

### Current and Potential Future Habitat, Capability, and Migration

	sq. km	sq. mi	FIA Plots
Area of Region	4,660.1	1,799.3	90

### 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	Low	RCP45	RCP85	RCP45	RCP85	RCP45	RCP85			
Ash	3			14	17	Increase	16	24	Very Good	5	6	Likely	1	1
Hickory	3			30	44	No Change	6	6	Good	13	15	Infill	9	13
Maple	2	Abundant	4	26	9	Decrease	29	21	Fair	6	10	Migrate	3	5
Oak	15	Common	13	3		New	7	9	Poor	9	6			
Pine	6	Rare	37			Unknown	15	13	Very Poor	12	8			
Other	25	Absent	16						FIA Only	2	2			
	<b>54</b>		<b>70</b>				<b>73</b>	<b>73</b>	Unknown	12	10			
										<b>59</b>	<b>57</b>		<b>13</b>	<b>19</b>

### Potential Changes in Climate Variables

#### Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	47.8	48.6	49.4	49.5	
	CCSM85	47.8	48.7	49.8	51.0	
	GFDL45	47.8	49.2	50.2	50.7	
	GFDL85	47.8	49.2	50.8	52.5	
	HAD45	47.8	48.7	50.0	50.6	
HAD85	47.8	48.9	50.3	52.2		
Growing Season (May—Sep)	CCSM45	54.5	55.2	55.9	56.1	
	CCSM85	54.5	55.2	56.3	57.7	
	GFDL45	54.5	55.9	57.1	57.7	
	GFDL85	54.5	56.0	57.7	59.7	
	HAD45	54.5	55.6	56.7	57.4	
HAD85	54.5	55.6	57.4	59.3		
Coldest Month (Average)	CCSM45	37.7	38.9	39.4	39.4	
	CCSM85	37.7	38.9	39.3	40.0	
	GFDL45	37.7	39.4	39.5	39.9	
	GFDL85	37.7	38.7	39.2	39.7	
	HAD45	37.7	37.9	38.7	39.0	
HAD85	37.7	38.1	38.7	39.5		
Warmest Month (Average)	CCSM45	56.9	57.6	57.9	57.9	
	CCSM85	56.9	57.7	58.3	58.9	
	GFDL45	56.9	58.1	58.6	59.1	
	GFDL85	56.9	58.4	59.2	60.3	
	HAD45	56.9	58.1	58.7	59.0	
HAD85	56.9	58.3	59.3	60.3		

#### Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	28.9	31.5	32.0	32.0	
	CCSM85	28.9	32.0	32.1	34.9	
	GFDL45	28.9	31.0	32.3	34.0	
	GFDL85	28.9	30.4	33.2	32.6	
	HAD45	28.9	29.8	30.1	29.6	
HAD85	28.9	31.3	29.2	28.0		
Growing Season (May—Sep)	CCSM45	14.9	17.7	17.9	17.7	
	CCSM85	14.9	16.8	17.4	18.7	
	GFDL45	14.9	16.1	17.1	18.2	
	GFDL85	14.9	15.6	17.9	18.0	
	HAD45	14.9	15.0	15.0	14.1	
HAD85	14.9	15.9	13.9	12.2		

**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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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	90.9	3510.6	23.7	No change	No change	Medium	Abundant	Good	Good			1	1
pond pine	Pinus serotina	NSH	Medium	48.3	1090.3	12.8	Sm. dec.	Sm. dec.	Low	Abundant	Fair	Fair			0	2
red maple	Acer rubrum	WDH	High	74	748.6	5.0	No change	No change	High	Abundant	Very Good	Very Good			1	3
sweetgum	Liquidambar styraciflua	WDH	High	80.5	713.6	5.3	No change	Sm. inc.	Medium	Abundant	Good	Very Good			1	4
loblolly-bay	Gordonia lasianthus	NSH	Medium	36.4	383.4	7.1	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	5
longleaf pine	Pinus palustris	NSH	Medium	32.5	329.6	6.5	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	6
redbay	Persea borbonia	NSL	Low	62.7	290.5	2.4	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	7
swamp tupelo	Nyssa biflora	NDH	Medium	59.3	286.7	3.2	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	8
water oak	Quercus nigra	WDH	High	52.2	225.5	2.9	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	9
yellow-poplar	Liriodendron tulipifera	WDH	High	37.8	166.6	3.6	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	10
American holly	Ilex opaca	NSL	Medium	44.5	138.4	2.2	No change	Sm. inc.	Medium	Common	Fair	Good			1	11
green ash	Fraxinus pennsylvanica	WSH	Low	28.2	124.6	4.4	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	12
sweetbay	Magnolia virginiana	NSL	Medium	57.1	116.2	1.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	13
slash pine	Pinus elliotii	NDH	High	1.4	105.6	22.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	14
pumpkin ash	Fraxinus profunda	NSH	FIA	8.3	93.3	12.2	Unknown	Unknown	NA	Common	FIA Only	FIA Only			0	15
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	26.2	89.4	1.3	Sm. dec.	No change	Medium	Common	Poor	Fair			1	16
southern red oak	Quercus falcata	WDL	Medium	14.1	75.8	2.9	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	17
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	8.9	52.8	7.1	Sm. dec.	No change	Low	Common	Poor	Poor			0	18
sourwood	Oxydendrum arboreum	NDL	High	27.4	49.2	1.9	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			1	19
mockernut hickory	Carya alba	WDL	Medium	18.5	48.9	1.5	Sm. inc.	Sm. inc.	High	Rare	Good	Good			1	20
eastern redcedar	Juniperus virginiana	WDH	Medium	5.3	40.5	9.3	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	21
flowering dogwood	Cornus florida	WDL	Medium	24.3	40.1	1.7	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	22
swamp chestnut oak	Quercus michauxii	NSL	Low	16.2	35.0	1.4	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	23
laurel oak	Quercus laurifolia	NDH	Medium	22.7	33.9	1.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	24
post oak	Quercus stellata	WDH	High	7.3	30.2	0.7	Lg. dec.	Sm. inc.	High	Rare	Poor	Good	Infill +	Infill ++	2	25
live oak	Quercus virginiana	NDH	High	8.4	29.5	2.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	26
turkey oak	Quercus laevis	NSH	Medium	6	27.5	1.2	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	27
pond cypress	Taxodium ascendens	NSH	Medium	6.2	24.4	0.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	28
white oak	Quercus alba	WDH	Medium	18.3	24.3	1.1	Sm. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	29
American elm	Ulmus americana	WDH	Medium	9.5	21.0	1.0	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	30
slippery elm	Ulmus rubra	WSL	Low	14.8	20.8	1.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	31
Virginia pine	Pinus virginiana	NDH	High	3.8	19.5	2.7	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	32
bald cypress	Taxodium distichum	NSH	Medium	8.8	17.2	1.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	33
Carolina ash	Fraxinus caroliniana	NSL	FIA	4.1	16.7	1.6	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	34
black cherry	Prunus serotina	WDL	Medium	21.8	16.7	0.7	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair			1	35
sassafras	Sassafras albidum	WSL	Low	2	16.0	4.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	36
pecan	Carya illinoensis	NSH	Low	3.2	14.6	6.8	Sm. dec.	No change	Low	Rare	Very Poor	Very Poor			2	37
willow oak	Quercus phellos	NSL	Low	12	13.0	0.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	38
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	11.4	10.0	0.7	Sm. dec.	Lg. inc.	Medium	Rare	Very Poor	Good		Infill ++	1	39
boxelder	Acer negundo	WSH	Low	4.1	9.9	1.2	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	40
shortleaf pine	Pinus echinata	WDH	High	0.8	8.4	0.9	Sm. dec.	Sm. inc.	Medium	Rare	Very Poor	Fair		Infill +	2	41
river birch	Betula nigra	NSL	Low	1	6.3	1.0	Sm. dec.	Sm. inc.	Medium	Rare	Very Poor	Fair		Infill +	2	42
black oak	Quercus velutina	WDH	High	1.1	5.2	0.8	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	43
ailanthus	Ailanthus altissima	NSL	FIA	2	4.1	1.2	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	44
blackjack oak	Quercus marilandica	NSL	Medium	3.2	4.0	1.9	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	45
pignut hickory	Carya glabra	WDL	Medium	4.1	3.8	0.4	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	46
scarlet oak	Quercus coccinea	WDL	Medium	2.1	3.7	0.2	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	47

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blackgum	<i>Nyssa sylvatica</i>	WDL	Medium	4	3.3	0.6	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	48
Shumard oak	<i>Quercus shumardii</i>	NSL	Low	3	2.2	1.0	Sm. dec.	Lg. dec.	High	Rare	Poor	Poor			0	49
American beech	<i>Fagus grandifolia</i>	WDH	High	0.4	2.0	0.1	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	50
common persimmon	<i>Diospyros virginiana</i>	NSL	Low	7.7	2.0	0.5	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	51
red mulberry	<i>Morus rubra</i>	NSL	Low	0.9	1.0	0.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	52
overcup oak	<i>Quercus lyrata</i>	NSL	Medium	3.1	1.0	0.4	Lg. dec.	Lg. inc.	Low	Rare	Very Poor	Fair		Infill +	2	53
Osage-orange	<i>Maclura pomifera</i>	NDH	Medium	4.5	0.5	0.3	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	54
sand pine	<i>Pinus clausa</i>	NDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	55
florida maple	<i>Acer barbatum</i>	NSL	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	56
serviceberry	<i>Amelanchier spp.</i>	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	57
pawpaw	<i>Asimina triloba</i>	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	58
water hickory	<i>Carya aquatica</i>	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +		3	59
shellbark hickory	<i>Carya laciniosa</i>	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	60
sugarberry	<i>Celtis laevigata</i>	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	61
silverbell	<i>Halesia spp.</i>	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	62
black walnut	<i>Juglans nigra</i>	WDH	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	63
southern magnolia	<i>Magnolia grandiflora</i>	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	64
bigleaf magnolia	<i>Magnolia macrophylla</i>	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	65
water tupelo	<i>Nyssa aquatica</i>	NSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate ++	Migrate +	3	66
eastern hophornbeam; ironw	<i>Ostrya virginiana</i>	WSL	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	67
swamp white oak	<i>Quercus bicolor</i>	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	68
bluejack oak	<i>Quercus incana</i>	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Migrate +	3	69
cabbage palmetto	<i>Sabal palmetto</i>	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	70
black willow	<i>Salix nigra</i>	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Likely +	Likely +	3	71
American basswood	<i>Tilia americana</i>	WSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	72
winged elm	<i>Ulmus alata</i>	WDL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Migrate +	3	73