

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	73.9	2789.77	28.67	No change	No change	Medium	Abundant	Good	Good	Infill ++	Infill ++	1	1
pond pine	Pinus serotina	NSH	Medium	47.4	1274.02	23.17	No change	Sm. dec.	Low	Abundant	Fair	Fair	Infill +	Infill +	0	2
red maple	Acer rubrum	WDH	High	75.8	956.23	10.88	Sm. dec.	No change	High	Abundant	Good	Very Good	Infill ++	Infill ++	1	3
sweetgum	Liquidambar styraciflua	WDH	High	67.7	745.83	10.08	No change	Sm. inc.	Medium	Abundant	Good	Very Good	Infill ++	Infill ++	1	4
swamp tupelo	Nyssa biflora	NDH	Medium	58.9	538.45	7.27	No change	No change	Low	Abundant	Fair	Fair	Infill +	Infill +	0	5
redbay	Persea borbonia	NSL	Low	65.7	427.91	4.53	No change	Sm. dec.	High	Common	Good	Fair	Infill ++	Infill +	1	6
loblolly-bay	Gordonia lasianthus	NSH	Medium	18.7	222.51	9.56	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	7
bald cypress	Taxodium distichum	NSH	Medium	21.9	175.7	5.98	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good	Infill ++	Infill ++	1	8
pond cypress	Taxodium ascendens	NSH	Medium	13.6	166.22	11.39	No change	Sm. dec.	Medium	Common	Fair	Poor	Infill +	Infill +	2	9
sweetbay	Magnolia virginiana	NSL	Medium	45.4	154.77	3.13	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	10
yellow-poplar	Liriodendron tulipifera	WDH	High	22	135.1	6.43	Sm. dec.	Sm. dec.	High	Common	Fair	Fair	Infill +	Infill +	1	11
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	19.6	116.83	7.86	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	12
green ash	Fraxinus pennsylvanica	WSH	Low	24.2	104.74	7.66	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	13
water tupelo	Nyssa aquatica	NSH	Medium	5.5	75.82	9.03	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	2	14
slash pine	Pinuselliottii	NDH	High	1.2	59.79	48.84	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			2	15
water oak	Quercus nigra	WDH	High	38.9	50.86	1.69	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	2	16
laurel oak	Quercus laurifolia	NDH	Medium	20.7	49.29	1.95	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	17
American holly	Ilex opaca	NSL	Medium	30	46.23	1.56	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	18
slippery elm	Ulmus rubra	WSL	Low	7.9	28.05	6.41	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	19
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	11.4	26.94	1.84	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	20
willow oak	Quercus phellos	NSL	Low	18.4	24.61	2.08	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	21
American elm	Ulmus americana	WDH	Medium	16.7	24.5	1.82	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	22
black willow	Salix nigra	NSH	Low	9.7	23.54	3.18	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	23
eastern redcedar	Juniperus virginiana	WDH	Medium	2.4	19.15	3.81	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	24
live oak	Quercus virginiana	NDH	High	1.7	15.56	4.35	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	25
blackgum	Nyssa sylvatica	WDL	Medium	16.4	15.32	1.09	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	26
southern red oak	Quercus falcata	WDL	Medium	7.3	15	1.52	Sm. inc.	Lg. inc.	High	Rare	Good	Good			2	27
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	4.1	13.2	1.6	No change	Sm. inc.	Medium	Rare	Poor	Fair		Infill +	2	28
swamp chestnut oak	Quercus michauxii	NSL	Low	13.3	10.61	1.72	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	2	29
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	1.8	6.4	2.09	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	30
black cherry	Prunus serotina	WDL	Medium	12.3	5.09	0.67	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	31
post oak	Quercus stellata	WDH	High	4.6	4.86	1.26	Lg. dec.	Lg. inc.	High	Rare	Poor	Good			2	32
longleaf pine	Pinus palustris	NSH	Medium	2.8	4.79	1.62	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	33
white oak	Quercus alba	WDH	Medium	9.4	4.22	0.73	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	34
American beech	Fagus grandifolia	WDH	High	8.5	3.8	0.52	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	35
river birch	Betula nigra	NSL	Low	1.2	3.56	2.86	Sm. dec.	No change	Medium	Rare	Very Poor	Poor			2	36
Shumard oak	Quercus shumardii	NSL	Low	1.1	2.52	1.86	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	37
pignut hickory	Carya glabra	WDL	Medium	2.3	1.97	0.78	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	38
mockernut hickory	Carya alba	WDL	Medium	1.8	1.94	0.5	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	39
flowering dogwood	Cornus florida	WDL	Medium	7	1.59	0.23	No change	No change	Medium	Rare	Poor	Poor			0	40
pumpkin ash	Fraxinus profunda	NSH	FIA	6.7	1.06	0.51	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	41
sassafras	Sassafras albidum	WSL	Low	1.2	0.97	0.78	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	42
sourwood	Oxydendrum arboreum	NDL	High	3.8	0.78	0.51	No change	No change	High	Rare	Fair	Fair	Infill +		2	43
blackjack oak	Quercus marilandica	NSL	Medium	0.3	0.69	0.16	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	44
Carolina ash	Fraxinus caroliniana	NSL	FIA	4.8	0.6	1.97	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	45
eastern cottonwood	Populus deltoides	NSH	Low	0.7	0.52	0.24	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	46
black oak	Quercus velutina	WDH	High	2.3	0.4	0.16	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	47
swamp white oak	Quercus bicolor	NSL	Low	1.1	0.36	0.28	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	48
boxelder	Acer negundo	WSH	Low	1.2	0.19	0.15	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	49
overcup oak	Quercus lyrata	NSL	Medium	4.8	0.15	0.46	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	50
white ash	Fraxinus americana	WDL	Medium	4.8	0.07	0.24	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	51
serviceberry	Amelanchier spp.	NSL	Low	4.8	0.05	0.18	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair			0	52
sand pine	Pinus clausa	NDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	53

**National Park**  
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Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	54
spruce pine	Pinus glabra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	55
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	56
sugar maple	Acer saccharum	WDH	High	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	57
pawpaw	Asimina triloba	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	58
water hickory	Carya aquatica	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	59
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	60
silverbell	Halesia spp.	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	61
southern magnolia	Magnolia grandiflora	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +		3	62
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	63
red mulberry	Morus rubra	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	64
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	65
turkey oak	Quercus laevis	NSH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	66
chinkapin oak	Quercus muehlenbergii	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	67
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Migrate +	3	68
cabbage palmetto	Sabal palmetto	NDH	Medium	0	0	0	New Habitat	New Habitat	NA	Absent	New Habitat	New Habitat			0	69
American basswood	Tilia americana	WSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	70
winged elm	Ulmus alata	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	71
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	72