



Nebraska's Forest Resources, 2006

Research Note NRS-11

This publication provides an overview of forest resource attributes for Nebraska based on an annual inventory conducted by the Forest Inventory and Analysis program at the Northern Research Station of the U.S. Forest Service. These annual estimates, along with web-posted core tables, will be updated annually. For more information regarding past inventory reports for Nebraska, inventory program information, sampling/estimation procedures, and for definitions of forest land and timberland, please refer to the last page of this report.

Table 1 - Annual estimates, uncertainty, and change

	Estimate	Sampling error (%)	Change since 2005 (%)
Forest Land Estimates			
Area (1,000 acres)	1,317.2	4.4	5.8
Number of live trees 1-inch diameter or larger (million trees)	355.2	6.9	1.0
Dry biomass of live trees 1-inch diameter or larger (1,000 tons)	41,996.1	6.6	5.1
Net volume in live trees (1,000,000 ft ³)	1,864.3	7.3	4.6
Net volume of growing-stock trees (1,000,000 ft ³)	1,219.0	9.7	-6.2
Annual net growth of live trees (1,000 ft ³ /year) ¹	*	*	NA
Annual mortality of live trees (1,000 ft ³ /year) ¹	*	*	NA
Annual removals of live trees (1,000 ft ³ /year) ¹	*	*	NA
Timberland Estimates			
Area (1,000 acres)	1,260.6	4.5	7.4
Number of live trees 1-inch diameter or larger (million trees)	342.5	7.1	0.9
Biomass of live trees 1-inch diameter or larger (1,000 tons)	40,712.0	6.8	6.5
Net volume in live trees (1,000,000 ft ³)	1,820.6	7.5	6.2
Net volume of growing-stock trees (1,000,000 ft ³)	1,202.9	9.8	-4.0
Annual net growth of growing-stock trees (1,000 ft ³ /year) ¹	*	*	NA
Annual mortality of growing-stock trees (1,000 ft ³ /year) ¹	*	*	NA
Annual removals of growing-stock trees (1,000 ft ³ /year) ¹	*	*	NA

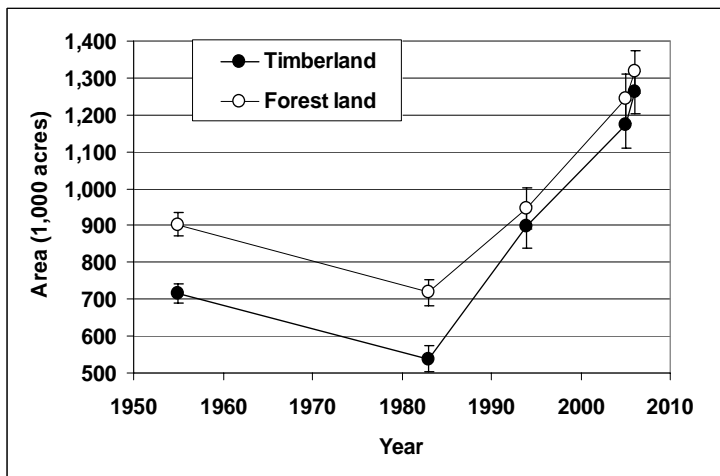


Figure 1 - Area of timberland and forest land by year

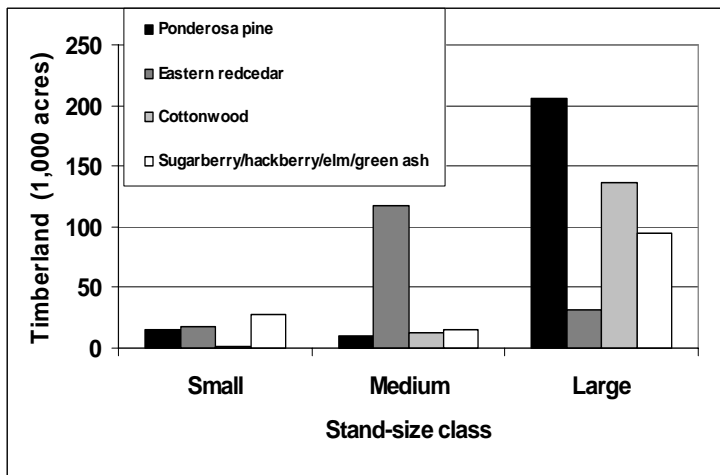


Figure 2 – Area of timberland of top four forest types by stand-size class

¹ Estimates have been removed due to significant sampling errors. Estimates are from forested plots that were originally measured in 2002 and then remeasured in 2006. This small sample size results in high sampling errors that will decrease as subsequent plots are remeasured.



Table 2 - Top 10 species by statewide volume estimates

Species	Volume of live trees on timberland (1,000,000 ft ³)	Sampling Error (%)	Change since 2005 (%)	Volume of sawtimber trees on timberland (1,000,000 bdf)	Sampling error (%)	Change since 2005 (%)
Cottonwood	605.9	18.8	10.6	2,544.2	20.6	6.5
Ponderosa pine	259.6	13.8	-4.8	955.7	16.1	-5.3
Bur oak	228.6	16.6	11.8	456.4	22.8	-8.9
Eastern redcedar	119.4	14.4	-0.3	147.3	20.6	-28.0
Green ash	106.8	15.1	8.9	132.7	25.8	-7.8
American basswood	69.4	31.1	11.0	188.6	39.6	12.9
Hackberry	67.3	23.3	0.1	98.1	53.8	-5.2
Red Mulberry	51.7	24.6	15.1	20.4	49.0	-18.1
American elm	46.3	15.1	-11.8	27.7	32.6	-44.6
Boxelder	39.6	32.2	16.8	45.0	80.9	1.8
Other softwoods	35.1	30.8	13.2	56.6	59.3	1.3
Other hardwoods	190.8	12.6	6.4	305.5	18.5	-88.9
All Species	1,820.6	7.5	6.2	4,978.3	11.2	-1.3

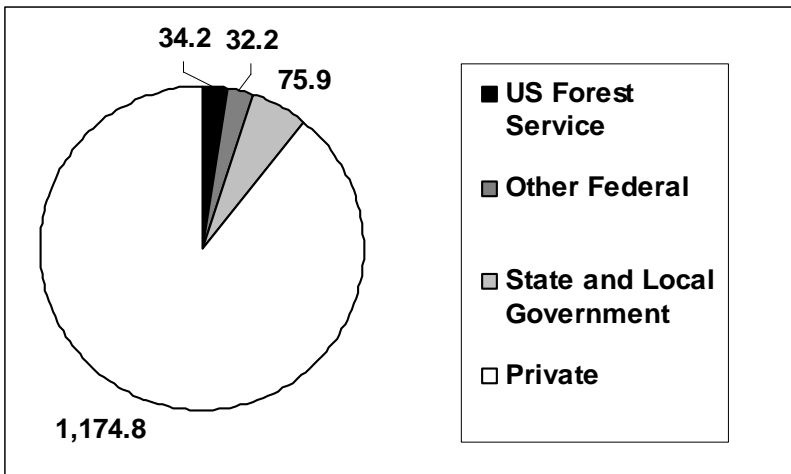


Figure 3 - Area of forest land (1,000 acres) by ownership group

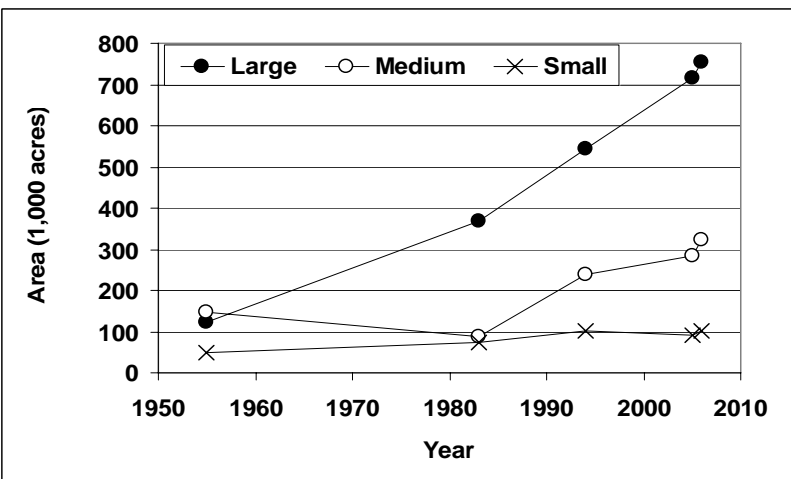


Figure 4 - Area of timberland by stand-size class and year



Nebraska Issue Update – Eastern Redcedar

Eastern redcedar, a native tree species, is expanding across Nebraska due to its ability to regenerate and grow on a wide range of soil types and under extreme climatic conditions. It is a pioneer species and regenerates in abandoned farmland, pastures that are not burned or mowed, and under existing forest cover.

According to the 2006 inventory, eastern redcedar has the most regeneration of all tree species in the state (Fig. 5). There are nearly 56 eastern redcedar saplings per acre of forest land while the second closest species, ponderosa pine, has a sapling density less than half of that. In terms of biomass, eastern redcedar is in the top five of all species in the state, with almost 2.5 dry tons per acre of forest land (Fig. 6). Due to the lack of cottonwood regeneration, eastern redcedar and some other species are replacing the cottonwood forest type. While cottonwood is first in terms of biomass, the data show that there is only about one sapling per acre of forest land. This will make it virtually impossible for cottonwood to compete with eastern redcedar unless conditions change to favor cottonwood regeneration.

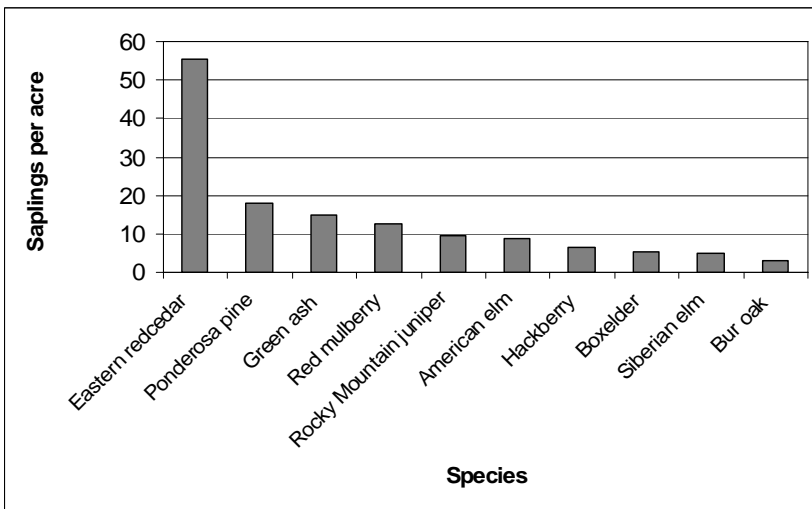


Fig. 5. Number of saplings per acre of forest land, top 10 species in 2006

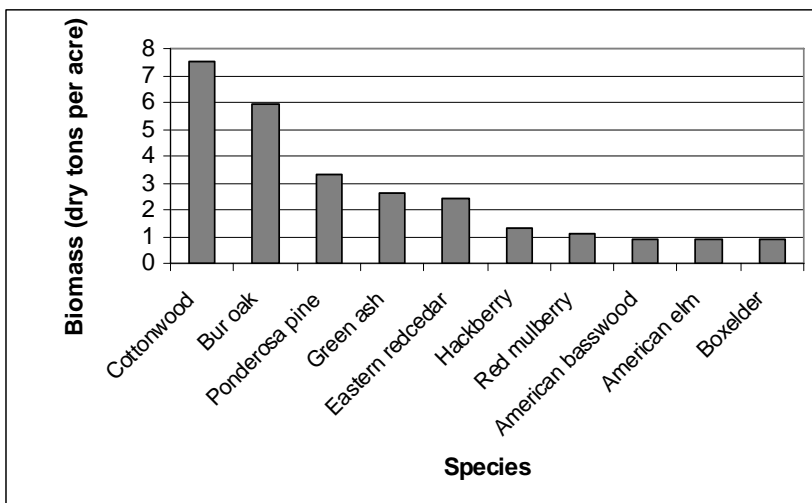


Fig. 6. Biomass per acre of forest land, top 10 species in 2006



Citation for this Publication

Meneguzzo, D.M. 2007. Nebraska's forest resources, 2006. Res. Note. NRS-11. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 4 p.

FIA Program Information

Bechtold, W.A.; Patterson, P.L. 2005. The enhanced Forest Inventory and Analysis Program: national sampling design and estimation procedures. Gen. Tech. Rep. SRS-80. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 85 p.

Smith, W.B. 2002. Forest inventory and analysis: a national inventory and monitoring program. Environmental Pollution. 116: 233-242.

USDA Forest Service. 2004. Forest inventory and analysis national core field guide, Vol. 1, Field data collection procedures for phase 2 plots, Ver. 2.0 [Online], available at www.fia.fs.fed.us/library/field-guides-methods-proc (verified 23 July 2007).

Additional Nebraska Inventory Information

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.

Schmidt, T. L.; Wardle, T.D. 1998. The forest resources of Nebraska. Res. Pap. NC-332. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Research Station. 114 p.

Meneguzzo, D.M.; Brand, G.J.; Lovett, W.R. 2007. Nebraska's Forest Resources in 2005. Resour. Bull. NRS-16. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 21 p.

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.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternate means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, DC 20250-9410, or call (800)795-3272 (voice) or (202)720-6382 (TDD). USDA is an equal opportunity provider and employer.