

	sq. km	sq. mi	FIA Plots
Area of Region	12,568	4,852.7	399

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	24	21	Increase	16	21	Very Good	5	4	Likely	2	2
Hickory	3			Medium	24	42	No Change	10	8	Good	11	14	Infill	5	7
Maple	5	Abundant	5	Low	27	15	Decrease	17	14	Fair	8	9	Migrate	4	9
Oak	5	Common	14	FIA	3		New	21	25	Poor	11	7			
Pine	3	Rare	27				Unknown	14	10	Very Poor	8	9			
Other	28	Absent	31							FIA Only	3	3			
	46		77		78	78		78	78	Unknown	11	7			
											57	53			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	41.3	42.7	44.3	44.4	
	CCSM85	41.3	43.1	44.9	47.2	
	GFDL45	41.3	43.4	45.7	46.8	
	GFDL85	41.3	43.7	46.7	50.2	
	HAD45	41.3	43.5	45.7	47.0	
	HAD85	41.3	43.6	46.6	50.5	
Growing Season (May—Sep)	CCSM45	53.9	55.4	56.7	56.9	
	CCSM85	53.9	55.6	57.3	59.9	
	GFDL45	53.9	56.1	58.6	59.8	
	GFDL85	53.9	56.4	59.7	63.4	
	HAD45	53.9	56.0	58.0	59.6	
	HAD85	53.9	55.8	59.2	63.3	
Coldest Month (Average)	CCSM45	21.8	23.0	24.2	24.7	
	CCSM85	21.8	23.7	24.6	26.3	
	GFDL45	21.8	24.0	25.5	26.5	
	GFDL85	21.8	24.6	26.1	28.1	
	HAD45	21.8	23.6	25.6	25.8	
	HAD85	21.8	24.7	26.3	28.8	
Warmest Month (Average)	CCSM45	58.6	60.2	60.9	61.0	
	CCSM85	58.6	60.5	61.6	62.8	
	GFDL45	58.6	60.6	61.9	62.8	
	GFDL85	58.6	60.9	63.0	64.9	
	HAD45	58.6	60.8	61.8	62.8	
	HAD85	58.6	60.4	62.4	65.1	

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	36.0	35.1	33.5	38.2	
	CCSM85	36.0	35.3	36.8	39.1	
	GFDL45	36.0	39.0	41.3	40.2	
	GFDL85	36.0	37.7	39.9	41.7	
	HAD45	36.0	38.6	41.0	39.8	
	HAD85	36.0	39.8	39.5	41.4	
Growing Season (May—Sep)	CCSM45	14.7	15.0	13.5	14.8	
	CCSM85	14.7	14.2	15.0	14.9	
	GFDL45	14.7	14.4	14.0	14.0	
	GFDL85	14.7	14.9	13.9	13.5	
	HAD45	14.7	15.9	16.1	16.0	
	HAD85	14.7	15.3	15.1	16.1	

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-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	96.8	2146.5	16.7	No change	Sm. dec.	High	Abundant	Very Good	Good			1	1
eastern white pine	Pinus strobus	WDH	High	87.3	1865.9	16.6	Sm. dec.	Lg. dec.	Low	Abundant	Fair	Poor			0	2
eastern hemlock	Tsuga canadensis	NSH	High	88.1	1244.1	11.1	Sm. dec.	Lg. dec.	Low	Abundant	Fair	Poor			0	3
northern red oak	Quercus rubra	WDH	Medium	88.7	1142.4	9.7	No change	No change	High	Abundant	Very Good	Very Good			1	4
American beech	Fagus grandifolia	WDH	High	75	753.7	7.5	Sm. dec.	Sm. dec.	Medium	Abundant	Fair	Fair			0	5
balsam fir	Abies balsamea	NDH	High	54.6	474.2	5.0	Sm. dec.	Lg. dec.	Low	Common	Poor	Very Poor			0	6
paper birch	Betula papyrifera	WDH	High	74	376.3	3.1	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	7
red spruce	Picea rubens	NDH	High	48	367.7	4.5	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	8
sugar maple	Acer saccharum	WDH	High	51.9	335.6	4.5	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	9
yellow birch	Betula alleghaniensis	NDL	High	58.4	311.4	3.8	No change	No change	Medium	Common	Fair	Fair			1	10
white ash	Fraxinus americana	WDL	Medium	59.1	289.9	3.6	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	11
quaking aspen	Populus tremuloides	WDH	High	34.7	138.4	2.6	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	12
sweet birch	Betula lenta	NDH	High	25.1	130.2	3.9	Lg. inc.	Sm. inc.	Low	Common	Good	Fair	Infill ++	Infill +	1	13
bigtooth aspen	Populus grandidentata	NSL	Medium	29.6	130.0	3.2	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	14
white oak	Quercus alba	WDH	Medium	30.3	109.0	3.2	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	15
pitch pine	Pinus rigida	NSH	High	13.7	74.5	5.0	No change	No change	Medium	Common	Fair	Fair			1	16
black oak	Quercus velutina	WDH	High	21.4	72.9	2.4	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	17
gray birch	Betula populifolia	NSL	Low	36.4	67.5	1.5	No change	Sm. inc.	Medium	Common	Fair	Good			1	18
red pine	Pinus resinosa	NSH	Medium	15.2	63.4	4.2	Sm. dec.	No change	Low	Common	Poor	Poor	Infill +	Infill +	0	19
black spruce	Picea mariana	NSH	High	4	46.0	6.5	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	20
black cherry	Prunus serotina	WDL	Medium	24.5	45.1	1.5	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair			1	21
striped maple	Acer pensylvanicum	NSL	Medium	21	44.4	1.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	22
American elm	Ulmus americana	WDH	Medium	22.6	29.5	1.1	Sm. dec.	Sm. inc.	Medium	Rare	Very Poor	Fair			1	23
shagbark hickory	Carya ovata	WSL	Medium	8.3	23.8	1.7	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	24
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	18.2	21.7	0.9	Sm. inc.	Lg. inc.	High	Rare	Good	Good			1	25
white spruce	Picea glauca	NSL	Medium	6.6	21.6	3.0	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	26
American basswood	Tilia americana	WSL	Medium	13.5	20.2	1.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	27
black ash	Fraxinus nigra	WSH	Medium	7.4	16.8	2.6	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	28
silver maple	Acer saccharinum	NSH	Low	1.9	16.6	10.4	Sm. dec.	No change	High	Rare	Poor	Fair		Infill +	2	29
serviceberry	Amelanchier spp.	NSL	Low	2.8	9.9	1.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	30
scarlet oak	Quercus coccinea	WDL	Medium	0.1	9.4	0.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	31
tamarack (native)	Larix laricina	NSH	High	5.2	7.9	1.0	Sm. dec.	No change	Low	Rare	Very Poor	Very Poor			2	32
pignut hickory	Carya glabra	WDL	Medium	1.1	7.9	0.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	33
American mountain-ash	Sorbus americana	NSL	Low	4.7	7.4	0.6	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	34
bear oak; scrub oak	Quercus ilicifolia	NSLX	FIA	3.5	7.0	2.1	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	35
pin cherry	Prunus pennsylvanica	NSL	Low	5.4	6.5	0.6	No change	Sm. dec.	Medium	Rare	Poor	Very Poor			1	36
black locust	Robinia pseudoacacia	NDH	Low	0.8	5.0	5.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	37
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	4.6	3.2	0.8	No change	Lg. inc.	Medium	Rare	Poor	Good		Infill ++	1	38
northern white-cedar	Thuja occidentalis	WSH	High	2.1	1.7	0.2	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	2	39
mountain maple	Acer spicatum	NSL	Low	3.1	1.2	0.2	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			1	40
American chestnut	Castanea dentata	NSLX	FIA	1	1.1	0.3	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	41
blackgum	Nyssa sylvatica	WDL	Medium	1.8	1.0	0.6	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	42
eastern redcedar	Juniperus virginiana	WDH	Medium	0.8	0.8	0.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	43
sassafras	Sassafras albidum	WSL	Low	0.8	0.6	0.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	44
bitternut hickory	Carya cordiformis	WSL	Low	0.9	0.4	0.5	Lg. dec.	Lg. inc.	High	Rare	Poor	Good			2	45
chokecherry	Prunus virginiana	NSLX	FIA	0.9	0.2	0.2	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	46
jack pine	Pinus banksiana	NSH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	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
sand pine	<i>Pinus clausa</i>	NDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	48
shortleaf pine	<i>Pinus echinata</i>	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	49
Virginia pine	<i>Pinus virginiana</i>	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	50
boxelder	<i>Acer negundo</i>	WSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	51
Ohio buckeye	<i>Aesculus glabra</i>	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	52
yellow buckeye	<i>Aesculus flava</i>	NSL	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	53
pawpaw	<i>Asimina triloba</i>	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	54
cittamwood/gum bumelia	<i>Sideroxylon lanuginosum</i> ssp.	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	55
pecan	<i>Carya illinoensis</i>	NSH	Low	0	0	0	Unknown	New Habitat	Low	Absent	Unknown	New Habitat			0	56
black hickory	<i>Carya texana</i>	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	57
mockernut hickory	<i>Carya alba</i>	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	58
sugarberry	<i>Celtis laevigata</i>	NDH	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			0	59
flowering dogwood	<i>Cornus florida</i>	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	60
common persimmon	<i>Diospyros virginiana</i>	NSL	Low	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat			0	61
green ash	<i>Fraxinus pennsylvanica</i>	WSH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	62
silverbell	<i>Halesia</i> spp.	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	63
American holly	<i>Ilex opaca</i>	NSL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Migrate +	3	64
black walnut	<i>Juglans nigra</i>	WDH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	65
sweetgum	<i>Liquidambar styraciflua</i>	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	66
yellow-poplar	<i>Liriodendron tulipifera</i>	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	67
Osage-orange	<i>Maclura pomifera</i>	NDH	Medium	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	68
bigleaf magnolia	<i>Magnolia macrophylla</i>	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	69
mountain or Fraser magnolia	<i>Magnolia fraseri</i>	NSL	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	70
redbay	<i>Persea borbonia</i>	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	71
sycamore	<i>Platanus occidentalis</i>	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	72
swamp white oak	<i>Quercus bicolor</i>	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	73
southern red oak	<i>Quercus falcata</i>	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	74
blackjack oak	<i>Quercus marilandica</i>	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	75
chestnut oak	<i>Quercus prinus</i>	NDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	76
post oak	<i>Quercus stellata</i>	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	77
slippery elm	<i>Ulmus rubra</i>	WSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	78