

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	90.2	1270.41	14.08	Sm. dec.	Lg. dec.	High	Abundant	Good	Good	Infill ++	Infill ++	1	1
red maple	Acer rubrum	WDH	High	91.5	1191	13.02	Sm. dec.	Sm. dec.	High	Abundant	Good	Good	Infill ++	Infill ++	1	2
sugar maple	Acer saccharum	WDH	High	85.4	853.74	10	Sm. dec.	Sm. dec.	High	Abundant	Good	Good	Infill ++	Infill ++	1	3
chestnut oak	Quercus prinus	NDH	High	69.5	742.83	10.69	No change	No change	High	Abundant	Very Good	Very Good	Infill ++	Infill ++	1	4
white oak	Quercus alba	WDH	Medium	58.5	530.22	9.06	Sm. inc.	Sm. inc.	High	Abundant	Very Good	Very Good	Infill ++	Infill ++	1	5
northern red oak	Quercus rubra	WDH	Medium	67.1	488.21	7.28	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	6
American beech	Fagus grandifolia	WDH	High	74.4	483.45	6.5	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	7
black locust	Robinia pseudoacacia	NDH	Low	64.6	372.23	5.76	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	8
black cherry	Prunus serotina	WDL	Medium	48.8	349.99	7.17	Sm. dec.	No change	Low	Common	Poor	Poor	Infill +	Infill +	0	9
sweet birch	Betula lenta	NDH	High	61	284.67	4.67	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor	Infill +	Infill +	0	10
pignut hickory	Carya glabra	WDL	Medium	53.7	261.73	4.88	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	11
scarlet oak	Quercus coccinea	WDL	Medium	43.9	246.43	5.61	Sm. inc.	No change	Medium	Common	Good	Fair	Infill ++	Infill +	1	12
American basswood	Tilia americana	WSL	Medium	41.5	231.38	5.58	No change	Sm. dec.	Medium	Common	Fair	Poor	Infill +	Infill +	1	13
black oak	Quercus velutina	WDH	High	51.2	227.94	4.45	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	14
white ash	Fraxinus americana	WDL	Medium	61	221.7	3.64	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair	Infill +	Infill +	1	15
sourwood	Oxydendrum arboreum	NDL	High	58.5	209.94	3.59	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	1	16
eastern hemlock	Tsuga canadensis	NSH	High	37.8	204.61	5.41	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	0	17
cucumbertree	Magnolia acuminata	NSL	Low	56.1	169.66	3.02	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	18
blackgum	Nyssa sylvatica	WDL	Medium	56.1	148.48	2.65	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	19
mockernut hickory	Carya alba	WDL	Medium	39	111.71	2.86	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	20
shagbark hickory	Carya ovata	WSL	Medium	29.3	103.44	3.53	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	21
yellow buckeye	Aesculus flava	NSL	Low	18.3	97.63	5.34	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor	Infill +	Infill +	0	22
sycamore	Platanus occidentalis	NSL	Low	13.4	93.5	6.97	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	23
yellow birch	Betula alleghaniensis	NDL	High	14.6	87.51	5.98	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	0	24
Virginia pine	Pinus virginiana	NDH	High	13.4	80.72	6.02	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	25
sassafras	Sassafras albidum	WSL	Low	37.8	60.05	1.59	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	26
pitch pine	Pinus rigida	NSH	High	12.2	58.68	4.81	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	0	27
bitternut hickory	Carya cordiformis	WSL	Low	23.2	56.38	2.43	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	28
ailanthus	Ailanthus altissima	NSL	FIA	9.8	52.82	5.41	Unknown	Unknown	NA	Common	NNIS	NNIS			0	29
slippery elm	Ulmus rubra	WSL	Low	19.5	51.41	2.63	No change	Sm. inc.	Medium	Common	Fair	Good	Infill +	Infill ++	1	30
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	20.7	47.66	2.3	No change	No change	NA	Rare	Unknown	Unknown			0	31
serviceberry	Amelanchier spp.	NSL	Low	25.6	36.94	1.44	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	32
paulownia	Paulownia tomentosa	NSL	FIA	7.3	34.7	4.74	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	33
American elm	Ulmus americana	WDH	Medium	7.3	26.52	3.63	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	2	34
pin cherry	Prunus pensylvanica	NSL	Low	13.4	26.3	1.96	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	35
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	20.7	25.7	1.24	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	36
eastern white pine	Pinus strobus	WDH	High	4.9	25.39	5.2	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	37
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	19.5	24.91	1.28	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	38
striped maple	Acer pensylvanicum	NSL	Medium	15.9	24.11	1.52	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	39
black walnut	Juglans nigra	WDH	Low	7.3	21	2.87	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	40
pawpaw	Asimina triloba	NSL	Low	8.5	16.83	1.97	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	41
bigtooth aspen	Populus grandidentata	NSL	Medium	3.7	10.82	2.96	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	42
flowering dogwood	Cornus florida	WDL	Medium	13.4	10.44	0.78	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	43
boxelder	Acer negundo	WSH	Low	1.2	7.99	6.55	No change	Sm. inc.	High	Rare	Fair	Good	Infill +	Infill ++	2	44
eastern redbud	Cercis canadensis	NSL	Low	7.3	5.79	0.79	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	45
black willow	Salix nigra	NSH	Low	2.4	5.05	2.07	Sm. dec.	No change	Low	Rare	Very Poor	Very Poor			2	46
common persimmon	Diospyros virginiana	NSL	Low	2.4	4.37	1.79	No change	Lg. inc.	High	Rare	Fair	Good	Infill +	Infill ++	2	47
American holly	Ilex opaca	NSL	Medium	3.7	3	0.82	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	48
butternut	Juglans cinerea	NSLX	FIA	2.4	2.65	1.08	Unknown	Unknown	Low	Rare	FIA Only	FIA Only			0	49
shellbark hickory	Carya laciniosa	NSL	Low	1.2	2.38	1.95	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	50
American chestnut	Castanea dentata	NSLX	FIA	4.9	2.13	0.44	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	51
chinkapin oak	Quercus muehlenbergii	NSL	Medium	1.2	2.07	1.7	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	52
red spruce	Picea rubens	NDH	High	1.2	1.83	1.5	No change	No change	Low	Rare	Very Poor	Very Poor			2	53

Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
eastern redcedar	Juniperus virginiana	WDH	Medium	1.2	1.77	1.45	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	54
river birch	Betula nigra	NSL	Low	1.2	0.91	0.75	No change	Sm. inc.	Medium	Rare	Poor	Fair		Infill +	2	55
black ash	Fraxinus nigra	WSH	Medium	1.2	0.83	0.68	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	56
sweetgum	Liquidambar styraciflua	WDH	High	1.2	0.79	0.65	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	57
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	58
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	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	Unknown	New Habitat	Medium	Absent	Unknown	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
black maple	Acer nigrum	NSH	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	63
mountain maple	Acer spicatum	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	64
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp	NSL	Low	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat			3	65
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	66
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	67
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	68
hackberry	Celtis occidentalis	WDH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	69
green ash	Fraxinus pennsylvanica	WSH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	70
honeylocust	Gleditsia triacanthos	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	71
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	72
red mulberry	Morus rubra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	73
water tupelo	Nyssa aquatica	NSH	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	74
southern red oak	Quercus falcata	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	75
overcup oak	Quercus lyrata	NSL	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	76
blackjack oak	Quercus marilandica	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	77
water oak	Quercus nigra	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	78
Shumard oak	Quercus shumardii	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	79
post oak	Quercus stellata	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	80
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	81
American mountain-ash	Sorbus americana	NSL	Low	0	0	0	Unknown	Unknown	Low	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