

Partnership produces recommendations for managers to respond to climate change

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A new report released today identifies natural resources that will be sensitive to a warmer climate in the North Cascades and offers management responses that will minimize adverse impacts on aquatic and terrestrial ecosystems.

The report, *Climate Change Vulnerability and Adaptation in the North Cascades Region, Washington*, is a product of the largest collaborative effort on federal lands to date, led by the North Cascadia Adaptation Partnership (NCAP). The partnership used an all-lands approach to increase awareness of [climate change](#), assess the vulnerability of natural and cultural resources, and incorporate [climate](#) change adaptation into management of federal lands in the North Cascades region. It is led by the U.S. Department of Agriculture Forest Service Pacific Northwest Research Station and Mount Baker-Snoqualmie and Okanogan-Wenatchee National Forests; North Cascades National Park Complex; Mount Rainier National Park; and the University of Washington Climate Impacts Group.

"It's critical that we work across agency boundaries to ensure that techniques for responding to climate change are effective," said Dave L. Peterson, a research biologist with the Pacific Northwest Research Station, which published the report. Peterson co-authored the report along with lead author Crystal Raymond, a climate scientist with Seattle City Light, and Regina Rochefort, a science advisor with the National Park Service.

Impacts related to hydrologic systems in the North Cascades are emphasized in the report. Cascades watersheds are expected to become increasingly rain dominated, rather than snow dominated. This will cause more autumn and winter flooding on much of the 10,000 miles of roads in the North Cascades.

"Events like the floods of 2006 that closed Mount Rainier National Park for six months affect both public access and infrastructure," said Mount Rainier National Park Superintendent Randy King. "Changing precipitation patterns, receding glaciers, and aggrading stream beds have increased flood vulnerability. If there are actions that we can take to predict and reduce flood damage, we need to take a hard look at them."

Adaptation tactics were identified in response to climate sensitivities, including installing hardened stream crossings, stabilizing stream banks, designing culverts for higher flows, and upgrading bridges. Implementation will enhance the potential for North Cascades ecosystems to maintain long-term functionality in future decades.

This report also addresses increased wildfire and insect sensitivity east of the Cascade crest as a result of a [warmer climate](#). On the heels of a record fire season in the state, it offers recommendations for how to respond to these changes and fast-track forest restoration.

"The recommendations in this report offer common sense approaches to help restore forests and limit the severity of future fires and other extreme events," said Becki Heath, Deputy Regional Forester for the Forest Service Pacific Northwest Region.

More information: The publication is available online at www.treearch.fs.fed.us/pubs/47131

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