

Missouri's Forest Resources, 2010

Research Note NRS-117

This publication provides an overview of forest resource attributes for Missouri 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

	2010 Estimate	Sampling error (%)	Change since 2005 (%)
Forest Land Estimates			
Area (1000 acres)	15,493.8	0.7	5.8
Number of all live trees 1 inch diameter or larger (million trees)	8,415.2	1.3	2.2
Biomass of all live trees 1 inch diameter or larger (1,000 tons)	632,776.1	1.0	9.1
Net volume of live trees (million cubic feet)	20,608.4	1.1	9.8
Annual net growth of live trees (thousand ft ³ yr ⁻¹)	524,290.7	3.6	3.3
Annual mortality of live trees (thousand ft ³ yr ⁻¹)	218,740.7	4.2	-8.2
Annual harvest removals of live trees (thousand ft ³ yr ⁻¹)	170,328.5	8.0	6.0
Annual other removals of live trees (thousand ft ³ yr ⁻¹)	24,666.1	25.8	-20.9
Timberland Estimates			
Area (1000 acres)	15,145.7	0.8	6.6
Number of all live trees 1 inch diameter or larger (million trees)	8,203.8	1.3	2.9
Biomass of all live trees 1 inch diameter or larger (1,000 tons)	619,936.6	1.0	10.4
Net volume of live trees (million cubic feet)	20,203.7	1.2	11.2
Net volume of growing stock trees (million cubic feet)	16,630.3	1.3	4.8
Annual net growth of growing stock trees (thousand ft ³ yr ⁻¹)	466,563.6	3.5	-9.9
Annual mortality of growing stock trees (thousand ft ³ yr ⁻¹)	140,157.9	4.6	-0.5
Annual harvest removals of growing stock trees (thousand ft ³ yr ⁻¹)	146,710.4	8.5	12.6
Annual other removals of growing stock trees (thousand ft ³ yr ⁻¹)	27,736.4	23.6	-11.0

Note: When available, sampling errors/bars provided in figures and tables represent 68 percent confidence intervals

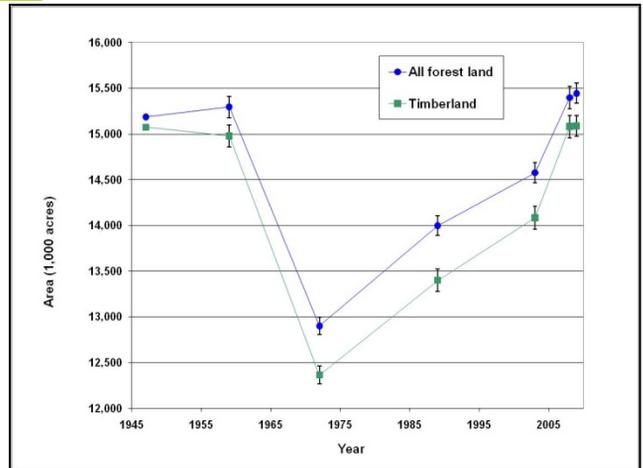


Figure 1. – Area of forest land and timberland by year.

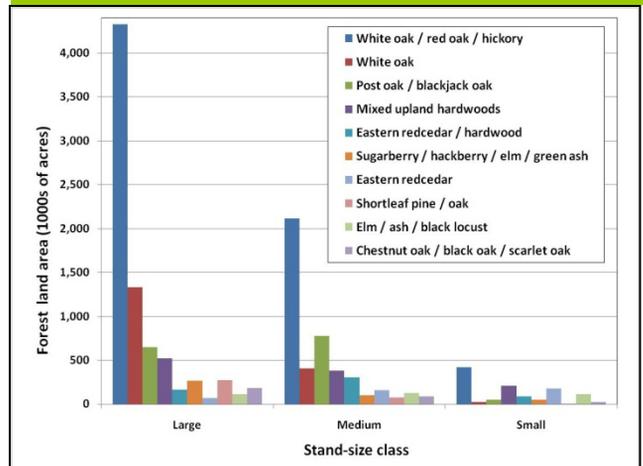


Figure 2. – Area of forest land area by stand-size class of the top ten forest types, 2005 - 2010.

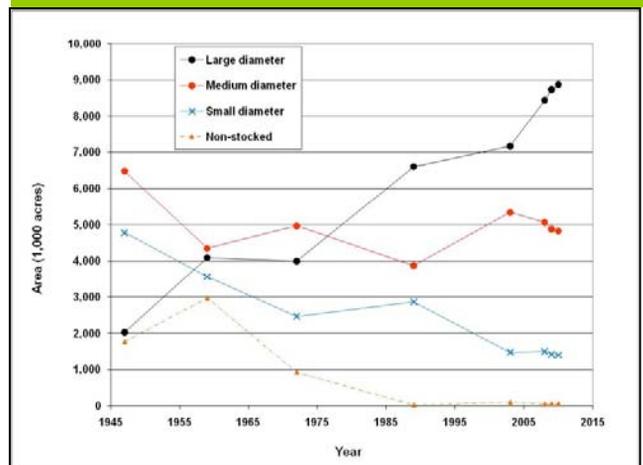


Figure 3. – Area of timberland by stand-size class and year, 1947 - 2010.

Table 2. – Top 10 tree species by statewide volume estimates, 2010.

	Species	Volume of live trees on forest land 2010 (1,000,000 ft ³)	Sampling error (%)	Change since 2005 (%)	Net volume of sawtimber trees on timberland 2010 (million board feet)	Sampling error (%)	Change since 2005 (%)
1	White oak	4,052.8	2.9	7.0	12,340.2	3.6	9.4
2	Black oak	2,870.2	3.1	2.0	9,155.0	3.9	0.8
3	Post oak	2,099.9	3.6	7.1	4,497.6	4.8	7.1
4	Northern red oak	1,066.7	5.4	3.5	3,790.3	6.5	3.6
5	Shortleaf pine	928.1	6.8	10.9	3,960.8	7.2	20.6
6	Eastern redcedar	705.4	5.3	19.8	649.7	11.8	-42.9
7	Black walnut	652.0	6.2	20.1	1,800.7	8.1	20.2
8	Scarlet oak	648.7	6.0	5.0	2,081.5	7.0	9.3
9	Shagbark hickory	550.4	6.1	13.4	1,341.6	8.8	17.1
10	Black hickory	461.6	4.9	6.5	887.4	8.6	-3.1
	Other softwood species	13.7	64.7	55.7	57.3	72.6	54.4
	Other hardwood species	6,559.0	2.7	16.0	14,885.0	4.1	17.9
	All species	20,608.4	1.1	9.8	55,447.0	1.7	9.2

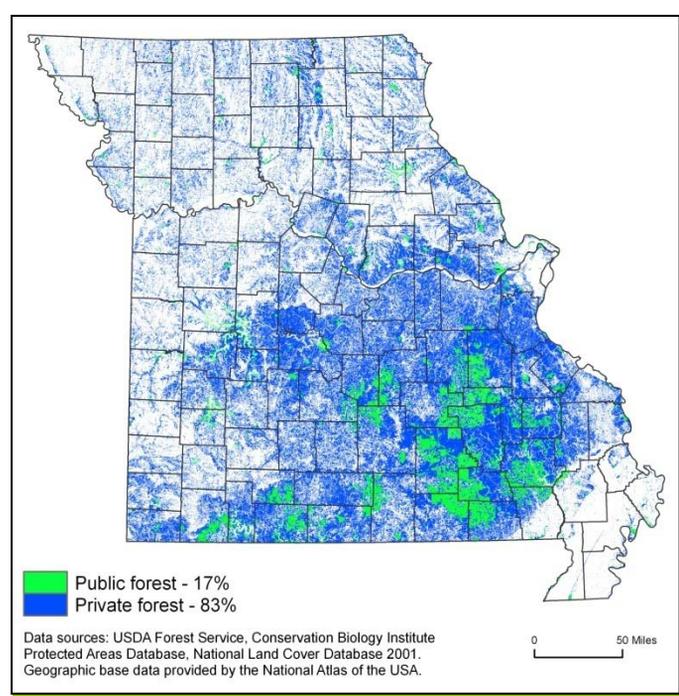


Figure 4. – Area of forest land by major owner group (public and private). White area represents nonforest. Map courtesy of D.M. Meneguzzo

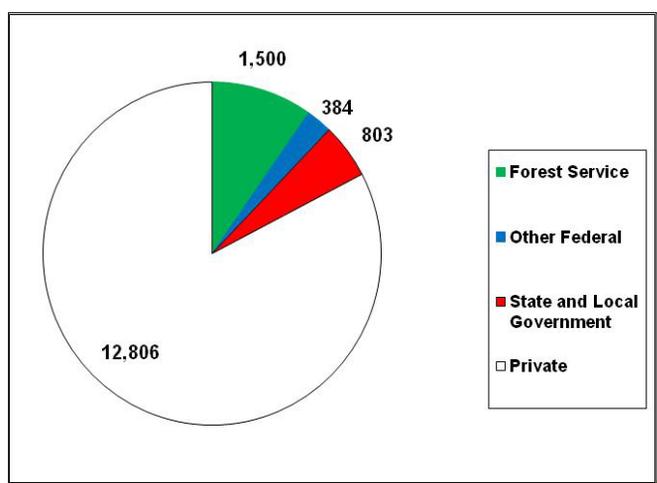


Figure 5. – Area of forest land, 2010, in thousands of acres, by major owner group.



Invasive Plants

Invasive plant species (IPS) have altered forest ecosystems throughout the world. Their presence has modified nutrient cycles, displaced native flora and fauna, and cost billions of dollars through control and monitoring. Their aggressive spread can create monocultures that have reduced aesthetic beauty and alter the hydrologic cycle .

In 2007-2009, forest vegetation was measured on 147 Phase 3 plots and the IPS were measured on 379 Phase 2 Invasive plots. Table 3 shows the most common plant species found on Phase 3 plots in Missouri. Of the 16 most common plant species, 15 species are native and one is introduced (multiflora rose). Figure 6 shows the five most common IPS found on Phase 2 Invasive plots, the number of plots each species was found on, and the percentage of plots on which they occurred. Of these five species, all were introduced. The most commonly recorded IPS was multiflora rose (179 plots; Figure 7). Since the inventory only occurs on forested plots, the highest occurrence of multiflora rose is in the heavily forested Ozark Plateau. In the future, remeasurement will help determine factors influential to the spread of IPS.

Table 3. – The 16 most common plant species on Forest Inventory and Analysis Phase 3 plots and the number of plots where they occurred, Missouri 2007-2009

Species
Virginia creeper (139)
Coralberry (117)
Summer grape (115)
Eastern redcedar (113)
Black cherry (108)
Eastern poison ivy (105)
Black oak (99)
White oak(97)
Common hackberry (94)
Flowering dogwood (92)
Fragrant sumac (86)
Black hickory (84)
Sassafras (83)
Multiflora rose (80)
Licorice bedstraw (73)
Common persimmon (71)

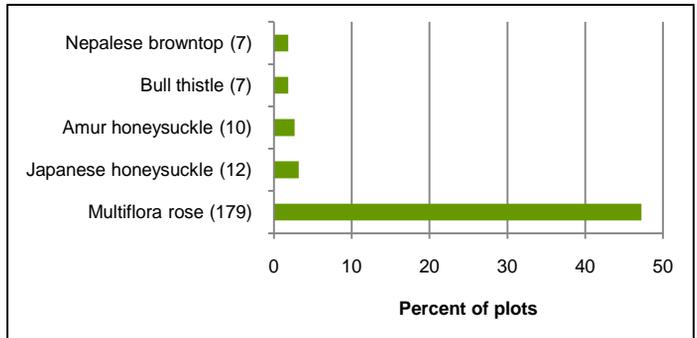


Figure 6. – The five most common introduced invasive plant species, the number of plots found on, and the percentage of Phase 2 Forest Inventory and Analysis plots they occurred, Missouri 2007-2009.

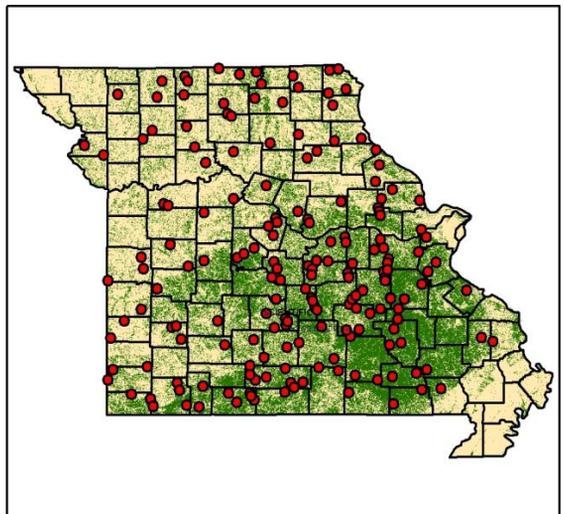


Figure 7. – Approximate location of invasives monitoring plots with multiflora rose, Missouri 2007-2009.



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FIA Program Information

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Additional Missouri Inventory Information

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

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