

sq. km sq. mi FIA Plots
Area of Region 15,000 5,791.5 527

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	Scenario	Scenario	Scenario	SHIFT	SHIFT				
				High	25	Increase	RCP45	RCP85	Very Good	10	11	Likely	2	2	
Ash	2			Medium	32	50	No Change	12	10	Good	16	20	Infill	12	15
Hickory	7			Low	35	10	Decrease	20	14	Fair	12	12	Migrate	9	12
Maple	5	Abundant	4	FIA	1		New	17	17	Poor	6	7			
Oak	14	Common	16				Unknown	7	7	Very Poor	17	10			
Pine	2	Rare	42							FIA Only	1	1			
Other	32	Absent	22							Unknown	6	6			
	62		84		85	85		85	85		68	67		23	29

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	60.5	62.2	64.1	64.4	
	CCSM85	60.5	62.7	65.1	67.8	
	GFDL45	60.5	63.4	65.1	66.4	
	GFDL85	60.5	63.4	66.2	69.9	
	HAD45	60.5	62.9	65.8	67.1	
HAD85	60.5	63.1	67.7	71.3		
Growing Season (May—Sep)	CCSM45	75.2	76.8	78.5	79.0	
	CCSM85	75.2	77.5	79.8	83.3	
	GFDL45	75.2	78.7	80.6	82.8	
	GFDL85	75.2	79.1	82.1	86.8	
	HAD45	75.2	78.0	80.9	81.9	
HAD85	75.2	78.4	84.3	87.4		
Coldest Month (Average)	CCSM45	38.5	40.9	42.0	42.1	
	CCSM85	38.5	41.2	42.3	43.8	
	GFDL45	38.5	42.3	42.7	42.7	
	GFDL85	38.5	39.6	41.2	41.7	
	HAD45	38.5	39.5	41.5	41.9	
HAD85	38.5	40.8	42.7	44.5		
Warmest Month (Average)	CCSM45	81.0	82.5	83.4	83.5	
	CCSM85	81.0	83.3	84.1	85.9	
	GFDL45	81.0	85.9	86.7	88.1	
	GFDL85	81.0	85.6	87.1	90.7	
	HAD45	81.0	84.3	86.0	86.3	
HAD85	81.0	85.4	88.6	89.6		

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	54.9	54.1	56.9	56.1	
	CCSM85	54.9	54.9	58.1	58.1	
	GFDL45	54.9	57.6	64.0	58.6	
	GFDL85	54.9	58.2	63.5	63.0	
	HAD45	54.9	54.6	58.4	60.2	
HAD85	54.9	60.0	51.6	55.6		
Growing Season (May—Sep)	CCSM45	22.1	21.8	21.0	21.5	
	CCSM85	22.1	21.5	20.1	21.0	
	GFDL45	22.1	23.4	25.5	24.1	
	GFDL85	22.1	24.3	26.4	25.0	
	HAD45	22.1	21.4	21.8	21.3	
HAD85	22.1	22.8	16.7	17.6		

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
shortleaf pine	Pinus echinata	WDH	High	88	2790.1	31.7	No change	No change	Medium	Abundant	Good	Good			1	1
loblolly pine	Pinus taeda	WDH	High	52	1406.2	27.0	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	2
white oak	Quercus alba	WDH	Medium	85.3	980.9	11.5	Sm. dec.	Sm. dec.	High	Abundant	Good	Good			1	3
post oak	Quercus stellata	WDH	High	85.3	851.2	10.0	Sm. inc.	Sm. inc.	High	Abundant	Very Good	Very Good			1	4
sweetgum	Liquidambar styraciflua	WDH	High	64.7	401.1	6.2	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	5
northern red oak	Quercus rubra	WDH	Medium	70	385.5	5.5	No change	No change	High	Common	Good	Good			1	6
black hickory	Carya texana	NDL	High	84	321.7	3.8	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	7
eastern redcedar	Juniperus virginiana	WDH	Medium	57.3	307.4	5.4	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	8
winged elm	Ulmus alata	WDL	Medium	81.3	278.6	3.4	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	9
mockernut hickory	Carya alba	WDL	Medium	76	261.2	3.4	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	10
red maple	Acer rubrum	WDH	High	67.3	211.4	3.1	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	11
blackgum	Nyssa sylvatica	WDL	Medium	62	203.2	3.3	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	12
black oak	Quercus velutina	WDH	High	64.7	196.9	3.0	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	13
southern red oak	Quercus falcata	WDL	Medium	47.3	166.2	3.5	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	14
black cherry	Prunus serotina	WDL	Medium	58	115.7	2.0	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	15
water oak	Quercus nigra	WDH	High	20.7	106.8	5.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	16
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	45.3	102.9	2.3	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	17
willow oak	Quercus phellos	NSL	Low	18.7	81.5	4.4	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	18
green ash	Fraxinus pennsylvanica	WSH	Low	32.7	71.7	2.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	19
blackjack oak	Quercus marilandica	NSL	Medium	33.3	66.9	2.0	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	20
American elm	Ulmus americana	WDH	Medium	16	47.1	3.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	21
American hornbeam; musclev	Carpinus caroliniana	WDL	Low	18.7	42.4	2.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	22
flowering dogwood	Cornus florida	WDL	Medium	43.3	40.2	0.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	23
sugarberry	Celtis laevigata	NDH	Medium	12.7	35.9	2.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	24
eastern cottonwood	Populus deltoides	NSH	Low	0.7	33.4	50.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	25
white ash	Fraxinus americana	WDL	Medium	17.3	31.9	1.8	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair			1	26
sycamore	Platanus occidentalis	NSL	Low	8.7	29.3	3.4	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	27
shagbark hickory	Carya ovata	WSL	Medium	6	25.0	4.2	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	28
Shumard oak	Quercus shumardii	NSL	Low	5.3	22.4	4.2	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	1	29
river birch	Betula nigra	NSL	Low	6.7	22.1	3.3	No change	Sm. inc.	Medium	Rare	Poor	Fair			1	30
honeylocust	Gleditsia triacanthos	NSH	Low	6.7	20.8	3.1	No change	Sm. inc.	High	Rare	Fair	Good	Infill +	Infill ++	1	31
American holly	Ilex opaca	NSL	Medium	8.7	19.3	2.2	Sm. dec.	No change	Medium	Rare	Very Poor	Poor			1	32
common persimmon	Diospyros virginiana	NSL	Low	9.3	18.5	2.0	No change	Sm. inc.	High	Rare	Fair	Good			1	33
Osage-orange	Maclura pomifera	NDH	Medium	4.7	17.1	3.7	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	34
overcup oak	Quercus lyrata	NSL	Medium	4.7	16.2	3.5	Sm. dec.	No change	Low	Rare	Very Poor	Very Poor			2	35
bitternut hickory	Carya cordiformis	WSL	Low	9.3	15.6	1.7	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			1	36
cedar elm	Ulmus crassifolia	NDH	Medium	2	15.4	7.7	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	37
slippery elm	Ulmus rubra	WSL	Low	10.7	14.3	1.3	Sm. dec.	Sm. inc.	Medium	Rare	Very Poor	Fair			1	38
black willow	Salix nigra	NSH	Low	3.3	13.9	4.2	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	39
pignut hickory	Carya glabra	WDL	Medium	4.7	12.8	2.7	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2	40
eastern redbud	Cercis canadensis	NSL	Low	10.7	11.4	1.1	Lg. dec.	Sm. inc.	Medium	Rare	Very Poor	Fair			1	41
serviceberry	Amelanchier spp.	NSL	Low	16	10.6	0.7	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	42
hackberry	Celtis occidentalis	WDH	Medium	6	10.3	1.7	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	1	43
florida maple	Acer barbatum	NSL	Low	7.3	9.8	1.3	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	1	44
silver maple	Acer saccharinum	NSH	Low	2.7	9.4	3.5	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	45
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	4	7.6	1.9	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	46
boxelder	Acer negundo	WSH	Low	3.3	7.5	2.3	Sm. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	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	
black walnut	Juglans nigra	WDH	Low	3.3	7.5	2.3	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor				0	48
black locust	Robinia pseudoacacia	NDH	Low	4.7	7.5	1.6	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor				0	49
American beech	Fagus grandifolia	WDH	High	3.3	7.3	2.2	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +		2	50
sassafras	Sassafras albidum	WSL	Low	7.3	6.7	0.9	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++		1	51
red mulberry	Morus rubra	NSL	Low	10	5.6	0.6	Sm. dec.	Lg. inc.	Medium	Rare	Very Poor	Good				1	52
water hickory	Carya aquatica	NSL	Medium	2	4.3	2.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor				0	53
shellbark hickory	Carya laciniosa	NSL	Low	0.7	3.5	5.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor				0	54
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	2	3.2	1.6	Lg. inc.	Lg. inc.	High	Rare	Good	Good				2	55
wild plum	Prunus americana	NSLX	FIA	4	2.6	0.7	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only				0	56
American basswood	Tilia americana	WSL	Medium	2.7	2.3	0.9	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor				0	57
bluejack oak	Quercus incana	NSL	Low	0.7	0.9	1.4	No change	Sm. inc.	Medium	Rare	Poor	Fair		Infill +		2	58
pin oak	Quercus palustris	NSH	Low	0.7	0.8	1.2	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor				0	59
chinkapin oak	Quercus muehlenbergii	NSL	Medium	1.3	0.7	0.5	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost				0	60
sugar maple	Acer saccharum	WDH	High	0.7	0.3	0.5	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor				0	61
pawpaw	Asimina triloba	NSL	Low	0.7	0.3	0.4	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
Virginia pine	Pinus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3	66
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	67
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Likely +	Likely +		3	68
black ash	Fraxinus nigra	WSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat				3	69
silverbell	Halesia spp.	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	70
yellow-poplar	Liriodendron tulipifera	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3	71
cucumbertree	Magnolia acuminata	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	72
southern magnolia	Magnolia grandiflora	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +		3	73
sweetbay	Magnolia virginiana	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3	74
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown				0	75
swamp tupelo	Nyssa biflora	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +		3	76
sourwood	Oxydendrum arboreum	NDL	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3	77
redbay	Persea borbonia	NSL	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown				0	78
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	79
scarlet oak	Quercus coccinea	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3	80
laurel oak	Quercus laurifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +		3	81
swamp chestnut oak	Quercus michauxii	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +		3	82
Nuttall oak	Quercus texana	NSH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat				0	83
chestnut oak	Quercus prinus	NDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3	84
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++		3	85