

Area of Region sq. km sq. mi FIA Plots
8,200.0 3,166.0 306

Species Information

The columns below provide brief summaries of the species associated with the region and described in the table on the next pages. Definitions are provided in the Excel file for this region.

Genus	Species	Abundance		Model		Potential Change in Habitat Suitability		Capability to Cope or Persist		Migration Potential					
				Reliability	Adaptability	Scenario RCP45	Scenario RCP85	Scenario RCP45	Scenario RCP85	SHIFT RCP45	SHIFT RCP85				
Ash	2			High	22	23	Increase	31	34	Very Good	10	11	Likely	4	5
Hickory	6			Medium	32	54	No Change	20	18	Good	21	21	Infill	16	20
Maple	3	Abundant	2	Low	35	13	Decrease	17	16	Fair	9	12	Migrate	2	1
Oak	15	Common	25	FIA	4		New	11	14	Poor	13	13			
Pine	7	Rare	45				Unknown	14	11	Very Poor	15	11			
Other	39	Absent	17							FIA Only	2	2			
	72		89		93	90		93	93	Unknown	10	7			
											80	77			

Potential Changes in Climate Variables

Temperature (°F)

Scenario	2009	2039	2069	2099	
Annual	61.0	62.8	64.9	64.9	
Average	61.0	63.2	65.6	68.3	
GFDL45	61.0	63.9	65.9	66.7	
GFDL85	61.0	63.8	67.0	70.7	
HAD45	61.0	63.3	66.1	67.6	
HAD85	61.0	63.6	67.6	71.7	
Growing Season	74.8	76.5	78.3	78.7	
May—Sep	74.8	77.9	81.5	85.7	
Coldest Month	40.9	43.3	44.1	44.1	
Average	40.9	43.9	44.2	44.7	
Warmest Month	79.7	81.7	82.6	82.6	
Average	79.7	82.5	83.3	84.3	

Precipitation (in)

Scenario	2009	2039	2069	2099	
Annual	48.1	51.6	54.4	55.7	
Total	48.1	51.9	55.4	61.7	
GFDL45	48.1	53.9	57.8	60.9	
GFDL85	48.1	53.1	59.3	59.3	
HAD45	48.1	48.0	51.5	53.0	
HAD85	48.1	53.5	48.7	51.5	
Growing Season	20.0	22.6	24.6	25.3	
May—Sep	20.0	24.9	27.6	28.3	
HAD45	20.0	19.9	20.4	21.3	
HAD85	20.0	22.9	18.3	18.6	

NOTE: For the six climate variables, four 30-year periods are used to indicate six potential future trajectories. The period ending in 2009 is based on modeled observations from the PRISM Climate Group and the three future periods were obtained from the NASA NEX-DCP30 dataset. Future climate projections from three models under two emission scenarios show estimates of each climate variable within the region. The three models are CCSM4, GFDL CM3, and HadGEM2-ES and the emission scenarios are the 4.5 and 8.5 RCP. The average value for the region is reported, even though locations within the region may vary substantially based on latitude, elevation, land-use, or other factors.

Cite as: Iverson, L.R.; Prasad, A.M.; Peters, M.P.; Matthews, S.N. 2019. Facilitating Adaptive Forest Management under Climate Change: A Spatially Specific Synthesis of 125 Species for Habitat Changes and Assisted Migration over the Eastern United States. *Forests*. 10(11): 989. <https://doi.org/10.3390/f10110989>.

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
loblolly pine	Pinus taeda	WDH	High	91.5	3999.1	46.0	No change	Sm. dec.	Medium	Abundant	Good	Fair			1	1
sweetgum	Liquidambar styraciflua	WDH	High	85.4	746.3	9.2	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	2
red maple	Acer rubrum	WDH	High	82.9	438.6	5.3	No change	No change	High	Common	Good	Good			1	3
white oak	Quercus alba	WDH	Medium	79.3	370.2	4.7	No change	No change	High	Common	Good	Good			1	4
winged elm	Ulmus alata	WDL	Medium	78	299.4	4.1	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	5
water oak	Quercus nigra	WDH	High	63.4	292.0	5.0	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	6
shortleaf pine	Pinus echinata	WDH	High	64.6	280.4	4.6	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	7
yellow-poplar	Liriodendron tulipifera	WDH	High	62.2	242.9	3.9	Sm. dec.	Lg. dec.	High	Common	Fair	Fair			1	8
eastern redcedar	Juniperus virginiana	WDH	Medium	63.4	203.9	3.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	9
sourwood	Oxydendrum arboreum	NDL	High	39	198.6	5.1	Sm. dec.	Lg. dec.	High	Common	Fair	Fair			1	10
eastern white pine	Pinus strobus	WDH	High	17.1	198.5	11.6	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor			0	11
southern red oak	Quercus falcata	WDL	Medium	64.6	191.4	3.0	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	12
scarlet oak	Quercus coccinea	WDL	Medium	34.1	144.0	4.2	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	13
blackgum	Nyssa sylvatica	WDL	Medium	62.2	141.1	2.3	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	14
chestnut oak	Quercus prinus	NDH	High	18.3	113.3	6.2	Sm. inc.	No change	High	Common	Very Good	Good	Infill ++	Infill ++	2	15
flowering dogwood	Cornus florida	WDL	Medium	69.5	107.8	1.6	No change	No change	Medium	Common	Fair	Fair			1	16
Virginia pine	Pinus virginiana	NDH	High	23.2	97.3	4.2	No change	No change	Medium	Common	Fair	Fair			1	17
post oak	Quercus stellata	WDH	High	51.2	90.5	1.8	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	18
pignut hickory	Carya glabra	WDL	Medium	48.8	87.2	1.8	Sm. inc.	No change	Medium	Common	Good	Fair			1	19
common persimmon	Diospyros virginiana	NSL	Low	37.8	84.4	2.2	Lg. dec.	Sm. dec.	High	Common	Fair	Fair			1	20
green ash	Fraxinus pennsylvanica	WSH	Low	31.7	80.2	2.5	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	21
mockernut hickory	Carya alba	WDL	Medium	43.9	71.6	1.6	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	22
eastern hemlock	Tsuga canadensis	NSH	High	9.8	58.9	6.0	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	2	23
black oak	Quercus velutina	WDH	High	36.6	56.6	1.6	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	24
black cherry	Prunus serotina	WDL	Medium	61	55.6	1.0	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	25
American beech	Fagus grandifolia	WDH	High	24.4	54.7	2.2	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good	Infill ++	Infill ++	1	26
shagbark hickory	Carya ovata	WSL	Medium	23.2	52.1	2.3	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	27
northern red oak	Quercus rubra	WDH	Medium	31.7	49.5	1.6	Sm. inc.	Sm. inc.	High	Rare	Good	Good			1	28
white ash	Fraxinus americana	WDL	Medium	24.4	48.3	2.0	Sm. inc.	Lg. inc.	Low	Rare	Poor	Fair			1	29
willow oak	Quercus phellos	NSL	Low	20.7	43.2	2.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	30
American hornbeam; muscley	Carpinus caroliniana	WSL	Low	24.4	41.0	1.7	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	31
sycamore	Platanus occidentalis	NSL	Low	12.2	38.2	3.1	Sm. dec.	Sm. inc.	Medium	Rare	Very Poor	Fair		Infill +	1	32
florida maple	Acer barbatum	NSL	Low	28	37.2	1.3	No change	Sm. inc.	High	Rare	Fair	Good			1	33
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	18.3	30.1	1.7	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	34
American elm	Ulmus americana	WDH	Medium	23.2	29.3	1.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	35
pitch pine	Pinus rigida	NSH	High	8.5	24.6	2.9	No change	No change	Medium	Rare	Poor	Poor	Infill +		2	36
swamp chestnut oak	Quercus michauxii	NSL	Low	3.7	22.4	6.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	37
longleaf pine	Pinus palustris	NSH	Medium	8.5	19.8	6.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	38
black willow	Salix nigra	NSH	Low	6.1	16.9	2.8	No change	Sm. inc.	Low	Rare	Very Poor	Poor			1	39
river birch	Betula nigra	NSL	Low	8.5	16.7	2.0	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	40
black locust	Robinia pseudoacacia	NDH	Low	8.5	15.0	1.8	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	41
sugarberry	Celtis laevigata	NDH	Medium	11	14.9	1.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	42
American holly	Ilex opaca	NSL	Medium	23.2	14.0	0.7	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	43
slippery elm	Ulmus rubra	WSL	Low	9.8	13.1	1.3	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	44
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	8.5	13.1	1.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	45
sweet birch	Betula lenta	NDH	High	6.1	10.8	1.8	No change	No change	Low	Rare	Very Poor	Very Poor			2	46
cucumbertree	Magnolia acuminata	NSL	Low	4.9	10.6	2.2	No change	Sm. dec.	Medium	Rare	Poor	Very Poor	Infill +		2	47

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Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
slash pine	Pinus elliottii	NDH	High	1.2	10.5	8.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	48
bitternut hickory	Carya cordiformis	WSL	Low	8.5	10.2	1.2	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	1	49
black walnut	Juglans nigra	WDH	Low	7.3	10.1	1.4	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	50
boxelder	Acer negundo	WSH	Low	6.1	9.9	1.6	Sm. dec.	No change	High	Rare	Poor	Fair		Infill +	1	51
red mulberry	Morus rubra	NSL	Low	14.6	7.4	0.5	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			1	52
sand hickory	Carya pallida	NSL	FIA	2.4	6.4	2.6	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	53
eastern redbud	Cercis canadensis	NSL	Low	9.8	5.5	0.6	Sm. dec.	No change	Medium	Rare	Very Poor	Poor			1	54
blackjack oak	Quercus marilandica	NSL	Medium	6.1	5.2	0.9	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	55
swamp tupelo	Nyssa biflora	NDH	Medium	4.9	5.0	16.3	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	56
sassafras	Sassafras albidum	WSL	Low	6.1	4.3	0.7	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	57
bluejack oak	Quercus incana	NSL	Low	1.2	4.1	3.3	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	58
honeylocust	Gleditsia triacanthos	NSH	Low	3.7	3.8	1.0	No change	No change	High	Rare	Fair	Fair		Infill +	2	59
pawpaw	Asimina triloba	NSL	Low	2.4	3.7	1.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	60
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	4.9	3.5	0.7	No change	No change	Low	Rare	Very Poor	Very Poor			0	61
pecan	Carya illinoensis	NSH	Low	1.2	3.4	2.8	No change	Lg. inc.	Low	Rare	Very Poor	Fair		Infill +	2	62
overcup oak	Quercus lyrata	NSL	Medium	1.2	3.3	2.7	No change	No change	Low	Rare	Very Poor	Very Poor			2	63
bald cypress	Taxodium distichum	NSH	Medium	4.9	2.7	8.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	64
silverbell	Halesia spp.	NSL	Low	3.7	1.8	0.5	No change	No change	Medium	Rare	Poor	Poor			0	65
American basswood	Tilia americana	WSL	Medium	1.2	1.3	1.1	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	66
laurel oak	Quercus laurifolia	NDH	Medium	2.4	1.1	0.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	67
ailanthus	Ailanthus altissima	NSL	FIA	2.4	0.9	0.4	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	68
white mulberry	Morus alba	NSL	FIA	1.2	0.7	0.6	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	69
yellow buckeye	Aesculus flava	NSL	Low	1.2	0.6	0.5	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	70
serviceberry	Amelanchier spp.	NSL	Low	1.2	0.4	0.3	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	71
wild plum	Prunus americana	NSLX	FIA	1.2	0.2	0.2	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	72
ashe juniper	Juniperus ashei	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	73
spruce pine	Pinus glabra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	74
pond cypress	Taxodium ascendens	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++		3	75
black maple	Acer nigrum	NSH	Low	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat			0	76
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	77
sugar maple	Acer saccharum	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	78
yellow birch	Betula alleghaniensis	NDL	High	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	79
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	80
shellbark hickory	Carya laciniosa	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	81
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	82
hackberry	Celtis occidentalis	WDH	Medium	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	83
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	New Habitat	Low	Absent	Unknown	New Habitat			3	84
southern magnolia	Magnolia grandiflora	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	85
sweetbay	Magnolia virginiana	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	86
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	87
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	88
turkey oak	Quercus laevis	NSH	Medium	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	89
chinkapin oak	Quercus muehlenbergii	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	90
Shumard oak	Quercus shumardii	NSL	Low	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat		Likely +	3	91
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	92
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	93