Highlights

Forest-Land Area

The 1.9 million acres of forest land in Connecticut cover 60 percent of the state's total land area (3.1 million acres). Timberland, the largest component of forest land, totals 1.7 million acres and makes up 91 percent of the forest land, and 55 percent of the total land area. There has been no change in total forest land since 1985, but timberland is down 5 percent since 1985 when it was estimated at 1.8 million acres, or 96 percent of the forest land, and 58 percent of the total area.

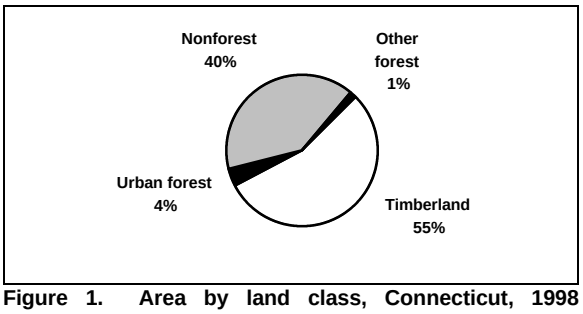

Figure 1. Area by land class, Connecticut, 1998 (Source: Table 1).

An increase in the urbanization in the Northeast is reflected in the increase in urban forest land in Connecticut since 1985. Area in this land class increased from 1.4 percent to 3.8 percent of the total land area.

Forest land class	1985	1998	Percent change
Timberland	1,785	1,696	-5
Urban	44	117	165
Other forest	21	46	114
Total forest land	**1,850**	**1,859**	**.5**

Figure 2. Area (in thousand acres) of components of forest land and percent change, Connecticut, 1985 and 1998 (Source: Table 1).

Timberland

When forest type is classified using relative stand density to calculate stocking (a new nationally developed standard procedure for all FIA projects—see **Comparison Between Inventories** section), the oak/hickory type group is the most common in Connecticut. This type group makes up 51 percent (0.9 million acres) of the timberland area. Northern hardwood forests cover 29 percent (0.5 million acres); elm/ash/red maple, 9 percent (0.2 million acres); and white/red pine, 7 percent (0.1 million acres). Other type groups combined contribute less than 0.1 million acres.

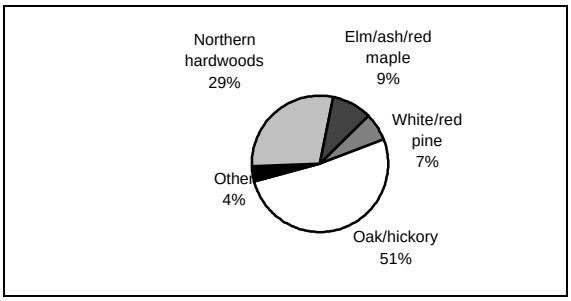

Figure 3. Timberland by forest-type group (based on relative density), Connecticut, 1998 (Source: Table 4).

When forest type is determined using basal area to calculate stocking (the procedure used in 1985), the major forest type groups are similarly represented. The oak/hickory type group makes up 54 percent (0.9 million acres) of the timberland area. Northern hardwood forests cover 26 percent (0.4 million acres); elm/ash/red maple, 9 percent (0.2 million acres); and white/red pine forests cover 8 percent (0.1 million acres). Other type groups contribute less than 0.1 million acres.

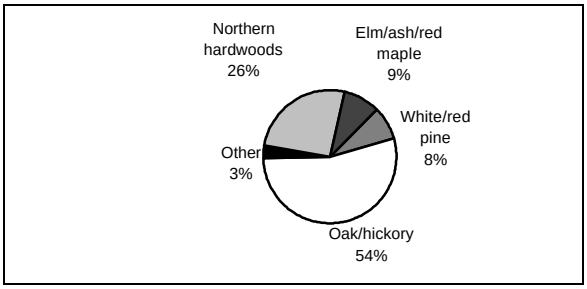

Figure 4. Timberland by forest-type group (based on basal area), Connecticut, 1998 (Source: Table 6).

When stand size is classified using relative density as a factor, sawtimber stands (those in which the stocking of live sawtimber trees makes up the majority) are found on 68 percent of the timberland, or 1.2 million acres. Poletimber stands cover 25 percent (0.4 million acres), sapling and seedling stands account for 6 percent (0.1 million acres), and nonstocked stands cover less than 1 percent of the timberland area. In 1985, sawtimber stands predominated, covering 0.9 million acres (52 percent), while poletimber stands accounted for 0.6 million acres (36 percent). Sapling and seedling stands accounted for 0.2 million acres, or 11 percent. Poletimber stands showed a 36-

percent drop while sawtimber stands increased by 24 percent.

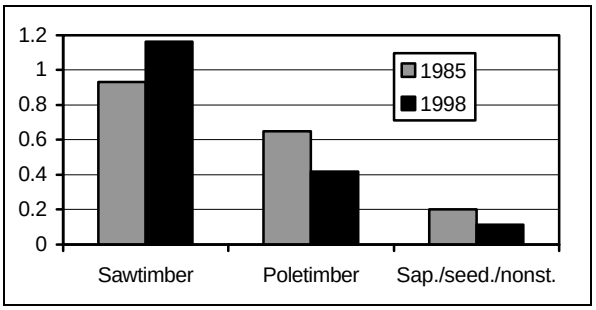

Figure 5. Area of timberland (in million acres) by stand-size class (based on relative density), Connecticut, 1985 and 1998 (Source: Tables 3 and 4).

When stand size is determined using basal area as a factor, sawtimber stands are found on 70 percent of the timberland, or 1.2 million acres. Poletimber stands cover 24 percent (0.4 million acres), sapling and seedling stands, 5 percent (0.1 million acres), and nonstocked stands, less than 1 percent. In 1985, sawtimber stands covered 1.1 million acres (62 percent); poletimber stands covered 0.5 million acres (27 percent); and sapling and seedling stands accounted for 0.2 million acres, or 10 percent. Poletimber stands showed a 15-percent drop while sawtimber stands increased by 8 percent.

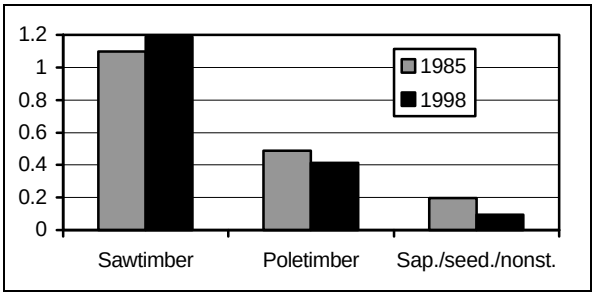

Figure 6. Area of timberland (in million acres) by stand-size class (based on basal area), Connecticut, 1985 and 1998 (Source: Tables 5 and 6).

Numbers of Trees

There are 820 million live trees 1.0 inch or larger in diameter at breast height (d.b.h.) on Connecticut's timberland, or 483 trees per acre. Of these, 273 million (161 trees per acre) are at least 5.0 inches in d.b.h. Red maple is the most common tree species in Connecticut, accounting for 27 percent of all saplings and 26 percent of the live trees 5.0 inches and larger in d.b.h. Sweet birch is the second most common tree species, with 11 percent of the saplings and 9 percent of the live trees at least 5.0 inches in diameter. Eastern hemlock rounds out the top three overall, with 6 percent of the saplings and 8 percent of the live trees 5.0 inches and larger in d.b.h.

Growing-stock trees make up 90 percent of live trees 5.0 inches and larger in d.b.h. Red maple is the most common of the trees in this category with 26 percent of the growing-stock trees. Northern red oak makes up 11 percent of the total. Sweet birch is third, with 10 percent of all growing-stock trees.

There has been a negligible change in the total number of growing-stock trees since 1985. However, since the timberland acreage is down, the number of growing-stock trees per acre is up, from 135 to 144 trees per acre.

In growing-stock trees 5.0 to 10.9 inches in d.b.h., there has been a decrease of 6 percent versus an increase of 20 percent in numbers of trees that are 11.0 inches and larger in diameter.

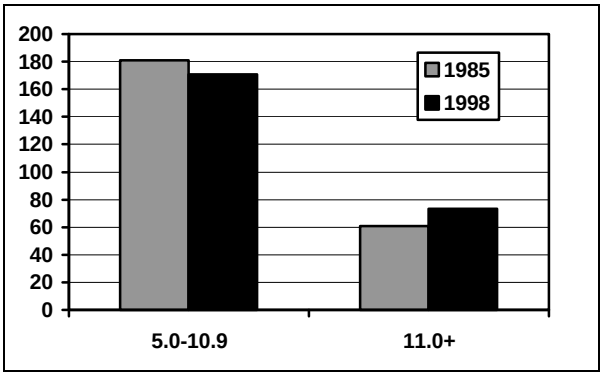

Figure 7. Number of growing-stock trees (in million trees) on timberland by diameter group, Connecticut, 1985 and 1998 (Source: Tables 22 and 23).

Growing-Stock Volume

The volume of growing-stock trees in Connecticut is 3.2 billion cubic feet, or 1,875 cubic feet per acre. This is a 14-percent increase since 1985 when the volume totaled 2.8 billion feet, or 1,570 cubic feet per acre. Red maple is the leading species in growing-stock volume, with 692 million cubic feet, or 22 percent of the total. Northern red oak growing-stock trees contribute 16 percent of the total volume, or 509 million cubic feet. Other red oaks rank third with 11 percent of the total (350 million cubic feet). There has been no change in the ranking of the top three species since 1985.

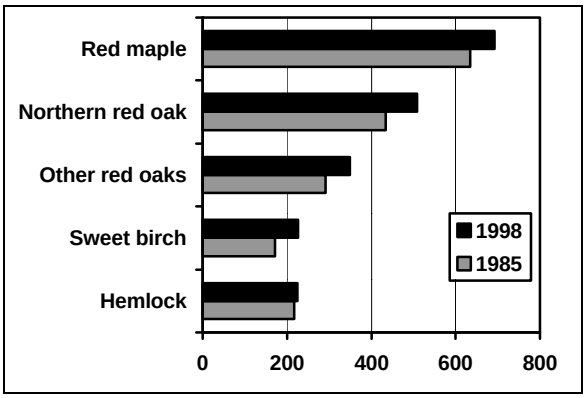

Figure 8. Net volume of growing-stock trees (in million cubic feet) on timberland, top five species, Connecticut, 1985 and 1998 (Source: Tables 33 and 34).

Sawtimber Volume

With an average of 5,406 board feet per acre, there are 9.2 billion board feet of sawtimber volume in Connecticut. In 1985, the volume was 7.6 billion board feet, or 4,276 board feet per acre; sawtimber volume has increased by 20 percent since the last inventory. The top three species for sawtimber volume are the same as for growing-stock volume, but are ranked differently. Northern red oak is the top species with 1.8 billion board feet, or 19 percent of the total. Red maple has 18 percent (1.7 billion board feet) of the total sawtimber volume. Rounding out the top three sawtimber volume species are other red oaks with 12 percent.

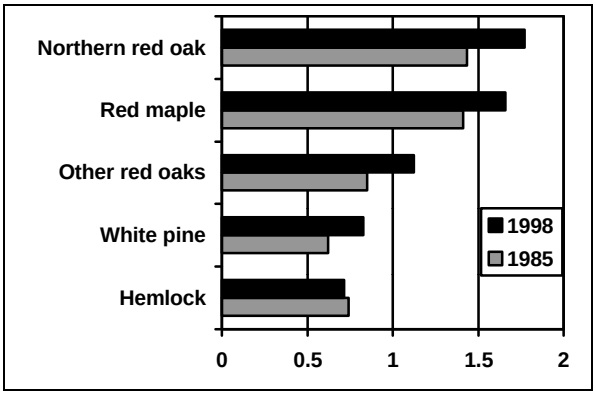

Figure 9. Net volume of sawtimber trees (in billion board feet) on timberland, top five species, Connecticut, 1985 and 1998 (Source: Tables 36 and 37).

Growth and Removals

Since the last inventory, the average annual net growth of growing stock on timberland is 55.7 million cubic feet, or 33 cubic feet per acre per year. This represents 1.8 percent of the current inventory. Average annual removals of growing stock total 25.5 million cubic feet, or 15 cubic feet per acre per year. Net change is positive over the period since the last inventory, with an average annual net change of 30.1 million cubic feet.

Over all species, the growth to removals ratio is 2.2. However, rates of growth to removals of growing-stock volume vary with tree species. Red maple is growing 2.1 times faster than it is being removed, either by harvest or by land-use change, while other red oaks, the species with the highest amount of total growing-stock removals, has a growth to removals ratio of 1.3.

Average annual net growth of sawtimber on timberland is 215.0 million board feet, or 127 board feet per acre per year. The rate of growth to removals of sawtimber volume is 2.5. Annual removals are 87.6 million board feet per year, or 52 board feet per acre annually. Removals combined with growth yielded a positive annual change in board-foot volume of 127.4 million board feet.

For all major species there was a positive change in board-foot volume, with red maple showing the largest annual increase at 24.0 million board feet and a growth-to-removals ratio of 2.6. Northern red oak had an annual increase of 22.5 million board feet, a growth-to-removals ratio of 2.2. Other red oaks, despite a growth-to-removals ratio of 1.4, showed an annual increase of 8.3 million board feet.

Species	Growing stock	Species	Saw-timber
Red maple	2.1	N. red oak	2.2
N. red oak	2.2	Red maple	2.6
Other red	1.3	Other red	1.4
Sweet birch	5.1	White pine	3.5
Hemlock	12.6	Hemlock	13.9

Figure 10. Growth-to-removals ratios of growing-stock and sawtimber volume on timberland, top five species, Connecticut, 1984-1997 (Source: Tables 40 and 41).