

	sq. km	sq. mi	FIA Plots
Area of Region	15,704	6,063.4	359

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		
		High	Low	Reliability	Adaptability	Scenario RCP45	Scenario RCP85	Scenario RCP45	Scenario RCP85	SHIFT RCP45	SHIFT RCP85	
Ash	4											
Hickory	6											
Maple	3	Abundant	4	High	16	22	Increase	28	32	Very Good	8	11
Oak	16	Common	25	Medium	34	52	No Change	14	15	Good	18	18
Pine	6	Rare	47	Low	32	11	Decrease	26	21	Fair	12	11
Other	41	Absent	13	FIA	8		New	5	6	Poor	18	20
	76		89		90	85	Unknown	17	16	Very Poor	11	7
								90	90	FIA Only	5	5
										Unknown	9	8
											19	28
											81	80

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099
Annual Average	CCSM45	53.1	54.4	55.8	55.9
	CCSM85	53.1	54.6	56.3	58.3
	GFDL45	53.1	55.0	56.7	57.3
	GFDL85	53.1	55.1	57.5	60.1
	HAD45	53.1	54.5	56.6	57.6
HAD85	53.1	54.8	57.3	60.2	
Growing Season May—Sep	CCSM45	63.2	64.4	65.6	66.0
	CCSM85	63.2	64.5	66.3	68.7
	GFDL45	63.2	65.2	67.0	68.0
	GFDL85	63.2	65.5	68.0	70.9
	HAD45	63.2	65.0	66.8	68.0
HAD85	63.2	65.0	68.2	71.2	
Coldest Month Average	CCSM45	38.0	39.6	40.2	40.3
	CCSM85	38.0	39.7	40.3	41.3
	GFDL45	38.0	40.4	40.7	41.2
	GFDL85	38.0	39.6	40.2	41.0
	HAD45	38.0	38.4	39.6	40.0
HAD85	38.0	38.7	39.5	40.7	
Warmest Month Average	CCSM45	66.9	68.2	68.9	68.9
	CCSM85	66.9	68.3	69.5	70.5
	GFDL45	66.9	68.7	69.4	70.2
	GFDL85	66.9	69.2	70.4	72.1
	HAD45	66.9	68.9	70.0	70.5
HAD85	66.9	69.2	71.2	73.0	

Precipitation (in)

	Scenario	2009	2039	2069	2099
Annual Total	CCSM45	35.2	39.3	40.5	41.3
	CCSM85	35.2	39.4	41.2	46.2
	GFDL45	35.2	38.0	40.9	43.1
	GFDL85	35.2	37.8	42.0	42.4
	HAD45	35.2	37.5	37.9	37.2
HAD85	35.2	39.6	36.5	35.7	
Growing Season May—Sep	CCSM45	17.5	21.2	22.0	22.6
	CCSM85	17.5	20.2	21.8	24.5
	GFDL45	17.5	19.4	21.3	22.6
	GFDL85	17.5	18.9	22.4	22.9
	HAD45	17.5	18.6	18.3	17.6
HAD85	17.5	20.1	17.6	15.9	

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-DGP30 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	84.9	3295.7	28.4	No change	No change	Medium	Abundant	Good	Good			1	1
sweetgum	Liquidambar styraciflua	WDH	High	87	1425.0	13.1	No change	No change	Medium	Abundant	Good	Good			1	2
red maple	Acer rubrum	WDH	High	86.2	1196.6	10.6	Sm. dec.	Sm. dec.	High	Abundant	Good	Good			1	3
yellow-poplar	Liriodendron tulipifera	WDH	High	51.3	569.0	7.5	Lg. dec.	Lg. dec.	High	Abundant	Good	Good			1	4
water oak	Quercus nigra	WDH	High	54	344.2	5.2	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	5
white oak	Quercus alba	WDH	Medium	43.8	305.2	5.9	No change	No change	High	Common	Good	Good			1	6
swamp tupelo	Nyssa biflora	NDH	Medium	34.4	254.5	5.4	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	7
pond pine	Pinus serotina	NSH	Medium	12.6	205.1	10.0	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	0	8
American holly	Ilex opaca	NSL	Medium	46.7	177.5	3.3	No change	No change	Medium	Common	Fair	Fair			1	9
green ash	Fraxinus pennsylvanica	WSH	Low	23.8	155.2	5.0	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	10
river birch	Betula nigra	NSL	Low	13.2	135.6	8.8	Sm. dec.	Sm. inc.	Medium	Common	Poor	Good			1	11
sweetbay	Magnolia virginiana	NSL	Medium	31.9	111.3	2.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	12
willow oak	Quercus phellos	NSL	Low	25	109.9	3.9	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	13
southern red oak	Quercus falcata	WDL	Medium	34.8	108.9	2.4	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	14
American hornbeam; muscley	Carpinus caroliniana	WSL	Low	26.7	100.0	3.1	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	15
blackgum	Nyssa sylvatica	WDL	Medium	41.8	93.4	1.9	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	16
Virginia pine	Pinus virginiana	NDH	High	11.2	89.6	6.0	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	17
mockernut hickory	Carya alba	WDL	Medium	28.3	85.9	2.6	Lg. inc.	Lg. inc.	High	Common	Very Good	Very Good			1	18
sourwood	Oxydendrum arboreum	NDL	High	31.4	76.8	2.3	Lg. dec.	Lg. dec.	High	Common	Fair	Fair			1	19
redbay	Persea borbonia	NSL	Low	22.4	73.0	2.0	No change	Sm. inc.	High	Common	Good	Very Good			1	20
American elm	Ulmus americana	WDH	Medium	23.9	72.8	2.6	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	21
pignut hickory	Carya glabra	WDL	Medium	19.4	71.0	3.7	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	22
black cherry	Prunus serotina	WDL	Medium	31.1	68.8	1.8	Lg. inc.	Lg. inc.	Low	Common	Good	Good			1	23
loblolly-bay	Gordonia lasianthus	NSH	Medium	10.2	66.7	4.0	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	0	24
bald cypress	Taxodium distichum	NSH	Medium	8.5	64.7	6.1	No change	Sm. inc.	Medium	Common	Fair	Good	Infill +	Infill ++	1	25
shortleaf pine	Pinus echinata	WDH	High	13.7	64.4	3.6	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	26
laurel oak	Quercus laurifolia	NDH	Medium	13.7	64.0	3.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good			1	27
black willow	Salix nigra	NSH	Low	7.7	59.7	5.8	No change	No change	Low	Common	Poor	Poor			0	28
eastern redcedar	Juniperus virginiana	WDH	Medium	13.3	50.6	3.1	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	1	29
northern red oak	Quercus rubra	WDH	Medium	15.3	47.9	2.5	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor	Infill +	Infill +	1	30
flowering dogwood	Cornus florida	WDL	Medium	24.1	43.8	1.4	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair			1	31
slash pine	Pinus elliotii	NDH	High	0.8	42.0	18.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	32
post oak	Quercus stellata	WDH	High	16.9	36.8	2.1	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	1	33
swamp chestnut oak	Quercus michauxii	NSL	Low	11.1	35.4	2.5	Sm. dec.	No change	Medium	Rare	Very Poor	Poor			1	34
scarlet oak	Quercus coccinea	WDL	Medium	11.4	34.1	3.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	35
slippery elm	Ulmus rubra	WSL	Low	8.4	33.3	2.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	36
black oak	Quercus velutina	WDH	High	18.7	30.6	1.6	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	1	37
common persimmon	Diospyros virginiana	NSL	Low	11.1	28.1	1.7	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			1	38
winged elm	Ulmus alata	WDL	Medium	10.9	27.2	2.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			1	39
longleaf pine	Pinus palustris	NSH	Medium	7.5	25.7	2.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	1	40
pond cypress	Taxodium ascendens	NSH	Medium	2.1	23.1	7.8	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2	41
boxelder	Acer negundo	WSH	Low	1.6	20.8	2.4	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			2	42
American beech	Fagus grandifolia	WDH	High	8.6	17.2	1.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	43
pumpkin ash	Fraxinus profunda	NSH	FIA	4.8	16.9	3.8	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	44
water tupelo	Nyssa aquatica	NSH	Medium	3.4	15.9	5.0	Sm. inc.	Sm. inc.	Low	Rare	Poor	Poor	Infill +	Infill +	2	45
Carolina ash	Fraxinus caroliniana	NSL	FIA	2.4	14.5	5.2	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	46
sycamore	Platanus occidentalis	NSL	Low	3	13.4	1.5	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	47

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
Shumard oak	Quercus shumardii	NSL	Low	4.8	11.2	2.1	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor		Infill +	2	48
turkey oak	Quercus laevis	NSH	Medium	2	10.2	5.3	No change	Sm. dec.	High	Rare	Fair	Poor	Infill +		2	49
white ash	Fraxinus americana	WDL	Medium	5.1	10.1	1.7	No change	No change	Low	Rare	Very Poor	Very Poor			2	50
ailanthus	Ailanthus altissima	NSL	FIA	0.9	8.2	2.8	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	51
cherrybark oak; swamp red o.	Quercus pagoda	NSL	Medium	3.6	7.7	1.9	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good	Infill +	Infill ++	2	52
florida maple	Acer barbatum	NSL	Low	2	5.9	2.9	Sm. dec.	No change	High	Rare	Poor	Fair		Infill +	2	53
sassafras	Sassafras albidum	WSL	Low	6.3	5.0	0.5	No change	Sm. inc.	Medium	Rare	Poor	Fair	Infill +	Infill +	1	54
blackjack oak	Quercus marilandica	NSL	Medium	3.9	5.0	1.3	Sm. inc.	Lg. inc.	High	Rare	Good	Good		Infill ++	2	55
shagbark hickory	Carya ovata	WSL	Medium	1.6	4.8	1.5	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			2	56
red mulberry	Morus rubra	NSL	Low	3.4	4.7	1.1	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	57
water hickory	Carya aquatica	NSL	Medium	0.7	4.5	7.1	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	58
paulownia	Paulownia tomentosa	NSL	FIA	1.4	4.2	3.3	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	59
eastern redbud	Cercis canadensis	NSL	Low	4.9	2.7	0.8	Lg. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	60
white mulberry	Morus alba	NSL	FIA	0.2	2.7	1.1	Unknown	Unknown	NA	Rare	NNIS	NNIS			0	61
chestnut oak	Quercus prinus	NDH	High	0.6	2.7	0.6	Lg. dec.	Sm. dec.	High	Rare	Poor	Poor			0	62
black walnut	Juglans nigra	WDH	Low	1.7	2.3	1.1	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	63
hackberry	Celtis occidentalis	WDH	Medium	0.6	2.1	2.7	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	64
honeylocust	Gleditsia triacanthos	NSH	Low	0.7	1.9	2.9	No change	No change	High	Rare	Fair	Fair		Infill +	2	65
eastern cottonwood	Populus deltoides	NSH	Low	0.7	1.9	2.9	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	66
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	4.1	1.5	0.9	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	67
overcup oak	Quercus lyrata	NSL	Medium	2.1	1.4	0.7	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	68
sugarberry	Celtis laevigata	NDH	Medium	0.7	0.6	0.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	69
northern catalpa	Catalpa speciosa	NSHX	FIA	0.7	0.4	0.6	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	70
sweet birch	Betula lenta	NDH	High	0.7	0.2	0.4	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	71
bitternut hickory	Carya cordiformis	WSL	Low	0.7	0.2	0.3	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	72
American chestnut	Castanea dentata	NSLX	FIA	0.7	0.2	0.4	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	73
wild plum	Prunus americana	NSLX	FIA	0.7	0.2	0.3	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	74
serviceberry	Amelanchier spp.	NSL	Low	0.3	0.1	0.1	No change	No change	Medium	Rare	Poor	Poor			0	75
pecan	Carya illinoensis	NSH	Low	5.1	0.1	0.2	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair		Infill +	2	76
pawpaw	Asimina triloba	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	77
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			0	78
shellbark hickory	Carya laciniosa	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	79
black hickory	Carya texana	NDL	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	80
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	81
silverbell	Halesia spp.	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	82
cucumbertree	Magnolia acuminata	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	83
southern magnolia	Magnolia grandiflora	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	84
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	85
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	86
live oak	Quercus virginiana	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	87
bluejack oak	Quercus incana	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat		Migrate +	3	88
American basswood	Tilia americana	WSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	89
cedar elm	Ulmus crassifolia	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			0	90