

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
white oak	Quercus alba	WDH	Medium	90.7	1563.53	17.24	Sm. dec.	Sm. dec.	High	Abundant	Good	Good			1	1
black oak	Quercus velutina	WDH	High	86	1026.1	11.93	Sm. dec.	Sm. dec.	Medium	Abundant	Fair	Fair			0	2
northern red oak	Quercus rubra	WDH	Medium	83.7	955.5	11.41	Sm. dec.	Sm. dec.	High	Abundant	Good	Good			1	3
eastern redcedar	Juniperus virginiana	WDH	Medium	70.9	761.38	10.73	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	4
post oak	Quercus stellata	WDH	High	77.9	716.71	9.2	Lg. inc.	Lg. inc.	High	Abundant	Very Good	Very Good			1	5
black hickory	Carya texana	NDL	High	88.4	580.14	6.57	Sm. inc.	No change	Medium	Abundant	Very Good	Good			1	6
shortleaf pine	Pinus echinata	WDH	High	48.8	524.99	10.75	Lg. inc.	Lg. inc.	Medium	Abundant	Very Good	Very Good			1	7
mockernut hickory	Carya alba	WDL	Medium	76.7	457.97	5.97	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	8
blackgum	Nyssa sylvatica	WDL	Medium	75.6	354.63	4.69	No change	No change	High	Common	Good	Good			1	9
southern red oak	Quercus falcata	WDL	Medium	45.3	254.37	5.61	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	10
winged elm	Ulmus alata	WDL	Medium	69.8	196.51	2.82	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	11
red maple	Acer rubrum	WDH	High	51.2	179.19	3.5	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	12
florida maple	Acer barbatum	NSL	Low	40.7	162.74	4	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	13
flowering dogwood	Cornus florida	WDL	Medium	70.9	161.01	2.27	No change	No change	Medium	Common	Fair	Fair			1	14
sweetgum	Liquidambar styraciflua	WDH	High	29.1	152.97	5.26	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	15
white ash	Fraxinus americana	WDL	Medium	55.8	146.92	2.63	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	16
shagbark hickory	Carya ovata	WSL	Medium	33.7	139.07	4.12	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	17
black cherry	Prunus serotina	WDL	Medium	53.5	110.38	2.06	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	18
sassafras	Sassafras albidum	WSL	Low	48.8	109.05	2.23	No change	Sm. inc.	Medium	Common	Fair	Good			1	19
black locust	Robinia pseudoacacia	NDH	Low	31.4	105.94	3.38	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	20
sycamore	Platanus occidentalis	NSL	Low	24.4	103.27	4.23	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	21
hackberry	Celtis occidentalis	WDH	Medium	15.1	97.23	6.43	No change	Sm. inc.	High	Common	Good	Very Good			1	22
American elm	Ulmus americana	WDH	Medium	37.2	95.08	2.56	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	23
American beech	Fagus grandifolia	WDH	High	12.8	93.29	7.29	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	2	24
blackjack oak	Quercus marilandica	NSL	Medium	26.7	88	3.29	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	25
chinkapin oak	Quercus muehlenbergii	NSL	Medium	37.2	87.85	2.36	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	26
black walnut	Juglans nigra	WDH	Low	30.2	72.49	2.4	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	27
slippery elm	Ulmus rubra	WSL	Low	31.4	68.28	2.17	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	28
bitternut hickory	Carya cordiformis	WSL	Low	23.3	60.36	2.6	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	29
pecan	Carya illinoensis	NSH	Low	1.2	58.14	50	No change	Sm. inc.	Low	Common	Poor	Fair		Infill +	2	30
eastern redbud	Cercis canadensis	NSL	Low	26.7	43.05	1.61	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair			1	31
sugar maple	Acer saccharum	WDH	High	10.5	42.91	4.1	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	32
common persimmon	Diospyros virginiana	NSL	Low	26.7	39.23	1.47	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	33
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	33.7	35.37	1.05	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	34
serviceberry	Amelanchier spp.	NSL	Low	26.7	26.12	0.98	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	35
American basswood	Tilia americana	WSL	Medium	7	15.27	2.19	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	36
red mulberry	Morus rubra	NSL	Low	11.6	14.34	1.23	Sm. dec.	Lg. inc.	Medium	Rare	Very Poor	Good			1	37
pignut hickory	Carya glabra	WDL	Medium	10.5	13.58	1.3	No change	Lg. inc.	Medium	Rare	Poor	Good	Infill +	Infill ++	1	38
sugarberry	Celtis laevigata	NDH	Medium	11.6	11.94	1.03	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	39
green ash	Fraxinus pennsylvanica	WSH	Low	10.5	11.53	1.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	40
boxelder	Acer negundo	WSH	Low	5.8	11.48	1.97	No change	Sm. inc.	High	Rare	Fair	Good	Infill +	Infill ++	1	41
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	10.5	10.17	0.97	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	42
ashe juniper	Juniperus ashei	NDH	High	1.2	9.88	8.5	Lg. inc.	Lg. inc.	NA	Rare	Unknown	Unknown			0	43
honeylocust	Gleditsia triacanthos	NSH	Low	5.8	8.85	1.52	Sm. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	44
Shumard oak	Quercus shumardii	NSL	Low	4.7	7.5	1.61	No change	Sm. inc.	High	Rare	Fair	Good		Infill ++	2	45
Osage-orange	Maclura pomifera	NDH	Medium	2.3	7.33	3.15	No change	Sm. inc.	High	Rare	Fair	Good		Infill ++	2	46
paulownia	Paulownia tomentosa	NSL	FIA	2.3	7.08	3.04	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	47
northern catalpa	Catalpa speciosa	NSHX	FIA	1.2	6.98	6	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	48
butternut	Juglans cinerea	NSLX	FIA	2.3	6.98	3	Unknown	Unknown	Low	Rare	FIA Only	FIA Only			0	49
cucumbertree	Magnolia acuminata	NSL	Low	3.5	5.67	1.63	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	50
ailanthus	Ailanthus altissima	NSL	FIA	2.3	5.49	2.36	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	51
swamp chestnut oak	Quercus michauxii	NSL	Low	4.7	4.27	0.92	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	52
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	1.2	4.16	3.58	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	53

**National Park**  
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wild plum	Prunus americana	NSLX	FIA	4.7	4.13	0.89	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	54
pawpaw	Asimina triloba	NSL	Low	3.5	3	0.86	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	55
blue ash	Fraxinus quadrangulata	NSL	Low	1.2	2.01	1.73	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	56
shellbark hickory	Carya laciniosa	NSL	Low	2.3	1.24	0.53	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	57
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp	NSL	Low	1.2	0.81	0.7	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	58
American holly	Ilex opaca	NSL	Medium	1.2	0.64	0.55	Very Lg. dec.	Sm. dec.	Medium	Rare	Lost	Very Poor			0	59
Ohio buckeye	Aesculus glabra	NSL	Low	1.2	0.58	0.5	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	60
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	61
loblolly pine	Pinus taeda	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	62
Virginia pine	Pinus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	63
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	64
silver maple	Acer saccharinum	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	65
yellow birch	Betula alleghaniensis	NDL	High	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	66
river birch	Betula nigra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	67
black ash	Fraxinus nigra	WSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	68
yellow-poplar	Liriodendron tulipifera	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	69
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	70
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	0	0	0	Unknown	Unknown	NA	Absent	Unknown	Unknown			0	71
bur oak	Quercus macrocarpa	NDH	Medium	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	72
water oak	Quercus nigra	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	73
willow oak	Quercus phellos	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	74
chestnut oak	Quercus prinus	NDH	High	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat		Migrate +	3	75
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	76
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate ++	3	77