

	sq. km	sq. mi	FIA Plots
Area of Region	9,700.0	3,745.2	335

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	19	22	Increase	35	41	Very Good	18	18	Likely	2	2
Hickory	5			Medium	32	55	No Change	16	10	Good	15	16	Infill	8	13
Maple	5	Abundant	2	Low	36	12	Decrease	15	15	Fair	9	13	Migrate	4	6
Oak	16	Common	26	FIA	2		New	12	13	Poor	11	8			
Pine	5	Rare	40				Unknown	11	10	Very Poor	9	6			
Other	35	Absent	21							FIA Only	2	2			
	68		89		89	89		89	89	Unknown	9	8			
											73	71			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	62.0	63.7	65.8	65.9	
	CCSM85	62.0	64.0	66.6	69.2	
	GFDL45	62.0	64.8	66.6	67.4	
	GFDL85	62.0	64.5	67.7	71.1	
	HAD45	62.0	64.2	67.1	68.5	
	HAD85	62.0	64.5	68.8	72.6	
Growing Season May—Sep	CCSM45	75.4	77.1	78.8	79.3	
	CCSM85	75.4	77.2	79.8	83.2	
	GFDL45	75.4	78.3	80.2	81.6	
	GFDL85	75.4	78.0	81.6	85.5	
	HAD45	75.4	78.7	81.3	82.8	
	HAD85	75.4	78.7	84.8	88.2	
Coldest Month Average	CCSM45	41.9	44.2	45.0	44.9	
	CCSM85	41.9	44.2	45.5	46.7	
	GFDL45	41.9	45.4	45.5	45.8	
	GFDL85	41.9	43.8	44.9	45.2	
	HAD45	41.9	41.8	43.6	44.1	
	HAD85	41.9	43.0	44.3	45.9	
Warmest Month Average	CCSM45	79.9	81.6	82.4	82.5	
	CCSM85	79.9	81.6	83.0	84.9	
	GFDL45	79.9	82.5	83.3	84.2	
	GFDL85	79.9	82.2	83.9	86.0	
	HAD45	79.9	84.2	86.0	86.6	
	HAD85	79.9	84.5	88.5	89.8	

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	53.5	55.3	59.9	59.0	
	CCSM85	53.5	56.4	58.7	64.8	
	GFDL45	53.5	60.2	63.6	66.7	
	GFDL85	53.5	60.0	62.9	64.5	
	HAD45	53.5	52.0	58.0	58.5	
	HAD85	53.5	57.1	51.5	55.5	
Growing Season May—Sep	CCSM45	20.6	21.3	22.8	22.8	
	CCSM85	20.6	20.8	21.3	23.3	
	GFDL45	20.6	25.4	27.3	27.4	
	GFDL85	20.6	25.5	27.8	28.7	
	HAD45	20.6	19.7	21.9	20.7	
	HAD85	20.6	22.2	16.4	17.9	

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	97.9	3495.9	37.2	No change	No change	Medium	Abundant	Good	Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	94.8	764.4	8.4	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	2
longleaf pine	Pinus palustris	NSH	Medium	44.3	390.7	8.8	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	3
yellow-poplar	Liriodendron tulipifera	WDH	High	73.2	376.7	5.2	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	4
water oak	Quercus nigra	WDH	High	73.2	359.1	5.3	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	5
red maple	Acer rubrum	WDH	High	78.4	348.4	4.7	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	6
shortleaf pine	Pinus echinata	WDH	High	75.3	315.9	4.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	7
white oak	Quercus alba	WDH	Medium	77.3	298.2	4.0	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	8
mockernut hickory	Carya alba	WDL	Medium	68	263.7	3.9	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	9
southern red oak	Quercus falcata	WDL	Medium	68	263.1	3.9	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	10
chestnut oak	Quercus prinus	NDH	High	44.3	236.5	5.3	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	11
sourwood	Oxydendrum arboreum	NDL	High	68	214.4	3.2	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	12
pignut hickory	Carya glabra	WDL	Medium	67	194.1	2.9	No change	No change	Medium	Common	Fair	Fair			1	13
flowering dogwood	Cornus florida	WDL	Medium	73.2	179.7	2.5	No change	No change	Medium	Common	Fair	Fair			1	14
post oak	Quercus stellata	WDH	High	56.7	164.7	2.9	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	15
blackgum	Nyssa sylvatica	WDL	Medium	79.4	156.3	2.1	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	16
black oak	Quercus velutina	WDH	High	42.3	146.1	3.5	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	17
Virginia pine	Pinus virginiana	NDH	High	27.8	145.6	5.2	No change	No change	Medium	Common	Fair	Fair			1	18
black cherry	Prunus serotina	WDL	Medium	64.9	131.3	2.0	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	19
blackjack oak	Quercus marilandica	NSL	Medium	33	114.2	3.5	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	20
scarlet oak	Quercus coccinea	WDL	Medium	29.9	84.2	2.8	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	21
sweetbay	Magnolia virginiana	NSL	Medium	17.5	71.4	4.1	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	22
sugarberry	Celtis laevigata	NDH	Medium	12.4	62.5	7.4	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	23
northern red oak	Quercus rubra	WDH	Medium	26.8	60.3	2.3	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	24
winged elm	Ulmus alata	WDL	Medium	39.2	58.0	1.7	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	25
green ash	Fraxinus pennsylvanica	WSH	Low	24.7	55.2	2.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	26
American hornbeam; muscled	Carpinus caroliniana	WSL	Low	32	53.2	1.9	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	27
eastern redcedar	Juniperus virginiana	WDH	Medium	25.8	50.3	2.0	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	28
American beech	Fagus grandifolia	WDH	High	28.9	44.7	1.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	29
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	14.4	35.2	2.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	30
common persimmon	Diospyros virginiana	NSL	Low	32	28.6	0.9	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	31
water tupelo	Nyssa aquatica	NSH	Medium	5.2	24.9	4.8	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			2	32
sassafras	Sassafras albidum	WSL	Low	24.7	24.8	1.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	33
shagbark hickory	Carya ovata	WSL	Medium	9.3	23.6	2.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	34
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	15.5	22.0	1.4	Lg. inc.	Lg. inc.	High	Rare	Good	Good			1	35
river birch	Betula nigra	NSL	Low	5.2	20.9	4.1	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	36
laurel oak	Quercus laurifolia	NDH	Medium	15.5	20.2	1.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	37
swamp tupelo	Nyssa biflora	NDH	Medium	3.1	19.7	6.4	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	1	38
florida maple	Acer barbatum	NSL	Low	23.7	19.4	1.0	Sm. inc.	Lg. inc.	High	Rare	Good	Good			1	39
willow oak	Quercus phellos	NSL	Low	20.6	19.1	1.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	40
red mulberry	Morus rubra	NSL	Low	12.4	15.2	1.2	No change	Lg. inc.	Medium	Rare	Poor	Good			1	41
American holly	Ilex opaca	NSL	Medium	13.4	15.2	1.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	42
sycamore	Platanus occidentalis	NSL	Low	7.2	10.8	1.5	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	43
white ash	Fraxinus americana	WDL	Medium	6.2	10.7	1.7	No change	No change	Low	Rare	Very Poor	Very Poor			0	44
American elm	Ulmus americana	WDH	Medium	11.3	10.7	1.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	45
pecan	Carya illinoensis	NSH	Low	2.1	10.1	4.9	No change	Lg. inc.	Low	Rare	Very Poor	Fair		Infill +	2	46
eastern redbud	Cercis canadensis	NSL	Low	6.2	8.8	1.4	No change	No change	Medium	Rare	Poor	Poor			1	47

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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	10.3	8.1	1.5	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	1	48
bigleaf magnolia	Magnolia macrophylla	NSL	Low	6.2	6.0	1.0	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	49
overcup oak	Quercus lyrata	NSL	Medium	2.1	6.0	2.9	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	50
black willow	Salix nigra	NSH	Low	7.2	5.0	0.7	Sm. inc.	Lg. inc.	Low	Rare	Poor	Fair	Infill +	Infill +	1	51
turkey oak	Quercus laevis	NSH	Medium	4.1	4.8	1.2	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	52
honeylocust	Gleditsia triacanthos	NSH	Low	2.1	4.8	2.3	No change	No change	High	Rare	Fair	Fair		Infill +	2	53
American basswood	Tilia americana	WSL	Medium	4.1	4.6	1.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	54
cucumbertree	Magnolia acuminata	NSL	Low	2.1	3.2	1.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	55
sugar maple	Acer saccharum	WDH	High	1	3.1	3.0	Lg. dec.	Very Lg. dec.	High	Rare	Poor	Lost			0	56
boxelder	Acer negundo	WSH	Low	6.2	2.0	0.8	No change	No change	High	Rare	Fair	Fair		Infill +	1	57
slippery elm	Ulmus rubra	WSL	Low	2.1	1.4	0.7	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	58
bald cypress	Taxodium distichum	NSH	Medium	1	1.2	1.2	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2	59
durand oak	Quercus sinuata var. sinuata	NSL	FIA	2.1	1.2	0.6	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	60
black walnut	Juglans nigra	WDH	Low	1	1.0	1.0	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	61
black locust	Robinia pseudoacacia	NDH	Low	1	0.9	0.9	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	62
silver maple	Acer saccharinum	NSH	Low	2.1	0.7	0.3	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	63
bitternut hickory	Carya cordiformis	WSL	Low	2.1	0.7	0.3	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	64
wild plum	Prunus americana	NSLX	FIA	2.1	0.6	0.3	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	65
serviceberry	Amelanchier spp.	NSL	Low	1	0.3	0.3	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	66
redbay	Persea borbonia	NSL	Low	1	0.2	0.2	Lg. inc.	Lg. inc.	High	Rare	Good	Good			0	67
spruce pine	Pinus glabra	NSL	Low	1	0.2	0.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	68
ashe juniper	Juniperus ashei	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	69
slash pine	Pinus elliottii	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	70
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	71
yellow buckeye	Aesculus flava	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	72
pawpaw	Asimina triloba	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	73
yellow birch	Betula alleghaniensis	NDL	High	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	74
sweet birch	Betula lenta	NDH	High	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	75
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate ++	3	76
water hickory	Carya aquatica	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	77
shellbark hickory	Carya laciniosa	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	78
black hickory	Carya texana	NDL	High	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	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	80
silverbell	Halesia spp.	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	81
southern magnolia	Magnolia grandiflora	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	82
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	83
water elm	Planera aquatica	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	84
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	85
chinkapin oak	Quercus muehlenbergii	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	86
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	87
bluejack oak	Quercus incana	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	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			3	89