

	sq. km	sq. mi	FIA Plots
Area of Region	8,263.6	3,190.6	260

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	4			High	18	23	Increase	26	30	Very Good	6	11	Likely	0	0
Hickory	4			Medium	34	48	No Change	7	6	Good	18	16	Infill	15	17
Maple	4	Abundant	5	Low	32	13	Decrease	32	29	Fair	11	12	Migrate	2	5
Oak	15	Common	21	FIA	4		New	10	11	Poor	13	10			
Pine	4	Rare	43				Unknown	13	12	Very Poor	11	11			
Other	38	Absent	14							FIA Only	2	2			
	69		83		88	84		88	88	Unknown	9	8			
											70	70			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	58.3	60.0	62.1	62.3	
	CCSM85	58.3	60.4	62.8	65.7	
	GFDL45	58.3	61.0	63.4	64.4	
	GFDL85	58.3	61.3	64.6	68.3	
	HAD45	58.3	60.4	63.5	64.8	
	HAD85	58.3	60.7	64.3	68.5	
Growing Season (May—Sep)	CCSM45	73.1	74.9	76.7	77.2	
	CCSM85	73.1	75.1	77.7	81.3	
	GFDL45	73.1	76.1	78.9	80.3	
	GFDL85	73.1	76.7	80.3	84.5	
	HAD45	73.1	75.7	78.4	80.0	
	HAD85	73.1	75.6	79.9	84.3	
Coldest Month (Average)	CCSM45	36.2	38.4	39.4	39.6	
	CCSM85	36.2	38.8	39.7	41.1	
	GFDL45	36.2	39.5	40.0	40.6	
	GFDL85	36.2	38.5	39.4	40.8	
	HAD45	36.2	37.4	39.1	39.5	
	HAD85	36.2	37.6	39.1	40.7	
Warmest Month (Average)	CCSM45	78.8	80.9	81.9	81.9	
	CCSM85	78.8	80.9	82.8	84.2	
	GFDL45	78.8	81.7	83.0	84.1	
	GFDL85	78.8	82.7	84.5	87.0	
	HAD45	78.8	81.6	83.4	84.0	
	HAD85	78.8	81.9	84.5	87.3	

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	44.6	49.7	52.9	52.2	
	CCSM85	44.6	50.0	52.4	59.1	
	GFDL45	44.6	49.5	53.2	55.2	
	GFDL85	44.6	48.1	53.3	54.9	
	HAD45	44.6	48.3	48.6	46.8	
	HAD85	44.6	51.3	47.4	48.0	
Growing Season (May—Sep)	CCSM45	20.5	25.5	27.1	26.8	
	CCSM85	20.5	24.4	26.1	29.8	
	GFDL45	20.5	22.7	24.9	26.2	
	GFDL85	20.5	21.7	25.2	26.1	
	HAD45	20.5	23.3	21.7	20.0	
	HAD85	20.5	23.8	21.2	20.1	

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	96.4	3597.6	37.7	No change	No change	Medium	Abundant	Good	Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	95.7	960.9	10.4	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	2
white oak	Quercus alba	WDH	Medium	87	779.4	9.3	Sm. dec.	Lg. dec.	High	Abundant	Good	Good			1	3
yellow-poplar	Liriodendron tulipifera	WDH	High	82	620.8	7.3	Lg. dec.	Lg. dec.	High	Abundant	Good	Good			1	4
red maple	Acer rubrum	WDH	High	83.1	574.3	6.6	Sm. inc.	Sm. inc.	High	Abundant	Very Good	Very Good			1	5
American holly	Ilex opaca	NSL	Medium	77.3	275.4	3.7	Sm. dec.	No change	Medium	Common	Poor	Fair			1	6
southern red oak	Quercus falcata	WDL	Medium	67.7	237.2	3.4	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	7
mockernut hickory	Carya alba	WDL	Medium	57.5	193.7	3.3	No change	Sm. inc.	High	Common	Good	Very Good			1	8
blackgum	Nyssa sylvatica	WDL	Medium	76.9	161.1	2.2	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	9
scarlet oak	Quercus coccinea	WDL	Medium	55.3	156.8	3.2	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	10
American beech	Fagus grandifolia	WDH	High	37.4	154.0	3.9	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	11
swamp tupelo	Nyssa biflora	NDH	Medium	25.8	141.8	4.8	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair	Infill +	Infill +	1	12
willow oak	Quercus phellos	NSL	Low	43.1	135.1	3.1	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	13
black oak	Quercus velutina	WDH	High	56.3	131.7	2.5	No change	No change	Medium	Common	Fair	Fair			1	14
green ash	Fraxinus pennsylvanica	WSH	Low	28.7	107.1	3.7	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	15
pignut hickory	Carya glabra	WDL	Medium	49.5	101.9	2.1	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	16
winged elm	Ulmus alata	WDL	Medium	35.8	91.4	2.5	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	17
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	40.7	86.3	2.1	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	18
chestnut oak	Quercus prinus	NDH	High	18.1	76.7	5.9	Lg. dec.	Lg. dec.	High	Common	Fair	Fair			0	19
eastern redcedar	Juniperus virginiana	WDH	Medium	42.3	76.4	1.8	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	20
water oak	Quercus nigra	WDH	High	32.6	70.0	2.1	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	2	21
water tupelo	Nyssa aquatica	NSH	Medium	2.4	68.4	28.3	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	2	22
northern red oak	Quercus rubra	WDH	Medium	29.5	67.4	2.5	Lg. dec.	Lg. dec.	High	Common	Fair	Fair	Infill +		1	23
slippery elm	Ulmus rubra	WSL	Low	18.8	57.7	2.9	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	24
river birch	Betula nigra	NSL	Low	22.7	57.3	2.5	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	25
Virginia pine	Pinus virginiana	NDH	High	27.5	55.0	1.9	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	26
sourwood	Oxydendrum arboreum	NDL	High	27.8	49.4	1.8	Sm. dec.	Lg. dec.	High	Rare	Poor	Poor			1	27
black cherry	Prunus serotina	WDL	Medium	24.8	41.7	1.6	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair			1	28
white ash	Fraxinus americana	WDL	Medium	12.1	41.4	3.4	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	29
flowering dogwood	Cornus florida	WDL	Medium	36.1	35.5	1.0	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			1	30
swamp chestnut oak	Quercus michauxii	NSL	Low	10.7	34.8	3.2	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	31
bald cypress	Taxodium distichum	NSH	Medium	1	29.8	21.2	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2	32
shortleaf pine	Pinus echinata	WDH	High	14.5	29.3	3.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	33
sycamore	Platanus occidentalis	NSL	Low	10.4	28.1	2.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	34
post oak	Quercus stellata	WDH	High	25.4	27.6	1.1	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	35
American elm	Ulmus americana	WDH	Medium	16.6	24.8	1.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	36
black locust	Robinia pseudoacacia	NDH	Low	6.8	20.3	2.3	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	37
hackberry	Celtis occidentalis	WDH	Medium	7.3	16.1	2.2	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	38
pawpaw	Asimina triloba	NSL	Low	3.3	15.5	3.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	39
sassafras	Sassafras albidum	WSL	Low	20.1	15.3	0.9	Very Lg. dec.	Lg. dec.	Medium	Rare	Lost	Very Poor			0	40
black walnut	Juglans nigra	WDH	Low	5.7	14.4	1.9	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	41
pin oak	Quercus palustris	NSH	Low	4.8	13.8	2.8	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	42
bitternut hickory	Carya cordiformis	WSL	Low	7.2	13.0	1.8	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	43
shagbark hickory	Carya ovata	WSL	Medium	4.8	10.5	2.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	44
eastern cottonwood	Populus deltoides	NSH	Low	1.2	8.7	6.9	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	45
sweetbay	Magnolia virginiana	NSL	Medium	7.3	8.6	1.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	46
florida maple	Acer barbatum	NSL	Low	7.3	8.0	1.1	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	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
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	4.8	7.1	1.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	48
pumpkin ash	Fraxinus profunda	NSH	FIA	1	6.4	4.5	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	49
boxelder	Acer negundo	WSH	Low	3.6	6.1	1.7	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	50
black willow	Salix nigra	NSH	Low	2.4	5.6	2.3	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair		Infill +	2	51
ailanthus	Ailanthus altissima	NSL	FIA	2.4	5.0	2.1	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	52
white mulberry	Morus alba	NSL	FIA	2.4	4.4	1.8	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	53
eastern redbud	Cercis canadensis	NSL	Low	7.3	3.9	0.5	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	54
sugar maple	Acer saccharum	WDH	High	3.6	3.8	1.0	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	55
Osage-orange	Maclura pomifera	NDH	Medium	1.2	3.5	2.9	Sm. dec.	No change	High	Rare	Poor	Fair			0	56
common persimmon	Diospyros virginiana	NSL	Low	7.2	2.9	0.4	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	1	57
pond pine	Pinus serotina	NSH	Medium	2.4	2.6	1.1	Very Lg. dec.	Very Lg. dec.	Low	Rare	Lost	Lost			0	58
yellow birch	Betula alleghaniensis	NDL	High	1.2	2.5	2.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	59
overcup oak	Quercus lyrata	NSL	Medium	3.6	2.5	0.7	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	60
Carolina ash	Fraxinus caroliniana	NSL	FIA	0.9	2.1	1.2	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	61
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	1.2	1.5	1.2	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	62
sweet birch	Betula lenta	NDH	High	2.4	1.0	0.4	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	63
blackjack oak	Quercus marilandica	NSL	Medium	1.2	0.8	0.7	Very Lg. dec.	Lg. inc.	High	Rare	Lost	Good			2	64
redbay	Persea borbonia	NSL	Low	1.2	0.8	0.6	Lg. inc.	Lg. inc.	High	Rare	Good	Good			0	65
bigtooth aspen	Populus grandidentata	NSL	Medium	1.2	0.8	0.6	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	66
pin cherry	Prunus pensylvanica	NSL	Low	1.2	0.5	0.5	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	67
honeylocust	Gleditsia triacanthos	NSH	Low	1.2	0.4	0.4	No change	Lg. inc.	High	Rare	Fair	Good			0	68
laurel oak	Quercus laurifolia	NDH	Medium	1.2	0.3	0.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	69
slash pine	Pinus elliotii	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	70
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	71
serviceberry	Amelanchier spp.	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	72
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	73
water hickory	Carya aquatica	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	74
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	75
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	76
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	77
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	New Habitat	Low	Absent	Unknown	New Habitat			3	78
loblolly-bay	Gordonia lasianthus	NSH	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	79
cucumbertree	Magnolia acuminata	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	80
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	81
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	82
red mulberry	Morus rubra	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	83
water elm	Planera aquatica	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	84
shingle oak	Quercus imbricaria	NDH	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	85
Shumard oak	Quercus shumardii	NSL	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	86
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	87
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	88