Forestland Productivity

Madison County, Tennessee

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			Cu ft/ac	
Ar:				
Arents	Cherrybark oak	100	143	American sycamore, Eastern cottonwood, Green ash, Nuttall oak, Sweetgum, Tuliptree
	Eastern cottonwood	100	129	
	Green ash	80	57	
	Nuttall oak	95	0	
	Shumard's oak	100	72	
	Sweetgum	95	114	
	Water oak	90	86	
	Willow oak	95	86	
Urban land	---	---	---	---
Ca:				
Calhoun	Loblolly pine	90	129	Green ash, Loblolly pine, Water oak
	Shortleaf pine	84	143	
	Sweetgum	---	0	
Henry	Loblolly pine	80	114	Loblolly pine, Shumard's oak, Sweetgum, Water oak
	Sweetgum	80	86	
	Water oak	80	72	
	Willow oak	80	72	
Co:				
Calloway	Cherrybark oak	80	114	Loblolly pine, Sweetgum
	Loblolly pine	80	129	
	Shortleaf pine	70	114	
	Sweetgum	80	86	
	Water oak	80	72	
Cs:				
Collins	Cherrybark oak	110	57	Cherrybark oak, Eastern cottonwood, Green ash
	Eastern cottonwood	115	0	
	Green ash	95	57	
DuB:				
Dulac	Loblolly pine	80	114	Loblolly pine, Southern red oak, Sweetgum
	Shortleaf pine	75	114	
	Southern red oak	70	57	
	Sweetgum	80	86	
DuB3:				
Dulac	Loblolly pine	80	114	Loblolly pine, Southern red oak, Sweetgum
	Shortleaf pine	75	114	
	Southern red oak	70	57	
	Sweetgum	80	86	

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	Common trees	Site index	Volume of wood fiber	
			Cu ft/ac	
DuC3:				
Dulac	Loblolly pine	80	114	Loblolly pine, Southern red oak, Sweetgum
	Shortleaf pine	75	114	
	Southern red oak	70	57	
	Sweetgum	80	86	
DuD3:				
Dulac	Loblolly pine	80	114	Loblolly pine, Southern red oak, Sweetgum
	Shortleaf pine	75	114	
	Southern red oak	70	57	
	Sweetgum	80	86	
EuE:				
Eustis	Blackjack oak	---	0	---
	Bluejack oak	---	0	
	Loblolly pine	80	114	
	Longleaf pine	65	72	
	Post oak	---	0	
	Slash pine	80	143	
	Turkey oak	---	0	
Fa:				
Falaya	Cherrybark oak	100	157	Cherrybark oak, Eastern cottonwood, Green ash, Sweetgum, Tuliptree
	Eastern cottonwood	100	129	
	Green ash	90	129	
	Loblolly pine	90	129	
	Nuttall oak	110	100	
	Water oak	100	100	
GrA:				
Grenada	Cherrybark oak	85	100	Cherrybark oak, Loblolly pine, Shortleaf pine, Shumard's oak, Slash pine, Sweetgum, Water oak, White oak
	Loblolly pine	85	114	
	Shortleaf pine	75	114	
	Southern red oak	80	57	
	Sweetgum	80	86	
GrB:				
Grenada	Cherrybark oak	85	100	Cherrybark oak, Loblolly pine, Shortleaf pine, Shumard's oak, Slash pine, Sweetgum, Water oak, White oak
	Loblolly pine	85	114	
	Shortleaf pine	75	114	
	Southern red oak	80	57	
	Sweetgum	80	86	

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	Common trees	Site index	Volume of wood fiber	
			Cu ft/ac	
GrB3:				
Grenada	Cherrybark oak	85	100	Cherrybark oak, Loblolly pine, Shortleaf pine, Shumard's oak, Slash pine, Sweetgum, Water oak, White oak
	Loblolly pine	85	114	
	Shortleaf pine	75	114	
	Southern red oak	80	57	
	Sweetgum	80	86	
GrC3:				
Grenada	Cherrybark oak	85	100	Cherrybark oak, Loblolly pine, Shortleaf pine, Shumard's oak, Slash pine, Sweetgum, Water oak, White oak
	Loblolly pine	85	114	
	Shortleaf pine	75	114	
	Southern red oak	80	57	
	Sweetgum	80	86	
Iu:				
Iuka	Eastern cottonwood	105	143	Eastern cottonwood, Loblolly pine, Tuliptree
	Loblolly pine	100	129	
	Sweetgum	100	143	
	Water oak	100	100	
LeB:				
Lexington	Cherrybark oak	80	86	Cherrybark oak, Loblolly pine, Shortleaf pine, Southern red oak, Sweetgum, Tuliptree
	Loblolly pine	80	114	
	Shortleaf pine	70	114	
	Southern red oak	70	57	
	Sweetgum	89	100	
	Tuliptree	90	86	
LeB3:				
Lexington	Cherrybark oak	80	86	Cherrybark oak, Loblolly pine, Shortleaf pine, Southern red oak, Sweetgum, Tuliptree
	Loblolly pine	80	114	
	Shortleaf pine	70	114	
	Southern red oak	70	57	
	Sweetgum	89	100	
	Tuliptree	90	86	
LeC:				
Lexington	Cherrybark oak	80	86	Cherrybark oak, Loblolly pine, Shortleaf pine, Southern red oak, Sweetgum, Tuliptree
	Loblolly pine	80	114	
	Shortleaf pine	70	114	
	Southern red oak	70	57	
	Sweetgum	89	100	
	Tuliptree	90	86	

Forestland Productivity

Madison County, Tennessee

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			Cu ft/ac	
LeC3:				
Lexington	Cherrybark oak	80	86	Cherrybark oak, Loblolly pine, Shortleaf pine, Southern red oak, Sweetgum, Tuliptree
	Loblolly pine	80	114	
	Shortleaf pine	70	114	
	Southern red oak	70	57	
	Sweetgum	89	100	
	Tuliptree	90	86	
LeD:				
Lexington	Cherrybark oak	80	86	Cherrybark oak, Loblolly pine, Shortleaf pine, Southern red oak, Sweetgum, Tuliptree
	Loblolly pine	80	114	
	Shortleaf pine	70	114	
	Southern red oak	70	57	
	Sweetgum	89	100	
	Tuliptree	90	86	
LeD3:				
Lexington	Cherrybark oak	80	86	Cherrybark oak, Loblolly pine, Shortleaf pine, Southern red oak, Sweetgum, Tuliptree
	Loblolly pine	80	114	
	Shortleaf pine	70	114	
	Southern red oak	70	57	
	Sweetgum	89	100	
	Tuliptree	90	86	
LeE:				
Lexington	Cherrybark oak	80	86	Cherrybark oak, Loblolly pine, Shortleaf pine, Southern red oak, Sweetgum, Tuliptree
	Loblolly pine	80	114	
	Shortleaf pine	70	114	
	Southern red oak	70	57	
	Sweetgum	89	100	
	Tuliptree	90	86	
LgC:				
Lexington	Cherrybark oak	80	86	Cherrybark oak, Loblolly pine, Shortleaf pine, Southern red oak, Sweetgum, Tuliptree
	Loblolly pine	80	114	
	Shortleaf pine	70	114	
	Southern red oak	70	57	
	Sweetgum	89	100	
	Tuliptree	90	86	
Urban land	---	---	---	---

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Madison County, Tennessee

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			Cu ft/ac	
LmE3:				
Lexington	Cherrybark oak	80	86	Cherrybark oak, Loblolly pine, Shortleaf pine, Southern red oak, Sweetgum, Tuliptree
	Loblolly pine	80	114	
	Shortleaf pine	70	114	
	Southern red oak	70	57	
	Sweetgum	89	100	
	Tuliptree	90	86	
Smithdale	Loblolly pine	80	114	Loblolly pine
	Shortleaf pine	69	114	
LoB:				
Loring	Cherrybark oak	86	100	Cherrybark oak, Loblolly pine, Shortleaf pine, Southern red oak, Tuliptree
	Loblolly pine	85	114	
	Southern red oak	74	57	
	Sweetgum	90	100	
	Water oak	82	72	
LoB3:				
Loring	Cherrybark oak	86	100	Cherrybark oak, Loblolly pine, Shortleaf pine, Southern red oak, Tuliptree
	Loblolly pine	85	114	
	Southern red oak	74	57	
	Sweetgum	90	100	
	Water oak	82	72	
LoC3:				
Loring	Cherrybark oak	86	100	Cherrybark oak, Loblolly pine, Shortleaf pine, Southern red oak, Tuliptree
	Loblolly pine	85	114	
	Southern red oak	74	57	
	Sweetgum	90	100	
	Water oak	82	72	
Ma:				
Mantachie	Cherrybark oak	100	143	Cherrybark oak, Eastern cottonwood, Green ash, Loblolly pine, Sweetgum, Tuliptree
	Eastern cottonwood	90	100	
	Green ash	80	57	
	Loblolly pine	98	143	
	Sweetgum	95	114	
	Tuliptree	95	100	
MeA:				
Memphis	Cherrybark oak	90	114	Cherrybark oak, Loblolly pine, Tuliptree
	Loblolly pine	90	129	
	Sweetgum	90	100	

Forestland Productivity

Madison County, Tennessee

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			Cu ft/ac	
MeB:				
Memphis	Cherrybark oak	90	114	Cherrybark oak, Loblolly pine, Tuliptree
	Loblolly pine	90	129	
	Sweetgum	90	100	
MeB2:				
Memphis	Cherrybark oak	90	114	Cherrybark oak, Loblolly pine, Tuliptree
	Loblolly pine	90	129	
	Sweetgum	90	100	
MeC3:				
Memphis	Cherrybark oak	90	114	Cherrybark oak, Loblolly pine, Tuliptree
	Loblolly pine	90	129	
	Sweetgum	90	100	
Oc:				
Ochlockonee	Eastern cottonwood	100	129	Eastern cottonwood, Loblolly pine, Tuliptree
	Loblolly pine	100	157	
	Slash pine	100	186	
	Sweetgum	90	100	
	Tuliptree	110	129	
	Water oak	80	72	
PrB:				
Providence	Loblolly pine	84	114	Loblolly pine, Shumard's oak, Sweetgum, Tuliptree
	Shortleaf pine	64	100	
	Sweetgum	90	100	
PrC3:				
Providence	Loblolly pine	84	114	Loblolly pine, Shumard's oak, Sweetgum, Tuliptree
	Shortleaf pine	64	100	
	Sweetgum	90	100	
PrD3:				
Providence	Loblolly pine	84	114	Loblolly pine, Shumard's oak, Sweetgum, Tuliptree
	Shortleaf pine	64	100	
	Sweetgum	90	100	
SmE:				
Smithdale	Loblolly pine	80	114	Loblolly pine
	Shortleaf pine	69	114	
SmF:				
Smithdale	Loblolly pine	80	114	Loblolly pine
	Shortleaf pine	69	114	

Forestland Productivity

Madison County, Tennessee

Map symbol and soil name	Potential productivity			Trees to manage
	Common trees	Site index	Volume of wood fiber	
			Cu ft/ac	
SwD:				
Sweatman	Loblolly pine	83	114	Loblolly pine, Shortleaf pine
	Shortleaf pine	73	114	
SwE:				
Sweatman	Loblolly pine	83	114	Loblolly pine, Shortleaf pine
	Shortleaf pine	73	114	
Vk:				
Vicksburg	Cherrybark oak	110	186	American sycamore, Eastern cottonwood, Green ash, Loblolly pine, Nuttall oak, Sweetgum, Tuliptree
	Eastern cottonwood	110	157	
	Green ash	90	57	
	Loblolly pine	90	129	
	Nuttall oak	100	0	
	Sweetgum	100	143	
Wa:				
Waverly	Cherrybark oak	100	143	American sycamore, Cherrybark oak, Eastern cottonwood, Loblolly pine, Sweetgum, Water oak, Water tupelo, Willow oak
	Eastern cottonwood	105	143	
	Loblolly pine	95	143	
	Nuttall oak	100	0	
	Sweetgum	100	143	
	Water oak	95	86	
	Willow oak	95	86	
Wf:				
Waverly	Cherrybark oak	100	143	American sycamore, Cherrybark oak, Eastern cottonwood, Loblolly pine, Sweetgum, Water oak, Water tupelo, Willow oak
	Eastern cottonwood	105	143	
	Loblolly pine	95	143	
	Nuttall oak	100	0	
	Sweetgum	100	143	
	Water oak	95	86	
	Willow oak	95	86	

Forestland Productivity

This table can help forestland owners or managers plan the use of soils for wood crops. It shows the potential productivity of the soils for wood crops.

"Potential productivity" of merchantable or "common trees" on a soil is expressed as a site index and as a volume number. The "site index" is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forestland managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The "volume of wood fiber," a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

"Trees to manage" are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Reference:
United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. (http://soils.usda.gov/technical/nfmanual/)