

Section 232E

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
loblolly pine	Pinus taeda	WDH	High	23.3	518.9	22.8	No change	No change	Medium	Abundant	Good	Good	Infill ++	Infill ++	2	1
bald cypress	Taxodium distichum	NSH	Medium	25.8	330.7	19.7	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	2
water tupelo	Nyssa aquatica	NSH	Medium	14.9	244.4	20.3	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor	Infill +	Infill +	2	3
red maple	Acer rubrum	WDH	High	32.9	234.1	11.2	Sm. inc.	No change	High	Common	Very Good	Good	Infill ++	Infill ++	1	4
sweetgum	Liquidambar styraciflua	WDH	High	35.4	173.6	7.7	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	5
water oak	Quercus nigra	WDH	High	29.5	167.5	8.5	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	6
black willow	Salix nigra	NSH	Low	13.9	141.5	17.0	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	2	7
green ash	Fraxinus pennsylvanica	WSH	Low	25.4	89.4	6.1	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	8
slash pine	Pinus elliotii	NDH	High	2.1	81.4	10.3	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	9
sugarberry	Celtis laevigata	NDH	Medium	16.5	70.2	8.2	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good	Infill ++	Infill ++	2	10
longleaf pine	Pinus palustris	NSH	Medium	2.1	68.1	14.8	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	11
laurel oak	Quercus laurifolia	NDH	Medium	16.6	52.6	4.4	Sm. inc.	No change	Medium	Common	Good	Fair	Infill ++	Infill +	2	12
American elm	Ulmus americana	WDH	Medium	22.2	49.5	4.3	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	2	13
blackgum	Nyssa sylvatica	WDL	Medium	16.4	49.4	2.8	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	14
swamp tupelo	Nyssa biflora	NDH	Medium	4.3	40.4	7.8	No change	No change	Low	Rare	Very Poor	Very Poor			2	15
live oak	Quercus virginiana	NDH	High	7.6	40.2	9.8	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	2	16
willow oak	Quercus phellos	NSL	Low	7.3	30.2	4.5	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	2	17
post oak	Quercus stellata	WDH	High	5	20.9	3.5	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	18
sweetbay	Magnolia virginiana	NSL	Medium	3.7	19.7	3.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	19
pecan	Carya illinoensis	NSH	Low	3.1	17.7	7.7	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	20
southern red oak	Quercus falcata	WDL	Medium	4.9	17.7	1.8	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	21
water hickory	Carya aquatica	NSL	Medium	5.2	17.0	4.0	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	22
swamp chestnut oak	Quercus michauxii	NSL	Low	5.7	15.9	2.8	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	23
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	9.1	14.8	2.8	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	24
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	3.9	14.6	2.7	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	25
Nuttall oak	Quercus texana	NSH	Medium	4.9	14.4	3.5	No change	No change	High	Rare	Fair	Fair			0	26
boxelder	Acer negundo	WSH	Low	6.5	13.5	5.8	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	27
overcup oak	Quercus lyrata	NSL	Medium	4.4	10.0	3.3	Sm. inc.	Lg. inc.	Low	Rare	Poor	Fair	Infill +	Infill +	2	28
American holly	Ilex opaca	NSL	Medium	4.9	8.2	0.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	29
redbay	Persea borbonia	NSL	Low	4	8.1	2.8	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor	Infill +	Infill +	2	30
cedar elm	Ulmus crassifolia	NDH	Medium	2.2	7.5	5.7	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	31
pond cypress	Taxodium ascendens	NSH	Medium	1.4	6.3	9.5	Sm. dec.	Lg. inc.	Medium	Rare	Very Poor	Good			2	32
southern magnolia	Magnolia grandiflora	NSL	Low	3.1	6.1	2.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	33
white oak	Quercus alba	WDH	Medium	1.4	5.9	1.1	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	34
winged elm	Ulmus alata	WDL	Medium	7.7	5.9	1.6	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	2	35
eastern redcedar	Juniperus virginiana	WDH	Medium	1.7	5.2	5.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	36
sycamore	Platanus occidentalis	NSL	Low	1.8	5.0	4.4	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	37
spruce pine	Pinus glabra	NSL	Low	0.5	4.8	2.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	38
black cherry	Prunus serotina	WDL	Medium	5.2	4.4	1.1	No change	No change	Low	Rare	Very Poor	Very Poor			2	39
honeylocust	Gleditsia triacanthos	NSH	Low	1.3	4.0	1.7	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	40
American beech	Fagus grandifolia	WDH	High	0.7	3.7	1.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	41
water elm	Planera aquatica	NSL	Low	0.8	3.6	2.9	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	2	42
sassafras	Sassafras albidum	WSL	Low	3	3.3	0.5	No change	Sm. dec.	Medium	Rare	Poor	Very Poor	Infill +		2	43
mockernut hickory	Carya alba	WDL	Medium	3.7	3.1	1.4	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	44
slippery elm	Ulmus rubra	WSL	Low	6.4	3.1	1.2	No change	Lg. inc.	Medium	Rare	Poor	Good	Infill +		2	45
eastern cottonwood	Populus deltoides	NSH	Low	1.2	3.0	2.6	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	46
yellow-poplar	Liriodendron tulipifera	WDH	High	0.3	2.8	10.8	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	47



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waterlocust	Gleditsia aquatica	NSLX	FIA	0.2	2.2	7.9	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	48
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	3.2	1.9	0.6	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	2	49
wild plum	Prunus americana	NSLX	FIA	0.3	1.7	6.8	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	50
white ash	Fraxinus americana	WDL	Medium	0.5	1.5	1.2	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			2	51
black oak	Quercus velutina	WDH	High	1.9	1.4	1.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	52
flowering dogwood	Cornus florida	WDL	Medium	1.4	1.4	0.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	53
Carolina ash	Fraxinus caroliniana	NSL	FIA	1.3	1.4	3.8	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	54
red mulberry	Morus rubra	NSL	Low	0.8	1.4	1.8	No change	No change	Medium	Rare	Poor	Poor			0	55
river birch	Betula nigra	NSL	Low	0.3	1.0	0.5	No change	No change	Medium	Rare	Poor	Poor		Infill +	2	56
common persimmon	Diospyros virginiana	NSL	Low	3.1	0.8	1.1	Sm. dec.	No change	High	Rare	Poor	Fair	Infill +	Infill +	2	57
blackjack oak	Quercus marilandica	NSL	Medium	0.9	0.7	0.8	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	2	58
pignut hickory	Carya glabra	WDL	Medium	0.6	0.7	0.6	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	59
American basswood	Tilia americana	WSL	Medium	0.1	0.2	0.1	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	60
bitternut hickory	Carya cordiformis	WSL	Low	1.1	0.2	1.1	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	61
shellbark hickory	Carya laciniosa	NSL	Low	1.1	0.1	2.0	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	62
black hickory	Carya texana	NDL	High	0.1	0.1	0.1	Lg. dec.	Sm. inc.	Medium	Rare	Very Poor	Fair		Infill +	2	63
sourwood	Oxydendrum arboreum	NDL	High	0.2	0.1	0.3	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	64
black locust	Robinia pseudoacacia	NDH	Low	0.2	0.1	0.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	65
pin cherry	Prunus pensylvanica	NSL	Low	1.1	0.0	0.5	No change	Sm. inc.	Medium	Rare	Poor	Fair			0	66
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate +		3	67
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	68
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	69
mountain maple	Acer spicatum	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	70
serviceberry	Amelanchier spp.	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	71
pawpaw	Asimina triloba	NSL	Low	0	0	0	New Habitat	Unknown	Medium	Absent	New Habitat	Unknown			3	72
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	73
hackberry	Celtis occidentalis	WDH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	74
eastern redbud	Cercis canadensis	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	75
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	76
blue ash	Fraxinus quadrangulata	NSL	Low	0	0	0	Unknown	Unknown	Low	Modeled	Unknown	Unknown			0	77
loblolly-bay	Gordonia lasianthus	NSH	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	78
silverbell	Halesia spp.	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	79
black walnut	Juglans nigra	WDH	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	80
cucumbertree	Magnolia acuminata	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	81
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	82
scarlet oak	Quercus coccinea	WDL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	83
bur oak	Quercus macrocarpa	NDH	Medium	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	84
chinkapin oak	Quercus muehlenbergii	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	85
northern red oak	Quercus rubra	WDH	Medium	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	86
Shumard oak	Quercus shumardii	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			2	87
cabbage palmetto	Sabal palmetto	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	88
American mountain-ash	Sorbus americana	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	89

