

Current and Potential Future Habitat, Capability, and Migration

	sq. km	sq. mi	FIA Plots
Area of Region	22,300	8,610.0	865

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	21	Increase	18	18	Very Good	6	6	Likely	1	1
Hickory	0			Medium	23	No Change	6	7	Good	11	13	Infill	3	5
Maple	6	Abundant	10	Low	23	Decrease	11	10	Fair	9	8	Migrate	7	14
Oak	2	Common	13	FIA	3	New	25	28	Poor	6	5		11	20
Pine	3	Rare	15			Unknown	10	7	Very Poor	3	3			
Other	24	Absent	32				70	70	FIA Only	2	2			
	38		70						Unknown	7	4			
										44	41			

Potential Changes in Climate Variables

Temperature (°F)

Scenario	2009	2039	2069	2099	
Annual	38.8	40.2	41.9	42.0	
Average	38.8	40.7	42.7	45.2	
GFDL45	38.8	41.0	43.8	45.0	
GFDL85	38.8	41.4	44.9	48.9	
HAD45	38.8	41.1	43.4	44.7	
HAD85	38.8	41.3	44.5	48.7	
Growing Season	53.1	54.7	56.1	56.3	
May—Sep	53.1	54.9	56.7	59.5	
GFDL45	53.1	55.7	58.4	59.8	
GFDL85	53.1	55.9	59.5	63.5	
HAD45	53.1	55.3	57.3	58.9	
HAD85	53.1	55.1	58.6	63.0	
Coldest Month	16.2	17.4	18.8	19.1	
Average	16.2	18.3	19.4	21.3	
GFDL45	16.2	18.2	20.6	21.5	
GFDL85	16.2	19.1	21.4	23.6	
HAD45	16.2	18.4	20.3	20.9	
HAD85	16.2	19.6	21.5	24.3	
Warmest Month	58.1	59.7	60.6	60.6	
Average	58.1	60.0	61.4	62.7	
GFDL45	58.1	60.5	61.9	62.9	
GFDL85	58.1	60.5	62.8	64.8	
HAD45	58.1	60.4	61.3	62.4	
HAD85	58.1	60.3	62.2	65.1	

Precipitation (in)

Scenario	2009	2039	2069	2099	
Annual	33.7	33.1	32.7	36.7	
Total	33.7	34.8	34.5	35.8	
GFDL45	33.7	37.0	39.2	38.1	
GFDL85	33.7	36.5	38.0	39.0	
HAD45	33.7	36.5	39.1	38.6	
HAD85	33.7	36.8	37.6	40.2	
Growing Season	14.8	14.7	13.8	15.4	
May—Sep	14.8	15.5	15.1	14.4	
GFDL45	14.8	14.4	14.5	14.0	
GFDL85	14.8	15.0	14.5	13.5	
HAD45	14.8	16.2	16.2	17.1	
HAD85	14.8	15.3	16.1	17.5	

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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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	97.7	2265.2	15.7	Sm. dec.	Sm. dec.	Low	Abundant	Fair	Fair			0	1
red spruce	Picea rubens	NDH	High	90.6	1361.3	10.3	Sm. dec.	Sm. dec.	Low	Abundant	Fair	Fair			0	2
red maple	Acer rubrum	WDH	High	97.7	1354.7	9.5	Sm. inc.	Sm. inc.	High	Abundant	Very Good	Very Good			1	3
northern white-cedar	Thuja occidentalis	WSH	High	79.6	1098.7	9.8	Sm. dec.	Sm. dec.	Medium	Abundant	Fair	Fair			0	4
American beech	Fagus grandifolia	WDH	High	71.2	772.9	7.8	No change	No change	Medium	Abundant	Good	Good			1	5
yellow birch	Betula alleghaniensis	NDL	High	84.5	695.6	5.4	Sm. dec.	Sm. dec.	Medium	Abundant	Fair	Fair			0	6
sugar maple	Acer saccharum	WDH	High	66.3	686.7	6.5	Sm. inc.	Sm. inc.	High	Abundant	Very Good	Very Good			1	7
eastern white pine	Pinus strobus	WDH	High	69.2	642.1	6.8	Sm. inc.	Sm. inc.	Low	Abundant	Good	Good			1	8
eastern hemlock	Tsuga canadensis	NSH	High	58.7	598.8	7.4	Sm. inc.	No change	Low	Abundant	Good	Fair			1	9
paper birch	Betula papyrifera	WDH	High	87.6	577.9	4.4	No change	No change	Medium	Abundant	Good	Good			1	10
black spruce	Picea mariana	NSH	High	32.1	332.5	7.0	No change	No change	Medium	Common	Fair	Fair			1	11
quaking aspen	Populus tremuloides	WDH	High	50.2	275.4	3.7	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	12
white spruce	Picea glauca	NSL	Medium	59.1	192.1	2.1	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	13
white ash	Fraxinus americana	WDL	Medium	45.6	184.1	2.8	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	14
striped maple	Acer pensylvanicum	NSL	Medium	60	175.2	1.9	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	15
bigtooth aspen	Populus grandidentata	NSL	Medium	34.8	125.5	2.7	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	16
gray birch	Betula populifolia	NSL	Low	30.8	102.6	2.2	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	17
northern red oak	Quercus rubra	WDH	Medium	13.6	95.4	4.6	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	1	18
tamarack (native)	Larix laricina	NSH	High	21	92.3	3.3	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	19
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	28.5	67.0	1.9	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	20
black ash	Fraxinus nigra	WSH	Medium	29.8	62.4	1.3	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	21
black cherry	Prunus serotina	WDL	Medium	11.3	58.8	2.8	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	22
red pine	Pinus resinosa	NSH	Medium	7.7	54.6	4.7	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	2	23
pin cherry	Prunus pensylvanica	NSL	Low	30.9	39.3	0.9	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	24
balsam poplar	Populus balsamifera	NSH	Medium	10.1	31.5	2.3	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	25
American elm	Ulmus americana	WDH	Medium	9.4	19.6	1.2	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	26
mountain maple	Acer spicatum	NSL	Low	14.2	12.1	0.6	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			1	27
silver maple	Acer saccharinum	NSH	Low	0.4	8.7	19.4	Sm. dec.	No change	High	Rare	Poor	Fair		Infill +	2	28
American mountain-ash	Sorbus americana	NSL	Low	7.2	8.3	0.6	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	29
Norway spruce	Picea abies	NSH	FIA	0.7	7.9	5.6	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	30
green ash	Fraxinus pennsylvanica	WSH	Low	1.5	3.5	1.7	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			2	31
serviceberry	Amelanchier spp.	NSL	Low	3.8	2.8	0.5	No change	No change	Medium	Rare	Poor	Poor		Infill +	1	32
American basswood	Tilia americana	WSL	Medium	1.4	2.8	0.4	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	33
jack pine	Pinus banksiana	NSH	Medium	0.4	2.2	4.9	Sm. dec.	Lg. dec.	High	Rare	Poor	Poor			0	34
butternut	Juglans cinerea	NSLX	FIA	0.3	1.5	2.4	Unknown	Unknown	Low	Rare	FIA Only	FIA Only			0	35
chokecherry	Prunus virginiana	NSLX	FIA	1.7	1.4	0.7	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	36
white oak	Quercus alba	WDH	Medium	0.4	1.4	3.0	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	37
boxelder	Acer negundo	WSH	Low	0	0.8	0.1	No change	Lg. inc.	High	Rare	Fair	Good			2	38
eastern redcedar	Juniperus virginiana	WDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	39
pitch pine	Pinus rigida	NSH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	40
Virginia pine	Pinus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	41
black maple	Acer nigrum	NSH	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	42
sweet birch	Betula lenta	NDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	43
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	44
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	45
bitternut hickory	Carya cordiformis	WSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	46
pignut hickory	Carya glabra	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	47

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Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIaiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
pecan	<i>Carya illinoensis</i>	NSH	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	48
shagbark hickory	<i>Carya ovata</i>	WSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	49
mockernut hickory	<i>Carya alba</i>	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	50
hackberry	<i>Celtis occidentalis</i>	WDH	Medium	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat			0	51
flowering dogwood	<i>Cornus florida</i>	WDL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			0	52
common persimmon	<i>Diospyros virginiana</i>	NSL	Low	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat			0	53
black walnut	<i>Juglans nigra</i>	WDH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	54
sweetgum	<i>Liquidambar styraciflua</i>	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	55
yellow-poplar	<i>Liriodendron tulipifera</i>	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	56
blackgum	<i>Nyssa sylvatica</i>	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	57
redbay	<i>Persea borbonia</i>	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	58
sycamore	<i>Platanus occidentalis</i>	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			2	59
swamp white oak	<i>Quercus bicolor</i>	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	60
scarlet oak	<i>Quercus coccinea</i>	WDL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	61
northern pin oak	<i>Quercus ellipsoidalis</i>	NSH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	62
overcup oak	<i>Quercus lyrata</i>	NSL	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	63
pin oak	<i>Quercus palustris</i>	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	64
chestnut oak	<i>Quercus prinus</i>	NDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	65
post oak	<i>Quercus stellata</i>	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	66
black oak	<i>Quercus velutina</i>	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	67
black locust	<i>Robinia pseudoacacia</i>	NDH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	68
sassafras	<i>Sassafras albidum</i>	WSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	69
slippery elm	<i>Ulmus rubra</i>	WSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	70