

	sq. km	sq. mi	FIA Plots
Area of Region	8,210.2	3,170.0	119

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	23	Increase	16	17	Very Good	5	5	Likely	3	3
Hickory	4			Medium	34	No Change	16	14	Good	7	10	Infill	30	29
Maple	3	Abundant	1	Low	31	Decrease	11	12	Fair	10	8	Migrate	8	14
Oak	10	Common	14	FIA	6	New	35	37	Poor	12	9			
Pine	3	Rare	34			Unknown	16	14	Very Poor	9	11			
Other	27	Absent	41						FIA Only	2	2			
	49		90		94		94	94	Unknown	10	8			
										55	53			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	52.4	54.1	56.1	56.4	
	CCSM85	52.4	54.5	56.9	59.8	
	GFDL45	52.4	57.4	57.8	58.9	
	GFDL85	52.4	55.4	59.0	62.9	
	HAD45	52.4	54.6	57.9	59.5	
HAD85	52.4	54.5	58.7	63.1		
Growing Season (May—Sep)	CCSM45	68.1	70.0	71.6	72.0	
	CCSM85	68.1	70.2	72.5	75.9	
	GFDL45	68.1	73.7	74.2	75.3	
	GFDL85	68.1	71.5	75.5	79.5	
	HAD45	68.1	70.5	73.5	75.4	
HAD85	68.1	69.7	74.3	78.9		
Coldest Month Average	CCSM45	28.8	30.5	32.0	32.6	
	CCSM85	28.8	31.3	32.5	34.3	
	GFDL45	28.8	32.2	33.3	34.2	
	GFDL85	28.8	32.0	33.6	35.5	
	HAD45	28.8	29.9	32.3	32.7	
HAD85	28.8	30.9	32.9	35.6		
Warmest Month Average	CCSM45	74.4	76.4	77.3	77.3	
	CCSM85	74.4	76.6	78.1	79.7	
	GFDL45	74.4	77.2	78.9	79.9	
	GFDL85	74.4	78.1	80.4	82.9	
	HAD45	74.4	77.1	78.4	79.4	
HAD85	74.4	76.4	78.5	81.4		

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	48.6	49.7	50.2	54.9	
	CCSM85	48.6	50.9	53.5	56.3	
	GFDL45	48.6	53.8	57.6	55.7	
	GFDL85	48.6	52.5	56.1	59.3	
	HAD45	48.6	50.0	53.0	52.8	
HAD85	48.6	54.3	52.8	55.5		
Growing Season (May—Sep)	CCSM45	20.3	23.6	22.8	24.7	
	CCSM85	20.3	22.4	23.9	23.4	
	GFDL45	20.3	21.3	21.7	22.8	
	GFDL85	20.3	21.3	21.9	23.1	
	HAD45	20.3	21.2	20.4	20.0	
HAD85	20.3	21.9	20.2	20.7		

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
red maple	Acer rubrum	WDH	High	64.5	613.0	13.9	No change	No change	High	Abundant	Very Good	Very Good	Infill ++	Infill ++	1	1
pitch pine	Pinus rigida	NSH	High	23.1	486.6	32.6	Sm. dec.	Lg. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	0	2
sweet birch	Betula lenta	NDH	High	38.8	403.7	13.0	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	3
scarlet oak	Quercus coccinea	WDL	Medium	37.7	313.9	11.6	No change	Sm. dec.	Medium	Common	Fair	Poor	Infill +	Infill +	1	4
black oak	Quercus velutina	WDH	High	55.3	272.5	7.9	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	5
northern red oak	Quercus rubra	WDH	Medium	55.9	267.0	7.7	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	1	6
sugar maple	Acer saccharum	WDH	High	27	261.4	14.5	Sm. dec.	Sm. dec.	High	Common	Fair	Fair	Infill +	Infill +	1	7
white oak	Quercus alba	WDH	Medium	54.7	232.0	6.0	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	8
black cherry	Prunus serotina	WDL	Medium	51.2	216.6	11.4	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	0	9
American beech	Fagus grandifolia	WDH	High	31.7	195.9	7.1	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	10
white ash	Fraxinus americana	WDL	Medium	28.5	150.5	8.9	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	0	11
chestnut oak	Quercus prinus	NDH	High	17.4	121.1	8.0	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	12
black locust	Robinia pseudoacacia	NDH	Low	24.3	99.8	11.9	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	1	13
eastern redcedar	Juniperus virginiana	WDH	Medium	17.1	96.8	6.9	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	14
yellow-poplar	Liriodendron tulipifera	WDH	High	21.4	50.6	4.9	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	15
sassafras	Sassafras albidum	WSL	Low	26	49.5	2.7	Sm. inc.	No change	Medium	Rare	Fair	Poor	Infill +	Infill +	1	16
pignut hickory	Carya glabra	WDL	Medium	25.1	48.5	2.9	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	17
yellow birch	Betula alleghaniensis	NDL	High	17.4	44.4	3.3	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	1	18
American elm	Ulmus americana	WDH	Medium	14	42.2	5.5	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	19
eastern white pine	Pinus strobus	WDH	High	19.9	35.5	6.4	Sm. inc.	Lg. dec.	Low	Rare	Poor	Very Poor	Infill +		1	20
Norway maple	Acer platanoides	NSL	FIA	15.2	28.8	5.5	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	21
blackgum	Nyssa sylvatica	WDL	Medium	21.5	27.8	3.8	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	22
mockernut hickory	Carya alba	WDL	Medium	8.7	26.8	3.3	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	1	23
black walnut	Juglans nigra	WDH	Low	5.5	19.4	12.9	No change	Sm. dec.	Medium	Rare	Poor	Very Poor			2	24
green ash	Fraxinus pennsylvanica	WSH	Low	3.3	17.8	7.4	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	2	25
gray birch	Betula populifolia	NSL	Low	10.6	17.6	2.7	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	26
bitternut hickory	Carya cordiformis	WSL	Low	8.3	17.2	5.2	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	27
shagbark hickory	Carya ovata	WSL	Medium	15.3	13.4	1.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	28
serviceberry	Amelanchier spp.	NSL	Low	4.8	11.8	2.4	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	29
ailanthus	Ailanthus altissima	NSL	FIA	18	9.6	5.7	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	30
swamp white oak	Quercus bicolor	NSL	Low	9.7	8.9	3.1	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	31
bear oak; scrub oak	Quercus ilicifolia	NSLX	FIA	10.8	8.7	1.7	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	32
eastern hemlock	Tsuga canadensis	NSH	High	4.4	6.9	2.3	Sm. inc.	No change	Low	Rare	Poor	Very Poor	Infill +		2	33
pin oak	Quercus palustris	NSH	Low	8.3	5.6	8.0	No change	No change	Low	Rare	Very Poor	Very Poor			2	34
bigtooth aspen	Populus grandidentata	NSL	Medium	8	5.6	7.6	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	35
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	3.7	4.2	1.1	No change	Sm. inc.	High	Rare	Fair	Good	Infill +	Infill ++	2	36
American basswood	Tilia americana	WSL	Medium	3.3	4.1	1.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	37
flowering dogwood	Cornus florida	WDL	Medium	17.2	3.1	0.7	Sm. dec.	Sm. inc.	Medium	Rare	Very Poor	Fair		Infill +	1	38
red spruce	Picea rubens	NDH	High	4.4	2.6	1.3	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	39
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	3.7	2.3	0.6	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	40
black willow	Salix nigra	NSH	Low	1.2	2.3	1.9	Lg. dec.	No change	Low	Rare	Very Poor	Very Poor			0	41
white mulberry	Morus alba	NSL	FIA	4.9	2.2	7.3	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	42
sweetgum	Liquidambar styraciflua	WDH	High	3.1	2.0	4.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	43
Norway spruce	Picea abies	NSH	FIA	6.1	1.8	1.2	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	44
post oak	Quercus stellata	WDH	High	9.6	1.2	0.9	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	45
northern pin oak	Quercus ellipsoidalis	NSH	Medium	4	1.1	3.1	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	46
red pine	Pinus resinosa	NSH	Medium	4	0.5	1.2	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	47

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Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N		
tamarack (native)	Larix laricina	NSH	High	3.2	0.3	0.7	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor				0	48	
American chestnut	Castanea dentata	NSLX	FIA	3.2	0.2	0.3	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only					0	49
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate +	Migrate +			3	50
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++			3	51
slash pine	Pinus elliottii	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					0	52
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					0	53
Table Mountain pine	Pinus pungens	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown					0	54
pond pine	Pinus serotina	NSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			Migrate +		3	55
loblolly pine	Pinus taeda	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++			3	56
Virginia pine	Pinus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +			3	57
bald cypress	Taxodium distichum	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					3	58
florida maple	Acer barbatum	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat					3	59
boxelder	Acer negundo	WSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +			3	60
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown					0	61
silver maple	Acer saccharinum	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +			3	62
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat					0	63
water hickory	Carya aquatica	NSL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat					0	64
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat					3	65
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					0	66
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					0	67
hackberry	Celtis occidentalis	WDH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat					3	68
eastern redbud	Cercis canadensis	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown					0	69
common persimmon	Diospyros virginiana	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat					3	70
loblolly-bay	Gordonia lasianthus	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					0	71
American holly	Ilex opaca	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +			3	72
cucumbertree	Magnolia acuminata	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown					0	73
sweetbay	Magnolia virginiana	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +			3	74
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown					0	75
water tupelo	Nyssa aquatica	NSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat					3	76
swamp tupelo	Nyssa biflora	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat					3	77
sourwood	Oxydendrum arboreum	NDL	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +			3	78
redbay	Persea borbonia	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat					3	79
sycamore	Platanus occidentalis	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +			3	80
eastern cottonwood	Populus deltoides	NSH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +			3	81
southern red oak	Quercus falcata	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +			3	82
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +			3	83
laurel oak	Quercus laurifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					3	84
overcup oak	Quercus lyrata	NSL	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat					3	85
blackjack oak	Quercus marilandica	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +			3	86
swamp chestnut oak	Quercus michauxii	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +			3	87
water oak	Quercus nigra	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					3	88
willow oak	Quercus phellos	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +			3	89
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					0	90
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown					0	91
American mountain-ash	Sorbus americana	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown					0	92
winged elm	Ulmus alata	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					3	93
slippery elm	Ulmus rubra	WSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown					0	94