

	sq. km	sq. mi	FIA Plots
Area of Region	8,686.5	3,353.9	44

**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	Medium	Increase	No Change	Decrease	New	Unknown	Very Good	Good	Fair	Poor	Very Poor	FIA Only	Unknown	SHIFT RCP45	SHIFT RCP85	
Ash	2																			
Hickory	0																			
Maple	3	0		10	14	4	5	0	0	0	0							0	0	
Oak	4		10	16	21	14	11	6	6	13	14							13	14	
Pine	2			13	7	10	12	8	7	3	3							3	6	
Other	23		11	6		10	10	4	5	1	1							16	20	
	<b>34</b>		<b>45</b>	<b>45</b>	<b>42</b>	<b>45</b>	<b>45</b>			<b>32</b>	<b>31</b>									

**Potential Changes in Climate Variables**

**Temperature (°F)**

Scenario	2009	2039	2069	2099		
Annual	CCSM45	43.4	45.2	48.2	48.7	
Average	CCSM85	43.4	46.1	49.4	52.9	
	GFDL45	43.4	49.4	48.6	50.1	
	GFDL85	43.4	46.5	49.8	54.6	
	HAD45	43.4	46.3	50.1	51.9	
	HAD85	43.4	46.9	51.5	56.7	
Growing Season	CCSM45	64.9	66.9	69.4	70.0	
	CCSM85	64.9	67.6	70.9	75.1	
May—Sep	GFDL45	64.9	72.1	71.0	72.9	
	GFDL85	64.9	68.4	72.1	77.7	
	HAD45	64.9	67.7	70.6	72.6	
	HAD85	64.9	67.8	72.0	77.2	
Coldest Month	CCSM45	9.0	10.9	13.3	13.8	
	CCSM85	9.0	10.8	13.1	15.6	
Average	GFDL45	9.0	12.9	14.2	14.7	
	GFDL85	9.0	12.8	14.4	17.3	
	HAD45	9.0	10.9	14.9	14.8	
	HAD85	9.0	14.3	18.4	21.6	
Warmest Month	CCSM45	71.3	73.9	75.4	76.1	
	CCSM85	71.3	75.2	77.2	79.8	
Average	GFDL45	71.3	74.6	76.2	77.6	
	GFDL85	71.3	75.3	77.1	80.5	
	HAD45	71.3	74.2	75.8	77.4	
	HAD85	71.3	75.1	77.3	81.0	

**Precipitation (in)**

Scenario	2009	2039	2069	2099		
Annual	CCSM45	26.5	27.7	27.8	26.9	
Total	CCSM85	26.5	27.2	26.1	26.8	
	GFDL45	26.5	29.8	31.6	29.1	
	GFDL85	26.5	30.0	32.6	31.5	
	HAD45	26.5	29.3	27.9	29.1	
	HAD85	26.5	28.5	28.4	30.4	
Growing Season	CCSM45	17.3	17.3	17.2	16.5	
	CCSM85	17.3	16.9	15.5	15.1	
May—Sep	GFDL45	17.3	19.5	20.3	18.2	
	GFDL85	17.3	19.7	20.2	18.8	
	HAD45	17.3	17.8	16.7	16.6	
	HAD85	17.3	17.3	15.6	15.2	

**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-DPC30 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
green ash	Fraxinus pennsylvanica	WSH	Low	57.2	368.8	13.4	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	2	1
baxelder	Acer negundo	WSH	Low	53.7	307.1	17.4	Sm. dec.	Lg. dec.	High	Common	Fair	Fair	Infill +	Infill +	2	2
American basswood	Tilia americana	WSL	Medium	31	266.6	13.5	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	2	3
bur oak	Quercus macrocarpa	NDH	Medium	31.4	237.8	10.2	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	2	4
American elm	Ulmus americana	WDH	Medium	37.4	127.8	6.6	No change	Sm. inc.	Medium	Common	Fair	Good	Infill +	Infill ++	2	5
quaking aspen	Populus tremuloides	WDH	High	19.7	99.2	20.3	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	6
black ash	Fraxinus nigra	WSH	Medium	12.8	95.2	8.2	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			2	7
eastern redcedar	Juniperus virginiana	WDH	Medium	5.2	91.4	27.1	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	8
black willow	Salix nigra	NSH	Low	13.3	80.4	22.7	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			2	9
sugar maple	Acer saccharum	WDH	High	6.3	72.9	24.3	No change	Sm. dec.	High	Common	Good	Fair		Infill +	2	10
hackberry	Celtis occidentalis	WDH	Medium	10.2	44.8	9.0	Sm. inc.	Lg. inc.	High	Rare	Good	Good			2	11
northern red oak	Quercus rubra	WDH	Medium	4.9	41.9	14.4	No change	Sm. dec.	High	Rare	Fair	Poor	Infill +	Infill +	2	12
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	15.1	27.6	2.7	Sm. inc.	No change	High	Rare	Good	Fair	Infill ++	Infill +	2	13
silver maple	Acer saccharinum	NSH	Low	9.9	24.8	20.8	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	14
tamarack (native)	Larix laricina	NSH	High	0.7	24.0	3.6	No change	No change	Low	Rare	Very Poor	Very Poor			2	15
eastern cottonwood	Populus deltoides	NSH	Low	13.6	21.3	8.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	16
Siberian elm	Ulmus pumila	NDH	FIA	5.9	17.7	4.9	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	17
red pine	Pinus resinosa	NSH	Medium	7.5	12.3	21.3	No change	No change	Low	Rare	Very Poor	Very Poor			2	18
black cherry	Prunus serotina	WDL	Medium	1.7	10.3	1.0	No change	No change	Low	Rare	Very Poor	Very Poor			2	19
bigtooth aspen	Populus grandidentata	NSL	Medium	4.5	10.2	13.4	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			2	20
paper birch	Betula papyrifera	WDH	High	0.5	6.4	0.5	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	21
slippery elm	Ulmus rubra	WSL	Low	4.4	5.7	1.8	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	22
peachleaf willow	Salix amygdaloides	NSLX	FIA	7.1	4.2	6.4	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	23
northern pin oak	Quercus ellipsoidalis	NSH	Medium	0.3	3.2	0.7	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	24
yellow birch	Betula alleghaniensis	NDL	High	0.3	3.2	0.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	25
balsam poplar	Populus balsamifera	NSH	Medium	0.2	2.2	0.3	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	26
chokecherry	Prunus virginiana	NSLX	FIA	8.6	1.3	0.7	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	27
white mulberry	Morus alba	NSL	FIA	1	1.1	0.8	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	28
Scots pine	Pinus sylvestris	NSH	FIA	2.9	0.8	1.7	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	29
white oak	Quercus alba	WDH	Medium	3.5	0.5	1.4	No change	Sm. inc.	High	Rare	Fair	Good			2	30
white spruce	Picea glauca	NSL	Medium	2.9	0.4	0.9	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			2	31
serviceberry	Amelanchier spp.	NSL	Low	4.6	0.3	1.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	32
wild plum	Prunus americana	NSLX	FIA	4.3	0.3	1.0	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	33
black walnut	Juglans nigra	WDH	Low	2.9	0.1	0.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	34
eastern white pine	Pinus strobus	WDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate ++		3	35
northern white-cedar	Thuja occidentalis	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	36
red maple	Acer rubrum	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	37
mountain maple	Acer spicatum	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	38
white ash	Fraxinus americana	WDL	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	39
honeylocust	Gleditsia triacanthos	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	40
Osage-orange	Maclura pomifera	NDH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	41
red mulberry	Morus rubra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	42
post oak	Quercus stellata	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	43
black oak	Quercus velutina	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	44
black locust	Robinia pseudoacacia	NDH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	45