

	sq. km	sq. mi	FIA Plots
Area of Region	8,177.1	3,157.2	173

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	21	18	Increase	14	17	Very Good	2	2	Likely	0	0
Hickory	3			Medium	24	42	No Change	9	8	Good	11	14	Infill	11	11
Maple	4	Abundant	3	Low	24	13	Decrease	20	18	Fair	6	6	Migrate	5	10
Oak	8	Common	11	FIA	6		New	18	20	Poor	10	7		16	21
Pine	3	Rare	35				Unknown	14	12	Very Poor	12	12			
Other	29	Absent	22					75	75	FIA Only	4	4			
	49		71		75	73				Unknown	8	6			
											53	51			

Potential Changes in Climate Variables

Temperature (°F)

Scenario	2009	2039	2069	2099		
Annual	CCSM45	50.2	51.9	53.7	54.0	
Average	CCSM85	50.2	52.3	54.5	57.3	
	GFDL45	50.2	53.9	55.4	56.5	
	GFDL85	50.2	53.0	56.6	60.7	
	HAD45	50.2	52.5	55.9	57.5	
	HAD85	50.2	52.5	56.9	61.5	
Growing Season	CCSM45	65.7	67.5	69.1	69.3	
	CCSM85	65.7	67.7	69.9	72.9	
May—Sep	GFDL45	65.7	69.6	71.3	72.5	
	GFDL85	65.7	68.6	72.6	76.8	
	HAD45	65.7	68.0	71.2	73.3	
	HAD85	65.7	67.3	72.4	77.1	
Coldest Month	CCSM45	26.8	28.0	29.5	30.2	
	CCSM85	26.8	29.1	30.1	32.0	
Average	GFDL45	26.8	30.0	31.3	32.4	
	GFDL85	26.8	30.1	31.9	34.0	
	HAD45	26.8	28.3	30.7	31.1	
	HAD85	26.8	29.3	31.3	34.2	
Warmest Month	CCSM45	72.2	74.1	75.0	74.9	
	CCSM85	72.2	74.3	75.6	77.0	
Average	GFDL45	72.2	74.8	76.2	77.2	
	GFDL85	72.2	75.3	77.5	79.9	
	HAD45	72.2	74.6	76.3	77.4	
	HAD85	72.2	73.6	76.4	79.2	

Precipitation (in)

Scenario	2009	2039	2069	2099		
Annual	CCSM45	49.0	48.0	47.2	52.9	
Total	CCSM85	49.0	49.0	50.3	54.4	
	GFDL45	49.0	52.0	54.2	52.9	
	GFDL85	49.0	50.7	53.3	55.0	
	HAD45	49.0	49.5	54.5	53.6	
	HAD85	49.0	52.8	53.6	54.6	
Growing Season	CCSM45	18.9	20.0	18.4	19.9	
	CCSM85	18.9	19.1	19.7	20.0	
May—Sep	GFDL45	18.9	17.9	17.3	17.6	
	GFDL85	18.9	18.5	17.0	17.0	
	HAD45	18.9	19.3	20.4	19.2	
	HAD85	18.9	19.3	19.2	19.6	

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	82.4	2260.8	29.9	Sm. dec.	Sm. dec.	High	Abundant	Good	Good			1	1
eastern white pine	Pinus strobus	WDH	High	70.9	1546.5	22.7	Lg. dec.	Lg. dec.	Low	Abundant	Poor	Poor			0	2
pitch pine	Pinus rigida	NSH	High	34	547.2	14.8	Sm. dec.	Lg. dec.	Medium	Abundant	Fair	Fair			0	3
scarlet oak	Quercus coccinea	WDL	Medium	57.6	449.1	8.4	No change	Sm. dec.	Medium	Common	Fair	Poor			1	4
black oak	Quercus velutina	WDH	High	61.1	404.3	7.2	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	5
white oak	Quercus alba	WDH	Medium	61.8	354.4	5.8	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	6
northern red oak	Quercus rubra	WDH	Medium	43.2	305.5	7.8	No change	No change	High	Common	Good	Good			1	7
blackgum	Nyssa sylvatica	WDL	Medium	32.3	142.9	4.1	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	8
black cherry	Prunus serotina	WDL	Medium	33.9	127.9	5.5	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	9
American elm	Ulmus americana	WDH	Medium	19.8	103.0	5.6	Lg. dec.	Sm. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	0	10
white ash	Fraxinus americana	WDL	Medium	25.2	96.5	5.0	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	11
eastern hemlock	Tsuga canadensis	NSH	High	23	92.7	5.9	No change	Sm. dec.	Low	Common	Poor	Poor			0	12
pignut hickory	Carya glabra	WDL	Medium	12.2	92.7	7.6	Sm. dec.	No change	Medium	Common	Poor	Fair	Infill +	Infill +	1	13
yellow birch	Betula alleghaniensis	NDL	High	20.8	52.8	3.5	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	14
Norway maple	Acer platanoides	NSL	FIA	9.1	47.2	8.5	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	15
gray birch	Betula populifolia	NSL	Low	14	47.0	3.0	No change	Sm. inc.	Medium	Rare	Poor	Fair			1	16
sweet birch	Betula lenta	NDH	High	15.7	43.4	3.2	Sm. inc.	No change	Low	Rare	Poor	Very Poor			1	17
American beech	Fagus grandifolia	WDH	High	17.8	40.4	3.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	18
eastern redcedar	Juniperus virginiana	WDH	Medium	19.7	39.3	2.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	19
bigtooth aspen	Populus grandidentata	NSL	Medium	7.6	34.5	5.9	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	20
sugar maple	Acer saccharum	WDH	High	8.8	29.5	4.1	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	21
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	8.3	27.1	3.1	No change	No change	Low	Rare	Very Poor	Very Poor			0	22
green ash	Fraxinus pennsylvanica	WSH	Low	8.9	25.6	4.8	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	23
black willow	Salix nigra	NSH	Low	5.4	24.2	8.2	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			2	24
shagbark hickory	Carya ovata	WSL	Medium	12.5	20.2	2.3	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	1	25
bear oak; scrub oak	Quercus ilicifolia	NSLX	FIA	6.7	19.8	2.7	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	26
sassafras	Sassafras albidum	WSL	Low	13.8	18.6	1.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	27
paper birch	Betula papyrifera	WDH	High	7.6	16.0	2.9	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	28
black locust	Robinia pseudoacacia	NDH	Low	6.6	12.9	2.3	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	29
honeylocust	Gleditsia triacanthos	NSH	Low	0.5	10.8	3.5	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	30
post oak	Quercus stellata	WDH	High	3	9.8	4.8	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	31
silver maple	Acer saccharinum	NSH	Low	1.2	9.1	7.4	Sm. dec.	Sm. inc.	High	Rare	Poor	Good			2	32
black walnut	Juglans nigra	WDH	Low	1.2	8.3	6.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	33
quaking aspen	Populus tremuloides	WDH	High	2.4	7.0	2.9	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	34
swamp white oak	Quercus bicolor	NSL	Low	7.8	6.8	2.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	35
red pine	Pinus resinosa	NSH	Medium	2.9	6.8	2.9	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	36
mockernut hickory	Carya alba	WDL	Medium	1.2	4.9	3.9	Sm. inc.	Lg. inc.	High	Rare	Good	Good			2	37
tamarack (native)	Larix laricina	NSH	High	1.8	4.8	1.3	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	38
American holly	Ilex opaca	NSL	Medium	3.6	4.0	1.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	39
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	5.6	3.5	0.8	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	40
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	1.2	3.4	2.8	No change	Sm. inc.	High	Rare	Fair	Good	Infill +		2	41
Norway spruce	Picea abies	NSH	FIA	1.8	2.9	0.7	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	42
pin cherry	Prunus pennsylvanica	NSL	Low	1.9	2.0	0.7	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	43
pin oak	Quercus palustris	NSH	Low	1.2	1.8	1.4	Very Lg. dec.	No change	Low	Rare	Lost	Very Poor			0	44
chokecherry	Prunus virginiana	NSLX	FIA	0.5	1.7	0.6	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	45
American basswood	Tilia americana	WSL	Medium	5.3	1.7	1.0	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	46
northern catalpa	Catalpa speciosa	NSHX	FIA	1.2	0.7	0.6	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	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		
butternut	Juglans cinerea	NSLX	FIA	4.2	0.7	2.0	Unknown	Unknown	Low	Rare	FIA Only	FIA Only				0	48	
serviceberry	Amelanchier spp.	NSL	Low	2.7	0.2	0.3	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor					0	49
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +			3	50
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					0	51
loblolly pine	Pinus taeda	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++			3	52
Virginia pine	Pinus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +			3	53
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown					0	54
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat					0	55
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					0	56
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					0	57
flowering dogwood	Cornus florida	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +			3	58
common persimmon	Diospyros virginiana	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat					3	59
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	Unknown	Low	Modeled	Unknown	Unknown					0	60
sweetgum	Liquidambar styraciflua	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++			3	61
yellow-poplar	Liriodendron tulipifera	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +			3	62
Osage-orange	Maclura pomifera	NDH	Medium	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown					0	63
red mulberry	Morus rubra	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown					0	64
redbay	Persea borbonia	NSL	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown					0	65
sycamore	Platanus occidentalis	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +			3	66
southern red oak	Quercus falcata	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +			3	67
blackjack oak	Quercus marilandica	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat					3	68
swamp chestnut oak	Quercus michauxii	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Migrate +			3	69
water oak	Quercus nigra	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					3	70
willow oak	Quercus phellos	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					3	71
chestnut oak	Quercus prinus	NDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +			3	72
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat					0	73
American mountain-ash	Sorbus americana	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown					0	74
winged elm	Ulmus alata	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat					0	75