

Kennesaw Mountain

National Park

Climate Change Atlas Tree Species

Current and Potential Future Habitat, Capability, and Migration

Landscape Change Research Group
Iverson, Peters, Prasad, Matthews
USFS Northern Research Station
Delaware, OH

Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
loblolly pine	Pinus taeda	WDH	High	87.5	2516.53	34.28	No change	No change	Medium	Abundant	Good	Good			1	1
yellow-poplar	Liriodendron tulipifera	WDH	High	81.2	814.39	12.05	Lg. dec.	Lg. dec.	High	Abundant	Good	Good			1	2
sweetgum	Liquidambar styraciflua	WDH	High	76.2	776.5	12.47	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	3
white oak	Quercus alba	WDH	Medium	63.7	380.89	6.93	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	4
red maple	Acer rubrum	WDH	High	61.2	306.7	5.38	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	5
southern red oak	Quercus falcata	WDL	Medium	60	228.69	4.67	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	6
mockernut hickory	Carya alba	WDL	Medium	40	216.21	6.11	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	7
chestnut oak	Quercus prinus	NDH	High	18.7	194.49	10.37	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	8
water oak	Quercus nigra	WDH	High	53.8	183.02	4.42	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	9
sourwood	Oxydendrum arboreum	NDL	High	58.8	177.26	3.65	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	10
Virginia pine	Pinus virginiana	NDH	High	27.5	176.61	6.42	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	11
shortleaf pine	Pinus echinata	WDH	High	50	171.79	4.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	12
scarlet oak	Quercus coccinea	WDL	Medium	40	171.5	5.75	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	13
pignut hickory	Carya glabra	WDL	Medium	47.5	159	3.68	No change	Sm. dec.	Medium	Common	Fair	Poor			1	14
black cherry	Prunus serotina	WDL	Medium	45	150.03	4.06	Sm. inc.	Lg. inc.	Low	Common	Fair	Good			1	15
blackgum	Nyssa sylvatica	WDL	Medium	57.5	128.01	2.64	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	16
green ash	Fraxinus pennsylvanica	WSH	Low	16.3	124.49	7.66	No change	Sm. inc.	Medium	Common	Fair	Good			1	17
flowering dogwood	Cornus florida	WDL	Medium	51.3	121.09	2.59	No change	No change	Medium	Common	Fair	Fair			1	18
post oak	Quercus stellata	WDH	High	51.3	118.36	2.85	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	19
black oak	Quercus velutina	WDH	High	36.3	118.21	3.7	No change	No change	Medium	Common	Fair	Fair			1	20
boxelder	Acer negundo	WSH	Low	13.8	106.91	7.78	Lg. dec.	Lg. dec.	High	Common	Fair	Fair			1	21
northern red oak	Quercus rubra	WDH	Medium	33.8	76.06	3.13	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	22
black willow	Salix nigra	NSH	Low	2.5	36.06	14.43	No change	No change	Low	Rare	Very Poor	Very Poor			0	23
blackjack oak	Quercus marilandica	NSL	Medium	12.5	31.24	2.5	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	24
common persimmon	Diospyros virginiana	NSL	Low	25	31	1.91	No change	Sm. inc.	High	Rare	Fair	Good			1	25
florida maple	Acer barbatum	NSL	Low	16.2	28.16	2.33	No change	Sm. inc.	High	Rare	Fair	Good			1	26
American hornbeam; musclewinged elm	Carpinus caroliniana	WSL	Low	13.7	24.06	1.75	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	27
Ulmus alata	Ulmus alata	WDL	Medium	15	21.12	1.41	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	28
American beech	Fagus grandifolia	WDH	High	12.5	21.02	1.68	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	29
river birch	Betula nigra	NSL	Low	3.8	20.84	5.56	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	30
eastern redcedar	Juniperus virginiana	WDH	Medium	10	20.58	2.06	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	31
black walnut	Juglans nigra	WDH	Low	3.8	19.81	5.28	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	32
sycamore	Platanus occidentalis	NSL	Low	7.5	19.33	2.58	No change	No change	Medium	Rare	Poor	Poor		Infill +	1	33
red mulberry	Morus rubra	NSL	Low	6.2	18.98	3.04	No change	No change	Medium	Rare	Poor	Poor			1	34
longleaf pine	Pinus palustris	NSH	Medium	5	17.32	3.46	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	35
sweetbay	Magnolia virginiana	NSL	Medium	1.2	15.12	12.1	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	1	36
southern magnolia	Magnolia grandiflora	NSL	Low	6.3	14.31	8.2	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	37
willow oak	Quercus phellos	NSL	Low	3.8	14.25	3.8	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	38
bitternut hickory	Carya cordiformis	WSL	Low	3.7	12.38	3.3	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	39
American elm	Ulmus americana	WDH	Medium	7.5	10.41	1.39	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good		Infill ++	2	40
sugarberry	Celtis laevigata	NDH	Medium	3.8	10.09	2.69	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	41
sassafras	Sassafras albidum	WSL	Low	10	9.54	0.95	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			1	42
eastern hophornbeam; ironwood	Ostrya virginiana	WSL	Low	10	8.76	1.55	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	43
honeylocust	Gleditsia triacanthos	NSH	Low	3.7	7.41	1.98	Sm. dec.	No change	High	Rare	Poor	Fair		Infill +	2	44
cucumber tree	Magnolia acuminata	NSL	Low	3.7	7.34	1.96	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	45
American basswood	Tilia americana	WSL	Medium	2.5	5.56	2.23	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	46
ailanthus	Ailanthus altissima	NSL	FIA	1.3	5.25	4.2	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	47
slippery elm	Ulmus rubra	WSL	Low	3.8	4.91	1.31	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	48
white ash	Fraxinus americana	WDL	Medium	2.5	4.47	1.79	No change	No change	Low	Rare	Very Poor	Very Poor			2	49
eastern white pine	Pinus strobus	WDH	High	1.3	4.12	3.3	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	50
bigleaf magnolia	Magnolia macrophylla	NSL	Low	2.5	3.12	1.25	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	51
paulownia	Paulownia tomentosa	NSL	FIA	2.5	2.97	1.19	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	52
shellbark hickory	Carya laciniosa	NSL	Low	2.5	2.81	1.13	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	53



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eastern redbud	<i>Cercis canadensis</i>	NSL	Low	3.8	2.56	0.68	No change	Sm. inc.	Medium	Rare	Poor	Fair		Infill +		1	54
swamp tupelo	<i>Nyssa biflora</i>	NDH	Medium	2.5	2.34	0.93	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +		2	55
black locust	<i>Robinia pseudoacacia</i>	NDH	Low	1.2	2.12	1.7	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost				0	56
shagbark hickory	<i>Carya ovata</i>	WSL	Medium	2.5	1.89	0.75	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +		2	57
yellow buckeye	<i>Aesculus flava</i>	NSL	Low	1.2	1.88	1.5	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor				0	58
American holly	<i>Ilex opaca</i>	NSL	Medium	2.5	1.27	0.51	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++		2	59
white mulberry	<i>Morus alba</i>	NSL	FIA	1.2	0.94	0.75	Unknown	Unknown	NA	Rare	NNIS	NNIS				0	60
swamp chestnut oak	<i>Quercus michauxii</i>	NSL	Low	1.2	0.62	0.5	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor				0	61
Nuttall oak	<i>Quercus texana</i>	NSH	Medium	1.3	0.54	0.43	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor				0	62
yellow birch	<i>Betula alleghaniensis</i>	NDL	High	1.2	0.38	0.3	No change	No change	Medium	Rare	Poor	Poor				0	63
ashe juniper	<i>Juniperus ashei</i>	NDH	High	0	0	0	New Habitat	New Habitat	NA	Absent	New Habitat	New Habitat				0	64
slash pine	<i>Pinus elliotii</i>	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++		3	65
Table Mountain pine	<i>Pinus pungens</i>	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown				0	66
striped maple	<i>Acer pensylvanicum</i>	NSL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat				3	67
serviceberry	<i>Amelanchier spp.</i>	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	68
sweet birch	<i>Betula lenta</i>	NDH	High	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown				0	69
cittamwood/gum bumelia	<i>Sideroxylon lanuginosum ssp</i>	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat				3	70
pecan	<i>Carya illinoensis</i>	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate ++		3	71
black hickory	<i>Carya texana</i>	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3	72
hackberry	<i>Celtis occidentalis</i>	WDH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +		3	73
black ash	<i>Fraxinus nigra</i>	WSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat				3	74
silverbell	<i>Halesia spp.</i>	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	75
mountain or Fraser magnolia	<i>Magnolia fraseri</i>	NSL	Low	0	0	0	Unknown	Unknown	NA	Absent	Unknown	Unknown				0	76
cherrybark oak; swamp red o	<i>Quercus pagoda</i>	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +		3	77
laurel oak	<i>Quercus laurifolia</i>	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++		3	78
pin oak	<i>Quercus palustris</i>	NSH	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown				0	79
live oak	<i>Quercus virginiana</i>	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++		3	80
bluejack oak	<i>Quercus incana</i>	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +		3	81
cedar elm	<i>Ulmus crassifolia</i>	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat				3	82