

	sq. km	sq. mi	FIA Plots
Area of Region	8,700.0	3,359.1	81

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				
						RCP45	RCP85	RCP45	RCP85	RCP45	RCP85				
Ash	2			High	14	22	Increase	26	26	Very Good	1	1	Likely	0	0
Hickory	7			Medium	30	45	No Change	8	11	Good	18	20	Infill	36	37
Maple	5	Abundant	0	Low	30	8	Decrease	28	25	Fair	15	14	Migrate	2	3
Oak	15	Common	12	FIA	1		New	8	9	Poor	11	12			
Pine	1	Rare	51				Unknown	5	4	Very Poor	16	14			
Other	33	Absent	12							FIA Only	1	1			
	63		75		75	75		75	75	Unknown	4	3			
											66	65		38	40

Potential Changes in Climate Variables

Temperature (°F)

Scenario	2009	2039	2069	2099	
Annual	61.8	63.5	65.5	65.8	
Average	61.8	63.9	66.4	69.1	
GFDL45	61.8	67.0	66.5	67.5	
GFDL85	61.8	64.6	67.6	71.2	
HAD45	61.8	64.4	67.4	68.6	
HAD85	61.8	64.7	69.2	72.9	
Growing Season	77.0	78.5	80.1	80.7	
May—Sep	77.0	79.2	81.5	85.0	
GFDL45	77.0	83.5	82.4	84.2	
GFDL85	77.0	80.4	83.9	88.3	
HAD45	77.0	80.5	83.3	84.4	
HAD85	77.0	80.7	87.1	90.5	
Coldest Month	38.6	40.8	42.1	42.3	
Average	38.6	41.2	42.5	42.6	
GFDL45	38.6	42.3	42.5	41.9	
GFDL85	38.6	40.0	41.4	41.9	
HAD45	38.6	39.6	41.6	41.9	
HAD85	38.6	40.7	42.4	44.1	
Warmest Month	82.2	83.5	84.5	84.7	
Average	82.2	84.5	85.3	87.2	
GFDL45	82.2	86.6	87.1	88.2	
GFDL85	82.2	86.0	87.6	90.4	
HAD45	82.2	86.6	88.6	88.9	
HAD85	82.2	87.5	91.6	92.8	

Precipitation (in)

Scenario	2009	2039	2069	2099	
Annual	51.6	52.9	57.7	56.0	
Total	51.6	54.1	57.1	58.8	
GFDL45	51.6	57.2	61.7	60.9	
GFDL85	51.6	57.3	61.2	63.6	
HAD45	51.6	49.4	54.4	56.7	
HAD85	51.6	54.2	47.7	53.0	
Growing Season	18.4	17.7	18.0	18.2	
May—Sep	18.4	17.3	16.6	17.4	
GFDL45	18.4	20.4	21.8	21.8	
GFDL85	18.4	21.7	23.1	23.4	
HAD45	18.4	16.2	17.1	16.0	
HAD85	18.4	17.9	13.0	13.3	

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
sugarberry	Celtis laevigata	NDH	Medium	75.9	234.8	19.9	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	1
water tupelo	Nyssa aquatica	NSH	Medium	29.9	157.7	23.5	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	2
green ash	Fraxinus pennsylvanica	WSH	Low	77	143.1	7.8	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	3
sweetgum	Liquidambar styraciflua	WDH	High	43.7	122.1	10.9	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	4
boxelder	Acer negundo	WSH	Low	29.9	107.1	10.7	Sm. dec.	Sm. dec.	High	Common	Fair	Fair	Infill +	Infill +	1	5
willow oak	Quercus phellos	NSL	Low	37.9	78.6	8.7	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	6
white oak	Quercus alba	WDH	Medium	25.3	72.2	7.4	Sm. dec.	Sm. dec.	High	Common	Fair	Fair	Infill +	Infill +	1	7
Nuttall oak	Quercus texana	NSH	Medium	50.6	62.1	9.3	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			0	8
water hickory	Carya aquatica	NSL	Medium	48.3	61.7	11.5	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	9
winged elm	Ulmus alata	WDL	Medium	27.6	54.7	9.7	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	10
overcup oak	Quercus lyrata	NSL	Medium	36.8	52.1	9.1	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair	Infill +	Infill +	1	11
pecan	Carya illinoensis	NSH	Low	32.2	50.7	8.7	Lg. inc.	Lg. inc.	Low	Common	Good	Good	Infill ++	Infill ++	1	12
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	33.3	49.8	7.4	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	1	13
black willow	Salix nigra	NSH	Low	40.2	49.2	9.6	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	1	14
sycamore	Platanus occidentalis	NSL	Low	27.6	48.5	8.1	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	15
eastern cottonwood	Populus deltoides	NSH	Low	29.9	42.3	9.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	16
American elm	Ulmus americana	WDH	Medium	63.2	42.2	3.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	17
loblolly pine	Pinus taeda	WDH	High	6.9	40.8	12.2	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	2	18
slippery elm	Ulmus rubra	WSL	Low	60.9	38.8	3.1	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	19
bald cypress	Taxodium distichum	NSH	Medium	33.3	32.7	11.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	20
common persimmon	Diospyros virginiana	NSL	Low	62.1	32.1	4.7	Sm. inc.	Sm. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	21
water oak	Quercus nigra	WDH	High	40.2	31.5	8.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	22
yellow-poplar	Liriodendron tulipifera	WDH	High	5.7	31.1	5.4	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	23
American beech	Fagus grandifolia	WDH	High	3.4	30.7	8.9	Sm. dec.	No change	Medium	Rare	Very Poor	Poor			2	24
Shumard oak	Quercus shumardii	NSL	Low	5.7	27.0	13.4	Sm. dec.	No change	High	Rare	Poor	Fair	Infill +	Infill +	2	25
shagbark hickory	Carya ovata	WSL	Medium	20.7	24.7	5.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			2	26
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	18.4	23.1	3.5	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor	Infill +	Infill +	1	27
black oak	Quercus velutina	WDH	High	12.6	22.9	4.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	28
mockernut hickory	Carya alba	WDL	Medium	34.5	22.5	3.9	Sm. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	29
red maple	Acer rubrum	WDH	High	40.2	22.1	4.5	Sm. inc.	Sm. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	30
pawpaw	Asimina triloba	NSL	Low	17.2	19.8	3.3	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	31
black cherry	Prunus serotina	WDL	Medium	18.4	17.4	2.8	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	32
pignut hickory	Carya glabra	WDL	Medium	11.5	16.4	4.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	33
blackgum	Nyssa sylvatica	WDL	Medium	6.9	15.5	5.7	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	34
post oak	Quercus stellata	WDH	High	5.7	13.5	6.8	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	35
sassafras	Sassafras albidum	WSL	Low	33.3	12.3	1.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	36
florida maple	Acer barbatum	NSL	Low	13.8	12.2	3.2	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	37
silver maple	Acer saccharinum	NSH	Low	20.7	8.1	2.5	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	38
water elm	Planera aquatica	NSL	Low	18.4	6.9	6.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	39
honeylocust	Gleditsia triacanthos	NSH	Low	24.1	6.6	2.9	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	40
swamp chestnut oak	Quercus michauxii	NSL	Low	25.3	6.5	1.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	41
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	10.3	5.3	2.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	42
flowering dogwood	Cornus florida	WDL	Medium	12.6	5.2	1.2	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	1	43
northern red oak	Quercus rubra	WDH	Medium	6.9	4.9	2.0	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	44
black hickory	Carya texana	NDL	High	5.7	4.8	2.3	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	45
chinkapin oak	Quercus muehlenbergii	NSL	Medium	8	4.4	1.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	46
eastern redcedar	Juniperus virginiana	WDH	Medium	14.9	3.7	2.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	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
southern red oak	Quercus falcata	WDL	Medium	5.7	3.4	3.2	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	48
red mulberry	Morus rubra	NSL	Low	14.9	3.3	2.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	49
cucumbertree	Magnolia acuminata	NSL	Low	1.1	3.2	2.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	50
black walnut	Juglans nigra	WDH	Low	1.1	2.9	2.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	51
sugar maple	Acer saccharum	WDH	High	1.1	2.8	2.5	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	52
eastern redbud	Cercis canadensis	NSL	Low	11.5	2.7	1.0	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			2	53
hackberry	Celtis occidentalis	WDH	Medium	4.6	2.5	8.7	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	54
American basswood	Tilia americana	WSL	Medium	1.1	1.8	1.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	55
pin oak	Quercus palustris	NSH	Low	1.1	1.7	1.5	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	56
cedar elm	Ulmus crassifolia	NDH	Medium	1.1	1.1	1.0	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	57
white ash	Fraxinus americana	WDL	Medium	10.3	1.0	0.6	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	58
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	4.6	0.8	2.9	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	59
black locust	Robinia pseudoacacia	NDH	Low	1.1	0.8	0.7	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	60
blackjack oak	Quercus marilandica	NSL	Medium	1.1	0.5	0.5	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	61
waterlocust	Gleditsia aquatica	NSLX	FIA	4.6	0.2	0.9	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	62
bitternut hickory	Carya cordiformis	WSL	Low	4.6	0.2	0.8	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	63
ashe juniper	Juniperus ashei	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	64
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	65
slash pine	Pinus elliotii	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	66
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	67
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	68
serviceberry	Amelanchier spp.	NSL	Low	0	0	0	New Habitat	Unknown	Medium	Absent	New Habitat	Unknown			3	69
American holly	Ilex opaca	NSL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Migrate +	3	70
Osage-orange	Maclura pomifera	NDH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	71
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	72
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	73
laurel oak	Quercus laurifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +		3	74
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	75