

	sq. km	sq. mi	FIA Plots
Area of Region	8,100.0	3,127.4	271

**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	16	22	Increase	30	37	Very Good	11	14	Likely	2	2
Hickory	7			Medium	34	53	No Change	17	13	Good	20	20	Infill	11	17
Maple	3	Abundant	3	Low	34	10	Decrease	21	18	Fair	9	10	Migrate	1	2
Oak	15	Common	19	FIA	2		New	10	9	Poor	11	10			
Pine	6	Rare	48				Unknown	8	9	Very Poor	16	13			
Other	37	Absent	15							FIA Only	1	1			
	<b>70</b>		<b>85</b>		<b>86</b>	<b>85</b>		<b>86</b>	<b>86</b>	Unknown	6	7			
											<b>74</b>	<b>75</b>			

**Potential Changes in Climate Variables**

**Temperature (°F)**

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	63.4	65.2	67.1	67.2	
	CCSM85	63.4	65.4	67.9	70.5	
	GFDL45	63.4	66.2	68.1	68.8	
	GFDL85	63.4	66.0	69.2	72.7	
	HAD45	63.4	65.7	68.4	70.0	
HAD85	63.4	65.9	69.9	73.8		
Growing Season May—Sep	CCSM45	76.5	78.1	79.7	80.2	
	CCSM85	76.5	78.1	80.7	83.9	
	GFDL45	76.5	79.3	81.2	82.4	
	GFDL85	76.5	79.2	82.5	86.5	
	HAD45	76.5	79.8	82.1	83.9	
HAD85	76.5	79.7	85.5	89.0		
Coldest Month Average	CCSM45	44.0	46.4	47.2	47.1	
	CCSM85	44.0	46.1	47.3	48.6	
	GFDL45	44.0	47.2	47.5	47.8	
	GFDL85	44.0	46.0	47.1	47.4	
	HAD45	44.0	44.0	45.6	46.2	
HAD85	44.0	45.1	46.2	47.9		
Warmest Month Average	CCSM45	80.7	82.3	83.0	83.2	
	CCSM85	80.7	82.3	83.7	85.5	
	GFDL45	80.7	83.1	83.9	84.7	
	GFDL85	80.7	83.0	84.5	86.7	
	HAD45	80.7	84.9	86.6	87.3	
HAD85	80.7	85.0	88.6	90.3		

**Precipitation (in)**

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	51.5	53.2	57.5	56.7	
	CCSM85	51.5	54.2	57.1	63.8	
	GFDL45	51.5	57.3	60.6	63.8	
	GFDL85	51.5	57.5	60.4	60.3	
	HAD45	51.5	49.3	54.8	55.3	
HAD85	51.5	54.5	49.7	53.3		
Growing Season May—Sep	CCSM45	20.3	21.8	23.7	23.6	
	CCSM85	20.3	21.4	22.5	24.8	
	GFDL45	20.3	25.0	27.2	27.4	
	GFDL85	20.3	25.2	27.9	28.3	
	HAD45	20.3	19.4	20.9	20.3	
HAD85	20.3	21.2	16.5	17.7		

**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-DGP30 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	95.1	4150.2	43.7	No change	No change	Medium	Abundant	Good	Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	96.3	1397.5	14.5	No change	No change	Medium	Abundant	Good	Good			1	2
water oak	Quercus nigra	WDH	High	88.9	826.0	9.3	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	3
shortleaf pine	Pinus echinata	WDH	High	65.4	455.6	7.0	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	4
yellow-poplar	Liriodendron tulipifera	WDH	High	58	264.8	4.6	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	5
red maple	Acer rubrum	WDH	High	69.1	200.4	2.9	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	6
southern red oak	Quercus falcata	WDL	Medium	44.4	197.1	4.4	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	7
pignut hickory	Carya glabra	WDL	Medium	43.2	139.7	3.2	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	8
white oak	Quercus alba	WDH	Medium	40.7	132.8	3.3	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	9
blackgum	Nyssa sylvatica	WDL	Medium	53.1	132.3	2.5	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	10
winged elm	Ulmus alata	WDL	Medium	50.6	118.1	2.3	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	11
mockernut hickory	Carya alba	WDL	Medium	48.1	117.8	2.5	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	12
laurel oak	Quercus laurifolia	NDH	Medium	32.1	115.3	3.6	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	13
post oak	Quercus stellata	WDH	High	39.5	111.4	2.8	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	14
sweetbay	Magnolia virginiana	NSL	Medium	21	102.3	4.9	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	15
black cherry	Prunus serotina	WDL	Medium	55.6	87.3	1.6	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	16
American hornbeam; muscley	Carpinus caroliniana	WSL	Low	32.1	87.1	2.7	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	17
flowering dogwood	Cornus florida	WDL	Medium	43.2	71.3	1.7	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	18
willow oak	Quercus phellos	NSL	Low	16	67.9	4.2	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	19
common persimmon	Diospyros virginiana	NSL	Low	45.7	58.1	1.3	Sm. dec.	Sm. inc.	High	Common	Fair	Very Good			1	20
water tupelo	Nyssa aquatica	NSH	Medium	4.9	56.0	11.3	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor			0	21
green ash	Fraxinus pennsylvanica	WSH	Low	24.7	50.8	2.1	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	22
swamp tupelo	Nyssa biflora	NDH	Medium	7.4	48.1	6.5	No change	No change	Low	Rare	Very Poor	Very Poor			0	23
American elm	Ulmus americana	WDH	Medium	25.9	45.4	1.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	24
sourwood	Oxydendrum arboreum	NDL	High	23.5	37.8	1.6	No change	No change	High	Rare	Fair	Fair			1	25
swamp chestnut oak	Quercus michauxii	NSL	Low	6.2	35.9	5.8	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	26
American beech	Fagus grandifolia	WDH	High	13.6	29.1	2.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	27
river birch	Betula nigra	NSL	Low	9.9	28.0	2.8	No change	Sm. inc.	Medium	Rare	Poor	Fair			1	28
bald cypress	Taxodium distichum	NSH	Medium	1.2	27.8	22.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	29
black walnut	Juglans nigra	WDH	Low	4.9	27.7	5.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	30
boxelder	Acer negundo	WSH	Low	9.9	26.5	2.7	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	1	31
scarlet oak	Quercus coccinea	WDL	Medium	12.3	26.3	2.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	32
eastern redcedar	Juniperus virginiana	WDH	Medium	17.3	24.5	1.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	33
longleaf pine	Pinus palustris	NSH	Medium	11.1	24.3	2.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	34
water hickory	Carya aquatica	NSL	Medium	7.4	24.0	3.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	35
American basswood	Tilia americana	WSL	Medium	11.1	23.0	2.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	36
blackjack oak	Quercus marilandica	NSL	Medium	11.1	22.3	2.0	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	37
red mulberry	Morus rubra	NSL	Low	14.8	21.9	1.5	No change	Sm. inc.	Medium	Rare	Poor	Fair			1	38
northern red oak	Quercus rubra	WDH	Medium	17.3	20.9	1.2	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			1	39
florida maple	Acer barbatum	NSL	Low	13.6	20.3	1.5	Sm. dec.	Sm. inc.	High	Rare	Poor	Good			1	40
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	11.1	17.8	1.6	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	41
slash pine	Pinus elliotii	NDH	High	6.2	17.3	2.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	42
eastern redbud	Cercis canadensis	NSL	Low	17.3	16.7	1.0	Sm. dec.	No change	Medium	Rare	Very Poor	Poor			1	43
spruce pine	Pinus glabra	NSL	Low	8.6	15.9	1.8	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	44
shagbark hickory	Carya ovata	WSL	Medium	9.9	15.8	1.6	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	45
sugarberry	Celtis laevigata	NDH	Medium	11.1	15.1	1.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	46
black oak	Quercus velutina	WDH	High	9.9	12.0	1.2	Sm. dec.	Sm. 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
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	4.9	9.9	2.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	48
black hickory	Carya texana	NDL	High	1.2	9.0	7.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	49
slippery elm	Ulmus rubra	WSL	Low	7.4	8.9	1.2	No change	No change	Medium	Rare	Poor	Poor		Infill +	1	50
pecan	Carya illinoensis	NSH	Low	4.9	8.6	1.8	No change	Lg. inc.	Low	Rare	Very Poor	Fair		Infill +	2	51
southern magnolia	Magnolia grandiflora	NSL	Low	6.2	7.8	1.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	52
overcup oak	Quercus lyrata	NSL	Medium	3.7	7.8	2.1	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	53
white ash	Fraxinus americana	WDL	Medium	4.9	7.8	1.6	No change	No change	Low	Rare	Very Poor	Very Poor			2	54
Osage-orange	Maclura pomifera	NDH	Medium	2.5	7.3	2.9	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	55
black willow	Salix nigra	NSH	Low	4.9	5.8	1.2	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	1	56
eastern cottonwood	Populus deltoides	NSH	Low	2.5	5.8	2.4	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	57
sycamore	Platanus occidentalis	NSL	Low	3.7	5.7	1.5	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	58
sassafras	Sassafras albidum	WSL	Low	9.9	5.2	0.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	59
chestnut oak	Quercus prinus	NDH	High	2.5	4.7	1.9	No change	No change	High	Rare	Fair	Fair			0	60
wild plum	Prunus americana	NSLX	FIA	4.9	4.4	0.9	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	61
honeylocust	Gleditsia triacanthos	NSH	Low	2.5	3.6	1.5	No change	Sm. inc.	High	Rare	Fair	Good		Infill ++	2	62
black locust	Robinia pseudoacacia	NDH	Low	1.2	3.6	2.9	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	63
bitternut hickory	Carya cordiformis	WSL	Low	2.5	3.5	1.4	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	64
American holly	Ilex opaca	NSL	Medium	1.2	2.0	1.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	65
hackberry	Celtis occidentalis	WDH	Medium	1.2	1.2	1.0	No change	No change	High	Rare	Fair	Fair		Infill +	2	66
loblolly-bay	Gordonia lasianthus	NSH	Medium	1.2	0.8	0.6	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	67
ailanthus	Ailanthus altissima	NSL	FIA	1.2	0.6	0.5	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	68
Shumard oak	Quercus shumardii	NSL	Low	1.2	0.4	0.4	No change	No change	High	Rare	Fair	Fair			0	69
Virginia pine	Pinus virginiana	NDH	High	1.2	0.3	0.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	70
ashe juniper	Juniperus ashei	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	71
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	72
yellow buckeye	Aesculus flava	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	73
serviceberry	Amelanchier spp.	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	74
pawpaw	Asimina triloba	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	75
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	76
shellbark hickory	Carya laciniosa	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	77
black ash	Fraxinus nigra	WSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	78
silverbell	Halesia spp.	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	79
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	80
redbay	Persea borbonia	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	81
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	New Habitat	Unknown	Medium	Absent	New Habitat	Unknown			3	82
chinkapin oak	Quercus muehlenbergii	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	83
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	84
bluejack oak	Quercus incana	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	85
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	86