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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	10,306	3,979.1	103

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	3															
Hickory	1		Abundance			Reliability	Adaptability		RCP45	RCP85		RCP45	RCP85		RCP45	RCP85
Maple	0		Abundant	1		High	3	6	Increase	5	5	Very Good	1	1	Likely	2	2
Oak	3		Common	10		Medium	8	11	No Change	3	3	Good	5	5	Infill	6	6
Pine	0		Rare	7		Low	10	5	Decrease	8	8	Fair	2	3	Migrate	0	0
Other	11		Absent	4		FIA	2		New	2	2	Poor	6	5		**8**	**8**
	18			**22**			**23**	**22**	Unknown	5	5	Very Poor	2	2			
										23	**23**	FIA Only	2	2			
									Unknown	3	3						
													21	**21**			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	63.6	65.1	66.6	67.4	
Average	CCSM85	63.6	65.7	67.5	70.2	
	GFDL45	63.6	67.9	68.1	69.7	
	GFDL85	63.6	66.6	69.6	73.6	
	HAD45	63.6	65.8	68.3	69.2	
	HAD85	63.6	66.2	70.3	73.3	
Growing	CCSM45	78.8	80.2	81.8	82.6	
Season	CCSM85	78.8	81.1	82.8	86.1	
May—Sep	GFDL45	78.8	84.3	84.3	87.1	
	GFDL85	78.8	83.1	86.7	91.8	
	HAD45	78.8	80.8	83.0	83.6	
	HAD85	78.8	81.4	85.8	88.4	
Coldest	CCSM45	41.1	43.3	43.9	44.7	
Month	CCSM85	41.1	43.2	43.9	45.4	
Average	GFDL45	41.1	44.3	44.3	44.5	
	GFDL85	41.1	41.8	43.0	43.3	
	HAD45	41.1	41.7	43.9	44.1	
	HAD85	41.1	44.4	46.1	47.7	
Warmest	CCSM45	85.0	86.2	87.4	87.7	
Month	CCSM85	85.0	87.2	87.8	89.8	
Average	GFDL45	85.0	90.4	90.7	92.8	
	GFDL85	85.0	90.7	92.6	96.9	
	HAD45	85.0	87.0	88.2	88.4	
	HAD85	85.0	87.9	90.1	91.1	

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual	CCSM45	30.6	31.7	31.1	30.4	
Total	CCSM85	30.6	29.6	32.3	31.9	
	GFDL45	30.6	31.3	36.2	30.0	
	GFDL85	30.6	31.0	33.5	31.5	
	HAD45	30.6	31.6	30.6	32.4	
	HAD85	30.6	31.5	27.8	31.1	
Growing	CCSM45	15.1	15.9	14.5	14.8	
Season	CCSM85	15.1	15.1	15.0	14.2	
May—Sep	GFDL45	15.1	15.9	18.5	15.1	
	GFDL85	15.1	16.2	17.1	15.6	
	HAD45	15.1	15.4	15.1	15.7	
	HAD85	15.1	15.1	12.4	14.3	

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
post oak	Quercus stellata	WDH	High	48.3	1737.3	48.8	Sm. dec.	Sm. dec.	High	Abundant	Good	Good			1	1
cedar elm	Ulmus crassifolia	NDH	Medium	28.9	267.3	15.2	Lg. inc.	Lg. inc.	Low	Common	Good	Good	Infill ++	Infill ++	1	2
blackjack oak	Quercus marilandica	NSL	Medium	22.5	226.3	13.2	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	1	3
live oak	Quercus virginiana	NDH	High	7.1	172.7	18.4	Sm. inc.	No change	Medium	Common	Good	Fair	Infill ++	Infill +	2	4
American elm	Ulmus americana	WDH	Medium	20	168.5	16.0	Sm. dec.	Sm. dec.	Medium	Common	Poor	Poor			0	5
pecan	Carya illinoinensis	NSH	Low	15.4	155.8	9.7	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor	Infill +	Infill +	0	6
ashe juniper	Juniperus ashei	NDH	High	9.1	152.7	10.5	Sm. inc.	Sm. inc.	Medium	Common	Good	Good			0	7
sugarberry	Celtis laevigata	NDH	Medium	20.1	136.3	6.1	Lg. dec.	Sm. dec.	Medium	Common	Poor	Poor	Infill +	Infill +	0	8
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	18.5	134.8	7.3	Sm. inc.	Sm. inc.	High	Common	Very Good	Very Good			1	9
Texas ash	Fraxinus texensis	NDH	FIA	13.6	125.2	10.5	Unknown	Unknown	NA	Common	FIA Only	FIA Only			0	10
hackberry	Celtis occidentalis	WDH	Medium	14.7	73.2	9.9	Lg. dec.	Lg. dec.	High	Common	Fair	Fair			0	11
black willow	Salix nigra	NSH	Low	11.6	38.6	15.6	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	12
wild plum	Prunus americana	NSLX	FIA	1	4.9	5.0	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	13
white ash	Fraxinus americana	WDL	Medium	0.8	3.4	0.9	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	14
Osage-orange	Maclura pomifera	NDH	Medium	0.6	2.6	1.6	Lg. dec.	Sm. dec.	High	Rare	Poor	Poor			0	15
eastern cottonwood	Populus deltoides	NSH	Low	2.8	2.4	7.2	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	16
eastern redcedar	Juniperus virginiana	WDH	Medium	4.1	0.4	0.6	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			0	17
green ash	Fraxinus pennsylvanica	WSH	Low	0.7	0.4	0.3	No change	Sm. inc.	Medium	Rare	Poor	Fair			0	18
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	0	0	0	Unknown	Unknown	Low	Modeled	Unknown	Unknown			0	19
pawpaw	Asimina triloba	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	20
shellbark hickory	Carya laciniosa	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	21
honeylocust	Gleditsia triacanthos	NSH	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Likely +	Likely +	3	22
slippery elm	Ulmus rubra	WSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	23