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One x One Degree
Climate Change Atlas Tree Species
Current and Potential Future Habitat, Capability, and Migration

	sq. km	sq. mi	FIA Plots
Area of Region	10,850	4,189.2	12

Species Information

The columns below provide breif 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 Reliability	Adaptability	Potential Change in Habitat Suitability	Scenario RCP45	Scenario RCP85	Capability to Cope or Persist	Scenario RCP45	Scenario RCP85	Migration Potential	SHIFT RCP45	SHIFT RCP85
Ash	2															
Hickory	0		Abundance			Reliability	Adaptability		RCP45	RCP85		RCP45	RCP85		RCP45	RCP85
Maple	0	Abundant	0		High	2	4	Increase	0	0	Very Good	0	0	Likely	1	1
Oak	1	Common	2		Medium	4	7	No Change	0	0	Good	0	0	Infill	1	0
Pine	0	Rare	6		Low	6	1	Decrease	7	7	Fair	0	0	Migrate	0	0
Other	5	Absent	5		FIA	1		New	1	1	Poor	2	2		2	1
	8		**13**			**13**	**12**	Unknown	5	5	Very Poor	5	5			
									13	**13**	FIA Only	1	1			
											Unknown	4	4			
												12	**12**			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	71.1	72.5	73.8	74.4	
Average	CCSM85	71.1	72.8	75.0	77.4	
	GFDL45	71.1	76.6	75.6	77.2	
	GFDL85	71.1	73.9	77.2	80.8	
	HAD45	71.1	73.1	75.5	76.4	
	HAD85	71.1	73.6	76.4	79.8	
Growing	CCSM45	82.7	84.0	85.0	85.7	
Season	CCSM85	82.7	84.4	86.4	89.0	
May—Sep	GFDL45	82.7	89.5	88.0	90.3	
	GFDL85	82.7	86.3	90.0	94.3	
	HAD45	82.7	84.8	86.8	87.5	
	HAD85	82.7	85.2	88.2	91.3	
Coldest	CCSM45	52.5	54.8	55.4	55.9	
Month	CCSM85	52.5	54.6	55.7	57.0	
Average	GFDL45	52.5	55.9	56.0	56.1	
	GFDL85	52.5	53.6	54.7	55.4	
	HAD45	52.5	53.3	54.6	55.2	
	HAD85	52.5	55.7	57.0	58.6	
Warmest	CCSM45	86.3	87.5	88.2	88.4	
Month	CCSM85	86.3	88.1	88.7	89.9	
Average	GFDL45	86.3	90.5	91.3	92.4	
	GFDL85	86.3	90.8	92.3	94.9	
	HAD45	86.3	88.7	89.4	90.0	
	HAD85	86.3	89.0	90.7	91.9	

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	25.5	28.3	29.0	26.1	
Total	CCSM85	25.5	28.6	28.5	27.3	
	GFDL45	25.5	23.9	28.2	20.8	
	GFDL85	25.5	23.9	24.2	22.6	
	HAD45	25.5	27.1	25.6	27.3	
	HAD85	25.5	26.7	26.3	27.3	
Growing	CCSM45	13.4	15.1	15.3	14.1	
Season	CCSM85	13.4	16.0	14.7	14.0	
May—Sep	GFDL45	13.4	12.4	16.0	11.1	
	GFDL85	13.4	13.0	13.0	12.2	
	HAD45	13.4	13.3	13.1	14.3	
	HAD85	13.4	14.1	13.3	13.8	

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
cedar elm	Ulmus crassifolia	NDH	Medium	14.6	112.0	22.5	Lg. dec.	Lg. dec.	Low	Common	Very Poor	Very Poor			0	1
live oak	Quercus virginiana	NDH	High	10.7	67.5	13.3	Lg. dec.	Lg. dec.	Medium	Common	Poor	Poor			0	2
sugarberry	Celtis laevigata	NDH	Medium	13.5	42.0	8.7	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	3
hackberry	Celtis occidentalis	WDH	Medium	1.4	14.1	8.9	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor	Infill +		1	4
green ash	Fraxinus pennsylvanica	WSH	Low	4.5	3.1	5.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	5
winged elm	Ulmus alata	WDL	Medium	3.7	2.5	11.0	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	6
red mulberry	Morus rubra	NSL	Low	1.7	1.0	2.0	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	7
Texas ash	Fraxinus texensis	NDH	FIA	0.8	0.6	0.5	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	8
eastern redbud	Cercis canadensis	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	9
common persimmon	Diospyros virginiana	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	10
black walnut	Juglans nigra	WDH	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	11
redbay	Persea borbonia	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	12
post oak	Quercus stellata	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	13

Sep 2022