

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
red maple	Acer rubrum	WDH	High	86.5	803.79	17.13	Lg. dec.	Lg. dec.	High	Abundant	Good	Good			1	1
black cherry	Prunus serotina	WDL	Medium	78.8	420.19	13.53	Sm. dec.	Lg. dec.	Low	Common	Poor	Very Poor			0	2
sugar maple	Acer saccharum	WDH	High	48.7	354	11.43	No change	No change	High	Common	Good	Good			1	3
American elm	Ulmus americana	WDH	Medium	76.7	314.91	8.31	No change	No change	Medium	Common	Fair	Fair			1	4
yellow-poplar	Liriodendron tulipifera	WDH	High	28.6	249.73	14.8	No change	Sm. dec.	High	Common	Good	Fair			1	5
white ash	Fraxinus americana	WDL	Medium	62.2	240.05	8.48	Sm. inc.	No change	Low	Common	Fair	Poor			1	6
green ash	Fraxinus pennsylvanica	WSH	Low	58.6	229.2	8.51	No change	Sm. inc.	Medium	Common	Fair	Good			1	7
American beech	Fagus grandifolia	WDH	High	46.4	205.78	8.35	Sm. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	8
northern red oak	Quercus rubra	WDH	Medium	53.3	190.62	7.24	No change	No change	High	Common	Good	Good			1	9
shagbark hickory	Carya ovata	WSL	Medium	35.1	127.9	6.57	No change	No change	Medium	Common	Fair	Fair			1	10
pin oak	Quercus palustris	NSH	Low	33.2	126.12	8.93	Sm. dec.	No change	Low	Common	Poor	Poor			0	11
silver maple	Acer saccharinum	NSH	Low	31	124.19	8.71	No change	No change	High	Common	Good	Good			1	12
sassafras	Sassafras albidum	WSL	Low	22.8	88.13	8.07	No change	Sm. dec.	Medium	Common	Fair	Poor			1	13
sycamore	Platanus occidentalis	NSL	Low	19.1	81.78	10.13	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	14
bitternut hickory	Carya cordiformis	WSL	Low	28.6	79.35	5.86	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	15
eastern white pine	Pinus strobus	WDH	High	16	74.37	8.52	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	16
white oak	Quercus alba	WDH	Medium	24.6	70.81	5.75	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	17
American basswood	Tilia americana	WSL	Medium	40.1	64.85	5.26	No change	Sm. dec.	Medium	Common	Fair	Poor			1	18
Norway spruce	Picea abies	NSH	FIA	13	63.51	9.47	Unknown	Unknown	NA	Common	NNIS	NNIS			0	19
eastern cottonwood	Populus deltoides	NSH	Low	20.5	53.71	7.74	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	20
bigtooth aspen	Populus grandidentata	NSL	Medium	22.2	50.12	4.53	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	21
ailanthus	Ailanthus altissima	NSL	FIA	6.9	42.32	12.94	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	22
Scotch pine	Pinus sylvestris	NSH	FIA	11.4	38.63	17.72	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	23
blackgum	Nyssa sylvatica	WDL	Medium	24.5	38.58	3.36	No change	Sm. inc.	High	Rare	Fair	Good			1	24
swamp white oak	Quercus bicolor	NSL	Low	9.2	37.59	7.54	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	25
slippery elm	Ulmus rubra	WSL	Low	16	30.65	3.71	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	26
Osage-orange	Maclura pomifera	NDH	Medium	2.3	29.25	12.78	No change	No change	High	Rare	Fair	Fair	Infill +		2	27
black walnut	Juglans nigra	WDH	Low	22.9	23.75	3.28	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	28
black locust	Robinia pseudoacacia	NDH	Low	15.3	23.23	7.38	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	29
black oak	Quercus velutina	WDH	High	5.7	21.25	11.19	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	30
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	22.9	20.63	2.09	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	31
black willow	Salix nigra	NSH	Low	16	19.47	7.25	Lg. dec.	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	1	32
cucumbertree	Magnolia acuminata	NSL	Low	11.4	15.46	2.13	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	33
boxelder	Acer negundo	WSH	Low	13.7	13.95	3.15	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	34
bur oak	Quercus macrocarpa	NDH	Medium	1.1	12.53	10.49	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	35
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	8	11.82	1.48	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	36
yellow birch	Betula alleghaniensis	NDL	High	3.4	11.52	3.36	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	37
chokecherry	Prunus virginiana	NSLX	FIA	6.9	11.43	5.62	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	38
quaking aspen	Populus tremuloides	WDH	High	6.9	6.4	3.02	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	39
eastern hemlock	Tsuga canadensis	NSH	High	5.7	3.84	3.08	Lg. dec.	Very Lg. dec.	Low	Rare	Very Poor	Lost			0	40
serviceberry	Amelanchier spp.	NSL	Low	1.1	3.66	3.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	41
pignut hickory	Carya glabra	WDL	Medium	5.7	3.62	1.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	42
mockernut hickory	Carya alba	WDL	Medium	4.6	3.11	10.87	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	43
flowering dogwood	Cornus florida	WDL	Medium	1.9	2.44	0.82	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	44
black ash	Fraxinus nigra	WSH	Medium	5.7	1.56	0.93	Very Lg. dec.	Very Lg. dec.	Low	Rare	Lost	Lost			0	45
Ohio buckeye	Aesculus glabra	NSL	Low	4.6	0.93	3.25	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	46
sweetgum	Liquidambar styraciflua	WDH	High	5	0.89	0.53	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	47
sweet birch	Betula lenta	NDH	High	9.2	0.5	0.88	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	48
honeylocust	Gleditsia triacanthos	NSH	Low	4.6	0.33	1.15	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	49
hackberry	Celtis occidentalis	WDH	Medium	9.2	0.32	0.55	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	50
Virginia pine	Pinus virginiana	NDH	High	4.6	0.16	0.55	No change	Lg. dec.	Medium	Rare	Poor	Very Poor	Infill +		2	51
scarlet oak	Quercus coccinea	WDL	Medium	4.6	0.13	0.42	No change	No change	Medium	Rare	Poor	Poor	Infill +		2	52
eastern redcedar	Juniperus virginiana	WDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	53

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 +	Migrate +	3	54
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	55
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	56
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	57
eastern redbud	Cercis canadensis	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	58
common persimmon	Diospyros virginiana	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	59
blue ash	Fraxinus quadrangulata	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	60
red mulberry	Morus rubra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	61
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	62
southern red oak	Quercus falcata	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	63
shingle oak	Quercus imbricaria	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	64
blackjack oak	Quercus marilandica	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	65
chinkapin oak	Quercus muehlenbergii	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	66
Shumard oak	Quercus shumardii	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	67
post oak	Quercus stellata	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	68
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	69
winged elm	Ulmus alata	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	70
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	71