

Area of Region    sq. km    sq. mi    FIA Plots  
8,300.6    3,204.9    244

**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	4			High	16	21	Increase	24	25	Very Good	8	10
Hickory	4			Medium	33	47	No Change	6	5	Good	14	15
Maple	2	Abundant	4	Low	32	13	Decrease	28	28	Fair	10	7
Oak	14	Common	20	FIA	5		New	13	15	Poor	11	11
Pine	3	Rare	39				Unknown	15	13	Very Poor	11	11
Other	36	Absent	18							FIA Only	2	2
	<b>63</b>		<b>81</b>		<b>86</b>	<b>81</b>		<b>86</b>	<b>86</b>	Unknown	10	8
											<b>15</b>	<b>19</b>
											<b>66</b>	<b>64</b>

**Potential Changes in Climate Variables**

**Temperature (°F)**

Scenario	2009	2039	2069	2099	
Annual	57.9	59.6	61.7	61.9	
Average	57.9	60.0	62.4	65.3	
GFDL45	57.9	60.6	63.1	64.1	
GFDL85	57.9	60.9	64.2	68.1	
HAD45	57.9	60.1	63.2	64.5	
HAD85	57.9	60.4	64.0	68.3	
Growing Season	72.8	74.5	76.4	76.9	
May—Sep	72.8	75.9	78.7	80.2	
GFDL45	72.8	75.9	78.7	80.2	
GFDL85	72.8	76.5	80.2	84.4	
HAD45	72.8	75.4	78.3	79.8	
HAD85	72.8	75.4	79.7	84.3	
Coldest Month	35.5	37.6	38.7	39.0	
Average	35.5	38.1	39.1	40.4	
GFDL45	35.5	38.8	39.2	39.8	
GFDL85	35.5	37.9	38.8	40.2	
HAD45	35.5	36.7	38.5	38.9	
HAD85	35.5	37.0	38.6	40.3	
Warmest Month	78.4	80.5	81.5	81.5	
Average	78.4	80.6	82.5	83.9	
GFDL45	78.4	81.4	82.8	84.0	
GFDL85	78.4	82.5	84.4	86.9	
HAD45	78.4	81.3	83.2	83.9	
HAD85	78.4	81.6	84.3	87.1	

**Precipitation (in)**

Scenario	2009	2039	2069	2099	
Annual	43.7	48.4	51.7	50.9	
Total	43.7	48.8	50.9	57.7	
GFDL45	43.7	48.8	52.2	53.9	
GFDL85	43.7	46.8	52.4	53.8	
HAD45	43.7	46.7	47.3	45.7	
HAD85	43.7	50.2	46.2	47.5	
Growing Season	19.8	24.6	26.0	25.7	
May—Sep	19.8	23.6	25.1	28.7	
GFDL45	19.8	21.8	23.8	24.9	
GFDL85	19.8	20.6	23.9	24.7	
HAD45	19.8	22.3	20.8	19.2	
HAD85	19.8	22.8	20.0	19.5	

**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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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
loblolly pine	Pinus taeda	WDH	High	92.8	2566.9	28.2	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	95.3	1037.2	11.3	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	2
white oak	Quercus alba	WDH	Medium	85.8	938.6	11.4	Lg. dec.	Lg. dec.	High	Abundant	Good	Good			1	3
yellow-poplar	Liriodendron tulipifera	WDH	High	82.1	907.4	10.8	Lg. dec.	Lg. dec.	High	Abundant	Good	Good			1	4
red maple	Acer rubrum	WDH	High	82	464.7	5.5	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	5
Virginia pine	Pinus virginiana	NDH	High	52.6	451.8	8.5	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	6
American holly	Ilex opaca	NSL	Medium	83.4	299.9	3.7	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	7
southern red oak	Quercus falcata	WDL	Medium	67.8	299.7	4.4	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	8
American beech	Fagus grandifolia	WDH	High	53.4	271.6	5.0	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	9
mockernut hickory	Carya alba	WDL	Medium	52.9	218.0	4.1	No change	No change	High	Common	Good	Good			1	10
scarlet oak	Quercus coccinea	WDL	Medium	57.4	213.3	4.1	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	11
blackgum	Nyssa sylvatica	WDL	Medium	75.8	190.7	2.7	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	12
black oak	Quercus velutina	WDH	High	57.2	143.0	2.6	No change	No change	Medium	Common	Fair	Fair			1	13
green ash	Fraxinus pennsylvanica	WSH	Low	26.1	126.6	4.7	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	14
pignut hickory	Carya glabra	WDL	Medium	52.9	102.5	1.9	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	15
willow oak	Quercus phellos	NSL	Low	42.9	93.3	2.1	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	16
swamp tupelo	Nyssa biflora	NDH	Medium	17.2	92.3	4.4	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	17
river birch	Betula nigra	NSL	Low	21.4	87.7	4.0	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	18
chestnut oak	Quercus prinus	NDH	High	21.6	85.4	5.3	Lg. dec.	Lg. dec.	High	Common	Fair	Fair			1	19
eastern redcedar	Juniperus virginiana	WDH	Medium	43.3	82.3	1.9	No change	Sm. inc.	Medium	Common	Fair	Good			1	20
northern red oak	Quercus rubra	WDH	Medium	37	78.9	2.4	Lg. dec.	Lg. dec.	High	Common	Fair	Fair			1	21
American hornbeam; muscley	Carpinus caroliniana	WSL	Low	36.9	77.8	2.1	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	22
water tupelo	Nyssa aquatica	NSH	Medium	3.6	68.6	19.0	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	2	23
water oak	Quercus nigra	WDH	High	22.8	50.7	2.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	24
black cherry	Prunus serotina	WDL	Medium	25.1	43.6	1.7	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair			1	25
slippery elm	Ulmus rubra	WSL	Low	12.7	42.3	3.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	26
post oak	Quercus stellata	WDH	High	21.7	41.7	1.9	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	27
flowering dogwood	Cornus florida	WDL	Medium	43.1	40.9	0.9	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			1	28
white ash	Fraxinus americana	WDL	Medium	15.7	35.4	2.3	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	29
bald cypress	Taxodium distichum	NSH	Medium	2.2	34.6	12.7	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2	30
winged elm	Ulmus alata	WDL	Medium	18.8	34.2	1.7	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	31
shortleaf pine	Pinus echinata	WDH	High	15.7	31.7	3.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	32
black walnut	Juglans nigra	WDH	Low	5.7	24.5	3.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	33
swamp chestnut oak	Quercus michauxii	NSL	Low	7.1	20.1	2.7	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	34
sassafras	Sassafras albidum	WSL	Low	19.2	19.5	1.3	Very Lg. dec.	Lg. dec.	Medium	Rare	Lost	Very Poor			0	35
pawpaw	Asimina triloba	NSL	Low	5.7	18.0	2.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	36
sourwood	Oxydendrum arboreum	NDL	High	9.6	17.3	1.8	No change	Sm. dec.	High	Rare	Fair	Poor	Infill +		1	37
ailanthus	Ailanthus altissima	NSL	FIA	4.8	16.8	3.5	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	38
hackberry	Celtis occidentalis	WDH	Medium	4.8	16.7	3.5	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			1	39
American elm	Ulmus americana	WDH	Medium	11.7	16.4	1.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	40
common persimmon	Diospyros virginiana	NSL	Low	10.8	15.9	1.5	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			1	41
black locust	Robinia pseudoacacia	NDH	Low	12	15.7	1.3	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	42
sycamore	Platanus occidentalis	NSL	Low	3.6	14.3	4.0	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	1	43
pin oak	Quercus palustris	NSH	Low	7.2	13.8	1.9	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	44
bigtooth aspen	Populus grandidentata	NSL	Medium	9.6	12.9	1.3	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	45
boxelder	Acer negundo	WSH	Low	3.6	11.5	3.2	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor	Infill +	Infill +	1	46
sweetbay	Magnolia virginiana	NSL	Medium	4.8	10.3	2.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	47

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eastern cottonwood	Populus deltoides	NSH	Low	1.2	8.6	6.9	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	48
shagbark hickory	Carya ovata	WSL	Medium	3.6	7.8	2.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	49
pumpkin ash	Fraxinus profunda	NSH	FIA	1	6.4	4.5	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	50
bitternut hickory	Carya cordiformis	WSL	Low	4.8	5.7	1.2	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	51
eastern redbud	Cercis canadensis	NSL	Low	4.8	3.7	0.8	Lg. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	52
white mulberry	Morus alba	NSL	FIA	1.2	3.6	3.0	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	53
honeylocust	Gleditsia triacanthos	NSH	Low	2.4	2.8	1.2	Sm. dec.	No change	High	Rare	Poor	Fair		Infill +	2	54
Carolina ash	Fraxinus caroliniana	NSL	FIA	0.8	2.1	1.2	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	55
overcup oak	Quercus lyrata	NSL	Medium	1.2	1.5	1.3	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	56
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	1.2	1.5	1.2	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	57
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	2.4	1.3	0.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	58
red mulberry	Morus rubra	NSL	Low	1.2	1.0	0.9	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	59
paulownia	Paulownia tomentosa	NSL	FIA	1.2	0.6	0.5	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	60
serviceberry	Amelanchier spp.	NSL	Low	1.2	0.4	0.3	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	61
sweet birch	Betula lenta	NDH	High	1.2	0.4	0.3	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	62
laurel oak	Quercus laurifolia	NDH	Medium	1.2	0.3	0.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	63
slash pine	Pinus elliottii	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate ++	3	64
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	65
pond pine	Pinus serotina	NSH	Medium	0	0	0	Unknown	Unknown	Low	Modeled	Unknown	Unknown			0	66
florida maple	Acer barbatum	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	67
yellow buckeye	Aesculus flava	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	68
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	69
water hickory	Carya aquatica	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	70
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	71
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	72
sugarberry	Celtis laevigata	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	73
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	74
loblolly-bay	Gordonia lasianthus	NSH	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	75
cucumbertree	Magnolia acuminata	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	76
redbay	Persea borbonia	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate ++		3	77
water elm	Planera aquatica	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	78
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	79
shingle oak	Quercus imbricaria	NDH	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	80
blackjack oak	Quercus marilandica	NSL	Medium	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat		Likely +	3	81
Shumard oak	Quercus shumardii	NSL	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	82
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	83
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	84
black willow	Salix nigra	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +	3	85
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	86