

One x One Degree
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	28.7	787.6	25.2	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	47.5	581.4	12.9	No change	No change	Medium	Abundant	Good	Good			1	2
sugarberry	Celtis laevigata	NDH	Medium	70.4	419.7	11.0	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	3
green ash	Fraxinus pennsylvanica	WSH	Low	65.4	382.8	8.1	No change	No change	Medium	Common	Fair	Fair			1	4
willow oak	Quercus phellos	NSL	Low	38.8	332.1	10.7	No change	No change	Medium	Common	Fair	Fair			1	5
water oak	Quercus nigra	WDH	High	46.3	323.7	7.5	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	6
overcup oak	Quercus lyrata	NSL	Medium	46.4	309.2	7.3	No change	No change	Low	Common	Poor	Poor			0	7
American elm	Ulmus americana	WDH	Medium	55.2	248.8	7.3	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	8
water hickory	Carya aquatica	NSL	Medium	34.9	217.3	6.8	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	9
winged elm	Ulmus alata	WDL	Medium	54.8	186.6	5.5	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	10
nuttall oak	Quercus texana	NSH	Medium	32.2	163.6	6.3	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			0	11
southern red oak	Quercus falcata	WDL	Medium	18.5	131.5	8.5	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	1	12
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	21.5	113.9	4.6	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	13
boxelder	Acer negundo	WSH	Low	25.8	111.2	5.3	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	1	14
black willow	Salix nigra	NSH	Low	17.9	109.2	10.4	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	15
honeylocust	Gleditsia triacanthos	NSH	Low	34.3	91.1	4.5	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	16
eastern cottonwood	Populus deltoides	NSH	Low	20.5	90.6	14.0	Sm. dec.	No change	Medium	Common	Poor	Fair	Infill +	Infill +	1	17
cedar elm	Ulmus crassifolia	NDH	Medium	29.8	83.6	4.6	Lg. inc.	Lg. inc.	Low	Common	Good	Good	Infill ++	Infill ++	1	18
pecan	Carya illinoensis	NSH	Low	17.3	75.1	4.4	Lg. inc.	Lg. inc.	Low	Common	Good	Good	Infill ++	Infill ++	1	19
sycamore	Platanus occidentalis	NSL	Low	9.6	72.8	8.4	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	20
bald cypress	Taxodium distichum	NSH	Medium	7.8	71.8	8.3	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	2	21
common persimmon	Diospyros virginiana	NSL	Low	22.6	61.3	3.8	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	22
slippery elm	Ulmus rubra	WSL	Low	30.6	52.4	3.5	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	23
white oak	Quercus alba	WDH	Medium	10.8	52.1	4.2	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	2	24
red maple	Acer rubrum	WDH	High	26	42.0	2.2	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	25
swamp chestnut oak	Quercus michauxii	NSL	Low	4.6	33.0	6.7	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	26
laurel oak	Quercus laurifolia	NDH	Medium	5.8	24.8	4.3	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	27
water elm	Planera aquatica	NSL	Low	4.3	20.0	1.4	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	28
blackgum	Nyssa sylvatica	WDL	Medium	3.4	19.8	3.7	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	29
eastern redbud	Cercis canadensis	NSL	Low	2.9	17.2	6.0	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	30
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	7.4	16.6	2.0	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair			1	31
flowering dogwood	Cornus florida	WDL	Medium	18.9	15.6	1.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	32
post oak	Quercus stellata	WDH	High	15.4	14.2	1.6	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	33
water tupelo	Nyssa aquatica	NSH	Medium	1.1	11.9	1.2	Sm. inc.	Sm. inc.	Low	Rare	Poor	Poor	Infill +	Infill +	2	34
shortleaf pine	Pinus echinata	WDH	High	4.2	11.8	1.8	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	35
pignut hickory	Carya glabra	WDL	Medium	5.6	10.8	1.1	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	36
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	8.6	10.7	1.1	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	1	37
slash pine	Pinus elliottii	NDH	High	1	9.8	10.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	38
white ash	Fraxinus americana	WDL	Medium	5.8	9.6	1.3	No change	No change	Low	Rare	Very Poor	Very Poor			2	39
black oak	Quercus velutina	WDH	High	7.3	9.1	1.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	40
swamp white oak	Quercus bicolor	NSL	Low	1.5	8.7	4.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	41
black cherry	Prunus serotina	WDL	Medium	11.4	8.5	1.4	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	1	42
shagbark hickory	Carya ovata	WSL	Medium	2.4	8.5	2.0	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	43
Shumard oak	Quercus shumardii	NSL	Low	7.7	7.1	1.1	No change	Sm. inc.	High	Rare	Fair	Good	Infill +	Infill ++	2	44
mockernut hickory	Carya alba	WDL	Medium	12.2	6.7	1.0	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	45
river birch	Betula nigra	NSL	Low	0.1	5.7	0.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	46
shellbark hickory	Carya laciniosa	NSL	Low	0.1	4.9	0.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	47



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swamp tupelo	Nyssa biflora	NDH	Medium	0.4	3.8	1.5	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	48
American holly	Ilex opaca	NSL	Medium	1.3	3.3	0.5	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	49
eastern redcedar	Juniperus virginiana	WDH	Medium	0.7	2.4	1.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	50
bitternut hickory	Carya cordiformis	WSL	Low	0.8	2.0	0.5	No change	No change	High	Rare	Fair	Fair			0	51
southern magnolia	Magnolia grandiflora	NSL	Low	0.8	1.8	0.3	No change	No change	Medium	Rare	Poor	Poor	Infill +		2	52
sassafras	Sassafras albidum	WSL	Low	1.6	1.5	0.6	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	53
blackjack oak	Quercus marilandica	NSL	Medium	0.6	1.4	0.9	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	54
red mulberry	Morus rubra	NSL	Low	2	1.3	0.4	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	55
hackberry	Celtis occidentalis	WDH	Medium	1	0.8	0.8	Sm. dec.	Sm. inc.	High	Rare	Poor	Good			2	56
florida maple	Acer barbatum	NSL	Low	4.9	0.5	0.4	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	57
black locust	Robinia pseudoacacia	NDH	Low	0.1	0.4	0.0	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	58
silver maple	Acer saccharinum	NSH	Low	3.8	0.4	1.8	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	59
pawpaw	Asimina triloba	NSL	Low	3.8	0.2	0.9	No change	No change	Medium	Rare	Poor	Poor			0	60
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	61
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	62
serviceberry	Amelanchier spp.	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	63
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	64
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	65
American beech	Fagus grandifolia	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	66
yellow-poplar	Liriodendron tulipifera	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	67
sweetbay	Magnolia virginiana	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	68
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	New Habitat	Unknown	Medium	Absent	New Habitat	Unknown			3	69
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	70
northern red oak	Quercus rubra	WDH	Medium	0	0	0	New Habitat	Unknown	High	Absent	New Habitat	Unknown	Likely +		3	71
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	72
American basswood	Tilia americana	WSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	73