



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
post oak	Quercus stellata	WDH	High	90.4	2645.4	23.1	No change	No change	High	Abundant	Very Good	Very Good			1	1
shortleaf pine	Pinus echinata	WDH	High	67.9	1783.6	21.8	No change	No change	Medium	Abundant	Good	Good			1	2
loblolly pine	Pinus taeda	WDH	High	39.2	1273.0	27.0	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	3
winged elm	Ulmus alata	WDL	Medium	86.4	693.0	6.0	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	4
eastern redcedar	Juniperus virginiana	WDH	Medium	66	515.8	6.2	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	5
blackjack oak	Quercus marilandica	NSL	Medium	64.4	463.1	5.6	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	6
black hickory	Carya texana	NDL	High	57	358.4	4.5	No change	No change	Medium	Common	Fair	Fair			1	7
mockernut hickory	Carya alba	WDL	Medium	67.3	320.1	4.2	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	8
water oak	Quercus nigra	WDH	High	34.2	270.7	5.3	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	9
southern red oak	Quercus falcata	WDL	Medium	26.7	235.3	6.0	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	10
sweetgum	Liquidambar styraciflua	WDH	High	14.9	231.6	9.9	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	11
green ash	Fraxinus pennsylvanica	WSH	Low	34.5	227.1	5.6	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	12
Osage-orange	Maclura pomifera	NDH	Medium	18.3	187.9	5.8	No change	No change	High	Common	Good	Good			1	13
black oak	Quercus velutina	WDH	High	37.4	146.9	3.0	Sm. inc.	No change	Medium	Common	Good	Fair			1	14
American elm	Ulmus americana	WDH	Medium	26.8	135.9	3.7	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	15
white ash	Fraxinus americana	WDL	Medium	31.8	126.6	3.4	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	16
honeylocust	Gleditsia triacanthos	NSH	Low	13.9	123.3	6.4	No change	Sm. inc.	High	Common	Good	Very Good			1	17
white oak	Quercus alba	WDH	Medium	20.2	120.5	4.2	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	18
sugarberry	Celtis laevigata	NDH	Medium	23.4	83.8	2.5	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	19
northern red oak	Quercus rubra	WDH	Medium	22	81.3	3.1	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	20
blackgum	Nyssa sylvatica	WDL	Medium	21	79.5	2.9	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	21
cedar elm	Ulmus crassifolia	NDH	Medium	8.5	78.3	6.4	Sm. inc.	Lg. inc.	Low	Common	Fair	Good	Infill +	Infill ++	2	22
slippery elm	Ulmus rubra	WSL	Low	11.2	76.6	5.6	Sm. dec.	Sm. inc.	Medium	Common	Poor	Good			1	23
red maple	Acer rubrum	WDH	High	18	66.3	2.9	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	24
Shumard oak	Quercus shumardii	NSL	Low	7.6	62.8	5.6	No change	No change	High	Common	Good	Good			1	25
bitternut hickory	Carya cordiformis	WSL	Low	9.8	52.1	2.9	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	26
common persimmon	Diospyros virginiana	NSL	Low	14.2	45.8	3.3	Sm. inc.	Lg. inc.	High	Rare	Good	Good			1	27
sycamore	Platanus occidentalis	NSL	Low	5.3	43.6	2.6	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	28
boxelder	Acer negundo	WSH	Low	4.2	42.9	2.4	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	1	29
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	3.1	40.5	9.0	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	30
black willow	Salix nigra	NSH	Low	5.6	40.5	4.1	No change	No change	Low	Rare	Very Poor	Very Poor			0	31
black cherry	Prunus serotina	WDL	Medium	19.2	40.4	1.3	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair			1	32
river birch	Betula nigra	NSL	Low	10.2	40.1	3.8	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			1	33
willow oak	Quercus phellos	NSL	Low	3.7	39.6	4.5	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	34
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	14.3	36.2	2.3	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	35
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	7.5	25.5	2.8	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	36
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	13	19.1	1.2	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	37
chinkapin oak	Quercus muehlenbergii	NSL	Medium	5.3	17.1	2.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	38
pecan	Carya illinoensis	NSH	Low	5.2	16.7	2.7	Sm. inc.	Lg. inc.	Low	Rare	Poor	Fair	Infill +	Infill +	1	39
silver maple	Acer saccharinum	NSH	Low	0.1	16.4	1.5	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	40
hackberry	Celtis occidentalis	WDH	Medium	6.5	14.4	2.7	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	1	41
eastern redbud	Cercis canadensis	NSL	Low	8.2	13.7	1.1	No change	No change	Medium	Rare	Poor	Poor			1	42
sassafras	Sassafras albidum	WSL	Low	2.9	10.5	3.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	43
shagbark hickory	Carya ovata	WSL	Medium	1.4	10.4	2.4	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	44
overcup oak	Quercus lyrata	NSL	Medium	1.9	10.1	2.6	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			2	45
ailanthus	Ailanthus altissima	NSL	FIA	1	10.1	10.3	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	46
red mulberry	Morus rubra	NSL	Low	7.8	9.7	1.2	No change	Sm. inc.	Medium	Rare	Poor	Fair			1	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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pin oak	Quercus palustris	NSH	Low	2.9	9.2	3.1	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	48
florida maple	Acer barbatum	NSL	Low	1.8	8.5	4.1	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	49
water hickory	Carya aquatica	NSL	Medium	2.8	7.8	2.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	50
black walnut	Juglans nigra	WDH	Low	1.3	7.7	3.4	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	51
water elm	Planera aquatica	NSL	Low	1	7.1	7.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	52
flowering dogwood	Cornus florida	WDL	Medium	8.5	5.5	0.6	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	53
wild plum	Prunus americana	NSLX	FIA	4.4	3.4	0.6	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	54
American holly	Ilex opaca	NSL	Medium	1.4	3.2	1.2	No change	No change	Medium	Rare	Poor	Poor		Infill +	2	55
black locust	Robinia pseudoacacia	NDH	Low	1.1	2.6	0.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	56
pignut hickory	Carya glabra	WDL	Medium	2	2.3	1.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	57
serviceberry	Amelanchier spp.	NSL	Low	1	0.6	0.6	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	58
white mulberry	Morus alba	NSL	FIA	1	0.6	0.6	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	59
nuttall oak	Quercus texana	NSH	Medium	1	0.5	0.5	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	60
shellbark hickory	Carya laciniosa	NSL	Low	0.8	0.5	0.4	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	61
pawpaw	Asimina triloba	NSL	Low	0.5	0.4	0.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	62
ashe juniper	Juniperus ashei	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	63
slash pine	Pinus elliotii	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	64
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	65
American beech	Fagus grandifolia	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	66
black ash	Fraxinus nigra	WSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	67
silverbell	Halesia spp.	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	68
yellow-poplar	Liriodendron tulipifera	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	69
southern magnolia	Magnolia grandiflora	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	70
sweetbay	Magnolia virginiana	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	71
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	72
water tupelo	Nyssa aquatica	NSH	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	73
sourwood	Oxydendrum arboreum	NDL	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	74
eastern cottonwood	Populus deltoides	NSH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	75
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	76
laurel oak	Quercus laurifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	77
bur oak	Quercus macrocarpa	NDH	Medium	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	78
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	79
bluejack oak	Quercus incana	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	80