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Department Forest Resources

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Permission date



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<http://www.forestry.oregonstate.edu/cof/fr/facultypages/bailey.php>

Research Fields

- Atmospheric chemistry
- Biogeochemistry
- Carbon Footprint Analysis
- Climatology
- Community & Disaster Planning
- Data Analysis & Statistical Modeling
- Ecology & Ecosystem Management
- Economics
- Energy policy & technology
- Ethics
- Fire
- Forestry & Forest Management
- Geographic Information Systems
- Horticulture
- Human Impacts - economics
- Human Impacts - health
- Human Impacts - policy
- Hydrology
- Impacts - agriculture & horticulture
- Impacts - ecosystems, populations
- Impacts - physical
- Instrumentation
- Mitigation Policy
- Modeling Climate
- Modeling Ecosystems
- Modeling Socioeconomic Processes
- Natural Resource Policy & Planning
- Outreach & Engagement
- Paleoclimatology
- Paleoecology
- Physical Ecology
- Physiological Ecology
- Urban Ecology
- Water Policy & Planning
- Other...

Specific Research Interests

Developing forest management approaches that restore and maintain ecosystem stability/resiliency over long time spans and large spatial scales – manipulation of structure, fuel beds, fire behavior, wildlife habitat, watershed processes and ecosystem recovery following fire.

Projects

Bailey, J.D. 2007-2008. Historic Age Structure and Fire Regimes of Pacific Silver Fir Forests in the Parks Creek Area. USDA Forest Service Willamette National Forest.

Bailey, J.D. and B. McComb. 2007-2008. Alternative Stand Establishment Techniques in Managed Forest Landscapes: Long-term effects of gap size on vertebrate habitat characteristics and invasive species. Forestry Research Laboratory, Fish and Wildlife Habitat in Managed Forests Research Program.

Bailey, J.D. 2006-2009. Fire Behavior and Fire Risk Modeling for Southern Oregon. Mealey-Boise Foundation.

Newton, M., J. Bailey and E. Cole. 2006-2012. Westside Mature Forest Study. Oregon Department of Forestry.

Bailey, J.D. and J. McIver. 2006-2007. Fuels and Fire Management Effects. USFS Rocky Mountain Research Station RJVA.

Bailey, J.D. 2005-2007. *Southwestern Silviculture, Fuels and Fire Management, and Forest Health Research*. USFS Rocky Mountain Research Station RJVA.

Selected Recent Publications

Bailey, J.D. and R.K. Speer. 2007. Understory vegetation responses to group selection thinning and prescribed fire at the Southwest Plateau Fire and Fires Surrogate sites. IN: *Proceedings of the 8th Biennial Colorado Plateau Meeting* (Van Riper *et al.* eds.) IN PRESS.

Shatford, J.P., J.C. Tappeiner and J.D. Bailey. 2007. Understory tree development with repeated stand-density treatments in coastal Douglas-fir forests of Oregon. *West. J. App. For.* IN PRESS.

Ares., A., T. Terry, C.A. Harrington, and J.D. Bailey. 2007. Biomass removal, soil compaction, and vegetation control effects on five-year growth of Douglas-fir in coastal Washington. *Forest Science*: IN PRESS.

McDowell, N.G., H.D. Adams, J.D. Bailey, and T.E. Kolb. 2007. The role of stand density on growth efficiency, leaf area index and resin flow in southwestern ponderosa pine forests. *Can. J. For. Res.* 37:343-355.

Faiella, S.M. and J.D. Bailey. 2007. Fluctuations in fuel moisture across restoration treatments in semi-arid ponderosa pine forests of northern Arizona, USA. *Intl J. Wildl. Fire* 16:119-127.

Landis, A.G. and J.D. Bailey. 2006. Predicting the age of pinyon and juniper trees in northern Arizona: guides for forest restoration treatments. *West. J. App. For.* 21(4):203-6.

McDowell, N.G., H.D. Adams, J.D. Bailey, M. Hess and T.E. Kolb. 2006. Homeostatic maintenance of ponderosa pine gas exchange in response to stand density changes. *Ecological Applications* 16(3) 1164-1182.

Professional Activities

Associate Editor (Fire and Fuels Management) – Western Journal of Applied Forestry

Manuscript/book reviewer for: Island Press, Yale University Press, Oregon State University Press, University of Arizona Cooperative Extension, USGS Biological Research Division, *Western Journal of Applied Forestry* (Associate Editor, plus 4 as reviewer), *Forest Ecology and Management* (7), *Canadian Journal of Forest Research* (3), *Tree Physiology* (2), *Trees- Structure and Function*, *Forest Science*, *Southern Journal of Applied Forestry*, *Journal of Forestry*, *New Forests*, *Conservation Biology*, *Journal of Arid Environments*, *Madrono* and *Journal of Applied Ecology*.

Proposal reviewer for: National Science Foundation, USDA Research and Scientific Exchanges Division, NAU School of Forestry, and USDA Forest Service Rocky Mountain Research Station

Member of: Society of American Foresters: Silviculture Working Group (D2) and local Chapter/Section, International Society of Tropical Foresters, Xi Sigma Pi, past-Forester and Faculty Advisor, and International Union of Forestry Research Organizations, Division 4 – Forest Modeling