



HAILEY BUCKINGHAM

Oregon State University, College of Forestry

Degrees:

B.S. Biology, minor in Chemistry, Seattle Pacific University
M.S. Plant Biology, University of California, Riverside

Advisor:

Claire Montgomery, Ph.D.

Scholar Award Donor:

Nancy and Dodd Fischer

About the Scholar:

Hailey is an interdisciplinary student working with Oregon State University's colleges of computer science, forestry, and applied economics with an emphasis on policy analysis. Her current work is designed to answer difficult questions about wildfire policies, including the economic costs and benefits of letting fires burn, and the expected outcome, both economically and ecologically, of new policies about beneficial wildfires on America's forests. Hailey's research is part of a national effort to find new ways of thinking about fire management, containment, and use.

Benefits to Society:

Every year, the US Forest Service spends more and more money on the suppression of wildfires in our national and state forests. It is estimated that more than half of this year's Forest Service budget will be spent on suppression activities alone. At the same time, the prevalence of record-breaking unstoppable fires is on the rise. Questions about how our forests have become so vulnerable to large fires in the first place have given way to a search for solutions for reducing the frequency of catastrophic fires. Hailey's research is part of a national effort to find new ways of thinking about fire management, containment, and use. The computer programs she is writing will hopefully play an important role in our ongoing scientific, political, and public debate about wildfire.

Awards and Honors:

Excellence in Technology Transfer Award: US Dept. of Energy, Federal Laboratory Consortium
Technology Transfer Award, Outstanding Effort: USDA Agricultural Research Service
Trustee's Scholar, Seattle Pacific University
Burwell Engineering Scholar, Seattle Pacific University
Provost Fellow, Oregon State University

Publications and Posters:

H. K. Buckingham, R. M. Houtman, C. A. Montgomery, A. R. Gagnon, T. G. Dietterich, S. McGregor, M. Crowley, Y. Lee (2013) "Optimizing Wildfire Policy: A dynamic modelling and simulation approach." *Western Forestry Graduate Research Symposium*, Poster Presentation

Under her previous name (L.A.Buckingham)

Lambrecht SC, Santiago LS, DeVan CM, Cervera JC, Stripe CM, **Buckingham LA**, Pasquini SC (2011) "Plant water status and hydraulic conductance during flowering in the southern California coastal sage shrub *Salvia mellifera* (Lamiaceae)." *American Journal of Botany* 98:1286–1292

Nelson, T.A., Haberlin, K., Nelson, A.V., Ribarich, H., Hotchkiss, R., Van Alstyne, K.L., **Buckingham, L.**, Simunds, D.J., and Fredrickson, K. (2008) "Ecological and physiological controls of species composition in green macroalgal blooms." *Ecology* 89:1287-1298.

