

Area of Region sq. km sq. mi FIA Plots
 8,100.0 3,127.4 227

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	24	Increase	21	25	Very Good	9	11	Likely	2	2
Hickory	4			Medium	24	48	No Change	16	13	Good	16	15	Infill	5	8
Maple	4	Abundant	4	Low	35	11	Decrease	25	24	Fair	11	14	Migrate	3	7
Oak	9	Common	36	FIA	5		New	10	11	Poor	14	12			
Pine	6	Rare	27				Unknown	14	13	Very Poor	12	8			
Other	41	Absent	14							FIA Only	2	2			
	67		81		86	83		86	86	Unknown	9	8			
											73	70			

Potential Changes in Climate Variables

Temperature (°F)

Scenario	2009	2039	2069	2099	
Annual	55.4	57.3	59.5	59.7	
Average	55.4	57.7	60.1	63.1	
GFDL45	55.4	58.1	60.7	61.5	
GFDL85	55.4	58.4	61.8	65.5	
HAD45	55.4	57.7	60.9	62.1	
HAD85	55.4	58.0	62.3	66.3	
Growing Season	69.6	71.5	73.6	74.1	
May—Sep	69.6	71.8	74.4	78.3	
GFDL45	69.6	72.8	76.0	77.2	
GFDL85	69.6	73.4	77.4	81.5	
HAD45	69.6	72.8	75.7	77.2	
HAD85	69.6	72.9	78.6	82.7	
Coldest Month	33.6	35.7	36.8	37.0	
Average	33.6	36.3	37.2	38.4	
GFDL45	33.6	37.0	37.1	37.7	
GFDL85	33.6	35.5	36.6	37.5	
HAD45	33.6	33.8	35.8	36.2	
HAD85	33.6	34.7	36.1	37.8	
Warmest Month	74.3	76.5	77.6	77.8	
Average	74.3	76.6	78.3	80.1	
GFDL45	74.3	78.1	79.7	80.6	
GFDL85	74.3	79.0	81.4	83.7	
HAD45	74.3	78.1	80.3	81.2	
HAD85	74.3	79.1	83.0	85.3	

Precipitation (in)

Scenario	2009	2039	2069	2099	
Annual	45.5	48.1	50.9	50.9	
Total	45.5	50.0	51.0	55.2	
GFDL45	45.5	50.3	51.6	55.0	
GFDL85	45.5	49.3	53.5	54.6	
HAD45	45.5	44.9	47.8	48.6	
HAD85	45.5	47.5	44.8	46.4	
Growing Season	20.6	22.2	23.4	23.4	
May—Sep	20.6	23.0	22.2	24.1	
GFDL45	20.6	23.3	23.3	24.4	
GFDL85	20.6	22.1	23.9	24.3	
HAD45	20.6	20.5	20.4	20.9	
HAD85	20.6	21.7	19.3	19.8	

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
yellow-poplar	Liriodendron tulipifera	WDH	High	86.4	1209.0	13.8	Lg. dec.	Lg. dec.	High	Abundant	Good	Good			1	1
chestnut oak	Quercus prinus	NDH	High	60.5	788.0	12.9	No change	Sm. dec.	High	Abundant	Very Good	Good			1	2
red maple	Acer rubrum	WDH	High	74.1	777.0	10.4	Sm. dec.	Sm. dec.	High	Abundant	Good	Good			1	3
eastern redcedar	Juniperus virginiana	WDH	Medium	45.7	588.8	12.7	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	4
white oak	Quercus alba	WDH	Medium	67.9	465.5	6.8	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	5
northern red oak	Quercus rubra	WDH	Medium	71.6	374.6	5.2	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	6
sugar maple	Acer saccharum	WDH	High	60.5	365.7	6.0	Sm. dec.	Lg. dec.	High	Common	Fair	Fair			1	7
Virginia pine	Pinus virginiana	NDH	High	50.6	351.6	6.9	Sm. inc.	No change	Medium	Common	Good	Fair			1	8
black locust	Robinia pseudoacacia	NDH	Low	65.4	311.6	4.7	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	9
scarlet oak	Quercus coccinea	WDL	Medium	46.9	303.3	6.4	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	10
sassafras	Sassafras albidum	WSL	Low	58	273.4	4.7	Lg. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	11
black oak	Quercus velutina	WDH	High	55.6	246.9	4.4	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	12
mockernut hickory	Carya alba	WDL	Medium	45.7	246.0	5.3	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	13
white ash	Fraxinus americana	WDL	Medium	45.7	245.2	5.3	No change	No change	Low	Common	Poor	Poor			0	14
sourwood	Oxydendrum arboreum	NDL	High	64.2	243.4	3.8	No change	Sm. dec.	High	Common	Good	Fair			1	15
eastern white pine	Pinus strobus	WDH	High	29.6	238.5	8.0	No change	No change	Low	Common	Poor	Poor			0	16
pignut hickory	Carya glabra	WDL	Medium	55.6	229.7	4.1	No change	No change	Medium	Common	Fair	Fair			1	17
blackgum	Nyssa sylvatica	WDL	Medium	65.4	212.0	3.2	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	18
black cherry	Prunus serotina	WDL	Medium	48.1	202.9	4.2	No change	Sm. inc.	Low	Common	Poor	Fair			1	19
American beech	Fagus grandifolia	WDH	High	51.9	193.9	3.7	No change	No change	Medium	Common	Fair	Fair			1	20
eastern hemlock	Tsuga canadensis	NSH	High	29.6	178.4	6.0	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor			0	21
sweet birch	Betula lenta	NDH	High	37	136.8	3.7	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	22
shagbark hickory	Carya ovata	WSL	Medium	29.6	128.0	4.3	No change	No change	Medium	Common	Fair	Fair			1	23
American elm	Ulmus americana	WDH	Medium	28.4	125.3	4.4	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	24
flowering dogwood	Cornus florida	WDL	Medium	44.4	116.6	2.6	No change	No change	Medium	Common	Fair	Fair			1	25
Osage-orange	Maclura pomifera	NDH	Medium	1.2	96.3	77.0	Lg. dec.	Lg. dec.	High	Common	Fair	Fair		Infill +	2	26
black walnut	Juglans nigra	WDH	Low	33.3	95.9	2.8	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	27
boxelder	Acer negundo	WSH	Low	7.4	85.7	11.4	Lg. dec.	No change	High	Common	Fair	Good			1	28
yellow buckeye	Aesculus flava	NSL	Low	18.5	82.0	4.4	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	29
chinkapin oak	Quercus muehlenbergii	NSL	Medium	21	79.2	3.7	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	30
green ash	Fraxinus pennsylvanica	WSH	Low	19.8	73.3	3.7	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	31
eastern redbud	Cercis canadensis	NSL	Low	27.2	71.3	2.6	No change	No change	Medium	Common	Fair	Fair			1	32
American basswood	Tilia americana	WSL	Medium	23.5	66.2	2.8	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	33
pitch pine	Pinus rigida	NSH	High	19.8	64.8	3.2	No change	No change	Medium	Common	Fair	Fair			1	34
sweetgum	Liquidambar styraciflua	WDH	High	9.9	63.8	6.4	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good	Infill ++	Infill ++	1	35
mountain or Fraser magnolia	Magnolia fraseri	NSL	Low	21	59.1	2.8	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor			0	36
Table Mountain pine	Pinus pungens	NSL	Low	6.2	54.6	8.7	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	37
shortleaf pine	Pinus echinata	WDH	High	12.3	51.9	4.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	38
cucumbertree	Magnolia acuminata	NSL	Low	28.4	51.1	1.8	Lg. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	39
bitternut hickory	Carya cordiformis	WSL	Low	18.5	50.5	2.7	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	40
red mulberry	Morus rubra	NSL	Low	16	43.0	2.6	Sm. dec.	No change	Medium	Rare	Very Poor	Poor			1	41
southern red oak	Quercus falcata	WDL	Medium	12.3	39.3	3.1	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	42
sycamore	Platanus occidentalis	NSL	Low	8.6	38.6	4.4	No change	Sm. inc.	Medium	Rare	Poor	Fair			1	43
winged elm	Ulmus alata	WDL	Medium	11.1	35.9	3.2	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	44
ailanthus	Ailanthus altissima	NSL	FIA	9.9	32.7	3.3	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	45
serviceberry	Amelanchier spp.	NSL	Low	25.9	25.9	1.0	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	46
paulownia	Paulownia tomentosa	NSL	FIA	3.7	25.2	6.7	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	47

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slippery elm	Ulmus rubra	WSL	Low	9.9	24.4	2.4	No change	No change	Medium	Rare	Poor	Poor			1	48
common persimmon	Diospyros virginiana	NSL	Low	4.9	24.4	4.9	No change	Lg. inc.	High	Rare	Fair	Good			1	49
loblolly pine	Pinus taeda	WDH	High	4.9	18.0	3.6	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	50
pawpaw	Asimina triloba	NSL	Low	7.4	17.9	2.4	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	51
hackberry	Celtis occidentalis	WDH	Medium	8.6	17.7	2.0	Sm. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	52
yellow birch	Betula alleghaniensis	NDL	High	4.9	15.2	3.0	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	53
post oak	Quercus stellata	WDH	High	2.5	9.4	3.7	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	54
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	8.6	7.2	0.8	Sm. inc.	Lg. inc.	High	Rare	Good	Good			1	55
striped maple	Acer pensylvanicum	NSL	Medium	11.1	5.9	0.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	56
pin cherry	Prunus pensylvanica	NSL	Low	2.5	3.3	1.3	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	57
bigleaf magnolia	Magnolia macrophylla	NSL	Low	3.7	2.7	0.7	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	58
black willow	Salix nigra	NSH	Low	2.5	2.1	0.9	Sm. dec.	Lg. inc.	Low	Rare	Very Poor	Fair		Infill +	2	59
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	2.5	1.2	0.5	No change	Lg. inc.	Medium	Rare	Poor	Good		Infill ++	1	60
American chestnut	Castanea dentata	NSLX	FIA	1.2	1.2	0.9	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	61
blackjack oak	Quercus marilandica	NSL	Medium	1.2	1.0	0.8	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	62
blue ash	Fraxinus quadrangulata	NSL	Low	1.2	0.9	0.8	Lg. dec.	Very Lg. dec.	Low	Rare	Very Poor	Lost			0	63
northern white-cedar	Thuja occidentalis	WSH	High	1.2	0.9	0.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	64
southern magnolia	Magnolia grandiflora	NSL	Low	1.2	0.9	0.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	65
wild plum	Prunus americana	NSLX	FIA	1.2	0.7	0.5	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	66
white mulberry	Morus alba	NSL	FIA	1.2	0.6	0.5	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	67
ashe juniper	Juniperus ashei	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	68
florida maple	Acer barbatum	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	69
silver maple	Acer saccharinum	NSH	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	70
mountain maple	Acer spicatum	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	71
Ohio buckeye	Aesculus glabra	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	72
river birch	Betula nigra	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	73
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	74
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	75
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	76
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	77
honeylocust	Gleditsia triacanthos	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	78
silverbell	Halesia spp.	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	79
American holly	Ilex opaca	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	80
eastern cottonwood	Populus deltoides	NSH	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	81
bigtooth aspen	Populus grandidentata	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	82
water oak	Quercus nigra	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	83
Shumard oak	Quercus shumardii	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	84
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	85
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Migrate +	3	86