S26 E81

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	10,054	3,882.0	177

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	1		Abundant	3		High	5 / 11	Increase	8	9	Very Good	2	3	Likely	1	1
Oak	3		Common	5		Medium	17 / 21	No Change	6	5	Good	6	5	Infill	4	6
Pine	2		Rare	11		Low	11 / 1	Decrease	4	4	Fair	3	4	Migrate	0	1
Other	11		Absent	7		FIA	1	New	2	3	Poor	4	3		**5**	**8**
	19			**26**			**34 / 33**	Unknown	14	13	Very Poor	2	1			
									34	**34**	FIA Only	1	1			
											Unknown	13	12			
												31	**29**			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	74.0	75.3	76.6	76.6	
Average	CCSM85	74.0	75.3	77.4	79.5	
	GFDL45	74.0	77.3	77.9	78.8	
	GFDL85	74.0	76.2	78.9	82.0	
	HAD45	74.0	75.3	77.3	78.4	
	HAD85	74.0	75.9	78.0	81.1	
Growing	CCSM45	81.0	82.2	83.3	83.4	
Season	CCSM85	81.0	82.2	84.3	86.6	
May—Sep	GFDL45	81.0	84.4	84.9	86.0	
	GFDL85	81.0	83.2	86.0	89.2	
	HAD45	81.0	82.8	84.3	85.4	
	HAD85	81.0	83.1	85.5	88.3	
Coldest	CCSM45	62.3	64.0	64.8	64.7	
Month	CCSM85	62.3	63.4	64.3	65.8	
Average	GFDL45	62.3	64.7	65.1	65.6	
	GFDL85	62.3	64.6	65.6	66.8	
	HAD45	62.3	62.6	63.8	64.3	
	HAD85	62.3	63.2	63.9	65.8	
Warmest	CCSM45	82.7	84.0	84.6	84.5	
Month	CCSM85	82.7	84.0	85.2	86.6	
Average	GFDL45	82.7	84.9	85.9	86.4	
	GFDL85	82.7	85.0	86.6	88.4	
	HAD45	82.7	84.5	85.2	85.7	
	HAD85	82.7	84.6	85.9	87.3	

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	52.5	53.7	52.2	56.7	
Total	CCSM85	52.5	54.1	52.2	48.7	
	GFDL45	52.5	59.4	60.3	61.3	
	GFDL85	52.5	56.5	63.7	57.0	
	HAD45	52.5	55.3	55.0	54.3	
	HAD85	52.5	49.9	52.4	49.7	
Growing	CCSM45	36.7	37.8	36.4	39.4	
Season	CCSM85	36.7	37.9	37.2	33.2	
May—Sep	GFDL45	36.7	39.9	39.5	37.9	
	GFDL85	36.7	38.5	40.7	35.5	
	HAD45	36.7	37.7	37.7	34.6	
	HAD85	36.7	34.4	33.6	31.1	

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	80.9	2235.6	42.9	No change	Sm. dec.	Medium	Abundant	Good	Fair			1	1
cabbage palmetto	Sabal palmetto	NDH	Medium	63.3	1189.1	26.3	No change	No change	Medium	Abundant	Good	Good			0	2
pond cypress	Taxodium ascendens	NSH	Medium	45.6	881.9	26.0	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			1	3
live oak	Quercus virginiana	NDH	High	49.5	451.6	15.8	Sm. inc.	Lg. inc.	Medium	Common	Good	Very Good			1	4
bald cypress	Taxodium distichum	NSH	Medium	21.3	149.0	10.3	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	5
red maple	Acer rubrum	WDH	High	19.1	96.0	8.7	Lg. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	6
laurel oak	Quercus laurifolia	NDH	Medium	37.3	95.7	4.4	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			1	7
longleaf pine	Pinus palustris	NSH	Medium	2.8	67.0	20.8	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	8
redbay	Persea borbonia	NSL	Low	24.7	44.1	2.5	Lg. inc.	Sm. inc.	High	Rare	Good	Good			1	9
Carolina ash	Fraxinus caroliniana	NSL	FIA	9.7	35.7	7.0	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	10
loblolly-bay	Gordonia lasianthus	NSH	Medium	4.9	24.3	16.4	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2	11
green ash	Fraxinus pennsylvanica	WSH	Low	1.9	8.9	4.2	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	12
sweetbay	Magnolia virginiana	NSL	Medium	5.7	5.1	1.7	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	1	13
hackberry	Celtis occidentalis	WDH	Medium	1	2.7	2.7	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	14
red mulberry	Morus rubra	NSL	Low	1	2.6	2.6	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	15
swamp tupelo	Nyssa biflora	NDH	Medium	0.9	1.6	1.5	No change	No change	Low	Rare	Very Poor	Very Poor			2	16
common persimmon	Diospyros virginiana	NSL	Low	0.5	1.5	0.8	Lg. dec.	Very Lg. dec.	High	Rare	Poor	Lost			0	17
water oak	Quercus nigra	WDH	High	2.4	1.1	0.6	No change	No change	Medium	Rare	Poor	Poor		Infill +	2	18
sugarberry	Celtis laevigata	NDH	Medium	7	0.6	1.1	Sm. dec.	Lg. inc.	Medium	Rare	Very Poor	Good		Infill ++	2	19
eastern redbud	Cercis canadensis	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	20
flowering dogwood	Cornus florida	WDL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	21
cucumbertree	Magnolia acuminata	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	22
blackgum	Nyssa sylvatica	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	23
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	24
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	25
white oak	Quercus alba	WDH	Medium	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	26
bur oak	Quercus macrocarpa	NDH	Medium	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	27
nuttall oak	Quercus texana	NSH	Medium	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	28
willow oak	Quercus phellos	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	29
Shumard oak	Quercus shumardii	NSL	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	30
post oak	Quercus stellata	WDH	High	0	0	0	Unknown	New Habitat	High	Absent	Unknown	New Habitat			3	31
black locust	Robinia pseudoacacia	NDH	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	32
winged elm	Ulmus alata	WDL	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	33
American elm	Ulmus americana	WDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	34