

HUC 080903 Central Louisiana Coastal

HUC 6 Watershed Climate Change Atlas Tree Species

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Landscape Change Research Group
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Current and Potential Future Habitat, Capability, and Migration

	sq. km	sq. mi	FIA Plots
Area of Region	14,997	5,790.4	76

Species Information

The columns below provide brief 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		Potential Change in Habitat Suitability		Capability to Cope or Persist		Migration Potential					
				Reliability	Adaptability	Scenario RCP45	Scenario RCP85	Scenario RCP45	Scenario RCP85	SHIFT RCP45	SHIFT RCP85				
Ash	1			High	7	9	Increase	7	10	Very Good	1	0	Likely	2	2
Hickory	4			Medium	25	35	No Change	16	14	Good	3	8	Infill	17	20
Maple	2	Abundant	1	Low	21	9	Decrease	12	11	Fair	10	9	Migrate	2	1
Oak	7	Common	8	FIA	0		New	7	9	Poor	11	11			
Pine	0	Rare	26				Unknown	11	9	Very Poor	8	6			
Other	21	Absent	16							FIA Only	0	0			
	35		51		53	53		53	53	Unknown	11	9			
											44	43			

Potential Changes in Climate Variables

Temperature (°F)

	Scenario	2009	2039	2069	2099	
Annual Average	CCSM45	56.2	57.1	58.2	58.3	
	CCSM85	56.2	57.3	58.7	60.1	
	GFDL45	56.2	58.5	58.9	59.5	
	GFDL85	56.2	57.8	59.7	61.8	
	HAD45	56.2	57.5	59.0	59.7	
HAD85	56.2	57.6	59.6	61.7		
Growing Season (May—Sep)	CCSM45	63.5	64.3	65.0	65.2	
	CCSM85	63.5	64.3	65.7	67.2	
	GFDL45	63.5	65.9	66.3	67.2	
	GFDL85	63.5	65.2	67.2	69.6	
	HAD45	63.5	65.1	66.4	66.9	
HAD85	63.5	65.1	67.5	69.3		
Coldest Month (Average)	CCSM45	44.8	46.2	46.8	46.7	
	CCSM85	44.8	46.5	47.3	47.9	
	GFDL45	44.8	46.8	47.0	47.0	
	GFDL85	44.8	45.7	46.5	47.0	
	HAD45	44.8	45.1	46.1	46.6	
HAD85	44.8	46.0	46.7	47.8		
Warmest Month (Average)	CCSM45	65.4	66.0	66.2	66.3	
	CCSM85	65.4	66.0	66.6	67.4	
	GFDL45	65.4	67.2	67.4	68.1	
	GFDL85	65.4	67.0	68.0	69.3	
	HAD45	65.4	67.1	67.7	67.9	
HAD85	65.4	67.1	68.4	69.1		

Precipitation (in)

	Scenario	2009	2039	2069	2099	
Annual Total	CCSM45	41.6	43.0	47.1	45.6	
	CCSM85	41.6	43.4	44.5	45.0	
	GFDL45	41.6	45.3	48.6	44.8	
	GFDL85	41.6	43.8	44.7	43.2	
	HAD45	41.6	39.5	41.4	44.2	
HAD85	41.6	44.5	40.3	42.5		
Growing Season (May—Sep)	CCSM45	20.7	21.7	22.7	22.3	
	CCSM85	20.7	21.3	21.9	21.1	
	GFDL45	20.7	23.4	26.0	22.7	
	GFDL85	20.7	22.7	23.8	24.0	
	HAD45	20.7	20.3	20.5	22.1	
HAD85	20.7	21.1	18.3	18.6		

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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Current and Potential Future Habitat, Capability, and Migration

Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
bald cypress	Taxodium distichum	NSH	Medium	52	691.7	27.6	Sm. dec.	Sm. dec.	Medium	Abundant	Fair	Fair	Infill +	Infill +	0	1
water tupelo	Nyssa aquatica	NSH	Medium	30.5	409.2	20.6	Sm. dec.	Sm. dec.	Low	Common	Poor	Poor	Infill +	Infill +	0	2
red maple	Acer rubrum	WDH	High	51.4	347.2	16.6	Sm. inc.	No change	High	Common	Very Good	Good	Infill ++	Infill ++	1	3
black willow	Salix nigra	NSH	Low	13.8	156.6	12.5	No change	No change	Low	Common	Poor	Poor	Infill +	Infill +	0	4
sugarberry	Celtis laevigata	NDH	Medium	21.2	154.3	10.5	No change	Sm. inc.	Medium	Common	Fair	Good	Infill +	Infill ++	1	5
green ash	Fraxinus pennsylvanica	WSH	Low	43.3	150.4	9.4	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	6
American elm	Ulmus americana	WDH	Medium	32.8	95.1	6.3	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	7
water oak	Quercus nigra	WDH	High	18.5	70.3	9.6	No change	No change	Medium	Common	Fair	Fair	Infill +	Infill +	1	8
boxelder	Acer negundo	WSH	Low	20.1	57.1	8.0	No change	No change	High	Common	Good	Good	Infill ++	Infill ++	1	9
sweetgum	Liquidambar styraciflua	WDH	High	25	47.8	4.6	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair	Infill +	Infill +	1	10
Nuttall oak	Quercus texana	NSH	Medium	11.3	21.4	3.3	Sm. inc.	Lg. inc.	High	Rare	Good	Good			0	11
pecan	Carya illinoensis	NSH	Low	6.9	12.0	6.8	No change	Sm. inc.	Low	Rare	Very Poor	Poor		Infill +	2	12
water hickory	Carya aquatica	NSL	Medium	6.4	8.7	2.3	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	13
swamp tupelo	Nyssa biflora	NDH	Medium	1.4	7.6	4.8	No change	Sm. dec.	Low	Rare	Very Poor	Very Poor			2	14
live oak	Quercus virginiana	NDH	High	8.1	7.2	2.9	Lg. inc.	Lg. inc.	Medium	Rare	Good	Good			2	15
slippery elm	Ulmus rubra	WSL	Low	3.3	5.0	1.0	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	16
eastern cottonwood	Populus deltoides	NSH	Low	0.6	4.1	4.5	Sm. dec.	No change	Medium	Rare	Very Poor	Poor		Infill +	2	17
red mulberry	Morus rubra	NSL	Low	3.6	3.7	1.4	No change	No change	Medium	Rare	Poor	Poor			0	18
sycamore	Platanus occidentalis	NSL	Low	3.6	3.5	2.2	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	19
laurel oak	Quercus laurifolia	NDH	Medium	5.4	2.9	1.1	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	20
eastern hophornbeam; ironw	Ostrya virginiana	WSL	Low	6.4	1.6	0.8	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	21
flowering dogwood	Cornus florida	WDL	Medium	0.9	1.2	1.8	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	22
cherrybark oak; swamp red o	Quercus pagoda	NSL	Medium	0.9	0.9	1.4	No change	Lg. inc.	Medium	Rare	Poor	Good	Infill +		2	23
pond cypress	Taxodium ascendens	NSH	Medium	1.8	0.9	2.7	No change	Lg. inc.	Medium	Rare	Poor	Good			2	24
willow oak	Quercus phellos	NSL	Low	2.3	0.7	0.8	Sm. inc.	Lg. inc.	Medium	Rare	Fair	Good			2	25
cedar elm	Ulmus crassifolia	NDH	Medium	0.9	0.7	1.1	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	26
honeylocust	Gleditsia triacanthos	NSH	Low	1	0.6	0.3	Very Lg. dec.	No change	High	Rare	Lost	Fair		Infill +	2	27
common persimmon	Diospyros virginiana	NSL	Low	6	0.6	0.7	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	28
winged elm	Ulmus alata	WDL	Medium	4.5	0.6	0.8	No change	No change	Medium	Rare	Poor	Poor	Infill +	Infill +	2	29
mockernut hickory	Carya alba	WDL	Medium	0.9	0.5	0.8	Very Lg. dec.	Very Lg. dec.	High	Rare	Lost	Lost			0	30
black cherry	Prunus serotina	WDL	Medium	0.9	0.3	0.4	Lg. dec.	Lg. dec.	Low	Rare	Very Poor	Very Poor			0	31
pignut hickory	Carya glabra	WDL	Medium	0.5	0.2	0.2	Lg. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	32
overcup oak	Quercus lyrata	NSL	Medium	0.5	0.2	0.2	Lg. inc.	Lg. inc.	Low	Rare	Fair	Fair	Infill +	Infill +	2	33
blackgum	Nyssa sylvatica	WDL	Medium	1.8	0.1	0.2	Lg. dec.	Lg. dec.	High	Rare	Poor	Poor			0	34
sassafras	Sassafras albidum	WSL	Low	3.4	0.0	0.2	No change	Lg. dec.	Medium	Rare	Poor	Very Poor			0	35
Atlantic white-cedar	Chamaecyparis thyoides	NSH	Low	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate +		3	36
eastern redcedar	Juniperus virginiana	WDH	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	37
slash pine	Pinus elliottii	NDH	High	0	0	0	New Habitat	Unknown	Medium	Absent	New Habitat	Unknown			3	38
loblolly pine	Pinus taeda	WDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	39
striped maple	Acer pensylvanicum	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	40
serviceberry	Amelanchier spp.	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	41
pawpaw	Asimina triloba	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	42
cittamwood/gum bumelia	Sideroxylon lanuginosum ssp.	NSL	Low	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat	Migrate +	Migrate +	3	43
shagbark hickory	Carya ovata	WSL	Medium	0	0	0	Unknown	Unknown	Medium	Modeled	Unknown	Unknown			0	44
black ash	Fraxinus nigra	WSH	Medium	0	0	0	Unknown	Unknown	Low	Absent	Unknown	Unknown			0	45
loblolly-bay	Gordonia lasianthus	NSH	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	46
silverbell	Halesia spp.	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	47

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Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	48
water elm	Planera aquatica	NSL	Low	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	49
pin cherry	Prunus pensylvanica	NSL	Low	0	0	0	Unknown	New Habitat	Medium	Absent	Unknown	New Habitat			3	50
black oak	Quercus velutina	WDH	High	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	51
cabbage palmetto	Sabal palmetto	NDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	52
American basswood	Tilia americana	WSL	Medium	0	0	0	New Habitat	Unknown	Medium	Absent	New Habitat	Unknown			3	53