## Highlights

### Forest-Land Area

Maryland encompasses 6.256 million acres of land according to the U.S. Bureau of Census 1990 figures. Forest land covers 2.566 million acres or 41 percent of that land area. There has been a 3 percent decrease in forest land since the 1986 inventory.

| Unit | 1986 | 1999 | Percent change |
|---|---|---|---|
| Forest land | 2,645.3 | 2,565.8 | -3.0 |
| Nonforest land | 3,610.4 | 3,690.0 | +2.2 |
| **State total** | **6,255.8** | **6,255.8** | |

**Figure 1. Land Area (in thousand acres) and percent change, Maryland, 1986 and 1999 (Source: Table 1).**

Timberland, the largest component of forest land, totals 2.372 million acres and makes up 92 percent of the forest land and 38 percent of the land area. This is a decrease from 1986, when timberland totaled 2.522 million acres, or 95 percent of the forest land, and 40 percent of the land area.

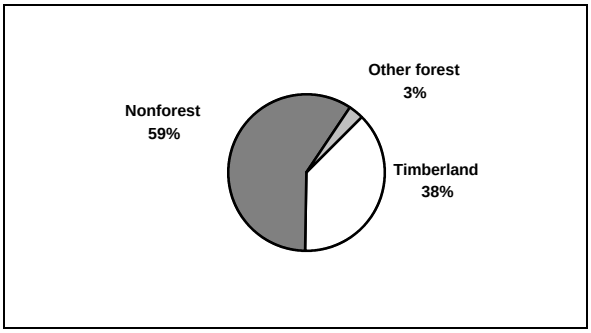


**Figure 2. Percent area by land class, Maryland, 1999 (Source: Table 1).**

### Timberland

Eighty-two percent of the timberland acres are privately owned. The state controls approximately 73 percent of publicly owned lands.

The oak/hickory forest type group makes up the preponderance of timberland acres accounting for 58 percent (1.388 million acres) of the acreage. The loblolly/shortleaf pine group contributes 12 percent (282,600 acres); and the oak/pine group 9.7 percent (229,600 acres). Northern hardwood forests, characterized by sugar maple, beech, yellow birch, and black cherry, cover 8.8 percent (209,100 acres); other forest type groups combined contribute about 262,700 acres.

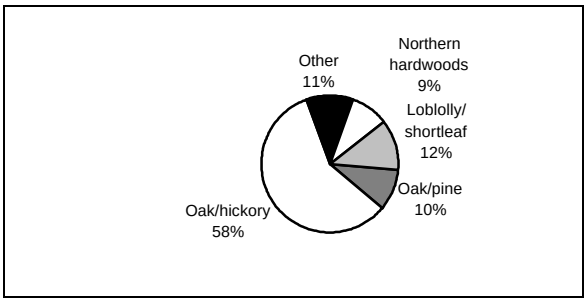


**Figure 3. Timberland by forest-type group, Maryland, 1999 (Source: Table 4).**

Sawtimber stands (stands in which live sawtimber trees make up the majority of stocking) occupy 66 percent (1.575 million acres) of timberland. Poletimber stands occupy 21 percent (506,100 acres), and sapling and seedling stands occupy 11 percent (268,400 acres). In 1986, sawtimber stands occupied 60 percent (1.511 million acres) of timberland area, poletimber stands 29 percent ( 740,000 acres) and sapling and seedling stands 10 percent (252,000 acres).

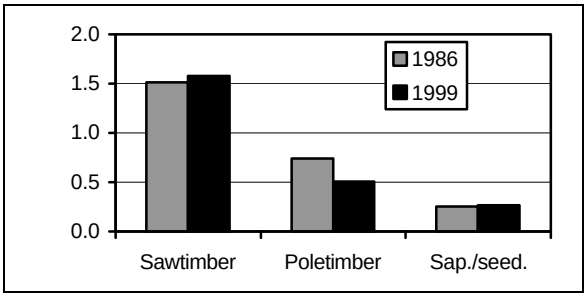


**Figure 4. Area of timberland ( million acres) by stand-size class, Maryland, 1986 and 1999 (Source: Tables 3 and 4).**

### Numbers of Trees

There are 1.447 billion live trees 1 inch or larger in diameter at breast height (d.b.h.) on Maryland's timberland, or 609 trees per acre. Of these, 385 million (162 trees per acre) are at least 5 inches in d.b.h. Red maple is the most common tree species in Maryland, accounting for 18 percent of all saplings and 15 percent of the live trees 5 inches and larger in d.b.h. Sweetgum is the second most common tree

species, with 10 percent of the saplings and 9 percent of the live trees at least 5 inches in diameter. Loblolly pine rounds out the top three, with 8 percent of the saplings and 14 percent of the live trees 5 inches and larger in d.b.h.

Growing-stock trees make up 94 percent of live trees 5 inches and larger in d.b.h. Loblolly pine and red maple are the most common trees in this category and each species accounts for 14 percent of the growing-stock trees. Most of the loblolly pine can be found on the lower eastern shore (75 percent) while red maple's distribution is more ubiquitous. Sweetgum is third, with 10 percent of all growing-stock trees.

A 4.5 percent decrease in growing-stock trees 5 to 12.9 inches d.b.h has been recorded. However, there has been a 12 percent increase in growing-stock trees 13 inches or greater in diameter.

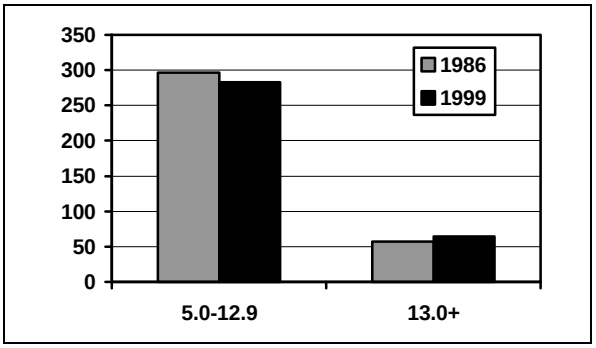


**Figure 5. Number of growing-stock trees (million trees) on timberland by diameter group, Maryland, 1986 and 1999 (Source: Tables 20 and 21).**

## Growing-Stock Volume

The volume of growing-stock trees in Maryland is 5.072 billion cubic feet, or 2,133 cubic feet per acre. This is an 7 percent increase since 1986 when the volume totaled 4.745 billion cubic feet, or 1,881 cubic feet per acre. Yellow-poplar is the leading species in growing-stock volume, with 749.9 million cubic feet, or 15 percent of the total. Red maple contributes 13 percent of the total volume, or 640.7 million cubic feet. Other red oaks rank third with 11 percent of the total (570.8 million cubic feet).

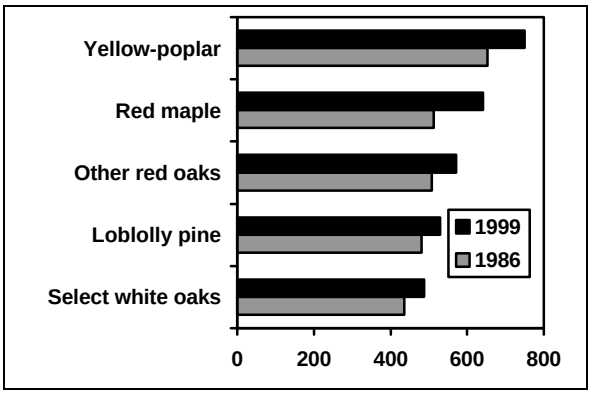


**Figure 6. Net volume of growing-stock trees (imillion cubic feet) on timberland, top five species, Maryland, 1986 and 1999 (Source: Tables 35 and 36).**

## Sawtimber Volume

With an average of 6,797 board feet per acre, there are 16.161 billion board feet of sawtimber in Maryland. In 1986, the volume was 14.156 billion board feet, or 5,953 board feet per acre. Sawtimber volume increased by 14 percent since the last inventory. Although the top three species are the same as the top species in growing-stock volume, there is a different ranking. Yellow-poplar is the top species with 3.164 billion board feet, or 20 percent of the total, and a 20-percent increase over its 1986 volume. Other red oaks have 2.136 billion board feet or 13 percent of the sawtimber volume. Rounding out the top three species in sawtimber volume is red maple with 11 percent of the total (1.846 billion board feet).

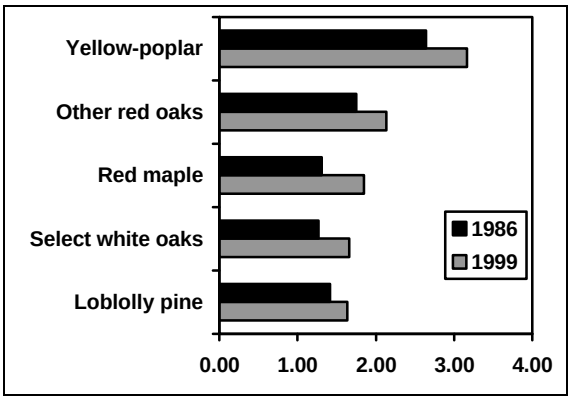


**Figure 7. Net volume of sawtimber trees (billion board feet) on timberland, top five species, Maryland, 1986 and 1999 (Source: Tables 38 and 39).**

## Biomass

There are more than 204 million dry tons of biomass in all live trees on forest land in Maryland, or an average of 79.6 dry tons per acre. Sixty-five percent of the weight is in growing-stock trees, 19 percent is in stumps and roots and 16 percent is distributed among branches, foliage, and cull trees.

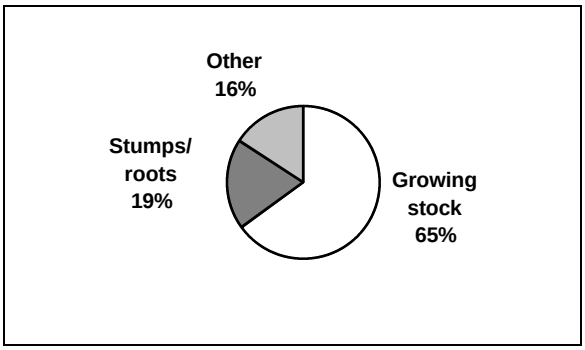


**Figure 8. Biomass of all timber on forest land by component , Maryland, 1999 (Source: Table 101).**

## Growth, Mortality, and Removals

Since the last inventory, the average annual net growth of growing stock on timberland is 106.8 million cubic feet, or 45 cubic feet per acre per year. This represents 2.1 percent of the current inventory. Average annual mortality is 36.5 million cubic feet or 15 cubic feet per acre per year. Mortality is 34 percent of net growth. Average annual removals of growing stock total 82.6 million cubic feet, or 35 cubic feet per acre per year. Sixty-three percent of the removals comes from harvesting and 37 percent from land use change. The removals going into land -use change are not necessarily trees that are harvested. The trees may still be standing, but the use may have changed from timberland to another use for example, reserved or unproductive forest. Even in the case of timberland being converted to a nonforest land use, the trees may be standing, but it is much more likely that these trees are harvested or killed.

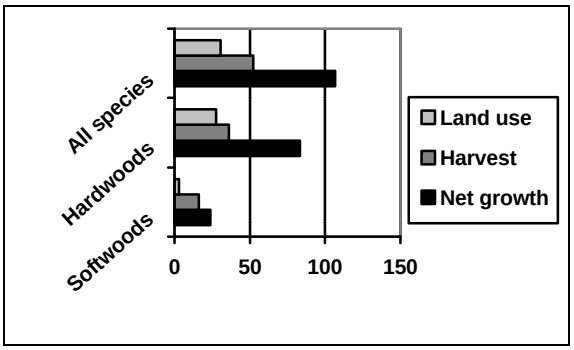


**Figure 9. Average annual net change ( millions of cubic feet) of growing stock by net growth, harvest removals and land-use change removals, Maryland 1986-1999 (Source: Table 41).**

Ratios of growth to removals of growing-stock volume vary with tree species. Yellow-poplar is growing 4.5 times faster than it is being removed, either by harvest or by land-use change, while red maple, the species with the highest amount of total growing-stock removals, has a growth-to-removals ratio of 0.5 to 1.

Average annual net growth of sawtimber on timberland is 428.6 million board feet, or 181 board feet per acre per year. The ratio of growth to removals of sawtimber volume is 1.6 to 1. Annual removals are 272.7 million board feet per year, or 115 board feet per acre annually. Removals combined with growth yielded a positive annual change in board-foot volume of 156 million board feet.

Yellow-poplar exhibited an annual increase of 150 million board feet, a growth-to-removals ratio of 6.2 to 1. Loblolly pine showed no significant increase in sawtimber volume and has a growth-to-removals ratio of 1.1 to 1.