

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
yellow-poplar	Liriodendron tulipifera	WDH	High	80.7	1132.77	14.03	No change	Sm. dec.	High	Abundant	Very Good	Good			1	1
red maple	Acer rubrum	WDH	High	78.3	964.93	12.32	No change	Sm. dec.	High	Abundant	Very Good	Good			1	2
sugar maple	Acer saccharum	WDH	High	78.3	743.93	9.5	No change	Sm. dec.	High	Abundant	Very Good	Good			1	3
chestnut oak	Quercus prinus	NDH	High	57.8	614.65	10.63	Sm. inc.	Sm. inc.	High	Abundant	Very Good	Very Good			1	4
white oak	Quercus alba	WDH	Medium	62.7	593.71	9.48	Sm. inc.	Sm. inc.	High	Abundant	Very Good	Very Good			1	5
northern red oak	Quercus rubra	WDH	Medium	66.3	478.01	7.21	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	6
black locust	Robinia pseudoacacia	NDH	Low	66.3	470.67	7.1	No change	No change	Medium	Common	Fair	Fair			1	7
American beech	Fagus grandifolia	WDH	High	57.8	372.31	6.44	Sm. inc.	No change	Medium	Common	Good	Fair			1	8
black cherry	Prunus serotina	WDL	Medium	49.4	315.94	6.4	Sm. dec.	No change	Low	Common	Poor	Poor			0	9
black oak	Quercus velutina	WDH	High	49.4	313.29	6.34	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	10
white ash	Fraxinus americana	WDL	Medium	56.6	271.61	4.8	No change	No change	Low	Common	Poor	Poor			0	11
eastern hemlock	Tsuga canadensis	NSH	High	31.3	251.02	8.01	No change	No change	Low	Common	Poor	Poor			0	12
scarlet oak	Quercus coccinea	WDL	Medium	42.2	247.89	5.88	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	13
sweet birch	Betula lenta	NDH	High	48.2	231.27	4.8	No change	Sm. dec.	Low	Common	Poor	Poor			0	14
sourwood	Oxydendrum arboreum	NDL	High	53	207.69	3.92	No change	No change	High	Common	Very Good	Good			1	15
Virginia pine	Pinus virginiana	NDH	High	13.3	180.69	13.63	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	16
pignut hickory	Carya glabra	WDL	Medium	47	180.34	3.84	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	17
eastern white pine	Pinus strobus	WDH	High	20.5	166.76	8.14	Lg. inc.	Sm. inc.	Low	Common	Good	Fair			1	18
yellow buckeye	Aesculus flava	NSL	Low	26.5	164.71	6.21	Sm. dec.	Lg. dec.	Low	Common	Poor	Very Poor			0	19
American basswood	Tilia americana	WSL	Medium	34.9	162.12	4.64	Sm. inc.	No change	Medium	Common	Good	Fair			1	20
cucumbertree	Magnolia acuminata	NSL	Low	39.8	114.42	2.88	No change	No change	Medium	Common	Fair	Fair			1	21
shagbark hickory	Carya ovata	WSL	Medium	31.3	109.05	3.48	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	22
mocckernut hickory	Carya alba	WDL	Medium	34.9	102.05	2.92	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	23
blackgum	Nyssa sylvatica	WDL	Medium	45.8	99.28	2.17	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	24
eastern redcedar	Juniperus virginiana	WDH	Medium	7.2	83.7	11.58	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good	Infill ++	Infill ++	1	25
sycamore	Platanus occidentalis	NSL	Low	13.3	79.23	5.98	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	26
sassafras	Sassafras albidum	WSL	Low	30.1	63.36	2.1	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	27
bitternut hickory	Carya cordiformis	WSL	Low	21.7	63.07	2.91	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	28
slippery elm	Ulmus rubra	WSL	Low	18.1	61.27	3.39	No change	Sm. inc.	Medium	Common	Fair	Good			1	29
ailanthus	Ailanthus altissima	NSL	FIA	9.6	60.07	6.23	Unknown	Unknown	NA	Common	NNIS	NNIS			0	30
American elm	Ulmus americana	WDH	Medium	7.2	58.17	8.05	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	31
yellow birch	Betula alleghaniensis	NDL	High	8.4	52.73	6.25	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	32
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	20.5	49.13	2.4	Sm. inc.	Sm. inc.	NA	Rare	Unknown	Unknown			0	33
black walnut	Juglans nigra	WDH	Low	12	43.46	3.61	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	34
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	18.1	41.22	2.28	Sm. dec.	Sm. inc.	Medium	Rare	Very Poor	Fair			1	35
serviceberry	Amelanchier spp.	NSL	Low	25.3	37.99	1.5	No change	No change	Medium	Rare	Poor	Poor			1	36
paulownia	Paulownia tomentosa	NSL	FIA	7.2	34.9	4.83	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	37
chinkapin oak	Quercus muehlenbergii	NSL	Medium	3.6	31.33	8.67	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	38
flowering dogwood	Cornus florida	WDL	Medium	20.5	30.8	1.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	39
butternut	Juglans cinerea	NSLX	FIA	7.2	30.47	4.22	Unknown	Unknown	Low	Rare	FIA Only	FIA Only			0	40
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	20.5	26.37	1.29	Sm. inc.	Lg. inc.	High	Rare	Good	Good			1	41
pitch pine	Pinus rigida	NSH	High	4.8	23.66	4.91	No change	No change	Medium	Rare	Poor	Poor			1	42
striped maple	Acer pensylvanicum	NSL	Medium	10.8	19.34	1.78	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	43
post oak	Quercus stellata	WDH	High	3.6	17.89	4.95	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	44
pin cherry	Prunus pensylvanica	NSL	Low	8.4	15.07	1.79	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	45
Norway spruce	Picea abies	NSH	FIA	2.4	14.73	6.12	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	46
pawpaw	Asimina triloba	NSL	Low	3.6	9.87	2.73	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	47
eastern redbud	Cercis canadensis	NSL	Low	7.2	8.58	1.19	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	48
bigtooth aspen	Populus grandidentata	NSL	Medium	2.4	5.33	2.21	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	49
black willow	Salix nigra	NSH	Low	2.4	4.99	2.07	Sm. dec.	No change	Low	Rare	Very Poor	Very Poor			2	50
American holly	Ilex opaca	NSL	Medium	2.4	2.47	1.02	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	51
hackberry	Celtis occidentalis	WDH	Medium	1.2	2.41	2	No change	Lg. inc.	High	Rare	Fair	Good			2	52
American chestnut	Castanea dentata	NSLX	FIA	2.4	1.2	0.5	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	53

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river birch	Betula nigra	NSL	Low	1.2	0.9	0.75	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	54
black ash	Fraxinus nigra	WSH	Medium	1.2	0.82	0.68	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	55
sweetgum	Liquidambar styraciflua	WDH	High	1.2	0.78	0.65	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	56
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	57
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	58
Table Mountain pine	Pinus pungens	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	59
loblolly pine	Pinus taeda	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	60
northern white-cedar	Thuja occidentalis	WSH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	61
florida maple	Acer barbatum	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	62
boxelder	Acer negundo	WSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	63
black maple	Acer nigrum	NSH	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	64
mountain maple	Acer spicatum	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	65
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp	NSL	Low	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat			3	66
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	67
shellbark hickory	Carya laciniosa	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	68
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	69
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	70
common persimmon	Diospyros virginiana	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	71
green ash	Fraxinus pennsylvanica	WSH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	72
honeylocust	Gleditsia triacanthos	NSH	Low	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat		Migrate +	3	73
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	74
red mulberry	Morus rubra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	75
water tupelo	Nyssa aquatica	NSH	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	76
southern red oak	Quercus falcata	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	77
overcup oak	Quercus lyrata	NSL	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	78
blackjack oak	Quercus marilandica	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	79
water oak	Quercus nigra	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	80
Shumard oak	Quercus shumardii	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	81
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	82
winged elm	Ulmus alata	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	83