

	sq. km	sq. mi	FIA Plots
Area of Region	8,228.8	3,177.1	208

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	4			High	14	15	Increase	20	24	Very Good	3	6	Likely	0	0
Hickory	2			Medium	32	45	No Change	13	9	Good	17	15	Infill	25	26
Maple	2	Abundant	5	Low	24	10	Decrease	17	17	Fair	10	10	Migrate	2	6
Oak	14	Common	11	FIA	2		New	10	11	Poor	8	9		27	32
Pine	4	Rare	36				Unknown	12	11	Very Poor	9	7			
Other	26	Absent	16					72	72	FIA Only	2	2			
	52		68		72	70				Unknown	10	9			
											59	58			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	61.9	63.4	65.1	65.2	
	CCSM85	61.9	63.7	65.8	68.3	
	GFDL45	61.9	65.2	66.5	67.5	
	GFDL85	61.9	64.5	67.7	71.1	
	HAD45	61.9	63.5	65.9	67.2	
HAD85	61.9	63.8	66.6	70.0		
Growing Season May—Sep	CCSM45	75.2	76.5	77.9	78.3	
	CCSM85	75.2	76.6	78.8	81.7	
	GFDL45	75.2	78.8	80.2	81.5	
	GFDL85	75.2	78.2	81.5	85.2	
	HAD45	75.2	77.1	79.1	80.4	
HAD85	75.2	77.1	80.3	83.6		
Coldest Month Average	CCSM45	41.8	44.2	44.9	45.2	
	CCSM85	41.8	44.2	45.1	46.4	
	GFDL45	41.8	45.0	45.4	46.2	
	GFDL85	41.8	43.8	44.8	46.0	
	HAD45	41.8	42.2	43.9	44.3	
HAD85	41.8	42.6	43.8	45.3		
Warmest Month Average	CCSM45	80.0	81.3	82.1	82.1	
	CCSM85	80.0	81.5	82.9	84.1	
	GFDL45	80.0	82.5	83.5	84.4	
	GFDL85	80.0	83.1	84.8	86.8	
	HAD45	80.0	82.1	83.3	83.8	
HAD85	80.0	82.3	84.1	85.9		

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	51.7	56.3	57.9	57.0	
	CCSM85	51.7	56.6	57.9	63.7	
	GFDL45	51.7	55.0	57.8	60.3	
	GFDL85	51.7	54.0	58.1	58.0	
	HAD45	51.7	54.9	53.8	52.6	
HAD85	51.7	56.8	52.1	49.2		
Growing Season May—Sep	CCSM45	26.2	31.4	31.8	31.4	
	CCSM85	26.2	29.6	31.2	34.3	
	GFDL45	26.2	27.6	29.5	31.3	
	GFDL85	26.2	26.8	30.2	30.9	
	HAD45	26.2	28.1	26.8	24.6	
HAD85	26.2	29.0	25.0	21.4		

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.

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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	73.9	2789.8	28.7	No change	No change	Medium	Abundant	Good	Good	Infill ++	Infill ++	1	1
pond pine	Pinus serotina	NSH	Medium	47.4	1274.0	23.2	No change	Sm. dec.	Low	Abundant	Fair	Fair	Infill +	Infill +	0	2
red maple	Acer rubrum	WDH	High	75.8	956.2	10.9	Sm. dec.	No change	High	Abundant	Good	Very Good	Infill ++	Infill ++	1	3
sweetgum	Liquidambar styraciflua	WDH	High	67.7	745.8	10.1	No change	Sm. inc.	Medium	Abundant	Good	Very Good	Infill ++	Infill ++	1	4
swamp tupelo	Nyssa biflora	NDH	Medium	58.9	538.5	7.3	No change	No change	Low	Abundant	Fair	Fair	Infill +	Infill +	0	5
redbay	Persea borbonia	NSL	Low	65.7	427.9	4.5	No change	Sm. dec.	High	Common	Good	Fair	Infill ++	Infill +	1	6
loblolly-bay	Gordonia lasianthus	NSH	Medium	18.7	222.5	9.6	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	7
bald cypress	Taxodium distichum	NSH	Medium	21.9	175.7	6.0	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good	Infill ++	Infill ++	1	8
pond cypress	Taxodium ascendens	NSH	Medium	13.6	166.2	11.4	No change	Sm. dec.	Medium	Common	Fair	Poor	Infill +	Infill +	2	9
sweetbay	Magnolia virginiana	NSL	Medium	45.4	154.8	3.1	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	10
yellow-poplar	Liriodendron tulipifera	WDH	High	22	135.1	6.4	Sm. dec.	Sm. dec.	High	Common	Fair	Fair	Infill +	Infill +	1	11
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	19.6	116.8	7.9	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	12
green ash	Fraxinus pennsylvanica	WSH	Low	24.2	104.7	7.7	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	13
water tupelo	Nyssa aquatica	NSH	Medium	5.5	75.8	9.0	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	2	14
slash pine	Pinus elliotii	NDH	High	1.2	59.8	48.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			2	15
water oak	Quercus nigra	WDH	High	38.9	50.9	1.7	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	2	16
laurel oak	Quercus laurifolia	NDH	Medium	20.7	49.3	2.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	17
American holly	Ilex opaca	NSL	Medium	30	46.2	1.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	18
slippery elm	Ulmus rubra	WSL	Low	7.9	28.1	6.4	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	19
American hornbeam; musclee	Carpinus caroliniana	WSL	Low	11.4	26.9	1.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	20
willow oak	Quercus phellos	NSL	Low	18.4	24.6	2.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	21
American elm	Ulmus americana	WDH	Medium	16.7	24.5	1.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	22
black willow	Salix nigra	NSH	Low	9.7	23.5	3.2	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	23
eastern redcedar	Juniperus virginiana	WDH	Medium	2.4	19.2	3.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	24
live oak	Quercus virginiana	NDH	High	1.7	15.6	4.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	25
blackgum	Nyssa sylvatica	WDL	Medium	16.4	15.3	1.1	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	26
southern red oak	Quercus falcata	WDL	Medium	7.3	15.0	1.5	Sm. inc.	Lg. inc.	High	Rare	Good	Good			2	27
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	4.1	13.2	1.6	No change	Sm. inc.	Medium	Rare	Poor	Fair		Infill +	2	28
swamp chestnut oak	Quercus michauxii	NSL	Low	13.3	10.6	1.7	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	2	29
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	1.8	6.4	2.1	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	30
black cherry	Prunus serotina	WDL	Medium	12.3	5.1	0.7	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	31
post oak	Quercus stellata	WDH	High	4.6	4.9	1.3	Lg. dec.	Lg. inc.	High	Rare	Poor	Good			2	32
longleaf pine	Pinus palustris	NSH	Medium	2.8	4.8	1.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	33
white oak	Quercus alba	WDH	Medium	9.4	4.2	0.7	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	34
American beech	Fagus grandifolia	WDH	High	8.5	3.8	0.5	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	35
river birch	Betula nigra	NSL	Low	1.2	3.6	2.9	Sm. dec.	No change	Medium	Rare	Very Poor	Poor			2	36
Shumard oak	Quercus shumardii	NSL	Low	1.1	2.5	1.9	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	37
pignut hickory	Carya glabra	WDL	Medium	2.3	2.0	0.8	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	38
mockernut hickory	Carya alba	WDL	Medium	1.8	1.9	0.5	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	39
flowering dogwood	Cornus florida	WDL	Medium	7	1.6	0.2	No change	No change	Medium	Rare	Poor	Poor			0	40
pumpkin ash	Fraxinus profunda	NSH	FIA	6.7	1.1	0.5	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	41
sassafras	Sassafras albidum	WSL	Low	1.2	1.0	0.8	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	42
sourwood	Oxydendrum arboreum	NDL	High	3.8	0.8	0.5	No change	No change	High	Rare	Fair	Fair	Infill +		2	43
blackjack oak	Quercus marilandica	NSL	Medium	0.3	0.7	0.2	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	44
Carolina ash	Fraxinus caroliniana	NSL	FIA	4.8	0.6	2.0	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	45
eastern cottonwood	Populus deltoides	NSH	Low	0.7	0.5	0.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	46
black oak	Quercus velutina	WDH	High	2.3	0.4	0.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	47

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
swamp white oak	Quercus bicolor	NSL	Low	1.1	0.4	0.3	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	48
boxelder	Acer negundo	WSH	Low	1.2	0.2	0.2	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	49
overcup oak	Quercus lyrata	NSL	Medium	4.8	0.2	0.5	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	50
white ash	Fraxinus americana	WDL	Medium	4.8	0.1	0.2	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	51
serviceberry	Amelanchier spp.	NSL	Low	4.8	0.1	0.2	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair			0	52
sand pine	Pinus clausa	NDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	53
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	54
spruce pine	Pinus glabra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	55
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	56
sugar maple	Acer saccharum	WDH	High	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	57
pawpaw	Asimina triloba	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	58
water hickory	Carya aquatica	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	59
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	60
silverbell	Halesia spp.	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	61
southern magnolia	Magnolia grandiflora	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +		3	62
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	63
red mulberry	Morus rubra	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	64
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	65
turkey oak	Quercus laevis	NSH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	66
chinkapin oak	Quercus muehlenbergii	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	67
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Migrate +	3	68
cabbage palmetto	Sabal palmetto	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	69
American basswood	Tilia americana	WSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	70
winged elm	Ulmus alata	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	71
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	72