

	sq. km	sq. mi	FIA Plots
Area of Region	8,200.0	3,166.0	223

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	15	22	Increase	32	36	Very Good	12	14	Likely	1	1
Hickory	7			Medium	35	50	No Change	15	14	Good	15	18	Infill	10	15
Maple	2	Abundant	4	Low	33	12	Decrease	22	19	Fair	12	8	Migrate	1	3
Oak	17	Common	21	FIA	2		New	10	11	Poor	14	16			
Pine	6	Rare	46				Unknown	6	5	Very Poor	15	12			
Other	37	Absent	14							FIA Only	2	2			
	71		85		85	84		85	85	Unknown	4	3			
											74	73			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	63.6	65.3	67.3	67.4	
	CCSM85	63.6	65.6	68.0	70.7	
	GFDL45	63.6	66.6	68.2	69.1	
	GFDL85	63.6	66.2	69.3	72.9	
	HAD45	63.6	65.7	68.4	69.9	
	HAD85	63.6	66.0	69.7	73.7	
Growing Season (May—Sep)	CCSM45	76.9	78.5	80.1	80.6	
	CCSM85	76.9	78.5	81.1	84.5	
	GFDL45	76.9	80.0	81.6	83.0	
	GFDL85	76.9	79.8	83.0	87.1	
	HAD45	76.9	79.8	82.2	83.9	
	HAD85	76.9	79.7	84.8	88.8	
Coldest Month (Average)	CCSM45	43.7	46.1	46.9	46.8	
	CCSM85	43.7	45.9	47.0	48.2	
	GFDL45	43.7	46.6	47.0	47.5	
	GFDL85	43.7	45.7	46.7	47.5	
	HAD45	43.7	44.1	45.7	46.3	
	HAD85	43.7	44.8	45.7	47.3	
Warmest Month (Average)	CCSM45	81.5	83.2	84.2	84.3	
	CCSM85	81.5	83.5	85.0	86.7	
	GFDL45	81.5	83.7	84.6	85.6	
	GFDL85	81.5	84.1	85.8	88.0	
	HAD45	81.5	84.8	86.1	86.8	
	HAD85	81.5	85.2	88.3	90.4	

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	45.5	49.3	51.3	53.2	
	CCSM85	45.5	49.6	52.9	58.5	
	GFDL45	45.5	51.1	54.8	57.3	
	GFDL85	45.5	50.5	57.1	56.7	
	HAD45	45.5	46.1	48.7	49.1	
	HAD85	45.5	49.5	45.2	46.7	
Growing Season (May—Sep)	CCSM45	22.0	25.5	26.9	27.6	
	CCSM85	22.0	24.6	26.7	29.5	
	GFDL45	22.0	27.0	29.6	30.5	
	GFDL85	22.0	26.2	31.4	31.8	
	HAD45	22.0	22.3	22.8	22.6	
	HAD85	22.0	23.9	20.0	19.2	

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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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	91.5	3102.6	40.1	No change	No change	Medium	Abundant	Good	Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	81.7	1023.3	14.7	No change	No change	Medium	Abundant	Good	Good			1	2
water oak	Quercus nigra	WDH	High	84.1	626.7	8.8	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	3
longleaf pine	Pinus palustris	NSH	Medium	39	574.5	18.6	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	4
red maple	Acer rubrum	WDH	High	76.8	408.4	6.3	No change	Sm. inc.	High	Common	Good	Very Good			1	5
swamp tupelo	Nyssa biflora	NDH	Medium	36.6	237.0	7.3	Sm. inc.	Lg. inc.	Low	Common	Fair	Good			1	6
black cherry	Prunus serotina	WDL	Medium	56.1	190.9	4.3	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	7
yellow-poplar	Liriodendron tulipifera	WDH	High	31.7	174.6	7.3	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	8
turkey oak	Quercus laevis	NSH	Medium	26.8	160.7	7.0	Sm. dec.	No change	High	Common	Fair	Good			1	9
southern red oak	Quercus falcata	WDL	Medium	40.2	125.6	4.7	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	10
mockernut hickory	Carya alba	WDL	Medium	42.7	113.1	3.6	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	11
laurel oak	Quercus laurifolia	NDH	Medium	34.1	109.7	3.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	12
bald cypress	Taxodium distichum	NSH	Medium	13.4	90.0	9.7	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	13
slash pine	Pinus elliotii	NDH	High	30.5	84.8	4.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	14
sugarberry	Celtis laevigata	NDH	Medium	17.1	79.5	6.2	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	15
blackgum	Nyssa sylvatica	WDL	Medium	41.5	78.2	2.7	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	16
willow oak	Quercus phellos	NSL	Low	23.2	77.7	4.2	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	17
green ash	Fraxinus pennsylvanica	WSH	Low	17.1	69.5	5.3	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	18
sweetbay	Magnolia virginiana	NSL	Medium	24.4	67.5	4.0	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	19
post oak	Quercus stellata	WDH	High	39	65.7	2.4	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	20
water tupelo	Nyssa aquatica	NSH	Medium	11	63.1	10.1	No change	Sm. inc.	Low	Common	Poor	Fair			1	21
white oak	Quercus alba	WDH	Medium	26.8	60.9	3.2	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	22
common persimmon	Diospyros virginiana	NSL	Low	25.6	58.1	2.3	Lg. dec.	Lg. dec.	High	Common	Fair	Fair			1	23
redbay	Persea borbonia	NSL	Low	17.1	52.1	3.1	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	24
American elm	Ulmus americana	WDH	Medium	24.4	51.7	2.5	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	25
American holly	Ilex opaca	NSL	Medium	28	48.6	2.4	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			1	26
scarlet oak	Quercus coccinea	WDL	Medium	14.6	45.7	4.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	27
pignut hickory	Carya glabra	WDL	Medium	8.5	36.7	4.3	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	28
sycamore	Platanus occidentalis	NSL	Low	8.5	36.6	4.3	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	29
flowering dogwood	Cornus florida	WDL	Medium	28	35.3	1.8	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair			1	30
American hornbeam; muscley	Carpinus caroliniana	WSL	Low	17.1	34.6	2.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	31
black willow	Salix nigra	NSH	Low	22	32.7	2.7	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair			1	32
blackjack oak	Quercus marilandica	NSL	Medium	22	32.3	2.4	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	33
shortleaf pine	Pinus echinata	WDH	High	11	32.1	2.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	34
sassafras	Sassafras albidum	WSL	Low	20.7	28.2	2.1	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair			1	35
eastern redcedar	Juniperus virginiana	WDH	Medium	12.2	25.5	3.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	36
overcup oak	Quercus lyrata	NSL	Medium	7.3	22.3	3.1	No change	No change	Low	Rare	Very Poor	Very Poor			0	37
winged elm	Ulmus alata	WDL	Medium	18.3	21.9	1.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	38
boxelder	Acer negundo	WSH	Low	9.8	21.5	4.3	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	1	39
water hickory	Carya aquatica	NSL	Medium	12.2	20.1	2.4	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	40
live oak	Quercus virginiana	NDH	High	4.9	19.2	3.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	41
northern red oak	Quercus rubra	WDH	Medium	3.7	16.7	4.6	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	2	42
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	12.2	16.4	2.1	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	43
river birch	Betula nigra	NSL	Low	2.4	16.3	6.7	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	44
black oak	Quercus velutina	WDH	High	13.4	15.8	1.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	45
bluejack oak	Quercus incana	NSL	Low	4.9	11.6	2.4	No change	No change	Medium	Rare	Poor	Poor			1	46
sand hickory	Carya pallida	NSL	FIA	8.5	11.4	2.4	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			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
swamp chestnut oak	Quercus michauxii	NSL	Low	6.1	10.0	1.6	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	48
water elm	Planera aquatica	NSL	Low	4.9	9.4	1.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	49
slippery elm	Ulmus rubra	WSL	Low	13.4	9.2	1.0	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	1	50
pawpaw	Asimina triloba	NSL	Low	8.5	6.9	1.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	51
hackberry	Celtis occidentalis	WDH	Medium	3.7	6.3	1.7	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	52
pond pine	Pinus serotina	NSH	Medium	6.1	5.6	2.7	Sm. dec.	No change	Low	Rare	Very Poor	Very Poor			0	53
sourwood	Oxydendrum arboreum	NDL	High	9.8	4.9	0.8	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			1	54
eastern cottonwood	Populus deltoides	NSH	Low	7.3	4.0	2.2	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	55
spruce pine	Pinus glabra	NSL	Low	1.2	3.1	2.5	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			2	56
shagbark hickory	Carya ovata	WSL	Medium	2.4	2.9	1.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	57
pond cypress	Taxodium ascendens	NSH	Medium	1.2	2.8	2.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	58
silverbell	Halesia spp.	NSL	Low	1.2	2.2	1.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	59
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	1.2	2.0	1.7	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	60
bigleaf magnolia	Magnolia macrophylla	NSL	Low	1.2	2.0	1.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	61
American beech	Fagus grandifolia	WDH	High	2.4	1.6	0.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	62
red mulberry	Morus rubra	NSL	Low	1.2	1.6	1.3	No change	No change	Medium	Rare	Poor	Poor		Infill +	2	63
pecan	Carya illinoensis	NSH	Low	1.2	1.4	1.2	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	64
loblolly-bay	Gordonia lasianthus	NSH	Medium	1.2	1.4	1.1	No change	No change	Medium	Rare	Poor	Poor	Infill +		2	65
chestnut oak	Quercus prinus	NDH	High	1.2	1.0	0.8	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	66
bitternut hickory	Carya cordiformis	WSL	Low	1.2	0.7	0.6	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	67
wild plum	Prunus americana	NSLX	FIA	1.2	0.7	0.5	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	68
yellow buckeye	Aesculus flava	NSL	Low	1.2	0.5	0.4	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	69
black walnut	Juglans nigra	WDH	Low	1.2	0.4	0.4	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	70
white ash	Fraxinus americana	WDL	Medium	1.2	0.2	0.2	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	71
sand pine	Pinus clausa	NDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate ++	Migrate +	3	72
florida maple	Acer barbatum	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate ++	3	73
serviceberry	Amelanchier spp.	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	74
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	75
shellbark hickory	Carya laciniosa	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	76
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	77
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	New Habitat	Low	Absent	Unknown	New Habitat			3	78
honeylocust	Gleditsia triacanthos	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	79
southern magnolia	Magnolia grandiflora	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	80
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	81
chinkapin oak	Quercus muehlenbergii	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	82
Shumard oak	Quercus shumardii	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	83
American basswood	Tilia americana	WSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	84
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	85