

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	93.3	3148.46	34.37	No change	No change	Medium	Abundant	Good	Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	87.6	713.28	8.2	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	2
yellow-poplar	Liriodendron tulipifera	WDH	High	80.1	675.31	8.38	Lg. dec.	Lg. dec.	High	Abundant	Good	Good			1	3
red maple	Acer rubrum	WDH	High	88.9	670.42	7.95	Sm. inc.	Sm. inc.	High	Abundant	Very Good	Very Good			1	4
white oak	Quercus alba	WDH	Medium	65.9	493.32	6.36	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	5
American holly	Ilex opaca	NSL	Medium	74.9	436.05	4.88	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	6
swamp tupelo	Nyssa biflora	NDH	Medium	27.1	209.18	6.95	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	7
southern red oak	Quercus falcata	WDL	Medium	62.4	202.32	3.12	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	8
American beech	Fagus grandifolia	WDH	High	51.9	195.08	3.81	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	0	9
Virginia pine	Pinus virginiana	NDH	High	34	172.61	4.05	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	10
blackgum	Nyssa sylvatica	WDL	Medium	64.4	161.71	2.33	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	11
mockernut hickory	Carya alba	WDL	Medium	37	147.5	3.89	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	1	12
scarlet oak	Quercus coccinea	WDL	Medium	32.9	128.57	3.61	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	13
water oak	Quercus nigra	WDH	High	44	110.06	2.56	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	14
green ash	Fraxinus pennsylvanica	WSH	Low	21.9	108.97	5.83	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good	Infill ++	Infill ++	1	15
sassafras	Sassafras albidum	WSL	Low	21.2	102.23	4.03	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	16
black oak	Quercus velutina	WDH	High	42.8	94.13	2.24	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	0	17
swamp chestnut oak	Quercus michauxii	NSL	Low	17.3	82.9	4.23	Sm. dec.	No change	Medium	Common	Poor	Fair	Infill +	Infill +	1	18
northern red oak	Quercus rubra	WDH	Medium	20.1	73.06	2.95	Very Lg. dec.	Very Lg. dec.	High	Common	Lost	Lost			0	19
sourwood	Oxydendrum arboreum	NDL	High	41.6	69.23	2	Lg. dec.	Lg. dec.	High	Common	Fair	Fair			1	20
water tupelo	Nyssa aquatica	NSH	Medium	3.5	66.4	19.14	Sm. dec.	No change	Low	Common	Poor	Poor			0	21
willow oak	Quercus phellos	NSL	Low	18.9	64.52	2.85	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	22
black cherry	Prunus serotina	WDL	Medium	35	51.45	1.29	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	23
bald cypress	Taxodium distichum	NSH	Medium	4.5	47.81	9.48	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2	24
American hornbeam; musc	Carpinus caroliniana	WSL	Low	30.5	45.73	1.54	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	25
chestnut oak	Quercus prinus	NDH	High	6.9	34.34	3.04	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	26
slippery elm	Ulmus rubra	WSL	Low	8.7	32.11	3.29	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	27
American elm	Ulmus americana	WDH	Medium	13.4	31.87	1.99	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	28
flowering dogwood	Cornus florida	WDL	Medium	27.1	28.86	1.09	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair			1	29
common persimmon	Diospyros virginiana	NSL	Low	3.9	26.44	3.21	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	30
pignut hickory	Carya glabra	WDL	Medium	21.9	23.19	0.94	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	31
black walnut	Juglans nigra	WDH	Low	5.2	22.62	2.27	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	32
hackberry	Celtis occidentalis	WDH	Medium	3.3	22.55	5.9	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	33
sycamore	Platanus occidentalis	NSL	Low	12.1	21.26	1.86	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	34
river birch	Betula nigra	NSL	Low	10.1	19.34	1.79	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	35
eastern redcedar	Juniperus virginiana	WDH	Medium	16.3	18.09	1.04	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	36
pin oak	Quercus palustris	NSH	Low	2.3	14.3	6.1	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	37
black locust	Robinia pseudoacacia	NDH	Low	5.8	14.18	1.38	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	38
cherrybark oak; swamp red	Quercus pagoda	NSL	Medium	9.8	13.93	1.87	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	2	39
bitternut hickory	Carya cordiformis	WSL	Low	7.9	13.6	1.66	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	40
pawpaw	Asimina triloba	NSL	Low	3.1	12.66	2.82	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	41
winged elm	Ulmus alata	WDL	Medium	10	12.12	1.11	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good		Infill ++	2	42
shortleaf pine	Pinus echinata	WDH	High	3.5	10.52	3.03	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	43
sweetbay	Magnolia virginiana	NSL	Medium	19.6	10.5	0.75	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	44
butternut	Juglans cinerea	NSLX	FIA	2.3	9.83	4.25	Unknown	Unknown	Low	Rare	FIA Only	FIA Only			0	45
eastern cottonwood	Populus deltoides	NSH	Low	1.1	8.27	6.86	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	46
post oak	Quercus stellata	WDH	High	7.8	7.55	0.87	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	47
white ash	Fraxinus americana	WDL	Medium	6.9	7.16	1.02	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	48
pumpkin ash	Fraxinus profunda	NSH	FIA	1	6.09	4.54	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	49
overcup oak	Quercus lyrata	NSL	Medium	3.5	4.5	1.3	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair		Infill +	2	50
laurel oak	Quercus laurifolia	NDH	Medium	4.6	3.8	0.82	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	51
ailanthus	Ailanthus altissima	NSL	FIA	4.5	3.75	1.27	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	52
redbay	Persea borbonia	NSL	Low	5.3	3.5	1.17	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	53

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northern catalpa	Catalpa speciosa	NSHX	FIA	1.2	2.58	2.23	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	54
Carolina ash	Fraxinus caroliniana	NSL	FIA	0.8	1.97	1.2	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	55
florida maple	Acer barbatum	NSL	Low	1.1	1.85	1.55	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	56
shagbark hickory	Carya ovata	WSL	Medium	1.8	1.66	0.55	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	57
paulownia	Paulownia tomentosa	NSL	FIA	0.8	1.45	0.86	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	58
bigtooth aspen	Populus marilandica	NSL	Medium	2.3	1.03	0.44	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	59
red mulberry	Morus rubra	NSL	Low	1.7	0.97	0.29	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	60
pond pine	Pinus serotina	NSH	Medium	1.2	0.8	0.69	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +		2	61
serviceberry	Amelanchier spp.	NSL	Low	1.1	0.77	0.64	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	62
blackjack oak	Quercus marilandica	NSL	Medium	1.2	0.75	0.65	Very Lg. dec.	Lg. inc.	High	Rare	Lost	Good			2	63
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	3	0.72	1.58	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	64
chokecherry	Prunus virginiana	NSLX	FIA	1.1	0.64	0.54	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	65
Shumard oak	Quercus shumardii	NSL	Low	1.1	0.61	0.51	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	66
southern magnolia	Magnolia grandiflora	NSL	Low	0.8	0.58	0.34	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	67
American chestnut	Castanea dentata	NSLX	FIA	1.1	0.53	0.43	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	68
white mulberry	Morus alba	NSL	FIA	2.2	0.4	0.66	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	69
eastern redbud	Cercis canadensis	NSL	Low	1.2	0.23	0.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	70
slash pine	Pinus elliotii	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	71
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	72
pond cypress	Taxodium ascendens	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	73
boxelder	Acer negundo	WSH	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	74
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	75
water hickory	Carya aquatica	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	76
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Likely +	Likely +	3	77
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	78
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	79
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	80
honeylocust	Gleditsia triacanthos	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	81
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	82
water elm	Planera aquatica	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	83
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	84
shingle oak	Quercus imbricaria	NDH	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	85
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	86
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	87
black willow	Salix nigra	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	88
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	89