

Nebraska's Forest Resources, 2011

Research Note NRS-152

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 and uncertainty for Nebraska, 2011

| | Estimate 2011 | Sampling error (%) |
|--|---------------|--------------------|
| Forest Land Estimates | | |
| Area (1,000 acres) | 1,576 | 4.2 |
| Number of live trees 1-inch diameter or larger (million trees) | 423 | 6.5 |
| Dry biomass of live trees 1-inch diameter or larger (1,000 tons) | 45,942 | 6.2 |
| Net volume of live trees (million cubic feet) | 2,082 | 6.9 |
| Annual net growth of live trees (1,000 cubic feet per year) | 58,048 | 14.4 |
| Annual mortality of live trees (1,000 cubic feet per year) | 27,849 | 15.7 |
| Annual removals of live trees (1,000 cubic feet per year) | 20,699 | 37.4 |
| Timberland Estimates | | |
| Area (1,000 acres) | 1,470 | 4.4 |
| Number of live trees 1-inch diameter or larger (million trees) | 393 | 6.9 |
| Dry biomass of live trees 1-inch diameter or larger (1,000 tons) | 44,026 | 6.4 |
| Net volume of live trees (million cubic feet) | 2,010 | 7.2 |
| Net volume of growing-stock trees (million cubic feet) | 1,125 | 10.7 |
| Annual net growth of growing-stock trees (1,000 cubic feet per year) | 20,358 | 28.1 |
| Annual mortality of growing-stock trees (1,000 cubic feet per year) | 15,323 | 23.3 |
| Annual removals of growing-stock trees (1,000 cubic feet per year) | 13,619 | 51.2 |

Note: Sampling errors in Tables 1 and 2 in this report represent 68% confidence intervals for the estimated values.

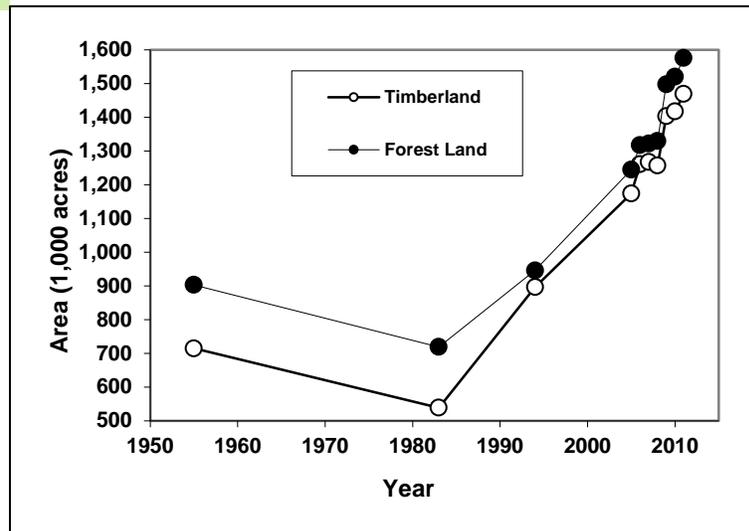


Figure 1.—Area of timberland and forest land by year.

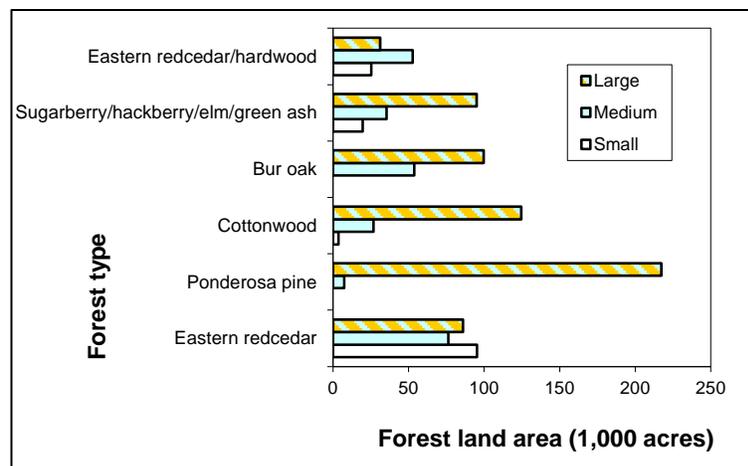


Figure 2.—Area of forest land by top six forest types and stand-size class.

NOTE: Large diameter trees are ≥ 11.0 d.b.h. for hardwoods and ≥ 9.0 d.b.h. for softwoods. Medium diameter trees are ≥ 5.0 d.b.h. but not as large as large diameter trees. Small diameter trees are < 5.0 d.b.h.

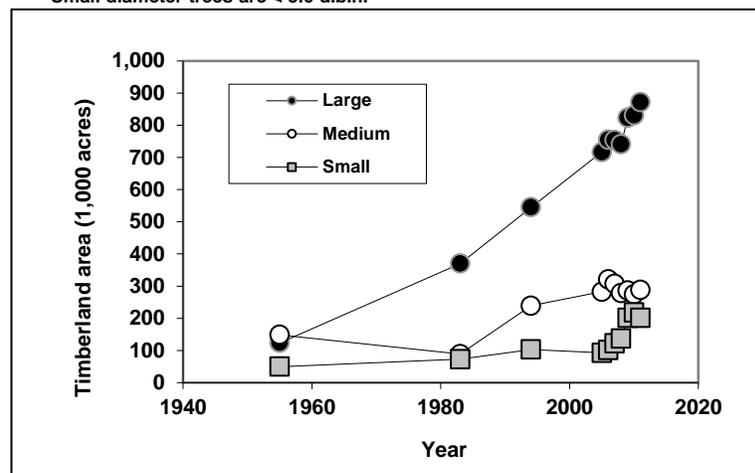
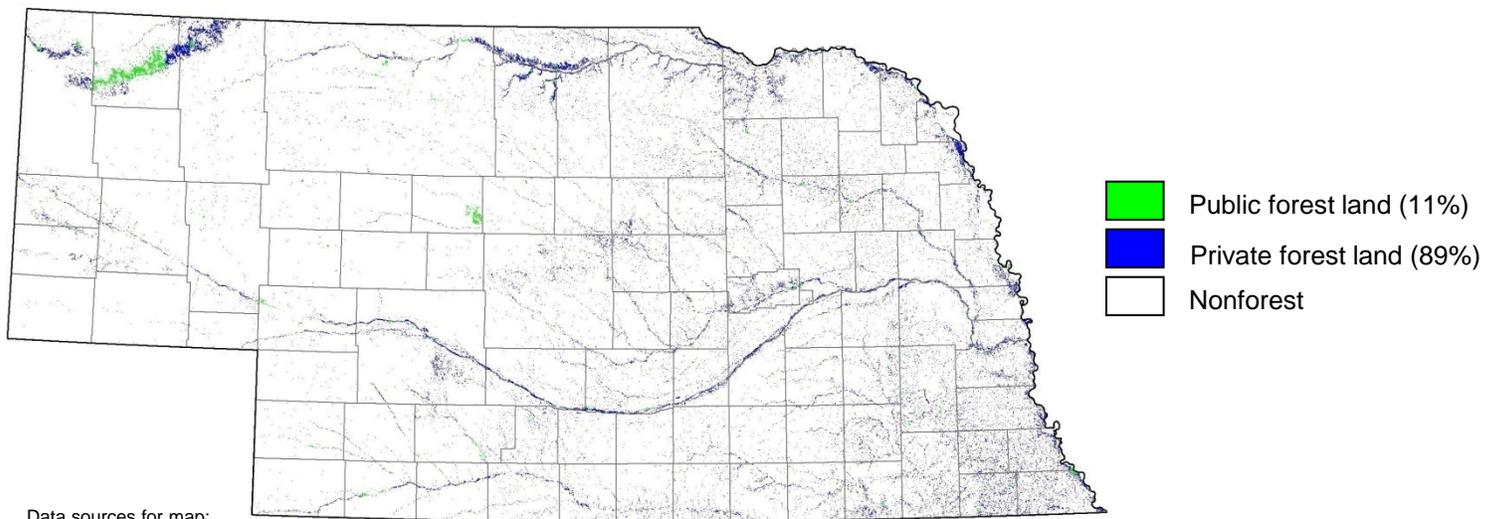


Figure 3.—Area of timberland by stand-size class and year.

Table 2.—Top 10 tree species by statewide volume estimates, Nebraska, 2011

| Rank | Species | Volume of live trees on forest land (million cubic feet) | Sampling error (%) | Volume of sawtimber trees on timberland (million board feet) | Sampling error (%) |
|------|------------------------|--|--------------------|--|--------------------|
| 1 | Cottonwood | 631.7 | 18.9 | 2,259.8 | 23.3 |
| 2 | Bur oak | 307.9 | 14.2 | 451.8 | 23.8 |
| 3 | Ponderosa pine | 303.8 | 15.4 | 956.3 | 17.8 |
| 4 | Eastern redcedar | 187.9 | 11.8 | 40.1 | 33.2 |
| 5 | Green ash | 131.9 | 14.0 | 179.1 | 26.7 |
| 6 | American basswood | 76.9 | 30.9 | 231.0 | 34.4 |
| 7 | Hackberry | 75.1 | 19.3 | 105.8 | 34.6 |
| 8 | Red mulberry | 73.9 | 19.7 | 15.0 | 42.5 |
| 9 | American elm | 55.7 | 14.3 | 39.1 | 32.6 |
| 10 | Siberian elm | 39.5 | 28.5 | 35.2 | 42.8 |
| | Other softwoods | 18.9 | 37.7 | 12.2 | 110.6 |
| | Other hardwoods | 178.3 | 12.0 | 302.8 | 19.1 |
| | All Species | 2,081.5 | 6.9 | 4,628.2 | 12.2 |

Forest Land Ownership



Data sources for map: USDA Forest Service, Conservation Biology Institute Protected Areas Database, National Land Cover Database 2001. Geographic base data from the National Atlas of the USA.

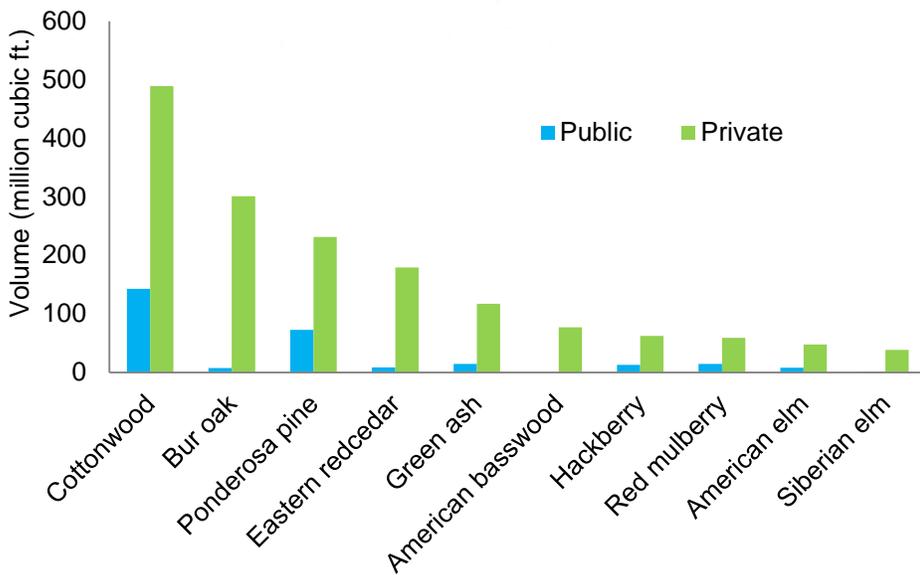


Figure 4.—Volume of top 10 tree species on forest land by owner category, Nebraska, 2011.

Nebraska's Timber Product Output, 2009

Primary wood-using mills in Nebraska were surveyed to determine the size and composition of the State's primary wood-using industry, its use of roundwood, and the generation and disposition of wood residues. Below are some preliminary findings from that survey. A full report will soon follow as more detailed information is processed.

There was 3.3 million cubic feet of industrial roundwood harvested from Nebraska's forests in 2009. Ninety percent of industrial roundwood production was processed by Nebraska mills, while the remaining 10 percent was exported to Wyoming, Iowa, Missouri, South Dakota, and other countries (Fig. 5). Saw logs made up an overwhelming majority of the products harvested with the rest being comprised of excelsior, veneer logs, posts and other products (Fig. 6). The majority (75 percent) of the industrial roundwood harvested was cottonwood; the remaining 25 percent of the total harvest was comprised of other hardwood species (6 percent) and softwood species (19 percent).

Receipts at Nebraska mills came mostly from retained industrial roundwood production, with the remainder being imported from Iowa, Kansas, Missouri, and South Dakota (Fig. 7). In the process of converting industrial roundwood into products, Nebraska mills generated 68,390 green tons of residues (sawdust, slabs, edgings, etc.). Nearly 40 percent of these mill residues were used for mulch (Fig. 8). Twenty-four percent of the mill residues were not used to make another product.

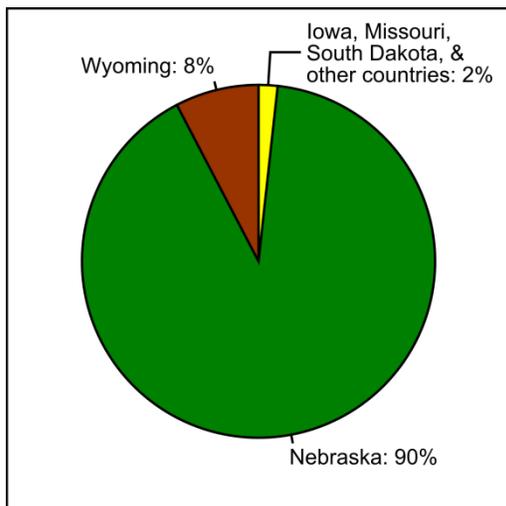


Figure 5. – Industrial roundwood production by state of destination.

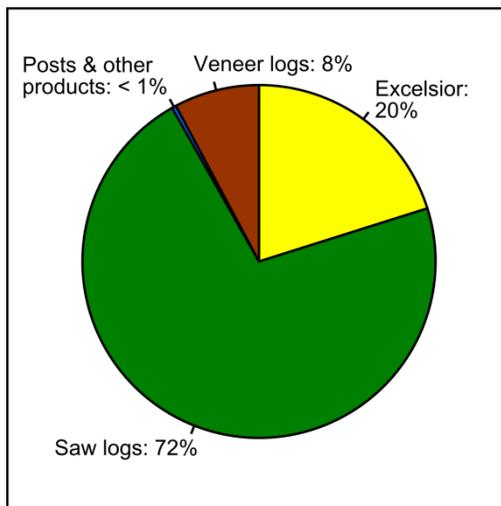


Figure 6. – Industrial roundwood production by product.

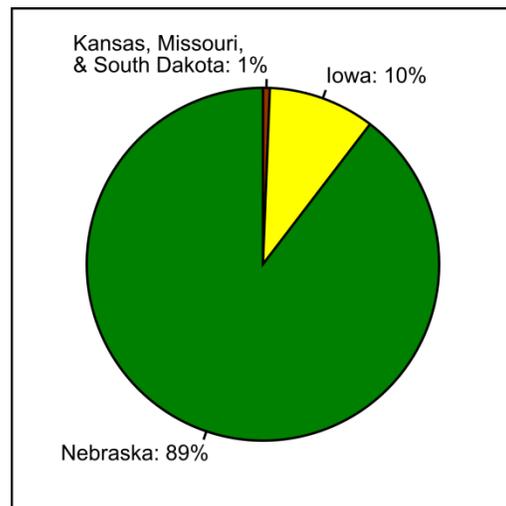


Figure 7. – Industrial roundwood receipts by state of origin.

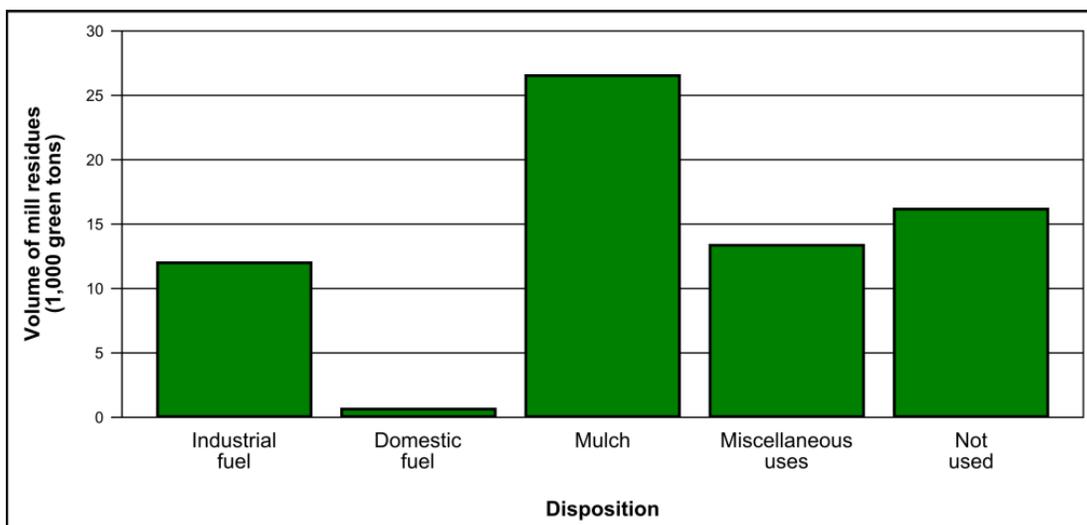


Figure 8. – Disposition of mill residues.

Citation for this Publication

Meneguzzo, D.M.; Walters, B. 2012. Nebraska's forest resources, 2011. Res. Note. NRS-152. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 4 p.

FIA Program Information

Bechtold, W.A.; Patterson, P.L., eds. 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. 2007. **Forest inventory and analysis national core field guide, Vol. 1, field data collection procedures for phase 2 plots, ver. 4.0.** Washington, DC: U.S. Department of Agriculture, Forest Service. Available at <http://www.fia.fs.fed.us/library/field-guides-methods-proc/> (verified 24 Nov 2009).

Additional Nebraska Inventory Information

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.

Meneguzzo, D.M.; Butler, B.J.; Crocker, S.J.; Haugen, D.E.; Moser, W.K.; Perry, C.H.; Wilson, B.T.; Woodall, C.W. 2008. **Nebraska's forests, 2005.** Resour. Bull. NRS-27. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 94 p.

Piva, R.J.; Adams, D.M. 2008. **Nebraska timber industry—an assessment of timber product output and use, 2006.** Resour. Bull. NRS-28. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 54 p.

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.

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.

Contact Information

Lead analyst: Dacia Meneguzzo, (651) 649-5129, dmeneguzzo@fs.fed.us

Data processing/access: Chuck Barnett, (610) 557-4031 cjbarnett@fs.fed.us

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

Page header image credit: Paul Wray, Iowa State University, bugwood.org

Information published in this report and in related tables is based on the Forest Inventory and Analysis Database (FIADB) processed using National Information Management System (NIMS) version 4.0, November 2010. Due to periodic changes to FIADB and NIMS, trend analyses should be made using FIA's online estimation tools, not by comparing published reports or tables. FIA estimates, tabular data, and maps may be generated at <http://www.fia.fs.fed.us/tools-data/>.

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, audiotope, 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.