Kerry L. Metlen, Ph.D.

Senior Forest Scientist - The Nature Conservancy - Oregon Field Office
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Goal: Apply fundamental ecological principals to conserving resilient, healthy ecosystems for people and nature

Current Position

2022-Present – **Senior Forest Scientist – The Nature Conservancy of Oregon**

- Advance the forest restoration evidence base, inclusive of disciplines, and ways of knowing, in support of forest conservation, restoration implementation and policy across Oregon
- Link science developed in support of focused geographies to existing and emerging evidence at state and regional scales through the Western Dry Forests and Fire Program
- Coordinate technical collaborations involving multiple agencies and complex projects with substantial deliverables and significant public engagement
- Clearly synthesize and communicate science findings in support of conservation priorities and actions in local landscapes, focused on southwestern Oregon

2020-Present – **Courtesy Graduate Faculty – Oregon State University**

- Collaborate with students and faculty to advance understanding of fire ecology, wildfire risk and ecological restoration
- Serve on graduate student committees in the Sustainable Forest Management major

2010-2022 –**Forest Ecologist – The Nature Conservancy of Oregon**

- Integrates forest conservation and human priorities in southwestern Oregon
- Contributes to The Nature Conservancy's North American Restoring America's Forests, particularly regarding resilient landscapes and climate change
- Coordinates technical collaborations involving multiple agencies and complex projects with substantial deliverables and significant public engagement
- Supervises 1-5 employees in addition to volunteers and technical collaborators

Education

Spring 2010 – The University of Montana – *Ph.D. Organismal Biology and Ecology*
Dissertation: **Using patchy plant invasions to understand how diffuse interactions modify facilitation and competition**
Graduate advisor: Dr. Ragan M. Callaway

2002 – The University of Montana – *M.S. Forestry*
Thesis: **Undergrowth vegetation response to fuel reduction treatments in the Blue Mountains of eastern Oregon**
Graduate advisor: Dr. Carl E. Fiedler

1998 - Eastern Oregon University – *B.S. Biology with Minors in Chemistry & Music*

Research experience

2022-Present Senior Forest Scientist – The Nature Conservancy of Oregon
2010-2022 – Forest Ecologist – The Nature Conservancy of Oregon
2007-2010 – *Ph.D. Student* – Division of Biological Sciences, The University of Montana
2002-2006 – *Research Associate* - Assistant Site Manager Fire/Fire Surrogate Study, Northern Rockies Site, College of Forestry and Conservation, The University of Montana
2000-2002 – *Research Assistant* - College of Forestry and Conservation, The University of Montana
1997-1999 - *Field Technician* – La Grande Forestry and Range Sciences Laboratory
USDA US Forest Service Pacific Northwest Research Station

Teaching experience

2010-2022 – Senior Forest Scientist – The Nature Conservancy of Oregon

- M.S. graduate committees for Oregon State University
- Capstone projects with Southern Oregon University and Yale School of Forestry
- Frequent school field trips or educational opportunities, particularly around climate change and fire ecology for local southwestern Oregon groups and guest lectures for Southern Oregon University, Yale School of Forestry, and Oregon State University

2010-2022 – Forest Ecologist – The Nature Conservancy of Oregon

- Multiple capstone projects with Southern Oregon University
- Frequent school field trips or educational opportunities, particularly around climate change and fire ecology

Summer 2010 – *Instructor* – Fundamentals of Biology
2006-2010 – *Teaching Assistant* – Plant Physiology, Principles of Biology, Diversity of Life, Science of Life
Fall 2009 – *Lab Coordinator* – Diversity of Life
2007-present – National Ski Patrol Instructor

Peer reviewed publications: Google Scholar profile

Davis, K. T., J. Peeler, J. Fargione, R. D. Haugo, **K. L. Metlen**, M. D. Robles, and T. Woolley. 2024. Tamm review: A meta-analysis of thinning, prescribed fire, and wildfire effects on subsequent wildfire severity in conifer dominated forests of the Western US. Forest Ecology and Management **561**:121885.https://doi.org/10.1016/j.foreco.2024.121885

Peeler, J. L., L. McCauley, **K. L. Metlen,** T. Woolley, K. T. Davis, M. D. Robles, R. D. Haugo, K. L. Riley, P. E. Higuera, J. E. Fargione, R. N. Addington, S. Bassett, K. Blankenship, M. J. Case, T. B. Chapman, E. Smith, R. Swaty, and N. Welch. 2023. Identifying opportunity hot spots for reducing the risk of wildfire-caused carbon loss in western US conifer forests. Environmental Research Letters 18:094040.https://dx.doi.org/10.1088/1748-9326/acf05a

Davis, K. T., M. D. Robles, K. B. Kemp, P. E. Higuera, T. Chapman, **K. L. Metlen**, J. L. Peeler, K. C. Rodman, T. Woolley, R. N. Addington, B. J. Buma, C. A. Cansler, M. J. Case, B. M. Collins, J. D. Coop, S. Z. Dobrowski, N. S. Gill, C. Haffey, L. B. Harris, B. J. Harvey, R. D. Haugo, M. D. Hurteau, D. Kulakowski, C. E. Littlefield, L. A. McCauley, N. Povak, K. L. Shive, E. Smith, J. T. Stevens, C. S. Stevens-Rumann, A. H. Taylor, A. J. Tepley, D. J. N. Young, R. A. Andrus, M. A. Battaglia, J. K. Berkey, S. U. Busby, A. R. Carlson, M. E. Chambers, E. K. Dodson, D. C. Donato, W. M. Downing, P. J. Fornwalt, J. S. Halofsky, A. Hoffman, A. Holz, J. M. Iniguez, M. A. Krawchuk, M. R. Kreider, A. J. Larson, G. W. Meigs, J. P. Roccaforte, M. T. Rother, H. Safford, M. Schaedel, J. S. Sibold, M. P. Singleton,

M. G. Turner, A. K. Urza, K. D. Clark-Wolf, L. Yocom, J. B. Fontaine, and J. L. Campbell. 2023. Reduced fire severity offers near-term buffer to climate-driven declines in conifer resilience across the western United States. Proceedings of the National Academy of Sciences **120**:e2208120120.doi:10.1073/pnas.2208120120

Margolis, E. Q., C. H. Guiterman, R. D. Chavardès, J. D. Coop, K. Copes-Gerbitz, D. A. Dawe, D. A. Falk, J. D. Johnston, E. Larson, H. Li, J. M. Marschall, C. E. Naficy, A. T. Naito, M.-A. Parisien, S. A. Parks, J. Portier, H. M. Poulos, K. M. Robertson, J. H. Speer, M. Stambaugh, T. W. Swetnam, A. J. Tepley, I. Thapa, C. D. Allen, Y. Bergeron, L. D. Daniels, P. Z. Fulé, D. Gervais, M. P. Girardin, G. L. Harley, J. E. Harvey, K. M. Hoffman, J. M. Huffman, M. D. Hurteau, L. B. Johnson, C. W. Lafon, M. K. Lopez, R. S. Maxwell, J. Meunier, M. North, M. T. Rother, M. R. Schmidt, R. L. Sherriff, L. A. Stachowiak, A. Taylor, E. J. Taylor, V. Trouet, M. L. Villarreal, L. L. Yocom, K. B. Arabas, A. H. Arizpe, D. Arseneault, A. A. Tarancón, C. Baisan, E. Bigio, F. Biondi, G. D. Cahalan, A. Caprio, J. Cerano-Paredes, B. M. Collins, D. C. Dey, I. Drobyshev, C. Farris, M. A. Fenwick, W. Flatley, M. L. Floyd, Z. e. Gedalof, A. Holz, L. F. Howard, D. W. Huffman, J. Iniguez, K. F. Kipfmueller, S. G. Kitchen, K. Lombardo, D. McKenzie, A. G. Merschel, **K. L. Metlen**, J. Minor, C. D. O'Connor, L. Platt, W. J. Platt, T. Saladyga, A. B. Stan, S. Stephens, C. Sutheimer, R. Touchan, and P. J. Weisberg. 2022. The North American tree-ring fire-scar network. Ecosphere 13:e4159.https://doi.org/10.1002/ecs2.4159

D'Evelyn, S. M., J. Jung, E. Alvarado, J. Baumgartner, P. Caligiuri, K. H. R, S. B. Henderson, P. F. Hessburg, S. Hopkins, E. J. Kasner, M. A. Krawchuk, J. E. Krenz, J. M. Lydersen, M. E. Marlier, Y. J. Masuda, **K.L. Metlen**, G. Mittelstaedt, S. J. Prichard, C. L. Schollaert, E. B. Smith, J. T. Stevens, C. W. Tessum, C. Reeb-Whitaker, J. L. Wilkins, N. H. Wolff, L. M. Wood, R. D. Haugo, and J. T. Spector. 2022. Wildfire, smoke exposure, human health, and environmental justice need to be integrated into forest restoration and management. Current Environmental Health Reports. https://doi.org/10.1007/s40572-022-00355-7.

Hagmann, R. K., P. F. Hessburg, S. J. Prichard, N. A. Povak, P. M. Brown, P. Z. Fulé, R. E. Keane, E. E. Knapp, J. M. Lydersen, **K. L. Metlen,** M. J. Reilly, A. J. Sánchez Meador, S. L. Stephens, J. T. Stevens, A. H. Taylor, L. L. Yocom, M. A. Battaglia, D. J. Churchill, L. D. Daniels, D. A. Falk, P. Henson, J. D. Johnston, M. A. Krawchuk, C. R. Levine, G. W. Meigs, A. G. Merschel, M. P. North, H. D. Safford, T. W. Swetnam, and A. E. M. Waltz. 2021. Evidence for widespread changes in the structure, composition, and fire regimes of western North American forests. Ecological Applications 31:e02431.https://doi.org/10.1002/eap.2431.

Kurzweil, J. R., **K. L. Metlen,** R. Abdi, R. Strahan, and T. S. Hogue. 2021. Surface water runoff response to forest management: Low-intensity forest restoration does not increase surface water yields. *Forest Ecology and Management* 496:119387.

Metlen, K. L., T. Fairbanks, M. Bennett, J. Volpe, B. Kuhn, M. Thompson, J. Thrailkill, M. Schindel, D. Helmbrecht, J. Scott, and D. Borgias. 2021. Integrating forest restoration, adaptation, and proactive fire management: Rogue River Basin Case Study. *Canadian Journal of Forest Research*. 51:1292-1306. https://doi.org/10.1139/cjfr-2020-0480.

Haugo, R. D., B. S. Kellogg, C. A. Cansler, C. A. Kolden, K. B. Kemp, J. Robertson, **K. L. Metlen**, N. M. Vaillant, and C. M. Restaino. 2019. The missing fire: quantifying human exclusion of wildfire in Pacific Northwest forests, USA. *Ecosphere* 10:e02702.

Metlen, K. L.; C. N. Skinner; D. R. Olson; C. Nichols; D. Borgias. 2018. Regional and local controls on historical fire regimes of dry forests and woodlands in the Rogue River Basin, Oregon, USA. *Forest Ecology and Management* 430:43-58.

Halofsky, J.E.; D.L. Peterson; **K.L. Metlen;** M.G. Myer; V.A. Sample. 2016. Developing and implementing climate change adaptation options in forest ecosystems: A case study in southwestern Oregon, USA. *Forests* 7:1-18.

Metlen, K.L.; Callaway, R.M. 2015. Native North American pine attenuates the competitive effects of a European invader on native grasses. *Biological Invasions* 17:1227-1237.

Metlen, K.L.; E.T. Aschehoug; R.M. Callaway. 2013. Competitive outcomes between two exotic invaders are modified by direct and indirect effects of a native conifer. *Oikos* 122:632-640.

Fiedler, C.E.; E.K. Dodson; **K.L. Metlen**. 2013. Invasive Plant Response to Forest Disturbance in the Western United States. In: *Invasive Plant Ecology* (eds S. Jose; H. Singh; D. Batish; R. Kohli). CRC Press, Boca Raton, FL.

Aschehoug, E.T.; **K.L. Metlen**; R.M. Callaway; G. Newcombe. 2012. Fungal endophytes directly increase the competitive effects of an invasive forb. *Ecology* 93:3-8.

Besaw, L.M.; G.C. Thelen; S. Sutherland; **K.L. Metlen**; R.M. Callaway. 2011. Disturbance, resource pulses, and invasion: short-term shifts in competitive effects, not growth responses, favour exotic annuals. *Journal of Applied Ecology* 48:998-1006.

Fiedler, C.E.; **K.L. Metlen**; Dodson, E.K. 2010. Restoration treatment effects on stand structure, tree growth, and fire hazard in a ponderosa pine/Douglas-fir forest in Montana. *Forest Science* 56:18-31.

Metlen, K.L.; E.T. Aschehoug; R.M. Callaway. 2009. Plant behavioral ecology: dynamic plasticity in secondary metabolites. *Plant Cell and Environment* 32:641-653.

Stephens, S.L.; J.J. Moghaddas; C. Edminster; C.E. Fiedler; S. Haase; M. Harrington; J.E. Keeley; E.E. Knapp; J.D. McIver; **K.L. Metlen**; C.N. Skinner; A. Youngblood. 2009. Fire treatment effects on vegetation structure, fuels, and potential fire severity in western U.S. forests. *Ecological Applications* 19:305-320.

Dodson, E.K.; **K.L. Metlen**; C.E. Fiedler. 2007. Locally rare understory species benefit from restoration treatments in ponderosa pine/Douglas-fir forests, Montana. *Restoration Ecology* 15:696-708.

Metlen, **K.L.**; C.E. Fiedler. 2006. Restoration treatment effects on the understory of ponderosa pine/Douglas-fir forests in western Montana, USA. *Forest Ecology and Management* 222: 355-369.

Gundale, M.J.; **K.L. Metlen**; C.E. Fiedler; T.H. DeLuca. 2006. Nitrogen spatial heterogeneity influences understory diversity following restoration treatments in a ponderosa pine/Douglas-fir forest, Montana. *Ecological Applications* 16:479-489.

Youngblood, A.; **K.L. Metlen**; K. Coe. 2006. Changes in stand structure and composition after restoration treatments in low elevation dry forests of northeastern Oregon. *Forest Ecology and Management* 234:143-163.

Youngblood, A.; **K.L. Metlen**; E.E. Knapp; K.W. Outcalt; S.L. Stephens, T.A. Waldrop, D. Yaussy. 2005. Implementation of the Fire and Fire Surrogate Study – a national research effort to evaluate the consequences of fuel reduction treatments. In: Peterson, C.E.; D. A. Maguire (Eds.), *Balancing Ecosystem Values: Innovative Experiments for Sustainable Forestry*. USDA Forest Service PNW-GTR-635. Pacific Northwest Research Station, Portland, Oregon. pp 315-321.

Metlen, **K.L.**; C.E. Fiedler; A. Youngblood. 2004. Understory response to fuel reduction treatments in the Blue Mountains of northeastern Oregon. *Northwest Science* 78:175-185.

<u>Non-peer reviewed publications</u>

Metlen, K.L., M. Bennett, D. Borgias, B. Brown, C. Davenport, T. Fairbanks, S. Jimerfield, B. Kuhn, C. Rudd, J. Stephens, R. Strahan, J. Trammell, J. Volpe, and P. Winnick. 2021.

Multiparty Monitoring Plan: Rogue Basin Cohesive Forest Restoration Strategy. Rogue Forest Partners, https://tnc.box.com/s/7v7u8nwyxtw0ecit5vysb2w3bpo2gt0h.

Boving, I., M. D. DeGuzman, **K. L. Metlen,** and A. R. Ramirez. 2021. Legacy tree monitoring in the Ashland Watershed: 2021 update. Ashland Forest Resiliency Monitoring Report: https://tnc.box.com/s/b5mtzevuh0ujtt2jpxs4dy7m89kc2jtn.

Perchemlides, K., **K. L. Metlen**, and P. Duwal. 2020. Ashland Forest All-lands Restoration supplement to the 2005 Scott and Burgan standard fuel model photo guide. The Nature Conservancy, Portland, OR, http://dx.doi.org/10.13140/RG.2.2.24347.90403.

Metlen, K. L., D. Borgias, and T. Fairbanks. 2019. Integrated Land Management: A Rogue Leadership Forum and All Lands Workshop. Workshop Report available at: https://tnc.box.com/s/cdvn8ztxxf2u55ehdjx8x9ycjnc3ttqe.

Metlen, K. L., D. Borgias, B. Kellogg, M. Schindel, A. Jones, G. McKinley, D. Olson, C. Zanger, M. Bennett, B. Moody, and E. Reilly. 2017. Rogue Basin Cohesive Forest Restoration Strategy: A Collaborative Vision for Resilient Landscapes and Fire Adapted Communities. The Nature Conservancy, Portland, OR. Available online at: https://tnc.box.com/s/k8kel1cww1i3oo4ru55lc1dv7xpyxuob.

Metlen, K.L.; D. Olson; K. Perchemlides; M. Morison; D. Borgias. 2016. Table Rocks oak and vernal pool habitats assessment. Bureau of Land Management, Medford District.

Metlen, K.L.; D. Borgias; C. Skinner. 2016. Historical fire frequency in the Rogue Basin. Page Appendix in D. Thorpe, editor. Boot Prints: A centennial summary of activities and events of Oregon's Department of Forestry in Jackson and Josephine Counties. Oregon Department of Forestry Southwest Oregon District, Central Point, OR.

Metlen, K. L.; D. Borgias; A. Jones; G. McKinley; D. Olson; E. Reilly; C. Zanger. 2015. Rogue Basin Cohesive Forest Restoration Strategy: A Collaborative Vision for Resilient Landscapes and Fire Adapted Communities v.1. The Nature Conservancy, Portland, OR.

Meyer, G.; **K. L. Metlen**; K. Wearstler. 2013. Forest assessment.in G. Griffith, T. Thaler, A. Perry, T. Crossett, and R. Rasker, editors. The Rogue Basin action plan for resilient watersheds and forests in a changing climate, Model Forest Policy Program in association with the Southern Oregon Forest Restoration Collaborative, the Cumberland River Compact and Headwaters Economics, Sagle, ID.

Metlen, K.L.; D. Borgias; D. Sarr: D. Clayton; E. M. Goheen; E. Dinger; J. Stephens; J. Gutrich; M. Shibley; M. Main. 2013. Ashland Forest Resiliency Stewardship Project: Monitoring Plan. Ashland, Oregon.

Aldous, A.L.; S. Buttrick.; **K.L. Metlen.**; L. Nelson.; R. Taylor. 2013. Research and monitoring support team report. The Nature Conservancy in Oregon. Portland, Oregon.

Metlen, K.L.; D. Olson; D. Borgias. 2013. Forensic Forestry: history lessons for a resilient future. Report to the Oregon Watershed Enhancement Board.

Metlen, K.L.; D. Olson; D. Borgias. 2013. Conserving large old trees in restoring dry, fire prone forests of the Rogue Basin. Report to the Oregon Watershed Enhancement Board.

D. Olson, **Metlen, K.L.** 2013. Remote sensing legacy trees for efficient old growth stewardship. Report to the Oregon Watershed Enhancement Board.

Metlen, K.L.; P. Caligiuri. 2013. Science and strategies for dwarf mistletoe in collaborative dry forest restoration: Douglas-fir dwarf mistletoe and ponderosa pine dwarf mistletoe. Report to the Oregon Watershed Enhancement Board.

Metlen, K.L.; E.K. Dodson.; C.E. Fiedler. 2006. Vegetation response to restoration treatments in ponderosa pine-Douglas-fir forests. In: *Fire Effects Information System*, [Online]. U.S.

Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: http://www.fs.fed.us/database/feis/.

Fiedler, C.E.; **K.L. Metlen**; E.K. Dodson. 2006. Restoration/fuels reduction treatments differentially affect native and exotic understory species in a ponderosa pine forest (Montana). *Ecological Restoration* 24:44-46.

Metlen, **K.L.**; C.E. Fiedler (editors). 2004. *FFS Study 6th Annual SMIC Meeting Field Trip Notebook*. University of Montana, College of Forestry and Conservation. Missoula, Montana. 50 pp.

Metlen, **K.L.** 2002. Undergrowth vegetation response to fuel reduction treatments in the Blue Mountains of eastern Oregon. *Masters Thesis*. The University of Montana. Missoula, MT. 74 pp.

Grants Funded

Rogue Basin Cohesive Forest Restoration Strategy, Climate Adaptation Monitoring, and Spatial Patterning Workshop. Bureau of Land Management Western Oregon Restoration and Resource Planning. P.I. Kerry L. Metlen. August 2016-September 2017. $50,000.

Developing an Optimized Work Plan for the Southern Oregon Forest Restoration Collaborative's Rogue Basin Cohesive Forest Restoration Strategy. Southern Oregon Forest Restoration Collaborative. P.I. Kerry L. Metlen. January 2015-June 2015. $25,729.

Developing an optimized work plan for the Southern Oregon Forest Restoration Collaborative's Rogue Basin Cohesive Restoration Strategy. Oregon Department of Forestry Federal Forest Health Program, Agreement #ODF-2191A. P.I. Darren Borgias and Kerry L. Metlen. November 2014-June 2015. $133,024.

Restoring oak resilience at the Table Rocks, Rogue River Basin, Oregon. Wildlife Conservation Fund. P.I. Marko Bey, Lomakatsi Restoration Project. October 2014-October 2016. $218,347. $22,000 for The Nature Conservancy.

Forest restoration references and their application to the conservation of critical habitat elements in dry, fire prone forests. Bureau of Land Management Western Oregon Restoration and Resource Planning. P.I. Kerry L. Metlen and Darren Borgias. August 2014-August 2016. $50,000.

Assessing fire regimes and historic stand structures in dry mixed conifer forests. Bureau of Land Management Western Oregon Restoration and Resource Planning. P.I. Kerry L. Metlen and Darren Borgias. August 2011-August 2016. $50,000.

Restoring frequent-fire adapted forests in southern Oregon. Priscilla Bullitt Collins Trust Northwest Conservation Fund. P.I. Kerry L. Metlen and Darren Borgias. April 2011-June 2016. $499,450.

Exotic invasion and biotic resistance: the role of overstory conifers. McIntire-Stennis Cooperative Forestry Program. P.I. Kerry L. Metlen and Ragan M. Callaway. April 2006-April 2009. $39, 802.
Developing an Optimized Work Plan for the Southern Oregon Forest Restoration Collaborative's Rogue Basin Cohesive Forest Restoration Strategy. Southern Oregon Forest Restoration Collaborative. P.I. Kerry L. Metlen. January 2015-June 2015. $25,729.

Media

Michael Gaskill, Kim Davis, **Kerry Metlen**. 2024. Treating fire with fire (and logging??): A surprisingly interesting scientific review of fire treatments! Podcast: https://open.spotify.com/episode/2HU3dEJDkKZI2M7qOz41Mo?si=uiqccefVRo2VvHkfMX0Wgw.

Metlen, K.L. Addressing fire in a fiery climate. Recorded lecture for Southern Oregon Climate Action Now. 16 January 2019. Available at https://www.ijpr.org/post/end-after-fact-fire-

Metlen, K.L. Before the end, after the fact: Fire Summit. Interview on *The Jefferson Exchange*. Jefferson Public Radio, Ashland, Oregon 11 September 2018. Available at https://www.ijpr.org/post/end-after-fact-fire-summit#stream/0.

Metlen, K.L. Looking back to move forward.2014. Video by Sockeye available at http://www.nature.org/photos-and-video/video/learning-from-the-pasthcst.hcst

Metlen, K.L. Fixing up the forest for the long term. Interview on *The Jefferson Exchange*. Jefferson Public Radio, Ashland, Oregon. 27 February 2014. Available at http://ijpr.org/post/ fixing-forest-long-term.

Metlen, K.L. When letting the forest burn is the best option. Interview on *The Jefferson Exchange*. Jefferson Public Radio, Ashland, Oregon. 15 October 2013. Available at http://ijpr.org/post/when-letting-forest-burn-best-option.

Awards

2021 – National Ski Patrol *National Appointment*
2021 – Mount Ashland Ski Patrol *Outstanding Ski Patroller*
2009 – The University of Montana, *Graduate Student Association Travel Award*, $600
2008 – Montana Snowbowl *Patroller of the Year*
2008-2009 – *Jack E. Schmautz Graduate Scholarship*, merit-based award, $500
2008 – The University of Montana, *Graduate Student Association Travel Award*, $500
2007-2008 – *Bertha Morton Scholarship*, merit-based award, $2000
1994-1998 – *Oregon Laurels Scholarship*, merit-based award, full tuition for four years

Professional development

February 2025 – *Allyship*, The Nature Conservancy
July 2024 – *Indian Country 102*, The Whitener Group
June 2024 – *High Impact Conversations,* The Nature Conservancy
November 2023 – *Indian Country 101*, The Whitener Group
February 2021 – *Decision Science,* The Nature Conservancy
November 2021 – *Values-Based Communications,* The Nature Conservancy
March 2021 – *Dashboard Development in ArcGIS Online,* ESRI
February 2020 – *The Science of Decision Making*, The Nature Conservancy.
February 2020 – *Living Our Values*, Training in Communication and Engagement through The Nature Conservancy.
October 2019 – *Introduction to Incident Command System, ICS-100*. Federal Emergency Management Administration.
May 2018 – *Science Impact Project, Leadership and Management Skills for Non-Managers* with Management Concepts, Chicago, Illinois.
December 2017 – *Engaging Across Differences*, The Nature Conservancy, Portland, Oregon.
August 2017 – *Science Impact Project, Science Communication* with the Alan Alda Project, Portland, Oregon.
May 2017 – *Highly Effective Teams*, The Nature Conservancy, Boulder, Colorado

November 2016 - *Science Impact Project, Science Communication* with the Alan Alda Project, Arlington, Virginia.
March 2015 – *Science Writing Workshop* with Peter Kerieva, Honolulu, Hawaii
November 2014 –*Grants 101: An Introduction to TNC's Grants Management Process* – The Nature Conservancy, San Francisco, California.
March 2013 – *Supervisor Training: Risk Management, Compensation, Professional Development, Recruiting, and Recognition* – The Nature Conservancy, Portland, Oregon.
September 2011 –*Supervisor Training: Developing Others, Communication, and Professional Development* – The Nature Conservancy, Portland, Oregon.
December 2010 – *Forest Vegetation Simulator Regional Training.* US Forest Service, Forest Management Resource Center.
December 2009 - *Pathways to Scientific Teaching.* MEID sponsored workshop given by Dr. Diane Ebert-May.

Mentoring experience

Rachel Howard. 2025-present. Supplemental regional fuel model guide for Northeast Oregon to inform fire managers in the creation and implementation of prescribed burn plans. M.S. Forestry, Oregon State University.
Sven Rodne. 2022-present. Dendrochronological explorations of contemporary forest departure from historical forest stand structure, composition, spatial patterning, and fire history in the Rogue Basin, Southwest Oregon. M.S. Forest Ecosystems and Society, Oregon State University.
James Puerini. 2020. Social Forestry and Fire Ecology Fellowship. Weis Foundation, Yale School of the Environment.
Jake Kurzweil. 2020. Hydrologic response to forest fire mitigation in the Ashland Watershed, Oregon. Department of Civil and Environmental Engineering, Colorado School of Mines, Ph.D. Dissertation.
Emily Newbury & Angela Powell. 2019. The Pacific Madrone: An Analysis of Resprout Characteristics after Disturbance, Southern Oregon University, Department of Environmental Studies. Capstone.
Indra Boving. 2018. Legacy tree monitoring in the Ashland watershed. Reed College. Internship.
Arlo Todd & Ollie Bocolo. 2018. The Response of California Black Oak (*Quercus kelloggii*) to Ashland Forest Resiliency Fuels Treatments. Southern Oregon University, Department of Environmental Studies. Capstone.
Emily Ho'o Kamalani Long. 2014. Monitoring and assessing macroinvertebrates and stream habitat conditions in the Ashland Watershed. Southern Oregon University, Department of Environmental Studies. Class project.
Amie Batham and Janel Lajoie. 2014. Fire in the Ashland watershed compared to regional fire history: A systematic literature review. Southern Oregon University, Department of Environmental Studies. Capstone.
Marc Gutches and Clint Nichols. 2014. Legacy tree monitoring in the Ashland Watershed with the Ashland Forest Resiliency Stewardship Project. Southern Oregon University, Department of Environmental Studies. Capstone.
John Ingman. 2013. Multiple lines of evidence for forest references. Whitworth January Term Internship.
Aleece Richter. 2011. Comparison of the flow hydraulics and bedload grain size distribution of the East and West Forks of Ashland Creek, Southwestern Oregon. Southern Oregon University, Department of Environmental Studies. Capstone.

Matt Callahan. 2009. Plant-soil feedbacks and plant invasion. University of Montana Undergraduate Honors Research Project.

Technical experience

ArcGIS Pro, JMP, Miradi, Microsoft Office, Adobe Suite

Reviewer for

Acta Oecologica, Biological Invasions, Ecology, Ecological Monographs, Ecological Restoration, Forest Ecology and Management, Forest Science, Functional Ecology, Global Change Biology, Journal of Forestry, Plant Ecology, Restoration Ecology, Western Journal of Applied Forestry, and Western North American Naturalist

Volunteer work

2010-Present Mount Ashland National Ski Patrol Outdoor Emergency Care, Skiing, and Tobogganing Instructor

- Improving and testing the skills of new and current ski patrollers in Outdoor Emergency Care, Skiing, and Tobogganing (patient transport)
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2022-Present Scouting America Troop 112 Committee Member and Merit Badge Counselor

- Serve on committee to guide Scout Troop finance and standards
- Enable Scout advancements and experiences

2019-2021 Mount Ashland National Ski Patrol Volunteer Patrol Representative (one term)

2009-2010 Snowbowl Montana Skiing, Snowboarding, and Tobogganing (SS&T) Advisor

- Coordinate and organize SS&T instructors
- Ensure proper SS&T training of all members

2005-2008 Montana Snowbowl National Ski Patrol Director (one term)

- Coordinate operations of the 40 member Snowbowl Ski Patrol
- Interface with the national organization of the NSP
- Interface with Montana Snowbowl owners and management
- Plan agendas and facilitate monthly meetings
- Ensure proper training of all members
- Recruit and facilitate training of new members

2003-2004 Montana Snowbowl National Ski Patrol Team Leader

- Manage daily operations of the volunteer ski patrol at Montana Snowbowl
- Provide interface among mountain management, volunteer patrollers, and ambulance personnel

1995-Present National Ski Patrol Senior Patroller

- Highest level of first aid certification available through the NSP
- Trained to handle multiple incident scenarios, manage people and resources

1993-1995 National Ski Patrol Basic Patroller

- Basic level of first aid certification, aid injured skiers and encourage skier safety

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