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

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	sq. km	sq. mi	FIA Plots
Area of Region	10,949	4,227.4	9

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
Ash	0
Hickory	0
Maple	0
Oak	1
Pine	0
Other	2
3	

Abundance	
Abundant	0
Common	1
Rare	2
Absent	9
12	

Model	Reliability	Adaptability
High	2	2
Medium	6	9
Low	4	1
FIA	0	
	12	**12**

Potential Change in Habitat Suitability	Scenario RCP45	Scenario RCP85
Increase	0	0
No Change	2	2
Decrease	1	1
New	4	4
Unknown	5	5
	12	**12**

Capability to Cope or Persist	Scenario RCP45	Scenario RCP85
Very Good	0	0
Good	0	0
Fair	1	1
Poor	1	1
Very Poor	1	1
FIA Only	0	0
Unknown	5	5
	8	**8**

Migration Potential	SHIFT RCP45	SHIFT RCP85
Likely	0	0
Infill	2	2
Migrate	1	1
	3	**3**

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	72.4	73.7	75.3	75.8	
Average	CCSM85	72.4	74.1	76.3	78.8	
	GFDL45	72.4	77.5	76.9	78.4	
	GFDL85	72.4	75.1	78.6	82.1	
	HAD45	72.4	74.4	76.7	77.7	
	HAD85	72.4	74.9	77.5	80.9	
Growing	CCSM45	83.2	84.5	85.7	86.2	
Season	CCSM85	83.2	84.9	86.9	89.5	
May—Sep	GFDL45	83.2	89.4	88.6	90.6	
	GFDL85	83.2	86.7	90.4	94.6	
	HAD45	83.2	85.2	87.2	88.0	
	HAD85	83.2	85.6	88.4	91.6	
Coldest	CCSM45	54.5	56.7	57.4	57.9	
Month	CCSM85	54.5	56.6	57.8	59.2	
Average	GFDL45	54.5	57.7	58.0	58.1	
	GFDL85	54.5	55.9	57.0	57.9	
	HAD45	54.5	55.6	56.9	57.6	
	HAD85	54.5	57.9	59.1	60.8	
Warmest	CCSM45	86.4	87.7	88.3	88.6	
Month	CCSM85	86.4	88.3	89.0	90.1	
Average	GFDL45	86.4	90.3	91.2	92.1	
	GFDL85	86.4	90.5	92.0	94.5	
	HAD45	86.4	88.6	89.4	90.1	
	HAD85	86.4	88.9	90.5	91.9	

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	23.2	26.3	25.8	24.0	
Total	CCSM85	23.2	25.7	26.0	24.1	
	GFDL45	23.2	22.1	25.4	18.6	
	GFDL85	23.2	22.2	21.5	20.1	
	HAD45	23.2	25.0	23.5	25.6	
	HAD85	23.2	25.1	25.9	25.5	
Growing	CCSM45	13.1	14.6	14.4	13.8	
Season	CCSM85	13.1	15.4	14.9	13.5	
May—Sep	GFDL45	13.1	12.5	15.6	10.7	
	GFDL85	13.1	13.0	12.4	11.7	
	HAD45	13.1	13.0	12.3	14.0	
	HAD85	13.1	14.5	13.7	13.3	

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
live oak	Quercus virginiana	NDH	High	5.5	154.3	54.0	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	1
sugarberry	Celtis laevigata	NDH	Medium	7.3	32.7	20.2	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	1	2
cedar elm	Ulmus crassifolia	NDH	Medium	0.9	12.7	13.9	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	3
ashe juniper	Juniperus ashei	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	4
pond cypress	Taxodium ascendens	NSH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	5
serviceberry	Amelanchier spp.	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	6
eastern redbud	Cercis canadensis	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	7
blackjack oak	Quercus marilandica	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	8
Shumard oak	Quercus shumardii	NSL	Low	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	9
black locust	Robinia pseudoacacia	NDH	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	10
cabbage palmetto	Sabal palmetto	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	11
American basswood	Tilia americana	WSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	12