

Climate Change Atlas Tree Species
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	91.5	3102.57	40.14	No change	No change	Medium	Abundant	Good	Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	81.7	1023.3	14.65	No change	No change	Medium	Abundant	Good	Good			1	2
water oak	Quercus nigra	WDH	High	84.1	626.72	8.79	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	3
longleaf pine	Pinus palustris	NSH	Medium	39	574.52	18.58	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	4
red maple	Acer rubrum	WDH	High	76.8	408.4	6.29	No change	Sm. inc.	High	Common	Good	Very Good			1	5
swamp tupelo	Nyssa biflora	NDH	Medium	36.6	236.98	7.32	Sm. inc.	Lg. inc.	Low	Common	Fair	Good			1	6
black cherry	Prunus serotina	WDL	Medium	56.1	190.85	4.31	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	7
yellow-poplar	Liriodendron tulipifera	WDH	High	31.7	174.6	7.33	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	8
turkey oak	Quercus laevis	NSH	Medium	26.8	160.68	6.98	Sm. dec.	No change	High	Common	Fair	Good			1	9
southern red oak	Quercus falcata	WDL	Medium	40.2	125.56	4.69	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	10
mockernut hickory	Carya alba	WDL	Medium	42.7	113.13	3.61	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	11
laurel oak	Quercus laurifolia	NDH	Medium	34.1	109.73	3.21	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	12
bald cypress	Taxodium distichum	NSH	Medium	13.4	89.95	9.68	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	13
slash pine	Pinus elliotii	NDH	High	30.5	84.8	4.76	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	14
sugarberry	Celtis laevigata	NDH	Medium	17.1	79.5	6.15	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	15
blackgum	Nyssa sylvatica	WDL	Medium	41.5	78.18	2.72	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	16
willow oak	Quercus phellos	NSL	Low	23.2	77.72	4.19	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	17
green ash	Fraxinus pennsylvanica	WSH	Low	17.1	69.46	5.33	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	18
sweetbay	Magnolia virginiana	NSL	Medium	24.4	67.5	3.98	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	19
post oak	Quercus stellata	WDH	High	39	65.67	2.41	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	20
water tupelo	Nyssa aquatica	NSH	Medium	11	63.09	10.12	No change	Sm. inc.	Low	Common	Poor	Fair			1	21
white oak	Quercus alba	WDH	Medium	26.8	60.9	3.17	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	22
common persimmon	Diospyros virginiana	NSL	Low	25.6	58.12	2.27	Lg. dec.	Lg. dec.	High	Common	Fair	Fair			1	23
redbay	Persea borbonia	NSL	Low	17.1	52.13	3.05	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	24
American elm	Ulmus americana	WDH	Medium	24.4	51.7	2.51	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	25
American holly	Ilex opaca	NSL	Medium	28	48.63	2.4	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			1	26
scarlet oak	Quercus coccinea	WDL	Medium	14.6	45.7	4.23	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	27
pignut hickory	Carya glabra	WDL	Medium	8.5	36.67	4.29	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	28
sycamore	Platanus occidentalis	NSL	Low	8.5	36.6	4.29	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	29
flowering dogwood	Cornus florida	WDL	Medium	28	35.34	1.79	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair			1	30
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	17.1	34.6	2.03	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	31
black willow	Salix nigra	NSH	Low	22	32.72	2.73	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair			1	32
blackjack oak	Quercus marilandica	NSL	Medium	22	32.28	2.37	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	33
shortleaf pine	Pinus echinata	WDH	High	11	32.11	2.93	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	34
sassafras	Sassafras albidum	WSL	Low	20.7	28.17	2.12	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair			1	35
eastern redcedar	Juniperus virginiana	WDH	Medium	12.2	25.48	3.02	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	36
overcup oak	Quercus lyrata	NSL	Medium	7.3	22.3	3.05	No change	No change	Low	Rare	Very Poor	Very Poor			0	37
winged elm	Ulmus alata	WDL	Medium	18.3	21.89	1.53	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	38
boxelder	Acer negundo	WSH	Low	9.8	21.49	4.34	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	1	39
water hickory	Carya aquatica	NSL	Medium	12.2	20.1	2.38	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	40
live oak	Quercus virginiana	NDH	High	4.9	19.24	3.94	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	41
northern red oak	Quercus rubra	WDH	Medium	3.7	16.68	4.56	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	2	42
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	12.2	16.38	2.06	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	43
river birch	Betula nigra	NSL	Low	2.4	16.3	6.68	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	44
black oak	Quercus velutina	WDH	High	13.4	15.8	1.69	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	45
bluejack oak	Quercus incana	NSL	Low	4.9	11.55	2.37	No change	No change	Medium	Rare	Poor	Poor			1	46
sand hickory	Carya pallida	NSL	FIA	8.5	11.35	2.35	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	47
swamp chestnut oak	Quercus michauxii	NSL	Low	6.1	9.98	1.64	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	48
water elm	Planera aquatica	NSL	Low	4.9	9.44	1.93	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	49
slippery elm	Ulmus rubra	WSL	Low	13.4	9.15	0.95	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	1	50
pawpaw	Asimina triloba	NSL	Low	8.5	6.94	1.69	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	51
hackberry	Celtis occidentalis	WDH	Medium	3.7	6.29	1.72	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	52
pond pine	Pinus serotina	NSH	Medium	6.1	5.61	2.7	Sm. dec.	No change	Low	Rare	Very Poor	Very Poor			0	53

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sourwood	Oxydendrum arboreum	NDL	High	9.8	4.89	0.83	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			1	54
eastern cottonwood	Populus deltoides	NSH	Low	7.3	3.99	2.2	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	55
spruce pine	Pinus glabra	NSL	Low	1.2	3.05	2.5	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			2	56
shagbark hickory	Carya ovata	WSL	Medium	2.4	2.9	1.19	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	57
pond cypress	Taxodium ascendens	NSH	Medium	1.2	2.77	2.27	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	58
silverbell	Halesia spp.	NSL	Low	1.2	2.23	1.83	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	59
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	1.2	2.02	1.66	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	60
bigleaf magnolia	Magnolia macrophylla	NSL	Low	1.2	1.95	1.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	61
American beech	Fagus grandifolia	WDH	High	2.4	1.57	0.64	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	62
red mulberry	Morus rubra	NSL	Low	1.2	1.55	1.27	No change	No change	Medium	Rare	Poor	Poor		Infill +	2	63
pecan	Carya illinoensis	NSH	Low	1.2	1.44	1.18	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	64
loblolly-bay	Gordonia lasianthus	NSH	Medium	1.2	1.38	1.13	No change	No change	Medium	Rare	Poor	Poor	Infill +		2	65
chestnut oak	Quercus prinus	NDH	High	1.2	0.98	0.8	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	66
bitternut hickory	Carya cordiformis	WSL	Low	1.2	0.67	0.55	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	67
wild plum	Prunus americana	NSLX	FIA	1.2	0.65	0.53	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	68
yellow buckeye	Aesculus flava	NSL	Low	1.2	0.49	0.4	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	69
black walnut	Juglans nigra	WDH	Low	1.2	0.44	0.36	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	70
white ash	Fraxinus americana	WDL	Medium	1.2	0.24	0.2	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	71
sand pine	Pinus clausa	NDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate ++	Migrate +	3	72
florida maple	Acer barbatum	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate ++	3	73
serviceberry	Amelanchier spp.	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	74
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	75
shellbark hickory	Carya laciniosa	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	76
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	77
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	New Habitat	Low	Absent	Unknown	New Habitat			3	78
honeylocust	Gleditsia triacanthos	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	79
southern magnolia	Magnolia grandiflora	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	80
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	81
chinkapin oak	Quercus muehlenbergii	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	82
Shumard oak	Quercus shumardii	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	83
American basswood	Tilia americana	WSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	84
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	85