New report synthesizes best available science on management of moist mixed-conifer forests

October 16 2014

Oregon and Washington land managers have a new synthesis of recent research findings to inform their management of eastside moist mixed-conifer (MMC) forests in the two states.

The Ecology and Management of Moist Mixed-Conifer Forests in Eastern Oregon and Washington: A Synthesis of the Relevant Biophysical Science and Implications for Future Land Management, a general technical report published by the U.S. Forest Service's Pacific Northwest Research Station, is a direct response to a request from managers for a synthesis of the large body of scientific information on MMC forests.

"The synthesis will assist natural resource managers and policymakers with the application of the best available science information to address the management of moist mixed-conifer forests in eastern Oregon and Washington," said Peter Stine, Director of Partnerships and Collaboration at the Pacific Southwest Research Station and lead editor of the new technical report. "Our report is a compilation of existing research across multiple natural resource issues."

Moist mixed-conifer forests—which are dominated by a combination of grand fir, white fir, and Douglas-fir trees—cover a large area east of the Cascade crest, where they occupy a critical intermediate position between the drier conifer forests and the wetter mixed-conifer forests

that are juxtaposed on these eastside forested landscapes. These forests are important for watershed protection, wildlife habitat, carbon sequestration, outdoor recreation, and other ecosystem services, yet are drought-stressed and vulnerable to high-severity wildfire following decades of human disturbances and climate warming.

The report reviews existing MMC research across multiple natural resource issues—including disturbance regimes, past management effects, silvicultural management options, wildlife habitat, and social and policy concerns—and synthesizes this large body of scientific information into a set of succinct findings that are relevant to resource managers. Among the findings:

- Disturbance regimes in MMC forests have been significantly altered after 150 years of Euro-American land use;
- Contemporary moist mixed-conifer forests are more vulnerable to large, high-severity fire and insect outbreaks; and
- Patterns of vegetation structure and composition in an eastside forest landscape shaped by intact disturbance regimes would create a diverse and patchy landscape, more resilient to future and inevitable disturbances.

"Ultimately, management choices should acknowledge and respond to local variability," Stine said. "This report provides general scientifically defensible findings and principles that can be applied to local settings."

More information: The report is available online at www.fs.fed.us/pnw/pubs/pnw_gtr897.pdf

Provided by USDA Forest Service