

# HUC 130800 Rio Grande-Falcon

## HUC 6 Watershed Climate Change Atlas Tree Species

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

### Current and Potential Future Habitat, Capability, and Migration

sq. km    sq. mi    FIA Plots  
Area of Region    32,863    12,688

#### 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	0		High	1	0	Increase	0	0	Very Good	0	0
Hickory	0		Medium	1	4	No Change	0	0	Good	0	0
Maple	0	Abundant	Low	2	0	Decrease	0	0	Fair	0	0
Oak	0	Common	FIA	0		New	1	1	Poor	0	0
Pine	0	Rare				Unknown	3	3	Very Poor	0	0
Other	0	Absent							FIA Only	0	0
	<b>0</b>	<b>4</b>		<b>4</b>	<b>4</b>		<b>4</b>	<b>4</b>	Unknown	3	3
										<b>3</b>	<b>3</b>

#### Potential Changes in Climate Variables

##### Temperature (°F)

Scenario	2009	2039	2069	2099	
Annual	54.8	55.5	56.4	56.8	
Average	54.8	55.8	57.1	58.5	
GFDL45	54.8	57.6	57.4	58.3	
GFDL85	54.8	56.3	58.3	60.3	
HAD45	54.8	55.9	57.2	57.7	
HAD85	54.8	56.2	57.7	59.7	
Growing Season	61.1	61.8	62.5	62.9	
May—Sep	61.1	62.1	63.2	64.8	
GFDL45	61.1	64.5	64.2	65.3	
GFDL85	61.1	63.1	65.2	67.7	
HAD45	61.1	62.3	63.4	63.8	
HAD85	61.1	62.5	64.1	66.1	
Coldest Month	44.4	45.7	46.1	46.4	
Average	44.4	45.6	46.2	47.0	
GFDL45	44.4	46.1	46.3	46.2	
GFDL85	44.4	45.1	45.7	46.1	
HAD45	44.4	45.1	45.8	46.1	
HAD85	44.4	46.3	47.0	47.9	
Warmest Month	62.9	63.6	64.0	64.1	
Average	62.9	64.1	64.4	65.1	
GFDL45	62.9	65.2	65.7	66.2	
GFDL85	62.9	65.3	66.2	67.6	
HAD45	62.9	64.3	64.7	65.1	
HAD85	62.9	64.5	65.4	66.3	

##### Precipitation (in)

Scenario	2009	2039	2069	2099	
Annual	11.0	12.7	12.0	10.9	
Total	11.0	12.2	12.2	11.9	
GFDL45	11.0	10.0	11.4	8.2	
GFDL85	11.0	10.2	9.7	8.8	
HAD45	11.0	11.8	11.1	13.0	
HAD85	11.0	11.7	12.5	12.5	
Growing Season	6.3	7.1	6.8	6.5	
May—Sep	6.3	7.5	7.0	6.9	
GFDL45	6.3	5.7	6.9	4.7	
GFDL85	6.3	6.0	5.5	4.9	
HAD45	6.3	6.3	6.0	7.2	
HAD85	6.3	6.8	6.6	6.6	

**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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Common Name	Scientific Name	Range	MR	%Cell	FIAsum	FIAiv	ChngCl45	ChngCl85	Adap	Abund	Capabil45	Capabil85	SHIFT45	SHIFT85	SSO	N
ashe juniper	Juniperus ashei	NDH	High	0	0	0	New Habitat	New Habitat	Medium	Absent	New Habitat	New Habitat			0	1
water hickory	Carya aquatica	NSL	Medium	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	2
eastern redbud	Cercis canadensis	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	3
bigleaf magnolia	Magnolia macrophylla	NSL	Low	0	0	0	Unknown	Unknown	Medium	Absent	Unknown	Unknown			0	4