

	sq. km	sq. mi	FIA Plots
Area of Region	8,700.0	3,359.1	262

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	14	23	Increase	34	39	Very Good	13	13	Likely	3	4
Hickory	8			Medium	33	51	No Change	15	14	Good	16	21	Infill	13	16
Maple	4	Abundant	2	Low	35	9	Decrease	19	15	Fair	14	13	Migrate	1	3
Oak	17	Common	26	FIA	1		New	12	13	Poor	12	11			
Pine	3	Rare	41				Unknown	3	2	Very Poor	10	7			
Other	35	Absent	13							FIA Only	1	1			
	69		82		83	83		83	83	Unknown	2	1			
											68	67			

Potential Changes in Climate Variables

Temperature (°F)

Scenario	2009	2039	2069	2099	
Annual	62.1	63.7	65.8	66.0	
Average	62.1	64.2	66.7	69.3	
GFDL45	62.1	65.1	66.7	67.6	
GFDL85	62.1	64.7	67.8	71.2	
HAD45	62.1	64.6	67.5	68.7	
HAD85	62.1	64.8	69.3	73.0	
Growing Season	76.2	77.8	79.4	80.0	
May—Sep	76.2	78.2	80.7	84.0	
GFDL45	76.2	79.6	81.3	82.9	
GFDL85	76.2	79.2	82.7	86.8	
HAD45	76.2	79.7	82.4	83.6	
HAD85	76.2	79.8	86.2	89.5	
Coldest Month	40.7	42.9	44.0	44.1	
Average	40.7	43.5	44.8	46.1	
GFDL45	40.7	44.6	44.6	44.7	
GFDL85	40.7	42.4	43.6	44.0	
HAD45	40.7	41.1	43.0	43.6	
HAD85	40.7	42.3	43.9	45.5	
Warmest Month	81.0	82.3	83.0	83.3	
Average	81.0	82.9	84.0	85.8	
GFDL45	81.0	85.0	85.4	86.4	
GFDL85	81.0	84.0	85.8	88.1	
HAD45	81.0	85.6	87.7	87.9	
HAD85	81.0	86.2	90.4	91.4	

Precipitation (in)

Scenario	2009	2039	2069	2099	
Annual	56.2	58.8	64.3	61.9	
Total	56.2	59.2	60.5	65.7	
GFDL45	56.2	63.3	67.7	68.4	
GFDL85	56.2	63.3	66.4	69.5	
HAD45	56.2	53.7	59.7	61.1	
HAD85	56.2	58.0	51.9	56.6	
Growing Season	21.4	21.2	21.7	21.9	
May—Sep	21.4	20.0	19.8	21.0	
GFDL45	21.4	25.0	26.6	26.4	
GFDL85	21.4	26.2	27.8	28.7	
HAD45	21.4	19.3	21.3	19.8	
HAD85	21.4	21.5	16.2	16.9	

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	82.8	3090.8	37.4	No change	No change	Medium	Abundant	Good	Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	88.5	1124.7	12.7	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	2
southern red oak	Quercus falcata	WDL	Medium	75.9	397.2	5.2	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	3
shortleaf pine	Pinus echinata	WDH	High	59.8	371.4	6.2	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	4
post oak	Quercus stellata	WDH	High	69	347.3	5.4	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	5
white oak	Quercus alba	WDH	Medium	69	324.9	5.0	No change	No change	High	Common	Good	Good			1	6
water oak	Quercus nigra	WDH	High	73.6	307.9	4.6	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	7
eastern redcedar	Juniperus virginiana	WDH	Medium	62.1	304.4	5.2	No change	Sm. inc.	Medium	Common	Fair	Good			1	8
cherrybark oak; swamp red oak	Quercus pagoda	NSL	Medium	52.9	251.2	4.8	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	9
winged elm	Ulmus alata	WDL	Medium	81.6	216.7	2.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	10
red maple	Acer rubrum	WDH	High	77	196.7	2.7	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	11
yellow-poplar	Liriodendron tulipifera	WDH	High	46	184.3	4.0	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	12
mockernut hickory	Carya alba	WDL	Medium	57.5	162.6	3.1	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	13
sugarberry	Celtis laevigata	NDH	Medium	14.9	149.2	15.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	14
pignut hickory	Carya glabra	WDL	Medium	50.6	128.3	2.7	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	15
sycamore	Platanus occidentalis	NSL	Low	23	125.2	5.5	Lg. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	16
black cherry	Prunus serotina	WDL	Medium	62.1	121.1	2.1	No change	Sm. inc.	Low	Common	Poor	Fair			1	17
blackgum	Nyssa sylvatica	WDL	Medium	70.1	113.2	1.7	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	18
green ash	Fraxinus pennsylvanica	WSH	Low	41.4	99.2	2.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	19
Shumard oak	Quercus shumardii	NSL	Low	26.4	96.4	4.4	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	20
American elm	Ulmus americana	WDH	Medium	31	77.3	2.5	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	21
black oak	Quercus velutina	WDH	High	32.2	75.6	2.4	Sm. dec.	No change	Medium	Common	Poor	Fair			1	22
flowering dogwood	Cornus florida	WDL	Medium	51.7	73.0	1.4	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	23
American hornbeam; musclewood	Carpinus caroliniana	WSL	Low	25.3	60.0	2.4	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	24
shagbark hickory	Carya ovata	WSL	Medium	28.7	56.9	2.3	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	25
eastern redbud	Cercis canadensis	NSL	Low	20.7	56.7	2.7	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	26
black willow	Salix nigra	NSH	Low	13.8	51.5	3.7	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	27
willow oak	Quercus phellos	NSL	Low	21.8	50.1	2.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	28
eastern hophornbeam; ironwood	Ostrya virginiana	WSL	Low	23	47.9	2.1	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	29
slippery elm	Ulmus rubra	WSL	Low	19.5	43.0	2.2	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			1	30
common persimmon	Diospyros virginiana	NSL	Low	43.7	42.4	1.1	No change	Sm. inc.	High	Rare	Fair	Good			1	31
black walnut	Juglans nigra	WDH	Low	5.7	39.3	6.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	32
blackjack oak	Quercus marilandica	NSL	Medium	14.9	35.5	2.4	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	33
sassafras	Sassafras albidum	WSL	Low	18.4	31.6	1.7	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			1	34
northern red oak	Quercus rubra	WDH	Medium	20.7	30.9	1.9	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	35
white ash	Fraxinus americana	WDL	Medium	25.3	27.8	1.1	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair			1	36
boxelder	Acer negundo	WSH	Low	14.9	26.1	2.3	Sm. inc.	Lg. inc.	High	Rare	Good	Good			1	37
Osage-orange	Maclura pomifera	NDH	Medium	8	26.0	7.3	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	1	38
American beech	Fagus grandifolia	WDH	High	17.2	25.4	1.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	39
overcup oak	Quercus lyrata	NSL	Medium	6.9	23.1	3.3	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	1	40
river birch	Betula nigra	NSL	Low	9.2	22.6	2.5	No change	No change	Medium	Rare	Poor	Poor			1	41
sourwood	Oxydendrum arboreum	NDL	High	16.1	22.1	1.4	No change	No change	High	Rare	Fair	Fair	Infill +		1	42
water tupelo	Nyssa aquatica	NSH	Medium	1.1	21.2	18.4	No change	No change	Low	Rare	Very Poor	Very Poor			2	43
slash pine	Pinus elliottii	NDH	High	1.1	19.2	16.7	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	44
chinkapin oak	Quercus muehlenbergii	NSL	Medium	10.3	18.0	1.7	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	45
swamp tupelo	Nyssa biflora	NDH	Medium	2.3	17.8	7.8	No change	No change	Low	Rare	Very Poor	Very Poor			2	46
water elm	Planera aquatica	NSL	Low	2.3	16.7	7.3	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	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
florida maple	Acer barbatum	NSL	Low	8	16.7	2.1	Sm. dec.	No change	High	Rare	Poor	Fair	Infill +	Infill +	1	48
laurel oak	Quercus laurifolia	NDH	Medium	3.4	14.3	4.2	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	49
swamp chestnut oak	Quercus michauxii	NSL	Low	9.2	11.9	1.3	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	1	50
eastern cottonwood	Populus deltoides	NSH	Low	4.6	11.6	2.5	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	51
scarlet oak	Quercus coccinea	WDL	Medium	8	10.5	1.3	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	52
bitternut hickory	Carya cordiformis	WSL	Low	12.6	9.5	1.1	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor		Infill +	1	53
durand oak	Quercus sinuata var. sinuata	NSL	FIA	3.4	9.3	2.7	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	54
red mulberry	Morus rubra	NSL	Low	11.5	8.1	0.7	Lg. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	1	55
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	1.1	7.5	6.6	Lg. inc.	Lg. inc.	High	Rare	Good	Good		Infill +	2	56
honeylocust	Gleditsia triacanthos	NSH	Low	3.4	5.8	1.7	Sm. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	57
sweetbay	Magnolia virginiana	NSL	Medium	3.4	5.6	1.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	58
bald cypress	Taxodium distichum	NSH	Medium	2.3	5.2	2.3	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2	59
water hickory	Carya aquatica	NSL	Medium	3.4	4.5	1.3	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	2	60
black locust	Robinia pseudoacacia	NDH	Low	2.3	4.4	1.9	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	61
pecan	Carya illinoensis	NSH	Low	3.4	3.8	1.1	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	62
Nuttall oak	Quercus texana	NSH	Medium	2.3	2.3	1.0	No change	No change	High	Rare	Fair	Fair			0	63
American holly	Ilex opaca	NSL	Medium	4.6	2.2	0.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	64
silver maple	Acer saccharinum	NSH	Low	1.1	1.1	1.0	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	65
black hickory	Carya texana	NDL	High	2.3	1.0	0.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	66
shellbark hickory	Carya laciniosa	NSL	Low	6.9	0.9	0.4	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	67
pawpaw	Asimina triloba	NSL	Low	1.1	0.5	0.4	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	68
serviceberry	Amelanchier spp.	NSL	Low	1.1	0.3	0.2	No change	No change	Medium	Rare	Poor	Poor			0	69
ashe juniper	Juniperus ashei	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	70
spruce pine	Pinus glabra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	71
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	72
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	73
hackberry	Celtis occidentalis	WDH	Medium	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	74
black ash	Fraxinus nigra	WSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	75
silverbell	Halesia spp.	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	76
southern magnolia	Magnolia grandiflora	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	77
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Likely +	3	78
redbay	Persea borbonia	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	79
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	80
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	81
bluejack oak	Quercus incana	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	82
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Likely +	Likely +	3	83