

	sq. km	sq. mi	FIA Plots
Area of Region	8,532.9	3,294.6	28

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	10	14	Increase	3	4	Very Good	0	0
Hickory	0			Medium	17	20	No Change	11	9	Good	3	3
Maple	2	Abundant	0	Low	14	8	Decrease	6	7	Fair	9	9
Oak	2	Common	9	FIA	2		New	17	17	Poor	5	6
Pine	1	Rare	13				Unknown	6	6	Very Poor	3	2
Other	15	Absent	18							FIA Only	1	1
	<u>22</u>		<u>40</u>		<u>43</u>	<u>42</u>		<u>43</u>	<u>43</u>	Unknown	4	4
											<u>25</u>	<u>25</u>

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	42.3	43.9	46.9	47.5	
	CCSM85	42.3	44.8	48.2	51.8	
	GFDL45	42.3	48.5	47.2	48.8	
	GFDL85	42.3	45.2	48.5	53.4	
	HAD45	42.3	45.4	49.3	51.0	
HAD85	42.3	45.9	50.6	56.1		
Growing Season (May-Sep)	CCSM45	64.4	66.3	68.8	69.5	
	CCSM85	64.4	67.1	70.3	74.5	
	GFDL45	64.4	71.9	70.3	72.3	
	GFDL85	64.4	67.8	71.4	77.1	
	HAD45	64.4	67.4	70.3	72.4	
HAD85	64.4	67.3	71.5	77.0		
Coldest Month Average	CCSM45	6.7	8.5	10.8	11.2	
	CCSM85	6.7	8.2	10.7	13.2	
	GFDL45	6.7	10.3	11.6	12.2	
	GFDL85	6.7	10.7	12.3	15.3	
	HAD45	6.7	9.1	13.1	12.8	
HAD85	6.7	12.3	16.5	19.8		
Warmest Month Average	CCSM45	71.1	73.7	75.2	75.8	
	CCSM85	71.1	74.9	77.0	79.6	
	GFDL45	71.1	74.6	76.1	77.6	
	GFDL85	71.1	75.0	76.9	80.3	
	HAD45	71.1	74.4	75.9	77.7	
HAD85	71.1	74.7	77.1	80.7		

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	23.8	24.8	24.8	24.1	
	CCSM85	23.8	24.2	23.5	24.2	
	GFDL45	23.8	27.0	28.9	26.7	
	GFDL85	23.8	27.3	29.6	28.7	
	HAD45	23.8	25.5	24.2	25.6	
HAD85	23.8	25.8	24.7	26.8		
Growing Season (May-Sep)	CCSM45	15.9	15.9	15.6	15.4	
	CCSM85	15.9	15.4	14.6	14.3	
	GFDL45	15.9	18.3	19.3	17.4	
	GFDL85	15.9	18.2	19.3	18.2	
	HAD45	15.9	16.1	15.1	15.0	
HAD85	15.9	16.2	14.2	13.9		

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
bur oak	Quercus macrocarpa	NDH	Medium	30.7	273.2	33.9	Sm. dec.	Sm. dec.	High	Common	Fair	Fair	Infill +	Infill +	2	1
boxelder	Acer negundo	WSH	Low	45.5	256.6	20.5	Sm. dec.	Lg. dec.	High	Common	Fair	Fair	Infill +	Infill +	2	2
green ash	Fraxinus pennsylvanica	WSH	Low	47.8	151.6	12.0	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	3
bigtooth aspen	Populus grandidentata	NSL	Medium	1.1	110.8	20.4	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor				4
American basswood	Tilia americana	WSL	Medium	20.7	87.2	8.2	No change	Sm. dec.	Medium	Common	Fair	Poor	Infill +	Infill +	2	5
American elm	Ulmus americana	WDH	Medium	38	87.0	12.5	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	6
quaking aspen	Populus tremuloides	WDH	High	10.9	83.6	11.3	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	7
sugar maple	Acer saccharum	WDH	High	6.5	61.9	10.7	No change	No change	High	Common	Good	Good				8
jack pine	Pinus banksiana	NSH	Medium	1.2	58.6	50.0	Sm. dec.	Lg. dec.	High	Common	Fair	Fair				9
northern red oak	Quercus rubra	WDH	Medium	5.9	34.4	10.2	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	10
Siberian elm	Ulmus pumila	NDH	FIA	5.2	30.1	19.7	Unknown	Unknown	NA	Rare	NNIS	NNIS				11
eastern cottonwood	Populus deltoides	NSH	Low	9.4	24.5	18.3	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	12
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	10.9	23.2	3.1	Sm. inc.	No change	High	Rare	Good	Fair	Infill ++	Infill +	2	13
paper birch	Betula papyrifera	WDH	High	2.8	16.1	2.8	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	14
white spruce	Picea glauca	NSL	Medium	4.7	7.7	3.4	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor				15
slippery elm	Ulmus rubra	WSL	Low	1.3	3.0	0.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	16
black walnut	Juglans nigra	WDH	Low	1.2	1.4	1.2	No change	Lg. inc.	Medium	Rare	Poor	Good				17
black ash	Fraxinus nigra	WSH	Medium	7	1.4	1.4	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	18
black cherry	Prunus serotina	WDL	Medium	1.7	1.3	0.5	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	19
chokecherry	Prunus virginiana	NSLX	FIA	1.3	1.1	0.3	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only				20
hackberry	Celtis occidentalis	WDH	Medium	1.2	1.1	0.9	Lg. inc.	Lg. inc.	High	Rare	Good	Good				21
balsam poplar	Populus balsamifera	NSH	Medium	0.5	0.3	0.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor				22
eastern redcedar	Juniperus virginiana	WDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	23
tamarack (native)	Larix laricina	NSH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Likely +	Likely +	3	24
red pine	Pinus resinosa	NSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat				25
eastern white pine	Pinus strobus	WDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate +			26
northern white-cedar	Thuja occidentalis	WSH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	27
red maple	Acer rubrum	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	28
silver maple	Acer saccharinum	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	29
mountain maple	Acer spicatum	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown				30
flowering dogwood	Cornus florida	WDL	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown				31
honeylocust	Gleditsia triacanthos	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat				32
red mulberry	Morus rubra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	33
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown				34
white oak	Quercus alba	WDH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat				35
northern pin oak	Quercus ellipsoidalis	NSH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +			36
post oak	Quercus stellata	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat				37
black oak	Quercus velutina	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	38
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat				39
black locust	Robinia pseudoacacia	NDH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	40
black willow	Salix nigra	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	41
American mountain-ash	Sorbus americana	NSL	Low	0	0	0	Unknown	Unknown	Low	Modeled	Unknown	Unknown				42
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat				43