

sq. km sq. mi FIA Plots
Area of Region 8,900.0 3,436.3 264

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	Scenario	Scenario	Scenario	SHIFT	SHIFT	
				High	26	Increase	RCP45	RCP85	Very Good	14	14	
Ash	2											
Hickory	8			Medium	33	51	No Change	15	8	Good	16	22
Maple	5	Abundant	5	Low	35	12	Decrease	23	22	Fair	13	8
Oak	16	Common	24	FIA	4		New	15	16	Poor	12	14
Pine	3	Rare	42				Unknown	9	8	Very Poor	12	9
Other	37	Absent	18							FIA Only	3	3
	71		89		91	89		91	91	Unknown	5	4
											16	22
											75	74

Potential Changes in Climate Variables

Temperature (°F)

Scenario	2009	2039	2069	2099	
Annual	60.5	62.3	64.4	64.6	
Average	60.5	62.6	65.2	67.9	
CCSM45	60.5	63.3	65.3	66.0	
CCSM85	60.5	63.1	66.3	69.7	
GFDL45	60.5	62.9	65.9	67.2	
GFDL85	60.5	63.3	67.7	71.5	
HAD45	60.5	63.3	67.7	71.5	
HAD85	60.5	63.3	67.7	71.5	
Growing Season	74.7	76.3	78.1	78.6	
CCSM45	74.7	76.5	79.2	82.7	
CCSM85	74.7	77.7	79.8	81.2	
GFDL45	74.7	77.4	81.2	85.1	
GFDL85	74.7	78.1	80.8	82.2	
HAD45	74.7	78.2	84.7	88.0	
HAD85	74.7	78.2	84.7	88.0	
Coldest Month	39.2	41.4	42.3	42.4	
CCSM45	39.2	42.0	43.2	44.5	
CCSM85	39.2	42.9	42.9	43.2	
GFDL45	39.2	41.0	42.2	42.5	
GFDL85	39.2	39.2	41.2	41.7	
HAD45	39.2	40.6	42.0	43.6	
HAD85	39.2	40.6	42.0	43.6	
Warmest Month	79.5	81.0	81.9	82.1	
CCSM45	79.5	81.2	82.7	84.6	
CCSM85	79.5	82.6	83.6	84.5	
GFDL45	79.5	82.3	84.2	86.3	
GFDL85	79.5	84.0	86.3	86.8	
HAD45	79.5	84.7	89.1	90.3	
HAD85	79.5	84.7	89.1	90.3	

Precipitation (in)

Scenario	2009	2039	2069	2099	
Annual	57.4	59.6	64.2	62.6	
Total	57.4	60.7	62.0	68.2	
CCSM45	57.4	65.1	68.3	70.9	
CCSM85	57.4	65.1	68.0	71.3	
GFDL45	57.4	55.1	61.7	62.1	
GFDL85	57.4	59.4	53.6	58.8	
HAD45	57.4	59.4	53.6	58.8	
HAD85	57.4	59.4	53.6	58.8	
Growing Season	22.3	22.0	22.4	23.2	
CCSM45	22.3	21.4	21.1	23.1	
CCSM85	22.3	26.5	27.8	28.2	
GFDL45	22.3	27.1	28.7	30.0	
GFDL85	22.3	20.8	22.8	21.4	
HAD45	22.3	22.9	16.7	18.5	
HAD85	22.3	22.9	16.7	18.5	

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	86.5	2557.4	29.6	No change	No change	Medium	Abundant	Good	Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	77.5	723.7	9.8	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	2
Virginia pine	Pinus virginiana	NDH	High	67.4	722.6	10.7	Sm. dec.	Lg. dec.	Medium	Abundant	Fair	Fair			0	3
white oak	Quercus alba	WDH	Medium	73	636.6	8.7	No change	No change	High	Abundant	Very Good	Very Good			1	4
yellow-poplar	Liriodendron tulipifera	WDH	High	73	570.4	8.3	Sm. dec.	Sm. dec.	High	Abundant	Good	Good			1	5
red maple	Acer rubrum	WDH	High	78.7	354.1	4.5	No change	Sm. inc.	High	Common	Good	Very Good			1	6
chestnut oak	Quercus prinus	NDH	High	51.7	346.9	6.7	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	7
southern red oak	Quercus falcata	WDL	Medium	55.1	338.6	6.2	Sm. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	8
pignut hickory	Carya glabra	WDL	Medium	66.3	276.1	4.7	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	9
mockernut hickory	Carya alba	WDL	Medium	64	261.0	4.1	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	10
water oak	Quercus nigra	WDH	High	37.1	183.9	5.0	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	11
shortleaf pine	Pinus echinata	WDH	High	43.8	173.7	4.0	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	12
sourwood	Oxydendrum arboreum	NDL	High	58.4	168.4	2.9	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	13
blackgum	Nyssa sylvatica	WDL	Medium	66.3	166.2	2.5	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	14
post oak	Quercus stellata	WDH	High	49.4	144.4	2.9	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	15
eastern redcedar	Juniperus virginiana	WDH	Medium	32.6	144.0	5.3	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	16
winged elm	Ulmus alata	WDL	Medium	43.8	130.2	3.3	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	17
black cherry	Prunus serotina	WDL	Medium	65.2	111.2	1.9	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	18
scarlet oak	Quercus coccinea	WDL	Medium	38.2	100.9	2.6	No change	Sm. dec.	Medium	Common	Fair	Poor			1	19
bigleaf magnolia	Magnolia macrophylla	NSL	Low	30.3	94.2	3.1	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	20
shagbark hickory	Carya ovata	WSL	Medium	16.9	84.7	5.0	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	21
green ash	Fraxinus pennsylvanica	WSH	Low	24.7	80.6	3.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	22
American beech	Fagus grandifolia	WDH	High	40.4	76.9	1.9	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	23
black oak	Quercus velutina	WDH	High	48.3	73.8	1.7	Lg. inc.	Sm. inc.	Medium	Common	Very Good	Good			1	24
flowering dogwood	Cornus florida	WDL	Medium	46.1	70.4	1.5	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	25
northern red oak	Quercus rubra	WDH	Medium	41.6	69.3	2.1	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	26
willow oak	Quercus phellos	NSL	Low	6.7	64.2	9.5	No change	No change	Medium	Common	Fair	Fair			1	27
eastern hemlock	Tsuga canadensis	NSH	High	7.9	56.3	7.2	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor			0	28
florida maple	Acer barbatum	NSL	Low	21.3	52.4	2.5	Sm. dec.	No change	High	Common	Fair	Good			1	29
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	27	46.0	1.7	Lg. inc.	Sm. inc.	High	Rare	Good	Good			1	30
hackberry	Celtis occidentalis	WDH	Medium	13.5	41.6	4.4	No change	Sm. inc.	High	Rare	Fair	Good			1	31
American hornbeam; musclev	Carpinus caroliniana	WSL	Low	25.8	39.5	1.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	32
common persimmon	Diospyros virginiana	NSL	Low	24.7	35.8	1.5	Sm. inc.	Lg. inc.	High	Rare	Good	Good			1	33
sugarberry	Celtis laevigata	NDH	Medium	18	33.1	2.3	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	34
chinkapin oak	Quercus muehlenbergii	NSL	Medium	7.9	31.0	3.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	35
white ash	Fraxinus americana	WDL	Medium	14.6	30.3	2.1	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair			1	36
boxelder	Acer negundo	WSH	Low	14.6	30.1	3.0	No change	Sm. inc.	High	Rare	Fair	Good			1	37
bitternut hickory	Carya cordiformis	WSL	Low	4.5	27.3	6.1	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	38
sassafras	Sassafras albidum	WSL	Low	28.1	26.8	1.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	39
American elm	Ulmus americana	WDH	Medium	19.1	26.3	1.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	40
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	11.2	23.1	2.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	41
black walnut	Juglans nigra	WDH	Low	10.1	22.6	3.7	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	42
sycamore	Platanus occidentalis	NSL	Low	5.6	19.2	3.4	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	43
black willow	Salix nigra	NSH	Low	9	16.2	3.6	No change	Sm. inc.	Low	Rare	Very Poor	Poor			1	44
eastern redbud	Cercis canadensis	NSL	Low	16.9	14.3	1.1	Lg. dec.	No change	Medium	Rare	Very Poor	Poor			1	45
sugar maple	Acer saccharum	WDH	High	3.4	13.3	4.0	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	46
Nuttall oak	Quercus texana	NSH	Medium	1.1	12.0	10.7	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	47

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Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
red mulberry	Morus rubra	NSL	Low	10.1	11.0	1.1	No change	Lg. inc.	Medium	Rare	Poor	Good			1	48
black locust	Robinia pseudoacacia	NDH	Low	3.4	10.6	3.1	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	49
paulownia	Paulownia tomentosa	NSL	FIA	3.4	10.0	3.0	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	50
blackjack oak	Quercus marilandica	NSL	Medium	5.6	10.0	1.8	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	51
sand hickory	Carya pallida	NSL	FIA	1.1	9.1	8.1	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	52
honeylocust	Gleditsia triacanthos	NSH	Low	1.1	8.2	7.3	No change	Sm. inc.	High	Rare	Fair	Good		Infill ++	2	53
serviceberry	Amelanchier spp.	NSL	Low	10.1	7.8	0.8	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	54
cucumbertree	Magnolia acuminata	NSL	Low	5.6	6.7	1.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	55
slippery elm	Ulmus rubra	WSL	Low	6.7	6.6	1.0	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	56
American basswood	Tilia americana	WSL	Medium	3.4	5.7	1.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	57
pin cherry	Prunus pensylvanica	NSL	Low	1.1	5.3	4.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	58
yellow buckeye	Aesculus flava	NSL	Low	2.2	4.9	2.2	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	59
shellbark hickory	Carya laciniosa	NSL	Low	1.1	4.5	4.0	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	60
river birch	Betula nigra	NSL	Low	2.2	4.3	1.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good		Infill ++	1	61
silver maple	Acer saccharinum	NSH	Low	5.6	2.6	2.6	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	62
American holly	Ilex opaca	NSL	Medium	2.2	2.6	1.2	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	2	63
Shumard oak	Quercus shumardii	NSL	Low	2.2	2.6	1.2	No change	No change	High	Rare	Fair	Fair		Infill +	2	64
laurel oak	Quercus laurifolia	NDH	Medium	3.4	2.3	0.7	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	65
pecan	Carya illinoensis	NSH	Low	1.1	2.2	1.9	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	66
sweet birch	Betula lenta	NDH	High	1.1	1.0	0.9	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	67
black hickory	Carya texana	NDL	High	1.1	1.0	0.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	68
overcup oak	Quercus lyrata	NSL	Medium	1.1	0.8	0.7	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	69
butternut	Juglans cinerea	NSLX	FIA	1.1	0.6	0.6	Unknown	Unknown	Low	Rare	FIA Only	FIA Only			0	70
wild plum	Prunus americana	NSLX	FIA	4.5	0.2	0.8	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	71
ashe juniper	Juniperus ashei	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	72
slash pine	Pinus elliottii	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	73
spruce pine	Pinus glabra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	74
longleaf pine	Pinus palustris	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	75
Table Mountain pine	Pinus pungens	NSL	Low	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat			3	76
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	77
pawpaw	Asimina triloba	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	78
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	79
black ash	Fraxinus nigra	WSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	80
loblolly-bay	Gordonia lasianthus	NSH	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	81
silverbell	Halesia spp.	NSL	Low	0	0	0	New Habitat	Unknown	Medium	Absent	New Habitat	Unknown			3	82
Osage-orange	Maclura pomifera	NDH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	83
southern magnolia	Magnolia grandiflora	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	84
sweetbay	Magnolia virginiana	NSL	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	85
swamp tupelo	Nyssa biflora	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Likely +	Likely +	3	86
turkey oak	Quercus laevis	NSH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	87
swamp chestnut oak	Quercus michauxii	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	88
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	89
bluejack oak	Quercus incana	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	90
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate +	Migrate ++	3	91