

	sq. km	sq. mi	FIA Plots
Area of Region	44,947	17,354	1,624

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		
		Abundant	Common	High	Low	Scenario	Scenario	Scenario	Scenario	SHIFT	SHIFT	
				Reliability	Adaptability	RCP45	RCP85	RCP45	RCP85	RCP45	RCP85	
Ash	3			21	20	Increase	14	16	Very Good	4	4	
Hickory	0			24	36	No Change	11	8	Good	9	14	
Maple	7	Abundant	7	23	15	Decrease	15	16	Fair	10	6	
Oak	5	Common	16	6		New	19	25	Poor	12	12	
Pine	5	Rare	23			Unknown	15	9	Very Poor	4	2	
Other	26	Absent	28	74	71		74	74	FIA Only	3	3	
										Unknown	9	3
											51	44
											15	20
											2	2
											4	6
											9	12

Potential Changes in Climate Variables

Temperature (°F)

Scenario	2009	2039	2069	2099		
Annual	CCSM45	42.4	44.2	46.4	46.5	
Average	CCSM85	42.4	44.8	47.4	50.6	
	GFDL45	42.4	45.3	48.7	50.2	
	GFDL85	42.4	45.7	50.2	55.3	
	HAD45	42.4	45.4	48.4	50.1	
	HAD85	42.4	45.7	49.8	55.2	
Growing	CCSM45	60.6	62.6	64.4	64.6	
Season	CCSM85	60.6	62.9	65.2	68.8	
May—Sep	GFDL45	60.6	64.0	67.3	69.0	
	GFDL85	60.6	64.1	68.7	73.9	
	HAD45	60.6	63.4	66.1	68.2	
	HAD85	60.6	63.2	67.8	73.3	
Coldest	CCSM45	13.6	15.0	16.7	17.2	
Month	CCSM85	13.6	16.2	17.6	20.0	
Average	GFDL45	13.6	16.2	19.1	20.3	
	GFDL85	13.6	17.3	20.1	23.0	
	HAD45	13.6	16.4	18.8	19.6	
	HAD85	13.6	17.9	20.3	23.8	
Warmest	CCSM45	67.1	69.2	70.3	70.3	
Month	CCSM85	67.1	69.6	71.3	73.0	
Average	GFDL45	67.1	70.2	72.0	73.3	
	GFDL85	67.1	70.2	73.2	75.8	
	HAD45	67.1	70.1	71.4	72.7	
	HAD85	67.1	69.9	72.4	76.0	

Precipitation (in)

Scenario	2009	2039	2069	2099		
Annual	CCSM45	44.6	44.0	43.0	48.9	
Total	CCSM85	44.6	45.7	45.6	47.5	
	GFDL45	44.6	48.5	51.4	50.0	
	GFDL85	44.6	47.9	49.8	51.1	
	HAD45	44.6	47.8	51.8	50.6	
	HAD85	44.6	48.6	49.5	52.5	
Growing	CCSM45	18.5	18.6	17.2	19.3	
Season	CCSM85	18.5	19.2	18.9	18.2	
May—Sep	GFDL45	18.5	17.8	17.9	17.3	
	GFDL85	18.5	18.7	17.8	16.5	
	HAD45	18.5	19.9	20.4	21.1	
	HAD85	18.5	19.0	20.0	21.5	

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
balsam fir	Abies balsamea	NDH	High	94.3	1886.3	16.4	Sm. dec.	Sm. dec.	Low	Abundant	Fair	Fair			0	1
red maple	Acer rubrum	WDH	High	95.7	1411.3	12.1	Sm. inc.	No change	High	Abundant	Very Good	Very Good			1	2
northern white-cedar	Thuja occidentalis	WSH	High	69.4	936.0	11.3	Sm. dec.	Sm. dec.	Medium	Abundant	Fair	Fair			0	3
red spruce	Picea rubens	NDH	High	77.5	879.2	8.6	Sm. dec.	Sm. dec.	Low	Abundant	Fair	Fair			0	4
eastern white pine	Pinus strobus	WDH	High	69.4	751.0	9.2	Sm. inc.	No change	Low	Abundant	Good	Fair			1	5
eastern hemlock	Tsuga canadensis	NSH	High	63.9	706.7	9.7	No change	Sm. dec.	Low	Abundant	Fair	Fair			0	6
American beech	Fagus grandifolia	WDH	High	58.2	522.0	7.1	No change	No change	Medium	Abundant	Good	Good			1	7
paper birch	Betula papyrifera	WDH	High	82.9	459.3	4.2	No change	Sm. dec.	Medium	Common	Fair	Poor			1	8
yellow birch	Betula alleghaniensis	NDL	High	72.5	398.3	4.4	No change	Sm. dec.	Medium	Common	Fair	Poor			1	9
quaking aspen	Populus tremuloides	WDH	High	56.9	374.2	5.5	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	10
sugar maple	Acer saccharum	WDH	High	53.7	357.6	5.3	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	11
northern red oak	Quercus rubra	WDH	Medium	29.1	274.8	7.5	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	12
black spruce	Picea mariana	NSH	High	27.5	263.9	8.6	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	13
white spruce	Picea glauca	NSL	Medium	53.8	262.4	3.8	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	14
white ash	Fraxinus americana	WDL	Medium	48.6	215.5	3.7	Sm. inc.	Lg. inc.	Low	Common	Fair	Good			1	15
bigtooth aspen	Populus grandidentata	NSL	Medium	38.5	173.6	3.7	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	16
tamarack (native)	Larix laricina	NSH	High	28.6	157.8	4.8	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor			0	17
gray birch	Betula populifolia	NSL	Low	43.7	152.5	3.1	No change	No change	Medium	Common	Fair	Fair			1	18
black ash	Fraxinus nigra	WSH	Medium	28.7	84.2	2.6	Sm. inc.	No change	Low	Common	Fair	Poor			1	19
striped maple	Acer pensylvanicum	NSL	Medium	38.4	74.6	1.5	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	20
balsam poplar	Populus balsamifera	NSH	Medium	13.2	69.7	4.6	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	21
black cherry	Prunus serotina	WDL	Medium	17.1	67.2	3.3	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	22
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	27.9	60.1	1.8	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	23
red pine	Pinus resinosa	NSH	Medium	9.1	48.6	4.7	No change	No change	Low	Rare	Very Poor	Very Poor			0	24
American elm	Ulmus americana	WDH	Medium	15.7	40.2	2.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	25
pin cherry	Prunus pensylvanica	NSL	Low	18.3	29.3	1.4	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	26
Norway spruce	Picea abies	NSH	FIA	1.5	25.7	9.7	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	27
chokecherry	Prunus virginiana	NSLX	FIA	3.3	23.4	4.3	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	28
green ash	Fraxinus pennsylvanica	WSH	Low	3.1	10.6	2.6	No change	Lg. inc.	Medium	Rare	Poor	Good	Infill +	Infill ++	2	29
mountain maple	Acer spicatum	NSL	Low	10.4	9.3	0.8	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			1	30
American basswood	Tilia americana	WSL	Medium	6	9.3	1.1	No change	Lg. inc.	Medium	Rare	Poor	Good		Infill ++	2	31
silver maple	Acer saccharinum	NSH	Low	0.4	7.1	16.0	Sm. dec.	Sm. inc.	High	Rare	Poor	Good			2	32
serviceberry	Amelanchier spp.	NSL	Low	6	4.7	0.6	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	1	33
pitch pine	Pinus rigida	NSH	High	0.4	4.2	2.2	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	34
jack pine	Pinus banksiana	NSH	Medium	0.2	3.8	2.4	Sm. dec.	Lg. dec.	High	Rare	Poor	Poor			0	35
Scots pine	Pinus sylvestris	NSH	FIA	0.2	3.3	14.7	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	36
white oak	Quercus alba	WDH	Medium	1.5	3.1	1.7	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	37
American mountain-ash	Sorbus americana	NSL	Low	3	2.5	0.4	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	38
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	1.7	1.6	0.9	No change	Lg. inc.	Medium	Rare	Poor	Good	Infill +	Infill ++	2	39
black oak	Quercus velutina	WDH	High	0.4	1.5	2.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	40
American chestnut	Castanea dentata	NSLX	FIA	0.2	1.2	5.6	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	41
butternut	Juglans cinerea	NSLX	FIA	0.4	0.8	1.9	Unknown	Unknown	Low	Rare	FIA Only	FIA Only			0	42
bur oak	Quercus macrocarpa	NDH	Medium	0.2	0.5	2.1	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	43
boxelder	Acer negundo	WSH	Low	0.4	0.4	1.0	No change	Lg. inc.	High	Rare	Fair	Good			2	44
Norway maple	Acer platanoides	NSL	FIA	0.2	0.4	1.5	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	45
swamp white oak	Quercus bicolor	NSL	Low	0.2	0.3	1.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	46
eastern redcedar	Juniperus virginiana	WDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	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
Virginia pine	<i>Pinus virginiana</i>	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	48
sweet birch	<i>Betula lenta</i>	NDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Likely +	Likely +	3	49
cittamwood/gum bumelia	<i>Sideroxylon lanuginosum</i> ssp. NSL	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	50
bitternut hickory	<i>Carya cordiformis</i>	WSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	51
pignut hickory	<i>Carya glabra</i>	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	52
shagbark hickory	<i>Carya ovata</i>	WSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	53
mockernut hickory	<i>Carya alba</i>	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	54
hackberry	<i>Celtis occidentalis</i>	WDH	Medium	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat			0	55
flowering dogwood	<i>Cornus florida</i>	WDL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			0	56
common persimmon	<i>Diospyros virginiana</i>	NSL	Low	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat			0	57
American holly	<i>Ilex opaca</i>	NSL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			0	58
black walnut	<i>Juglans nigra</i>	WDH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	59
sweetgum	<i>Liquidambar styraciflua</i>	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			2	60
yellow-poplar	<i>Liriodendron tulipifera</i>	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	61
cucumbertree	<i>Magnolia acuminata</i>	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			0	62
mountain or Fraser magnolia	<i>Magnolia fraseri</i>	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	63
blackgum	<i>Nyssa sylvatica</i>	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	64
redbay	<i>Persea borbonia</i>	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	65
sycamore	<i>Platanus occidentalis</i>	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	66
scarlet oak	<i>Quercus coccinea</i>	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	67
overcup oak	<i>Quercus lyrata</i>	NSL	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	68
pin oak	<i>Quercus palustris</i>	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	69
chestnut oak	<i>Quercus prinus</i>	NDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	70
post oak	<i>Quercus stellata</i>	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	71
black locust	<i>Robinia pseudoacacia</i>	NDH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	72
sassafras	<i>Sassafras albidum</i>	WSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	73
slippery elm	<i>Ulmus rubra</i>	WSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Migrate +	3	74