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	sq. km	sq. mi	FIA Plots
Area of Region	8,200.0	3,166.0	235

Species Information

The columns below provide breif 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 Reliability	Adaptability	Potential Change in Habitat Suitability	Scenario RCP45	Scenario RCP85	Capability to Cope or Persist	Scenario RCP45	Scenario RCP85	Migration Potential	SHIFT RCP45	SHIFT RCP85
Ash	2														
Hickory	5		Abundance		Reliability	Adaptability		RCP45	RCP85		RCP45	RCP85		RCP45	RCP85
Maple	4	Abundant	5	High	18	22	Increase	23	27	Very Good	11	11	Likely	2	2
Oak	17	Common	22	Medium	33	48	No Change	18	17	Good	12	15	Infill	17	20
Pine	6	Rare	43	Low	31	12	Decrease	27	24	Fair	10	13	Migrate	1	2
Other	36	Absent	13	FIA	2		New	9	9	Poor	20	13		**20**	**24**
	70		**83**		**84**	**82**	Unknown	7	7	Very Poor	13	13			
								84	**84**	FIA Only	0	0			
										Unknown	5	5			
											71	**70**			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	61.5	63.2	65.2	65.3	
Average	CCSM85	61.5	63.5	65.9	68.7	
	GFDL45	61.5	64.1	66.4	67.2	
	GFDL85	61.5	64.2	67.5	71.1	
	HAD45	61.5	63.5	66.4	67.8	
	HAD85	61.5	63.9	67.5	71.7	
Growing	CCSM45	75.5	77.2	78.9	79.4	
Season	CCSM85	75.5	77.2	79.8	83.2	
May—Sep	GFDL45	75.5	78.3	80.7	82.0	
	GFDL85	75.5	78.6	82.1	86.2	
	HAD45	75.5	78.2	80.8	82.5	
	HAD85	75.5	78.2	83.0	87.4	
Coldest	CCSM45	40.5	42.7	43.5	43.5	
Month	CCSM85	40.5	42.7	43.7	45.0	
Average	GFDL45	40.5	43.8	44.1	44.8	
	GFDL85	40.5	42.7	43.6	44.6	
	HAD45	40.5	41.0	42.7	43.1	
	HAD85	40.5	41.6	42.7	44.3	
Warmest	CCSM45	80.6	82.6	83.6	83.6	
Month	CCSM85	80.6	82.7	84.3	85.9	
Average	GFDL45	80.6	83.1	84.1	85.1	
	GFDL85	80.6	83.6	85.4	87.8	
	HAD45	80.6	83.7	85.3	86.0	
	HAD85	80.6	84.2	87.2	89.7	

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	45.8	51.4	52.7	54.9	
Total	CCSM85	45.8	51.3	54.2	61.0	
	GFDL45	45.8	50.3	54.5	57.6	
	GFDL85	45.8	49.9	56.6	57.2	
	HAD45	45.8	48.5	50.0	49.4	
	HAD85	45.8	51.4	47.5	47.5	
Growing	CCSM45	22.7	27.6	28.4	29.9	
Season	CCSM85	22.7	26.0	28.3	31.9	
May—Sep	GFDL45	22.7	26.3	29.1	30.6	
	GFDL85	22.7	25.6	31.2	31.5	
	HAD45	22.7	23.7	23.9	23.9	
	HAD85	22.7	26.0	22.7	20.8	

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.

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U.S. Census Bureau Urban Areas
Climate Change Atlas Tree Species
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	3342.2	35.2	No change	No change	Medium	Abundant	Good	Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	78	1035.6	12.8	No change	No change	Medium	Abundant	Good	Good			1	2
red maple	Acer rubrum	WDH	High	81.7	830.7	9.8	No change	No change	High	Abundant	Very Good	Very Good			1	3
longleaf pine	Pinus palustris	NSH	Medium	37.8	704.4	18.0	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	4
water oak	Quercus nigra	WDH	High	68.3	531.3	7.5	Sm. inc.	Lg. inc.	Medium	Abundant	Very Good	Very Good			1	5
yellow-poplar	Liriodendron tulipifera	WDH	High	48.8	407.9	8.1	Lg. dec.	Lg. dec.	High	Common	Fair	Fair			1	6
swamp tupelo	Nyssa biflora	NDH	Medium	40.2	338.6	8.1	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	7
pond pine	Pinus serotina	NSH	Medium	26.8	281.9	10.1	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	8
white oak	Quercus alba	WDH	Medium	34.1	189.3	5.3	No change	No change	High	Common	Good	Good			1	9
black cherry	Prunus serotina	WDL	Medium	36.6	182.3	4.8	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	10
southern red oak	Quercus falcata	WDL	Medium	42.7	171.2	3.9	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	11
blackjack oak	Quercus marilandica	NSL	Medium	25.6	165.1	6.2	Sm. dec.	No change	High	Common	Fair	Good			1	12
slash pine	Pinus elliottii	NDH	High	7.3	113.5	14.9	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	13
turkey oak	Quercus laevis	NSH	Medium	20.7	112.8	5.2	No change	No change	High	Common	Good	Good			1	14
American holly	Ilex opaca	NSL	Medium	39	105.4	2.6	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	15
blackgum	Nyssa sylvatica	WDL	Medium	46.3	105.1	2.2	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	16
post oak	Quercus stellata	WDH	High	39	99.2	2.5	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	17
sweetbay	Magnolia virginiana	NSL	Medium	32.9	99.2	2.9	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	18
pignut hickory	Carya glabra	WDL	Medium	20.7	90.0	4.2	Lg. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	19
laurel oak	Quercus laurifolia	NDH	Medium	19.5	86.7	4.3	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	20
mockernut hickory	Carya alba	WDL	Medium	23.2	75.2	3.1	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	21
sourwood	Oxydendrum arboreum	NDL	High	23.2	67.0	2.8	Lg. dec.	Lg. dec.	High	Common	Fair	Fair			1	22
flowering dogwood	Cornus florida	WDL	Medium	26.8	65.2	2.3	No change	No change	Medium	Common	Fair	Fair			1	23
willow oak	Quercus phellos	NSL	Low	12.2	62.7	5.0	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	24
black oak	Quercus velutina	WDH	High	20.7	61.9	2.9	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	0	25
redbay	Persea borbonia	NSL	Low	25.6	53.4	2.0	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	26
boxelder	Acer negundo	WSH	Low	4.9	51.3	10.1	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	27
eastern redcedar	Juniperus virginiana	WDH	Medium	8.5	48.9	5.5	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	28
bald cypress	Taxodium distichum	NSH	Medium	7.3	44.3	5.8	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	29
green ash	Fraxinus pennsylvanica	WSH	Low	4.9	42.0	8.3	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	30
shortleaf pine	Pinus echinata	WDH	High	11	38.9	3.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	31
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	8.5	37.3	4.2	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	32
pond cypress	Taxodium ascendens	NSH	Medium	7.3	36.6	4.8	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	33
loblolly-bay	Gordonia lasianthus	NSH	Medium	7.3	34.3	4.5	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	34
winged elm	Ulmus alata	WDL	Medium	8.5	29.3	3.3	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	35
American beech	Fagus grandifolia	WDH	High	6.1	23.9	3.8	No change	No change	Medium	Rare	Poor	Poor	Infill +		2	36
northern red oak	Quercus rubra	WDH	Medium	11	22.7	2.0	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	37
common persimmon	Diospyros virginiana	NSL	Low	14.6	17.1	1.1	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			1	38
bluejack oak	Quercus incana	NSL	Low	11	16.8	1.5	No change	Lg. inc.	Medium	Rare	Poor	Good		Infill ++	1	39
swamp chestnut oak	Quercus michauxii	NSL	Low	4.9	16.4	3.2	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	40
scarlet oak	Quercus coccinea	WDL	Medium	9.8	11.4	1.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	41
American elm	Ulmus americana	WDH	Medium	4.9	11.0	2.2	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	2	42
black willow	Salix nigra	NSH	Low	4.9	10.1	2.0	Sm. inc.	Lg. inc.	Low	Rare	Poor	Fair		Infill +	2	43
bitternut hickory	Carya cordiformis	WSL	Low	2.4	10.0	4.0	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	44
white ash	Fraxinus americana	WDL	Medium	4.9	7.0	1.4	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			2	45
black walnut	Juglans nigra	WDH	Low	1.2	6.7	5.3	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	46
cherrybark oak; swamp red o...	Quercus pagoda	NSL	Medium	2.4	5.7	2.3	No change	Sm. inc.	Medium	Rare	Poor	Fair	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
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	1.2	5.6	4.4	Sm. inc.	Sm. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	48
sycamore	Platanus occidentalis	NSL	Low	1.2	5.3	4.2	No change	No change	Medium	Rare	Poor	Poor		Infill +	2	49
black locust	Robinia pseudoacacia	NDH	Low	1.2	5.3	4.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	50
chestnut oak	Quercus prinus	NDH	High	1.2	5.1	4.0	Sm. dec.	Lg. dec.	High	Rare	Poor	Poor			0	51
shagbark hickory	Carya ovata	WSL	Medium	1.2	4.1	3.3	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	52
sassafras	Sassafras albidum	WSL	Low	7.3	3.3	0.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	53
northern white-cedar	Thuja occidentalis	WSH	High	1.2	2.7	2.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	54
sugar maple	Acer saccharum	WDH	High	1.2	2.5	2.0	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	55
hackberry	Celtis occidentalis	WDH	Medium	1.2	2.5	2.0	Lg. dec.	Very Lg. dec.	High	Rare	Poor	Lost			0	56
serviceberry	Amelanchier spp.	NSL	Low	1.2	2.4	1.9	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	57
southern magnolia	Magnolia grandiflora	NSL	Low	3.7	2.4	0.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	58
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	3.7	2.4	0.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	59
red mulberry	Morus rubra	NSL	Low	2.4	2.0	0.8	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	60
chinkapin oak	Quercus muehlenbergii	NSL	Medium	1.2	1.9	1.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	61
white mulberry	Morus alba	NSL	FIA	1.2	1.6	1.3	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	62
Shumard oak	Quercus shumardii	NSL	Low	1.2	1.5	1.2	Sm. dec.	No change	High	Rare	Poor	Fair			0	63
pecan	Carya illinoinensis	NSH	Low	1.2	1.5	1.2	Sm. dec.	No change	Low	Rare	Very Poor	Very Poor			2	64
ailanthus	Ailanthus altissima	NSL	FIA	1.2	1.5	1.2	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	65
Virginia pine	Pinus virginiana	NDH	High	2.4	1.4	0.5	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	66
water tupelo	Nyssa aquatica	NSH	Medium	2.4	1.3	0.5	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	67
sugarberry	Celtis laevigata	NDH	Medium	1.2	1.0	0.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	68
florida maple	Acer barbatum	NSL	Low	1.2	0.6	0.5	No change	No change	High	Rare	Fair	Fair		Infill +	2	69
eastern redbud	Cercis canadensis	NSL	Low	1.2	0.4	0.3	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	70
sand pine	Pinus clausa	NDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	71
spruce pine	Pinus glabra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	72
river birch	Betula nigra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	73
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	74
shellbark hickory	Carya laciniosa	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	75
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	76
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	77
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	78
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	79
swamp white oak	Quercus bicolor	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	80
overcup oak	Quercus lyrata	NSL	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate ++	3	81
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	82
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	83
slippery elm	Ulmus rubra	WSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	84