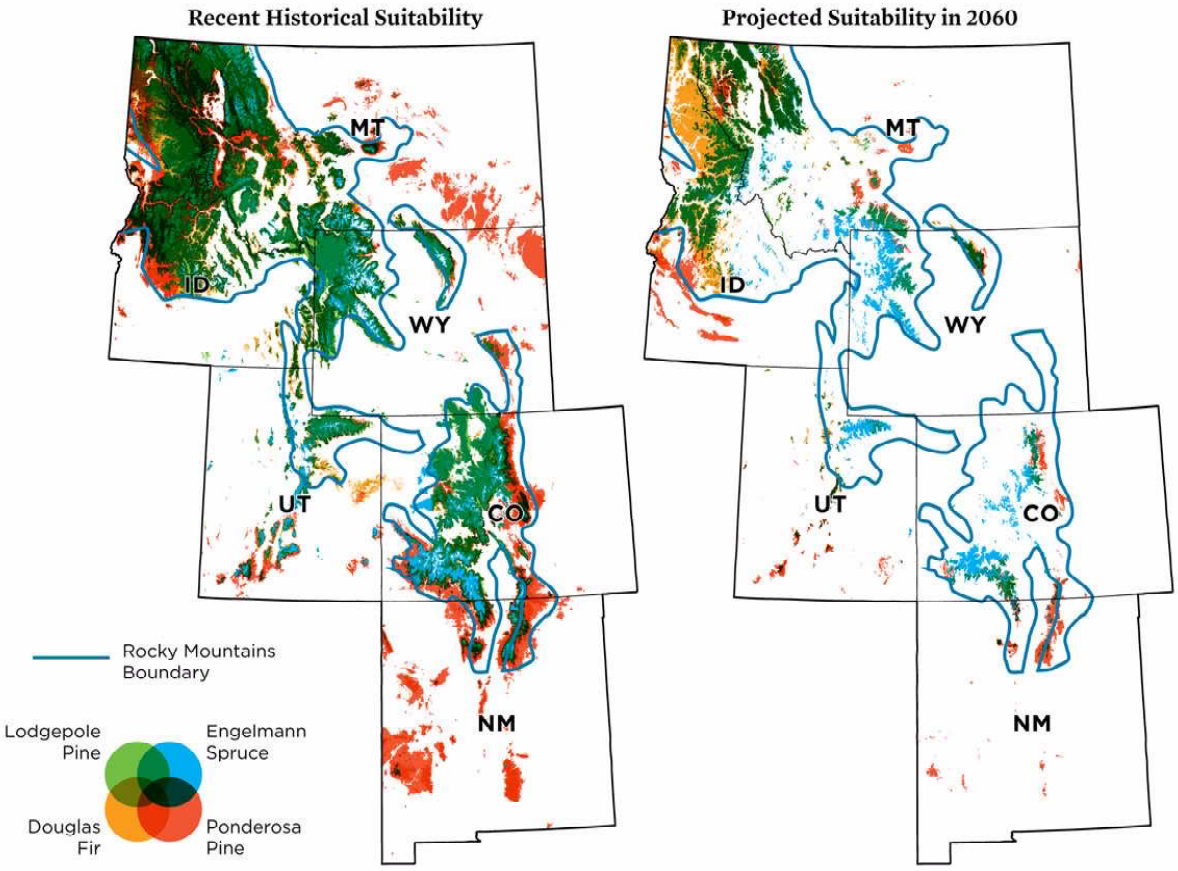
Projected Changes in Suitable Ranges for Key Rocky Mountain Tree Species



Species	Current	2060		
	Recent Historical Suitability (acres)	Projected Suitability (acres)	Net Change in Suitability (acres)	Percent Net Change
Lodgepole Pine	60,473,792	6,065,064	-54,408,728	-90%
Ponderosa Pine	39,842,408	7,771,045	-32,071,363	-80%
Engelmann Spruce	64,651,291	21,999,184	-42,652,107	-66%
Douglas Fir	53,620,143	22,605,970	-31,014,173	-58%

Much of the current range of these four widespread Rocky Mountain conifer species is projected to become climatically unsuitable for them by 2060 if emissions of heat-trapping gases continue to rise. The map on the left shows areas projected to be climatically suitable for these tree species under the recent historical (1961–1990) climate; the map on the right depicts conditions projected for 2060 given medium-high levels of heat-trapping emissions. Areas in color have at least a 50 percent likelihood of being climatically suitable according to the models, which did not address other factors that affect where species occur (e.g., soil types). Emissions levels reflect the A2 scenario of the Intergovernmental Panel on Climate Change.

SOURCE: UCS ANALYSIS OF PROJECTIONS FROM USFS MOSCOW LAB 2014; MAP BASED ON USFS N.D.