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USDA Forest Service
Northern Research Station
Landscape Change Research Group
Iverson, Peters, Prasad, Matthews

	sq. km	sq. mi	FIA Plots
Area of Region	8,102.5	3,128.4	108

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			Model			Potential Change in Habitat Suitability			Capability to Cope or Persist			Migration Potential	
								Scenario	Scenario		Scenario	Scenario		SHIFT	SHIFT
Ash	1				Model			RCP45	RCP85		RCP45	RCP85		RCP45	RCP85
Hickory	1		Abundance	Reliability	Adaptability										
Maple	1	Abundant	2	High	6	7	Increase	7	7	Very Good	1	2	Likely	2	2
Oak	3	Common	4	Medium	15	21	No Change	3	3	Good	6	4	Infill	8	9
Pine	2	Rare	11	Low	10	3	Decrease	6	6	Fair	3	3	Migrate	0	0
Other	9	Absent	10	FIA	1		New	6	6	Poor	2	4		**10**	**11**
	17		**27**		**32**	**31**	Unknown	10	10	Very Poor	4	3			
								32	**32**	FIA Only	1	1			
										Unknown	9	9			
											26	**26**			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	73.2	74.5	75.9	75.9	
Average	CCSM85	73.2	74.6	76.7	78.8	
	GFDL45	73.2	77.3	77.2	78.1	
	GFDL85	73.2	75.4	78.2	81.4	
	HAD45	73.2	74.5	76.6	77.7	
	HAD85	73.2	75.2	77.3	80.6	
Growing	CCSM45	80.7	81.9	83.1	83.2	
Season	CCSM85	80.7	81.9	84.1	86.4	
May—Sep	GFDL45	80.7	84.9	84.6	85.7	
	GFDL85	80.7	83.0	85.7	89.1	
	HAD45	80.7	82.6	84.2	85.3	
	HAD85	80.7	82.9	85.5	88.4	
Coldest	CCSM45	60.7	62.6	63.4	63.3	
Month	CCSM85	60.7	62.0	62.9	64.4	
Average	GFDL45	60.7	63.3	63.7	64.2	
	GFDL85	60.7	63.1	64.2	65.3	
	HAD45	60.7	60.9	62.0	62.6	
	HAD85	60.7	61.6	62.3	64.2	
Warmest	CCSM45	82.4	83.7	84.4	84.4	
Month	CCSM85	82.4	83.8	85.0	86.4	
Average	GFDL45	82.4	84.6	85.6	86.2	
	GFDL85	82.4	84.8	86.4	88.2	
	HAD45	82.4	84.3	85.0	85.6	
	HAD85	82.4	84.4	85.8	87.2	

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	51.7	53.9	53.2	57.0	
Total	CCSM85	51.7	53.4	53.2	50.1	
	GFDL45	51.7	59.2	60.6	62.0	
	GFDL85	51.7	56.1	64.2	57.6	
	HAD45	51.7	54.6	55.1	55.5	
	HAD85	51.7	50.3	53.0	51.3	
Growing	CCSM45	35.0	36.8	35.6	38.3	
Season	CCSM85	35.0	36.1	36.6	32.9	
May—Sep	GFDL45	35.0	38.9	38.9	38.0	
	GFDL85	35.0	37.5	40.4	35.4	
	HAD45	35.0	36.3	37.2	34.6	
	HAD85	35.0	33.9	32.7	31.2	

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	63.8	1600.3	52.9	No change	Sm. dec.	Medium	Abundant	Good	Fair	Infill ++	Infill +	2	1
cabbage palmetto	Sabal palmetto	NDH	Medium	59.7	536.6	26.0	No change	Sm. inc.	Medium	Abundant	Good	Very Good			0	2
live oak	Quercus virginiana	NDH	High	69.3	356.0	21.1	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	2	3
longleaf pine	Pinus palustris	NSH	Medium	27	105.5	22.3	Sm. dec.	Lg. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	2	4
laurel oak	Quercus laurifolia	NDH	Medium	62.9	102.6	8.0	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	5
red maple	Acer rubrum	WDH	High	37	52.0	15.2	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good	Infill ++	Infill ++	2	6
bald cypress	Taxodium distichum	NSH	Medium	7.4	26.5	10.8	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	2	7
pond cypress	Taxodium ascendens	NSH	Medium	10.6	23.5	6.0	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good	Infill ++	Infill ++	2	8
swamp tupelo	Nyssa biflora	NDH	Medium	16	22.5	8.4	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	9
water oak	Quercus nigra	WDH	High	33	14.4	6.4	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	10
American elm	Ulmus americana	WDH	Medium	17.3	13.1	2.8	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	11
sweetbay	Magnolia virginiana	NSL	Medium	29.5	12.0	6.3	Sm. inc.	No change	Medium	Rare	Fair	Poor	Infill +	Infill +	2	12
Carolina ash	Fraxinus caroliniana	NSL	FIA	16	4.7	2.9	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	13
water hickory	Carya aquatica	NSL	Medium	1.2	4.1	3.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	14
loblolly-bay	Gordonia lasianthus	NSH	Medium	4.9	1.8	5.8	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	15
redbay	Persea borbonia	NSL	Low	9.9	0.6	1.0	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	16
common persimmon	Diospyros virginiana	NSL	Low	4.9	0.3	0.9	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	17
sand pine	Pinus clausa	NDH	High	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	18
pond pine	Pinus serotina	NSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	19
pawpaw	Asimina triloba	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	20
green ash	Fraxinus pennsylvanica	WSH	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			3	21
American holly	Ilex opaca	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	22
sweetgum	Liquidambar styraciflua	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	23
cucumbertree	Magnolia acuminata	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	24
blackgum	Nyssa sylvatica	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat			3	25
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	26
water elm	Planera aquatica	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	27
turkey oak	Quercus laevis	NSH	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	28
Nuttall oak	Quercus texana	NSH	Medium	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	29
willow oak	Quercus phellos	NSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	30
black locust	Robinia pseudoacacia	NDH	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	31
slippery elm	Ulmus rubra	WSL	Low	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	32