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USDA Forest Service
Northern Research Station
Landscape Change Research Group
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	sq. km	sq. mi	FIA Plots
Area of Region	8,000.0	3,088.8	136

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							Potential Change in Habitat Suitability			Capability to Cope or Persist			Migration Potential		
				Model					Scenario	Scenario			Scenario	Scenario		SHIFT	SHIFT
Ash	4		Abundance	Reliability	Adaptability				RCP45	RCP85			RCP45	RCP85		RCP45	RCP85
Hickory	2																
Maple	1	Abundant	3	High	10	9		Increase	14	13		Very Good	6	5	Likely	1	1
Oak	4	Common	11	Medium	25	31		No Change	9	10		Good	8	8	Infill	18	18
Pine	5	Rare	20	Low	13	8		Decrease	9	9		Fair	4	5	Migrate	0	3
Other	18	Absent	13	FIA	2			New	5	5		Poor	6	7		19	22
	34		47		50	48		Unknown	13	13		Very Poor	6	4			
									50	50		FIA Only	2	2			
												Unknown	11	11			
													43	42			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	72.0	73.4	74.9	74.8	
Average	CCSM85	72.0	73.5	75.6	77.8	
	GFDL45	72.0	75.3	76.1	76.9	
	GFDL85	72.0	74.3	77.1	80.4	
	HAD45	72.0	73.5	75.6	76.7	
	HAD85	72.0	74.1	76.4	79.7	
Growing	CCSM45	80.5	81.7	82.8	83.0	
Season	CCSM85	80.5	81.7	83.9	86.2	
May—Sep	GFDL45	80.5	83.8	84.4	85.5	
	GFDL85	80.5	82.8	85.6	89.1	
	HAD45	80.5	82.6	84.3	85.5	
	HAD85	80.5	83.0	85.8	88.9	
Coldest	CCSM45	58.1	60.2	61.1	60.8	
Month	CCSM85	58.1	59.5	60.5	61.9	
Average	GFDL45	58.1	60.7	61.2	61.7	
	GFDL85	58.1	60.4	61.5	62.6	
	HAD45	58.1	57.9	59.1	59.7	
	HAD85	58.1	58.6	59.4	61.2	
Warmest	CCSM45	82.6	83.7	84.5	84.5	
Month	CCSM85	82.6	83.8	85.1	86.5	
Average	GFDL45	82.6	84.8	85.7	86.4	
	GFDL85	82.6	84.9	86.4	88.3	
	HAD45	82.6	84.8	85.5	86.1	
	HAD85	82.6	84.8	86.4	87.7	

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	50.3	53.6	54.2	55.9	
Total	CCSM85	50.3	52.8	53.1	52.4	
	GFDL45	50.3	59.2	60.6	62.6	
	GFDL85	50.3	54.5	63.9	60.3	
	HAD45	50.3	49.8	49.0	51.7	
	HAD85	50.3	47.4	48.3	46.3	
Growing	CCSM45	31.4	33.9	32.9	34.5	
Season	CCSM85	31.4	33.2	33.1	31.1	
May—Sep	GFDL45	31.4	36.6	37.0	37.1	
	GFDL85	31.4	34.6	39.1	36.9	
	HAD45	31.4	31.3	30.3	29.1	
	HAD85	31.4	28.7	26.3	25.2	

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	48.8	1310.5	32.9	Sm. inc.	No change	Medium	Abundant	Very Good	Good	Infill ++	Infill ++	2	1
pond cypress	Taxodium ascendens	NSH	Medium	35	769.9	31.5	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good	Infill ++	Infill ++	2	2
cabbage palmetto	Sabal palmetto	NDH	Medium	41.2	703.8	22.5	Sm. inc.	Sm. inc.	Medium	Abundant	Very Good	Very Good			0	3
longleaf pine	Pinus palustris	NSH	Medium	37.5	498.3	29.2	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	4
red maple	Acer rubrum	WDH	High	51.2	469.4	15.5	No change	Sm. dec.	High	Common	Good	Fair	Infill ++	Infill +	2	5
swamp tupelo	Nyssa biflora	NDH	Medium	48.8	346.6	9.8	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	2	6
live oak	Quercus virginiana	NDH	High	41.3	318.8	13.8	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	2	7
sand pine	Pinus clausa	NDH	High	21.3	314.8	36.4	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor	Infill +	Infill +	2	8
laurel oak	Quercus laurifolia	NDH	Medium	56.3	283.5	9.4	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	2	9
loblolly-bay	Gordonia lasianthus	NSH	Medium	37.5	212.8	9.6	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	10
sweetgum	Liquidambar styraciflua	WDH	High	17.5	148.2	7.6	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	2	11
bald cypress	Taxodium distichum	NSH	Medium	20	119.1	7.0	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	2	12
sweetbay	Magnolia virginiana	NSL	Medium	37.5	114.6	7.2	Sm. inc.	Sm. inc.	Medium	Common	Good	Good	Infill ++	Infill ++	2	13
water oak	Quercus nigra	WDH	High	17.5	63.4	3.3	Lg. inc.	Lg. inc.	Medium	Common	Very Good	Very Good	Infill ++	Infill ++	2	14
loblolly pine	Pinus taeda	WDH	High	7.5	49.3	5.9	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	15
redbay	Persea borbonia	NSL	Low	36.3	47.4	2.2	Sm. inc.	Sm. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	16
pumpkin ash	Fraxinus profunda	NSH	FIA	3.7	47.1	11.3	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	17
green ash	Fraxinus pennsylvanica	WSH	Low	5	37.1	6.7	No change	No change	Medium	Rare	Poor	Poor			0	18
American elm	Ulmus americana	WDH	Medium	22.5	33.0	2.1	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	19
pond pine	Pinus serotina	NSH	Medium	17.5	28.5	12.0	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	20
pignut hickory	Carya glabra	WDL	Medium	7.5	25.3	7.2	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	21
Carolina ash	Fraxinus caroliniana	NSL	FIA	13.7	19.5	4.2	Unknown	Unknown	NA	Rare	FIA Only	FIA Only			0	22
American hornbeam; muscle\	Carpinus caroliniana	WSL	Low	6.3	14.7	2.1	Sm. dec.	No change	Medium	Rare	Very Poor	Poor			0	23
black cherry	Prunus serotina	WDL	Medium	6.2	11.8	4.9	No change	No change	Low	Rare	Very Poor	Very Poor			2	24
southern magnolia	Magnolia grandiflora	NSL	Low	3.7	11.4	2.7	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	25
water hickory	Carya aquatica	NSL	Medium	2.5	7.0	2.5	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	26
common persimmon	Diospyros virginiana	NSL	Low	11.3	6.7	1.2	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	27
turkey oak	Quercus laevis	NSH	Medium	5	2.9	8.2	Lg. inc.	Lg. inc.	High	Rare	Good	Good	Infill ++	Infill ++	2	28
blackgum	Nyssa sylvatica	WDL	Medium	6.2	2.8	2.4	Lg. inc.	Lg. inc.	High	Rare	Good	Good			2	29
eastern redcedar	Juniperus virginiana	WDH	Medium	6.3	2.3	1.0	Sm. dec.	Very Lg. dec.	Medium	Rare	Very Poor	Lost			0	30
white ash	Fraxinus americana	WDL	Medium	1.2	2.2	1.6	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	31
red mulberry	Morus rubra	NSL	Low	1.3	1.4	1.0	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	32
American holly	Ilex opaca	NSL	Medium	1.2	1.3	0.9	Very Lg. dec.	Very Lg. dec.	Medium	Rare	Lost	Lost			0	33
sugarberry	Celtis laevigata	NDH	Medium	1.2	0.7	0.5	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	34
shortleaf pine	Pinus echinata	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat		Migrate +	3	35
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	36
serviceberry	Amelanchier spp.	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	37
shagbark hickory	Carya ovata	WSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	38
mockernut hickory	Carya alba	WDL	Medium	0	0	0	Unknown	Unknown	High	Modeled	Unknown	Unknown			0	39
silverbell	Halesia spp.	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	40
cucumbertree	Magnolia acuminata	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	41
water tupelo	Nyssa aquatica	NSH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat			3	42
sourwood	Oxydendrum arboreum	NDL	High	0	0	0	Unknown	Unknown	High	Absent	Unknown	Unknown			0	43
southern red oak	Quercus falcata	WDL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	44
post oak	Quercus stellata	WDH	High	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate +	3	45
bluejack oak	Quercus incana	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	46
black locust	Robinia pseudoacacia	NDH	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	47

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Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
black willow	Salix nigra	NSH	Low	0	0	0	Unknown	Unknown	Low	Modeled	Unknown	Unknown			0	48
American mountain-ash	Sorbus americana	NSL	Low	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	49
winged elm	Ulmus alata	WDL	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	50