

Kelly E Gleason

Assistant Professor of Eco-hydro-climatology
Department of Environmental Science and Management
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EDUCATION

- Ph.D. 2015** **Oregon State University**, Corvallis, OR
Geography Program, College of Earth, Ocean, and Atmospheric Sciences
Dissertation Title: *Forest Fire Effects on Radiative and Turbulent Fluxes over Snow: Implications for Snow Hydrology*
Committee: Anne Nolin (chair), Dennis Albert, John Bailey, Julia Jones, and Chris Thomas
- M.S. 2010** **University of Florida**, Gainesville, FL
Interdisciplinary Ecology, School of Natural Resources and Environment
Thesis Title: *Elevational Gradient Resembles Latitudinal Gradient in Global Language Diversity*
Geographic Information Science (GIScience) Graduate Certificate
- B.S. 2002** **The Evergreen State College**, Olympia, WA
Ecology

RESEARCH & TEACHING INTERESTS

Snow and ice processes in mountain environments, disturbance ecohydroclimatology, water-climate-forest interactions, integrated modeling of the hydroclimate, surface energy balance modeling, remote sensing of land cover change, spatiotemporal statistics, and geo-analytics.

PROFESSIONAL RESEARCH & TEACHING APPOINTMENTS

- Assistant Professor**, Eco-hydro-climatology (2018 – present)
Department of Environmental Science and Management
Portland State University, Portland, OR
- Postdoctoral Research Fellow**, Snow Hydrology (2017 – 2018)
Desert Research Institute, Reno, NV
- Postdoctoral Research Associate**, Ecohydrology (2015 – 2017)
Southwest Biological Science Center,
U.S. Geological Survey, Flagstaff, AZ
- Lecturer**, Physical Geography (2015)
Geosciences Department,
Oregon State University, Corvallis, OR
- Graduate Research Assistant**, Snow Hydrology (2011 – 2014)
Water Sustainability and Climate Award (National Science Foundation)
College of Earth, Ocean, and Atmospheric Sciences
Oregon State University, Corvallis, OR

Teaching Assistant, Physical Geography (2010 – 2011)
Geosciences Department, Oregon State University, Corvallis, OR

Teaching Assistant, Biology (2008 –2010)
Biology Department, University of Florida, Gainesville, FL

Field Research Technician, Forest Canopy Ecology and Ecohydrology (2002 – 2008)
University of Washington, WA; Simon Fraser University, British Columbia; University of California, Berkeley, CA; Northern Arizona University, AZ; Bureau of Land Management and US Forest Service, WA, OR, and CA.

PUBLICATIONS

Gleason, K. E., McConnell, J.R., Arienzo, M.A., Chellman, N., and Calvin, W.M. (2019), Four-fold increase in forest-fire-related solar forcing on western U.S. snow since 1999. *Nature Communications*, 10 (1), 2026.

Legrand, M., J. R. McConnell, S. Preunkert, M. M. Arienzo, N. J. Chellman, N. J., **K. E. Gleason**, T. Sherwen, M. J. Evans, and L. J. Carpenter. 2018. Alpine ice evidence of a three-fold increase in atmospheric iodine deposition since 1950 in Europe due to increasing oceanic emissions. *Proceedings of the National Academy of Sciences*, 115 (48), 12136-12141.

Gleason, K. E., J. Bradford, A. Bottero, T. D'Amato, S. Fraver, B. Palik, M. Battaglia, L. Iverson, and C. C. Kern. 2017. Competition amplifies drought stress in forests across broad climatic and compositional gradients. *Ecosphere*, 8, e01849. 10.1002/ecs2.1849

Gleason, K. E., A. W. Nolin, and T. R. Roth. 2017. Developing a representative snow monitoring network in a forested mountain watershed. *Hydrology and Earth System Science*, 21, 1137-1147. DOI: 10.1002/hyp.10897

Curzon, M. T., A.W. D'Amato, S. Fraver, B. Palik, A. Bottero, J. R. Foster, and **K. E. Gleason**. 2017. Harvesting influences functional identity and diversity over time in forests of the northeastern U.S.A. *Forest Ecology and Management*, 400, 93-99.

Gleason, K. E. and A. W. Nolin. 2016. Charred forests accelerate snow albedo decay: parameterizing the post-fire radiative forcing on snow for three years following fire. *Hydrological Processes*, 30, 3855-3870. DOI: 10.1002/hyp.10897.

Coons, L. P., A. W. Nolin, **K. E. Gleason**, E. J. Mar, K. Rittger, T. R. Roth, and T. H. Painter. 2014. Seeing the snow through the trees: Toward a validated canopy adjustment for satellite snow-covered area, Chapter 12, In: Remote Sensing of the Terrestrial Water Cycle, V. Lakshmi (ed.), AGU Geophysical Monograph Series, no. 206, Wiley & Sons.

Gleason, K. E., A. W. Nolin, and T. Roth. 2013. Charred forests increase snowmelt: effects of burned woody debris and incoming solar radiation on snow ablation, *Geophysical Research Letters*, 40, 1-8.

AWARDED GRANTS, SCHOLARSHIPS, & FELLOWSHIPS

2020 “Eagle Creek Fire Impacts to Cold Water Refuges in the Columbia River Gorge, an

- Opportunity for Student Training, Public Service, and Research Collaboration”, PSU-USGS University Partnership Program, Portland State University, Lead author. (\$20,000)
- 2019** “Forest Fire Effects on Snow Albedo, Snowmelt, and Snow-Water Resource Availability”, PSU Vision 2025, Portland State University, Lead author. (\$25,000)
- 2019** “Training and Retention of Women Leaders in Science (TRELIS) Fellowship, University Consortium of Geographic Information Sciences and National Science Foundation.
- 2018** “Forest Fire Effects on Snow Albedo: Improving Remote Sensing of Snow in Burned Forests,” National Aeronautics and Space Administration, Desert Research Institute, Lead author. (\$330,000)
- 2017** “Maki Postdoctoral Research Fellowship in Snow Hydrology,” Desert Research Institute, Division of Hydrologic Sciences, Reno, NV
- 2012** “Forest fire effects to snow accumulation and melt,” National Science Foundation Hydrologic Sciences RAPID Award, Oregon State University, Lead Author. (\$20,000)
- 2011** “Biotic impacts of changing climate and disturbance regimes on cold region ecosystems from watershed to continental scales,” National Science Foundation Macro-systems Biology Workshops, Contributing author. (\$150,000)

PROFESSIONAL PRESENTATIONS

- 2020** American Geophysical Union Fall Meeting, Poster Presentation, San Francisco, CA
- 2019** Pacific Northwest Climate Science Conference, Oral Presentation, Portland, OR
- 2019** Western Snow Conference, Oral Presentation, Reno, NV
- 2019** USGS Brownbag Seminar, Water Science Center, Portland, OR
- 2018** American Geophysical Union Fall Meeting, Poster Presentation, New Orleans, LA
- 2017** Tahoe Silicon Mountain, Truckee, CA
- 2017** Science Distilled, Reno, NV
- 2016** MtnClim, Oral Presentation, Leavenworth, WA
- 2014** American Geophysical Union Fall Meeting, Poster Presentation, San Francisco, CA
- 2014** Pacific Northwest Climate Science Conference, Poster Presentation, Seattle, WA
- 2014** WW2100 Stakeholder Engagement Meeting, Poster Presentation, Salem, OR
- 2013** American Geophysical Union Fall Meeting, Poster Presentation, San Francisco, CA
- 2013** Pacific Northwest Climate Science Conference, Poster Presentation, Portland, OR
- 2012** American Geophysical Union Fall Meeting, Oral Presentation, San Francisco, CA
- 2011** American Geophysical Union Fall Meeting, Poster Presentation, San Francisco, CA
- 2011** Association of American Geographers Annual Meeting, Oral Presentation, Seattle, WA

NON-ACADEMIC EMPLOYMENT

- Native Plant Specialist**, Vegetation Division, (2010)
Grand Canyon National Park, AZ
- Vegetation Crew Leader**, Vegetation Division, (2008)
Grand Canyon National Park, AZ
- Peace Corps Volunteer**, Agroforestry, (2004 – 2006)
Tuna, Paraguay

PROFESSIONAL AFFILIATIONS

American Geophysical Union
Association of American Geographers