

	sq. km	sq. mi	FIA Plots
Area of Region	8,200.0	3,166.0	247

**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	18	24	Increase	31	34	Very Good	15	17	Likely	2	2
Hickory	7			Medium	34	52	No Change	14	11	Good	16	17	Infill	12	12
Maple	5	Abundant	6	Low	33	12	Decrease	22	22	Fair	14	12	Migrate	3	4
Oak	17	Common	29	FIA	6		New	14	14	Poor	8	8			
Pine	7	Rare	38				Unknown	10	10	Very Poor	11	9			
Other	35	Absent	18							FIA Only	4	4			
	<b>73</b>		<b>91</b>		<b>91</b>	<b>88</b>		<b>91</b>	<b>91</b>	Unknown	4	4			
											<b>72</b>	<b>71</b>			

**Potential Changes in Climate Variables**

**Temperature (°F)**

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	60.2	62.0	64.1	64.2	
	CCSM85	60.2	62.4	64.8	67.7	
	GFDL45	60.2	62.9	65.2	66.1	
	GFDL85	60.2	63.1	66.4	70.1	
	HAD45	60.2	62.4	65.4	66.9	
	HAD85	60.2	62.8	66.7	71.0	
Growing Season (May—Sep)	CCSM45	74.4	76.2	78.0	78.4	
	CCSM85	74.4	76.3	78.9	82.5	
	GFDL45	74.4	77.4	79.9	81.2	
	GFDL85	74.4	77.8	81.3	85.6	
	HAD45	74.4	77.3	80.1	81.8	
	HAD85	74.4	77.3	82.6	87.2	
Coldest Month (Average)	CCSM45	39.2	41.4	42.3	42.3	
	CCSM85	39.2	41.5	42.5	43.7	
	GFDL45	39.2	42.5	42.7	43.5	
	GFDL85	39.2	41.3	42.2	43.2	
	HAD45	39.2	39.7	41.4	41.8	
	HAD85	39.2	40.3	41.4	43.0	
Warmest Month (Average)	CCSM45	79.6	81.7	82.7	82.7	
	CCSM85	79.6	81.8	83.4	85.1	
	GFDL45	79.6	82.4	83.4	84.5	
	GFDL85	79.6	83.0	84.9	87.4	
	HAD45	79.6	83.0	84.7	85.5	
	HAD85	79.6	83.6	86.9	89.6	

**Precipitation (in)**

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	45.7	50.5	52.5	54.6	
	CCSM85	45.7	50.8	54.0	59.9	
	GFDL45	45.7	50.8	55.0	58.1	
	GFDL85	45.7	50.1	56.6	57.3	
	HAD45	45.7	48.5	49.8	49.7	
	HAD85	45.7	50.6	47.1	48.5	
Growing Season (May—Sep)	CCSM45	20.9	24.7	26.1	27.6	
	CCSM85	20.9	23.9	25.3	28.5	
	GFDL45	20.9	24.7	27.6	28.8	
	GFDL85	20.9	23.8	29.1	29.4	
	HAD45	20.9	21.8	21.9	22.6	
	HAD85	20.9	23.9	20.9	20.0	

**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	72	2111.5	29.4	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	91.5	893.0	9.8	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	2
red maple	Acer rubrum	WDH	High	92.7	882.3	9.5	Sm. dec.	Sm. dec.	High	Abundant	Good	Good			1	3
white oak	Quercus alba	WDH	Medium	80.5	737.1	9.2	No change	Sm. dec.	High	Abundant	Very Good	Good			1	4
yellow-poplar	Liriodendron tulipifera	WDH	High	80.5	612.1	7.6	Lg. dec.	Lg. dec.	High	Abundant	Good	Good			1	5
shortleaf pine	Pinus echinata	WDH	High	58.5	503.4	8.6	Sm. inc.	Lg. inc.	Medium	Abundant	Very Good	Very Good			1	6
Virginia pine	Pinus virginiana	NDH	High	42.7	383.5	9.0	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	7
eastern redcedar	Juniperus virginiana	WDH	Medium	64.6	286.4	4.4	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	8
longleaf pine	Pinus palustris	NSH	Medium	12.2	247.2	20.3	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	9
southern red oak	Quercus falcata	WDL	Medium	63.4	225.9	3.6	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	10
pignut hickory	Carya glabra	WDL	Medium	67.1	205.2	3.1	No change	No change	Medium	Common	Fair	Fair			1	11
sourwood	Oxydendrum arboreum	NDL	High	61	187.9	3.1	Sm. dec.	Lg. dec.	High	Common	Fair	Fair			1	12
post oak	Quercus stellata	WDH	High	47.6	183.0	3.9	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	13
chestnut oak	Quercus prinus	NDH	High	24.4	174.4	7.2	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	14
winged elm	Ulmus alata	WDL	Medium	47.6	165.7	3.5	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	15
blackgum	Nyssa sylvatica	WDL	Medium	67.1	165.0	2.0	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	16
flowering dogwood	Cornus florida	WDL	Medium	70.7	138.0	2.0	No change	No change	Medium	Common	Fair	Fair			1	17
black cherry	Prunus serotina	WDL	Medium	68.3	126.3	1.9	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	18
scarlet oak	Quercus coccinea	WDL	Medium	32.9	113.9	3.5	Sm. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	19
willow oak	Quercus phellos	NSL	Low	18.3	112.0	6.1	No change	Sm. inc.	Medium	Common	Fair	Good			1	20
northern red oak	Quercus rubra	WDH	Medium	36.6	99.5	2.7	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	21
American elm	Ulmus americana	WDH	Medium	30.5	97.7	3.2	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	22
black oak	Quercus velutina	WDH	High	32.9	96.6	2.9	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	23
American holly	Ilex opaca	NSL	Medium	41.5	94.3	2.3	No change	No change	Medium	Common	Fair	Fair			1	24
mockernut hickory	Carya alba	WDL	Medium	48.8	91.2	1.9	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	25
turkey oak	Quercus laevis	NSH	Medium	12.2	91.2	7.5	Sm. dec.	Sm. dec.	High	Common	Fair	Fair	Infill +	Infill +	1	26
hackberry	Celtis occidentalis	WDH	Medium	12.2	88.5	7.3	No change	No change	High	Common	Good	Good			1	27
white ash	Fraxinus americana	WDL	Medium	34.1	78.7	2.3	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	28
American beech	Fagus grandifolia	WDH	High	24.4	66.6	2.7	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	29
blackjack oak	Quercus marilandica	NSL	Medium	14.6	66.4	4.5	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	30
boxelder	Acer negundo	WSH	Low	4.9	65.2	13.4	No change	No change	High	Common	Good	Good			1	31
water oak	Quercus nigra	WDH	High	24.4	64.0	2.6	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	32
shagbark hickory	Carya ovata	WSL	Medium	19.5	63.3	3.2	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	33
green ash	Fraxinus pennsylvanica	WSH	Low	19.5	57.7	3.0	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	34
American hornbeam; muscley	Carpinus caroliniana	WSL	Low	25.6	51.1	2.0	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	35
eastern redbud	Cercis canadensis	NSL	Low	22	40.8	1.9	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	36
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	12.2	32.1	2.6	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	37
black walnut	Juglans nigra	WDH	Low	12.2	24.9	2.0	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	38
florida maple	Acer barbatum	NSL	Low	6.1	18.5	3.0	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	1	39
ailanthus	Ailanthus altissima	NSL	FIA	3.7	15.1	4.1	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	40
common persimmon	Diospyros virginiana	NSL	Low	12.2	14.2	1.2	No change	Sm. inc.	High	Rare	Fair	Good			1	41
red mulberry	Morus rubra	NSL	Low	6.1	12.3	2.0	Sm. dec.	No change	Medium	Rare	Very Poor	Poor			1	42
sycamore	Platanus occidentalis	NSL	Low	7.3	9.6	1.3	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	43
overcup oak	Quercus lyrata	NSL	Medium	1.2	8.9	7.3	No change	No change	Low	Rare	Very Poor	Very Poor			2	44
slippery elm	Ulmus rubra	WSL	Low	6.1	8.3	1.4	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	1	45
laurel oak	Quercus laurifolia	NDH	Medium	4.9	7.6	1.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	46
pitch pine	Pinus rigida	NSH	High	1.2	6.6	5.4	No change	Sm. dec.	Medium	Rare	Poor	Very Poor	Infill +		2	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
sassafras	Sassafras albidum	WSL	Low	6.1	5.5	0.9	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	48
swamp tupelo	Nyssa biflora	NDH	Medium	3.7	5.2	1.4	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	49
pond pine	Pinus serotina	NSH	Medium	1.2	5.0	4.1	No change	No change	Low	Rare	Very Poor	Very Poor			2	50
swamp chestnut oak	Quercus michauxii	NSL	Low	1.2	4.5	3.7	No change	No change	Medium	Rare	Poor	Poor	Infill +		2	51
black locust	Robinia pseudoacacia	NDH	Low	2.4	3.0	1.2	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	52
cucumbertree	Magnolia acuminata	NSL	Low	2.4	2.5	1.0	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	53
sweetbay	Magnolia virginiana	NSL	Medium	3.7	2.3	0.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	54
butternut	Juglans cinerea	NSLX	FIA	1.2	1.9	1.6	Unknown	Unknown	Low	Rare	FIA Only	FIA Only			0	55
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	1.2	1.6	1.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	56
bluejack oak	Quercus incana	NSL	Low	1.2	1.3	1.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	57
American basswood	Tilia americana	WSL	Medium	1.2	1.2	1.0	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	58
redbay	Persea borbonia	NSL	Low	1.2	1.1	0.9	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	59
shellbark hickory	Carya laciniosa	NSL	Low	1.2	1.1	0.9	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	60
sand hickory	Carya pallida	NSL	FIA	1.2	1.0	0.8	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	61
serviceberry	Amelanchier spp.	NSL	Low	2.4	1.0	0.4	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	62
honeylocust	Gleditsia triacanthos	NSH	Low	1.2	0.9	0.8	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	63
silver maple	Acer saccharinum	NSH	Low	1.2	0.8	0.6	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	64
pecan	Carya illinoensis	NSH	Low	1.2	0.7	0.6	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair		Infill +	2	65
striped maple	Acer pensylvanicum	NSL	Medium	2.4	0.6	0.3	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	66
black willow	Salix nigra	NSH	Low	1.2	0.5	0.4	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	67
white mulberry	Morus alba	NSL	FIA	1.2	0.4	0.3	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	68
wild plum	Prunus americana	NSLX	FIA	1.2	0.4	0.3	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	69
slash pine	Pinus elliotii	NDH	High	1.2	0.3	0.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	70
bitternut hickory	Carya cordiformis	WSL	Low	1.2	0.3	0.3	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	71
bear oak; scrub oak	Quercus ilicifolia	NSLX	FIA	1.2	0.3	0.2	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	72
loblolly-bay	Gordonia lasianthus	NSH	Medium	1.2	0.2	0.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	73
ashe juniper	Juniperus ashei	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	74
sand pine	Pinus clausa	NDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	75
spruce pine	Pinus glabra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	76
bald cypress	Taxodium distichum	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	77
pond cypress	Taxodium ascendens	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	78
mountain maple	Acer spicatum	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	79
pawpaw	Asimina triloba	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	80
river birch	Betula nigra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	81
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	82
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	83
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	84
black ash	Fraxinus nigra	WSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	85
blue ash	Fraxinus quadrangulata	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	86
southern magnolia	Magnolia grandiflora	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	87
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	88
Nuttall oak	Quercus texana	NSH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	89
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	90
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	91