

	sq. km	sq. mi	FIA Plots
Area of Region	19,595	7,565.7	358

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	3			High	22	25	Increase	22	24	Very Good	4	4	Likely	0	0
Hickory	4			Medium	40	60	No Change	25	21	Good	18	20	Infill	28	29
Maple	5	Abundant	2	Low	38	16	Decrease	18	20	Fair	15	12	Migrate	9	12
Oak	15	Common	21	FIA	6		New	26	27	Poor	13	16			
Pine	8	Rare	48				Unknown	15	14	Very Poor	15	12			
Other	36	Absent	33							FIA Only	2	2			
										Unknown	9	8			
	71		104		106	101		106	106		76	74		37	41

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	53.0	54.7	56.7	57.0	
	CCSM85	53.0	55.1	57.4	60.4	
	GFDL45	53.0	56.9	58.3	59.4	
	GFDL85	53.0	56.0	59.5	63.4	
	HAD45	53.0	55.3	58.5	60.0	
HAD85	53.0	55.4	59.3	63.7		
Growing Season (May—Sep)	CCSM45	68.9	70.7	72.4	72.8	
	CCSM85	68.9	70.9	73.3	76.8	
	GFDL45	68.9	73.3	75.0	76.3	
	GFDL85	68.9	72.5	76.4	80.5	
	HAD45	68.9	71.6	74.3	76.1	
HAD85	68.9	71.0	75.4	80.0		
Coldest Month (Average)	CCSM45	29.1	31.1	32.5	33.0	
	CCSM85	29.1	31.6	32.8	34.6	
	GFDL45	29.1	32.4	33.3	34.0	
	GFDL85	29.1	32.3	33.6	35.3	
	HAD45	29.1	30.3	32.7	33.0	
HAD85	29.1	31.3	33.1	35.4		
Warmest Month (Average)	CCSM45	75.0	77.0	78.0	78.0	
	CCSM85	75.0	77.2	78.8	80.5	
	GFDL45	75.0	77.8	79.5	80.7	
	GFDL85	75.0	78.8	81.1	83.6	
	HAD45	75.0	78.0	79.4	80.3	
HAD85	75.0	77.7	80.0	83.0		

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	47.0	49.7	51.3	54.7	
	CCSM85	47.0	50.7	52.9	57.0	
	GFDL45	47.0	52.8	56.4	56.1	
	GFDL85	47.0	50.9	56.0	58.5	
	HAD45	47.0	49.9	51.3	51.0	
HAD85	47.0	53.4	50.3	52.6		
Growing Season (May—Sep)	CCSM45	20.8	24.8	25.0	26.9	
	CCSM85	20.8	23.8	25.2	26.1	
	GFDL45	20.8	22.6	23.9	25.3	
	GFDL85	20.8	22.1	24.1	25.2	
	HAD45	20.8	22.6	21.2	20.1	
HAD85	20.8	22.9	20.2	19.8		

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
pitch pine	Pinus rigida	NSH	High	35.3	1113.1	35.9	Lg. dec.	Lg. dec.	Medium	Abundant	Fair	Fair			0	1
red maple	Acer rubrum	WDH	High	68.7	794.2	13.3	No change	No change	High	Abundant	Very Good	Very Good			1	2
white oak	Quercus alba	WDH	Medium	51	496.8	12.2	No change	No change	High	Common	Good	Good			1	3
white ash	Fraxinus americana	WDL	Medium	35.2	354.7	10.7	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor			0	4
sweetgum	Liquidambar styraciflua	WDH	High	19.2	304.0	18.9	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	5
black cherry	Prunus serotina	WDL	Medium	40.8	279.6	9.4	No change	No change	Low	Common	Poor	Poor			0	6
black oak	Quercus velutina	WDH	High	44.3	272.8	7.0	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	7
northern red oak	Quercus rubra	WDH	Medium	35.8	269.4	8.1	No change	Sm. dec.	High	Common	Good	Fair			1	8
chestnut oak	Quercus prinus	NDH	High	32.7	266.1	9.2	No change	Sm. dec.	High	Common	Good	Fair			1	9
yellow-poplar	Liriodendron tulipifera	WDH	High	24.9	220.0	10.4	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	10
sweet birch	Betula lenta	NDH	High	27.3	207.7	7.4	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	11
scarlet oak	Quercus coccinea	WDL	Medium	35.3	204.1	7.5	No change	Sm. dec.	Medium	Common	Fair	Poor			1	12
blackgum	Nyssa sylvatica	WDL	Medium	45.3	198.1	5.6	No change	Sm. inc.	High	Common	Good	Very Good			1	13
eastern redcedar	Juniperus virginiana	WDH	Medium	29	193.4	9.3	No change	No change	Medium	Common	Fair	Fair			1	14
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	9.3	183.3	21.2	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor	Infill +	Infill +	0	15
sugar maple	Acer saccharum	WDH	High	24.1	150.4	6.8	Sm. inc.	No change	High	Common	Very Good	Good	Infill ++	Infill ++	1	16
sassafras	Sassafras albidum	WSL	Low	41.5	97.1	3.2	No change	Sm. dec.	Medium	Common	Fair	Poor			1	17
American beech	Fagus grandifolia	WDH	High	21.6	85.3	4.4	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	18
pignut hickory	Carya glabra	WDL	Medium	21.7	72.9	3.1	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	19
American holly	Ilex opaca	NSL	Medium	11.8	69.5	6.8	Lg. inc.	Sm. inc.	Medium	Common	Very Good	Good	Infill ++	Infill ++	1	20
black walnut	Juglans nigra	WDH	Low	14	66.0	7.5	No change	No change	Medium	Common	Fair	Fair			1	21
pin oak	Quercus palustris	NSH	Low	9.2	58.5	10.2	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	0	22
eastern white pine	Pinus strobus	WDH	High	14.7	51.8	5.9	Sm. inc.	Sm. dec.	Low	Common	Fair	Poor			1	23
shortleaf pine	Pinus echinata	WDH	High	5.9	46.7	10.3	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	24
American elm	Ulmus americana	WDH	Medium	15.7	44.9	3.8	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	25
Virginia pine	Pinus virginiana	NDH	High	5.3	42.0	7.4	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	26
flowering dogwood	Cornus florida	WDL	Medium	7.6	41.1	6.2	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	1	27
eastern hemlock	Tsuga canadensis	NSH	High	7.3	40.5	4.6	No change	No change	Low	Rare	Very Poor	Very Poor			2	28
green ash	Fraxinus pennsylvanica	WSH	Low	4.9	39.6	7.7	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	29
black locust	Robinia pseudoacacia	NDH	Low	7.7	37.4	8.3	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	30
shagbark hickory	Carya ovata	WSL	Medium	11.3	33.3	3.7	Sm. inc.	No change	Medium	Rare	Fair	Poor	Infill +	Infill +	1	31
southern red oak	Quercus falcata	WDL	Medium	10.9	29.1	4.1	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	32
bigtooth aspen	Populus grandidentata	NSL	Medium	5.9	27.9	4.4	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	33
yellow birch	Betula alleghaniensis	NDL	High	10.6	26.6	2.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	34
mockernut hickory	Carya alba	WDL	Medium	16.2	25.5	1.7	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	35
swamp white oak	Quercus bicolor	NSL	Low	2.2	24.0	5.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	36
ailanthus	Ailanthus altissima	NSL	FIA	6.2	23.2	5.2	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	37
eastern cottonwood	Populus deltoides	NSH	Low	1	19.1	10.4	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	38
hackberry	Celtis occidentalis	WDH	Medium	0.5	16.2	7.9	Sm. dec.	No change	High	Rare	Poor	Fair	Infill +	Infill +	2	39
post oak	Quercus stellata	WDH	High	8.5	16.0	2.3	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	40
Scots pine	Pinus sylvestris	NSH	FIA	1	14.4	14.1	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	41
sweetbay	Magnolia virginiana	NSL	Medium	11.7	12.4	1.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	42
blackjack oak	Quercus marilandica	NSL	Medium	5.6	12.1	2.2	No change	Sm. inc.	High	Rare	Fair	Good	Infill +	Infill ++	2	43
American basswood	Tilia americana	WSL	Medium	3.3	12.0	2.7	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	44
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	7.7	11.6	1.3	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	1	45
black willow	Salix nigra	NSH	Low	2	11.1	5.4	No change	No change	Low	Rare	Very Poor	Very Poor			2	46
silver maple	Acer saccharinum	NSH	Low	5.4	10.4	3.8	No change	No change	High	Rare	Fair	Fair	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
slippery elm	Ulmus rubra	WSL	Low	5	9.8	2.3	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	48
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	11	9.5	1.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	49
serviceberry	Amelanchier spp.	NSL	Low	6	9.3	1.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	50
gray birch	Betula populifolia	NSL	Low	6	8.5	1.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	51
red pine	Pinus resinosa	NSH	Medium	1	8.5	8.1	Lg. dec.	Very Lg. dec.	Low	Rare	Very Poor	Lost			0	52
Norway maple	Acer platanoides	NSL	FIA	7.2	8.3	2.4	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	53
boxelder	Acer negundo	WSH	Low	5.9	7.4	3.3	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	1	54
sycamore	Platanus occidentalis	NSL	Low	3.4	7.4	3.9	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	2	55
bear oak; scrub oak	Quercus ilicifolia	NSLX	FIA	6.1	7.2	1.2	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	56
bitternut hickory	Carya cordiformis	WSL	Low	5.5	7.1	3.2	No change	Sm. inc.	High	Rare	Fair	Good	Infill +	Infill ++	2	57
Norway spruce	Picea abies	NSH	FIA	7.2	5.3	2.9	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	58
river birch	Betula nigra	NSL	Low	5	4.2	3.3	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	59
loblolly pine	Pinus taeda	WDH	High	1.4	3.6	2.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	60
Osage-orange	Maclura pomifera	NDH	Medium	1	3.4	3.4	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	61
pond pine	Pinus serotina	NSH	Medium	0.5	2.7	5.3	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	62
willow oak	Quercus phellos	NSL	Low	2.2	2.5	1.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	63
black ash	Fraxinus nigra	WSH	Medium	1.5	2.2	1.5	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	64
red mulberry	Morus rubra	NSL	Low	0.5	1.9	3.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	65
swamp chestnut oak	Quercus michauxii	NSL	Low	1.5	1.7	1.4	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +		2	66
common persimmon	Diospyros virginiana	NSL	Low	1.2	1.2	1.2	Sm. inc.	Lg. inc.	High	Rare	Good	Good			2	67
American chestnut	Castanea dentata	NSLX	FIA	1.3	1.0	0.6	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	68
quaking aspen	Populus tremuloides	WDH	High	2	0.3	2.5	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	69
chinkapin oak	Quercus muehlenbergii	NSL	Medium	0.5	0.3	0.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	70
laurel oak	Quercus laurifolia	NDH	Medium	1.7	0.2	1.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	71
slash pine	Pinus elliottii	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	72
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	73
bald cypress	Taxodium distichum	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	74
pond cypress	Taxodium ascendens	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	75
florida maple	Acer barbatum	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	76
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	77
mountain maple	Acer spicatum	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	78
Ohio buckeye	Aesculus glabra	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	79
yellow buckeye	Aesculus flava	NSL	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	80
pawpaw	Asimina triloba	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	81
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	82
water hickory	Carya aquatica	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	83
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	84
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	85
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	86
eastern redbud	Cercis canadensis	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	87
loblolly-bay	Gordonia lasianthus	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	88
cucumbertree	Magnolia acuminata	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	89
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	90
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	0	0	0	Unknown	Unknown	NA	Absent	Unknown	Unknown			0	91
water tupelo	Nyssa aquatica	NSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	92
swamp tupelo	Nyssa biflora	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	93
sourwood	Oxydendrum arboreum	NDL	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	94

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
redbay	Persea borbonia	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	95
water elm	Planera aquatica	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	96
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	97
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	98
shingle oak	Quercus imbricaria	NDH	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	99
turkey oak	Quercus laevis	NSH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	100
overcup oak	Quercus lyrata	NSL	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	101
water oak	Quercus nigra	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	102
Nuttall oak	Quercus texana	NSH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	103
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	104
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			0	105
winged elm	Ulmus alata	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	106