

Area of Region      sq. km      sq. mi      FIA Plots  
160.7      62.1

**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	14	18	Increase	14	15	Very Good	6	8	Likely	11	11
Hickory	0			Medium	27	31	No Change	0	1	Good	9	8	Infill	18	18
Maple	3	Abundant	2	Low	16	8	Decrease	7	5	Fair	2	2	Migrate	12	11
Oak	4	Common	14	FIA	2		New	36	36	Poor	4	2		41	40
Pine	1	Rare	7				Unknown	2	2	Very Poor	0	0			
Other	13	Absent	36		59	57		59	59	FIA Only	0	0			
	<b>23</b>		<b>59</b>							Unknown	0	0			
											<b>21</b>	<b>20</b>			

**Potential Changes in Climate Variables**

**Temperature (°F)**

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	56.2	57.9	60.0	60.3	
	CCSM85	56.2	58.3	60.8	63.8	
	GFDL45	56.2	62.3	61.7	62.8	
	GFDL85	56.2	59.4	62.8	66.8	
	HAD45	56.2	58.7	62.1	63.5	
HAD85	56.2	58.9	62.9	67.4		
Growing Season May—Sep	CCSM45	72.1	73.8	75.6	76.1	
	CCSM85	72.1	74.0	76.7	80.3	
	GFDL45	72.1	79.4	78.4	79.9	
	GFDL85	72.1	76.1	79.9	84.3	
	HAD45	72.1	74.9	78.1	79.8	
HAD85	72.1	74.8	79.5	84.5		
Coldest Month Average	CCSM45	32.5	34.5	35.9	36.4	
	CCSM85	32.5	34.9	36.2	37.7	
	GFDL45	32.5	35.6	36.2	36.8	
	GFDL85	32.5	35.2	36.3	37.8	
	HAD45	32.5	34.2	36.3	36.5	
HAD85	32.5	34.6	36.3	38.2		
Warmest Month Average	CCSM45	78.0	80.1	80.9	81.2	
	CCSM85	78.0	80.2	82.0	83.5	
	GFDL45	78.0	81.0	82.7	84.0	
	GFDL85	78.0	82.5	84.6	87.3	
	HAD45	78.0	81.3	83.2	84.2	
HAD85	78.0	81.5	84.4	87.8		

**Precipitation (in)**

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	43.2	46.8	49.4	50.4	
	CCSM85	43.2	47.6	48.9	55.8	
	GFDL45	43.2	48.4	52.0	52.5	
	GFDL85	43.2	45.0	51.8	52.9	
	HAD45	43.2	45.9	47.1	45.9	
HAD85	43.2	49.8	44.8	48.4		
Growing Season May—Sep	CCSM45	19.8	23.3	24.7	25.4	
	CCSM85	19.8	23.3	23.6	27.2	
	GFDL45	19.8	21.1	23.2	23.6	
	GFDL85	19.8	19.5	22.7	23.0	
	HAD45	19.8	21.6	20.3	18.9	
HAD85	19.8	22.2	18.7	19.7		

**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
chestnut oak	Quercus prinus	NDH	High	88.4	561.9	2.9	Lg. dec.	Lg. dec.	High	Abundant	Good	Good	Infill ++	Infill ++	1	1
American beech	Fagus grandifolia	WDH	High	88.4	507.7	3.7	Sm. dec.	Sm. dec.	Medium	Abundant	Fair	Fair	Infill +	Infill +	0	2
sycamore	Platanus occidentalis	NSL	Low	88.4	494.7	2.9	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	0	3
yellow-poplar	Liriodendron tulipifera	WDH	High	88.4	492.2	2.7	Sm. dec.	Sm. dec.	High	Common	Fair	Fair	Infill +	Infill +	1	4
white ash	Fraxinus americana	WDL	Medium	30.8	286.2	2.3	Sm. dec.	No change	Low	Common	Poor	Poor	Infill +	Infill +	0	5
red maple	Acer rubrum	WDH	High	30.8	214.7	1.7	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	6
white oak	Quercus alba	WDH	Medium	57.6	174.2	2.6	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	7
American elm	Ulmus americana	WDH	Medium	88.4	103.9	0.6	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good		Infill ++	1	8
Norway maple	Acer platanoides	NSL	FIA	57.6	80.9	1.2	Unknown	Unknown	NA	Common	NNIS	NNIS			0	9
northern red oak	Quercus rubra	WDH	Medium	57.6	80.9	1.2	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	10
blackgum	Nyssa sylvatica	WDL	Medium	88.4	77.8	0.4	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	11
green ash	Fraxinus pennsylvanica	WSH	Low	30.8	74.0	0.6	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	12
black cherry	Prunus serotina	WDL	Medium	30.8	68.4	0.6	Lg. inc.	Lg. inc.	Low	Common	Good	Good	Infill ++	Infill ++	1	13
black locust	Robinia pseudoacacia	NDH	Low	30.8	64.7	0.5	Sm. dec.	Very Lg. dec.	Medium	Common	Poor	Lost	Infill +		0	14
sweetgum	Liquidambar styraciflua	WDH	High	30.8	58.5	0.5	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	15
scarlet oak	Quercus coccinea	WDL	Medium	30.8	56.0	0.5	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good	Infill ++	Infill ++	1	16
American holly	Ilex opaca	NSL	Medium	30.8	34.8	0.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	17
common persimmon	Diospyros virginiana	NSL	Low	30.8	30.5	0.2	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	18
ailanthus	Ailanthus altissima	NSL	FIA	30.8	29.9	0.2	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	19
Virginia pine	Pinus virginiana	NDH	High	30.8	28.6	0.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	20
hackberry	Celtis occidentalis	WDH	Medium	30.8	21.2	0.2	Lg. dec.	Lg. inc.	High	Rare	Poor	Good			0	21
boxelder	Acer negundo	WSH	Low	30.8	16.8	0.1	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	22
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	30.8	12.4	0.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	23
eastern redcedar	Juniperus virginiana	WDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	24
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	25
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	26
loblolly pine	Pinus taeda	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	27
bald cypress	Taxodium distichum	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	28
sugar maple	Acer saccharum	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +		3	29
river birch	Betula nigra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	30
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	31
water hickory	Carya aquatica	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	32
bitternut hickory	Carya cordiformis	WSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate ++		3	33
pignut hickory	Carya glabra	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	34
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	35
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	36
mockernut hickory	Carya alba	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	37
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	38
flowering dogwood	Cornus florida	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	39
black walnut	Juglans nigra	WDH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	40
sweetbay	Magnolia virginiana	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	41
water tupelo	Nyssa aquatica	NSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	42
swamp tupelo	Nyssa biflora	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	43
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	44
sourwood	Oxydendrum arboreum	NDL	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +		3	45
southern red oak	Quercus falcata	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	46
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	47

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Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
laurel oak	Quercus laurifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	48
overcup oak	Quercus lyrata	NSL	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	49
blackjack oak	Quercus marilandica	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	50
swamp chestnut oak	Quercus michauxii	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	51
water oak	Quercus nigra	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	52
willow oak	Quercus phellos	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	53
post oak	Quercus stellata	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	54
black oak	Quercus velutina	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	55
black willow	Salix nigra	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	56
winged elm	Ulmus alata	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	57
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	58
slippery elm	Ulmus rubra	WSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	59