

	sq. km	sq. mi	FIA Plots
Area of Region	19,763	7,630.7	238

**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	7	10	Increase	5	6	Very Good	1	1
Hickory	3			Medium	13	23	No Change	7	7	Good	4	5
Maple	0	Abundant	3	Low	16	5	Decrease	19	18	Fair	5	4
Oak	9	Common	4	FIA	3		New	2	2	Poor	8	8
Pine	0	Rare	27				Unknown	6	6	Very Poor	13	13
Other	19	Absent	5							FIA Only	3	3
	<b>34</b>		<b>39</b>		<b>39</b>	<b>38</b>		<b>39</b>	<b>39</b>	Unknown	3	3
											<b>8</b>	<b>8</b>

**Potential Changes in Climate Variables**

**Temperature (°F)**

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	57.2	58.4	59.4	59.9	
	CCSM85	57.2	58.7	60.2	62.0	
	GFDL45	57.2	60.0	60.4	61.6	
	GFDL85	57.2	59.3	61.6	64.3	
	HAD45	57.2	58.8	60.7	61.3	
HAD85	57.2	59.2	61.8	64.1		
Growing Season (May—Sep)	CCSM45	67.3	68.4	69.2	69.8	
	CCSM85	67.3	68.9	70.3	72.5	
	GFDL45	67.3	70.7	71.0	73.0	
	GFDL85	67.3	70.1	72.8	76.2	
	HAD45	67.3	68.9	70.4	70.9	
HAD85	67.3	69.3	72.2	74.2		
Coldest Month Average	CCSM45	41.8	43.5	44.0	44.3	
	CCSM85	41.8	43.5	44.2	45.2	
	GFDL45	41.8	44.4	44.4	44.5	
	GFDL85	41.8	42.6	43.4	43.7	
	HAD45	41.8	42.1	43.5	43.8	
HAD85	41.8	44.1	45.3	46.5		
Warmest Month Average	CCSM45	71.0	71.8	72.4	72.6	
	CCSM85	71.0	72.5	72.9	74.1	
	GFDL45	71.0	74.6	74.8	76.1	
	GFDL85	71.0	74.8	76.0	78.6	
	HAD45	71.0	72.7	73.4	73.6	
HAD85	71.0	73.2	74.7	75.4		

**Precipitation (in)**

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	24.1	24.5	25.3	23.7	
	CCSM85	24.1	23.8	26.3	25.2	
	GFDL45	24.1	23.9	27.8	22.6	
	GFDL85	24.1	23.4	24.9	23.4	
	HAD45	24.1	24.9	24.2	25.0	
HAD85	24.1	24.5	22.0	24.0		
Growing Season (May—Sep)	CCSM45	11.3	12.4	11.7	11.3	
	CCSM85	11.3	11.6	12.2	10.9	
	GFDL45	11.3	11.5	13.8	10.9	
	GFDL85	11.3	11.6	12.1	11.3	
	HAD45	11.3	11.3	11.0	11.8	
HAD85	11.3	11.1	9.6	10.7		

**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
ashe juniper	Juniperus ashei	NDH	High	58.2	1827.8	43.4	No change	No change	Medium	Abundant	Good	Good			0	1
live oak	Quercus virginiana	NDH	High	58.4	706.5	18.5	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	2
post oak	Quercus stellata	WDH	High	29.9	550.6	24.7	Sm. dec.	Sm. dec.	High	Abundant	Good	Good			1	3
cedar elm	Ulmus crassifolia	NDH	Medium	63.7	399.8	16.3	Sm. inc.	Sm. inc.	Low	Common	Fair	Fair			1	4
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	24.5	123.4	10.5	Sm. dec.	Lg. dec.	High	Common	Fair	Fair			1	5
blackjack oak	Quercus marilandica	NSL	Medium	19.3	58.4	6.0	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	1	6
hackberry	Celtis occidentalis	WDH	Medium	16.9	56.5	9.2	Sm. dec.	Sm. dec.	High	Common	Fair	Fair			1	7
sugarberry	Celtis laevigata	NDH	Medium	25.2	41.4	3.6	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair			1	8
red mulberry	Morus rubra	NSL	Low	1.7	32.7	10.3	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	9
pecan	Carya illinoensis	NSH	Low	12.5	32.5	8.0	Sm. inc.	Sm. inc.	Low	Rare	Poor	Poor			1	10
American elm	Ulmus americana	WDH	Medium	10	25.7	5.6	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	11
durand oak	Quercus sinuata var. sinuata	NSL	FIA	5.1	19.2	8.4	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	12
sycamore	Platanus occidentalis	NSL	Low	2.5	18.5	18.6	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	13
green ash	Fraxinus pennsylvanica	WSH	Low	9.7	17.8	7.6	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	14
water oak	Quercus nigra	WDH	High	2.7	15.6	6.0	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	15
black walnut	Juglans nigra	WDH	Low	2.9	12.9	7.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	16
white ash	Fraxinus americana	WDL	Medium	0.5	10.3	7.1	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	17
eastern redcedar	Juniperus virginiana	WDH	Medium	7.3	10.0	6.0	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	18
black hickory	Carya texana	NDL	High	1.3	8.6	5.7	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	19
Texas ash	Fraxinus texensis	NDH	FIA	7.2	7.9	2.2	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	20
black willow	Salix nigra	NSH	Low	6.3	7.0	11.6	Sm. dec.	No change	Low	Rare	Very Poor	Very Poor			0	21
Shumard oak	Quercus shumardii	NSL	Low	4.6	6.4	2.2	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor	Infill +	Infill +	2	22
bur oak	Quercus macrocarpa	NDH	Medium	4.6	3.2	3.5	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	23
slippery elm	Ulmus rubra	WSL	Low	2.2	2.2	1.6	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	24
winged elm	Ulmus alata	WDL	Medium	0.2	1.9	0.3	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	25
black cherry	Prunus serotina	WDL	Medium	0.5	0.9	1.9	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	26
eastern cottonwood	Populus deltoides	NSH	Low	2	0.6	4.5	No change	Sm. dec.	Medium	Rare	Poor	Very Poor			0	27
black oak	Quercus velutina	WDH	High	1.9	0.3	1.9	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	28
bear oak; scrub oak	Quercus ilicifolia	NSLX	FIA	2	0.2	1.8	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	29
eastern redbud	Cercis canadensis	NSL	Low	2.2	0.2	0.4	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	30
Osage-orange	Maclura pomifera	NDH	Medium	1.9	0.1	1.1	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	31
flowering dogwood	Cornus florida	WDL	Medium	2	0.1	0.2	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	32
bitternut hickory	Carya cordiformis	WSL	Low	0.1	0.1	0.0	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	33
honeylocust	Gleditsia triacanthos	NSH	Low	1.9	0.1	0.4	No change	Sm. inc.	High	Rare	Fair	Good	Infill +		2	34
loblolly pine	Pinus taeda	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	35
boxelder	Acer negundo	WSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	36
shellbark hickory	Carya laciniosa	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	37
sassafras	Sassafras albidum	WSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	38
American basswood	Tilia americana	WSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	39