

sq. km sq. mi FIA Plots
Area of Region 67,067 25,895 2,514

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	3			High	22	Increase	21	22	Very Good	7	7	Likely	0	0
Hickory	2			Medium	25	No Change	11	8	Good	17	16	Infill	7	9
Maple	6	Abundant	8	Low	27	Decrease	17	19	Fair	9	10	Migrate	6	10
Oak	7	Common	22	FIA	5	New	21	22	Poor	8	11			
Pine	4	Rare	24			Unknown	9	8	Very Poor	8	4			
Other	32	Absent	24						FIA Only	2	2			
	54		78				79	79	Unknown	4	3			
										55	53			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	43.5	45.3	48.4	48.3	
	CCSM85	43.5	46.0	49.1	52.6	
	GFDL45	43.5	46.6	49.6	51.0	
	GFDL85	43.5	47.0	50.8	55.8	
	HAD45	43.5	46.9	50.2	52.1	
HAD85	43.5	47.2	51.4	57.4		
Growing Season (May—Sep)	CCSM45	61.3	62.9	65.2	65.4	
	CCSM85	61.3	63.5	66.2	70.0	
	GFDL45	61.3	65.4	69.3	71.3	
	GFDL85	61.3	66.1	70.8	76.5	
	HAD45	61.3	64.8	66.9	69.4	
HAD85	61.3	64.4	68.6	74.5		
Coldest Month Average	CCSM45	16.6	18.3	21.3	20.8	
	CCSM85	16.6	19.3	21.6	24.0	
	GFDL45	16.6	18.6	20.5	21.0	
	GFDL85	16.6	19.5	21.2	23.8	
	HAD45	16.6	18.5	22.4	22.7	
HAD85	16.6	20.9	23.6	28.2		
Warmest Month Average	CCSM45	67.6	69.5	71.0	71.3	
	CCSM85	67.6	70.4	72.1	74.1	
	GFDL45	67.6	71.8	73.7	75.0	
	GFDL85	67.6	72.5	75.0	77.8	
	HAD45	67.6	71.3	72.2	74.0	
HAD85	67.6	71.5	73.8	77.9		

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	31.9	32.2	31.7	32.6	
	CCSM85	31.9	32.6	32.0	33.1	
	GFDL45	31.9	34.1	36.5	35.9	
	GFDL85	31.9	34.5	37.3	38.0	
	HAD45	31.9	33.3	34.8	34.4	
HAD85	31.9	34.5	34.5	37.1		
Growing Season (May—Sep)	CCSM45	16.0	16.5	15.6	16.1	
	CCSM85	16.0	16.3	15.5	15.1	
	GFDL45	16.0	16.5	17.8	17.5	
	GFDL85	16.0	17.3	17.3	17.1	
	HAD45	16.0	16.0	15.1	15.3	
HAD85	16.0	16.4	14.1	15.0		

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	77.9	1154.9	12.3	No change	No change	High	Abundant	Very Good	Very Good			1	1
sugar maple	Acer saccharum	WDH	High	49.3	1009.3	17.0	Sm. dec.	Sm. dec.	High	Abundant	Good	Good			1	2
northern white-cedar	Thuja occidentalis	WSH	High	46	942.7	15.0	Sm. dec.	Sm. dec.	Medium	Abundant	Fair	Fair			0	3
red pine	Pinus resinosa	NSH	Medium	42.4	799.0	16.8	Sm. dec.	Sm. dec.	Low	Abundant	Fair	Fair			0	4
quaking aspen	Populus tremuloides	WDH	High	60.7	782.2	10.4	No change	Sm. dec.	Medium	Abundant	Good	Fair			1	5
jack pine	Pinus banksiana	NSH	Medium	30.4	519.6	16.1	Sm. dec.	Sm. dec.	High	Abundant	Good	Good			1	6
balsam fir	Abies balsamea	NDH	High	52.3	509.3	7.7	Lg. dec.	Lg. dec.	Low	Abundant	Poor	Poor			0	7
eastern white pine	Pinus strobus	WDH	High	50.5	508.1	8.3	No change	Sm. dec.	Low	Abundant	Fair	Fair			0	8
bigtooth aspen	Populus grandidentata	NSL	Medium	46	496.0	9.1	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	9
northern red oak	Quercus rubra	WDH	Medium	35.4	405.1	9.6	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	10
black cherry	Prunus serotina	WDL	Medium	47.8	261.4	4.6	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	11
paper birch	Betula papyrifera	WDH	High	51.4	241.2	3.6	No change	No change	Medium	Common	Fair	Fair			1	12
white oak	Quercus alba	WDH	Medium	21.3	228.4	9.0	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	13
black spruce	Picea mariana	NSH	High	30.5	205.5	5.6	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	14
green ash	Fraxinus pennsylvanica	WSH	Low	21.4	196.4	5.7	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	15
American beech	Fagus grandifolia	WDH	High	33	193.5	4.8	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	16
white spruce	Picea glauca	NSL	Medium	32.1	181.6	4.3	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	17
northern pin oak	Quercus ellipsoidalis	NSH	Medium	18.2	169.9	8.6	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	1	18
tamarack (native)	Larix laricina	NSH	High	21.8	161.3	6.2	No change	No change	Low	Common	Poor	Poor			0	19
black ash	Fraxinus nigra	WSH	Medium	33.3	157.6	3.9	Sm. inc.	No change	Low	Common	Fair	Poor			1	20
balsam poplar	Populus balsamifera	NSH	Medium	23	149.4	5.1	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	21
eastern hemlock	Tsuga canadensis	NSH	High	25.5	147.2	4.8	No change	Sm. dec.	Low	Common	Poor	Poor			0	22
white ash	Fraxinus americana	WDL	Medium	21.9	140.1	5.0	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	23
American basswood	Tilia americana	WSL	Medium	22.5	139.3	5.6	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	24
black oak	Quercus velutina	WDH	High	15.4	115.0	6.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	25
Scots pine	Pinus sylvestris	NSH	FIA	5.1	101.0	16.2	Unknown	Unknown	NA	Common	NNIS	NNIS			0	26
American elm	Ulmus americana	WDH	Medium	23.4	81.2	2.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	27
yellow birch	Betula alleghaniensis	NDL	High	23.9	65.9	2.4	No change	No change	Medium	Common	Fair	Fair			1	28
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	24.7	61.8	2.2	No change	Sm. dec.	High	Common	Good	Fair			1	29
silver maple	Acer saccharinum	NSH	Low	5.1	61.2	11.1	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	30
serviceberry	Amelanchier spp.	NSL	Low	14.9	24.4	1.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	31
pin cherry	Prunus pensylvanica	NSL	Low	5.8	15.6	2.3	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	32
eastern cottonwood	Populus deltoides	NSH	Low	0.5	15.1	4.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	33
Norway spruce	Picea abies	NSH	FIA	1.3	13.0	9.7	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	34
bur oak	Quercus macrocarpa	NDH	Medium	1.8	9.3	3.4	Sm. inc.	Sm. inc.	High	Rare	Good	Good			2	35
American hornbeam; muscle	Carpinus caroliniana	WSL	Low	4.7	9.2	1.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	36
black locust	Robinia pseudoacacia	NDH	Low	0.3	6.9	23.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	37
sassafras	Sassafras albidum	WSL	Low	3.3	6.7	1.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	38
peachleaf willow	Salix amygdaloides	NSLX	FIA	2.2	5.8	2.5	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	39
mountain maple	Acer spicatum	NSL	Low	2.5	4.2	1.0	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	40
swamp white oak	Quercus bicolor	NSL	Low	1	3.7	1.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	41
slippery elm	Ulmus rubra	WSL	Low	1.5	3.6	1.5	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	42
striped maple	Acer pensylvanicum	NSL	Medium	1.4	3.1	0.9	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	43
bitternut hickory	Carya cordiformis	WSL	Low	1.1	3.1	2.6	No change	Sm. inc.	High	Rare	Fair	Good	Infill +		2	44
chokecherry	Prunus virginiana	NSLX	FIA	3.1	3.0	0.8	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	45
black willow	Salix nigra	NSH	Low	0.4	2.8	2.4	No change	Lg. inc.	Low	Rare	Very Poor	Fair		Infill +	2	46
boxelder	Acer negundo	WSH	Low	0.4	1.8	2.3	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	47

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Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIaiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N	
Siberian elm	Ulmus pumila	NDH	FIA	0.2	1.1	2.7	Unknown	Unknown	NA	Rare	NNIS	NNIS				0	48
pin oak	Quercus palustris	NSH	Low	0.1	0.6	3.9	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +		2	49
flowering dogwood	Cornus florida	WDL	Medium	0.4	0.5	1.0	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +		2	50
shagbark hickory	Carya ovata	WSL	Medium	0	0.4	0.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good				2	51
eastern redcedar	Juniperus virginiana	WDH	Medium	0.3	0.3	0.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good				2	52
American mountain-ash	Sorbus americana	NSL	Low	0.8	0.2	0.2	Lg. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor				0	53
blackgum	Nyssa sylvatica	WDL	Medium	0.1	0.1	0.4	Lg. inc.	Lg. inc.	High	Rare	Good	Good				2	54
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat				0	55
Virginia pine	Pinus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat				3	56
sweet birch	Betula lenta	NDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat				3	57
pignut hickory	Carya glabra	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3	58
shellbark hickory	Carya laciniosa	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	59
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat				0	60
mockernut hickory	Carya alba	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3	61
hackberry	Celtis occidentalis	WDH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3	62
eastern redbud	Cercis canadensis	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat				3	63
common persimmon	Diospyros virginiana	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +		3	64
honeylocust	Gleditsia triacanthos	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat				3	65
black walnut	Juglans nigra	WDH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate +		3	66
sweetgum	Liquidambar styraciflua	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat				3	67
yellow-poplar	Liriodendron tulipifera	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3	68
Osage-orange	Maclura pomifera	NDH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +		3	69
cucumbertree	Magnolia acuminata	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown				0	70
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat				0	71
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown				0	72
red mulberry	Morus rubra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +		3	73
sycamore	Platanus occidentalis	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3	74
scarlet oak	Quercus coccinea	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +		3	75
blackjack oak	Quercus marilandica	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat				0	76
chestnut oak	Quercus prinus	NDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat				3	77
post oak	Quercus stellata	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat				3	78
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat				0	79