



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 ash	Fraxinus americana	WDL	Medium	72.4	119.6	7.7	No change	Sm. dec.	Low	Common	Poor	Poor	Infill +	Infill +	2	1
black walnut	Juglans nigra	WDH	Low	48.1	119.0	9.7	No change	Sm. dec.	Medium	Common	Fair	Poor	Infill +	Infill +	2	2
American elm	Ulmus americana	WDH	Medium	71	108.1	6.2	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	2	3
sugar maple	Acer saccharum	WDH	High	62.2	106.1	5.4	No change	Sm. dec.	High	Common	Good	Fair	Infill ++	Infill +	2	4
northern red oak	Quercus rubra	WDH	Medium	44.7	86.0	9.3	Sm. dec.	Lg. dec.	High	Common	Fair	Fair	Infill +	Infill +	2	5
shagbark hickory	Carya ovata	WSL	Medium	54.8	80.7	12.2	No change	Sm. dec.	Medium	Common	Fair	Poor	Infill +	Infill +	2	6
green ash	Fraxinus pennsylvanica	WSH	Low	38.9	79.0	12.9	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	7
hackberry	Celtis occidentalis	WDH	Medium	45.7	69.4	6.1	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	2	8
Ohio buckeye	Aesculus glabra	NSL	Low	35.5	50.4	4.6	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	2	9
American basswood	Tilia americana	WSL	Medium	43.9	41.4	4.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			2	10
black cherry	Prunus serotina	WDL	Medium	54.6	35.5	2.4	Sm. inc.	No change	Low	Rare	Poor	Very Poor	Infill +		2	11
white oak	Quercus alba	WDH	Medium	44.9	32.6	5.8	Sm. inc.	No change	High	Rare	Good	Fair	Infill ++	Infill +	2	12
swamp white oak	Quercus bicolor	NSL	Low	18.3	28.6	11.9	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			2	13
scarlet oak	Quercus coccinea	WDL	Medium	0.9	26.6	21.5	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	14
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	28.1	21.5	2.1	Sm. dec.	Lg. dec.	High	Rare	Poor	Poor	Infill +		2	15
bitternut hickory	Carya cordiformis	WSL	Low	26.3	19.5	2.7	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	16
pin oak	Quercus palustris	NSH	Low	16.3	18.7	5.0	Sm. inc.	Sm. inc.	Low	Rare	Poor	Poor	Infill +	Infill +	2	17
slippery elm	Ulmus rubra	WSL	Low	44.5	18.0	2.1	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	2	18
honeylocust	Gleditsia triacanthos	NSH	Low	8.3	17.6	2.4	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	19
eastern cottonwood	Populus deltoides	NSH	Low	14.8	16.4	7.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	20
boxelder	Acer negundo	WSH	Low	19.9	15.4	5.9	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	21
black willow	Salix nigra	NSH	Low	5	12.8	11.7	Sm. dec.	No change	Low	Rare	Very Poor	Very Poor			2	22
pignut hickory	Carya glabra	WDL	Medium	14.4	11.7	1.4	No change	Sm. dec.	Medium	Rare	Poor	Very Poor	Infill +		2	23
American beech	Fagus grandifolia	WDH	High	16.6	9.4	1.6	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			2	24
chinkapin oak	Quercus muehlenbergii	NSL	Medium	16.1	8.8	2.8	Lg. inc.	Sm. inc.	Medium	Rare	Good	Fair		Infill +	2	25
black oak	Quercus velutina	WDH	High	10.9	8.5	3.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	26
red maple	Acer rubrum	WDH	High	18.5	7.7	2.7	Sm. dec.	No change	High	Rare	Poor	Fair	Infill +	Infill +	2	27
mockernut hickory	Carya alba	WDL	Medium	18.8	7.5	4.1	Sm. dec.	Sm. inc.	High	Rare	Poor	Good	Infill +		2	28
silver maple	Acer saccharinum	NSH	Low	8.7	7.3	4.1	No change	Sm. inc.	High	Rare	Fair	Good	Infill +		2	29
Osage-orange	Maclura pomifera	NDH	Medium	7.3	6.9	1.0	Sm. inc.	Lg. inc.	High	Rare	Good	Good			2	30
sycamore	Platanus occidentalis	NSL	Low	10.4	5.1	1.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	31
eastern white pine	Pinus strobus	WDH	High	0.1	3.9	0.3	Lg. dec.	Very Lg. dec.	Low	Rare	Very Poor	Lost			0	32
black locust	Robinia pseudoacacia	NDH	Low	1.1	3.8	3.7	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2	33
bur oak	Quercus macrocarpa	NDH	Medium	11	3.7	0.9	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	34
red pine	Pinus resinosa	NSH	Medium	1.3	2.6	3.0	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	35
white mulberry	Morus alba	NSL	FIA	9.7	2.4	1.7	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	36
blue ash	Fraxinus quadrangulata	NSL	Low	3.9	2.2	0.9	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	37
yellow buckeye	Aesculus flava	NSL	Low	12.7	2.1	2.6	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	38
eastern redbud	Cercis canadensis	NSL	Low	5.8	1.7	0.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	39
yellow-poplar	Liriodendron tulipifera	WDH	High	1.1	1.6	1.5	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	40
flowering dogwood	Cornus florida	WDL	Medium	1.3	1.4	0.4	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	41
northern pin oak	Quercus ellipsoidalis	NSH	Medium	0.6	1.0	0.1	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	42
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	9.9	1.0	0.5	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	43
pawpaw	Asimina triloba	NSL	Low	5.2	0.8	0.6	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	44
rock elm	Ulmus thomasii	NSLX	FIA	4.9	0.8	0.4	Unknown	Unknown	Low	Rare	FIA Only	FIA Only			0	45
eastern redcedar	Juniperus virginiana	WDH	Medium	1.1	0.7	0.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	46
black maple	Acer nigrum	NSH	Low	1.3	0.6	0.7	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	47

One x One Degree  
Climate Change Atlas Tree Species

USDA Forest Service  
Northern Research Station  
Landscape Change Research Group  
Iverson, Peters, Prasad, Matthews

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Virginia pine	Pinus virginiana	NDH	High	1.1	0.5	0.5	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	48
Norway spruce	Picea abies	NSH	FIA	4.2	0.5	2.0	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	49
ailanthus	Ailanthus altissima	NSL	FIA	0.6	0.5	0.3	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	50
shingle oak	Quercus imbricaria	NDH	Medium	0.7	0.5	0.3	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	51
overcup oak	Quercus lyrata	NSL	Medium	4.2	0.4	1.6	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	52
black ash	Fraxinus nigra	WSH	Medium	0.1	0.3	0.0	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	53
red mulberry	Morus rubra	NSL	Low	0.4	0.2	0.1	Lg. inc.	Sm. dec.	Medium	Rare	Good	Very Poor			2	54
jack pine	Pinus banksiana	NSH	Medium	0.1	0.2	0.0	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	55
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	56
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	57
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	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
sweetgum	Liquidambar styraciflua	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	60
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	61
blackjack oak	Quercus marilandica	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	62
Shumard oak	Quercus shumardii	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	63
post oak	Quercus stellata	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	64
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	65
sassafras	Sassafras albidum	WSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++		3	66
winged elm	Ulmus alata	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	67