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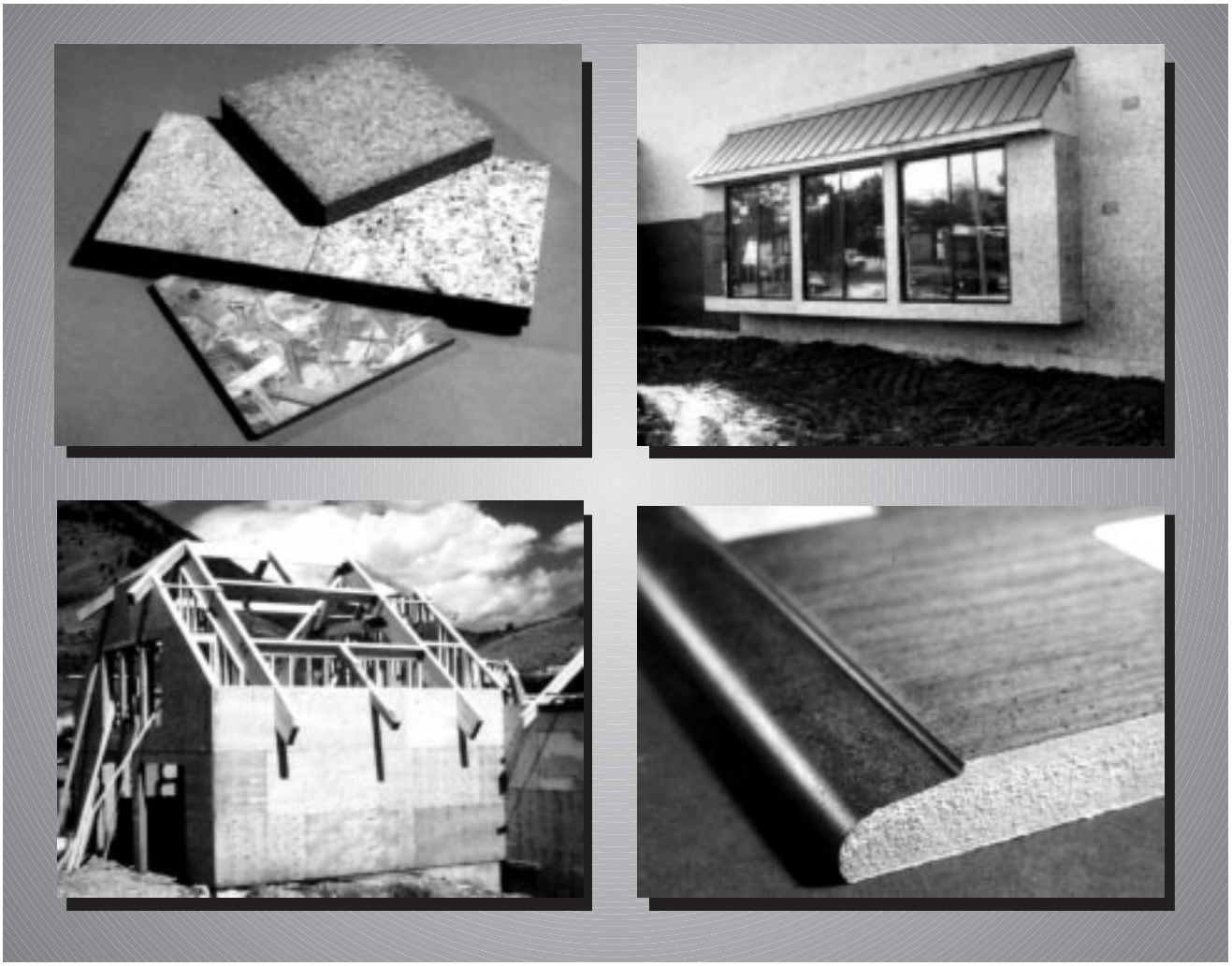
# Capacity, Production, and Manufacture of Wood-Based Panels in the United States and Canada

**Henry Spelter**



# Abstract

Structural and nonstructural panel products have constituted the fastest growing segment of the wood products industries over the past two decades. Based on announced plans, growth will accelerate in the next 2 years. The cost of wood fiber used in these processes has been rising. To keep wood costs as low as possible, a growing share of the new production is being channeled into regions where panel manufacturing has been low or nonexistent and where underutilized timber supplies are still available. There is also increasing interest in using agricultural fibers for panels, either to complement or to replace wood. The projected increases in production over the next 2 years are likely to exceed projected growth in demand, leading to an oversupply, at least temporarily. This paper summarizes capacity growth in various wood-based panels: Southern Pine plywood, oriented strandboard, medium density fiberboard, and particleboard. It also examines changes in the manufacturing costs and the emerging supply–demand balance through 1997.


# Contents

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# Capacity, Production, and Manufacture of Wood-Based Panels in the United States and Canada

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## Introduction

The purposes of this report are to review the growth of wood-based panel capacity in the United States and Canada and to examine trends in costs, pricing, and profitability for various kinds of panels. Over the past few decades, there has been a general decline in the quality and size of timber available for processing. Manufacturing plants have increasingly turned to composites technology as a means to make products from lower grade material, resulting in a gradual transition in the type of raw material used. The first phase of this transition occurred in plywood with the old-growth Douglas-fir. Then, manufacturers began to use pulpwood from softwoods and low density hardwood species such as aspen for composite panels as a substitute for plywood. Now, even nonwood fibers are being used for the manufacture of panels for non-structural purposes. These changes have stimulated a large amount of investment in new technologies that will markedly affect timber and wood product markets.

Information in this paper is presented for four panel manufacture sectors: oriented strandboard, Southern Pine plywood, particleboard, and medium density fiberboard. The data are based on information obtained from a collection of sources, including the Census of Manufactures, private and public timber market price reporting agencies, publications on panel market prices, trade association surveys, company financial reports, and trade journals.

## Oriented Strandboard

### Capacity

Oriented strandboard (OSB) is a structural panel that consists of wood strands glued with an exterior-type, waterproof resin. The physical properties of the board are enhanced by alignment of the wood particles. In 1964, the total OSB industry was represented by one plant with just 71 thousand $m^3$ of capacity. Based on current announcements, OSB capacity will reach 18.4 million $m^3$ in 1997, with production projected at 15.5 million $m^3$ (Fig. 1). Between 1995 and 1997, almost 8.3 million $m^3$ of capacity will be built, representing an 82-percent increase relative to capacity at the end of 1994. Plants manufacturing OSB are listed in the Appendix.

The largest OSB share is located in the U.S. South; capacity is projected to be 6.8 million $m^3$ in 1997 (Table 1).

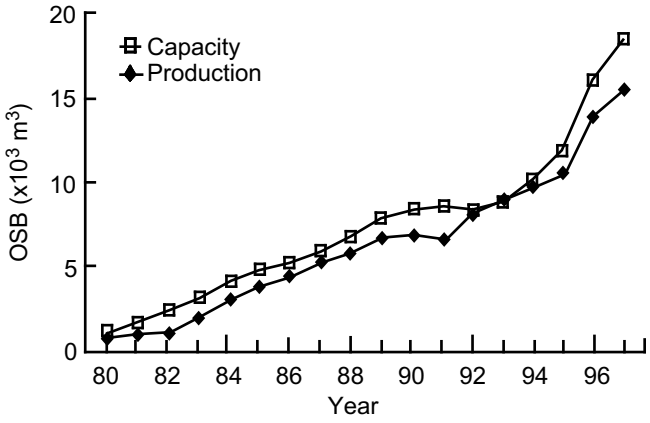


**Figure 1—North American OSB capacity and production, 1980–1997.**

**Table 1—Projected 1997 OSB industry capacity, by region**

| Region | Projected OSB capacity ($\times 10^3$ $m^3$) |
|---|---|
| U.S. South | 6,852 |
| Eastern Canada | 5,014 |
| U.S. North | 3,238 |
| Western Canada | 3,049 |
| U.S. West | 239 |

Manufacture of OSB is comparatively small in the U.S. West, with only two mills in operation; a third plant, which produces a hybrid OSB/veneer panel called COMPLY, is not included in these data.

The ability to use diverse species and sizes of trees has led the OSB industry to expand to many areas new to panel manufacture. During the next 2 years, OSB plants will be built in Tennessee, West Virginia, and Manitoba. Tennessee and West Virginia offer plentiful supplies of yellow-poplar, a low-density hardwood suitable for OSB. In Manitoba, as in most of Canada as well as the U.S. North and West, the most available species is aspen, followed by balsam poplar, birch, and softwoods. In the U.S. South, a mix of pine and low- to medium-density hardwoods is most often used.

## Costs and Prices

The manufacture of OSB is favored by the ability to use relatively low cost, small-diameter trees that are not suitable for plywood. However, the value of the smaller pulpwood species used for OSB has been rising. From 1978 to 1994, the prices of delivered aspen pulpwood in the North and mixed hardwood pulpwood in the South rose from $12–$14 per cubic meter to about $27 (Fig. 2). The price of that timber on the stump rose even more rapidly—from about $1.5–$3.0 to $7.5–$8.0 per cubic meter (Fig. 3). In the U.S. South, softwood pulpwood has historically been more costly than hardwood, a condition that prevails, although with reduced premiums.

The manufacture of 1 $m^3$ of OSB requires about 2 $m^3$ of wood (Fig. 4). Changes in manufacturing processes, such as improvements in adhesives, more efficient flakers capable of processing tree-length bolts, and larger presses that reduce trim waste, have led to more economical use of wood. Recent mill reports imply a recovery rate of about 1.8 $m^3/m^3$ of product. Recovery rates could also be improved if log conditioning were universally adopted, a measure that would tend to reduce fines generation during flaking.

Higher productivity has also helped moderate labor costs in OSB manufacturing. The tendency in recent years has been to build larger plants in which productivity is considerably higher. Census figures indicate that average hourly wages rose by more than 130 percent between 1977 and 1992, but output per hour of work increased by about half (Fig. 5),

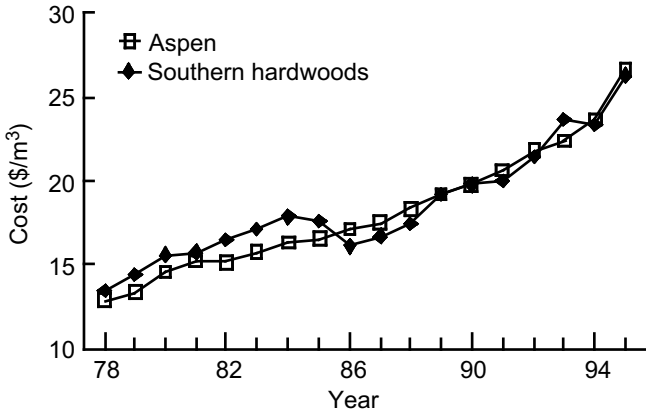


**Figure 2—Cost of delivered aspen and southern hardwood pulpwood.**

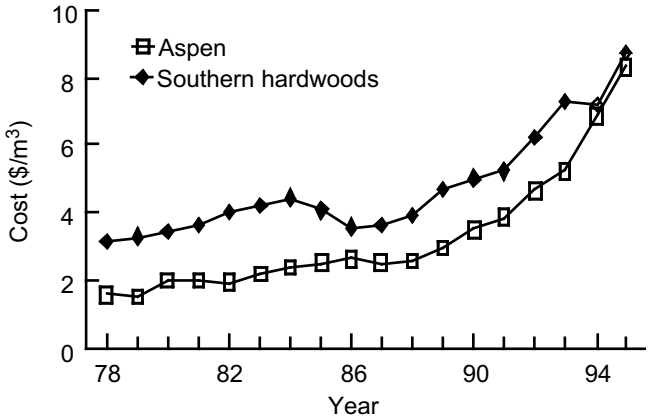


**Figure 3—Cost of aspen and southern hardwood pulpwood on the stump.**

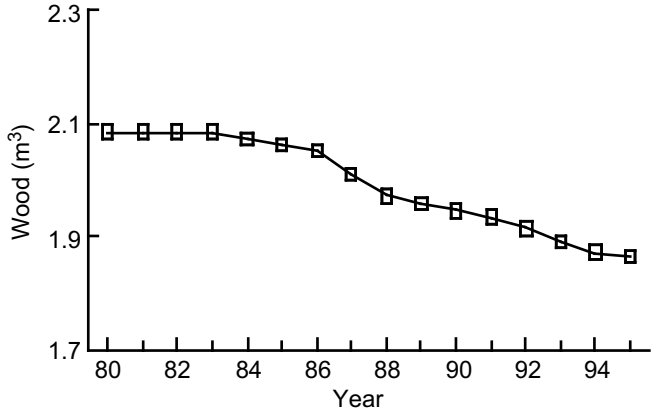


**Figure 4—Wood input per cubic meter of OSB output in North America.**

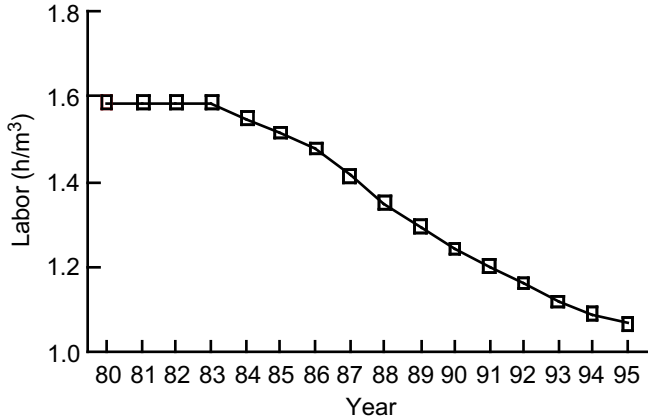


**Figure 5—Average hours of labor per cubic meter of OSB in North America.**

resulting in unit cost increases of about 50 percent over that period and virtually no increase since the early 1980s.

The use of adhesives is one area where OSB technology is at a disadvantage relative to plywood because of the greater surface area presented by the flakes. This disadvantage has been mitigated by advances in resins and blending that have reduced requirements for adhesives. Resin costs ranged between $20/m^3$ and $25/m^3$ in the 1990s.

Average manufacturing costs for the U.S. OSB industry show about a 30-percent increase since 1980, primarily as a result of rising wood costs (Table 2). Prices, on the other hand, have risen even more sharply, especially since 1991, resulting in exceptional profitability that has stimulated the projected rapid expansion of capacity in 1995–1997.

# Southern Pine Plywood

## Capacity

The southern softwood plywood industry began in 1964 to satisfy the need for a complementary source of supply for old-growth-based western plywood. By 1970, almost 40 plants were in production (Fig. 6). New plants continued to be built until the early 1980s, when a recession led to consolidation of plants. Since then, the bulk of investment has flowed into the OSB sector; only a handful of new plywood plants has opened while more than a dozen facilities have closed. However, overall capacity has increased because many plants have been improved and expanded. In 1995, production capacity was approximately 11.5 million $m^3$. Current Southern Pine plywood plants are listed in the Appendix.

**Table 2—U.S. OSB manufacturing costs and prices ($/m^3$)**

| Year | Power and fuel | Labor and management | Glue and wax | Other costs | Wood | Variable costs | Price |
|---|---|---|---|---|---|---|---|
| 1976 | 5 | 14 | 23 | 16 | 24 | 83 | 122 |
| 1977 | 6 | 15 | 20 | 16 | 26 | 83 | 131 |
| 1978 | 7 | 17 | 15 | 16 | 27 | 81 | 139 |
| 1979 | 8 | 18 | 22 | 18 | 28 | 94 | 145 |
| 1980 | 9 | 20 | 27 | 21 | 30 | 107 | 123 |
| 1981 | 11 | 22 | 28 | 22 | 32 | 115 | 136 |
| 1982 | 13 | 26 | 28 | 23 | 31 | 121 | 144 |
| 1983 | 12 | 25 | 28 | 24 | 34 | 123 | 158 |
| 1984 | 12 | 25 | 28 | 24 | 35 | 124 | 140 |
| 1985 | 12 | 24 | 29 | 25 | 36 | 125 | 153 |
| 1986 | 11 | 24 | 24 | 23 | 35 | 117 | 146 |
| 1987 | 11 | 23 | 27 | 24 | 36 | 121 | 141 |
| 1988 | 11 | 23 | 28 | 25 | 37 | 124 | 123 |
| 1989 | 11 | 23 | 30 | 27 | 39 | 130 | 166 |
| 1990 | 11 | 23 | 23 | 26 | 40 | 123 | 124 |
| 1991 | 11 | 23 | 18 | 25 | 41 | 119 | 144 |
| 1992 | 11 | 23 | 18 | 26 | 43 | 121 | 208 |
| 1993 | 11 | 23 | 20 | 28 | 46 | 128 | 227 |
| 1994 | 11 | 23 | 22 | 28 | 47 | 130 | 252 |
| 1995 | 11 | 23 | 24 | 31 | 52 | 141 | 242 |

## Costs and Prices

Wood represents the largest share of plywood manufacturing costs. In 1995, delivered costs for sawtimber-grade logs reached approximately $70/m^3$; after accounting for process losses and gains from residue sales, this figure translates to about $127/m^3$ of product. The installation of more rapid, accurate lathes that maintain high throughput and recovery has prevented further rises in costs. This innovation has enabled the use of smaller logs than those traditionally used in plywood manufacturing. The amount of wood required to manufacture 1 $m^3$ of plywood depends on mill process parameters such as average log size and target core diameter. Average recovery is estimated at more than 50 percent regionwide (Fig. 7). Other input costs are summarized in

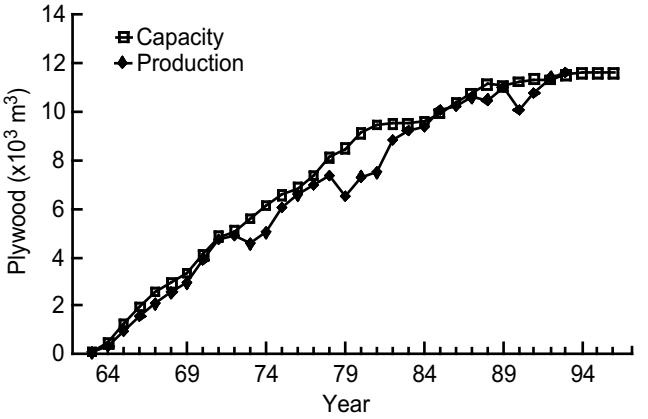


**Figure 6—Southern plywood capacity and production.**

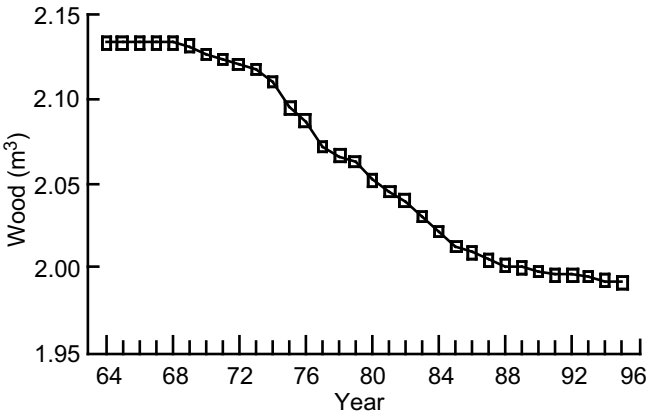


**Figure 7—Wood input per cubic meter of plywood output in U.S. South.**

**Table 3—U.S. southern plywood manufacturing costs and prices ($/m$^3$)**

| Year | Power and fuel | Labor and management | Main-tenance | Glue | Supplies | Net wood | Variable costs | Price |
|---|---|---|---|---|---|---|---|---|
| 1964 | 4 | 14 | 3 | 3 | 4 | 18 | 46 | 61 |
| 1965 | 4 | 15 | 3 | 3 | 4 | 18 | 47 | 59 |
| 1966 | 4 | 15 | 3 | 3 | 5 | 20 | 49 | 62 |
| 1967 | 4 | 15 | 3 | 3 | 5 | 21 | 51 | 55 |
| 1968 | 4 | 16 | 3 | 3 | 5 | 23 | 54 | 74 |
| 1969 | 4 | 18 | 3 | 3 | 5 | 27 | 60 | 76 |
| 1970 | 4 | 18 | 3 | 3 | 6 | 26 | 60 | 62 |
| 1971 | 4 | 19 | 3 | 3 | 6 | 31 | 67 | 74 |
| 1972 | 4 | 20 | 4 | 4 | 6 | 36 | 74 | 103 |
| 1973 | 4 | 22 | 4 | 4 | 7 | 45 | 86 | 106 |
| 1974 | 5 | 23 | 4 | 7 | 7 | 48 | 95 | 95 |
| 1975 | 6 | 23 | 4 | 9 | 8 | 42 | 93 | 98 |
| 1976 | 7 | 25 | 5 | 8 | 8 | 52 | 105 | 131 |
| 1977 | 8 | 25 | 5 | 8 | 9 | 61 | 115 | 168 |
| 1978 | 8 | 26 | 5 | 6 | 9 | 76 | 131 | 184 |
| 1979 | 9 | 29 | 6 | 8 | 10 | 96 | 158 | 174 |
| 1980 | 11 | 30 | 6 | 10 | 11 | 85 | 153 | 179 |
| 1981 | 14 | 32 | 6 | 10 | 12 | 79 | 152 | 161 |
| 1982 | 16 | 34 | 7 | 10 | 13 | 63 | 142 | 160 |
| 1983 | 16 | 35 | 7 | 10 | 13 | 69 | 149 | 180 |
| 1984 | 16 | 35 | 7 | 10 | 14 | 66 | 148 | 169 |
| 1985 | 15 | 37 | 8 | 10 | 15 | 51 | 135 | 164 |
| 1986 | 14 | 38 | 8 | 9 | 16 | 49 | 133 | 168 |
| 1987 | 13 | 39 | 8 | 10 | 16 | 62 | 149 | 168 |
| 1988 | 13 | 39 | 8 | 11 | 17 | 63 | 151 | 159 |
| 1989 | 13 | 40 | 8 | 12 | 17 | 65 | 155 | 184 |
| 1990 | 13 | 40 | 9 | 10 | 18 | 69 | 159 | 168 |
| 1991 | 13 | 40 | 9 | 8 | 18 | 74 | 162 | 175 |
| 1992 | 13 | 41 | 9 | 8 | 18 | 85 | 174 | 226 |
| 1993 | 13 | 42 | 9 | 9 | 19 | 98 | 190 | 257 |
| 1994 | 13 | 42 | 9 | 10 | 20 | 119 | 212 | 274 |
| 1995 | 13 | 42 | 9 | 11 | 20 | 127 | 221 | 267 |

Table 3. In 1995, total manufacturing costs for plywood were estimated at about $221/m$^3$ compared with an estimated selling price of $267. Profitability during 1992–1995 improved from previous levels, but did not match that in the OSB sector.

# Particleboard

## Capacity

The manufacturing of particleboard in the United States began on a large scale after World War II as a low-cost replacement for lumber and plywood in furniture and cabinetry. The early postwar years were characterized by fast growth in the industry as ample supplies of inexpensive sawmill residues favored particleboard economics. Growth temporarily halted during the recession of 1974 to 1975—the industry found itself with excess capacity on the one hand and rising furnish costs on the other as residues acquired additional value for their energy potential. After a period of retrenchment, growth resumed on a more modest scale that was as much the result of improvements to existing mills as the construction of new ones. During this period, a few plants were converted to OSB or medium density fiberboard. In 1995, production capacity was approximately 8.5 million m$^3$; this figure is scheduled to rise to more than 9.1 million m$^3$ by 1997 (Fig. 8). The Canadian particleboard industry has also been growing, even though some plants have been closed. Currently, there are eight plants with approximately 2.5 million m$^3$ of capacity.

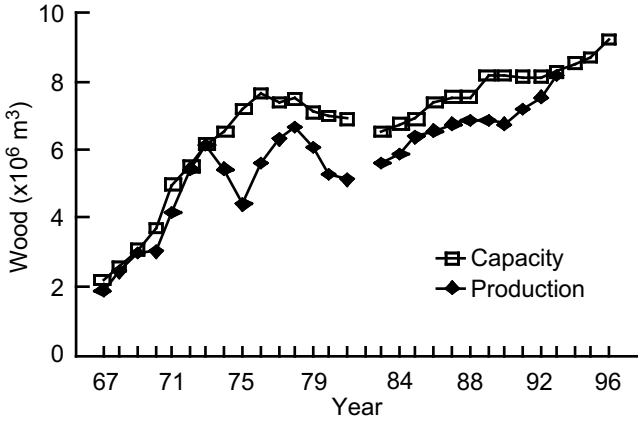


**Figure 8—Particleboard capacity and production in the United States.**

Particleboard plants in the United States and Canada are listed in Tables A3 and A4 in the Appendix. These tables do not include data on several small plants that utilize straw as the fiber furnish. At least two such plants are operational—one in North Dakota and the other in Texas. Plans to build a $120 million (Canadian dollars), 180-thousand-$m^3$ straw-based particleboard plant in Manitoba in 1996 hinge on the availability of financing.

## Costs and Prices

Costs of particleboard manufacturing are shown in Table 4. Unlike plywood and OSB, particleboard is primarily made from lumber and plywood residues. Approximately 0.9 t of fiber are required to make an average cubic meter of product, or 1.2 t of fiber per ton of board. The cost of that fiber has increased to approximately $33/t ($31/$m^3$ of product) from less than $10/t ($9/$m^3$ of product) in the 1960s (Fig. 9). In 1995, total manufacturing costs, excluding depreciation and overhead, were approximately $120/$m^3$ compared to an average selling price of $169/$m^3$.

# Medium Density Fiberboard

## Capacity

The first North American medium density fiberboard (MDF) plant was started in 1966 in New York. By 1994, the number of plants had increased to 18, representing more than 2.5 million $m^3$ of capacity. Plans for many new plants were announced in 1995. If all are realized, the industry will more than double in size by the end of 1997 (Fig. 10). One proposed plant would constitute the first attempt in North America to make MDF from urban waste wood furnish. Since financing for this plant, which is to be located outside Toronto, has not been finalized and completion is not assured, the project should be viewed as tentative. Medium density fiberboard plants are listed in Table E in the Appendix.

**Table 4—U.S. particleboard manufacturing costs and prices ($/$m^3$)**

| Year | Power and fuel | Labor and management | Glue and wax | Other costs | Wood | Variable costs | Price |
|---|---|---|---|---|---|---|---|
| 1972 | 2 | 17 | 9 | 8 | 8 | 44 | 54 |
| 1973 | 3 | 19 | 13 | 9 | 9 | 52 | 64 |
| 1974 | 3 | 19 | 18 | 11 | 10 | 61 | 66 |
| 1975 | 4 | 19 | 22 | 11 | 10 | 66 | 61 |
| 1976 | 5 | 19 | 18 | 10 | 11 | 64 | 65 |
| 1977 | 6 | 20 | 15 | 10 | 12 | 63 | 77 |
| 1978 | 6 | 23 | 16 | 11 | 14 | 71 | 124 |
| 1979 | 7 | 23 | 19 | 13 | 18 | 80 | 96 |
| 1980 | 9 | 24 | 22 | 14 | 20 | 89 | 102 |
| 1981 | 11 | 26 | 22 | 15 | 23 | 98 | 106 |
| 1982 | 13 | 28 | 22 | 16 | 25 | 104 | 111 |
| 1983 | 13 | 28 | 23 | 16 | 23 | 103 | 114 |
| 1984 | 13 | 28 | 23 | 16 | 25 | 106 | 123 |
| 1985 | 13 | 28 | 23 | 16 | 21 | 101 | 115 |
| 1986 | 11 | 28 | 22 | 15 | 22 | 98 | 120 |
| 1987 | 11 | 28 | 21 | 15 | 23 | 98 | 127 |
| 1988 | 11 | 29 | 24 | 15 | 22 | 101 | 127 |
| 1989 | 12 | 29 | 23 | 16 | 23 | 104 | 129 |
| 1990 | 12 | 30 | 23 | 16 | 24 | 105 | 122 |
| 1991 | 11 | 30 | 23 | 16 | 26 | 107 | 120 |
| 1992 | 11 | 32 | 21 | 16 | 28 | 108 | 129 |
| 1993 | 11 | 32 | 24 | 17 | 29 | 114 | 153 |
| 1994 | 11 | 33 | 25 | 18 | 31 | 118 | 171 |
| 1995 | 11 | 34 | 25 | 18 | 31 | 120 | 169 |

## Costs and Prices

Few cost figures exclusive to MDF are available in the public domain. Thus, it is difficult to separate and quantify costs in this segment from particleboard costs. The production processes for MDF and particleboard are similar in most respects, but census figures show that average labor productivity for MDF is lower than that for particleboard (Table 5). Power, wax, wood, and resin requirements are also generally higher for MDF (Vesihiisi 1980). Medium density fiberboard has been priced at substantial premiums compared to particleboard, but it is unclear what part of that is due to higher costs and what is due to premium properties.

# Outlook for Panels

The capacity of structural panel plants is poised for rapid growth over the next 2 years (Table 6). For OSB alone, capacity is slated to increase by about 7 million $m^3$ between the end of 1995 and the beginning of 1998. The capacity of Southern Pine plywood and OSB plants would increase by about 30 percent if all announced plans were implemented. Total U.S. and Canadian structural panel capacity would

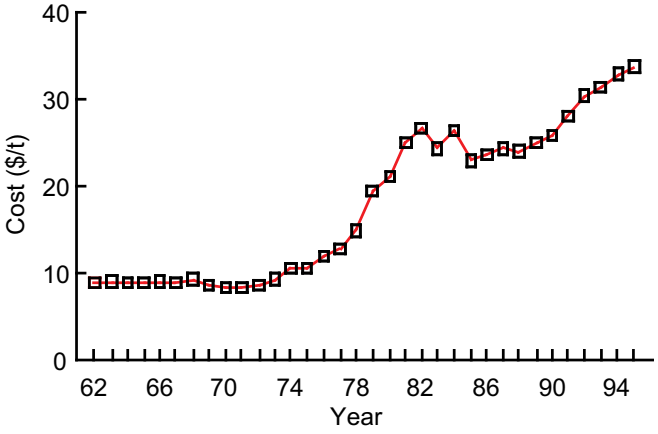


**Figure 9—Average cost of wood fiber for particleboard in the United States.**

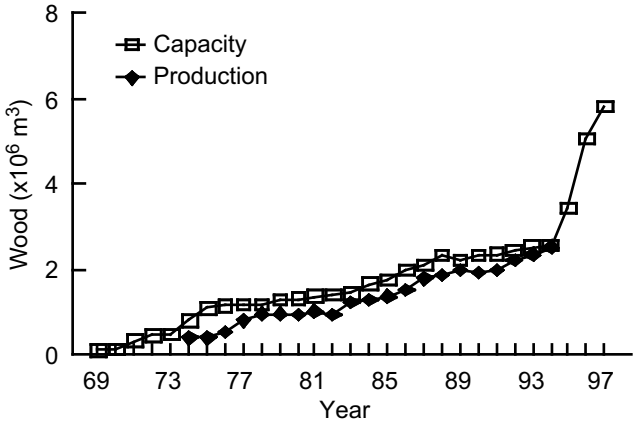


**Figure 10—Capacity and production of medium density fiberboard (MDF) in North America.**

**Table 5—Average labor productivity in particleboard and MDF industries (h/m$^3$)**

| Year | Particleboard | MDF |
|---|---|---|
| 1982 | 3.2 | 4.8 |
| 1987 | 2.7 | 4.0 |
| 1992 | 2.6 | 3.5 |

**Table 6—Structural panel consumption and capacity, 1994–1997 (million m$^3$)**

| | 1994 | 1997 |
|---|---|---|
| Consumption | | |
| Residential | 13.0 | 13.0 |
| Remodeling | 7.2 | 7.4 |
| Industrial | 4.0 | 4.3 |
| Nonresidential | 2.8 | 3.0 |
| Exports | 1.6 | 2.7 |
| Total | 28.6 | 30.4 |
| Capacity | | |
| Southern Pine plywood | 11.5 | 11.9 |
| Douglas Fir plywood | 7.8 | 4.6 |
| Canadian plywood | 2.1 | 1.9 |
| Oriented strandboard | 10.1 | 18.5 |
| Total | 31.5 | 36.9 |
| "Excess" capacity | 2.9 | 6.5 |

increase by 25 percent, assuming the status quo remains in the plywood industry in the western United States and Canada. To absorb this amount of growth without major disruptions in pricing and markets will be a challenge for industry marketers.

The major market for structural panels (softwood plywood and OSB) is residential construction (Table 6). In an average year, this segment consumes on the order of 12–13 million m$^3$ in the United States and Canada. Two important factors affect housing demand. A long-term determinant is the growth in that segment of the population that is a net buyer of homes. Typically, these are people between 25 and 45 years of age who are acquiring their first independent residences. A short-term determinant is the availability and cost of financing. At present, these determinants are working in opposite directions in the United States. Interest rates are low, and it is probable that this situation will continue as inflation ebbs. However, the growth of the population in the middle-age group is also slowing as a result of the decline in the birthrate that followed the postwar population boom. The net effect is likely to be little change in the level of housing activity when the growth in additional capacity comes to fruition.

Other markets, such as repair and remodeling, nonresidential construction, and shipping, which have consumed approximately 14 million m$^3$ a year, are relatively stable and unlikely to rise sharply. Export markets have been a growing source of demand, accounting for 1.6 million m$^3$. In traditional lumber markets, OSB is being used to an increasing extent for the web component in the popular composite I-joist. However, both the export and I-joist markets are small relative to the total market for structural panels. In the absence of increases in demand proportional to the projected increases in capacity, an excess supply is likely, especially by 1997. This looming imbalance suggests that the high profit levels of the past 3 years will be under pressure as the market seeks equilibrium between supply and demand. Plywood and OSB are used in many of the same markets, and there are few end-uses for which the products are not interchangeable. Plywood manufacture, particularly the West Coast segment, currently operates under a higher cost structure than that of OSB and would be most vulnerable in a

downward market. However, even assuming significant reductions in West Coast plywood capacity, a gap between consumption and capacity will likely remain, which may lead to a delay in the construction of some plants or the closure of some high-cost plants.

For particleboard and MDF, the supply situation is similar. By the end of 1997, capacity is slated to grow by more than 3 million $m^3$, a 22-percent increase relative to the end of 1995, although some new plants may not be built as a result of the uncertainty of financing. Furniture and cabinetry are the major markets for nonstructural panels. Growth in these industries is tied to general economic activity. Overall growth from 1996 to 1997 should be at a moderate level—between 5 and 6 percent. The rise in demand for nonstructural panels (Table 7) may exceed this level as a result of the capture of market share from other products, but growth in internal demand by itself is unlikely to absorb the added supply. On the other hand, demand for these panels is growing rapidly overseas, particularly in the Far East where increasing economic growth is rapidly driving the demand for consumer goods. Many new Canadian MDF mills will be equipped with presses and lines capable of producing panels either to offshore or U. S. size specifications. Therefore, export of MDF is likely to increase in the next few years and to absorb some slack, although not all.

A second issue pertaining to particleboard and MDF is the availability and cost of the fiber. Most plants rely on shavings and sander dust generated in lumber and plywood plants for their furnish supply. Neither the lumber nor the plywood sector is likely to match the growth of the particleboard and MDF sectors. If residues from traditional sources are not available in adequate amounts, then particleboard and MDF plants will need to resort to potentially more expensive alternative fibers, such as agricultural waste, waste wood (urban wood), or roundwood. To some extent, this change has already occurred in the West, where contraction of the lumber and plywood industries has reduced the amount of residues available and has caused some mills to augment their furnish with straw and waste wood collected in cities. Such problems have been reported in the South and may increase as projected growth in particleboard and MDF capacity is likely to be greater than growth in lumber production (Fig. 11).

**Table 7—Nonstructural panel consumption and capacity, 1994–1997 (million $m^3$)**

| | 1994 | 1997 |
|---|---|---|
| Consumption | | |
| Construction | 1.8 | 1.9 |
| Industrial | 10.1 | 10.9 |
| Exports | 0.4 | 1.0 |
| Imports | (0.3) | (0.2) |
| Total | 12.0 | 13.6 |
| Capacity | | |
| U.S. particleboard | 8.3 | 9.2 |
| Canadian particleboard | 1.8 | 2.2 |
| Medium density fiberboard | 2.6 | 5.8 |
| Total | 12.7 | 17.2 |
| "Excess" capacity | 0.7 | 3.6 |

A new development in particleboard technology that has the potential to change the economics of the industry has been the construction of several plants that use straw furnish. Tests in Germany, Sweden, and other countries have shown that the physical properties of boards made with straw are equal or better than those made with wood for boards of similar densities and resin contents (Hesch 1978). In terms of the process, straw furnish offers advantages such as the ability to be processed with less costly chipping and drying equipment. On the other hand, greater press capacity may be needed to accommodate the longer press times required for adequate steam dissipation. A plant with an annual capacity of 52,000 $m^3$ was built in South Dakota for a reported cost of $15 million (Donnel 1995). This cost is considerably below the $60–$80 million price tag associated with current wood-based particleboard plants, although on the basis of per cubic meter capacity, the cost of $290/$m^3$ is comparable or higher than the cost of a large wood-based particleboard facility.

The market viability of straw-based particleboard (strawboard) will depend in large measure on how operating costs compare with those of wood-based plants. In terms of the furnish cost, straw can be advantageous in regions where it has little alternative agricultural value. If a region is rich in dairy operations, then straw is valued for livestock bedding and its cost can range from $50 to $90 per dry ton (Youngquist and

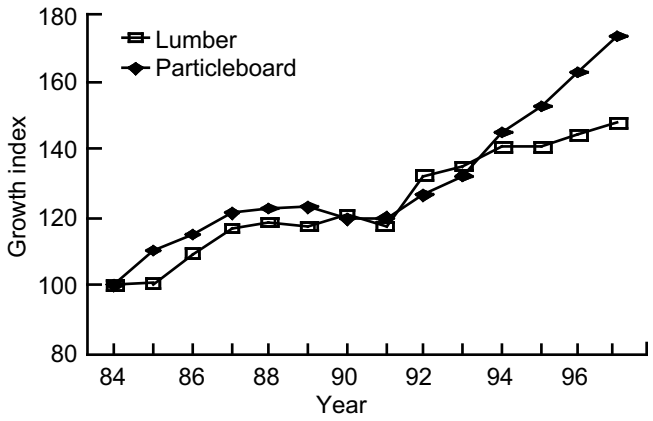


**Figure 11—Historical and projected lumber and particleboard production in the U.S. South.**

others 1993). Where there are few dairy operations, such as in North Dakota, the cost of straw is generally much lower, about $25–$30/ton. This figure is lower than the typical cost of wood residue ($30–$40/ton). Likewise, in Manitoba, a ton of baled straw can be bought for a competitive price of $40 (Canadian dollars).

In terms of the cost of adhesive, strawboard has a disadvantage. Conventional urea formaldehyde (UF) resin, used in most of the particleboard industry, does not perform well with straw fiber. Consequently, more expensive isocyanate resins are used. Although the application of resin solids at about 3 to 4 percent is less than half that used for UF, isocyanate is about four to five times as expensive as UF, resulting in higher net resin expense. Offsetting that disadvantage, however, are the superior physical properties of strawboard. Because strawboard is more homogeneous than wood-based panels, its machining characteristics are more like those of MDF. Thus, strawboard would be appropriate for high-value applications where it would command a premium relative to industrial-grade particleboard. There is potential for additional board capacity in agricultural areas such as Kansas, eastern Washington, Minnesota, and Manitoba.

Roundwood costs for OSB have been rising in recent years, reflecting the demand for not only OSB but also paper. Despite substantial increases in paper recycling, pulpwood harvest for paper in North America is increasing; it is projected to increase by 27 million $m^3$ over the next decade (Ince and Spelter 1995). The need for fiber to supply the additional OSB capacity in the next 2 years will be on the order of 13 million $m^3$. Increases of this magnitude are likely to encourage the trend toward higher pulpwood prices. The high concentration of OSB mills in some traditional production regions and the resulting pressure on pulpwood costs has led the industry to locate to new regions, such as West Virginia, Tennessee, and Manitoba, where supplies of underutilized fiber suitable for OSB are still plentiful. Mills are also likely to increase the use of different species such as birch, balsam poplar, cottonwood, and other low-to-medium density hardwoods.

In summary, the favorable cost and pricing scenarios in panel-manufacturing industries are likely to be tested in the coming 2 years by rising wood fiber costs and declining product prices.

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# Appendix—Panel Manufacturing Industries

The tables in this Appendix show the capacity of various wood-based panel plants by year of construction.

**Table A—OSB capacity by year of plant construction**

| Region | Location | Company (former name) | Initial Capacity ($\times 10^3$ $m^3$) | Year built | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | Hudson Bay | McM–Bloed | 71 | 1964 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 4 | Hudson Bay | McM–Bloed | 97 | 1968 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 |
| 1 | Gr.Rapids | Potlat (Bland) | 89 | 1972 | 115 | 124 | 124 | 124 | 212 | 248 | 248 | 248 | 248 | 248 | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 301 |
| 4 | Timmins | Wfbd/Mal | 62 | 1973 | 62 | 62 | 62 | 62 | 62 | 62 | 71 | 71 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 177 | 177 | 177 | 266 | 354 |
| 4 | Longlac | Weldwood | 97 | 1973 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 124 | 142 | 142 | 142 |
| 4 | Thunder B | McM–Bloed | 89 | 1974 | 97 | 106 | 106 | 106 | 106 | 106 | 106 | 115 | 142 | 142 | 150 | 150 | 150 | | | | | | | | |
| 4 | Thunder b | Gt.Lakes | 111 | 1975 | 111 | 111 | 111 | 111 | 115 | 115 | 124 | 124 | 133 | 71 | | | | | | | | | | | |
| 5 | Slave Lk | Weyerhaeus | 97 | 1977 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | | | 124 | 177 | 177 | 177 | 177 |
| 1 | Hayward | L–P | 115 | 1978 | | 115 | 115 | 115 | 115 | 115 | 115 | 133 | 142 | 150 | 155 | 159 | 177 | 204 | 204 | 204 | 204 | 204 | 212 | 212 | 212 |
| 4 | Chatham | Atl Wfbd/Eagle | 142 | 1979 | | | 142 | 142 | 142 | 142 | 142 | 142 | 159 | 159 | 177 | 177 | 195 | 195 | 133 | | | | | | 288 |
| 4 | LeSarre I | Norbd (Norm–P) | 71 | 1980 | | | | 71 | 71 | 71 | 71 | 71 | 80 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| 4 | St.Georges | Malette | 133 | 1980 | | | | 133 | 133 | 133 | 133 | 133 | 133 | 142 | 142 | 142 | 142 | 142 | 142 | 142 | 142 | 142 | 142 | 266 | 266 |
| 1 | Clairmont | Elmendorf | 89 | 1981 | | | | | 62 | 89 | 89 | 89 | 89 | 89 | 89 | 44 | | | | | | | | | |
| 1 | Woodland | G–P | 124 | 1981 | | | | | 89 | 124 | 124 | 124 | 124 | 137 | 137 | 137 | 137 | 137 | 137 | 137 | 137 | 177 | 177 | 177 | 177 |
| 1 | Bemidji | Potlatch | 137 | 1981 | | | | | 80 | 137 | 137 | 142 | 150 | 159 | 168 | 173 | 177 | 195 | 195 | 199 | 204 | 208 | 212 | 212 | 212 |
| 1 | Solway | Norboard | 230 | 1981 | | | | | 212 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 274 | 310 | 310 | 310 | 310 |
| 1 | Hayward | L–P | 115 | 1982 | | | | | | 89 | 115 | 133 | 142 | 150 | 159 | 159 | 177 | 204 | 204 | 204 | 204 | 204 | 212 | 212 | 212 |
| 1 | Houlton | L–P | 115 | 1982 | | | | | | 62 | 124 | 133 | 133 | 150 | 155 | 155 | 159 | 164 | 177 | 177 | 177 | 217 | 217 | 217 | 217 |
| 4 | Val d'or | Norbd (N–P) | 150 | 1982 | | | | | | 75 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| 4 | Englehart | Grant | 155 | 1982 | | | | | | 155 | 155 | 155 | 155 | 155 | 168 | 177 | 177 | 177 | 177 | 177 | 177 | 195 | 195 | 195 | 195 |
| 1 | Grayling | Weyerhaeus | 266 | 1982 | | | | | | 111 | 266 | 266 | 266 | 266 | 266 | 266 | 266 | 266 | 266 | 266 | 336 | 336 | 336 | 336 | 336 |
| 2 | Dudley | G–P | 111 | 1983 | | | | | | | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 124 | 124 | 124 | 124 | 124 |
| 2 | Corrigan | L–P | 115 | 1983 | | | | | | | 89 | 124 | 124 | 124 | 128 | 128 | 128 | 124 | 119 | 119 | 119 | 119 | 124 | 124 | 124 |
| 1 | Easton | Huber | 119 | 1983 | | | | | | | 49 | 119 | 119 | 119 | 119 | 164 | 164 | 164 | 164 | 164 | 164 | 164 | 164 | 164 | 164 |
| 2 | LeMoyen | Martin | 124 | 1983 | | | | | | | 53 | 124 | 142 | 150 | 159 | 159 | 159 | 168 | 195 | 212 | 230 | 230 | 230 | 230 | 230 |
| 1 | Cook | Potlatch | 142 | 1983 | | | | | | | 142 | 155 | 159 | 164 | 168 | 168 | 168 | 168 | 168 | 186 | 212 | 212 | 212 | 212 | 212 |
| 3 | Chilco | L–P | 80 | 1984 | | | | | | | | 80 | 89 | 97 | 106 | 111 | 115 | 119 | 111 | 111 | 111 | 111 | 111 | 111 | 111 |
| 3 | Kremmling | L–P | 97 | 1984 | | | | | | | | 97 | 102 | 106 | 111 | 115 | 115 | 111 | 106 | | | | | | |
| 3 | Montrose | L–P | 97 | 1984 | | | | | | | | 97 | 102 | 106 | 111 | 115 | 115 | 106 | 106 | 106 | 106 | 128 | 128 | 128 | 128 |
| 2 | Urania | L–P | 106 | 1984 | | | | | | | | 106 | 115 | 119 | 128 | 133 | 115 | 97 | 89 | 89 | 89 | 102 | 102 | 102 | 102 |
| 5 | Edson | Weyerhaeus | 221 | 1984 | | | | | | | | 221 | 221 | 221 | 221 | 221 | 221 | 221 | 221 | 221 | 221 | 292 | 292 | 292 | 292 |
| 1 | Two-Harbor | L–P | 89 | 1985 | | | | | | | | | 89 | 97 | 102 | 106 | 111 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 |
| 2 | Grenada | G–P | 221 | 1985 | | | | | | | | | 221 | 235 | 248 | 248 | 248 | 266 | 266 | 266 | 266 | 298 | 298 | 298 | 298 |
| 2 | Skippers | G–P | 221 | 1985 | | | | | | | | | 221 | 235 | 248 | 248 | 248 | 266 | 266 | 292 | 292 | 292 | 309 | 309 | 309 |
| 2 | Dungannon | L–P | 97 | 1986 | | | | | | | | | | 97 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 |
| 2 | Elkin | Weyerhaeus | 199 | 1986 | | | | | | | | | | 199 | 199 | 199 | 199 | 199 | 199 | 199 | 217 | 230 | 230 | 230 | 230 |
| 2 | New Waverly | L–P | 89 | 1987 | | | | | | | | | | | 62 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| 2 | Nacogdoch | I-P | 168 | 1987 | | | | | | | | | | | 106 | 168 | 168 | 168 | 168 | 168 | 177 | 212 | 212 | 212 | 212 |
| 5 | Dawson Cr. | L–P | 221 | 1987 | | | | | | | | | | | 221 | 248 | 266 | 305 | 319 | 319 | 319 | 332 | 332 | 332 | 332 |
| 5 | Drayton | Weyerhaeus | 221 | 1987 | | | | | | | | | | | 115 | 221 | 221 | 230 | 235 | 310 | 310 | 310 | 310 | 310 | 310 |
| 2 | Quitman | Langlade | 119 | 1988 | | | | | | | | | | | | 133 | 164 | 164 | 164 | 164 | 164 | 190 | 190 | 190 | 190 |
| 4 | Chambord | Norbd (Norm–P) | 230 | 1988 | | | | | | | | | | | | 177 | 230 | 230 | 230 | | 89 | 243 | 266 | 266 | 266 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Sagola | L–P | 230 | 1988 | | | | | | | | | | | | 230 | 266 | 319 | 319 | 319 | 319 | 319 | 319 | 319 | 319 |
| 4 | Englehart | Grant | 279 | 1988 | | | | | | | | | | | | 146 | 279 | 279 | 279 | 279 | 283 | 310 | 310 | 310 | 310 |
| 4 | St.Michele | Lanofor | 252 | 1989 | | | | | | | | | | | | | 252 | 252 | 252 | 257 | 270 | 270 | 270 | 336 | 336 |
| 2 | Commerce | Huber | 253 | 1989 | | | | | | | | | | | | | 253 | 253 | 253 | 253 | 253 | 253 | 253 | 253 | 253 |
| 2 | Athens | L–P | 283 | 1989 | | | | | | | | | | | | | 283 | 283 | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| 1 | Newberry | L–P | 106 | 1990 | | | | | | | | | | | | | | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 |
| 1 | Bemidji | Potlatch | 195 | 1990 | | | | | | | | | | | | | | 195 | 195 | 199 | 204 | 208 | 220 | 220 | 220 |
| 2 | Cordele | I–P | 270 | 1990 | | | | | | | | | | | | | | 243 | 270 | 270 | 270 | 270 | 270 | 270 | 270 |
| 2 | Silsbee | L–P | 283 | 1991 | | | | | | | | | | | | | | | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| 1 | Tomahawk | L–P | 106 | 1993 | | | | | | | | | | | | | | | | | 106 | 124 | 124 | 124 | 124 |
| 2 | Hanceville | L–P | 283 | 1994 | | | | | | | | | | | | | | | | | | 236 | 283 | 283 | 283 |
| 4 | Limer | Jager | 288 | 1994 | | | | | | | | | | | | | | | | | | 288 | 288 | 288 | 288 |
| 5 | 100 Ml Hse | Ainsworth | 292 | 1994 | | | | | | | | | | | | | | | | | | 89 | 292 | 292 | 292 |
| 2 | Roxboro | L–P | 292 | 1995 | | | | | | | | | | | | | | | | | | | 66 | 292 | 292 |
| 2 | Crystal Hill | Huber | 301 | 1995 | | | | | | | | | | | | | | | | | | | 221 | 301 | 301 |
| 2 | Jefferson | I–P | 310 | 1995 | | | | | | | | | | | | | | | | | | | 27 | 310 | 310 |
| 2 | Mt.Hope | G–P | 314 | 1995 | | | | | | | | | | | | | | | | | | | 183 | 314 | 314 |
| 2 | Brookneal | G–P | 319 | 1995 | | | | | | | | | | | | | | | | | | | 53 | 319 | 319 |
| 4 | LeSarre II | Norboard | 319 | 1995 | | | | | | | | | | | | | | | | | | | 66 | 319 | 319 |
| 4 | Wawa | Jager | 341 | 1995 | | | | | | | | | | | | | | | | | | | 142 | 341 | 341 |
| 2 | Tupelo | Norboard | 354 | 1995 | | | | | | | | | | | | | | | | | | | 89 | 354 | 354 |
| 4 | Swan River | L–P | 376 | 1995 | | | | | | | | | | | | | | | | | | | 111 | 443 | 443 |
| 5 | High prairie | Tolko Ind | 420 | 1995 | | | | | | | | | | | | | | | | | | | 175 | 420 | 420 |
| 5 | Grand Prairie | Ainsworth | 478 | 1995 | | | | | | | | | | | | | | | | | | | 40 | 478 | 478 |
| 2 | Arcadia | Willamette | 266 | 1996 | | | | | | | | | | | | | | | | | | | | 266 | 266 |
| 2 | Jasper | L–P | 292 | 1996 | | | | | | | | | | | | | | | | | | | | 133 | 292 |
| 2 | Carthage | L–P | 292 | 1996 | | | | | | | | | | | | | | | | | | | | 133 | 292 |
| 5 | Grand Prai | Weyerhaeus | 354 | 1996 | | | | | | | | | | | | | | | | | | | | 354 | 354 |
| 5 | Ft Nelson | Slocan | 394 | 1996 | | | | | | | | | | | | | | | | | | | | 394 | 394 |
| 2 | Heaters WV | Weyerhaeus | 443 | 1996 | | | | | | | | | | | | | | | | | | | | 148 | 443 |
| 4 | Ft Frances | Boise Casc | 266 | 1997 | | | | | | | | | | | | | | | | | | | | | 266 |
| 2 | Sprint Cty, Tn | Huber | 301 | 1997 | | | | | | | | | | | | | | | | | | | | | 301 |
| 4 | Kenora, Ont | Tolko Ind | 420 | 1997 | | | | | | | | | | | | | | | | | | | | | 420 |
| 4 | Hudson Bay | Saskfor | 425 | 1997 | | | | | | | | | | | | | | | | | | | | | 425 |

| | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total ($\times 10^3$ $m^3$) | 504 | 615 | 615 | 748 | 881 | 1022 | 1226 | 1761 | 2425 | 3204 | 4062 | 4748 | 5152 | 5789 | 6727 | 7794 | 8383 | 8564 | 8246 | 8887 | 10124 | 11643 | 16065 | 18467 |
| Change($\times 10^3$ $m^3$) | | 111 | 0 | 133 | 133 | 142 | 204 | 535 | 664 | 779 | 858 | 686 | 404 | 637 | 938 | 1067 | 589 | 181 | -319 | 642 | 1237 | 1519 | 4422 | 2401 |
| Number of mills | | | 7 | 8 | 9 | 10 | 12 | 16 | 21 | 26 | 31 | 34 | 36 | 39 | 43 | 45 | 47 | 47 | 44 | 47 | 50 | 61 | 67 | 72 |
| Average mill capacity($\times 10^3$ $m^3$) | | | 88 | 93 | 98 | 102 | 102 | 110 | 115 | 123 | 131 | 140 | 143 | 148 | 156 | 173 | 178 | 182 | 187 | 189 | 202 | 191 | 240 | 256 |
| Production ($\times 10^3$ $m^3$) | | | | | | | 719 | 996 | 1065 | 1983 | 3038 | 3699 | 4493 | 5220 | 5722 | 6686 | 6769 | 6563 | 8162 | 8921 | 9641 | 10487 | 13806 | 15488 |
| Capacity utilization (percent) | | | | | | | 59 | 57 | 44 | 62 | 75 | 78 | 87 | 90 | 85 | 86 | 81 | 77 | 99 | 100 | 95 | 90 | 86 | 84 |

## Table B—Southern plywood plant capacity by year of plant construction

| State | Location | Company (former name) | Initial Capacity ($\times 10^3$ m$^3$) | Year built | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AR | Fordyce | G–P | 80 | 1964 | 53 | 80 | 106 | 106 | 106 | 119 | 119 | 133 | 133 | 133 | 133 | 133 | 150 | 159 |
| TX | Silsbee | Kirby | 32 | 1964 | 32 | 32 | 35 | 44 | 53 | 53 | 53 | 106 | 106 | 106 | 106 | 106 | 106 | 115 |
| TX | Diboll | TE (SPPCo) | 62 | 1964 | 44 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 106 | 106 | 106 | 106 | 106 | 106 |
| Tex | Keltys | L–P (Angel) | 53 | 1965 | | 44 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 89 | 89 |
| AR | Crossett #1 | G–P | 106 | 1965 | | 53 | 115 | 115 | 115 | 128 | 137 | 137 | 137 | 137 | 155 | 177 | 177 | 177 |
| LA | Ruston | Willam (Santm) | 53 | 1965 | | 31 | 62 | 62 | 71 | 71 | 71 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| AL | Fulton | Scotch | 40 | 1965 | | 40 | 53 | 53 | 71 | 71 | 89 | 89 | 89 | 89 | 89 | 89 | 115 | 135 |
| LA | Oakdale | BC (Vanply) | 89 | 1965 | | 53 | 89 | 89 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 146 | 146 |
| LA | Florien | BC (Vanply) | 89 | 1965 | | 44 | 89 | 89 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 146 | 146 | 146 |
| NC | Plymouth | Weyerhaeus | 64 | 1965 | | 53 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 71 | 71 |
| LA | Minden | Willam (Col) | 53 | 1966 | | | 18 | 53 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 75 | 75 | 75 |
| MS | Beaumont | Hood (Del pn) | 80 | 1966 | | | 53 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 84 |
| AR | Crossett #2 | G–P | 115 | 1966 | | | 80 | 115 | 115 | 128 | 128 | 133 | 137 | 137 | 155 | 177 | 177 | 177 |
| MS | Louisville | G–P | 80 | 1966 | | | 44 | 80 | 80 | 80 | 80 | 80 | 133 | 133 | 133 | 133 | 148 | 166 |
| VA | Emporia | G–P | 80 | 1966 | | | 80 | 89 | 97 | 115 | 133 | 0 | 142 | 142 | 142 | 142 | 142 | 142 |
| GA | Savannah | G–P | 49 | 1966 | | | 35 | 49 | 66 | 66 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| LA | Dodson | Willam (Hunt) | 71 | 1966 | | | 18 | 71 | 71 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 |
| LA | Winnfield | LP (Manville) | 53 | 1966 | | | 27 | 53 | 53 | 53 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| LA | Haynesv | Santiam | 27 | 1966 | | | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| NC | Eliz. City | Triangle | 27 | 1966 | | | 9 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 |
| MD | Pocomoke | Chespk (USPly) | 53 | 1966 | | | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 80 | 80 |
| LA | Hammond | CI (USPly) | 89 | 1966 | | | 44 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| MS | Philadel | Weyerhaeus | 27 | 1966 | | | 27 | 27 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| NC | Jacksonv | Weyerhaeus | 53 | 1966 | | | 22 | 53 | 53 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| AR | Gurdon | Arkla | 89 | 1967 | | | | 35 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 |
| NC | Moncure | Willam (BC) | 53 | 1967 | | | | 44 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 74 | 74 | 74 |
| LA | Joyce | Riverwd (CZ) | 62 | 1967 | | | | 31 | 62 | 62 | 75 | 75 | 75 | 75 | 75 | 75 | 155 | 155 |
| MS | Gloster | G–P | 80 | 1967 | | | | 80 | 80 | | | | | | | | | |
| FL | Chiefland | G–P | 80 | 1967 | | | | 53 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| LA | Natchitoch | Willam (SPly) | 53 | 1967 | | | | 40 | 53 | 53 | 66 | 66 | 66 | 66 | 66 | 66 | 75 | 75 |
| AL | Chapman | Union-Camp | 106 | 1967 | | | | 80 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 133 | 159 |
| LA | Plain Deal | IP (Anthon) | 53 | 1968 | | | | | 35 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 64 | 64 |
| SC | Russelville | G–P | 80 | 1968 | | | | | 80 | 97 | 119 | 133 | 133 | 133 | 133 | 133 | 133 | 133 |
| GA | Cedar Spr. | Gt Northn | 53 | 1968 | | | | | 53 | 74 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| AL | Pine Hill | McM-Bloed | 106 | 1968 | | | | | 71 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 119 | 133 |
| GA | Waycross | CI (USPly) | 49 | 1968 | | | | | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 66 |
| MS | Gloster | G–P | 44 | 1969 | | | | | | 89 | 124 | 155 | 155 | 155 | 155 | 155 | 168 | 177 |
| MS | Taylorsvil | G–P | 80 | 1969 | | | | | | 44 | 80 | 168 | 168 | 168 | 168 | 168 | 168 | 168 |
| TX | Nacogdoch | I-P | 89 | 1969 | | | | | | 62 | 89 | 89 | 89 | 89 | 89 | 89 | 111 | 133 |
| AL | Cordova | Champion Int | 44 | 1970 | | | | | | | 22 | 44 | 49 | 49 | 53 | 62 | 62 | 66 |
| GA | Monticello | G–P | 106 | 1970 | | | | | | | 53 | 106 | 106 | 106 | 159 | 177 | 195 | 212 |
| LA | Urania | LP (G–P) | 106 | 1970 | | | | | | | 62 | 124 | 124 | 177 | 177 | 177 | 181 | 186 |
| AL | Andalusia | Independ | 53 | 1970 | | | | | | | 27 | 53 | 53 | 80 | 80 | 80 | 80 | 80 |
| FL | Pensacola | B-C | 53 | 1971 | | | | | | | | 53 | 80 | 80 | 80 | | | |
| NC | Whiteville | G–P | 66 | 1971 | | | | | | | | 66 | 75 | 80 | 133 | 133 | 133 | 133 |
| TX | New Waver | L–P (G–P) | 142 | 1971 | | | | | | | | 89 | 150 | 155 | 159 | 177 | 177 | 177 |
| MS | Wiggins | Hood (I-P) | 89 | 1971 | | | | | | | | 44 | 89 | 111 | 111 | 111 | 119 | 128 |
| TX | Jasper | L–P (O-I) | 89 | 1971 | | | | | | | | 44 | 89 | 89 | 89 | 89 | 111 | 124 |
| AR | Huttig | Manv (OlnM) | 62 | 1971 | | | | | | | | 31 | 62 | 62 | 62 | 62 | 66 | 66 |
| AL | Livingston | MBI (Sumter) | 80 | 1971 | | | | | | | | 40 | 80 | 89 | 89 | 89 | 89 | 89 |
| AR | Mt. Pine | Weyerhaeus | 75 | 1971 | | | | | | | | 40 | 75 | 75 | 75 | 75 | 75 | 75 |
| AR | Dierks | Weyerhaeus | 75 | 1971 | | | | | | | | 44 | 75 | 75 | 75 | 75 | 75 | 75 |
| OK | Wright Cty | Weyerhaeus | 75 | 1971 | | | | | | | | 40 | 75 | 75 | 75 | 75 | 80 | 84 |
| TX | Corrigan | CI (G–P) | 142 | 1972 | | | | | | | | | 71 | 142 | 168 | 168 | 168 | 177 |
| SC | Holly Hill | Holly H. | 89 | 1972 | | | | | | | | | 44 | 89 | 89 | 89 | 89 | 89 |
| LA | DeQuincy | B-C | 89 | 1973 | | | | | | | | | | 35 | 89 | 89 | 89 | 89 |
| GA | Warm Spr. | G–P | 146 | 1974 | | | | | | | | | | | 87 | 146 | 164 | 173 |
| TX | Pineland | Temple | 106 | 1974 | | | | | | | | | | | 106 | 106 | 124 | 124 |
| SC | Newberry | CI (USPly) | 62 | 1974 | | | | | | | | | | | 62 | 133 | 133 | 133 |
| SC | Prosperity | G–P | 84 | 1975 | | | | | | | | | | | 0 | 84 | 84 | 84 |
| AL | Talladega | G–P | 106 | 1975 | | | | | | | | | | | 0 | 115 | 142 | 159 |
| TX | Bon Wier | LP (Kirby) | 142 | 1975 | | | | | | | | | | | 0 | 142 | 150 | 164 |
| AL | Millport | Weyerhaeus | 71 | 1977 | | | | | | | | | | | | | | 71 |
| AL | Peterman | G–P | 204 | 1978 | | | | | | | | | | | | | | |
| LA | Zwolle | Willamette | 89 | 1978 | | | | | | | | | | | | | | |
| LA | Taylor | Willamette | 111 | 1978 | | | | | | | | | | | | | | |
| TX | Camden | Champ. Int. | 195 | 1979 | | | | | | | | | | | | | | |
| GA | Madison | GP (GA-Kraft) | 199 | 1979 | | | | | | | | | | | | | | |
| LA | Logansport | LP (G–P) | 142 | 1979 | | | | | | | | | | | | | | |
| AK | Gurdon | I-P | 133 | 1979 | | | | | | | | | | | | | | |
| AK | Emerson | Willamette | 133 | 1979 | | | | | | | | | | | | | | |
| NC | Dudley | G–P | 89 | 1980 | | | | | | | | | | | | | | |
| TX | Cleveland | LP (Kirby) | 159 | 1980 | | | | | | | | | | | | | | |
| SC | Chester | Willam (B-C) | 133 | 1981 | | | | | | | | | | | | | | |
| FL | Havana | Coastal | 111 | 1981 | | | | | | | | | | | | | | |
| LA | Pollock | Hunt Plywd | 66 | 1981 | | | | | | | | | | | | | | |
| LA | Springhill | I-P | 195 | 1981 | | | | | | | | | | | | | | |
| FL | Hawthorne | G–P | 195 | 1982 | | | | | | | | | | | | | | |
| LA | Natalbany | Hunt Plywd | 106 | 1988 | | | | | | | | | | | | | | |
| LA | Chopin | Martco | 248 | 1995 | | | | | | | | | | | | | | |
| GA | Fitzgerald | Springfield | 66 | 1995 | | | | | | | | | | | | | | |
| Total ($\times 10^3$ m$^3$) | | | | | 129 | 492 | 1274 | 1973 | 2601 | 2945 | 3371 | 4101 | 4822 | 5092 | 5577 | 6136 | 6560 | 6883 |
| Change ($\times 10^3$ m$^3$) | | | | | 129 | 363 | 781 | 699 | 628 | 344 | 426 | 730 | 721 | 270 | 485 | 558 | 424 | 323 |
| Number of mills | | | | | 3 | 10 | 24 | 31 | 36 | 38 | 42 | 52 | 54 | 55 | 61 | 60 | 60 | 61 |
| Average mill capacity ($\times 10^3$ m$^3$) | | | | | 43 | 49 | 53 | 64 | 72 | 78 | 80 | 79 | 89 | 93 | 91 | 102 | 109 | 113 |
| Production ($\times 10^3$ m$^3$) | | | | | 71 | 356 | 1009 | 1574 | 2100 | 2544 | 2934 | 3903 | 4707 | 4921 | 4540 | 5023 | 6030 | 6591 |
| Capacity utilization (percent) | | | | | 55 | 72 | 79 | 80 | 81 | 86 | 87 | 95 | 98 | 97 | 81 | 82 | 92 | 96 |

| 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 168 | 168 | 177 | 199 | 204 | 204 | 226 | 226 | 226 | 230 | 252 | 257 | 252 | 252 | 252 | 252 | 252 | 252 | 252 | 252 |
| 128 | 133 | 133 | 133 | 133 | 133 | 133 | 142 | | | | | | | | | | | | |
| 106 | 106 | 106 | 106 | 111 | 111 | 111 | 44 | | | | | | | | | | | | |
| 89 | 89 | 89 | 97 | 124 | 124 | 124 | 137 | 150 | 150 | 150 | 168 | 168 | 168 | 177 | 177 | 177 | 177 | 177 | 177 |
| 177 | 177 | 177 | 177 | 195 | 212 | 212 | 221 | 243 | 266 | 270 | 274 | 279 | 279 | 279 | 279 | 279 | 279 | 279 | 279 |
| 75 | 75 | 75 | 75 | 75 | 75 | 89 | 102 | 115 | 115 | 115 | 115 | 133 | 155 | 155 | 155 | 155 | 155 | 155 | 155 |
| 135 | 135 | 159 | 177 | 204 | 204 | 204 | 204 | 212 | 212 | 212 | 235 | 235 | 235 | 235 | 235 | 251 | 251 | 251 | 251 |
| 146 | 146 | 146 | 155 | 155 | 155 | 155 | 155 | 164 | 177 | 221 | 230 | 230 | 230 | 252 | 252 | 252 | 252 | 252 | 252 |
| 146 | 146 | 146 | 155 | 155 | 155 | 155 | 155 | 164 | 199 | 235 | 257 | 261 | 263 | 263 | 263 | 274 | 274 | 274 | 274 |
| 71 | 71 | 71 | 71 | 71 | 71 | 89 | 89 | 89 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 | 97 |
| 75 | 75 | 75 | 75 | | | | | | | | | | | | | | | | |
| 89 | 89 | 89 | 89 | 89 | 89 | 89 | 106 | 106 | 124 | 124 | 124 | 124 | 124 | 124 | 155 | 161 | 177 | 177 | 177 |
| 177 | 177 | 177 | 177 | 195 | 212 | 212 | 221 | 243 | 266 | 274 | 279 | 283 | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| 177 | 177 | 177 | 248 | 248 | 248 | 248 | 248 | 257 | 257 | 257 | 257 | 258 | 258 | 258 | 258 | 258 | 258 | 258 | 258 |
| 142 | 142 | 142 | 142 | 142 | 177 | 204 | 221 | 221 | 235 | 235 | 257 | 261 | 266 | 281 | 281 | 281 | 281 | 281 | 281 |
| 89 | 89 | 89 | | | | | | | | | | | | | | | | | |
| 115 | 115 | 115 | 115 | 133 | 133 | 133 | 133 | 142 | 159 | 168 | 174 | 173 | 173 | 173 | 173 | 173 | 173 | 173 | 173 |
| 89 | 89 | 89 | 89 | 89 | 89 | | | | | | | | | | | | | | |
| 27 | 27 | | | | | | | | | | | | | | | | | | |
| 27 | | | | | | | | | | | | | | | | | | | |
| 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 89 | 89 | | | | | | | | | | |
| 89 | 89 | 89 | 89 | 89 | 89 | | | | | | | | | | | | | | |
| 49 | 49 | 49 | 58 | 58 | 58 | 66 | 66 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |
| 89 | 115 | 115 | 115 | 115 | 115 | 140 | 140 | 146 | 142 | 142 | 136 | 137 | 137 | 137 | 137 | 137 | 137 | 137 | 137 |
| 106 | | | | | | | | | | | | | | | | | | | |
| 74 | 74 | 74 | 74 | 80 | 80 | 80 | 84 | 84 | 84 | 84 | 96 | 97 | 97 | 97 | 97 | 119 | 119 | 119 | 119 |
| 155 | 155 | 166 | 166 | 166 | 166 | 166 | 173 | 173 | 173 | 173 | 173 | 173 | 173 | 175 | 175 | 175 | 175 | 175 | 175 |
| | | | | | | | | | | | | | | | | | | | |
| 80 | 80 | 80 | | | | | | | | | | | | | | | | | |
| 75 | 75 | 75 | 75 | 75 | | | | | | | | | | | | | | | |
| 168 | 168 | 168 | 168 | 168 | 168 | 168 | 177 | 186 | 186 | 186 | 181 | 186 | 186 | 186 | 186 | 212 | 212 | 212 | 212 |
| 64 | 64 | | | | | | | | | | | | | | | | | | |
| 133 | 133 | 133 | 133 | 133 | 190 | 199 | 199 | 199 | 212 | 221 | 243 | 243 | 243 | 243 | 243 | 243 | 243 | 243 | 243 |
| 89 | 89 | 89 | 89 | 89 | 97 | 115 | 137 | 146 | 146 | 146 | 142 | 142 | 142 | 142 | | | | | |
| 133 | 133 | 133 | 133 | 133 | 133 | 133 | 133 | 142 | 142 | 142 | 119 | 119 | 122 | 124 | 124 | 124 | 124 | 124 | 124 |
| 66 | 66 | 66 | 66 | 66 | 66 | 73 | 76 | 80 | 89 | 89 | 89 | 89 | 89 | 87 | 133 | 133 | 133 | 133 | 133 |
| 186 | 186 | 204 | 204 | 204 | 204 | 212 | 239 | 248 | 248 | 248 | 230 | 248 | 248 | 248 | 248 | 248 | 248 | 248 | 248 |
| 168 | 168 | 221 | 221 | 221 | 221 | 217 | 217 | 226 | 266 | 310 | 310 | 305 | 305 | 305 | 305 | 305 | 305 | 305 | 305 |
| 142 | 142 | 0 | 0 | 142 | 142 | | | | | | | | | | | | | | |
| 66 | 71 | 75 | 75 | 80 | 80 | 80 | | | | | | | | | | | | | |
| 221 | 230 | 230 | 230 | 239 | 257 | 266 | 266 | 283 | 283 | 283 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 |
| 195 | 195 | 195 | 195 | 195 | 195 | 195 | 195 | 204 | 204 | 221 | 239 | 239 | 239 | 239 | 239 | 239 | 239 | 239 | 239 |
| 80 | 80 | 80 | 80 | 80 | 80 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 133 | 133 | 177 | 177 | 177 | 177 | 212 | 212 | 221 | 239 | 248 | 248 | 248 | 248 | 248 | 248 | 248 | 248 | 248 | 248 |
| 177 | 177 | 186 | 186 | 186 | 186 | 186 | 199 | 212 | 212 | 212 | 239 | 266 | 266 | 266 | 266 | 266 | 266 | 266 | 266 |
| 133 | 133 | 133 | 133 | 133 | 133 | 133 | 155 | 159 | 168 | 177 | 195 | 195 | 195 | 181 | 181 | 181 | 181 | 181 | 181 |
| 124 | 124 | 124 | 124 | 124 | 124 | 128 | 133 | 133 | 142 | 142 | 133 | 133 | 142 | 142 | 142 | 142 | 142 | 142 | 142 |
| 71 | 71 | 71 | 71 | 71 | 80 | 89 | 89 | 89 | | | | | | | | | | | |
| 89 | 89 | 89 | 89 | 89 | 89 | 89 | | | | | | | | | | | | | |
| 75 | 75 | 75 | 75 | 75 | 80 | 89 | 97 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 |
| 75 | 75 | 75 | 75 | 75 | 84 | 97 | 97 | 106 | 106 | 106 | 106 | 106 | 111 | 111 | 111 | 158 | 164 | 164 | 164 |
| 89 | 93 | 97 | 97 | 97 | 97 | 102 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 142 | 142 | 142 | 142 | 142 | 142 |
| 177 | 177 | 177 | 195 | 204 | 204 | 204 | 204 | 208 | 239 | 257 | 264 | 264 | 266 | 266 | 266 | 266 | 266 | 266 | 266 |
| 89 | 89 | 89 | 89 | | | | | | | | | | | | | | | | |
| 106 | 111 | 111 | 111 | 89 | | | | | | | | | | | | | | | |
| 177 | 177 | 177 | 177 | 177 | 177 | 190 | 190 | 199 | 221 | 257 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 | 261 |
| 133 | 137 | 137 | 137 | 137 | 173 | 173 | 173 | 181 | 177 | 177 | 177 | 177 | 177 | 177 | 177 | 177 | 177 | 177 | 177 |
| 133 | 155 | 159 | 159 | 159 | 159 | 164 | 164 | 177 | 203 | 203 | 150 | | | | | | | | |
| 84 | 106 | 115 | 124 | 124 | 124 | 124 | 124 | 128 | 155 | 164 | 190 | 199 | 218 | 218 | 218 | 218 | 218 | 218 | 218 |
| 177 | 177 | 195 | 195 | 195 | 195 | 200 | 200 | 212 | 221 | 248 | 274 | 274 | 283 | 289 | 289 | 289 | 289 | 289 | 289 |
| 177 | 177 | 190 | 195 | 204 | 204 | 204 | 208 | 243 | 243 | 243 | 243 | 243 | 243 | 243 | 243 | 243 | 243 | 243 | 243 |
| 71 | 71 | 71 | 71 | 71 | 71 | 80 | 80 | 84 | 89 | 105 | 110 | 111 | 115 | 115 | 115 | 115 | 115 | 115 | 115 |
| 177 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | 208 | 208 | 235 | 266 | 274 | 274 | 274 | 274 | 274 | 274 | 274 | 274 |
| 80 | 93 | 93 | 93 | 93 | 93 | 95 | 95 | 102 | 133 | 155 | 159 | 164 | 164 | 169 | 169 | 169 | 169 | 169 | 169 |
| 111 | 115 | 115 | 115 | 115 | 115 | 115 | 133 | 142 | 164 | 186 | 177 | 177 | 186 | 186 | 186 | 186 | 186 | 186 | 186 |
| | 195 | 204 | 221 | 230 | 230 | 230 | 252 | 266 | 279 | 279 | 281 | 279 | 279 | 279 | 279 | 279 | 279 | 279 | 279 |
| | 159 | 199 | 199 | 199 | 208 | 230 | 239 | 243 | 243 | 243 | 274 | 274 | 274 | 310 | 319 | 319 | 319 | 319 | 319 |
| | 106 | 142 | 150 | 150 | 150 | 150 | 168 | 177 | 177 | 177 | 221 | 212 | 221 | 221 | 221 | 221 | 221 | 221 | 221 |
| | 133 | 159 | 186 | 204 | 208 | 208 | 217 | 230 | 230 | 230 | 230 | 230 | 230 | 243 | 243 | 252 | 252 | 252 | 252 |
| | 111 | 124 | 133 | 133 | 133 | 133 | 142 | 150 | 155 | 159 | 164 | 164 | 168 | 170 | 170 | 170 | 170 | 170 | 170 |
| | | 93 | 97 | 124 | 124 | 124 | 124 | 124 | 177 | 190 | 221 | 226 | 227 | 227 | 227 | 227 | 227 | 227 | 227 |
| | | 159 | 195 | 221 | 221 | 230 | 248 | 266 | 274 | 283 | 266 | 266 | 266 | 266 | 266 | 266 | 266 | 266 | 266 |
| | | | 133 | 133 | 133 | 133 | 137 | 150 | 168 | 190 | 195 | 208 | 232 | 232 | 232 | 232 | 232 | 232 | 232 |
| | | | 111 | 111 | 111 | 124 | 124 | 124 | 124 | 124 | 124 | 128 | 133 | 142 | 159 | 177 | 177 | 177 | 177 |
| | | | 66 | 71 | 71 | 71 | 111 | 115 | 115 | 115 | 106 | 102 | 97 | 97 | 97 | 97 | 97 | 97 | 97 |
| | | | 195 | 195 | 195 | 204 | 221 | 226 | 235 | 248 | 239 | 239 | 239 | 243 | 243 | 266 | 270 | 270 | 270 |
| | | | | 177 | 177 | 212 | 212 | 221 | 239 | 248 | 243 | 243 | 243 | 243 | 243 | 257 | 257 | 257 | 257 |
| | | | | | | | | | | 53 | 124 | 133 | 137 | 137 | 137 | 137 | 137 | 137 | 137 |
| | | | | | | | | | | | | | | | | | 0 | 133 | 292 |
| | | | | | | | | | | | | | | | | | 66 | 66 | 66 |
| 7407 | 8123 | 8489 | 9104 | 9472 | 9534 | 9493 | 9639 | 9921 | 10371 | 10796 | 11123 | 11090 | 11220 | 11366 | 11328 | 11520 | 11613 | 11745 | 11904 |
| 524 | 717 | 366 | 615 | 368 | 62 | -42 | 147 | 281 | 450 | 425 | 327 | -33 | 130 | 146 | -38 | 192 | 93 | 132 | 159 |
| 64 | 67 | 67 | 69 | 68 | 66 | 62 | 60 | 58 | 57 | 57 | 57 | 56 | 56 | 56 | 55 | 55 | 57 | 57 | 57 |
| 116 | 121 | 127 | 132 | 139 | 144 | 153 | 161 | 171 | 182 | 189 | 195 | 198 | 200 | 203 | 206 | 209 | 204 | 206 | 209 |
| 6990 | 7371 | 6543 | 7352 | 7484 | 8821 | 9204 | 9379 | 10111 | 10283 | 10618 | 10491 | 11010 | 10071 | 10766 | 11403 | 11628 | 11600 | 11860 | |
| 94 | 91 | 77 | 81 | 79 | 93 | 97 | 97 | 102 | 99 | 98 | 94 | 99 | 90 | 95 | 101 | 101 | 100 | 101 | |

## Table C—Particleboard capacity, by year of plant construction ($\times 10^3$ $m^3$)

| State | Location | Company (former name) | Year built | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CA | Arcata | Sierra-P/L–P | | 80 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 150 | 301 | 266 |
| OR | Brownsville | Browns/Forr | | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 18 | | |
| CA | Chester | Collins Pine | | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 44 | 50 | 57 |
| CA | Crescent city | Hambro | | 21 | 21 | 41 | 41 | 41 | 41 | 41 | 41 | 44 | 46 | 50 |
| Ark | Crossett | G–P | | 74 | 74 | 112 | 112 | 112 | 112 | 127 | 127 | 186 | 186 | 186 |
| OR | Dillard | Permaneer | | 44 | 44 | 44 | 44 | 44 | 44 | 53 | 53 | 53 | 53 | |
| OR | Eugene | Boh/Willam | | 64 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 117 | 117 | 115 |
| NC | Farmville | IP(Formica) | | 71 | 71 | 71 | 106 | 124 | 124 | 124 | | | | |
| MI | Gaylord | Champion | | 71 | 71 | 177 | 177 | 177 | 177 | 191 | 191 | 191 | 191 | 191 |
| AR | Hope | S. Plaswood | | 21 | 21 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | | |
| AL | Hunstville | Giles–Kend | | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| TX | Jacksonville | Wynnewood | | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 32 | 32 | 32 | |
| WA | Longview | I–P | | 12 | 21 | 21 | 21 | 18 | 18 | 18 | 18 | 18 | 19 | 19 |
| WI | Marinette | Rodman | | 27 | 35 | 35 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 |
| OR | Medford | Timber prod | | 71 | 106 | 106 | 106 | 106 | 106 | 142 | 142 | 142 | 143 | 143 |
| OR | N Bend | Weyerhaeus | | 62 | 62 | 62 | 62 | 62 | 62 | 124 | 124 | | | |
| CA | Redding | Champion | | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 150 | |
| CA | Redlands | Golden State | | 46 | 46 | 46 | 53 | 53 | 53 | 64 | 64 | 64 | | |
| OR | Sweet Home | Smurfit (Publ.) | | 21 | 21 | 21 | 21 | 35 | 35 | 35 | 35 | 35 | 27 | 27 |
| AR | Trumann | Singer | | 9 | 9 | 9 | 9 | 18 | 18 | 27 | 39 | 39 | 39 | 27 |
| PA | Tyrone | Westvaco | | 44 | 44 | 44 | | | | | | | | |
| OR | White City | Down River | | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 133 | 124 |
| VA | South Boston | G–P (Cham) | | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 113 | 113 | 124 |
| VA | Waverly | I–P (Masonite) | | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 142 | 142 | 159 |
| IN | Seymour | Swain | 1947 | 21 | 21 | 21 | 21 | 21 | 21 | 27 | 27 | 27 | 27 | 27 |
| MS | Meridien | Kroehler | 1959 | 21 | 21 | 21 | | | | | | | | |
| OR | Albany | Willamette | 1960 | 177 | 177 | 177 | 177 | 294 | 294 | 294 | 294 | 294 | 299 | 314 |
| OR | Oakridge | Pope–Talb | 1963 | 42 | 42 | 53 | 53 | 53 | 53 | 53 | | | | |
| NC | Lenoir | Nu–Wood | 1964 | 13 | 13 | 27 | 27 | 27 | 27 | 27 | 27 | 30 | 30 | 30 |
| OR | Springfield | Weyerhae | 1965 | 53 | 53 | 53 | | | | | | | | |
| OR | Bend | Brks–Willam | 1966 | 80 | 80 | 80 | 195 | 195 | 195 | 195 | 195 | 248 | 248 | 257 |
| OR | LaGrande | Boise | 1966 | 115 | 115 | 115 | 115 | 212 | 212 | 266 | 266 | 266 | 266 | 271 |
| KY | Middlesboro | Tenn–Flake | 1967 | 53 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | | |
| WI | Marshfield | Weyerhaeus | 1967 | 67 | 67 | 67 | 67 | 67 | 106 | 106 | 106 | 110 | 110 | 113 |
| MS | Louisville | G–P | 1967 | 106 | 127 | 127 | 127 | 127 | 159 | 159 | 159 | 159 | 161 | 161 |
| TX | Silsbee | Evans Pr | 1967 | 80 | 124 | 124 | 127 | 127 | | | | | | |
| GA | Adel | Weyerhae | 1968 | | 62 | 62 | 62 | 62 | 89 | 89 | 89 | 89 | 133 | 133 |
| AK | Malvern | I–P | 1968 | | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | | |
| GA | Vienna | G–P | 1969 | | | 133 | 133 | 159 | 159 | 159 | 159 | 159 | 177 | 181 |
| MS | Oxford | G–P (CI) | 1969 | | | 177 | 177 | 177 | 195 | 195 | 204 | 212 | 212 | 212 |
| NM | Albuquerque | Ponderosa (Mexw) | 1970 | | | | 53 | 53 | 53 | 53 | 53 | 53 | 80 | 80 |
| OR | Springfield | Weyerhae | 1970 | | | | 159 | 159 | 159 | 159 | 159 | 159 | 177 | 186 |
| SC | Greenwood | I–P | 1970 | | | | 124 | 124 | 124 | 124 | 124 | | | |
| AZ | Flagstaff | SWFI | 1970 | | | | 133 | 133 | 133 | 133 | 133 | 133 | | |
| MT | Missoula | Evans Pr/L–P | 1970 | | | | 142 | 142 | 142 | 142 | 150 | 159 | 170 | 170 |
| OR | Roseburg/Dil | Roseburg | 1971 | | | | | 177 | 177 | 177 | 177 | 266 | 489 | 489 |
| OR | Klamath Falls | Weyerhae | 1971 | | | | | 99 | 99 | 127 | 127 | 168 | 168 | 168 |
| LA | Urania | L–P (G–P) | 1971 | | | | | 127 | 127 | 168 | 168 | 168 | 168 | 159 |
| MS | Taylorsville | G–P | 1971 | | | | | 129 | 129 | 212 | 212 | 212 | 212 | 212 |
| TX | Diboll | Temple | 1971 | | | | | 142 | 142 | 142 | 142 | 177 | 177 | 159 |
| SC | Russelville | G–P | 1971 | | | | | 168 | 168 | 168 | 168 | 168 | 212 | 192 |
| LA | Lillie | Willam (Olinkr) | 1971 | | | | | 177 | 177 | 177 | 177 | 177 | 177 | 177 |
| CA | Chowchilla | Wickes | 1972 | | | | | | 28 | 57 | 57 | 57 | 64 | 60 |
| LA | Ruston | Willamette | 1972 | | | | | | 106 | 106 | 106 | 106 | 120 | 113 |
| VA | Franklin | Union Camp | 1972 | | | | | | 106 | 106 | 124 | 124 | 149 | 149 |
| CA | Ukiah | G–P/L–P | 1972 | | | | | | 142 | 142 | 142 | 142 | 143 | 142 |
| CA | Martell | G–P (AFPC) | 1972 | | | | | | 159 | 159 | 159 | 159 | 168 | 170 |
| IN | Evanston | Swain | 1973 | | | | | | | 21 | 21 | 21 | 21 | 22 |
| FL | Greenville | Fla–ply | 1973 | | | | | | | 18 | 18 | 18 | 18 | 18 |
| VA | Stuart | I–P (Stuart ) | 1973 | | | | | | | 106 | 106 | 106 | 106 | 106 |
| TX | Corrigan | G–P / L–P | 1973 | | | | | | | 80 | 159 | 159 | 177 | 177 |
| AL | Monroeville | T–I (Olinkr) | 1974 | | | | | | | | 35 | 142 | 186 | 177 |
| AL | Pine Hill | McM–Bloed | 1974 | | | | | | | | 177 | 177 | 177 | 177 |
| MN | Virginia | Publishers | 1974 | | | | | | | | 21 | 21 | 21 | 21 |
| TX | Silsbee | L–P (Kirby) | 1974 | | | | | | | | 124 | 124 | 124 | 127 |
| GA | Thomson | Temple | 1974 | | | | | | | | 53 | 177 | 177 | 159 |
| AL | Eufala | L–P | 1975 | | | | | | | | | 191 | 191 | 177 |
| ID | Post Falls | Potlatch | 1975 | | | | | | | | | 89 | 101 | 106 |
| NC | Lenoir | Broyhill | 1976 | | | | | | | | | | 48 | 74 |
| OR | Philomath | Smurfit (Publ.) | 1976 | | | | | | | | | | 30 | 30 |
| NM | Navajo | Navajo FP | 1976 | | | | | | | | | | 53 | 53 |
| MI | Gaylord #2 | G–P (Cham) | 1978 | | | | | | | | | | | |
| SD | Rapid City | Merrillat | 1984 | | | | | | | | | | | |
| VA | Galax | Webb | 1985 | | | | | | | | | | | |
| VA | Ridgeway | Triwood, Inc | 1985 | | | | | | | | | | | |
| NC | Moncure | Weyerhaeus | 1987 | | | | | | | | | | | |
| PA | Mt Jewett | Allegheny | 1990 | | | | | | | | | | | |
| AK | Hope | Temple Inl. | 1996 | | | | | | | | | | | |
| TX | Eastern Tx | I–P | 1997 | | | | | | | | | | | |
| | | | | 177 | 142 | 124 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| Total ($\times 10^3$ $m^3$) | | | | 2023 | 2236 | 2610 | 3092 | 3717 | 5014 | 5544 | 6163 | 6535 | 7218 | 7651 | 7380 |
| Change ($\times 10^3$ $m^3$) | | | | 2023 | 212 | 374 | 482 | 625 | 1297 | 529 | 619 | 372 | 683 | 433 | -271 |
| Number of mills | | | | 46 | 46 | 46 | 51 | 55 | 59 | 62 | 62 | 62 | 58 | 57 | 54 |
| Average mill capacity ($\times 10^3$ $m^3$) | | | | 44 | 49 | 57 | 61 | 68 | 85 | 89 | 99 | 105 | 124 | 134 | 137 |
| Production($\times 10^3$ $m^3$) | | | | 1678 | 1901 | 2462 | 2977 | 3066 | 4175 | 5450 | 6124 | 5443 | 4430 | 5645 | 6317 |
| Capacity utilization (percent) | | | | 83 | 85 | 94 | 96 | 82 | 83 | 98 | 99 | 83 | 61 | 74 | 86 |

| 1978 | 1979 | 1980 | 1981 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 221 | 221 | 221 | 221 | 138 | 138 | 177 | 177 | 204 | 212 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 230 |
| 53 | 64 | 64 | 64 | 67 | | | | | | | | | | | | | |
| 50 | 60 | 62 | 53 | 44 | 53 | 53 | 62 | 62 | 64 | 64 | 62 | 62 | 62 | 62 | 62 | 62 | 62 |
| 227 | 212 | 239 | 168 | | | | | | | | | | | | | | |
| 115 | 115 | 115 | 115 | 106 | 127 | 127 | 131 | 133 | 142 | 142 | 142 | 142 | 142 | 142 | 89 | | |
| 12 | 18 | 18 | 18 | 21 | 18 | 32 | 32 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 19 | | | | | | | | | | | | | | | | | |
| 44 | 32 | 44 | 42 | 62 | 62 | 62 | 62 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| 135 | 142 | 149 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 | 170 |
| 23 | 28 | 28 | | | | | | | | | | | | 39 | 39 | 39 | 39 |
| 39 | 35 | 28 | 39 | | | | | | | | | | | | | | |
| 124 | 89 | 142 | 133 | | | | | | | | | | | | | | |
| 133 | 136 | 149 | 149 | 177 | 177 | 191 | 191 | 191 | 191 | 191 | 191 | 191 | 191 | 191 | 191 | 191 | 191 |
| 159 | 172 | 172 | 177 | 170 | 170 | 172 | 173 | 173 | 173 | 182 | 177 | 177 | 177 | 177 | 184 | 184 | 184 |
| 27 | 27 | 27 | 27 | 27 | 27 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 28 | 28 | 28 |
| 312 | 303 | 297 | 303 | 315 | 301 | 319 | 335 | 336 | 336 | 375 | 381 | 381 | 381 | 381 | 372 | 372 | 372 |
| 44 | 41 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 41 | 28 | 28 | 28 | 28 | 41 | 41 | 41 |
| 253 | 266 | 239 | 248 | 251 | 266 | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 301 | 283 | 283 | 283 |
| 294 | 269 | 271 | 273 | 294 | 315 | 320 | 319 | 319 | 326 | 331 | 331 | 327 | 327 | 327 | 345 | 345 | 345 |
| 124 | 112 | 117 | 115 | 113 | 113 | 113 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 |
| 188 | 159 | 177 | 131 | 119 | 166 | 172 | 219 | 219 | 182 | 182 | 209 | 209 | 209 | 230 | 230 | 230 | 230 |
| 133 | 124 | 124 | 133 | 133 | 133 | 133 | 133 | 152 | 158 | 163 | 163 | 165 | 165 | 165 | 177 | 248 | 248 |
| 181 | 186 | 186 | 186 | 191 | 198 | 202 | 205 | 212 | 209 | 202 | 198 | 204 | 204 | 204 | 211 | 211 | 211 |
| 212 | 232 | 269 | 274 | 310 | 342 | 354 | 354 | 354 | 354 | 354 | 354 | 310 | 310 | 354 | 354 | 354 | 354 |
| 74 | 80 | 80 | 80 | 80 | 85 | 85 | 85 | 85 | 80 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| 186 | 177 | 186 | 177 | 170 | 170 | 170 | 170 | 177 | 186 | 230 | 230 | 230 | 230 | 230 | 257 | 257 | 257 |
| 177 | 170 | 177 | 177 | 170 | 170 | 177 | 266 | 266 | 266 | 266 | 266 | 266 | 266 | 266 | 266 | 266 | 266 |
| 489 | 510 | 510 | 510 | 531 | 531 | 558 | 602 | 602 | 602 | 620 | 620 | 620 | 620 | 646 | 673 | 673 | 673 |
| 170 | 165 | 168 | 177 | 177 | 177 | 177 | 177 | 177 | 184 | 184 | 186 | 186 | 186 | 195 | 195 | 195 | 195 |
| 159 | 159 | 159 | 177 | | | | | | | | | | | | | | |
| 212 | 198 | 186 | 152 | 127 | 186 | 189 | 195 | 200 | 212 | 205 | 221 | 221 | 221 | 248 | 267 | 267 | 267 |
| 159 | 177 | 177 | 177 | 159 | 181 | 186 | 186 | 186 | 195 | 195 | 202 | 195 | 195 | 195 | 195 | 195 | 195 |
| 196 | 191 | 186 | 191 | 195 | 212 | 223 | 223 | 216 | 221 | 221 | 221 | 221 | 221 | 221 | 267 | 267 | 267 |
| 177 | 177 | 177 | 177 | 177 | 158 | 168 | 177 | 177 | 177 | 177 | 186 | 195 | 195 | 195 | 212 | 212 | 212 |
| 65 | 64 | 64 | 65 | | | | | | | | | | | | | | |
| 110 | 115 | 117 | 142 | 145 | 149 | 159 | 172 | 172 | 172 | 181 | 181 | 177 | 177 | 177 | 177 | 177 | 177 |
| 135 | 138 | 142 | 133 | 154 | 150 | 154 | 159 | 163 | 163 | 159 | 159 | 159 | 159 | 159 | 191 | 191 | 191 |
| 142 | 142 | | | | | | | | | | | | | | | | |
| 165 | 172 | 204 | 195 | 186 | 204 | 204 | 230 | 230 | 248 | 248 | 248 | 248 | 248 | 248 | 266 | 266 | 266 |
| 21 | 19 | 23 | 27 | 21 | 27 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 28 | 28 | 28 |
| 14 | 42 | 28 | 19 | 30 | 30 | 25 | 25 | 25 | 25 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| 89 | 80 | 97 | 106 | 97 | 97 | 97 | 135 | 135 | 135 | 138 | 138 | 138 | 138 | 138 | 127 | 127 | 127 |
| 177 | | | | | | | | | | | | | | | | | |
| 177 | 177 | 177 | 177 | 184 | 177 | 212 | 212 | 204 | 204 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 |
| 177 | 177 | | | | | | | | | | | | | | | | |
| 14 | 14 | 14 | | | | | | | | | | | | | | | |
| 127 | 127 | 127 | 127 | 127 | 127 | | | | | 124 | 124 | 124 | 124 | 124 | 142 | 142 | 142 |
| 177 | 177 | 177 | 177 | 159 | 191 | 181 | 181 | 181 | 186 | 186 | 193 | 193 | 193 | 193 | 193 | 193 | 193 |
| 177 | | | | | | | | | | | | | | | | | |
| 120 | 120 | 120 | 127 | 133 | 133 | 133 | 135 | 135 | 135 | 133 | 129 | 129 | 129 | 129 | 129 | 129 | 129 |
| 48 | 35 | 44 | 44 | 44 | 55 | 55 | 55 | 55 | 51 | 50 | 53 | 53 | 53 | 53 | 124 | 124 | 124 |
| 34 | 30 | 30 | 35 | 39 | 39 | 50 | 50 | 50 | 50 | 50 | 50 | 60 | 60 | 60 | 60 | 60 | 60 |
| 53 | 51 | 51 | 44 | 64 | 67 | 67 | 67 | 67 | 64 | 71 | | | | | | | |
| 290 | 304 | 319 | 310 | 354 | 354 | 366 | 366 | 443 | 427 | 427 | 425 | 425 | 425 | 425 | 425 | 425 | 425 |
| | | | | 156 | 115 | 150 | 154 | 166 | 168 | 168 | 186 | 186 | 186 | 186 | 168 | 168 | 168 |
| | | | | | 32 | 27 | 28 | 28 | 25 | 27 | 28 | 28 | 28 | 28 | 28 | 28 | 28 |
| | | | | | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| | | | | | | | 159 | 159 | 159 | 168 | 186 | 186 | 186 | 186 | 186 | 266 | 266 |
| | | | | | | | | | | 329 | 329 | 329 | 329 | 329 | 329 | 329 | 329 |
| | | | | | | | | | | | | | | | | 150 | 301 |
| | | | | | | | | | | | | | | | | | 301 |
| 89 | 89 | 89 | 89 | 71 | 71 | 71 | 71 | 71 | 71 | 71 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| 7521 | 7119 | 7007 | 6892 | 6501 | 6740 | 6921 | 7406 | 7544 | 7569 | 8192 | 8170 | 8138 | 8138 | 8305 | 8523 | 8735 | 9186 |
| 141 | -402 | -112 | -115 | | 239 | 181 | 485 | 138 | 25 | 623 | -21 | -32 | 0 | 166 | 218 | 212 | 451 |
| 54 | 52 | 50 | 47 | 43 | 44 | 43 | 44 | 44 | 44 | 46 | 45 | 45 | 45 | 46 | 46 | 46 | 47 |
| 139 | 137 | 140 | 147 | 151 | 153 | 161 | 168 | 171 | 172 | 178 | 182 | 181 | 181 | 181 | 185 | 190 | 195 |
| 6682 | 6089 | 5310 | 5151 | 5657 | 5896 | 6377 | 6560 | 6777 | 6852 | 6876 | 6779 | 7207 | 7531 | 8204 | | | |
| 89 | 86 | 76 | 75 | 87 | 87 | 92 | 89 | 90 | 91 | 84 | 83 | 89 | 93 | 99 | | | |

## Table D—Canadian particleboard capacity by year of plant construction

| Providence | Location | Company | Year Built | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ON | Sturgeon F | Abitibi | 1958 | 35 | 35 | 35 | | | | | | | | | | | | | | |
| NB | St Stephen | Flake Bd | 1960 | 35 | 35 | 35 | 44 | 60 | 53 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 53 | 53 | 71 | 71 |
| QU | Lac des Iles | Sogefors | 1960 | 27 | 27 | 27 | 71 | 71 | 71 | 80 | 80 | 89 | 97 | 97 | 97 | 97 | 92 | 92 | 110 | 110 |
| BC | Vancouver | McM–Bl | 1962 | 37 | 37 | 37 | 57 | 71 | 71 | 71 | 78 | 78 | 85 | 85 | 89 | 92 | 92 | 96 | 96 | 96 |
| MA | Sprague | Weldwood | 1962 | 21 | 21 | 21 | 35 | 35 | 37 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | | | | |
| ON | New Liskeard | Rexwood | 1964 | 18 | 18 | 44 | 44 | 44 | 44 | 44 | 53 | 53 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 |
| QU | Val d'Or | Forpan | 1964 | | | | | | | | | | | | | | 150 | 150 | 150 | 150 |
| ON | Timmins | Mallette | 1972 | | | | | | | | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 |
| ON | Huntsville | Domtar | 1974 | | | | | | | | | | | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| BC | Grand Forks | CanPar | 1976 | | | | | | | | | | | | | | 35 | 44 | 53 | 53 |
| ON | Hearst | Levesque | 1976 | | | | | | | | | | | | 80 | 80 | 80 | 80 | 80 | 97 |
| ON | Atikokan | Proboard | 1976 | | | | | | | | | | | | 80 | 80 | 80 | 81 | 89 | 89 |
| BC | Smithers | Northwest P | 1983 | | | | | | | | | | | | | | | | | |
| QU | Sayabec | Panval | 1983 | | | | | | | | | | | | | | | | | |
| ON | Bancroft | Comb/GP | 1991 | | | | | | | | | | | | | | | | | |
| QU | Lac-Megantic | Tafisa | 1992 | | | | | | | | | | | | | | | | | |
| MA | Winnipeg | Palliser | 1994 | | | | | | | | | | | | | | | | | |
| Total ($\times 10^3$ m$^3$) | | | | 173 | 173 | 200 | 251 | 281 | 276 | 278 | 358 | 366 | 391 | 466 | 628 | 632 | 782 | 797 | 848 | 866 |
| Change($\times 10^3$ m$^3$) | | | | | 0 | 27 | 51 | 30 | -5 | 2 | 80 | 9 | 25 | 74 | 163 | 4 | 150 | 14 | 51 | 18 |
| Production ($\times 10^3$ m$^3$) | | | | | | | | | | | | | | | 496 | 519 | 637 | 710 | 720 | 715 |
| Capacity utilization (percent) | | | | | | | | | | | | | | 0 | 79 | 82 | 81 | 89 | 85 | 83 |

## Table E—MDF Capacity by year of plant construction ($\times 10^3$ m$^3$)

| State/ Prov. | Location | Company | Year built | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NY | Deposit | Norboard | 1966 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 44 | 44 | 50 | 50 | 50 | |
| VA | Bassett | Bassett | 1969 | 35 | 35 | 35 | 35 | 35 | 35 | 39 | 42 | 42 | 39 | 39 | 39 | 39 | 39 | 39 |
| MS | Meridian | Kroehler | 1970 | | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | | | | | |
| OR | Oakridge | Pope-Talbott | 1971 | | | 53 | 53 | 53 | 78 | 78 | | | | | | | | |
| NC | Moncure | Weyerhaeus | 1971 | | | 110 | 110 | 110 | 110 | 110 | 110 | 106 | 106 | 106 | 106 | 106 | 106 | 106 |
| OK | Broken Bow | Weyer>Pan Pac | 1972 | | | | 127 | 127 | 127 | 127 | 127 | 150 | 124 | 124 | 124 | 124 | 124 | 126 |
| NC | Spring Hope | Masonite>I-P | 1973 | | | | | 71 | 97 | 106 | 124 | 124 | 127 | 131 | 131 | 131 | 131 | 131 |
| SC | Marion | Masonite>I-P | 1974 | | | | | | 101 | 101 | 101 | 101 | 97 | 97 | 101 | 101 | 101 | 101 |
| MT | Columbia Falls | Plum Creek | 1974 | | | | | | 124 | 124 | 124 | 124 | 133 | 135 | 142 | 142 | 142 | 142 |
| SC | Holly Hill | HH>G-P | 1975 | | | | | | | 89 | 89 | 89 | 106 | 106 | 110 | 110 | 110 | 143 |
| CA | Oroville | L–P | 1975 | | | | | | | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| OR | Medford | Medite | 1975 | | | | | | | 114 | 114 | 124 | 142 | 142 | 142 | 142 | 142 | 150 |
| CA | Rocklin | Fbd>Sierra | 1976 | | | | | | | | 106 | 106 | 106 | 120 | 133 | 133 | 133 | 142 |
| AL | Eufala | L–P | 1979 | | | | | | | | | | | 106 | 106 | 106 | 106 | 106 |
| ALT | White Court | Blue Ridge | 1981 | | | | | | | | | | | | | 80 | 90 | 90 |
| AK | Malvern | Willamette | 1983 | | | | | | | | | | | | | | | 71 |
| NM | Las Vegas | Medite | 1984 | | | | | | | | | | | | | | | |
| MI | Newberry | L-P | 1985 | | | | | | | | | | | | | | | |
| QU | Mont-Laurier | Uniboard | 1986 | | | | | | | | | | | | | | | |
| SC | Bennetsville | Willamette | 1990 | | | | | | | | | | | | | | | |
| NB | St. Stephen | Flakeboard | 1991 | | | | | | | | | | | | | | | |
| LA | Urania | L-P | 1993 | | | | | | | | | | | | | | | |
| PA | Mt Jewett | Allegheny | 1995 | | | | | | | | | | | | | | | |
| GA | Monticello | G-P | 1995 | | | | | | | | | | | | | | | |
| OR | Eugene | Willamette | 1995 | | | | | | | | | | | | | | | |
| ON | SaultSteMarie | GP/Flakebd | 1996 | | | | | | | | | | | | | | | |
| PA | Shippenville | MB/Clarion F | 1996 | | | | | | | | | | | | | | | |
| ON | Pembroke | MB/FIDEV | 1996 | | | | | | | | | | | | | | | |
| QU | Sainte-Foy | Uniboard | 1996 | | | | | | | | | | | | | | | |
| BC | Quesnel | West Fraser | 1996 | | | | | | | | | | | | | | | |
| BC | Prince George | Canfor/Sincl | 1996 | | | | | | | | | | | | | | | |
| ON | Scarborough | CanFibre | 1997 | | | | | | | | | | | | | | | |
| Q/O | ? | Grant Forest | 1997 | | | | | | | | | | | | | | | |
| BC | Port Alberni | MB | 1997 | | | | | | | | | | | | | | | |
| AK | Murphy | Temple-Inland | 1997 | | | | | | | | | | | | | | | |
| Total ($\times 10^3$ m$^3$) | | | | 1969 85 | 1970 118 | 1971 281 | 1972 408 | 1973 479 | 1974 755 | 1975 1059 | 1976 1109 | 1977 1138 | 1978 1146 | 1979 1239 | 1980 1271 | 1981 1351 | 1982 1361 | 1983 1435 |
| Number of Mills | | | | 2 | 3 | 5 | 6 | 7 | 9 | 12 | 12 | 12 | 12 | 12 | 12 | 13 | 13 | 13 |
| Production, U.S. ($\times 10^3$ m$^3$) | | | | | | | | | 393 | 381 | 496 | 781 | 940 | 938 | 908 | 938 | 832 | 1115 |
| Production, Canada. ($\times 10^3$ m$^3$) | | | | | | | | | | | | | | | | 53 | 71 | 80 |
| Production, Total ($\times 10^3$ m$^3$) | | | | | | | | | 393 | 381 | 496 | 781 | 940 | 938 | 908 | 991 | 903 | 1195 |
| Capacity Utilization (percent) | | | | | | | | | 52 | 36 | 45 | 69 | 82 | 76 | 71 | 73 | 66 | 83 |

| 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71 | 71 | 71 | 80 | 124 | 142 | 142 | 142 | 145 | 149 | 149 | 149 | 149 | 159 | 168 | 168 |
| 115 | 119 | 119 | 159 | 159 | 159 | 159 | 106 | | | | | | | | |
| 96 | 96 | 96 | 96 | 96 | 96 | 101 | 101 | 97 | 96 | 99 | 99 | 99 | 96 | 96 | 96 |
| 62 | 62 | 62 | 71 | 71 | 80 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 113 | 113 | 113 |
| 150 | 150 | 212 | 230 | 248 | 248 | 248 | 266 | 274 | 289 | 301 | 301 | 301 | 386 | 386 | 386 |
| 64 | 64 | 64 | 64 | 64 | 64 | 67 | 57 | 53 | 50 | | | | | | |
| 80 | 80 | 80 | 80 | 80 | 80 | 89 | 89 | 133 | 177 | 177 | 177 | 177 | 177 | 177 | 177 |
| 71 | 71 | 71 | 74 | 74 | 80 | 80 | 115 | 115 | 126 | 147 | 147 | 147 | 177 | 177 | 177 |
| 97 | 97 | 97 | 97 | 103 | 103 | 103 | 103 | 101 | 101 | 110 | 110 | 110 | 101 | 101 | 101 |
| 97 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 110 | 110 | 110 | 110 | 110 | 140 | 140 | 140 |
| | 89 | 80 | 76 | 74 | 71 | 62 | 62 | 53 | 44 | 44 | 44 | 44 | 64 | 64 | 64 |
| | 177 | 177 | 177 | 177 | 177 | 177 | 177 | 195 | 212 | 212 | 212 | 212 | 248 | 248 | 248 |
| | | | | | | | | | 188 | 188 | 188 | 248 | 251 | 251 | 251 |
| | | | | | | | | | | 147 | 147 | 147 | 150 | 227 | 227 |
| | | | | | | | | | | | | 53 | 53 | 53 | 53 |
| 903 | 1198 | 1251 | 1328 | 1393 | 1421 | 1466 | 1455 | 1391 | 1655 | 1798 | 1798 | 1912 | 2115 | 2200 | 2200 |
| 37 | 296 | 53 | 76 | 65 | 28 | 44 | -11 | -64 | 264 | 143 | 0 | 113 | 204 | 85 | 0 |
| 563 | 717 | 843 | 1044 | 1138 | 1354 | 1212 | 1278 | 1145 | 1058 | 1205 | 1421 | 1476 | 1682 | 1770 | 1770 |
| 62 | 60 | 67 | 79 | 82 | 95 | 83 | 88 | 82 | 64 | 67 | 79 | 77 | 79 | 80 | 80 |

| 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 97 | 97 | 97 | 97 | 96 | 97 | 97 | 106 | 106 | 110 | 110 | 110 |
| 39 | 39 | 39 | 39 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 |
| 124 | 124 | 124 | 124 | 124 | 124 | 133 | 142 | 142 | 142 | 142 | 133 | 133 | 133 |
| 133 | 133 | 133 | 133 | 225 | 225 | 53 | | | | | 65 | 65 | 65 |
| 127 | 131 | 110 | 110 | 110 | 110 | 119 | 122 | 122 | 122 | 122 | 122 | 122 | 122 |
| 101 | 101 | 101 | 101 | 101 | 101 | 112 | 112 | 112 | 112 | 122 | 133 | 133 | 133 |
| 142 | 142 | 142 | 150 | 156 | 154 | 177 | 195 | 195 | 195 | 195 | 218 | 218 | 218 |
| 143 | 143 | 143 | 143 | 177 | 170 | 177 | 177 | 177 | 177 | 177 | 177 | 177 | 177 |
| 89 | 89 | 89 | 89 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 |
| 150 | 150 | 156 | 156 | 165 | 168 | 177 | 170 | 170 | 170 | 170 | 177 | 177 | 177 |
| 142 | 133 | 142 | 145 | 145 | 156 | 156 | 150 | 156 | 156 | 165 | 165 | 165 | 165 |
| 124 | 124 | 124 | 124 | 212 | 212 | 221 | 221 | 230 | 230 | 230 | 239 | 239 | 239 |
| 90 | 90 | 90 | 106 | 106 | 106 | 106 | 106 | 106 | 106 | 115 | 195 | 195 | 195 |
| 80 | 87 | 103 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 216 | 283 | 283 |
| 142 | 142 | 142 | 142 | 150 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 | 159 |
| | 89 | 89 | 89 | 106 | | | | | | | | | |
| | | 106 | 106 | 106 | 106 | 112 | 112 | 112 | 112 | 119 | 124 | 124 | 124 |
| | | | | | | 177 | 177 | 212 | 212 | 212 | 257 | 257 | 257 |
| | | | | | | | 71 | 85 | 97 | 97 | 154 | 154 | 154 |
| | | | | | | | | | 89 | 106 | 89 | 89 | 89 |
| | | | | | | | | | | | 177 | 177 | 177 |
| | | | | | | | | | | | 283 | 283 | 283 |
| | | | | | | | | | | | 106 | 106 | 106 |
| | | | | | | | | | | | | 266 | 266 |
| | | | | | | | | | | | | 212 | 212 |
| | | | | | | | | | | | | 230 | 230 |
| | | | | | | | | | | | | 212 | 212 |
| | | | | | | | | | | | | 212 | 212 |
| | | | | | | | | | | | | | 106 |
| | | | | | | | | | | | | | 301 |
| | | | | | | | | | | | | | 212 |
| | | | | | | | | | | | | | 177 |
| 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
| 1625 | 1715 | 1928 | 2066 | 2308 | 2216 | 2301 | 2338 | 2402 | 2512 | 2565 | 3413 | 4613 | 5409 |
| 14 | 15 | 17 | 17 | 17 | 16 | 17 | 17 | 17 | 18 | 18 | 22 | 27 | 31 |
| 1165 | 1241 | 1416 | 1628 | 1690 | 1751 | 1715 | 1729 | 1933 | 2078 | 2241 | | | |
| 78 | 78 | 106 | 159 | 177 | 186 | 168 | 193 | 257 | 257 | 283 | | | |
| 1243 | 1319 | 1522 | 1788 | 1867 | 1936 | 1883 | 1922 | 2189 | 2335 | 2524 | | | |
| 76 | 77 | 79 | 87 | 81 | 87 | 82 | 82 | 91 | 93 | 98 | | | |