

	sq. km	sq. mi	FIA Plots
Area of Region	8,078.4	3,119.1	378

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											
Hickory	0											
Maple	2	Abundant	6	High	15	16	Increase	14	13	Very Good	8	7
Oak	6	Common	18	Medium	21	31	No Change	6	6	Good	8	8
Pine	4	Rare	15	Low	19	10	Decrease	15	16	Fair	5	4
Other	24	Absent	20	FIA	4		New	17	17	Poor	8	11
	39		59		59	57	Unknown	7	7	Very Poor	5	4
								59	59	FIA Only	2	2
										Unknown	3	3
											14	18

Potential Changes in Climate Variables

Temperature (°F)

Scenario	2009	2039	2069	2099		
Annual	CCSM45	43.7	45.5	48.6	48.5	
Average	CCSM85	43.7	46.2	49.3	52.7	
	GFDL45	43.7	46.6	49.7	51.0	
	GFDL85	43.7	47.1	51.0	55.9	
	HAD45	43.7	47.1	50.3	52.3	
	HAD85	43.7	47.4	51.6	57.5	
Growing	CCSM45	61.6	63.2	65.5	65.7	
Season	CCSM85	61.6	63.7	66.5	70.4	
May—Sep	GFDL45	61.6	65.3	69.2	71.1	
	GFDL85	61.6	66.1	70.7	76.3	
	HAD45	61.6	65.1	67.3	69.8	
	HAD85	61.6	64.7	68.9	74.8	
Coldest	CCSM45	16.7	18.3	21.4	21.0	
Month	CCSM85	16.7	19.6	21.9	24.2	
Average	GFDL45	16.7	18.6	20.6	21.2	
	GFDL85	16.7	19.6	21.3	23.9	
	HAD45	16.7	18.4	22.3	22.6	
	HAD85	16.7	20.7	23.4	28.0	
Warmest	CCSM45	67.8	69.9	71.3	71.7	
Month	CCSM85	67.8	70.7	72.5	74.5	
Average	GFDL45	67.8	71.7	73.5	74.8	
	GFDL85	67.8	72.4	74.8	77.8	
	HAD45	67.8	71.6	72.6	74.4	
	HAD85	67.8	71.9	74.3	78.4	

Precipitation (in)

Scenario	2009	2039	2069	2099		
Annual	CCSM45	30.3	30.1	29.3	30.8	
Total	CCSM85	30.3	30.8	29.9	30.9	
	GFDL45	30.3	32.3	34.9	34.1	
	GFDL85	30.3	32.7	35.1	35.6	
	HAD45	30.3	31.9	33.1	32.8	
	HAD85	30.3	32.9	32.2	35.5	
Growing	CCSM45	15.9	16.4	15.4	16.0	
Season	CCSM85	15.9	16.4	15.3	15.0	
May—Sep	GFDL45	15.9	16.3	17.5	17.1	
	GFDL85	15.9	17.0	16.6	16.1	
	HAD45	15.9	16.0	14.9	15.4	
	HAD85	15.9	16.2	13.8	14.7	

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
jack pine	Pinus banksiana	NSH	Medium	54.2	1351.0	24.7	Lg. dec.	Lg. dec.	High	Abundant	Good	Good			1	1
red pine	Pinus resinosa	NSH	Medium	57.8	962.4	16.4	Sm. dec.	Sm. dec.	Low	Abundant	Fair	Fair			0	2
red maple	Acer rubrum	WDH	High	79.9	931.0	11.4	No change	No change	High	Abundant	Very Good	Very Good			1	3
quaking aspen	Populus tremuloides	WDH	High	69	897.4	12.9	Sm. dec.	Sm. dec.	Medium	Abundant	Fair	Fair			0	4
northern red oak	Quercus rubra	WDH	Medium	61.5	695.8	11.2	No change	Sm. dec.	High	Abundant	Very Good	Good			1	5
bigtooth aspen	Populus grandidentata	NSL	Medium	52.9	632.5	11.9	Sm. dec.	Lg. dec.	Medium	Abundant	Fair	Fair			0	6
northern white-cedar	Thuja occidentalis	WSH	High	27.6	494.4	15.6	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	7
eastern white pine	Pinus strobus	WDH	High	61.3	439.7	6.9	No change	Sm. dec.	Low	Common	Poor	Poor			0	8
northern pin oak	Quercus ellipsoidalis	NSH	Medium	50.4	425.2	8.4	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	9
white oak	Quercus alba	WDH	Medium	49.2	344.2	6.9	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	10
balsam fir	Abies balsamea	NDH	High	56.4	289.8	5.0	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	11
sugar maple	Acer saccharum	WDH	High	23.5	266.8	11.3	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	12
white ash	Fraxinus americana	WDL	Medium	29.4	221.0	7.3	Sm. dec.	No change	Low	Common	Poor	Poor			0	13
black oak	Quercus velutina	WDH	High	39	206.6	5.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	14
black cherry	Prunus serotina	WDL	Medium	54.2	190.4	3.5	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	15
black spruce	Picea mariana	NSH	High	26.6	175.4	5.8	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	16
green ash	Fraxinus pennsylvanica	WSH	Low	19.3	142.2	7.0	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	17
white spruce	Picea glauca	NSL	Medium	24.8	130.1	5.3	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	18
paper birch	Betula papyrifera	WDH	High	50.5	128.6	2.5	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	19
balsam poplar	Populus balsamifera	NSH	Medium	23.5	114.0	4.9	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	20
tamarack (native)	Larix laricina	NSH	High	17.9	110.1	5.7	No change	No change	Low	Common	Poor	Poor			0	21
American basswood	Tilia americana	WSL	Medium	22.9	94.3	3.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	22
Scots pine	Pinus sylvestris	NSH	FIA	7.4	84.5	11.4	Unknown	Unknown	NA	Common	NNIS	NNIS			0	23
American beech	Fagus grandifolia	WDH	High	13.6	65.7	4.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	24
Norway spruce	Picea abies	NSH	FIA	2.5	45.9	18.6	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	25
black ash	Fraxinus nigra	WSH	Medium	25.4	44.1	1.7	Lg. inc.	Sm. inc.	Low	Rare	Fair	Poor			1	26
serviceberry	Amelanchier spp.	NSL	Low	21	32.4	1.5	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	27
American elm	Ulmus americana	WDH	Medium	19.3	30.8	1.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	28
pin cherry	Prunus pensylvanica	NSL	Low	3.7	19.4	5.2	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	29
eastern hemlock	Tsuga canadensis	NSH	High	8.1	17.9	1.9	No change	No change	Low	Rare	Very Poor	Very Poor			2	30
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	10.8	10.4	0.9	Lg. inc.	Lg. dec.	High	Rare	Good	Poor			1	31
yellow birch	Betula alleghaniensis	NDL	High	4.9	8.5	1.7	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	32
eastern cottonwood	Populus deltoides	NSH	Low	1.2	3.3	2.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	33
swamp white oak	Quercus bicolor	NSL	Low	1.2	2.5	2.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	34
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	3.7	2.5	0.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	35
peachleaf willow	Salix amygdaloides	NSLX	FIA	2.3	2.2	0.8	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	36
chokecherry	Prunus virginiana	NSLX	FIA	5	1.9	0.4	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	37
bur oak	Quercus macrocarpa	NDH	Medium	0.9	1.5	0.9	Lg. inc.	Sm. inc.	High	Rare	Good	Good			2	38
flowering dogwood	Cornus florida	WDL	Medium	1.2	0.7	0.5	Very Lg. dec.	No change	Medium	Rare	Lost	Poor		Infill +	2	39
eastern redcedar	Juniperus virginiana	WDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	40
boxelder	Acer negundo	WSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	41
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	42
silver maple	Acer saccharinum	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	43
mountain maple	Acer spicatum	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	44
bitternut hickory	Carya cordiformis	WSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	45
pignut hickory	Carya glabra	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	46
shagbark hickory	Carya ovata	WSL	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
mockernut hickory	<i>Carya alba</i>	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +		3 48
eastern redbud	<i>Cercis canadensis</i>	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat				3 49
black walnut	<i>Juglans nigra</i>	WDH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3 50
yellow-poplar	<i>Liriodendron tulipifera</i>	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +		3 51
bigleaf magnolia	<i>Magnolia macrophylla</i>	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0 52
blackgum	<i>Nyssa sylvatica</i>	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3 53
sycamore	<i>Platanus occidentalis</i>	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3 54
pin oak	<i>Quercus palustris</i>	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Likely +	Likely +		3 55
post oak	<i>Quercus stellata</i>	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat				0 56
black locust	<i>Robinia pseudoacacia</i>	NDH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3 57
black willow	<i>Salix nigra</i>	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Likely +	Likely +		3 58
sassafras	<i>Sassafras albidum</i>	WSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3 59