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Forest Service, US Department of Agriculture
Northern Research Station

Nebraska's Forest Resources, 2007

Research Note NRS-34

This publication provides an overview of forest resource attributes for Nebraska based on an annual inventory conducted by the Forest Inventory and Analysis (FIA) program at the Northern Research Station of the U.S. Forest Service. These estimates, along with web-posted core tables, will be updated annually. For more information please refer to page 4 of this report.

Table 1.—Annual estimates, uncertainty, and change

	Estimate 2007	Sampling error (%)	Change since 2006 (%)
Forest Land Estimates			
Area (1,000 acres)	1,322.3	4.4	0.4
Number of live trees 1-inch diameter or larger (million trees)	348.4	6.9	-1.9
Dry biomass of live trees 1-inch diameter or larger (1,000 tons)	44,527.6	6.6	1.6
Net volume in live trees (1,000,000 ft^3)	1,941.3	7.4	1.7
Annual net growth of live trees (1,000 ft^3/year)	44,567.9	33.4	4.4
Annual mortality of live trees (1,000 ft^3/year)	26,371.5	32.5	-27.5
Annual removals of live trees (1,000 ft^3/year)	14,559.0	53.5	94.6
Timberland Estimates			
Area (1,000 acres)	1,267.8	4.6	0.6
Number of live trees 1-inch diameter or larger (million trees)	335.4	7.1	-2.1
Dry biomass of live trees 1-inch diameter or larger (1,000 tons)	43,140.4	6.7	1.4
Net volume in live trees (1,000,000 ft^3)	1,893.6	7.6	1.5
Net volume of growing-stock trees (1,000,000 ft^3)	1,206.8	10.1	-3.7
Annual net growth of growing-stock trees (1,000 ft^3/year)	17,027.0	63.7	64.2
Annual mortality of growing-stock trees (1,000 ft^3/year)	19,759.4	41.7	-36.6
Annual removals of growing-stock trees (1,000 ft^3/year)	11,832.9	55.5	82.3

Note: Sampling errors in the tables in this report represent 68% confidence intervals for the estimated values.

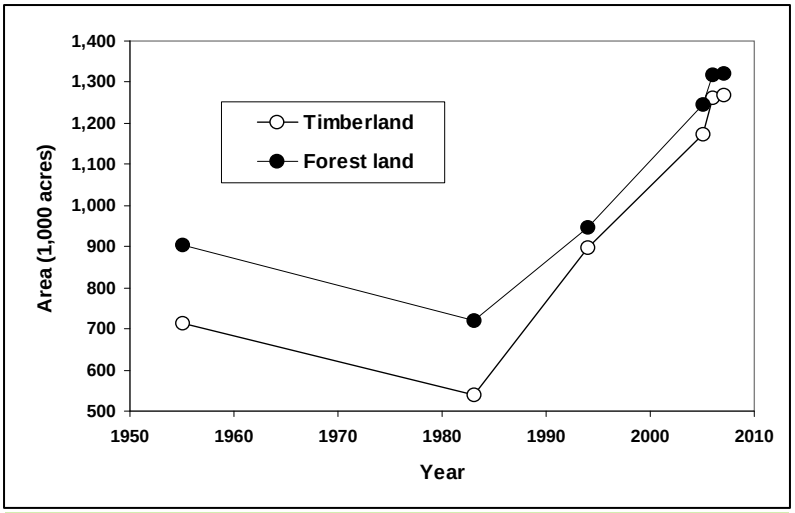


Figure 1.—Area of timberland and forest land by year.

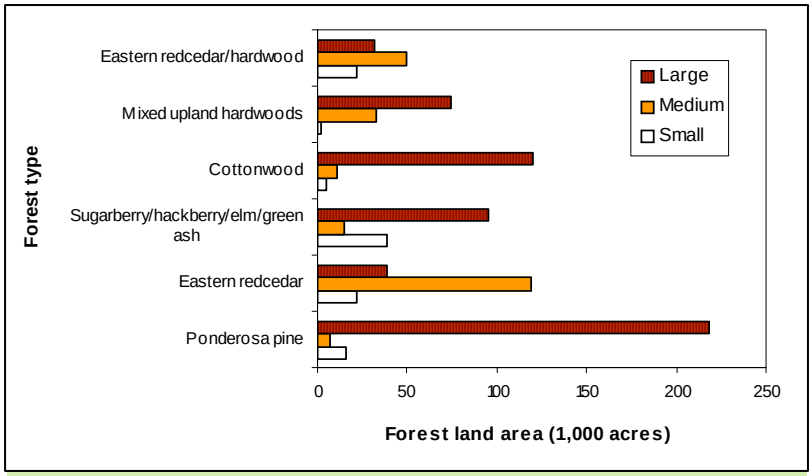


Figure 2.—Area of forest land by top six forest types and stand size class.

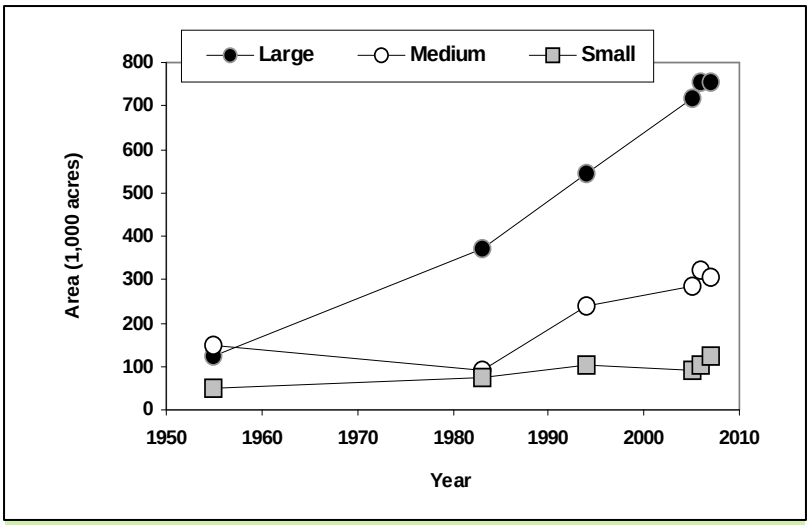
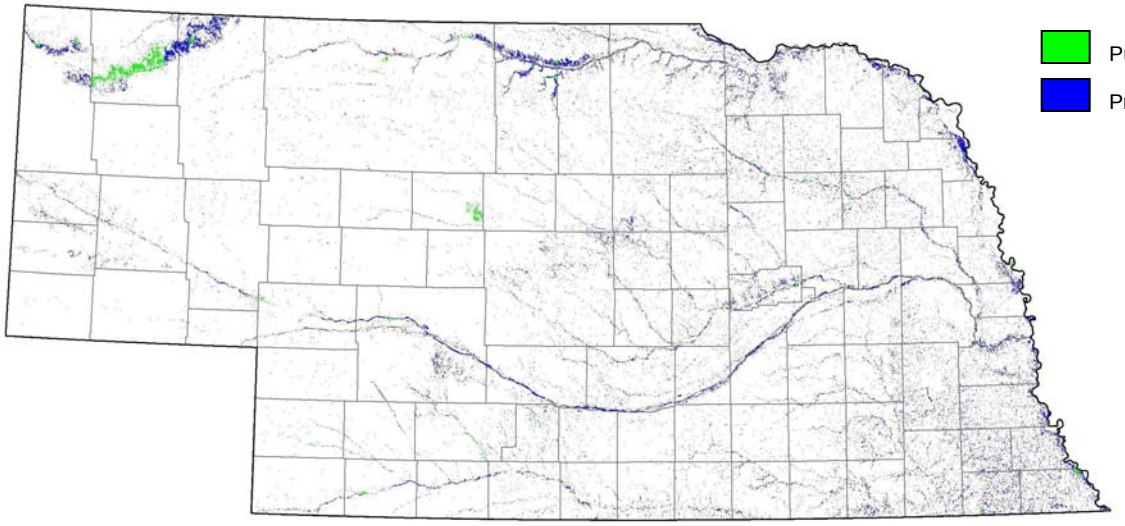


Figure 3.—Area of timberland by stand size class and year.

Table 2. —Top 10 tree species by statewide volume estimates.

Rank	Species	Volume of live trees on forest land (1,000,000 ft^3)	Sampling Error (%)	Change since 2006 (%)	Volume of sawtimber trees on timberland (1,000,000 bdft)	Sampling error (%)	Change since 2006 (%)
1	Cottonwood	595.0	19.5	-2.0	2,427.7	21.8	-4.6
2	Ponderosa pine	313.8	14.8	3.1	1,007.1	18.3	1.6
3	Bur oak	261.2	15.4	2.3	454.8	22.3	-0.4
4	Eastern redcedar	130.9	13.8	5.3	116.3	22.0	-21.0
5	Green ash	112.7	15.0	0.3	134.2	26.3	1.1
6	American basswood	76.6	28.7	10.4	208.6	36.6	10.6
7	Hackberry	74.3	23.3	10.4	107.4	53.3	9.5
8	Red mulberry	59.9	23.4	12.6	15.8	53.3	-22.5
9	American elm	50.8	14.9	9.5	32.9	32.8	18.8
10	Rocky Mountain juniper	36.4	31.6	24.7	31.9	64.2	6.3
	Other softwoods	5.2	107.8	-10.3	24.1	110.9	-9.4
	Other hardwoods	224.5	11.5	-4.1	301.6	18.6	-14.0
	All Species	**1,941.3**	**7.4**	**1.7**	**4,862.2**	**11.7**	**-3.0**



Public forest land – 11% of all forest land

Private forest land – 89% of all forest land

Map data sources: USDA Forest Service, Conservation Biology Institute Protected Areas Database, National Land Cover Database 2001. Geographic base data are provided by the National Atlas of the USA.

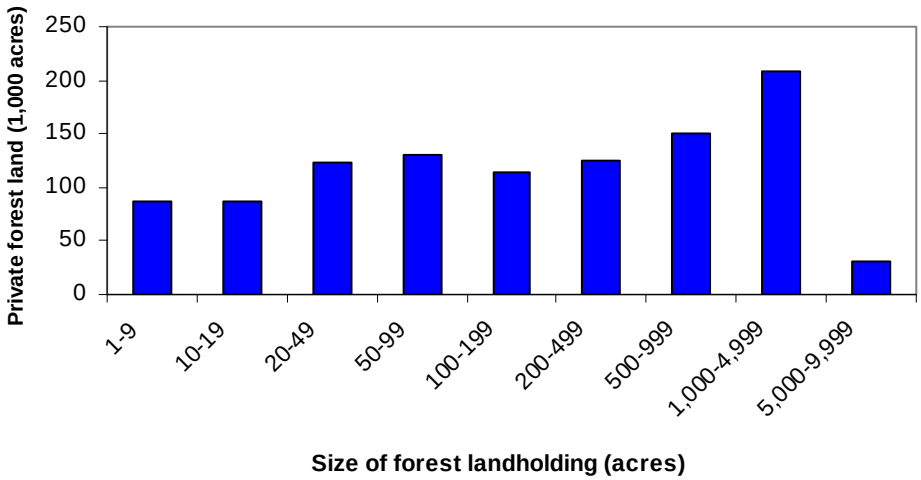


Figure 4. —Distribution of forest land by major owner group (map) and size of private forest landholding (graph).

Nebraska Issue Update – Emerald Ash Borer

The emerald ash borer (EAB) is a nonnative, wood-boring insect that is responsible for killing tens of millions of ash trees in the United States alone. The adult is metallic green in color and measures approximately 1/2 inch long and 1/8 inch wide. While the adults do not cause much damage by feeding on the leaves, the larvae tunnel and feed beneath the bark of the tree, disrupting the flow of water and nutrients. As a result, the tree declines in health and eventually dies in 1 to 3 years. All native species of ash (*Fraxinus* spp.) are susceptible to EAB infestation, including healthy trees. EAB is spread by movement of infested ash materials, such as nursery stock and firewood.

Emerald ash borer. Photo by Dave Cappaert, Michigan State University, bugwood.org.

While EAB has not been found in Nebraska yet, its presence was confirmed in nearby Missouri in 2008. The introduction of this insect would be detrimental to Nebraska's forest resources. Green ash is the fifth most voluminous tree species in the State, with an estimated volume of 112.7 million cubic feet, and is an important component of riparian forests. In terms of aboveground live-tree biomass, green ash comprises eight percent of the State's total with a current estimate of nearly 3.5 million oven-dry tons. Ash biomass is generally concentrated along the eastern and southern portions of the State (Fig. 5). This is worrisome given the close proximity to Missouri.

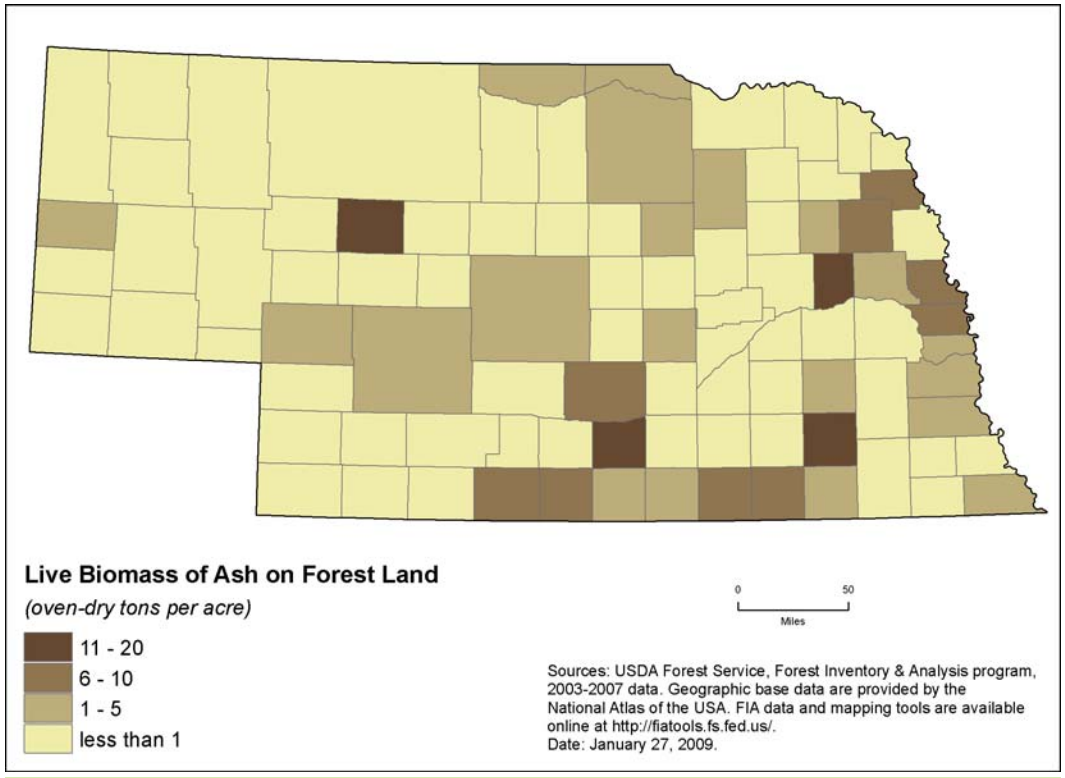


Figure 5. —Distribution of ash live-tree biomass on forest land by county.

Citation for this Publication

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FIA Program Information

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Additional Nebraska Inventory Information

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Raile, G.K. 1986. **Nebraska's second forest inventory.** Resour. Bull. NC-96. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station. 87 p.

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Definitions

Forest land - Land at least 10 percent stocked by forest trees of any size, or land formerly having such tree cover and not currently developed for a nonforest use. The minimum area for classification as forest land is 1 acre. Roadside, stream-side, and shelterbelt strips of timber must be at least 120 feet wide to qualify as forest land. Unimproved roads and trails, streams and other bodies of water, or natural clearings in forested areas are classified as forest, if less than 120 feet in width or 1 acre in size. Grazed woodlands, reverting fields, and pastures that are not actively maintained are included if the above qualifications are satisfied. Forest land includes three subcategories: timberland, reserved forest land, and other forest land.

Timberland - Forest land that is producing or is capable of producing wood at a rate of 20 cubic feet/acre/year and is not withdrawn from timber utilization by statute or administrative regulation.

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Estimates, tabular data, and maps from this report may be generated at: http://fiatools.fs.fed.us
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