**Lisa M Ellsworth**

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**Research and Teaching Interests**

Rangeland ecology and management; fire ecology; fire behavior and modeling; rangeland restoration; human dimensions of fire; science communication and outreach; increasing diversity and representation for underserved minorities in STEM

**Education**

2012 **Ph.D.** University of Hawaii at Manoa,Natural Resources and Environmental Management

2006 **M.S.**  Oregon State University, Wildlife Science

2001 **B.S.** Oregon State University, Biology

**Professional Appointments**

2014-present **Assistant Professor, Senior Research**, Oregon State University, Fisheries and Wildlife

2017-2018 **Wilburforce Conservation Fellow,** Wilburforce Foundation

2012-2014 **Postdoctoral Scholar**, Oregon State University, Fisheries and Wildlife

2008-2012 **Graduate Research Assistant,** University of Hawaii at Manoa, NREM

2007-2008 **Permanent Plot Network Supervisor,** USDA Forest Service and University of Hawaii

2006-2007 **Rangeland Ecologist,** University of Nevada, Natural Resources and Environmental Sciences

2003-2005 **Graduate Research Assistant,** Oregon State University, Fisheries and Wildlife

2003 **Research Technician,** Oregon State University/Centro Cientifico Tropical (Costa Rica)

2002 **Faculty Research Assistant,** Oregon Cooperative Fisheries and Wildlife Research Unit

2000-2002 **Laboratory Technician,** Oregon State University, Dept. of Botany and Plant Pathology

1998-1999 **Wildland Firefighter,** Douglas Forest Patrol

**Publications (Peer-Reviewed)**

Jetter, A, **LM Ellsworth**, and S Gray. Investigating stakeholders’ mental models of wildland fire risks with fuzzy cognitive maps. *In prep for Risk Analysis*. Complete draft available.

**Ellsworth, LM,** JB Kauffman, SAReis, D Sapsis, and K Moseley. Repeated fire sets trajectory for persistent herbaceous dominance, suppression of woody vegetation, and increased fire behavior in high desert shrublands. *In review: Ecosphere*

Schuyler, EM, **LM Ellsworth,** DM Sanchez, and DG Whittaker. Habitat use of a landscape species is impacted by anthropogenic and ecological drivers. *In review: Ecosphere*

Gray, S, A Jetter, **LM Ellsworth**, A Singer, O Laraichi, and P Zhang. Avoiding Fussy Cognitive Maps. *In review: Socio-Environmental Systems Modeling*

Kauffman, JB, **LM Ellsworth**, S Acker, DM Bell, and J Kertis. 2019. Forest structure and biomass reflects the variable effects of fire and land use 15 and 29 years following fire in the western Cascades, Oregon. *Forest Ecology and Management*: 453:117570

Reis, SA, **LM Ellsworth**, JB Kauffman, and D Wrobleski. 2019. Long-Term Effects of Fire on Vegetation Structure and Predicted Fire Behavior in Wyoming Big Sagebrush Ecosystems. *Ecosystems* 22(2): 257–265

Dittel, JW, D Sanchez, **LM Ellsworth**, CN Morozumi, and R Mata-Gonzalez. 2018. Vegetation response to juniper reduction and grazing exclusion in sagebrush-steppe habitat in eastern Oregon. *Rangeland Ecology and Management* 71: 213-219

Powell, KB, **LM Ellsworth**, CM Litton, KLL Oleson, and SA Ammondt. 2017. Balancing ecological restoration of native species with economic reality: Lessons from a Hawaiian dry lowland ecosystem dominated by the invasive grass *Megathyrsus maximus*. *Pacific Science* 71(4): 479-493

**Ellsworth, LM**, and JB Kauffman. 2017. Plant community response to prescribed fire varies by pre-fire condition and season of burn in mountain big sagebrush ecosystems. *Journal of Arid Environments* 144: 74-80

**Ellsworth, LM,** AP Dale, CM Litton, and T Miura. 2017. Improved fuel moisture prediction in non-native tropical *Megathyrsus maximus* grasslands using Moderate Resolution Imaging Spectroradiometer (MODIS) derived vegetation indices. *International Journal of Wildland Fire* 26(5): 384-392

**Ellsworth, LM**, JB Kauffman, D Wrobleski, and SA Reis. 2016. Ecosystem resilience is evident 17 years after fire in Wyoming big sagebrush ecosystems. *Ecosphere* 7(12): e01618

**Ellsworth, LM,** CM Litton, and JK Leary. 2015. Restoration impacts on fuels and fire potential in a dryland tropical ecosystem dominated by the invasive grass *Megathyrsus maximus*. *Restoration Ecology* 23(6): 955-963

Evans, EW, **LM Ellsworth**, and CM Litton. 2015. Impact of grazing on fine fuels and potential fire behavior in a non-native tropical grassland. *Pacific Conservation Biology* 21(2): 126-132*.*

Beschta, RL, JB Kauffman, DS Dobkin, and **LM Ellsworth**. 2014. Long-term livestock grazing alters aspen age structure in the northwestern Great Basin. *Forest Ecology and Management* 329: 30-36*.*

**Ellsworth, LM,** CM Litton, AP Dale, and T Miura. 2014. Invasive grasses change landscape structure and fire behaviour in Hawaii. *Journal of Applied Vegetation Science* 17(4): 680-689*.*

**Ellsworth, LM,** CM Litton, AD Taylor and JB Kauffman.2013. Spatial and temporal variability in *Megathyrsus maximus* grasslands on Oahu, Hawaii. *International Journal of Wildland Fire* 22:1083-1092.

Bergstrom, R, R Caddell, MW Chynoweth, **LM Ellsworth**, S Henly-Shepard, DK Iwashita, CA Lepczyk, and K Miller. 2013. A review of solutions and challenges to addressing human population growth and global climate change. *The International Journal of Climate Change: Impacts and Responses* 4(3): 147-172.

**Ellsworth, LM** and JB Kauffman. 2013. Seedbank responses to spring and fall prescribed fire in mountain big sagebrush ecosystems of differing ecological condition at Lava Beds National Monument, California. *Journal of Arid Environments* 96: 1-8*.*

Ammondt, S AE, CM Litton, **LM Ellsworth**, and JK Leary. 2012. Restoration of native plant communities in a Hawaiian dry lowland ecosystem dominated by the invasive grass *Megathyrsus maximus*. *Journal of Applied Vegetation Science* 16(1): 29-39*.*

**Ellsworth, LM** and JB Kauffman. 2010. Native bunchgrass response to prescribed fire in ungrazed mountain big sagebrush ecosystems. *Fire Ecology* 6(3): 86-96.

**Publications (Extension and Technical Reports)**

**Ellsworth, LM**, C Trauernicht, and M Kunz. 2017. Restoration impacts on fuels and fire potential. Pacific Fire Exchange Research Brief

Singer, A, A Jetter, **LM Ellsworth**, S Gray, P Zhang, MO Laraichi. 2017. Policy scenarios for fire-adapted communities: Understanding stakeholder risk perceptions in Ashland, Oregon

Jetter, A, A Singer, S Gray, **LM Ellsworth**, P Zhang, MO Laraichi. 2017. Fuzzy cognitive mapping for fire science applications

**Professional Affiliations**

Society for Range Management (SRM)

The Wildlife Society (TWS)

The Association for Fire Ecology (AFE)

Ecological Society of America (ESA)

 International Association of Wildland Fire (IAWF)

Society for Ecological Restoration (SER)

**Grant Funding**

**Ellsworth, LM**, TS Garcia, AJ Kroll, D Warren. 2020. Post-fire refugia in Oregon’s managed forests for salamanders of conservation concern. Fish and Wildlife Habitat in Managed Forests. *Pre-proposal accepted. Full proposal in preparation.*

Dugger, KM, **LM Ellsworth**, TS Garcia, AJ Kroll, and LM Thurman. 2020. The wildfire and timber harvest connection: the role of large downed wood on salamander population resilience in disturbed landscapes. USGS Climate Science Adaptation Center. $299,693. *Pre-proposal accepted. Full proposal in preparation.*

Fischer, EC, D Blunck, J Bailey, R Gupta, L Muszynski, J Adams, G Hollinger, **LM Ellsworth**, and A Sinha. 2020. Gas flow management system for the OSU fire testing facility. National Science Foundation Major Infrastructure Grant Program, $303,169. *In review.*

Fischer, EC, **LM Ellsworth,** L Linderman, J Tilt, and B Wham. 2019. Sensor technology for improved wildland urban interface (WUI) fire resilience. Alfred P. Sloan Foundation, $1,486,404.

Chambers, J, M Reeves, K Short, A Urza, B Hanberry, **LM Ellsworth**, E Strand, K Rollins, and M Taylor. 2019. Using Next Generation Fuels Data and Outcome-Based Metrics in Fire Risk Assessments for High Value Resources in the Sagebrush Biome. Joint Fire Science Program, $488,021

**Ellsworth, LM**. 2018. SageSTEP: Great Basin soil carbon assessment. U.S. Forest Service, Rocky Mountain Research Station, $19,751

Sanchez, D, **LM Ellsworth** and J Dittel. 2018. Frontlines of invasion and postfire recovery in critical mule deer habitat at PWSWA. Oregon Department of Fish and Wildlife $484,144

**Ellsworth, LM**, E Strand, and M Reeves. 2018. SageSTEP: Treatment impacts on potential fire behavior. U.S. Forest Service, Rocky Mountain Research Station, $22,500

Davis, E, P McDowell, **LM Ellsworth**, and M Goslin. 2018. Long-term ecological effects of passive restoration in the Middle Fork John Day watershed. Oregon Watershed Enhancement Board $260,706

Dittel, J, **LM Ellsworth**, DM Sanchez, and EM Schuyler. 2017. Post-fire recovery of native shrubs in the sagebrush-steppe. Joint Fire Science Program. $362,074 (ranked for funding but precluded by federal budget cuts)

Kauffman, JB, D Bell, **LM Ellsworth**, J Kertis, and S Acker. 2016. Post-fire landscape management and fire severity influences in Western Oregon forests. Joint Fire Science Program $321,138

Sanchez, D and **LM Ellsworth**. 2016. Post-treatment recovery of mule deer habitat in juniper-invaded sagebrush-bitterbrush ecosystems. Oregon Department of Fish and Wildlife $491,833

**Ellsworth, LM,** and JB Kauffman. 2014. Long-term impacts of wildfire on fuel loads, vegetation composition, and potential fire behavior and management in sagebrush-dominated ecosystems. Joint Fire Science Program $375,223

Jetter, A, S Gray, and **LM** **Ellsworth.** 2014. Policy scenarios for fire-adapted communities: Understanding stakeholder risk- perceptions by measuring mental models using Fuzzy Cognitive Maps. Joint Fire Science Program. $181,092

Kauffman, JB, **LM Ellsworth**, and WH Pyle. 2013. An analysis of long-term recovery following implementation of passive and active restoration: Ecosystem responses of livestock removal and fire management at the Sheldon Hart Mountain National Wildlife Refuge Complex. Greater Sheldon-Hart Conservation Fund. $250,000.

**Ellsworth, LM** and CM Litton**.** 2010. Improved wildfire prediction using remote sensing technology on military grasslands in Hawaii. Department of Defense-Legacy Resource Management Program. $48,227.

**Ellsworth, LM.** 2010. Improved wildfire prediction using remote sensing technology on guinea grasslands in Hawaii. Joint Fire Sciences Graduate Research Innovation Award. $24,967

**Invited Presentations**

**Ellsworth, LM** 2018. Recovery and resilience at Eagle Creek. Organization of Fish and Wildlife Managers Conference. *Banquet speaker.* Hood River, OR

**Ellsworth, LM** 2018. After the fire: Recovery and resilience. The Native Plant Society. McMinnville, OR

**Ellsworth, LM** 2018. Communicating fire science to fire-impacted communities. COMPASS science communication stakeholder panel.

**Ellsworth, LM** 2018. After the fire: Death and rebirth in western forests. Eagle Creek Public Meetings. Corbett, OR

**Ellsworth, LM** 2018. Talking fire with empathy. Lessons from the Eagle Creek Fire. Invited panelist. Public Interest Environmental Law Conference. Eugene, OR

**Ellsworth, LM** 2018. Fuel conditions in unburned, burned, and salvaged forests of Oregon’s western Cascades.  Forest Health in Oregon: State of the State. Corvallis, OR

**Ellsworth, LM** 2017. After the fire: Death and rebirth in western forests. Eagle Creek Public Meetings. Troutdale, OR

**Ellsworth, LM** 2016. Fire in the sagebrush steppe: 21st century challenges, successes, and opportunities. Central Oregon Prescribed Fire Symposium. Bend, OR

**Ellsworth, LM** 2016. Sage grouse habitat conservation and management. Aves Research Seminars. Corvallis, OR

**Ellsworth, LM** 2010. Fire and grass invasion in Hawaii’s dry forests. Nahele Dry Forest Symposium, Kailua-Kona, HI

**Ellsworth, LM,** CM Litton, and JB Kauffman. 2010. Temporal monitoring of guinea grass fuel loads for improved fire prediction. Western Society of Weed Science Symposium, Kailua-Kona, HI

**Ellsworth, LM** and JB Kauffman. 2006. Effects of spring and fall prescribed fire on plant community composition and native bunchgrass density and reproductive effort. Nevada Wildland Fire Conference. Desert Research Institute. Reno, NV

**Ellsworth, LM**, JB Kauffman, and J Wilson. 2004*.* Vegetation response to prescribed burning at Lava Beds National Monument. Lava Beds National Monument, CA.

**Select Presentations (1st author only)**

**Ellsworth, LM**, JB Kauffman, J Kertis, S Acker, and D Bell. 2019. Fire severity and forest management alters reburn potential in mesic mixed conifer forests. Association for Fire Ecology 8th International Fire Ecology and Management Congress. Tucson, AZ

**Ellsworth, LM**, SA Reis, JB Kauffman, and D Sapsis. 2019. Repeated fire sets trajectory for persistent herbaceous dominance in basin big sagebrush ecosystems. International Association of Wildfire Fire Behavior and Fuels Conference. Albuquerque, NM

**Ellsworth, LM,** SA Reis, JB Kauffman, W Pyle, and D Wrobleski. 2015. Mid-succession fire effects in the sagebrush steppe. 6th International Fire Ecology & Management Congress. San Antonio, TX

**Ellsworth, LM**, JB Kauffman, SA Reis, W Pyle, D Sapsis, and D Wrobleski. 2015. Long term fire effects on vegetation composition and fuel loads in sagebrush-dominated ecosystems. Restoring the West Conference. Logan, UT

**Ellsworth, LM** and JB Kauffman. 2014. Effects of livestock removal in sagebrush ecosystems at Hart Mountain National Antelope Refuge, Oregon. Ecological Society of America Annual Meeting. Sacramento, CA.

**Ellsworth, LM,** AP Dale, CM Litton, and T Miura. 2012. Improved prediction of fuel moisture in invasive guinea grasslands in Hawaii using MODIS data. Association for Fire Ecology and Management Congress. Portland, OR.

**Ellsworth, LM,** CM Litton, AP Dale, and T Miura. 2012. Changes in land cover and fire risk associated with nonnative grass invasion in Hawaii. Ecological Society of America, Portland, OR.

**Ellsworth, LM,** CM Litton and JB Kauffman. 2011. A custom fuel model for improving wildfire prediction in nonnative guinea grasslands (*Megathyrsus maximus*) in Hawaii. Ecological Society of America, Austin, TX.

**Ellsworth, LM,** CM Litton and JB Kauffman. 2011. A custom fuel model for improving wildfire prediction in nonnative guinea grasslands (*Megathyrsus maximus*) in Hawaii. CTAHR Research Symposium. Honolulu, HI. ***Winner: Best PhD Student Oral Presentation***

**Ellsworth, LM,** CM Litton and JB Kauffman. 2010. Using soil moisture and antecedent weather to predict live and dead fuel moisture in nonnative guinea grasslands (*Urochloa maxima*) on the island of Oahu, Hawaii. Ecological Society of America, Pittsburgh, PA.

**Ellsworth, LM,** S Ammondt, L Deignan, CM Litton, and JB Kauffman. 2010. Managing the grass-wildfire cycle in nonnative-dominated grassland ecosystems of leeward Oahu, Hawaii. Hawaiian Conservation Conference. Honolulu, HI.

**Ellsworth, LM,** CM Litton, and JB Kauffman. 2009. Predicting and managing fire in Oahu's non-native grasslands. Hawaii Ecosystems Meeting. Hilo, HI.

**Ellsworth, LM,** CM Litton, and JB Kauffman. 2009. Using soil moisture and weather variables to predict live and dead fuel moisture on in guinea grasslands on Oahu, Hawaii. Association for Fire Ecology and Management Congress. Savannah, GA.

**Ellsworth, LM,** CM Litton, and JB Kauffman. 2009. Fuel loading and fire parameters in nonnative grasslands on military and surrounding lands on Oahu, Hawaii. Hawaiian Conservation Conference. Honolulu, HI. ***Winner: Best Student Poster Presentation.***

**Ellsworth, LM,** CM Litton, and JB Kauffman. 2009. Predicting and managing fire in Oahu's non-native grasslands. Hawaii Ecosystems Meeting. Hilo, HI.

**Ellsworth, LM**, JB Kauffman, and CM Litton. 2008. The invasive species/wildfire cycle: Fuel loads, microclimate, fire potential, and fire behavior in nonnative grasslands of military and surrounding lands on Oahu, Hawaii. Hawaii Ecosystems Meeting: Hilo, HI.

**Ellsworth, LM**, F Inman, C Giardina, S Cordell, R Ostertag, and L Sack. 2007. Establishment of a permanent plot network on the Hawaiian Islands. Hawaiian Ecosystems Meeting. Hilo, HI.

**Ellsworth, LM**, JB Kauffman, L Kellogg, A Augustine, and M Rasmussen. 2004. Decrease in *Bromus tectorum* germination following prescription fire at Lava Beds National Monument. Ecological Society of America. Portland, OR.

**Teaching Experience**

2018-2020 Instructor. *Wildlife in Agricultural Ecosystems* (FW 435)

2017-2020 Instructor. *Ecology* (BI 370)

2018 Instructor and Course Developer. *Arid Lands Fire Ecology* (FW 505)

2016, 2018 Instructor. *Plant Ecology* (BOT 341)

2016 Instructor. *Endangered Species, Society, and Sustainability* (FW 350)

 Taught as part of OSU Studies Abroad – Chile Program

2015 Instructor. *Field Sampling* (FW 255)

2015 E-campus Instructor. *Wildland Fire Ecology* (FOR 446)

2014-2015 Co-Instructor. *Wildland Fire Ecology* (FOR/FW/RNG 446/546)

2012 Instructor. *Ecology and Evolutionary Biology Lab* (BIO 254L)

2011 Guest Lecturer. *Grant Writing for Graduate Students* (FSHN 657)

2011 Teaching Assistant and Guest Lecturer. *Applied Forest Ecology* (NREM 480)

2010 Teaching Assistant and Guest Lecturer. *Wildlife Management Techniques* (NREM 491)

**Training, Extension, and Service Activities**

* Graduate Advising: E. Schyler (Ph.D. Fisheries and Wildlife); C. Plunk (PSM Environmental Science); S. Reis (M.S. Fisheries and Wildlife); D. Marvin (PSM Fisheries and Wildlife); L. Gutierrez Yee (Graduate Certificate, Fisheries and Wildlife)
* Graduate Committee Membership: C. Reed-Dustin (M.S. Animal and Rangeland Science); C. Anthony (Ph.D. Fisheries and Wildlife); I. Sprecher (M.N.R, Forestry); T. Owens (M.S. Animal and Rangeland Science); V. Schroeder (M.S. Animal and Rangeland Science), L. Ridder (M.S. Fisheries and Wildlife), T West (PhD Forest Engineering Resources and Management)
* USFS: Fire in Mixed Conifer Forests field tour – Oakridge, OR
* Department of Fisheries and Wildlife Diversity Committee (2016-2020); Committee Chair 2017-2018)
* Department of Fisheries and Wildlife Curriculum Committee (2018-2019)
* Department of Fisheries and Wildlife Scholarship Committee (2016-2018)
* Department of Fisheries and Wildlife Graduate Admissions Committee (2015-2016)
* Eagle Creek Fire Public Forums. 2017-2018. Series of public meetings educating public groups on forest ecology and post-fire succession.
* Rogue Basin “Bringing Back Fire”: Collaborative extension workshops
* Session organizer: Ecological Society of America 2014 Annual Meeting
* Supervised and trained over 70 interns, technicians, and student workers in various aspects of field sampling, sample and data processing, GIS mapping, and remote sensing

**Recent Journal Reviews**

*Restoration Ecology; Landscape Ecology; Rangeland Ecology and Management; Applied Vegetation Science; Botany; Ecosphere; Journal of Arid Ecosystems; Journal of Soil Science and Environmental Management; Forestry; Animal Conservation; Journal of Ecology and Natural Environment*

**Recent Media work and Press Coverage**

PBS NOVA: “Invasive, flammable grasses now blanket much of the United States”

<https://www.pbs.org/wgbh/nova/article/invasive-grasses-wildfire/>

Elemental – Full feature film for 2020 release. National Geographic and Balance Media

Living with Wildfire: Travel Oregon

<https://www.youtube.com/watch?v=6BEBPtz8o-0>

AAA Via Magazine: “Rediscovering Columbia River Gorge After Eagle Creek Fire”

<https://calstate.aaa.com/via/places-visit/columbia-river-gorge-after-eagle-creek-fire>

The Oregonian: Eagle Creek Fire Anniversary

<https://www.oregonlive.com/expo/news/erry-2018/09/7dd264ccc16223/eagle-creek-fire-anniversary-g.html>

Compass Science Communications

<https://www.compassscicomm.org/single-post/2017/04/07/Meet-A-2017-Wilburforce-Fellow-Lisa-Ellsworth>

Eagle Creek Fire Documentary

<https://www.youtube.com/watch?v=Fg_fBGBH7fY#action=share>

After the Smoke Clears Video

<https://www.youtube.com/watch?v=1sUFcYe4nqI>

Oregon Public Broadcasting

<https://www.opb.org/news/article/sage-grass-wildfire-native-species-wildfire-recovery-oregon/>

Terra Magazine

<http://terra.oregonstate.edu/2017/04/living-with-fire/>

Capital Press

<http://www.capitalpress.com/Research/20170601/native-sage-grasses-handle-wildfires-better-researchers-say>