

Sagebrush Steppe Climate Change Vulnerability Assessment



Brief for Resource Managers

Forecasts of Sagebrush Distribution Across Western Land Management Agencies: Who Owns the Sagebrush?

Andy Kleinhesselink, David Iles, Rebecca Mann, Eric Lamalfa, Lexine Long, Aldo Compagnoni, Jonathon Koch, Andrew Tredennick, Peter Adler | Utah State University

Contact: Lexine Long, lexine.long@gmail.com

We used species distribution models to predict how sagebrush distribution could change in response to climate change across land management agencies in the West. Our models predict that sagebrush habitats will shift northward and upward in elevation and decrease greatly in extent. Mountainous higher elevation areas were predicted to maintain more sagebrush. U.S. Forest Service Lands were predicted to lose proportionally less sagebrush area than non-federal land or the BLM (Fig. 1). Our analysis suggests that some agencies such as the BLM with the most experience managing sagebrush will lose much of this habitat, while other agencies such as the US Forest Service may have new sagebrush habitats to manage.

Management implications

- Sagebrush habitats are likely to shift northward and upward in elevation.
- US Forest Service lands will lose proportionally less sagebrush area than non-federal and BLM lands.

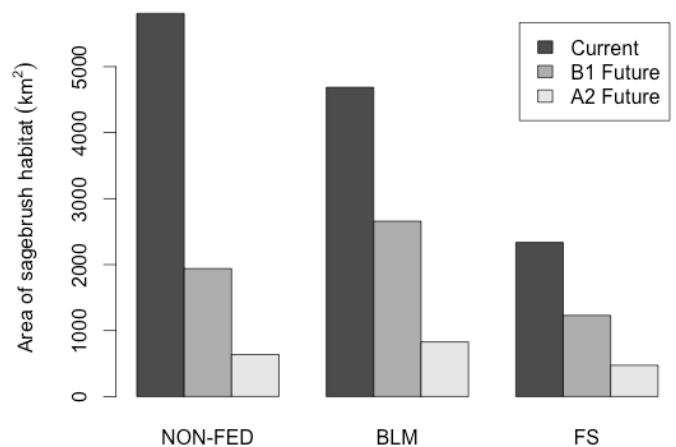


Fig. 1. Area of sagebrush habitat projected by the species distribution model under current climate and future climate scenarios for non-federal, BLM and Forest Service lands. “B1” refers to a relatively low greenhouse gas emissions scenario (moderate temperature increases) and “A2” refers to a higher emissions scenario (larger temperature increases).