together, data on the health of Vermont's forest products sector presents a mixed picture. On one hand, harvests are down; mill consumption of sawlogs and veneer logs is down (however, the number of mills in Vermont in 2003 is only one less than it was in 1993); the trend line for exports is down; imports show a slight increase; and employment in wood products manufacturing and paper manufacturing are down. On the other hand, employment in furniture manufacturing and retail is up and the value of furniture shipments is increasing.