

	sq. km	sq. mi	FIA Plots
Area of Region	8,649.0	3,339.4	239

**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	Medium	Low	FIA	RCP45	RCP85	RCP45	RCP85	
Ash	4			15	21	Increase		25	26	Very Good	6	7
Hickory	4			33	51	No Change		2	4	Good	15	17
Maple	2	Abundant	4	32	12	Decrease		34	31	Fair	9	8
Oak	16	Common	19	9		New		13	14	Poor	13	12
Pine	4	Rare	47			Unknown		15	14	Very Poor	13	12
Other	40	Absent	17	89	84			89	89	FIA Only	6	6
	70		87							Unknown	6	5
											68	67

**Potential Changes in Climate Variables**

**Temperature (°F)**

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	59.1	60.7	62.7	62.8	
	CCSM85	59.1	61.1	63.4	66.1	
	GFDL45	59.1	62.3	64.2	65.2	
	GFDL85	59.1	62.0	65.3	69.1	
	HAD45	59.1	61.1	64.0	65.3	
	HAD85	59.1	61.4	64.8	68.7	
Growing Season (May—Sep)	CCSM45	73.7	75.2	76.9	77.3	
	CCSM85	73.7	75.4	77.9	81.1	
	GFDL45	73.7	77.2	79.3	80.8	
	GFDL85	73.7	77.2	80.8	84.9	
	HAD45	73.7	76.0	78.5	80.0	
	HAD85	73.7	75.9	79.8	83.8	
Coldest Month Average	CCSM45	37.4	39.6	40.6	40.9	
	CCSM85	37.4	40.0	40.9	42.3	
	GFDL45	37.4	40.5	41.0	41.7	
	GFDL85	37.4	39.6	40.7	42.0	
	HAD45	37.4	38.3	40.1	40.4	
	HAD85	37.4	38.7	40.1	41.9	
Warmest Month Average	CCSM45	79.2	81.0	81.9	81.9	
	CCSM85	79.2	81.0	82.7	84.0	
	GFDL45	79.2	82.0	83.2	84.4	
	GFDL85	79.2	83.0	84.7	87.1	
	HAD45	79.2	81.8	83.4	84.0	
	HAD85	79.2	82.0	84.3	86.7	

**Precipitation (in)**

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	45.9	50.9	53.5	52.6	
	CCSM85	45.9	50.9	52.8	59.2	
	GFDL45	45.9	50.5	54.1	56.1	
	GFDL85	45.9	49.2	54.0	55.4	
	HAD45	45.9	49.7	49.7	47.7	
	HAD85	45.9	53.0	48.2	47.9	
Growing Season (May—Sep)	CCSM45	21.4	26.8	27.8	27.5	
	CCSM85	21.4	25.3	26.7	30.2	
	GFDL45	21.4	23.5	25.8	27.2	
	GFDL85	21.4	22.6	25.9	26.9	
	HAD45	21.4	24.3	22.6	20.5	
	HAD85	21.4	24.8	21.5	19.8	

**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.

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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	93.3	3148.5	34.4	No change	No change	Medium	Abundant	Good	Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	87.6	713.3	8.2	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	2
yellow-poplar	Liriodendron tulipifera	WDH	High	80.1	675.3	8.4	Lg. dec.	Lg. dec.	High	Abundant	Good	Good			1	3
red maple	Acer rubrum	WDH	High	88.9	670.4	8.0	Sm. inc.	Sm. inc.	High	Abundant	Very Good	Very Good			1	4
white oak	Quercus alba	WDH	Medium	65.9	493.3	6.4	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	5
American holly	Ilex opaca	NSL	Medium	74.9	436.1	4.9	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	6
swamp tupelo	Nyssa biflora	NDH	Medium	27.1	209.2	7.0	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	7
southern red oak	Quercus falcata	WDL	Medium	62.4	202.3	3.1	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	8
American beech	Fagus grandifolia	WDH	High	51.9	195.1	3.8	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	0	9
Virginia pine	Pinus virginiana	NDH	High	34	172.6	4.1	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	10
blackgum	Nyssa sylvatica	WDL	Medium	64.4	161.7	2.3	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	11
mockernut hickory	Carya alba	WDL	Medium	37	147.5	3.9	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	1	12
scarlet oak	Quercus coccinea	WDL	Medium	32.9	128.6	3.6	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	13
water oak	Quercus nigra	WDH	High	44	110.1	2.6	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	14
green ash	Fraxinus pennsylvanica	WSH	Low	21.9	109.0	5.8	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good	Infill ++	Infill ++	1	15
sassafras	Sassafras albidum	WSL	Low	21.2	102.2	4.0	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	16
black oak	Quercus velutina	WDH	High	42.8	94.1	2.2	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	0	17
swamp chestnut oak	Quercus michauxii	NSL	Low	17.3	82.9	4.2	Sm. dec.	No change	Medium	Common	Poor	Fair	Infill +	Infill +	1	18
northern red oak	Quercus rubra	WDH	Medium	20.1	73.1	3.0	Very Lg. dec.	Very Lg. dec.	High	Common	Lost	Lost			0	19
sourwood	Oxydendrum arboreum	NDL	High	41.6	69.2	2.0	Lg. dec.	Lg. dec.	High	Common	Fair	Fair			1	20
water tupelo	Nyssa aquatica	NSH	Medium	3.5	66.4	19.1	Sm. dec.	No change	Low	Common	Poor	Poor			0	21
willow oak	Quercus phellos	NSL	Low	18.9	64.5	2.9	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	22
black cherry	Prunus serotina	WDL	Medium	35	51.5	1.3	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	23
bald cypress	Taxodium distichum	NSH	Medium	4.5	47.8	9.5	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2	24
American hornbeam; muscley	Carpinus caroliniana	WSL	Low	30.5	45.7	1.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	25
chestnut oak	Quercus prinus	NDH	High	6.9	34.3	3.0	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	26
slippery elm	Ulmus rubra	WSL	Low	8.7	32.1	3.3	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	27
American elm	Ulmus americana	WDH	Medium	13.4	31.9	2.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	28
flowering dogwood	Cornus florida	WDL	Medium	27.1	28.9	1.1	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair			1	29
common persimmon	Diospyros virginiana	NSL	Low	3.9	26.4	3.2	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	30
pignut hickory	Carya glabra	WDL	Medium	21.9	23.2	0.9	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	31
black walnut	Juglans nigra	WDH	Low	5.2	22.6	2.3	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	32
hackberry	Celtis occidentalis	WDH	Medium	3.3	22.6	5.9	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	33
sycamore	Platanus occidentalis	NSL	Low	12.1	21.3	1.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	34
river birch	Betula nigra	NSL	Low	10.1	19.3	1.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	35
eastern redcedar	Juniperus virginiana	WDH	Medium	16.3	18.1	1.0	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	36
pin oak	Quercus palustris	NSH	Low	2.3	14.3	6.1	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	37
black locust	Robinia pseudoacacia	NDH	Low	5.8	14.2	1.4	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	38
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	9.8	13.9	1.9	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	2	39
bitternut hickory	Carya cordiformis	WSL	Low	7.9	13.6	1.7	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	40
pawpaw	Asimina triloba	NSL	Low	3.1	12.7	2.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	41
winged elm	Ulmus alata	WDL	Medium	10	12.1	1.1	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good		Infill ++	2	42
shortleaf pine	Pinus echinata	WDH	High	3.5	10.5	3.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	43
sweetbay	Magnolia virginiana	NSL	Medium	19.6	10.5	0.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	44
butternut	Juglans cinerea	NSLX	FIA	2.3	9.8	4.3	Unknown	Unknown	Low	Rare	FIA Only	FIA Only			0	45
eastern cottonwood	Populus deltoides	NSH	Low	1.1	8.3	6.9	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	46
post oak	Quercus stellata	WDH	High	7.8	7.6	0.9	Lg. inc.	Lg. inc.	High	Rare	Good	Good			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
white ash	Fraxinus americana	WDL	Medium	6.9	7.2	1.0	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	48
pumpkin ash	Fraxinus profunda	NSH	FIA	1	6.1	4.5	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	49
overcup oak	Quercus lyrata	NSL	Medium	3.5	4.5	1.3	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair		Infill +	2	50
laurel oak	Quercus laurifolia	NDH	Medium	4.6	3.8	0.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	51
ailanthus	Ailanthus altissima	NSL	FIA	4.5	3.8	1.3	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	52
redbay	Persea borbonia	NSL	Low	5.3	3.5	1.2	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	53
northern catalpa	Catalpa speciosa	NSHX	FIA	1.2	2.6	2.2	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	54
Carolina ash	Fraxinus caroliniana	NSL	FIA	0.8	2.0	1.2	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	55
florida maple	Acer barbatum	NSL	Low	1.1	1.9	1.6	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	56
shagbark hickory	Carya ovata	WSL	Medium	1.8	1.7	0.6	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	57
paulownia	Paulownia tomentosa	NSL	FIA	0.8	1.5	0.9	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	58
bigtooth aspen	Populus grandidentata	NSL	Medium	2.3	1.0	0.4	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	59
red mulberry	Morus rubra	NSL	Low	1.7	1.0	0.3	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	60
pond pine	Pinus serotina	NSH	Medium	1.2	0.8	0.7	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +		2	61
serviceberry	Amelanchier spp.	NSL	Low	1.1	0.8	0.6	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	62
blackjack oak	Quercus marilandica	NSL	Medium	1.2	0.8	0.7	Very Lg. dec.	Lg. inc.	High	Rare	Lost	Good			2	63
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	3	0.7	1.6	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	64
chokecherry	Prunus virginiana	NSLX	FIA	1.1	0.6	0.5	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	65
Shumard oak	Quercus shumardii	NSL	Low	1.1	0.6	0.5	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	66
southern magnolia	Magnolia grandiflora	NSL	Low	0.8	0.6	0.3	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	67
American chestnut	Castanea dentata	NSLX	FIA	1.1	0.5	0.4	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	68
white mulberry	Morus alba	NSL	FIA	2.2	0.4	0.7	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	69
eastern redbud	Cercis canadensis	NSL	Low	1.2	0.2	0.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	70
slash pine	Pinus elliottii	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	71
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	72
pond cypress	Taxodium ascendens	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	73
boxelder	Acer negundo	WSH	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	74
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	75
water hickory	Carya aquatica	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	76
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Likely +	Likely +	3	77
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	78
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	79
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	80
honeylocust	Gleditsia triacanthos	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	81
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	82
water elm	Planera aquatica	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	83
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	84
shingle oak	Quercus imbricaria	NDH	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	85
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	86
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	87
black willow	Salix nigra	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	88
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	89