

Section 231G

EcoMap 2007
Climate Change Atlas Tree Species

USDA Forest Service
Northern Research Station
Landscape Change Research Group
Iverson, Peters, Prasad, Matthews

Current and Potential Future Habitat, Capability, and Migration

Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
post oak	Quercus stellata	WDH	High	80.4	1941.9	20.0	No change	No change	High	Abundant	Very Good	Very Good			1	1
shortleaf pine	Pinus echinata	WDH	High	43.1	1172.1	16.6	No change	No change	Medium	Abundant	Good	Good			1	2
eastern redcedar	Juniperus virginiana	WDH	Medium	72.9	881.4	10.6	No change	No change	Medium	Abundant	Good	Good			1	3
black hickory	Carya texana	NDL	High	65.9	549.1	6.6	No change	No change	Medium	Abundant	Good	Good			1	4
winged elm	Ulmus alata	WDL	Medium	80.9	508.3	5.5	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	5
loblolly pine	Pinus taeda	WDH	High	18	400.6	15.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	6
sweetgum	Liquidambar styraciflua	WDH	High	36.3	382.7	7.6	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	7
white oak	Quercus alba	WDH	Medium	35.2	353.5	6.4	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	8
blackjack oak	Quercus marilandica	NSL	Medium	48.4	315.2	6.3	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	9
green ash	Fraxinus pennsylvanica	WSH	Low	39.5	247.1	5.7	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	10
black oak	Quercus velutina	WDH	High	43.3	211.8	3.7	No change	No change	Medium	Common	Fair	Fair			1	11
mockernut hickory	Carya alba	WDL	Medium	45.7	194.5	3.4	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	12
willow oak	Quercus phellos	NSL	Low	14.9	194.1	11.1	No change	No change	Medium	Common	Fair	Fair			1	13
southern red oak	Quercus falcata	WDL	Medium	30	191.0	5.5	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	14
water oak	Quercus nigra	WDH	High	25.8	187.1	6.7	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	15
common persimmon	Diospyros virginiana	NSL	Low	29.9	153.6	6.0	Sm. dec.	No change	High	Common	Fair	Good			1	16
American elm	Ulmus americana	WDH	Medium	23.2	147.1	5.1	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	17
northern red oak	Quercus rubra	WDH	Medium	28.7	140.9	3.4	No change	No change	High	Common	Good	Good			1	18
red maple	Acer rubrum	WDH	High	29	120.7	3.1	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	19
blackgum	Nyssa sylvatica	WDL	Medium	30.9	120.3	3.0	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	20
black cherry	Prunus serotina	WDL	Medium	33.6	101.5	2.3	Sm. inc.	Lg. inc.	Low	Common	Fair	Good			1	21
sycamore	Platanus occidentalis	NSL	Low	12.9	86.7	7.0	Lg. dec.	Sm. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	0	22
honeylocust	Gleditsia triacanthos	NSH	Low	13.7	84.3	6.0	No change	Sm. inc.	High	Common	Good	Very Good			1	23
sugarberry	Celtis laevigata	NDH	Medium	18.3	81.2	4.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	24
white ash	Fraxinus americana	WDL	Medium	23.9	75.8	2.7	Sm. inc.	Lg. inc.	Low	Common	Fair	Good			1	25
black willow	Salix nigra	NSH	Low	7.2	70.5	10.6	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	0	26
Osage-orange	Maclura pomifera	NDH	Medium	8.9	67.6	6.3	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	1	27
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	9.8	57.9	4.5	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	28
boxelder	Acer negundo	WSH	Low	10.4	51.6	5.2	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	29
slippery elm	Ulmus rubra	WSL	Low	13.4	51.2	3.3	No change	Sm. inc.	Medium	Common	Fair	Good			1	30
eastern cottonwood	Populus deltoides	NSH	Low	3.5	42.1	15.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	31
pecan	Carya illinoensis	NSH	Low	9.1	42.0	4.3	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	1	32
silver maple	Acer saccharinum	NSH	Low	7.4	41.9	5.9	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	2	33
black locust	Robinia pseudoacacia	NDH	Low	4.1	38.6	3.8	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	34
black walnut	Juglans nigra	WDH	Low	7.5	38.4	5.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	35
hackberry	Celtis occidentalis	WDH	Medium	11.2	34.1	2.9	Sm. dec.	No change	High	Rare	Poor	Fair	Infill +	Infill +	1	36
overcup oak	Quercus lyrata	NSL	Medium	4.2	32.1	8.2	No change	No change	Low	Rare	Very Poor	Very Poor			0	37
bitternut hickory	Carya cordiformis	WSL	Low	6.8	31.5	2.7	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor	Infill +	Infill +	1	38
flowering dogwood	Cornus florida	WDL	Medium	16	27.9	1.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	39
river birch	Betula nigra	NSL	Low	7.4	22.7	3.0	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	1	40
Nuttall oak	Quercus texana	NSH	Medium	3.1	20.3	5.0	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	41
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	6.5	18.2	1.8	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	1	42
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	10.5	17.7	1.1	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	43
Shumard oak	Quercus shumardii	NSL	Low	3.4	16.8	3.1	Sm. dec.	No change	High	Rare	Poor	Fair	Infill +	Infill +	2	44
eastern redbud	Cercis canadensis	NSL	Low	14.3	15.8	1.1	Sm. dec.	Sm. inc.	Medium	Rare	Very Poor	Fair			1	45
shagbark hickory	Carya ovata	WSL	Medium	5.8	15.8	3.0	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	46
sassafras	Sassafras albidum	WSL	Low	13.5	15.3	1.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	47



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pin oak	Quercus palustris	NSH	Low	3.8	14.7	3.0	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor				0 48
pignut hickory	Carya glabra	WDL	Medium	3.3	13.4	4.2	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +		2 49
cedar elm	Ulmus crassifolia	NDH	Medium	3.6	10.0	5.4	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +		2 50
red mulberry	Morus rubra	NSL	Low	10.8	9.3	1.2	No change	Lg. inc.	Medium	Rare	Poor	Good				1 51
wild plum	Prunus americana	NSLX	FIA	5.3	8.4	1.6	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only				0 52
bur oak	Quercus macrocarpa	NDH	Medium	2	6.8	1.1	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor				0 53
pawpaw	Asimina triloba	NSL	Low	1	6.4	5.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor				0 54
water hickory	Carya aquatica	NSL	Medium	2	5.4	2.8	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +		2 55
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	8.8	5.2	1.0	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++		1 56
serviceberry	Amelanchier spp.	NSL	Low	3.4	4.0	0.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor				0 57
American basswood	Tilia americana	WSL	Medium	3.6	3.8	1.0	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor				0 58
shellbark hickory	Carya laciniosa	NSL	Low	0.9	3.7	1.4	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor				0 59
white mulberry	Morus alba	NSL	FIA	0.7	3.6	4.5	Unknown	Unknown	NA	Rare	NNIS	NNIS				0 60
swamp tupelo	Nyssa biflora	NDH	Medium	0.4	3.0	7.7	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor				0 61
American beech	Fagus grandifolia	WDH	High	0.5	2.3	2.7	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +			2 62
northern catalpa	Catalpa speciosa	NSHX	FIA	0.4	2.0	5.1	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only				0 63
chinkapin oak	Quercus muehlenbergii	NSL	Medium	3.9	1.7	0.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor				0 64
laurel oak	Quercus laurifolia	NDH	Medium	0.4	1.1	2.9	No change	No change	Medium	Rare	Poor	Poor		Infill +		2 65
cucumbertree	Magnolia acuminata	NSL	Low	0	1.0	0.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor				0 66
sugar maple	Acer saccharum	WDH	High	0.1	0.5	0.4	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost				0 67
American holly	Ilex opaca	NSL	Medium	0.1	0.4	0.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good				2 68
florida maple	Acer barbatum	NSL	Low	1.6	0.4	0.4	No change	Sm. inc.	High	Rare	Fair	Good	Infill +	Infill ++		2 69
Kentucky coffeetree	Gymnocladus dioicus	NSLX	FIA	1	0.3	0.4	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only				0 70
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown				0 71
ashe juniper	Juniperus ashei	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat				0 72
slash pine	Pinus elliottii	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++		3 73
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3 74
eastern white pine	Pinus strobus	WDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3 75
Virginia pine	Pinus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat				3 76
bald cypress	Taxodium distichum	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +		3 77
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0 78
black ash	Fraxinus nigra	WSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat				3 79
silverbell	Halesia spp.	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0 80
yellow-poplar	Liriodendron tulipifera	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3 81
southern magnolia	Magnolia grandiflora	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat				3 82
sweetbay	Magnolia virginiana	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3 83
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown				0 84
sourwood	Oxydendrum arboreum	NDL	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +		3 85
water elm	Planera aquatica	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +		3 86
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat				3 87
scarlet oak	Quercus coccinea	WDL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Migrate +		3 88
northern pin oak	Quercus ellipsoidalis	NSH	Medium	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown				0 89
swamp chestnut oak	Quercus michauxii	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +		3 90
chestnut oak	Quercus prinus	NDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +		3 91
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++		3 92
bluejack oak	Quercus incana	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +		3 93

