

Assessing vulnerabilities and adapting to climate change in northwestern U.S. forests

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Received: 5 November 2016 / Accepted: 10 April 2017 / Published online: 24 April 2017
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Abstract Multiple climate change vulnerability assessments in the Pacific Northwest region of the USA provide the scientific information needed to begin adaptation in forested landscapes. Adaptation options developed by resource managers in conjunction with these assessments, newly summarized in the Climate Change Adaptation Library of the Western United States, provide an extensive choice of peer-reviewed climate-smart management strategies and tactics. More adaptation options are available for vegetation than for any other resource category, allowing vegetation management to be applied across a range of spatial and temporal scales. Good progress has been made in strategic development and planning for climate change adaptation in the Northwest, although on-the-ground implementation is in the early stages. However, recent regulatory mandates plus the increasing occurrence of extreme events (drought, wildfires, insect outbreaks) provide motivation to accelerate the adaptation process in planning and management on federal lands and beyond. Timely implementation of adaptation and collaboration across boundaries will help ensure the functionality of Northwest forests at broad spatial scales in a warmer climate.

1 Introduction

Forests in the Pacific Northwest region of the USA (Washington, Oregon, Idaho, western Montana) provide many ecosystem services, including timber, water, food, bioenergy, plant

This article is part of a Special Issue on ‘Vulnerability Assessment of US Agriculture and Forests developed by the USDA Climate Hubs’ edited by Jerry L. Hatfield, Rachel Steele, Beatrice van Home, and William Gould.

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