

HUC 111301 Red-Pease

HUC 6 Watershed Climate Change Atlas Tree Species Current and Potential Future Habitat, Capability, and Migration

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	sq. km	sq. mi	FIA Plots
Area of Region	14,890	5,749.1	6

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		
		Abundant	Common	High	Low	Scenario	Scenario	Scenario	Scenario	SHIFT	SHIFT	
				Reliability	Adaptability	RCP45	RCP85	RCP45	RCP85	RCP45	RCP85	
Ash	0											
Hickory	1											
Maple	0	Abundant	0	High	3	5	Increase	1	1	Very Good	0	0
Oak	1	Common	0	Medium	6	9	No Change	3	3	Good	0	0
Pine	0	Rare	11	Low	7	3	Decrease	6	6	Fair	3	3
Other	9	Absent	6	FIA	1		New	4	4	Poor	2	2
	11		17		17	17	Unknown	3	3	Very Poor	5	5
								17	17	FIA Only	1	1
										Unknown	2	2
											13	13

Potential Changes in Climate Variables

Temperature (°F)

Scenario	2009	2039	2069	2099
Annual	48.4	49.2	50.1	50.5
Average	48.4	49.6	50.5	52.1
GFDL45	48.4	51.3	50.9	51.7
GFDL85	48.4	50.0	51.7	54.0
HAD45	48.4	49.6	51.0	51.5
HAD85	48.4	49.8	52.1	53.7
Growing Season	57.0	57.9	58.8	59.3
May—Sep	57.0	58.3	59.3	61.2
GFDL45	57.0	61.0	60.2	61.6
GFDL85	57.0	59.4	61.3	64.3
HAD45	57.0	58.1	59.3	59.6
HAD85	57.0	58.5	60.8	62.2
Coldest Month	35.7	36.9	37.2	37.8
Average	35.7	37.0	37.3	38.2
GFDL45	35.7	37.5	37.5	37.6
GFDL85	35.7	36.2	36.9	37.2
HAD45	35.7	36.2	37.4	37.5
HAD85	35.7	37.5	38.5	39.4
Warmest Month	60.5	61.3	62.1	62.2
Average	60.5	61.8	62.2	63.3
GFDL45	60.5	63.3	63.6	64.8
GFDL85	60.5	63.5	64.5	67.0
HAD45	60.5	61.4	62.1	62.2
HAD85	60.5	62.0	63.1	63.7

Precipitation (in)

Scenario	2009	2039	2069	2099
Annual	14.7	15.6	15.1	14.5
Total	14.7	14.5	15.8	15.0
GFDL45	14.7	15.0	17.3	14.6
GFDL85	14.7	14.9	16.0	14.8
HAD45	14.7	16.1	15.2	15.8
HAD85	14.7	15.2	13.4	15.4
Growing Season	8.0	8.1	7.6	7.5
May—Sep	8.0	7.9	7.9	7.4
GFDL45	8.0	8.1	9.5	7.9
GFDL85	8.0	8.5	8.8	7.9
HAD45	8.0	8.7	8.4	8.5
HAD85	8.0	7.8	6.6	7.9

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
American elm	<i>Ulmus americana</i>	WDH	Medium	6.7	46.2	20.4	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			2	1
cittamwood/gum bumelia	<i>Sideroxylon lanuginosum</i> ssp.	NSL	Low	14.5	27.9	21.5	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			1	2
sugarberry	<i>Celtis laevigata</i>	NDH	Medium	9.3	19.9	13.1	Sm. dec.	Lg. dec.	Medium	Rare	Very Poor	Very Poor			0	3
ashe juniper	<i>Juniperus ashei</i>	NDH	High	0.6	16.8	9.6	Sm. inc.	Sm. inc.	Medium	Rare	Fair	Fair			0	4
pecan	<i>Carya illinoensis</i>	NSH	Low	0.2	10.3	1.8	No change	No change	Low	Rare	Very Poor	Very Poor			2	5
black willow	<i>Salix nigra</i>	NSH	Low	2.6	8.8	8.6	Sm. dec.	Sm. dec.	Low	Rare	Very Poor	Very Poor			0	6
eastern cottonwood	<i>Populus deltoides</i>	NSH	Low	2	8.4	17.0	Sm. dec.	Sm. dec.	Medium	Rare	Very Poor	Very Poor			0	7
post oak	<i>Quercus stellata</i>	WDH	High	0.6	8.2	4.9	No change	No change	High	Rare	Fair	Fair	Infill +	Infill +	2	8
hackberry	<i>Celtis occidentalis</i>	WDH	Medium	4	3.8	3.3	No change	No change	High	Rare	Fair	Fair			0	9
honeylocust	<i>Gleditsia triacanthos</i>	NSH	Low	3.4	1.3	4.5	Sm. dec.	Sm. dec.	High	Rare	Poor	Poor			0	10
wild plum	<i>Prunus americana</i>	NSLX	FIA	5.8	0.6	3.6	Unknown	Unknown	Medium	Rare	FIA Only	FIA Only			0	11
eastern redcedar	<i>Juniperus virginiana</i>	WDH	Medium	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Likely +	Likely +	3	12
serviceberry	<i>Amelanchier</i> spp.	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	13
blackjack oak	<i>Quercus marilandica</i>	NSL	Medium	0	0	0	New Habitat	New Habitat	High	Absent	New Habitat	New Habitat		Migrate ++	3	14
swamp chestnut oak	<i>Quercus michauxii</i>	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	15
live oak	<i>Quercus virginiana</i>	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	16
cedar elm	<i>Ulmus crassifolia</i>	NDH	Medium	0	0	0	New Habitat	New Habitat	Low	Absent	New Habitat	New Habitat	Migrate ++	Migrate ++	3	17