



FORESTS OF Florida, 2014

This periodic resource update provides an overview of forest resources in Florida based on an inventory conducted by the U.S. Forest Service, Forest Inventory and Analysis (FIA) program at the Southern Research Station in cooperation with the Florida Forest Service. Estimates are based on field data collected using the FIA annualized sample design and are updated yearly. The estimates presented in this update are for the measurement year 2014, with comparisons made to data reported in 2013. The sample plot population in Florida consists of 7,251 plots distributed across the State, of which about 20 percent are collected annually. The 2014 estimates included 5 years of data collection from 100 percent of the sample plots updated by 20 percent re-measured in 2014. Growth, removals, and mortality (GRM) estimates were derived from remeasurement data on 6,543 of the plots. The slightly smaller sample used for GRM estimates is due to a combination of new and/or lost plots. The data used in this publication were accessed from the FIA database on May 2, 2016 at <http://www.fia.fs.fed.us/tools-data/>.

Overview

Florida was home to 17.25 million acres of forest land in 2014. Forested area decreased by 0.1 percent (18,800 acres) since 2013 (table 1). Forest land includes areas designated as reserved, whereas timberland is that portion not restricted from commercial timber production, measured at 15.41 million acres in 2014. The majority of this report is focused on timberland. The number of live trees on Florida’s timberland was estimated at 6.99 billion trees, a decrease of 0.2 percent from 2013. Net volume increased >5 percent to 21.91 billion cubic feet. Average annual net growth increased <6 percent to 0.92 billion cubic feet, whereas average annual removals decreased by >5 percent since 2013 to 0.54 billion cubic feet (table 1). The ecologically unique sand pine (*Pinus clausa*) is featured on page 4, where the Choctawhatchee (var. *immuginata*) and Ocala (var. *clausa*) varieties are discussed collectively.

Table 1—Florida's forest statistics, change between 2013 and 2014^a

Forest statistics	2013 estimate	Sampling error percent	2014 estimate	Sampling error percent	Change since 2013
Forest land					
Area (thousand acres)	17,271.8	0.84	17,253.0	0.84	-18.8
Number of live trees ≥1.0 inch d.b.h. (million trees)	8,016.7	1.90	8,035.0	1.81	18.3
Net volume of live trees ≥5.0 inches d.b.h. (million cubic feet)	22,528.8	1.94	23,694.2	1.74	1,165.4
Live tree aboveground biomass (thousand oven-dry tons)	579,123.6	1.75	605,470.5	1.56	26,346.9
Net annual growth of live trees ≥5.0 inches d.b.h. (million cubic feet per year)	896.4	2.69	955.7	2.32	59.3
Annual removals of live trees ≥5.0 inches d.b.h. (million cubic feet per year)	535.6	5.29	529.3	5.34	-6.3
Annual mortality of live trees ≥5.0 inches d.b.h. (million cubic feet per year)	283.7	4.94	261.2	4.47	-22.5
Timberland					
Area (thousand acres)	15,392.7	0.95	15,408.7	0.94	16.0
Number of live trees ≥1.0 inch d.b.h. (million trees)	7,005.3	1.97	6,992.7	1.86	-12.6
Net volume of live trees ≥5.0 inches d.b.h. (million cubic feet)	20,818.8	2.04	21,907.2	1.83	1,088.4
Live tree aboveground biomass (thousand oven-dry tons)	533,030.0	1.85	558,067.2	1.67	25,037.2
Net annual growth of live trees ≥5.0 inches d.b.h. (million cubic feet per year)	871.9	2.75	923.3	2.39	51.4
Annual removals of live trees ≥5.0 inches d.b.h. (million cubic feet per year)	570.5	5.74	540.0	5.28	-30.5
Annual mortality of live trees ≥5.0 inches d.b.h. (million cubic feet per year)	263.6	5.21	241.3	4.70	-22.3

^a Estimates for 2014 are comprised of five panels (2010, 2011, 2012, 2013, 2014) constituting 20 percent new data. The 2013 estimates used were reported in Resource Update FS-73.



Forest Area

Florida is divided into four survey units (fig. 1). The total timberland in all survey units in 2014 was 15.41 million acres. The Northeast unit contained the most with 6.51 million acres, or 42 percent (table 2). The Northwest unit had 35 percent, the Central unit 17 percent, and the South unit 6 percent of the timberland.

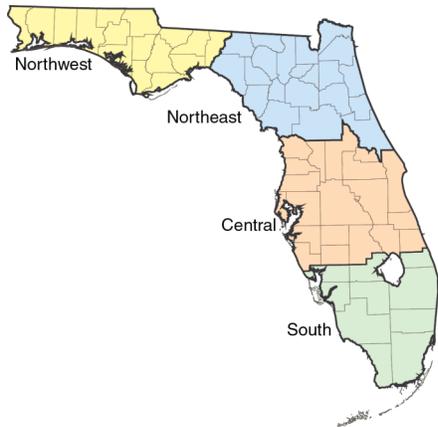


Figure 1—Forest survey regions in Florida.

Other corporate ownerships accounted for the most timberland with 6.27 million acres, or 41 percent (table 2). Private individual ownerships combined for 26 percent, State/local governments for 18 percent, national forest 7 percent, forest industry for 4 percent, and other Federal ownerships accounted for <4 percent.

Most private individual ownerships, 41 percent, were located in the Northeast unit, which also contained 88 percent of the forest industry timberland. Most National forest timberland was split between the Northeast and Northwest units. Most other corporate timberland, 45 percent, was found in the Northeast unit, whereas most other Federal timberland, 79 percent, was located in the Northwest unit.

Table 2—Area^a of timberland by ownership and survey unit, Florida, 2014

Category	North-east	North-west	Central	South	State
<i>million acres</i>					
National forest	0.51	0.52	0.08	0.00	1.10
Other Federal	0.01	0.44	0.10	0.00	0.56
State and local government	0.88	0.81	0.75	0.32	2.76
Forest industry	0.58	0.05	0.02	0.01	0.66
Individual	1.68	1.54	0.64	0.20	4.06
Other corporate	2.85	2.10	0.98	0.34	6.27
Total	6.51	5.45	2.57	0.87	15.41

^a Sum of components and totals may differ due to rounding.

The longleaf-slash pine forest-type group dominated with 5.30 million acres, or 34 percent, of all timberland (table 3). The oak-gum-cypress group covered 20 percent, the oak-hickory group 17 percent, the loblolly-shortleaf pine group 11 percent, and the oak-pine group 10 percent of the timberland.

The largest portion of the longleaf-slash pine group, 45 percent, was located in the Northeast unit. More of the oak-gum-cypress group, 43 percent, as well as more of the oak-hickory group, 41 percent, also occurred in the Northeast unit. The majority of the loblolly-shortleaf pine group, 55 percent, was found in the Northwest unit. More of the oak-pine group, 42 percent, occurred in the Northwest unit, followed by 38 percent in the Northeast unit.

Table 3—Area of timberland by forest-type group and survey unit, Florida, 2014

Forest-type group	North-east	North-west	Central	South	State
<i>million acres</i>					
Longleaf-slash pine	2.40	2.09	0.55	0.26	5.30
Loblolly-shortleaf pine ^a	0.71	0.96	0.07	0.00	1.75
Oak-pine	0.59	0.64	0.24	0.06	1.54
Oak-hickory	1.10	0.72	0.73	0.11	2.66
Oak-gum-cypress	1.32	0.92	0.68	0.16	3.08
Elm-ash-cottonwood	0.02	0.03	0.04	0.00	0.09
Other hardwoods	0.01	0.00	0.01	0.00	0.02
Tropical hardwoods	0.06	0.00	0.15	0.15	0.36
Exotic hardwoods	0.00	0.00	0.00	0.06	0.06
Nonstocked	0.29	0.10	0.10	0.07	0.56
Total	6.51	5.45	2.57	0.87	15.41

^a Includes other eastern softwoods.

Planted stands accounted for 31 percent, or 4.72 million acres, of the timberland (table 4). The Northeast unit contained 53 percent of the planted acres, the Northwest unit 42 percent, the Central unit 3 percent, and <2 percent were in the South unit.

Table 4—Area^a of timberland by stand origin and survey unit, Florida, 2014

Stand origin	North-east	North-west	Central	South	State
<i>million acres</i>					
Planted	2.50	1.98	0.16	0.08	4.72
Natural	4.02	3.48	2.41	0.80	10.69
Total	6.51	5.45	2.57	0.87	15.41

^a Sum of components and totals may differ due to rounding.

Volume, Biomass, and Trends

Florida timberland contained 21.91 billion cubic feet of total wood volume in 2014. Softwood species made up 12.53 billion cubic feet, or 57 percent, of total inventory (table 5). Hardwood species made up 9.38 billion cubic feet, or 43 percent, of the total volume in the State. Total softwood inventory was highest (40 percent) in the Northwest unit and lowest (5 percent) in the South unit. Total hardwood inventory was highest (41 percent) in the Northeast unit and lowest (4 percent) in the South unit.

Statewide, net growth of softwoods averaged 696.85 million cubic feet annually (table 5). Most of the softwood net growth, 49 percent, occurred in the Northeast unit. Nearly 40 percent occurred in the Northwest unit. In addition, 56 percent of the State’s average annual 461.01 million cubic feet of softwood removals came from the Northeast alone. Most of the remainder (38 percent) came from the Northwest unit. However, the softwood growth-to-removals ratio was higher (1.57) in the Northwest unit than it was in the Northeast unit (1.31). The highest softwood growth-to-removals ratio in the State (3.51) occurred in the Central unit, although its softwood resource was just 16 percent of the State total.

The State’s net growth of hardwoods averaged 226.40 million cubic feet annually. Slightly more of the hardwood net growth, 42 percent, occurred in the Northeast unit. Another 36 percent

Table 5—All-live (trees ≥5 inches d.b.h.) volume of net growth, removals, and total inventory^a on timberland for softwoods and hardwoods by survey unit, Florida, 2014

Category	North-east	North-west	Central	South	State
<i>million cubic feet</i>					
Softwood					
Net growth	340.56	275.38	61.12	19.80	696.85
Removals	260.11	175.50	17.42	7.97	461.01
G/R ratio ^a	1.31	1.57	3.51	2.48	1.51
Total inventory	4,941.25	5,020.66	1,951.06	616.38	12,529.35
Hardwood					
Net growth	95.36	81.67	35.40	13.95	226.40
Removals	39.80	18.91	14.04	6.27	79.02
G/R ratio ^b	2.40	4.32	2.52	2.22	1.26
Total inventory	3,849.19	3,190.93	2,005.48	332.27	9,377.87
All species					
Net growth	435.92	357.05	96.54	33.74	923.25
Removals	299.91	194.41	31.46	14.24	540.03
G/R ratio ^b	1.45	1.84	3.07	2.37	1.71
Total inventory	8,790.44	8,211.58	3,956.54	948.65	21,907.21

^a Sums and totals may differ due to rounding.

^b Net growth/removals ratio.

occurred in the Northwest unit. The State’s hardwood removals averaged 79.02 million cubic feet annually. Most of the hardwood removals, 50 percent, came from the Northeast unit, and another 24 percent came from the Northwest unit. The hardwood growth-to-removals ratio was highest (4.32) in the Northwest unit and lowest in the South unit (2.22).

Aboveground biomass totaled 558.07 million dry weight tons in Florida. Softwood species made up 292.20 million tons, or 52 percent, of the total biomass (table 6). Hardwood species made up 265.87 million tons, or 48 percent, of total biomass.

The Northeast unit contained 41 percent of the softwood biomass, and the Northwest unit 39 percent. The Northeast unit contained most, 42 percent, of the hardwood biomass.

Table 6—Aboveground biomass (trees ≥1 inch d.b.h.) and carbon estimates on timberland for softwoods and hardwoods by survey unit, Florida, 2014

Category	North-east	North-west	Central	South	State
<i>million tons</i>					
Softwood					
Biomass	118.59	115.34	43.72	14.56	292.20
Carbon	59.29	57.67	21.86	7.28	146.10
Hardwood					
Biomass	111.07	87.27	57.39	10.14	265.87
Carbon	55.53	43.63	28.69	5.07	132.93
Total					
Biomass	229.66	202.61	101.11	24.69	558.07
Carbon	114.83	101.31	50.55	12.34	279.03



Sand pine scrub (photo by Teresa Gallagher, U.S. Forest Service)

Sand pine Trends in Florida

In 2014, sand pine forest type classified as timberland covered 554.65 thousand acres in Florida, down 5 percent from the 586.89 thousand acres it occupied at the time of the 1987 inventory. However, fluctuation occurred in the interim. From 1987 to 1995, area of sand pine type increased 6 percent to 624.48 thousand acres. A potential result from earlier planting efforts. A downward trend began from 1995 to 2007 with a 5 percent decrease to 593.13 thousand acres. From 2007 to 2014, area of sand pine type decreased further, by 6 percent to 554.65 thousand acres (table 7).

The total number of sand pine trees increased by 33 percent from 257.94 million trees in 1987 to 342.37 million trees in 1995. That number decreased by 13 percent to 296.78 million trees by 2007. By 2014, the total number of sand pine trees decreased another 19 percent to 239.61 million trees.

The increase in net volume of sand pine trees has slowed. Between 1987 and 1995, volume of sand pine increased by 14 percent, from 434.06 to 494.67 million cubic feet (table 7). From 1995 to 2007, volume of sand pine increased by 34 percent to 660.72 million cubic feet. From 2007 to 2014, volume of sand pine increased by 4 percent to 685.32 million cubic feet.

The number of sand pine trees by diameter class distribution

Table 7—Changes in sand pine on timberland by year, Florida, 1987–2014

Year	Area of sand pine forest type <i>thousand acres</i>	Number of live trees ≥ 1 inch d.b.h. <i>- million -</i>	Net volume of live trees ≥ 5 inches d.b.h. <i>- million ft³-</i>
1987	586.89	257.94	434.06
1995	624.48	342.37	494.67
2007	593.13	296.78	660.72
2014	554.65	239.61	685.32

Source: Evaluator, accessed online May 2, 2016.

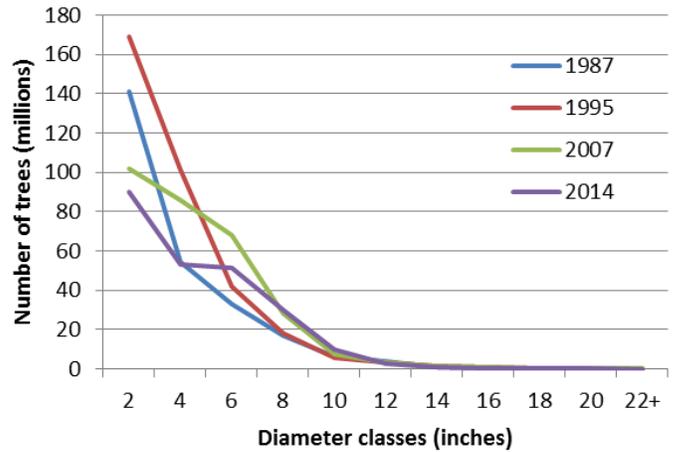


Figure 2—Number of sand pine trees ≥ 1 inch diameter class on timberland, Florida, 1987–2014.

changed as well. From 1987 to 1995, sand pine increased in tree numbers for all diameters up to 8 inches (fig. 2). From 1995 to 2007, all diameter classes below 6 inches decreased while those between 6 and 10 inches increased. Since 2007, the losses by diameter class have been limited to the 2- to 6- inch classes.



Sand pine needles and cones. (photo by Nancy Loewenstein, Bugwood.org)

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