

Current and Potential Future Habitat, Capability, and Migration

	sq. km	sq. mi	FIA Plots
Area of Region	24,759	9,559.4	572

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	15	19	Increase	17	18	Very Good	7	7
Hickory	4			Medium	38	49	No Change	10	13	Good	10	11
Maple	2	Abundant	4	Low	29	14	Decrease	24	20	Fair	6	8
Oak	12	Common	15	FIA	3		New	11	12	Poor	13	12
Pine	5	Rare	35				Unknown	23	22	Very Poor	13	11
Other	27	Absent	29							FIA Only	3	3
	<b>54</b>		<b>83</b>		<b>85</b>	<b>82</b>		<b>85</b>	<b>85</b>	Unknown	20	19
											<b>72</b>	<b>71</b>

Potential Changes in Climate Variables

Temperature (°F)

Scenario	2009	2039	2069	2099	
Annual	60.4	61.5	62.6	62.6	
Average	60.4	61.6	63.1	64.7	
GFDL45	60.4	62.3	63.5	64.1	
GFDL85	60.4	62.2	64.3	66.8	
HAD45	60.4	61.6	63.3	64.2	
HAD85	60.4	62.1	63.9	66.4	
Growing Season	67.3	68.2	69.1	69.2	
May—Sep	67.3	68.2	69.8	71.6	
GFDL45	67.3	69.1	70.3	71.0	
GFDL85	67.3	69.1	71.1	73.8	
HAD45	67.3	69.0	70.4	71.3	
HAD85	67.3	69.3	71.6	74.0	
Coldest Month	49.4	51.0	51.6	51.4	
Average	49.4	51.3	51.6	52.0	
GFDL45	49.4	51.0	51.9	52.6	
GFDL85	49.4	49.2	50.2	50.6	
HAD45	49.4	49.8	50.3	51.7	
HAD85	49.4	49.8	50.3	51.7	
Warmest Month	69.0	70.0	70.5	70.6	
Average	69.0	70.0	71.0	72.0	
GFDL45	69.0	70.7	71.3	71.8	
GFDL85	69.0	70.7	71.8	73.3	
HAD45	69.0	70.9	71.5	72.0	
HAD85	69.0	71.0	72.4	73.3	

Precipitation (in)

Scenario	2009	2039	2069	2099	
Annual	37.7	40.1	41.0	41.8	
Total	37.7	39.6	40.1	40.1	
GFDL45	37.7	44.2	45.2	46.7	
GFDL85	37.7	41.0	47.3	45.3	
HAD45	37.7	36.5	35.7	37.8	
HAD85	37.7	35.3	35.2	33.7	
Growing Season	22.5	24.1	23.8	24.5	
May—Sep	22.5	23.6	24.1	23.1	
GFDL45	22.5	26.6	26.9	27.2	
GFDL85	22.5	25.2	28.5	27.5	
HAD45	22.5	21.9	21.1	20.4	
HAD85	22.5	20.4	18.5	17.6	

**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
slash pine	Pinus elliottii	NDH	High	67.3	2631.7	29.8	No change	No change	Medium	Abundant	Good	Good			1	1
sand pine	Pinus clausa	NDH	High	17	562.9	34.2	No change	No change	Low	Abundant	Fair	Fair			0	2
longleaf pine	Pinus palustris	NSH	Medium	34.1	546.5	16.1	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	3
live oak	Quercus virginiana	NDH	High	51.1	509.7	10.0	Lg. inc.	Lg. inc.	Medium	Abundant	Very Good	Very Good			1	4
cabbage palmetto	Sabal palmetto	NDH	Medium	34.6	492.5	16.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			0	5
laurel oak	Quercus laurifolia	NDH	Medium	56.4	479.5	7.9	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	6
red maple	Acer rubrum	WDH	High	37.1	449.2	9.4	No change	No change	High	Common	Good	Good			1	7
pond cypress	Taxodium ascendens	NSH	Medium	25.3	435.1	14.4	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	8
loblolly pine	Pinus taeda	WDH	High	24.4	351.9	11.8	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	9
sweetgum	Liquidambar styraciflua	WDH	High	33.7	245.3	5.9	No change	No change	Medium	Common	Fair	Fair			1	10
loblolly-bay	Gordonia lasianthus	NSH	Medium	30.2	239.7	6.1	No change	No change	Medium	Common	Fair	Fair			1	11
turkey oak	Quercus laevis	NSH	Medium	15.9	221.6	10.4	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	12
swamp tupelo	Nyssa biflora	NDH	Medium	33.5	207.3	5.0	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	13
water oak	Quercus nigra	WDH	High	26.5	207.1	6.9	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	14
pond pine	Pinus serotina	NSH	Medium	11.9	116.3	9.2	No change	Sm. inc.	Low	Common	Poor	Fair			1	15
sweetbay	Magnolia virginiana	NSL	Medium	26.1	107.5	3.6	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	16
redbay	Persea borbonia	NSL	Low	34.1	89.6	2.2	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	17
bald cypress	Taxodium distichum	NSH	Medium	12	74.7	5.9	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	18
pumpkin ash	Fraxinus profunda	NSH	FIA	4.8	67.8	10.0	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	19
black cherry	Prunus serotina	WDL	Medium	12.3	52.6	3.5	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	20
green ash	Fraxinus pennsylvanica	WSH	Low	4.5	42.8	6.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	21
pignut hickory	Carya glabra	WDL	Medium	6.8	40.4	5.3	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	22
American elm	Ulmus americana	WDH	Medium	19.2	38.2	2.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	23
bluejack oak	Quercus incana	NSL	Low	4	25.6	4.3	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	1	24
American hornbeam; muscley	Carpinus caroliniana	WSL	Low	7.9	25.6	2.1	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	1	25
southern magnolia	Magnolia grandiflora	NSL	Low	7.3	22.9	2.5	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	26
blackgum	Nyssa sylvatica	WDL	Medium	6.9	20.4	2.1	Sm. inc.	Sm. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	27
sugarberry	Celtis laevigata	NDH	Medium	3.8	16.2	3.4	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good		Infill ++	2	28
eastern redcedar	Juniperus virginiana	WDH	Medium	4.1	12.0	4.3	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	29
Carolina ash	Fraxinus stellata	NSL	FIA	3.2	10.4	3.2	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	30
common persimmon	Diospyros virginiana	NSL	Low	4.1	8.5	1.4	Sm. dec.	Lg. dec.	High	Rare	Poor	Poor			1	31
mockernut hickory	Carya alba	WDL	Medium	1	6.6	3.3	Sm. dec.	No change	High	Rare	Poor	Fair		Infill +	2	32
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	0.6	5.1	2.4	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	33
sand hickory	Carya pallida	NSL	FIA	0.8	5.0	6.1	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	34
flowering dogwood	Cornus florida	WDL	Medium	1.8	4.2	1.9	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	35
blackjack oak	Quercus marilandica	NSL	Medium	0.9	4.2	1.0	Lg. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	2	36
post oak	Quercus stellata	WDH	High	1.4	3.8	2.1	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	37
swamp chestnut oak	Quercus michauxii	NSL	Low	1.7	3.4	2.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	38
American holly	Ilex opaca	NSL	Medium	4.2	3.3	0.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	39
southern red oak	Quercus falcata	WDL	Medium	0.9	2.4	1.8	Sm. inc.	Lg. inc.	High	Rare	Good	Good			2	40
water hickory	Carya aquatica	NSL	Medium	1.2	2.3	1.9	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	41
yellow-poplar	Liriodendron tulipifera	WDH	High	0.9	2.0	1.3	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	42
hackberry	Celtis occidentalis	WDH	Medium	0.4	2.0	1.7	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	43
American basswood	Tilia americana	WSL	Medium	0.3	2.0	3.3	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	44
overcup oak	Quercus lyrata	NSL	Medium	0.4	1.9	4.8	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	45
white ash	Fraxinus americana	WDL	Medium	1.3	1.8	2.4	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	46
water tupelo	Nyssa aquatica	NSH	Medium	0.4	1.8	4.5	No change	No change	Low	Rare	Very Poor	Very 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	
florida maple	Acer barbatum	NSL	Low	0.4	1.5	3.7	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor				0	48
winged elm	Ulmus alata	WDL	Medium	0.8	1.3	1.6	No change	No change	Medium	Rare	Poor	Poor		Infill +		2	49
Shumard oak	Quercus shumardii	NSL	Low	0	0.7	0.2	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor				0	50
red mulberry	Morus rubra	NSL	Low	0.4	0.4	1.0	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost				0	51
sycamore	Platanus occidentalis	NSL	Low	0	0.4	0.1	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost				0	52
white oak	Quercus alba	WDH	Medium	0.4	0.4	0.9	Sm. dec.	No change	High	Rare	Poor	Fair		Infill +		2	53
pawpaw	Asimina triloba	NSL	Low	0.4	0.1	0.3	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor				0	54
balsam fir	Abies balsamea	NDH	High	0	0	0	Unknown	Unknown	Low	Modeled	Unknown	Unknown				0	55
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate +	Migrate +		3	56
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat				0	57
serviceberry	Amelanchier spp.	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat				3	58
sweet birch	Betula lenta	NDH	High	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown				0	59
river birch	Betula nigra	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +		3	60
gray birch	Betula populifolia	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	61
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat				0	62
pecan	Carya illinoensis	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +		3	63
shellbark hickory	Carya laciniosa	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	64
shagbark hickory	Carya ovata	WSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	65
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat				3	66
eastern redbud	Cercis canadensis	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	67
American beech	Fagus grandifolia	WDH	High	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown				0	68
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown				0	69
silverbell	Halesia spp.	NSL	Low	0	0	0	New Habitat	Unknown	Medium	Absent	New Habitat	Unknown				0	70
cucumbertree	Magnolia acuminata	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	71
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	72
sourwood	Oxydendrum arboreum	NDL	High	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown				0	73
water elm	Planera aquatica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	74
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	75
scarlet oak	Quercus coccinea	WDL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	76
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat				3	77
bur oak	Quercus macrocarpa	NDH	Medium	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown				0	78
chinkapin oak	Quercus muehlenbergii	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown				0	79
Nuttall oak	Quercus texana	NSH	Medium	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown				0	80
willow oak	Quercus phellos	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +		3	81
black locust	Robinia pseudoacacia	NDH	Low	0	0	0	New Habitat	Unknown	Medium	Absent	New Habitat	Unknown				3	82
black willow	Salix nigra	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate +		3	83
American mountain-ash	Sorbus americana	NSL	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat				0	84
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat		Migrate ++		3	85