

Image credit: Terry Spivey, USDA Forest Service, Bugwood.org

North Dakota's Forest Resources, 2008

Research Note NRS-58

This publication provides an overview of forest resource attributes for North Dakota 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 2008	Sampling error (%)	Change since 2003 (%)
Forest Land Estimates			
Area (1,000 acres)	714.5	6.5	-4.0
Number of live trees 1 inch diameter or larger (million trees)	331.4	10.8	-4.6
Dry biomass of live trees 1 inch diameter or larger (1,000 tons)	17,304.8	9.0	-9.7
Net volume in live trees (1,000,000 ft ³)	684.4	10.6	-5.8
Annual net growth of live trees (1,000 ft ³ /year)	8,114.9	58.5	NA
Annual mortality of live trees (1,000 ft ³ /year)	13,667.9	32.9	NA
Annual removals of live trees (1,000 ft ³ /year)	2,184.4	89.5	NA
Timberland Estimates			
Area (1,000 acres)	511.5	8.0	-3.0
Number of live trees 1 inch diameter or larger (million trees)	240.1	13.6	-4.2
Dry biomass of live trees 1 inch diameter or larger (1,000 tons)	14,104.9	11.0	-9.2
Net volume in live trees (1,000,000 ft ³)	563.4	12.7	-6.2
Net volume of growing stock trees (1,000,000 ft ³)	350.4	16.1	6.2
Annual net growth of growing stock trees (1,000 ft ³ /year)	2,019.9	174.5	NA
Annual mortality of growing stock trees (1,000 ft ³ /year)	8,163.0	44.9	NA
Annual removals of growing stock trees (1,000 ft ³ /year)	3,512.4	58.2	NA

NA: Estimates have been removed due to significant sampling errors. Estimates are from forested plots that were originally measured in 2001 thru 2003 and then remeasured in 2006 thru 2008. This small sample size results in high sampling errors that will decrease as subsequent plots are remeasured.

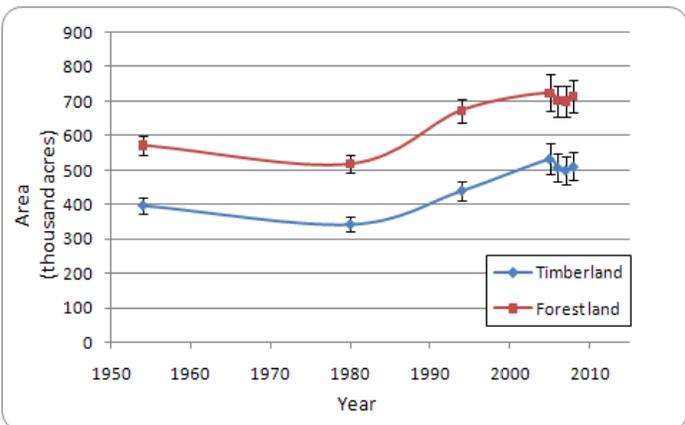


Figure 1. - Area of timberland and forest land by year

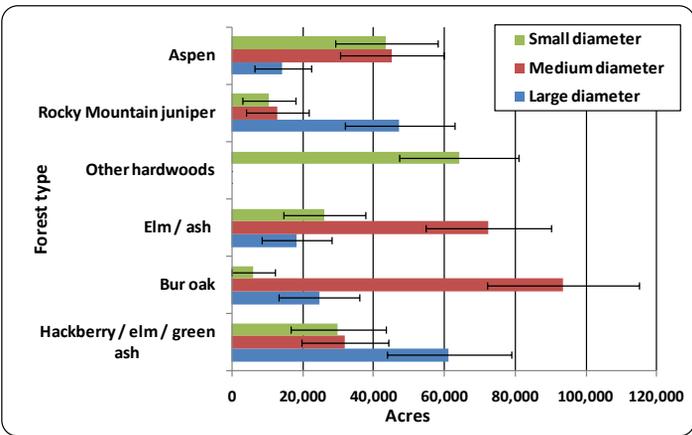


Figure 2. - Area of forest land area by top six forest types and stand size class

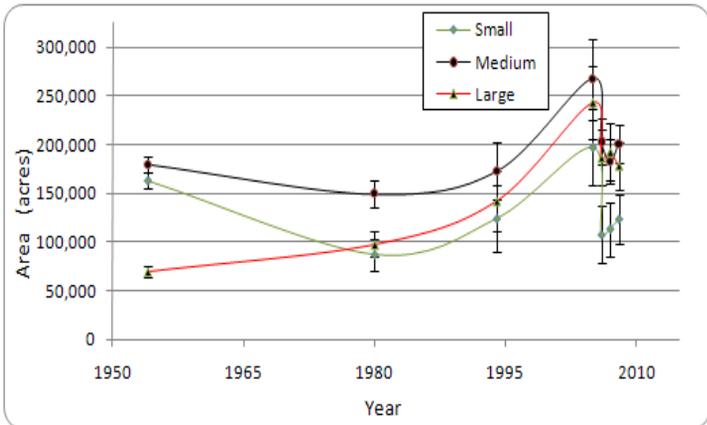


Figure 3. - Area of timberland by stand size class and year

Note: When available, sampling error bars provided in figures.

Table 2. - Top eight tree species by statewide volume estimates

Rank	Species	Volume of live trees on timberland (million cubic feet)	Sampling error (%)	Change since 2003 (%)	Volume of sawtimber on timberland (million board feet)	Sampling error (%)	Change since 2003 (%)
1	Cottonwood	159.9	34.1	15.3	514.6	43.4	124.5
2	Bur oak	147.6	16.2	-28.3	232.0	37.2	-39.0
3	Green ash	122.6	12.8	-6.3	149.5	23.0	-7.0
4	Quaking aspen	74.7	19.2	-25.4	110.8	32.7	-32.8
5	Rocky Mountain juniper	56.9	28.9	49.0	0.0	0.0	0.0
6	Boxelder	49.1	20.9	6.5	33.8	62.7	231.4
7	American elm	27.4	43.0	-32.8	46.0	55.4	-29.6
8	American basswood	15.8	54.4	224.2	31.6	70.3	0.0
	Other softwood species	4.3	80.3	377.8	0.0	0.0	-100.0
	Other hardwood species	26.1	54.3	30.0	32.1	139.5	0.0
	All species	684.4	10.6	-5.8	1,150.0	22.9	13.5

Ownership of forest land

- Private forest land – 68.7%
- Public forest land – 31.3%

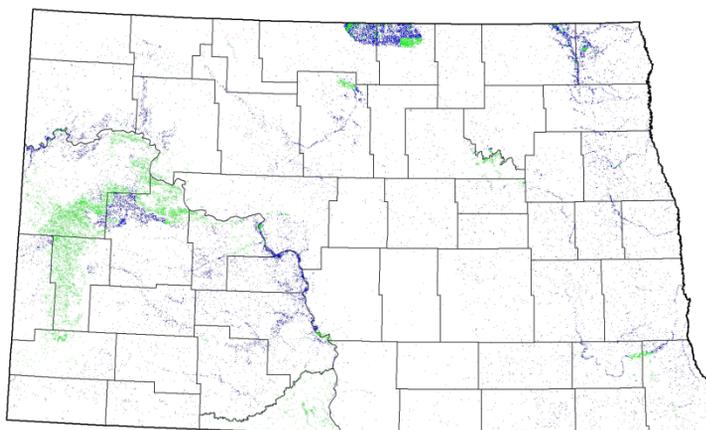


Figure 4. - Area of forest land by major owner group (1.5% of North Dakota is forested).

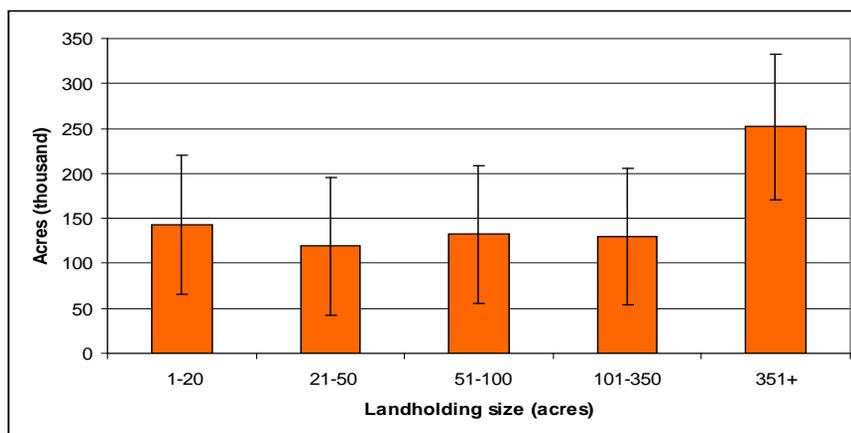


Figure 5. - Area of forest land by major owner group and size of private forest landholding in North and South Dakota.

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Great Plains Tree and Forest Invasives Initiative

A Multi-State Cooperative Effort for Education, Mitigation, and Utilization

Emerald ash borer (EAB) is a highly invasive, exotic insect that attacks and kills all species of North American ash trees. Since its introduction from Asia in the early 1990s, EAB has killed more than 50 million ash trees in Michigan, Illinois, Indiana, Ohio, Pennsylvania, Maryland, Virginia, West Virginia and Ontario, Canada. In 2008, EAB was also discovered in Missouri and Wisconsin. Across the United States, hundreds of millions more ash trees are at risk.

A \$500,000 seed grant by the U.S. Forest Service is allowing state forestry agencies in Kansas, Nebraska, North Dakota and South Dakota to engage in a regional initiative to prepare for the arrival of invasive pests, such as EAB, that threaten tree resources in the northern plains. The Great Plains Tree and Forest Invasives Initiative (GPI) gives state forestry agencies the opportunity to work together to create public awareness, promote alternatives to ash tree plantings, and prepare for EAB's arrival by assessing the region's tree resources and determining and addressing the potential impacts of EAB to those resources. One of the goals of the GPI is to assess the ash resource on nonforest land in the Plains States.

In 2008, there were 200 urban and 100 rural GPI plots that were measured in North Dakota. The measurement plots from the GPI are finding that ash (35 million trees) are the most abundant tree species in rural and nonforest areas (Fig. 6). These areas include windbreaks, shelterbelts, other agricultural land and farmsteads with trees, and riparian wooded strips. There are another half million ash trees in the urban areas of North Dakota. Ash is the most abundant forest land tree species, with an estimated 79 million ash trees (1-inch diameter or greater).

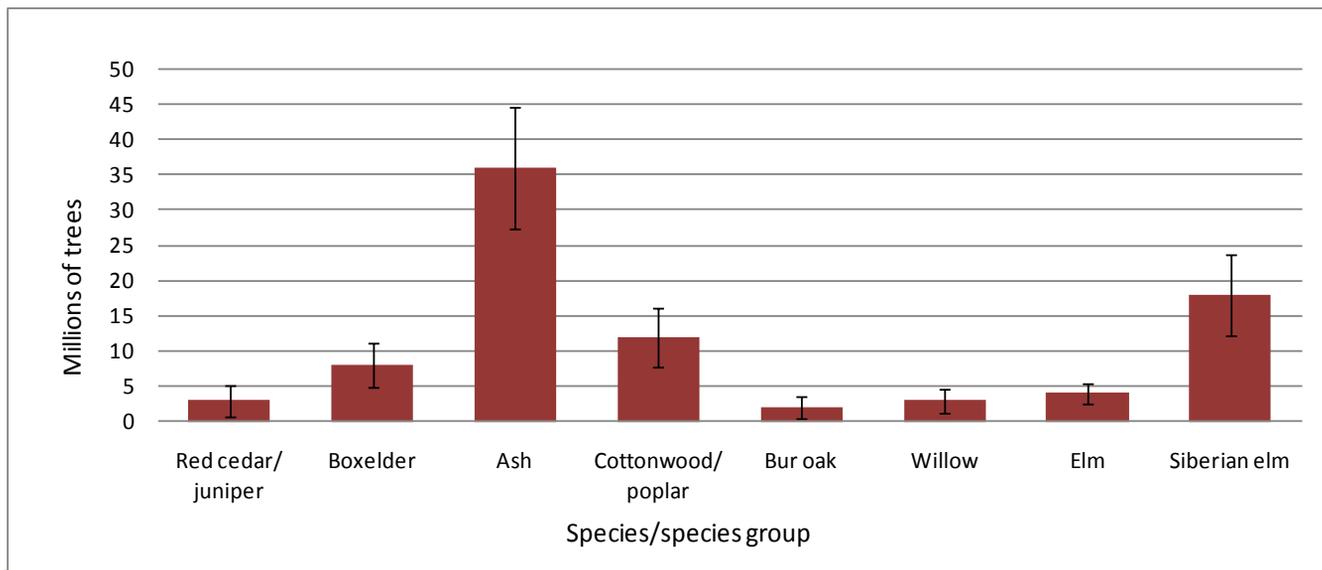


Figure 6. - GPI select tree species in rural, nonforest areas, North Dakota 2008.



Image credit: Terry Spivey, USDA Forest Service, Bugwood.org

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FIA Program Information

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Additional North Dakota Inventory Information

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

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