CURRICULUM VITAE

CV SECTION 1: Employment History/Awards

NAME

Courtney Allison Schultz

ADDRESS

Department of Forest and Rangeland Stewardship Warner College of Natural Resources Colorado State University Fort Collins, CO 80523-1472



EDUCATION

2009 PhD, Forestry, University of Montana

Thesis: "Cumulative Effects Analysis in U.S. Forest Service Decision Making"

2004 MS, Conservation Biology and Sustainable Development, University of Maryland

Professional Paper: "The Role of Indigenous Knowledge in Natural Resource Management with Case

Studies from East and Southern Africa"

1997 BA, International Relations (minor in Biology), Stanford University

ACADEMIC POSITIONS

July 2017 – Present Associate Professor of Forest and Natural Resource Policy, Department of Forest

and Rangeland Stewardship, Colorado State University

August 2011 – July 2017 Assistant Professor of Forest and Natural Resource Policy, Department of Forest

and Rangeland Stewardship, Colorado State University

August 2010 – July 2011 Temporary Assistant Professor of Forest and Natural Resource Policy, Department

of Forest and Rangeland Stewardship, Colorado State University

OTHER POSITIONS

August 2009 – August 2010 Presidential Management Fellow, USDA Forest Service, Flagstaff, AZ

CURRENT JOB DESCRIPTION

I am a professor of forest and natural resource policy. The 21st century is seeing the emergence of a new era in U.S. environmental governance—one that requires greater adaptiveness, an ability to work across jurisdictions and sectors, and the ability to plan over larger spatial and longer time scales. My research investigates how policies can improve approaches to climate-adaptive land management, forest restoration, and fire management. More broadly, my work investigates environmental governance in this era of rapid social and ecological change, and I have a particular interest in policy design for temporal and spatial scale-related challenges. I serve in a unique niche in my field by working across disciplines and bridging public policy, environmental governance, and natural science. Because my applied research is responsive to the needs of policy makers and land managers, I engage in outreach with various audiences, including members of Congress, executive branch appointees and agency staff members, and non-governmental organizations. My courses educate students in natural resource history, policy, planning, environmental impact assessment, governance, and sustainability studies. I direct the Public Lands Policy Group, which produces original research to inform the policy and practice of natural resource management on public lands. In 2020, I created and began leading the CSU Climate Adaptation Partnership, an effort hosted by the Office of the Vice President for Research and dedicated to developing interdisciplinary research teams and conducting policy outreach to address the challenges of climate adaptation. My current appointment is 35% Teaching, 55% Research, and 10% Service/Outreach. Until Fall 2020, my appointment was 40% Teaching, 50% Research, and 10% Service/Outreach.

HONORS AND AWARDS

2022	Presidential Fellow in Climate Change Analysis, Office of the Vice President for Research
2021	CSU Carnegie Fellowship Nominee
2019 & 2020	Monfort Professor Nomination and Finalist, Colorado State University
2019 & 2020	Outstanding Publication Award, Warner College of Natural Resources
2016	Colorado State University Graduate Student Council Advising and Mentorship Award
2014	Teacher of the Year, Warner College of Natural Resources

CV SECTION 2: Publications/Scholarly Record

RESEARCH PROGRAM OVERVIEW

My research focuses on the intersection of science, policy, and law in natural resource management, investigating how policy mediates the adoption and application of science-based land management principles. Specifically, I study policy design to support collaborative forest restoration efforts, fire management, and climate change adaptation efforts on U.S. forestlands. I also investigate how law and policy influence the practice of wildlife conservation planning and adaptive management, and I recently have begun working on post-fire governance challenges, with new research on post-fire policy with Indigenous tribes in the U.S. West. I use findings from my empirical work to inform theory in the environmental governance, public administration, and social-ecological systems literatures. I have led theoretical papers on policy design for scale mismatches and multi-level drivers of governance change. I work across disciplines and publish with biophysical scientists, engineers, and other social scientists in high-impact science journals. Through my publications and science delivery efforts, I have established myself as a national and internationally recognized leader in my field. I lead high-profile research projects on forest policy topics of national importance and have represented the field of U.S. forest governance in international forums, including at conferences, in edited books, and in special issues of journals.

Since I began at CSU in 2010, I have raised more than \$3 million as PI, more than \$3 million as co-PI, published 54 journal articles, and graduated 12 MS and three PhD students. I fund and supervise a research group, which currently includes three MS students and four research associates (three full-time, one half-time). Since my promotion to Associate Professor in 2017, I have published 40 articles, including a piece in *Science* and a co-edited book. Please see my Google Scholar profile for statistics and evidence of my increasing citation rates. External funding sources include the National Science Foundation's Macrosystem Biology program, Southwest Climate Adaptation Science Center, USDA Forest Service, and Joint Fire Science Program. Throughout my career, I have integrated research associates, graduate students, and undergraduate students as contributors and co-authors on research projects and publications.

EVIDENCE OF INCORPORATING DIVERSITY, EQUITY, INCLUSION, AND/OR SOCIAL JUSTICE (DEISJ) IN SCHOLARSHIP AND RESEARCH

As part of the newly formed CSU Climate Adaptation Partnership, I am developing outreach and research projects with Indigenous scholars in my own and other departments, including Ethnic Studies. Together, we recently wrote a proposal to the Southwest Climate Adaptation Science Center to work with Indigenous tribes on post-fire governance, studying management priorities and policy challenges. To prepare for this proposal, we started the research approval process with the Karuk Tribe and built an advisory board that includes Indigenous representatives and staff members from the organization of International Tribal Environmental Professionals. In other scholarship, we have included equity and inclusion considerations as well (e.g., see papers 5 and 19 below).

PUBLISHED WORKS

RA Research Associate

GS Graduate Student

UG Undergraduate Student

D Post-Doctoral Scholar GSC Graduate Student Committee

Books

1. Butler, W.H., **Schultz, C.A.,** editors. 2019. *A New Era for Collaborative Forest Management: Insights for Policy and Practice from the CFLRP*. Routledge Earthscan: New York, USA. 242pp.

Refereed Journal Articles

- 1. vonHedemann, N., Breidenbach, T., Carney, C.P., Carr Childers, L., David-Chavez, D.M., Havrilla, C.A., Hill, M., Mahmoud, H., Mueller, N.D., Schultz, C.A., Stevens-Rumann, C.S. Climate adaptation research priorities and funding: a review of U.S. federal departments' climate action plans. *Climate Policy* (in review).
- 2. Abrams, J., Kee, D., Aldworth, T., **Schultz, C.A.,** Kooistra, C. 2022. The Shared Stewardship Strategy in the Southern U.S.: Lessons Learned. *Journal of Forestry* (in press).

- 3. Murphy, D., Yung, L., Miller, B.A., Wyborn, C., **Schultz, C.A.,** Williams, D.R. 2022. Understanding perceptions of climate change scenario planning in U.S. public land management agencies. *Society and Natural Resources* (accepted).
- 4. McGrath Novak, K., GS McCaffrey, S., **Schultz, C.A.** 2022. Comparing Land Manager and Community Perceptions of a Colorado Prescribed Fire Outreach Program. *Journal of Forestry (online). doi:* https://doi.org/10.1093/jofore/fvac026
- 5. Thompson, M.P., O'Connor, C.D., Gannon, B.M., Caggiano, M.D., Dunn, C.J., **Schultz, C.A.**, Calkin, D.E., Pietruszka, B., Greiner, S.M., Stratton, R., and J.T. Morisette. 2022. Potential operational delineations: new horizons for proactive, risk-informed strategic land and fire management. *Fire Ecology 18(1). doi: 10.1186/s42408-022-00139-2*
- 6. Kooistra, C. RA, **Schultz, C.A.**, Huber-Stearns, H.R, Abrams, J. 2022. Institutionalizing the U.S. Forest Service's Shared Stewardship Strategy. *Journal of Forestry (online), doi: 10.1093/jofore/fvac010*
- 7. Niemiec, R., Berl, R., Gonzalez, M., Teel, T., Salerno, J., Collins, M., Camara, C., Breck, S., **Schultz, C.,** Crooks, K. 2022. Evidence for rapid public attitude and belief change towards a conservation initiative. *Conservation Science and Practice* 4, e12632, *doi:10.1111/csp2.12632*
- 8. Kooistra, C.^{RA}, Sinkular, E.^{RA}, **Schultz, C.** 2022. Characterizing the context and demand for the U.S. Forest Service's Collaborative Forest Landscape Restoration Program in 2020. 2022. *Journal of Forestry 120(1)*, 64-85, *doi:* 10.1093/jofore/fvab044
- 9. Collins, N.H. GS, **Schultz, C.A.** 2021. Why companies fund climate change projects on national forests: Insights into the motivations of the Forest Service's corporate partners. *Climatic Change 169(3)*, 1-26, *doi: 10.1007/s10584-021-03281-*
- 10. Huber-Stearns, H.R., Santo, A., **Schultz, C.A.,** McCaffrey, S. 2021. Network governance in the use of prescribed fire: roles for bridging organizations and other actors in the western United States. *Regional Environmental Change* 21(4), 1-17, doi: 10.1007/s10113-021-01850-7
- 11. vonHedemann, N. PD, **Schultz, C.A.** 2021. Family forest owners in the United States and forest management for climate adaptation: perspectives from extension and outreach specialists. *Frontiers in Climate (online), doi:* 10.3389/fclim.2021.674718
- 12. **Schultz, C.A.,** Abrams, J., Davis, E.J., Cheng, A.S., Huber-Stearns, H.R., and Moseley, C. 2021. Disturbance Shapes the U.S. Forest Governance Frontier: A Review and Conceptual Framework for Understanding Governance Change. *Ambio* 50(12), 2168-2182, *doi:* 10.1007/s13280-021-01629-4 (Invited for a special issue on The International Forest Governance Frontier).
- 13. Chapin, J., Abrams, J., Timberlake, T.J., **Schultz, C.,** Evans, A.M. Fernández-Giménez, M. 2021. Operationalizing Resilience on U.S. National Forestlands: A Quantitative Analysis of Environmental Impact Statements. *Society & Natural Resources* 34(10), 1394-1411, doi:10.1080/08941920.2021.1961043
- 14. Coughlan, M., Huber-Stearns, H.R., **Schultz, C.A.** 2021. Brief Communication: Piloting a Climate Change Adaptation Index on U.S. National Forest Lands. *Journal of Forestry 119*(6), 557-563, *doi: 10.1093/jofore/fyab032*
- 15. **Schultz, C.A.,** Miller, L.F. RA, Greiner, S.M. RA, Kooistra, C. RA. 2021. A Qualitative Study on the U.S. Forest Service's Risk Management Assistance Efforts to Improve Wildfire Decision-Making. *Forests 12(3)*, 344, *doi:* 10.3390/f12030344 (Invited for a special issue on Decision Support System Development of Wildland Fire)
- 16. Abrams, J., Greiner, S.M. RA, Schultz, C.A., Evans, A., Huber-Stearns, H. 2021. Can forest managers plan for resilient

- landscapes? Lessons from the United States national forest plan revision process. *Environmental Management* 67(4), 574-588, doi: 10.1007/s00267-021-01451-4
- 17. Greiner, S.M.^{RA}, **Schultz, C.A.,** Kooistra, C.^{RA}. 2021. Pre-season fire management planning: the use of Potential Operational Delineations to prepare for wildland fire events. *International Journal of Wildland Fire 30(3)* 170-178, *doi:* 10.1071/WF20124
- 18. Timberlake, T.J. GS, Evans, A., Abrams, J., and **Schultz, C.A.** 2021. Working institutions while planning for forest resilience: a case study of public land management in the United States. *Journal of Environmental Policy and Management* 64(7), 1291-1311, doi: 10.1080/09640568.2020.1817730
- 19. Stephens, S., Westerling, A., Hurteau, M., Peery, M., **Schultz, C.A.,** Thompson, S. 2020. Fire and climate change: Conserving seasonally dry forests is still possible. *Frontiers in Ecology and the Environment 18*(6), 354-360, doi: 10.1002/fee.2218
- 20. Wurtzebach, Z. GS, Derose, J.R., Bush, R., Goeking, S., Healey, S., Menlove, J., Pelz, K., **Schultz, C.A.,** Shaw, J., Witt, C. 2020. Supporting National Forest System planning with Forest Inventory and Analysis data. *Journal of Forestry* 118(3), 289-306, doi:10.1093/jofore/fvz061
- 21. vonHedemann, N. PD, Wurtzebach, Z., Timberlake, T.J., Sinkular, E. UG, **Schultz, C.A.** 2020. Forest policy and management approaches for carbon dioxide removal. *Royal Society Interface Focus* 10(5), 20200001, *doi:* 10.1098/rsfs.2020.0001
- 22. Niemiec, R., Berl, R.E.W., Gonzalez, M., Teel, T., Camara, C., Collins, M., Salerno, J., Crooks, K., **Schultz, C.,** Breck, S., Hoag, D. 2020. Public perspectives and media reporting of wolf reintroduction in Colorado. *Peer J 8*, e9074, *doi:* 10.7717/peerj.9074
- 23. McIntyre, K.M. GS, **Schultz, C.A.** 2020. Facilitating Collaboration in Forest Management: Assessing the Benefits of Collaborative Policy Innovations. *Land Use Policy* 96, 104683, *doi: 10.1016/j.landusepol.2020.104683*
- 24. Buma, B., **Schultz, C.A.** 2020. Disturbances as opportunities: Can we learn from disturbance-response parallels in social and ecological systems to better adapt to climate change? *Journal of Applied Ecology* 57(6), 1113-1123, *doi:* 10.1111/1365-2664.13606
- 25. Carter, S.K., Pilliod, D.S., Haby, T., Prentice, K.L., Aldridge, C.L., Anderson, P.J., Bowen, Z.H., Bradford, J.B., Cushman, S.A., DeVivo, J.C., Duniway, M.C., Hathway, R.S., Nelson, L., **Schultz, C.A.,** Schuster, R.M., Trammell, E.J., Weltzin, J.F. 2020. Bridging the research-management gap: landscape science in practice on public lands in the western United States. *Landscape Ecology* 35(3), 545-560, *doi:* 10.1007/s10980-020-00970-5
- 26. **Schultz, C.A.,** Moseley, C. 2019. Collaborations and capacities to transform U.S. fire management. *Science 366(6461)*, 38-40, *doi: 10.1126/science.aay3727*
- 27. **Schultz, C.A.,** McCaffrey, S., Huber-Stearns, H. 2019. Policy barriers and opportunities for prescribed fire application in the Western United States. *International Journal of Wildland Fire 28*, 874-884, *doi: 10.1071/WF19040*
- 28. **Schultz, C.A.,** M.P. Thompson, S. McCaffrey. 2019. Forest Service fire management and the elusiveness of change. *Fire Ecology* 15(1), 1-15, *doi:* 10.1186/s42408-019-0028-x
- 29. **Schultz, C.A.,** Timberlake, T.J.^{GS}, Wurtzebach, Z.P.^{GS}, McIntyre, K.B.^{GS}, Moseley, C. 2019. Policy tools to address scale mismatches: lessons from U.S. forest governance. *Ecology and Society* 24(1), 21, doi: 10.5751/ES-10703-240121
- 30. Timberlake, T.J. GS, Schultz, C.A. 2019. Climate change vulnerability assessment for forest management: the case of the U.S. Forest Service. *Forests* 10(11), 1030, doi:10.3390/f10111030

- 31. Rutherford, T.^{GS}, **Schultz, C.A.** 2019. Adapting wildland fire governance to climate change in Alaska. *Ecology and Society* 24(1), 27-40, *doi:* 10.5751/ES-10810-240127
- 32. Wurtzebach, Z.^{GS}, **Schultz, C.A.,** Waltz, A.E.N., Esch, B.E., Wasserman, T.N. 2019. Broader-scale monitoring for federal forest planning: challenges and opportunities. *Journal of Forestry 177*, 244-255, *doi: 10.1093/jofore/fvz009*
- 33. Cyphers, L.A. GS, **Schultz, C.A.** 2019. Policy design to support cross-boundary land management: the example of the Joint Chiefs Landscape Restoration Partnership. *Land Use Policy 80*, 362-369, *doi: 10.1016/j.landusepol.2018.09.021*
- 34. Pitt, A.N. GS, **Schultz, C.A.**, Vaske, J.J. 2019. Engaging youth in public lands monitoring: opportunities for enhancing ecological literacy and environmental stewardship. *Environmental Education Research* 25(9), 1386-1399, *doi:* 10.1080/13504622.2019.1649368
- 35. Ricco, G.^{GS}, **Schultz, C.A.** 2019. Understanding organizational learning during policy implementation: lessons from U.S. forest planning. *Journal of Environmental Policy and Planning 21(3), 275-287, doi: 10.1080/1523908X.2019.1623659* (Invited for a special issue on Learning and Environmental Governance: Advancing the Next Generation of Scholarship)
- 36. McWethy, D., Schoennagel, T., Higuera, P.E., Krawchuk, M., Harvey, B.J., Metcalf, E.C., Schultz, C.A., Miller, C., Metcalf, A.L., Buma, B., Virapongse, A., Kulig, J.C., Stedman, R.C., Ratajczak, Z., Nelson, C.R., Kolden, C. 2019. Rething resilience to wildfire. *Nature Sustainability* 2(9), 797-804, *doi:* 10.1038/s41893-019-0353-8
- 37. Higuera, P.E., Metcalf, A.L., Miller, C., Buma, B., McWethy, D.B., Metcalf, E.C., Ratajczak, Z., Nelson, C.R., Chaffin, B.C., Stedman, R.C., McCaffrey, S., Schoennagel, T., Harvey, B.J., Hood, S.M., **Schultz, C.A.**, Black, A.E., Campbell, D., Haggerty, J.H., Keane, R.E., Krawchuk, M.A., Kulig, J.C., Rafferty, R., Virapongse, A. 2019. Integrating subjective and objective dimensions of resilience in fire-prone landscapes. *Bioscience* 69(5), 375-388, doi: 10.1093/biosci/biz030
- 38. Wurtzebach, Z.^{GS}, **Schultz, C.A.,** Waltz, A.E.M., Esch, B., Wasserman, T. 2019. Adaptive governance and the administrative state: knowledge management for forest planning in the western United States. *Regional Environmental Change* 19(8), 2651-2666, *doi:* 10.1007/s10113-019-01569-6
- 39. Huber-Stearns, H.R. GSC, **Schultz, C.A.,** Cheng, A.S. 2019. A multiple streams analysis of institutional innovation in forest watershed governance. *Review of Policy Research 36(6)*, 781-804, *doi: 10.1111/ropr.12359*
- 40. Timberlake, T.J.^{GS}, Joyce, L.A., **Schultz, C.A.,** and Lampman, G. 2018. Design of a workshop process to support consideration of natural range of variation and climate change for land management planning under the 2012 planning rule. Research Note RMRS-RN-82. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 36 p.
- 41. **Schultz, C.A.,** McIntyre, K.B.^{GS}, Cyphers, L.^{GS}, Kooistra, C., Ellison, A., and Moseley, C. 2018. Policy design to support forest restoration: the value of focused investment and collaboration. *Forests* 9(9), 512, *doi:* 10.3390/f9090512
- 42. Kleindl, W., Stoy, P.C., Binford, M., Desai, A.R., Dietze, M.C., **Schultz**, **C.A.**, Starr, G., Staudhammer, C., Wood, D.J.A. 2018. Toward a socioecological theory of forest macrosystem ecology. *Forests* 9(4), 200, doi:10.3390/f9040200
- 43. Timberlake, T.J.^{GS}, **Schultz, C.A.** 2018. Policy, practice, and partnerships for climate change adaptation on U.S. national forests. *Climatic Change 144*, 257-269, *doi: 10.1007/s10584-017-2031-z*
- 44. Pitt, A. N. GS, **Schultz, C.A.** 2018. Youth-based citizen science monitoring: Case studies from three national forests. *Journal of Forestry 116*(2), 109-116, *doi: 10.1093/jofore/fvx008*
- 45. **Schultz, C.A.,** Moseley, C., McIntyre, K. B. GS, Mattor, K. M., Ellison, A. 2017. Key findings and recommendations based on the U.S. Forest Service Integrated Resource Restoration pilot third-party review. *Journal of Forestry* 116(1),

- 46. **Schultz, C.A.,** Mattor, K.D., Moseley, C. 2016. Aligning policies to support forest restoration and promote organizational change. *Forest Policy and Economics* 73, 195-203, *doi: 10.1016/j.forpol.2016.09,015*
- 47. Wurtzebach, Z. GS, **Schultz, C.A.** 2016. Measuring ecological integrity: history and practical application. *BioScience* 66, 446-457, *doi:* 10.1093/biosci/biw037
- 48. **Schultz, C.A.,** Moseley, C., Mattor, K.M. 2015. Striking the balance between budgetary discretion and performance accountability: the case of the U.S. Forest Service's approach to integrated restoration. *Journal of Natural Resources Policy Research* 7(2-3), 109–123, doi: 10.1080/19390459.2015.1027533
- 49. Spencer, A.G. GS, **Schultz, C.A.**, Hoffman, C.M. 2015. Enhancing adaptive capacity for restoring fire-dependent ecosystems: the Fire Learning Network's Prescribed Fire Training Exchanges. *Ecology and Society* 20(3), 38, doi: 10.5751/ES-07847-200338
- 50. Becknell, J.M., Desai, A.R., Dietze, M.C., **Schultz, C.A.,** Starr, G., Duffy, P.A., Franklin, J.F., Pourmokhtarian, A., Hall, J., Stoy, P.C., others. 2015. Assessing interactions among changing climate, management, and disturbance in forests: a macrosystems approach. *BioScience* 65(3), 263–274, *doi:* 10.1093/biosci/biu234
- 51. **Schultz, C.A.,** Coelho, D.L.^{GS}, Beam, R.D.^{UG}. 2014. Design and governance of multiparty monitoring under the USDA Forest Service's Collaborative Forest Landscape Restoration Program. *Journal of Forestry 112(2)*, 198–206, *doi:* 10.5849/jof.13-070
- 52. **Schultz, C.A.,** Sisk, T.D., Noon, B.R., Nie, M.A. 2013. Wildlife conservation planning under the United States Forest Service's 2012 planning rule. *The Journal of Wildlife Management* 77(3), 428–444, *doi:* 10.1002/jwmg.513
- 53. **Schultz, C.A.,** Nie, M. 2012. Decision-making triggers, adaptive management, and natural resources law and planning. *Natural Resources Journal* 52, 443–521.
- 54. **Schultz, C.A.** 2012. History of the cumulative effects analysis requirement under NEPA and its interpretation in U.S. Forest Service case law. *Journal of Environmental Law and Litigation* 27, 125–190.
- 55. **Schultz, C.A.,** Jedd, T.^{GS}, Beam, R.D.^{UG}. 2012. The Collaborative Forest Landscape Restoration Program: a history and overview of the first projects. *Journal of Forestry* 110(7), 381–391, *doi:* 10.5849/jof.11-082
- 56. **Schultz, C.A.** 2012. The U.S. Forest Service's analysis of cumulative effects to wildlife: A study of legal standards, current practice, and ongoing challenges on a National Forest. *Environmental Impact Assessment Review 32(1)*, 74–81, *doi: 10.1016/J.EIAR.2011.03.003*
- 57. Nie, M.A., **Schultz, C.A.** 2012. Decision-making triggers in adaptive management. *Conservation Biology* 26(6), 1137–1144, *doi:* 10.1111/j.1523-1739.2012.01915.x
- 58. **Schultz, C.A.** 2010. Challenges in connecting cumulative effects analysis to effective wildlife conservation planning. *Bioscience* 60(7), 545–551, *doi:* 10.1525/bio.2010.60.7.10
- 59. **Schultz, C.** 2008. Responding to scientific uncertainty in forest policy. *Environmental Science and Policy 11*, 253-271, *doi: 10.1016/j.envsci.2007.09.002*

Manuscripts in Review

Non-Refereed Chapters in Books

1. Wurtzebach, Z., and Schultz, C.A. 2020. Policy tools and capacities for adaptiveness in U.S. public lands management.

- In R. Djalante and B. Siebenhüner (Eds). *Adaptiveness: Changing Earth System Governance*. Cambridge, UK: Cambridge University Press.
- 2. Benson, M.H., **Schultz, C.A.** 2015. Adaptive management and law. Pages 39-59 in Allen, C., Garmestani, A., Smith, C., editors. *Adaptive Management of Social-Ecological Systems*. New York: Springer.
- 3. Coelho, D. GS, Wurtzebach, Z. GS, **Schultz, C.A.** 2013. Adaptive management. Pages 163-190 in Egan, D., Dubay, T., eds. *Breaking Barriers Building Bridges*. Flagstaff, AZ: Northern Arizona University Ecological Restoration Institute.

Working Papers/Practitioner Papers

- 1. Aldworth, T. GS, Schultz, C.A., Huber Stearns, H.R., Abrams, J., Kooistra, C. 2022. Field-Level Implementation of the US Forest Service's Shared Stewardship Strategy: Six Case Studies of Large-Scale Cross-Boundary Forest Management. Public Lands Policy Group Practitioner Paper #16. Fall 2022. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 2. **Schultz, C.A.,** Bertone-Riggs, T., Brown, S.J., Goulette, N., Greiner, M., Kruse, D., Shively, R., Smith, M. 2022. Report on May 2022 Workshop on Outcome-Based Performance Measures. Public Lands Policy Group Practitioner Paper #15. Summer 2022. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 3. Greiner, M. RA, Schultz, C.A. 2022. Informing Strategic Development within the USFS Research and Development Deputy Area. Public Lands Policy Group Practitioner Paper #14. Spring 2022. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 4. Greiner, M.^{RA}, McGrath Novak, K.^{RA}, **Schultz, C.A.** 2022. Assessing How Fuel Treatments Are Considered During Incident Response: An Interim Report. Public Lands Policy Group. Practitioner Paper #13. Spring 2022. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 5. Manzolillo, B.^{GS} and **Schultz, C.** 2021. Policy lessons for wolf reintroduction. CSU Public Lands Policy Group Practitioner Paper 11. Summer 2021. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 6. Kooistra, C.^{RA}, **Schultz, C.**, Huber-Stearns, H., Abrams, J., Greiner, M.^{RA}, Sinkular, E.^{RA}. 2021. Assessment of early implementation of the U.S. Forest Service's Shared Stewardship Strategy. Public Lands Policy Group Practitioner Paper 10. Winter 2021. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 7. McGrath Novak, K.^{GS}, **Schultz, C.A.,** and McCaffrey, S. 2020. Design, Implementation, and Evaluations of Prescribed Fire Outreach on the Colorado Front Range. CSU Public Lands Policy Group Practitioner Paper 7. Fall 2020. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 8. Greiner, M.^{RA}, Kooistra, C.^{RA}, and **Schultz, C.A.** 2020. Pre-Season Planning for Wildland Fire Response: An Assessment of the U.S. Forest Service's Potential Operational Delineations (PODs). CSU Public Lands Policy Group Practitioner Paper 5. Spring 2020. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 9. Abrams, J., Greiner, M.^{RA}, Timberlake, T.^{GS}, **Schultz, C.A.**, Evans, A., Huber-Stearns, H. 2020. Planning and Managing for Resilience: Lessons from National Forest Plan Revisions. Ecosystem Workforce Program Working Paper #100, Summer 2020. Available at: http://ewp.uoregon.edu/publications/working
- 10. Collins, N. GS, and **Schultz, C.A.** 2020. Motivations and Mechanisms Underlying U.S. Forest Service Corporate Partnerships. CSU Public Lands Policy Group Practitioner Paper 6. Summer 2020. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/

- 11. Greiner, M.^{RA}, Kooistra, C.^{RA}, and **Schultz, C.A.** 2020. Pre-Season Planning for Wildland Fire Response: An Assessment of the U.S. Forest Service's Potential Operational Delineations (PODs). CSU Public Lands Policy Group Practitioner Paper 5. Spring 2020. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 12. **Schultz, C.A.,** Kooistra, C.^{RA}, Miller, L.^{RA}, Ferguson, M.^{RA}. 2020. Findings from a Third-Party Assessment of the Forest Service's Risk Management Assistance Team. CSU Public Lands Policy Group Practitioner Paper 4. Winter 2020. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 13. **Schultz, C.A,** Santo, A., Huber-Stearns, H., and McCaffrey, S. 2020. Strategies for Increasing Prescribed Fire Application on Federal Lands: Lessons from Case Studies in the U.S. West. CSU Public Lands Policy Group Practitioner Paper 6/Ecosystem Workforce Program Working Paper #99. Spring 2020. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 14. Niemiec, R.M., Berl, R., Gonzalez, M., Teel, T., Camara, C., Collins, M., Salerno, J., Crooks, K., **Schultz, C.A.**, Hoag, S., Breck, S. 2020. Working Report: Public Perspectives on Wolf Reintroduction and Management in Colorado. Fort Collins, CO: Colorado State University, Department of Human Dimensions of Natural Resources. Available at: https://sites.warnercnr.colostate.edu/rniemiec/publications/
- 15. Ellison, A., Coughlan, M., Kooistra, C., and Schultz, C.A. 2018. Accomplishing Collaborative, Landscape-Scale Restoration on Forests without CFLRP or Joint Chiefs' Projects. CSU Public Lands Policy Group Practitioner Paper 3/Ecosystem Workforce Program Working Paper #99. Summer 2018. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 16. **Schultz, C.,** Huber-Stearns, H., McCaffrey, S., Quirke, D., Ricco, G., and Moseley, C. 2018. Prescribed Fire Policy Barriers and Opportunities: A Diversity of Challenges and Strategies Across the West. CSU Public Lands Policy Group Practitioner Paper 2, Summer 2018. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 17. **Schultz, C.,** McIntyre, K.^{GS}, Cyphers, L.^{GS}, Ellison, A., Kooistra, C., Moseley, C. 2017. Strategies for Success Under Forest Service Restoration Initiatives. Ecosystem Workforce Program Institute for a Sustainable Environment, University of Oregon, Eugene, OR. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 18. Rutherford, T.^{GS} and **Schultz, C.A.** 2017. Challenges and Opportunities in Alaska Fire Management: Adapting to Climate Change: A Practitioner's Report on Interview Findings. CSU Public Lands Policy Group Practitioner Paper 1. Fall 2017. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 19. Timberlake, T.J. GS, **Schultz, C.A.,** Abrams, J. 2017. Resilience in Land Management Planning: Policy Mandates, Approaches, and Resources. Ecosystem Workforce Program, Institute for a Sustainable Environment, University of Oregon, Eugene, OR. Available at: http://ewp.uoregon.edu/publications/working
- 20. Waltz, A., Wurtzebach, Z. GS, Esch, B., Wasserman, T., **Schultz, C.A.** 2017. Developing a Framework for the U.S. Forest Service Broader-Scale Monitoring Strategy: Processes and Outcomes. Northern Arizona University Ecological Restoration Institute Report. Available at: http://sweri.eri.nau.edu/PDFs/BSMS_InterviewReportFinal122115.pdf
- 21. Ricco, G. G. and **Schultz, C.A.** 2016. Lessons Learned, Innovations, and Best Practices among Early Revision Efforts in Forest Planning: Summary of Interview Findings. Report to the U.S. Forest Service Washington Office, Ecosystem Management and Coordination. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 22. Ricco, G. G. Schultz, C.A., Timberlake, T. G. McIntyre, K. G. 2016. Summary of the 2016 National Planners Workshop: Lessons Learned, Innovations, and Best Practices among Early Revision Efforts in Forest Planning. Report to the U.S. Forest Service Washington Office, Ecosystem Management and Coordination. Available at: sites.warnercnr.edu/courtneyschultz/practitioner-papers/
- 23. **Schultz, C.A.,** McIntyre, K.^{GS}, Ellison, A., Moseley, C. 2015. A Third-Party Evaluation of the IRR Pilot: Report from Phase 3, Stakeholder Outreach and Engagement. Ecosystem Workforce Program, Institute for a Sustainable

Environment, University of Oregon, Eugene, OR. Available at: http://ewp.uoregon.edu/publications/working

- 24. **Schultz, C.A.,** Mattor, K.M., Moseley, C. 2015. Evaluating the integrated resource restoration line item: results from a survey of National Forest System Staff. Ecosystem Workforce Program, Institute for a Sustainable Environment, University of Oregon, Eugene, OR. Available at: http://ewp.uoregon.edu/publications/working
- 25. **Schultz, C.A.,** Mattor, K.M., Moseley, C. 2014. Evaluating the integrated resource restoration line item: results from phase 1. Ecosystem Workforce Program, Institute for a Sustainable Environment, University of Oregon, Eugene, OR. Available at: http://ewp.uoregon.edu/publications/working
- 26. **Schultz, C.A.,** Coelho, D. GS. 2012. The design and governance of multi–party monitoring under the Collaborative Forest Landscape Restoration Program. Colorado Forest Restoration Institute, Fort Collins, CO.
- 27. Nie, M. A., **Schultz, C. A.** 2011. *Decision-making triggers in adaptive management*. Report to the U.S. Forest Service Pacific Northwest Research Station, NEPA for the 21st Century Project. USDA Forest Service, Portland, OR.

CONTRACTS & GRANTS

Externally Funded Projects as PI: \$3,114,951

- Schultz, C. A. (PI), vonHedemann, N. PD (Co-PI), Stevens-Rumann, C. (Co-PI), Long, J. (Co-PI), Schneider, L. (Co-PI), Fulé, P (Co-PI). 2022-2025. "The Importance of Forests for All People: Understanding Forest Recovery Priorities, Management Options and Policy Needs for Tribes in Post-Fire Landscapes." Southwest Climate Adaptation Science Center, \$350,000.
- Schultz, C. A. (PI), Bertone-Riggs, T. (Co-PI), Brown, S. J. (Co-PI), Goulette, N. (Co-PI), Smith, M (Co-PI), 2021-2022. "Identifying Policy and Governance Options for Prescribed Fire." William and Flora Hewlett Foundation, \$200,000.
- Schultz, C. A. (PI), 2021-2024. "Incorporating Climate Change Considerations into Forest Service Planning and Activities," USDA-USFS-Office of Sustainability and Climate, \$65,000.
- Schultz, C. A. (PI), Anderson, N. (Co-PI). 2021-2023. "Phase 2 Quantitative Research and Development Deputy Area Study," USDA-USFS-Rocky Mountain Research Station, \$40,000.
- Schultz, C. A. (PI), Anderson, N. (Co-PI). 2020-2023. "Informing Strategic Development within the USFS Research and Development Deputy Area," USDA-USFS-Rocky Mountain Research Station, \$175,000.
- Schultz, C. A. (PI), Anderson, N. (Co-PI), 2021-2023. "Expanding the Assessment of Fuels Treatment Effectiveness from Planning and Response Perspectives," USDA-USFS-Rocky Mountain Research Station, \$65,000
- Schultz, C. A. (PI), Anderson, N. (Co-PI), 2020-2022. "Assessment of Fuels Treatment Effectiveness from Planning and Response Perspectives," USDA-USFS-Rocky Mountain Research Station, \$70,000
- Schultz, C. A. (PI), Abrams, J. (Co-PI), Huber-Stearns (Co-PI), 2019-2024. "A National Review of the Shared Stewardship Strategy's Implementation," USDA-USFS-State and Private Forestry, \$882,029.
- Schultz, C. A. (PI), Cheng, A. S. (Co-PI), McCaffrey, S. (Co-PI), 2019-2024. "Implementing the Shared Stewardship Strategy in Colorado," USDA-USFS-Rocky Mountain Research Station, \$127,220.
- Schultz, C. A. (PI), 2017-2022. "Collaborative Proposal: MSB-FRA: The Future of U.S. Forest Function under Changing Climate, Disturbance and Forest Management," National Science Foundation, \$211,054 (total funding to all collaborators: ~\$2 million).
- Schultz, C. A. (PI), Moseley, C. (Co-PI), 2013-2019. "An Evaluation of the Integrated Resource Restoration Budget Pilot and Other Restoration Authorities," USDA-USFS-National Forest System, \$350,000.
- Schultz, C. A. (PI), 2016-2021. "Assessing the First Generation of Forest Service Climate Change Vulnerability Assessments," USDA-USFS-National Forest System-Office of Sustainability and Climate, \$291,224.
- Schultz, C. A. (PI), Moseley, C. (Co-PI), Bone, C. (Co-PI), Amos, A. (Co-PI), 2016-2019. "Policy Barriers to Prescribed Fire: Identifying Opportunities and Mechanisms for Change," Joint Fire Science Program, \$275,002.
- Schultz, C. A. (PI), Duffy, P. (Co-PI), Fresco, N. (Co-PI), 2016-2018. "Impacts of Climate and Management Options on Wildland Fire Fighting in Alaska: Implications for Operational Costs and Complexity under Future Scenarios," Joint Fire Science Program, \$244,422.
- Schultz, C. A. (PI), 2015-2017. "Incorporating Climate Change Considerations into National Forest Planning Processes," USDA-USFS-Rocky Mountain Research Station, \$55,000.

- Schultz, C. A. (PI), 2013-2014. "Assisting National Forests in Updating Monitoring and Adaptive Management Programs under the 2012 Planning Rule," USDA-USFS-Rocky Mountain Research Station, \$25,000.
- Schultz, C. A. (PI), 2012. "Adaptive Management for Landscape-Scale Restoration," Northern Arizona University, Ecological Restoration Institute, \$4,000.

Externally Funded Projects as Co-PI: \$3,203,406

- Stevens-Rumann, C. (PI), Schultz, C.A. (Co-PI), Peterson, C. (Co-PI), Chambers, M. (Co-PI), vonHedemann, N. (Co-PI), Vorster, A. (Co-PI). 2023-2027. Tree Regeneration in a Changing Climate: Climate-Smart Reforestation After Wildfire. USDA-NIFA AFRI, \$650,000.
- Kelly, E. F. (PI), Leach, J. E. (Co-PI), Jablonski, B. (Co-PI), Schipanski, M. (Co-PI), Schultz, C. A. (Co-PI). 2022-2023. "NIFA's Roadmap for Climate Change Research: A Horizon Scan 2022-2032," USDA-NIFA Climate Hub Partnership Program, \$300,000.
- Wei, Y. (PI), Schultz, C. A. (Co-PI), 2022-2027. "Improving analytics and understanding effectiveness to support wildfire risk management," USDA-USFS-Rocky Mountain Research Station, \$215,271.
- Wei Y. (PI), Schultz, C. A. (Co-PI), Bayham, J. (Co-PI), Belval, E. J. (Co-PI). 2019-2024. "Strategic wildfire management planning," USDA-USFS-Rocky Mountain Research Station, \$1,293,557 (\$373,884 awarded in 2018; \$499,676 awarded in 2019; \$419,997 in 2020).
- Wei, Y. (PI), Schultz, C. A. (Co-PI), 2014-2019. "Large wildland fire resource requirements," USDA-USFS-Rocky Mountain Research Station, \$937,560.
- Abrams, J. (PI), Schultz, C. A. (Co-PI), Evans, A. (Co-PI), Huber-Stearns, H. (Co-PI), Moseley, C. (Co-PI), Fernandez-Gimenez, M. (Co-PI), 2016-2019. "Integrating Social and Ecological Resilience into Forest Management Planning," Joint Fire Science Program, \$288,984 (Institutional PI is Schultz; subaward: \$106,942).
- Cheng, A. S. (PI), Schultz, C. A. (Co-PI), 2015-2016. "Support of Forest Planning," USDA-USFS-National Forest System, \$150,406.
- Cheng, A. S. (PI), Schultz, C. A. (Co-PI), 2015-2016. "RMRS Future Forest Webinar Series and Additional Science Application and Delivery Efforts," USDA-USFS-Rocky Mountain Research Station, \$20,000.
- Waltz, A. (PI), Schultz, C. A. (Co-PI), 2014-2016. "Designing a Broad-Scale Monitoring Framework to Support the Goals of the 2012 Forest Planning Rule," USDA-USFS-National Forest System, \$300,000. (Institutional PI is Schultz; subaward: \$96,833.00).
- Cheng, A. S. (PI), Schultz, C. A. (Co-PI), 2012-2015. "Forest Plan Monitoring Transition Pilot Project," USDA-USFS-National Forest System, \$144,000.
- Nie, M. (PI), Schultz, C. A. (Co-PI), 2010-2012. "NEPA, Adaptive Management, and the National Forests," USDA-USFS-Pacific Northwest Research Station, \$69,259. (Institutional PI is Schultz; subaward: 28,800).

Internally Funded Awards: \$534,302

- Schultz, C.A. (PI), 2020-2023. "The Climate Adaptation Partnership (CAP) for Policy Innovation and Research Coordination." 2020-2023. Office of the Vice President for Research, Catalyst for Innovative Partnerships. \$200,000.
- Carr-Childers, L. (PI), Schultz, C.A (Co-PI), 2019-2020. "Building a Public Lands Center at CSU." Office of the Vice President for Research, Pre-Catalyst for Innovative Partnerships Program. \$5,000.

- Crooks, K. (PI), Breck, S. (Co-PI), Niemiac, B. (Co-PI), Salerno, J. (Co-PI), Teel, T. (Co-PI), Schultz, C.A. (Co-PI), Gruby, R. (Co-PI), Hoag, D (Co-PI), 2019-2020. "A Center for Human-Carnivore Conflict." Office of the Vice President for Research, Pre-Catalyst for Innovative Partnerships Program. \$5,000.
- Schultz, C. A. (PI), Cheng, A. S. (Co-PI), McIntyre, K. B. (Co-PI), Bergemann, H. M. (Co-PI), 2016-2017. "Assessing the Efficacy of Current Forest Policy for Supporting Collaborative Adaptive Governance," McIntire-Stennis Cooperative Forestry Program. \$23,427.
- Schultz, C. A. (PI), 2015-2017. "Strategies for Incorporating Climate Change into U.S. Forest Service Decision-Making and NEPA Processes," McIntire-Stennis Cooperative Forestry Program. GRA support for 3 years, \$83.000.
- Schultz, C. A. (PI), 2012-2015. "Innovation, Policy Learning, and Adaptive Governance: An Analysis of the Competitive Prioritization Policy Model for Forest Restoration," McIntire-Stennis Cooperative Forestry Program, \$150,000.
- Schultz, C. A. (PI), 2012. "Monitoring and Adaptive Management for Collaborative Forest Restoration Programs," Colorado Forest Restoration Institute, \$8,877.
- Schultz, C. A. (PI), 2010-2012. "The Collaborative Forest Landscape Restoration Act as a Policy Experiment," McIntire-Stennis Cooperative Forestry Program, \$60,000.

Pending Projects as Co-PI: \$300,000

- Stevens-Rumann, C. (PI), Schultz, C.A. (Co-PI), Chambers, M. (Co-PI), Peterson, C. (Co-PI), vonHedemann, N. (Co-PI), Vorster, A. (Co-PI). Tree regeneration in a changing climate: reforestation potential after wildfire, USDA-NIFA-AFRI Foundational and Applied Science, \$642,820.
- Schultz, C. (PI), Carney, C. (Co-PI), Huber-Stearns, H.R. (Co-PI). Pre-Fire Planning Tools and Governance Conditions to Facilitate Mitigation of Post-Fire Effects in Forest Ecosystems, Joint Fire Science Program, \$490,275.

PAPERS PRESENTED/SYMPOSIA/INVITED LECTURES/PROFESSIONAL MEETINGS (past five years)

Invited Talks (presenter in bold)

- March 22, 2022. **Schultz, C.A.** "Innovations and Challenges in U.S. Forest Restoration and Fire Management." Invited speaker at World Forestry Day, Bunbury, Australia. Virtual Oral Presentation.
- June 4, 2021. **Schultz, C.A.** "America Is Burning: The Growing Onslaught of Wildfires and Post-Fire Landslides in the U.S." Invited participant for panel with the American Geophysical Union's Hazards Caucus Alliance to the Congressional Hazards Caucus on Capitol Hill. Virtual Oral Presentation.
- March 15, 2021. **Schultz, C.A.** "Managing Public Lands in 2021 and Beyond: New Directions and Challenges in National Forest Management." Invited presentation for panel with the Council on Food, Agricultural and Resource Economics. Virtual Oral Presentation.
- November 19, 2020. **Schultz, C.A.** "Challenges and Opportunities for Increasing Prescribed Fire on Federal Lands in the West: Lessons from Case Studies and Broader Implications for Improving U.S. Fire Management." University of California Fire Science Seminar Series. Virtual Oral Presentation.
- March 2, 2020. **Schultz, C.A.** "Research Perspective on Shared Stewardship, Cross-Boundary Restoration and Collaborative Partnerships." SWERI Cross-Boundary Landscape Restoration Conference, Albuquerque, NM. Oral Presentation.

- October 22, 2019. **Schultz, C.A.** "New Directions and Challenges for Collaborative Forest Management." The Nature Conservancy's Annual North America Forests Workshop, Estes Park, CO. Oral Presentation
- April 5, 2019. **Schultz, C.A.,** Huber-Stearns, H., McCaffrey, S., Quirke, D., Ricco, G., Moseley, C. "Policy Barriers to Increasing Prescribed Fire Accomplishments on Federal Lands: A Diversity of Challenges and Approaches Across the West." California Fire MOU Partnership Meeting, Sacramento, CA. Oral Presentation
- October 12, 2018. **Schultz, C.A.** "Scale, Science, and Stakeholders: The Changing Landscape of U.S. Forest Policy and Governance." CU-Denver Integrative Biology Seminar Series, Denver, CO. Oral Presentation.
- March 21, 2018. **Schultz, C.A.** "Policy changes to support integrated and collaborative forest restoration." Montana-Idaho Regional Forest Collaboratives Meeting, Coeur d'Alene, ID. Oral Presentation.
- December 6, 2017. **Schultz, C.A.** "CFLRP Strategies for Success and Lessons Learned," Rural Voices for Conservation Coalition Annual Meeting, Edgefield, OR. Oral Presentation.
- September 20, 2017. **Schultz, C.A.** "The Future of U.S. National Forest Governance: Institutional Innovations for Addressing Multi-Scale Management Priorities and Challenges," International Union of Forest Research Organizations, Freiburg, Germany. Oral Presentation.

Conference Presentations (presenter in bold)

- November, 11, 2022. **Schultz, C.A.** "Policy Design for Climate Adaptive Wildfire Management." Organized side-event: "Wildfire Increased, a Challenge for Earth Systems and Societies." UN Climate Change Conference of the Parties 27, Sharm el-Sheik, Egypt. Oral presentation in an organized session.
- October 26, 2022. **Beavers, J., Miyamoto, T.,** and **Schultz, C.A.** "Centering Sustainability and Well-Being in University Strategic Planning." Global Conference on Sustainability in Higher Education. Virtual Panel Presentation.
- June 27, 2022. **vonHedemann, N.**^{RA} and Schultz, C.A. "United States Forest Management for Climate Adaptation and Mitigation: Challenges Across Regions and Jurisdictions." International Association of Society and Natural Resources Conference, San Jose, Costa Rica. Oral Presentation.
- May 26, 2021. **Aldworth, T.** GS, Schultz, C.A. "Shared Stewardship on the Ground: Case Studies of Cross-Boundary Forest Management Projects." International Association of Wildland Fire's Fire and Climate Conference. Pasadena, CA. Oral Presentation.
- May 25, 2022. **Greiner, M.**RA, McGrath Novak, K.RA, Schultz, C.A. "Assessing How Fuel Treatments Are Considered During Incident Response." International Association of Wildland Fire's Fire and Climate Conference. Pasadena, CA. Poster Presentation.
- February 25, 2022. **vonHedemann, N.**RA and Schultz, C.A. "Challenges in U.S. Climate Adaptive Forest Management for Family Forest Owners." Annual Meeting of the American Association of Geographers. Virtual Oral Presentation.
- June 21, 2021. **Kooistra, C.**, RA Schultz, C.A., Huber-Stearns, H., Abrams, J. "Perspectives on the U.S. Forest Service's Shared Stewardship Strategy's Implementation and the Implications for Institutions and Federal Lands Governance." International Association of Society and Natural Resources Conference. Virtual Oral Presentation.
- May 26, 2021. **Kooistra, C.**, RA Schultz, C.A., Sinkular, E. RA "Characterizing the Context and Demand for the U.S. Forest Service's Collaborative Forest Restoration Program in 2020." 16th International Wildland Fire Safety Summit & 6th Human Dimensions of Wildland Fire. Virtual Oral Presentation.

- May 25, 2021. **Kooistra, C.,** RA Schultz, C.A., Ellison, A., McCaffrey, S. "National Forests without Targeted Federal Funding: Restoration Underdogs or a Different Breed of Forest?" 16th International Wildland Fire Safety Summit & 6th Human Dimensions of Wildland Fire. Virtual Oral Presentation.
- May 25, 2021. **Greiner, M.**, RA Schultz, C.A. "Organizational Change Dynamics and PODs." 16th International Wildland Fire Safety Summit & 6th Human Dimensions of Wildland Fire. Virtual Oral Presentation.
- May 24, 2021. **Greiner, M.**, RA Schultz, C.A. "Pre-season Fire Management Planning: The Use of Potential Operational Delineations (PODs)." 16th International Wildland Fire Safety Summit & 6th Human Dimensions of Wildland Fire. Virtual Oral Presentation.
- February 24, 2021. **Greiner, M.**, RA Schultz, C.A. "Pre-fire Planning: Assessing the use of PODs." Rocky Mountain Research Station Wildfire Risk Management Science PODs Collaborative Fire Planning workshop. Virtual Oral Presentation.
- October 31, 2020. **McGrath Novak, K.,** GS Schultz, C.A., McCaffrey, S. "Building a Prescribed Fire Outreach Program on the Arapaho-Roosevelt National Forest." Society of American Foresters National Convention. Virtual Oral Presentation.
- October 30, 2020. **Kooistra, C.,** RA Schultz, C.A., Miller, L., RA Greiner, M. RA "Using Enhanced Analytics to Improve Wildfire Decision Making: Assessing Forest Service Risk Management Assistance Efforts." Society of American Foresters National Convention. Virtual Oral Presentation.
- October 29, 2020. **Schultz, C.A., Kooistra, C.A.,** RA Huber-Stearns, H., Abrams, J. "Understanding Shared Stewardship Approaches for U.S. Forest Management." Society of American Foresters National Convention. Virtual Oral Presentation.
- November 21, 2019. **Schultz, C.A.,** Hoffman, C., Hiers, K. Organized symposium: "The Unique Considerations of Prescribed Fire Research and Application" (sequential 2-hour sessions on social and biophysical science). 8th International Fire Ecology and Management Congress. Tucson, AZ. Oral Presentation in an Organized Session.
- November 21, 2019. **Ferguson, M.,**^{RA} Schultz, C.A. "Policy processes for improving strategic fire risk management on federal forestlands." 8th International Fire Ecology and Management Congress. Tucson, AZ. Oral Presentation in an Organized Session.
- November 21, 2019. **Schultz, C.A.,** Huber-Stearns, H., McCaffrey, S. "Policy approaches for increasing application of prescribed fire on federal lands." 8th International Fire Ecology and Management Congress. Tucson, AZ. Oral Presentation in an Organized Session.
- November 21, 2019. **McGrath, K.,** GS McCaffrey, S., Schultz, C.A., Miller, L., RA Emslie, A. UG "Building a prescribed fire program on the Colorado Front Range: the role of landowner engagement." 8th International Fire Ecology and Management Congress. Tucson, AZ. Oral Presentation in an Organized Session.
- November 20, 2019. **Schultz, C.A.,** Moseley, C. "Policy design to support collaboration and capacity-building for improving federal fire management." 8th International Fire Ecology and Management Congress. Tucson, AZ. Oral Presentation in an Organized Session.
- October 9, 2019. **Collins, N.,** GS Schultz, C.A., Jones, K., Huber-Stearns, H. "Corporate giving for climate change projects on national forests." Society of Environmental Journalists Conference. Ft. Collins, CO. Poster Presentation.
- October 25, 2019. **Collins, N.,** GS Schultz, C.A., Jones, K., Huber-Stearns, H. "Corporate giving for climate change projects on national forests." Net Impact Conference. Detroit, MI. Poster Presentation.

- April 10, 2019. **Schultz, C.A.** "Policy for supporting landscape approaches in land management." International Association of Landscape Ecology, Fort Collins, CO. Oral Presentation.
- March 14, 2019. **Schultz, C.A.** "Policies to support forest and fire restoration efforts." High Altitude Restoration—Society for Ecological Restoration Rocky Mountain Chapter Meeting, Fort Collins, CO. Oral Presentation.
- March 12, 2019. **Schultz, C.A.** "Achieving forest restoration through increased prescribed fire application." High Altitude Restoration—Society for Ecological Restoration Rocky Mountain Chapter Meeting, Fort Collin, CO. Oral Presentation.
- December 10, 2018. **Staudhammer, C.L.,** W. Kleindl, C.-S. Fu, A. Desai, M. Dietze, P. Duffy, M. Marsik, C.A. Schultz, C. Rollinson, G. Starr, P. Stoy. The future of U.S. forest function under changing environment, disturbance, and forest management. American Geophysical Union, Washington, D.C. Oral Presentation.
- June 18, 2018. **Schultz, C.A.** "Policy design to support collective action and adaptive governance: Examples from community-based forest restoration approaches in the United States." International Symposium for Society and Resource Management, Snowbird, UT. Oral Presentation.
- June 19, 2018. **Timberlake, T.J.,** GS Abrams, J.A., Evans, A., Fernández-Giménez, M., Schultz, C.A. "Making sense of resilience in federal forest management: A case study of the Kaibab National Forest." International Symposium on Society and Resource Management, Snowbird, UT. Oral Presentation.
- June 12, 2018. **Timberlake, T.J.,** GS Abrams, J.A., Evans, A., Fernández-Giménez, M., Schultz, C.A. "Making sense of resilience on 'the little forest that could': A case study of forest planning on the Kaibab National Forest." SESYNC Boundary Spanning International Symposium, Annapolis, MD. Poster Presentation.
- May 23, 2018. **Schultz, C.A.,** Huber-Stearns, H., McCaffrey, S., Quirke, D., Ricco, G., Moseley, C. "Policy Barriers to Increasing Prescribed Fire Accomplishments on Federal Lands: A Diversity of Challenges and Approaches Across the West." Fire Continuum Conference, Missoula, MT. Oral Presentation in Organized Session.
- May 23, 2018. **Rutherford, T.K.,** GS C.A. Schultz. "The Future of Fire Management in Alaska: Adapting Approaches in Light of Current and Predicted Effects due to Climate Change." Fire Continuum Conference, Missoula, MT. Oral Presentation in Organized Session.
- May 14, 2018. **Desai, A.R.,** M.C. Dietze, C. Rollinson, C.L. Staudhammer, W. Kleindl, C. S. Fu, P. Duffy, M. Marsik, C.A. Schultz, G. Starr, P. Stoy, and C. Deshmukh. 2018. "Bringing Forest Management into Earth System Models: Insights from Observations and Theory." American Meteorological Society 33rd Conference on Agricultural and Forest Meteorology, Boise, ID. Oral Presentation.
- April 13, 2018. **Schultz, C.A.,** C. Moseley, T.J. Timberlake, K.B. McIntyre, Z. Wurtzebach. "Policy Design to Address Scale Mismatches and Related Challenges: Lessons from U.S. Forest Governance." Second International Forest Policy Meeting, Waginengen, Netherlands. Oral Presentation.
- April 8, 2018. **Staudhammer, C.L.,** C.-S. Fu, W. Kleindl, C. Rollinson, A. Desai, M. Dietze, P. Duffy, C.A. Schultz, M. Marsik, G. Starr, P. Stoy. "The future of U.S. forest function under changing environment, disturbance, and forest management." European Geosciences Union General Assembly, Vienna, Austria. Poster Presentation.
- January 8, 2018. Kleindl, W., C.-S. Fu, C. Rollinson, A. Desai, C. L. Staudhammer, M. Dietze, P. Duffy, C.A. Schultz, M. Marsik, G. Starr, P. Stoy. "The future of U.S. forest function under changing environment, disturbance, and forest management." National Science Foundation Macrosystems Biology Annual PI Meeting, Fairfax, VA. Poster Presentation.
- November 28, 2017. **Schultz, C.A.,** M.P. Thompson, M. P., S. McCaffrey. "How Organizational Institutions May Limit Progress in U.S. Forest Service Fire Management," 7th International Fire Ecology and Management Congress, Orlando, FL. Oral Presentation.

- November 28, 2017. **Schultz, C.A.,** Huber-Stearns, H., McCaffrey, S., Quirke, D., Ricco, G., Moseley, C. "Policy Barriers to Prescribed Fire: A Diversity of Approaches Across the West," 7th International Fire Ecology and Management Congress, Orlando, FL. Oral Presentation.
- November 17, 2017. **McIntyre, K.B.,** GS Schultz, C.A. "Assessing Restoration Success: Evaluating CFLRP as a Policy Tool for Landscape-Scale Restoration," Society of American Foresters National Convention, Albuquerque, NM. Oral Presentation.
- November 17, 2017. **Rutherford, T.K.,** Schultz, C.A. "Preparing for Future Fire: Governance Change in the Alaska Wildland Fire Management System," Society of American Foresters National Convention, Albuquerque, NM. Oral Presentation.
- November 17, 2017. **Cyphers, L,** GS Schultz, C.A. "An Evaluation of the Joint Chiefs Landscape Restoration Partnership," Society of American Foresters National Convention, Albuquerque, NM. Oral Presentation.
- November 17, 2017. **Schultz, C.A.** "A Preliminary Analysis of Laws and Policies Governing Prescribed Fire," Society of American Foresters National Convention, Albuquerque, NM. Oral Presentation.
- November 17, 2017. **Timberlake, T.J.,** Schultz, C.A. "Assessing the First Generation of Forest Service Climate Change Vulnerability Assessments," Society of American Foresters National Convention, Albuquerque, NM. Oral Presentation.
- October 10, 2017. **Timberlake**, **T.J.**, ^{GS} Schultz, C.A. "Examining the U.S. Forest Service's Climate Change Vulnerability Assessments: Themes and Opportunities," Natural Areas Conference, Fort Collins, CO. Oral Presentation.
- October 10, 2017. **McIntyre, K.B.,** GS Schultz, C.A. "Collaborative Governance and Public Lands: Outcomes, Successes, and Challenges Under the CFLRP," Natural Areas Conference, Fort Collins, CO. Oral Presentation.
- October 10, 2017. **Rutherford, T.K.,** GS Schultz, C.A. "Impacts of Climate and Management Options on Alaska Wildland Fire Management," Alaska Fall Fire Review with the Alaska Fire Science Consortium, Fairbanks, AK. Oral Presentation in an Organized Session.
- September 18, 2017. **Thompson, M.P.,** Schultz, C.A., McCaffrey, S. "Bridging Gaps in Fire Management and Dry Forest Restoration," International Union for Forestry Research Organizations, Freiburg, Germany. Oral Presentation in an Organized Session.

COLLABORATIVE AND INTEGRATIVE INTERDISCIPLINARY SCHOLARSHIP

I have collaborated with agencies and stakeholders on the design of research and regularly inform, consult, and involve stakeholders, policymakers, and land managers in my work. Many of my active collaborations serve to integrate natural and social sciences to understand the impact of governance and policy processes on land management.

In a 2020 Applied Ecology paper with ecologist Dr. Brian Buma, from the University of Colorado at Denver, I took an integrated social and ecological perspective on the question of whether disturbances present opportunities for adaptation. I have written numerous other manuscripts and have been awarded multiple grants to conduct research with interdisciplinary groups of colleagues, ranging from geographers to fire modelers and systems engineers. For instance, I am part of a team of researchers on an NSF Macrosystems Biology project, where I investigate social and political dynamics that drive forest management to inform the broader team's forest ecosystem modeling efforts. More recently, I created an innovative and interdisciplinary team to build a Climate Adaptation Partnership at CSU, with funding support from the Warner College, Vice President for Research, and Provost. Through this effort, I have submitted several interdisciplinary proposals to look at social and ecological aspects of climate adaptive land management.

My core work is in public policy, and I collaborate with numerous scholars in my field. I have worked closely with Dr. Cassandra Moseley, a political scientist, at the University of Oregon. Our efforts together began with a congressionally

Courtney Schultz

requested third-party review of the Forest Service's budget structure. I then received funding from the Joint Fire Science Program to continue to collaborate with Dr. Moseley and other co-PIs across a range of disciplines to investigate various topics in fire management. Our 2019 paper in *Science* offered a governance perspective on the challenges of fire management, based on our empirical findings from multiple research projects, to demonstrate why collaboration at multiple governance levels is critical to building capacity for improved fire management.

With multiple social scientists, I recently published a paper presenting a new theoretical framework on disturbance-driven governance change in an international special issue of *Ambio* on the forest governance frontier. With my Ph.D. student Zachary Wurtzebach, I contributed to an edited volume entitled *Adaptiveness: Changing Earth Systems Governance* as part of the Earth Systems Governance project. Based on years of organizing a network of scholars, in 2019 I published a coedited a book entitled *A New Era for Collaborative Forest Management: Insights for Policy and Practice from the CFLRP*, with Dr. William Butler, a land-use planning scholar at Florida State University.

CV SECTION 3: Evidence of Teaching and Advising Effectiveness

EVIDENCE OF INCORPORATING DIVERSITY, EQUITY, INCLUSION, AND/OR SOCIAL JUSTICE (DEISJ) IN TEACHING AND ADVISING EFFECTIVENESS

Over the last several years, I have been utilizing CSU's TILT (The Institute for Learning and Teaching) Teaching Effectiveness Framework to guide my course improvements. I have prioritized work in the domain of inclusive pedagogy to align with our university's DEISJ goals for advising and teaching, and to improve the content in my natural resource classes. My two goals have been to build a more inclusive classroom environment and to improve the representation of nondominant and BIPOC (black, Indigenous, and people of color) histories and narratives in natural resource policy and history. In subsequent sections I describe in detail the course changes that I have made to make my classroom and content more inclusive and incorporative of social justice topics. These changes include updating undergraduate course curriculum to include more detail on BIPOC histories related to westward expansion and U.S. natural resource policies, featuring Indigenous guest lecturers, incorporating readings on traditional ecological knowledge, and including, reading, and reflecting upon CSU's land acknowledgement statement. I also have led my research group, which includes postdoctoral scholars, research associates, and graduate and undergraduate students who work closely with us, in reading DEISJ material and attending trainings. In 2020, we read How to Be an Anti-Racist and Citizen: An American Lyric. In 2021, we focused on updating our knowledge about Indigenous history and anti-colonial resistance in the United States. After engaging in some shorter readings, we read Our History Is the Future: Standing Rock Versus the Dakota Access Pipeline, and the Long Tradition of Indigenous Resistance. This work has been challenging and highly beneficial for our understanding of Indigenous history and its role in past and present natural resource management. Senior members of my group and I are now participating in additional DEISJ trainings through events such as the CSU Diversity Symposium.

TEACHING

My teaching responsibilities are in natural resource policy and planning (Table 1). Each year, I teach a 300-level undergraduate course that is required for most majors in the Warner College of Natural Resources and is an option for the Global Environmental Sustainability minor. I also teach annually a 400-level forest policy course, and until 2020 I team taught a graduate course on environmental impact assessment and the National Environmental Policy Act, which draws Masters and Ph.D. students from numerous disciplines across the university. In addition to my regular course load, I consistently offer independent study options for undergraduate and graduate students in advanced forest policy and policy analysis. In 2020, I offered a seminar with colleagues in the Department of Fish, Wildlife, and Conservation Biology on human-carnivore coexistence.

My courses are known to be among the most challenging and rewarding in the college. I offer highly engaging courses that take what many expect to be a dry subject matter and make it relevant and interesting to students, many of whom, after my classes, pursue careers in natural resource policy and planning. Before my Ph.D., I was an educator in experiential and high school settings and studied pedagogy in my pursuit of excellence as a teacher. I engage multiple kinds of learners through different educational strategies and work closely with my students to help them achieve their best. My classes integrate critical thinking, public speaking, writing, and knowledge acquisition. I teach ~700 student credit hours annually.

Courses Taught (last five years)

NR 320: Natural Resource History and Policy (3 credits): This is taught as a survey course covering natural resource and public land history, an overview of policy and lawmaking for natural resource students, and an introduction to natural resource policy analysis frameworks. Despite the large size of over 200 students a semester, I am committed to active learning. Students frequently say this is among the best and most challenging courses they have had at CSU.

NR 425 Natural Resource Policy and Sustainability (3 credits): This is taught as a policy capstone course for the Forestry major and is open to students from other programs across CSU. The course utilizes scholarly readings, case studies, guest lectures, and student-led discussions to critically examine the development, application, and effectiveness of policy instruments to achieve environmental, economic, and social goals related to renewable resource management.

NR 567 Analysis of Environmental Impact (3 credits): This is a graduate level course focusing on the National Environmental Policy Act (NEPA) and administrative regulations, court cases, and scholarly analyses pertaining the application of NEPA. The course integrates theoretical and practical dimensions, examining the application of NEPA to particular cases through readings, guest discussants, and class discussion.

ECOL 592 Seminar on Human-Carnivore Coexistence (1 credit):

This is a graduate seminar for students interested in studying human-carnivore existence and building a community of scholars working on this topic at CSU. I co-taught this course with Drs. Kevin Crooks and Stewart Breck.

TABLE 1: COURSES TAUGHT 2018-2022

Year	Semester	Course No./Title	Credits	Enrollment
2022	Fall	NR320 – Natural Resource History and Policy	3	~175
2022	Spring	NR 425 – Natural Resource Policy and Sustainability	3	35
2021	Fall	NR320 – Natural Resource History and Policy	3	160
2021	Spring	NR 425 – Natural Resource Policy and Sustainability	3	34
2020	Fall	NR320 – Natural Resource History and Policy	3	180
2020	Spring	ECOL 592 – Seminar of Human-Carnivore Coexistence (33%)	1	9
2020	Spring	NR 425 – Natural Resource Policy and Sustainability	3	33
2019	Fall	NR320 – Natural Resources History and Policy	3	199
2019	Fall	NR 567 – Analysis of Environmental Impact (50%)	3	9
2019	Spring	NR425 – Natural Resource Policy and Sustainability	3	41
2018	Fall	NR320 – Natural Resources History and Policy	3	199
2018	Fall	NR 567 – Analysis of Environmental Impact	3	13

Impactful Classroom, Clinical, or Other Direct Teaching Improvements

To improve my inclusive pedagogy, I set a goal of improving the inclusivity of my classroom facilitation and of my content. As examples of how I have addressed this, I have undertaken two major areas of reform:

- My classes now include a student-designed list of class norms, including respectful dialogue, self-introduction using preferred pronouns, and ways to solicit contrary opinions without attaching them to specific individuals (e.g., role playing in classroom dialogue, and use of anonymous digital whiteboards for class feedback and dialogue).
- In both of my classes I have incorporated new content on Indigenous history. For instance, in NR 320, I now include non-dominant histories from the 19th century on westward expansion and its effects on BIPOC communities, and readings such as Kantor's *Ethnic Cleansing and America's Creation of National Parks*. In addition to including and reading CSU's land acknowledgment statement, I assign readings and discussions on the taking and selling of Indigenous lands to form land grant universities like CSU from the *High Country News*' investigative reporting series on this topic. In NR 425, I now include Indigenous guest lecturers, readings on traditional knowledge and tribal forest management policies, and readings on cultural impacts to tribes from climate change. Students have indicated that they appreciate changes in both content and inclusive classroom climate.

I also adjusted my instructional strategies in response to the COVID-19 pandemic, transitioning both of my courses to online formats. My goals aligned with the instructional strategies and classroom climate domains in the Teaching Effectiveness Framework. These included redesigning instructional strategies for online learning and creating an online student community. Changes I made included:

- Developing online learning modules for all content in NR 320 and recording new lectures for online viewing.
- Online discussion groups and a podcast assignment to develop smaller group community and interaction for different types of learners.
- Creation of low-stakes assessments and incorporation of strengths reflections in both of my courses to improve student success in the early weeks of each semester.

Enduring Educational Materials

In addition to the above, as part of my leadership of the Teaching Effectiveness Committee for our department, I also led the revision of our code to assist faculty members in understanding our standards and capturing their efforts in improving teaching effectiveness. I supervised two half-time teaching assistants who worked with our committee to identify content for specific classes and for the department to incorporate into their inclusive pedagogy efforts. These students created a compendium of resources for the department, and we worked together with our college's diversity officer to make these materials available to other departments. This translated into improved content in my courses and those of my colleagues. It also provided the two students with valuable training in inclusive content and pedagogical techniques.

Educational Professional Development

I have attended the following facilitated trainings to improve my teaching, advising, and mentoring of my students and staff:

October 26, 2021. Social Justice Equity in the Secondary School Classroom: Practicing Intersectional Literacy. 1.5 hours. August 10, 2021. Introduction to the Teaching Effectiveness Initiative. 1.5 hours.

January 14, 2021. Incorporating Best Practices in Remote and Hybrid Teaching: Critical Thinking. 2 hours.

October 24, 2019. Seeking Opportunities to Find the Win-Win. Training with College Diversity Officer. 1.5 hours.

October 17, 2019. Inclusive Pedagogy. Training with CSU's Institute for Learning and Teaching. 1 hour.

Other Evidence: Student Course Surveys and Comments

Prior to 2019, when our standardized CSU course survey changed, more than four out of five students consistently rated my courses and instruction as above average. In 2019 our survey approach changed and data have not been collected for enough years to reveal consistent trends, particularly in light of COVID-19.

STUDENT ADVISING/GRADUATE SUPERVISION

I am a highly sought-out mentor, both for graduates and undergraduates. I have advised seven undergraduate honors theses since 2011 and have involved multiple undergraduates in both research and publication. I am a successful and engaged graduate student advisor, running an active research group (the CSU Public Lands Policy Group), graduating my students in a timely manner, and publishing with my advisees. In my advising, I have developed Individual Development Plans with all incoming graduate students and staff members since 2019. My students and I meet biweekly to discuss progress, provide advice to each other, identify mentoring opportunities, share intellectual discoveries, and hold each other accountable to tasks and timelines. I have given my Ph.D. students and research associates the opportunity to mentor a M.S. student and ask them to participate in research design, proposal review, identification of relevant literature, and methods training. In addition, I actively seek ways to involve my students in outreach activities with the federal agencies to build professional connections and practical understandings of natural resource management.

Undergraduate Students

While I serve as an available faculty mentor for many undergraduates, undergraduate advising is handled centrally through the Department of Forest and Rangeland Stewardship.

Graduate Students

Current Graduate Advisees (3 M.S. Plan A):
Cole Buettner (M.S., expected Spring 2024)
Lily Calfee (M.S., expected Spring 2023)
Tamera Breidenbach (M.S., expected Spring 2022)

Current Graduate Committee Memberships:

2 M.S. Plan A 3 Ph.D.

Hailey Hall (M.S. Political Science)

Matthew Collins (M.S. Human Dimensions of Natural Resources)

Clara Mosso (Ph.D. Geography)

Kristen Hoelting (Ph.D. Human Dimensions of Natural Resources)

Bret Meldrum (Ph.D. Human Dimensions of Natural Resources)

Graduate Committee Memberships (past 5 years, not including those above):

2 M.A. Plan A

1 M.S. Plan C

4 Ph.D.

Chaska Huayhuaca (Ph.D. Ecology, awarded 2019)

Josh Keuhn (M.S. Conservation Leadership Through Learning, awarded 2019)

Jonathan Williams (M.A. Political Science, awarded 2019)

Kat Hodgson (M.A. Political Science, awarded 2018)

Aramati Caspar (Ph.D. Ecology, awarded 2016)

Graduated Students (past 5 years):

10 M.S. Plan A

1 M.S. Plan B

3 Ph.D.

Tyler Aldworth (M.S., Summer 2022)

Thesis: "Institutions for Cross Boundary Forest Management: Lessons from Four Case Studies of "Shared Stewardship Projects in the Western United States"

Brielle Manzolillo (M.S., Summer 2021)

Thesis: "Policy Tools for Carnivore Reintroduction: Lessons Learned from Past Wolf Reintroductions in the Western United States."

Katherine McGrath Novak (M.S., Fall 2020)

Thesis: "Building a Prescribed Fire Program on the Colorado Front Range: The Role of Landowner Engagement." Natasha Collins (M.S., awarded in Summer 2020)

Thesis: "Corporate Investments for Public Land Management: Insights into the Forest Service's Corporate Partnerships."

Kathleen McIntyre (Ph.D., Fall 2019)

Dissertation: "Investigating Policy Tools and Variables to Support Collaborative Governance and Collective Learning: A Programmatic Assessment of the Collaborative Forest Landscape Restoration Program."

Thomas Timberlake (Ph.D., Summer 2019)

Dissertation: "Climate Change Adaptation on Public Lands: Policy, Vulnerability Assessments, and Resilience in the U.S. Forest Service."

James Garlant (M.S., Fall 2018)

Professional Paper: "Adaptive Management in Large-Scale Forest Service Projects: Conducting Landscape Restoration and Management Within The Legal Framework of the National Environmental Policy Act."

Tait Rutherford (M.S., awarded in Summer 2018—Winner, WCNR Outstanding Master's Thesis Award)

Thesis: "Climate Change Adaptation in Wildland Fire Management and Governance in Alaska."

Laren Cyphers (M.S., Summer 2018)

Thesis: "Prioritizing Restoration and Fire Preparedness at the Public-Private Boundary."

Zachary Wurtzebach (Ph.D., Spring 2018)

Dissertation: "Knowledge Management for Adaptive Planning and Decision-Making in Federal Land Management Agencies."

Hannah Bergemann (M.S., Fall 2017)

Thesis: "The Collaborative Forest Landscape Restoration Program: Lessons from Two Colorado-Based Forest Restoration Projects."

Gwendolyn Ricco (M.S., Summer 2017)

Thesis: "Assessing Forest Plan Revision under the 2012 Planning Rule: Understanding Policy Implementation and Organizational Learning."

Other Research Associates and Assistants

Current:

Clint Carney, Ph.D., Research Associate III, April 2022-present.

Nicolena von Hedemann, Ph.D. Postdoctoral Scholar and Research Associate IV, September 2019-present.

Michelle Greiner, M.S. Research Associate III, July 2019-present.

Katie McGrath Novak, M.S. Research Associate II, September 2021-present.

Sarah Perryman, Undergraduate Hourly Research Assistant, August 2021-present.

Past Five Years:

Chad Kooistra, Ph.D. Research Associate IV, September 2019-2022.

Emily Sinkular, B.A. Research Associate I, September 2018-2020.

Lauren Miller, Ph.D. Research Associate III, April 2019-August 2019.

Gwendolyn Ricco, M.S. Research Associate II, May-August 2017.

Molly Warner, Undergraduate Research Assistant, May-August 2017.

Tabitha Gully, Undergraduate Research Assistant, May-August 2017.

Undergraduate Honors Theses (primary advisor; past 5 years)

Lawhead, C. 2020. *Thesis:* A Policy Analysis of Implementing Disposable Bag Fee Ordinances for the City of Fort Collins Based on a Review of Six Colorado Municipality Disposable Bag Fee Ordinances.

Griffis, R.M. 2019. *Thesis:* Making Sense of the Good Neighbor Authority (GNA) in Colorado: Analysis and Recommendations.

Sinkular, E. 2019. *Thesis:* A Comparison of EU and California Carbon Markets.

OTHER ACTIVITIES/ACCOMPLISHMENTS – TEACHING/ADVISING

Undergraduate Research (past 5 years)

Emily Sinkular was an honors undergraduate student who completed her honors thesis under my supervision and began research work with my lab group during her junior year. She then worked with us as a research associate for a year, contributing to one publication with work from her honors thesis, one practitioner paper, and co-authoring a publication for which she conducted substantial research. I applied for an undergraduate research scholarship for Alexis Emslie, who worked with my research group to learn about data collection and analysis and synthesize findings from interview data. I also have worked with multiple undergraduate research assistants, including Emily Sinkular, Tabitha Gulley, and Molly Warner, who sought mentorship in my research group and an opportunity to participate in policy research.

CV SECTION 4: Evidence of Outreach/Service/Engagement

EVIDENCE OF INCORPORATING DIVERSITY, EQUITY, INCLUSION, AND/OR SOCIAL JUSTICE (DEISJ) IN OUTREACH/SERVICE/ENGAGEMENT

My primary DSEIJ activities in service are related to my work on the department's Teaching Effectiveness Committee, described above on page 18.

COMMITTEES AND UNIVERSITY SERVICE ACTIVITIES (past 5 years)

Department of Forest and Rangeland Stewardship

Economics of Risk and Resilience Search Committee, Member, 2021-2022.

Mentoring Committee for Dominique Davíd-Chavez. Chair. 2021-present.

Mentoring Committee for Robin Rothfeder, Chair. 2021-present.

Mentoring Committee for Seth Ex, Chair. 2020-2021.

Mentoring Committee for Ursula Quillmann, Chair. 2020-present.

Mentoring Committee for Caroline Havrilla, Member. 2021-present.

Mentoring Committee for Wade Tinkham, Member. 2017-present.

Teaching Effectiveness Committee, Chair. 2019-2021.

Code Committee, Chair. 2015-present.

Natural Resource Policy Assistant Professor Search Committee, Chair. 2020.

Mentoring Committee for Jeremy Sueltenfuss, Chair. 2019-2020.

Forest Biometry Assistant Professor Search Committee. 2016-2017.

Graduate Program Committee. 2015-2017.

Warner College of Natural Resources

Scholarship Committee. 2015-2017.

Advisor to the SheJumps undergraduate group, dedicated to taking young women in the outdoors. 2014-2018.

University

Foothills Integrated Visioning Taskforce. 2020-2021.

University Committee on Teaching and Learning. 2019-present.

Faculty of the CSU School of Global Environmental Sustainability. 2017-present.

Workshops on Communicating Science to Policymakers, hosted by the Biodiversity Working Group of the School of Global Environmental Sustainability. A one-day workshop for CSU colleagues co-hosted with Drs. Barry Noon (Fish, Wildlife, and Conservation Biology), Chris Funk (Biology), and Peter Backlund (Assistant Director of the School of Global Environmental Sustainability) in Spring of 2013, 2014, and 2021.

On-Campus Lectures and Panels (last five years):

September 3, 2021. "An Introduction to the Climate Adaptation Partnership Panel Series." Presentation to introduce monthly panel series I co-organized on campus.

April 22, 2021. "Policy design to support collaboration and capacity-building for federal fire management." Presentation for the Graduate Degree Program in Ecology Seminar Series.

December 9, 2020. "Public Lands Overview." Presentation to the Honors Sustainability Club.

November 12, 2020. "Wildfires in Colorado." Panel hosted by the Straayer Center for Public Service.

October 14, 2019. "The Trouble with Wolves." Panel hosted by the Society for Conservation Biology Chapter at CSU.

April 17, 2019. "Land Management and Policy in Larimer County." Facilitator for panel hosted by the Straayer Center for Public Service.

Feb. 22, 2017. "Sell our Public Lands? - Biodiversity, Human Welfare, Our Heritage." SoGES Global Biodiversity Center Panel Series.

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

I am an active member of several professional societies and am an associate editor for two leading journals in my field, *Fire Ecology* and *Journal of Forestry*.

Memberships in Professional Societies

American Association for the Advancement of Science, 2019-present.

Association for Fire Ecology, 2017-present.

Society of American Foresters, 2012-present.

International Association for Society and Natural Resources, 2009-2018.

Professional Service Activities

Ad Hoc Reviewer, NSF Program Proposals to Decision, Risk, and Management Sciences. 2019 and 2021.

Book Reviewer, Routledge (Environment and Sustainability). 2020.

Steering Committee Member, National Forest Foundation Shared Stewardship Coordination. 2020.

Joint Fire Science Program Reviewer, Fire Science Exchange Network Proposals. 2019.

Associate Editor, Fire Ecology, January 2019-present. I handle 2-3 manuscripts a year.

Associate Editor, Journal of Forestry, May 2015-present. I handle 6-8 manuscripts a year.

Board of Governors, North American Section of the Society for Conservation Biology. Elected 2015-2018.

Policy Committee, North American Section of the Society for Conservation Biology. 2015-2018.

Manuscript Refereeing

Since taking on the role of associated editor for two journals, *Fire Ecology* and *Journal of Forestry*, I handle about eight manuscripts a year. I also review on average another five manuscripts per year for other journals.

Fire Ecology, Associate Editor

Journal of Forestry, Associate Editor

Ambio

Ecology and Society

Environmental Impact Assessment Review

Environmental Management

Environmental Science and Policy

Fisheries

Forests

Forest Policy and Economics

Global Environmental Change

International Journal of Disaster Risk Reduction

Journal of Environmental Policy and Planning

Land Use Policy

Natural Resources Forum

PLOS One

Policy Sciences

Society and Natural Resources

State and Local Government

Professional Development and Training

April 27, 2022. Transformational Leadership. 2 hours.

November 2, 2020. Integrity: Building the Character of Great Leadership. 2 hours.

November 15, 2019. Inclusive Excellence: Part 2. CSU training with the Vice President of Diversity. 2.5 hours August 27, 2019. CSU Supervisor Rules of the Road Training. 4 hours.

February 19, 2019. Inclusive Excellence: Part 1. CSU training with the Vice President of Diversity. 2.5 hours February 8, 2019. CSU Mindset for Supervisors Training. 4 hours.

Please note that additional pedagogical training is listed on page 19 in Section 3, Teaching.

SERVICE/OUTREACH WITH POLICYMAKERS

- September 7, 2022. Town Hall Expert Panelist for Congressman Joe Neguse, Discussion on the Inflation Reduction Act. One-hour phone session, live with ~6,100 participants.
- June 7, 2022. Invited Testimony to the U.S. Senate Agriculture Subcommittee on Conservation, Climate, Forestry, and Natural Resources. Hearing on "The Western Water Crisis: Confronting persistent drought and building resilience on our forests and farmland."
- April 11, 2022. Invited Participant at Senator Bennet's Forestry and Fire Recovery Roundtable. Boulder, Colorado.
- April 29, 2021. Invited Testimony to the U.S. House of Representatives Natural Resources Subcommittee on National Parks, Forests, and Public Lands. Hearing on "Wildfire in a Warming World: Opportunities to Improve Community Collaboration, Climate Resilience, and Workforce Capacity."
- November 2020 (multiple dates). Advisor to the Biden-Harris U.S. Department of Agriculture Agency Review Team. I present for eight hours to the team on various aspects of my group's research in forest and fire management.
- Fall 2020-present. National Forest Policy Coalition. I convene a weekly meeting of leading thinkers in U.S. forest policy to share ideas, research findings, and policy needs. We wrote a letter in 2020 on forest and fire management for the Biden-Harris transition team and members of Congress and have provided input on legislation.
- February 13, 2019. Workshop on Carbon Dioxide Removal Options with Carbon 180, the Atkinson Center for a Sustainable Future at Cornell University, and the New Carbon Economy Consortium. This resulted in contribution to a special issue on carbon dioxide removal in *Royal Society Interface* (see publication led by vonHedemann).
- July and November 2018. Forest Service Senior Fire Leadership Meeting. I was one of two external researchers invited to present research and problem-solve with USDA Forest Service leadership.
- April-September, 2018. Joint Fire Science Program Sign-on Letter. I led a sign-on letter that garnered over 800 signatures, including organizational sign-ons from the Society of American Foresters and National Association of State Foresters, in support of maintaining funding for the JFSP. I had in-person conversations with appropriations staff members and agency leadership to generate support for the program and share our letter.
- November 14-16, 2017. "Strategies for Success Under Forest Service Restoration Approaches," Washington, D.C. We conducted a brown bag seminar at the USDA Forest Service's Washington Office, along with targeted presentations with multiple groups up to the highest levels (e.g., the Chief and Deputy Chief) of the agency. In addition, we brief the Undersecretary of Agriculture and interested legislative staff on Capitol Hill about our findings and to identify ourselves as resources on topics of interest for upcoming legislative cycles.

SERVICE WITH EXTERNAL PARTNERS AND COMMUNITIES

I have made engagement a priority, given that outreach to our stakeholders is a key part of the land-grant mission and that many of my grants have an emphasis on delivery of findings to managers and policy makers. Below is a selected list of outreach activities, including workshops I have conducted, briefings for policy makers and local stakeholder groups, webinars, etc. Often this work is high-profile, and through my participation I have significantly contributed to Colorado

State University's reputation as a national leader in applied natural resource management. My research also has been covered in numerous popular media outlets.

Webinars and Presentations to Primarily Manager and Practitioner Audiences

- April 21, 2021. "Assessment of Early Implementation of the U.S. Forest Service's Shared Stewardship Strategy." Webinar sponsored and hosted by the Northwest Fire Science Consortium and the Southern Rockies Fire Science Network, Schultz, C., Kooistra, C. (Presenter), Huber-Stearns, H., Abrams, J.
- April 20, 2021. "Policy design to support collaboration and capacity-building for federal fire management." Guest lecture for the Southwest Fire Science Consortium and GDPE Program. Schultz, C.A. (Presenter).
- January 27, 2020. "Prescribed fire policy barriers: new findings from case studies across the West." Invited webinar by the Fire Science Exchange Networks, Schultz, C.A. (Presenter), ~250 participants.
- April 17, 2019. "Land management and policy in Larimer County" Fort Collins, CO. Panel for the Straayer Center for Public Service Leadership. Schultz, C. (Moderator), Wurtzebach, Z., Figgs, D., and Mack, J.
- November 29, 2018. "Prescribed fire policy barriers: Findings from a JFSP project on challenges and strategies on federal lands across the West." Invited webinar by the Fire Science Exchange Networks, Schultz, C. A. (Presenter), ~250 participants.
- November 8-9, 2017. "CFLRP Book Writers' Workshop," Tallahassee, FL. My co-editor, William Butler and I convened all chapter writers for our workshop, along with several guest contributors and practitioners, to develop policy recommendations and chapter content for our forthcoming book.
- Summer/Fall 2016-2017. "Site Visits with the CFLRP Projects," Locations Vary, Schultz, C. A. (Researcher and Facilitator). The CFLRP is the most important new legislation for national forests, and I was invited with my Ph.D. student to help conduct the biennial site visits to evaluated progress towards goals; no external researcher has previously been invited to assist the Forest Service in these visits; our previous research with agency earned us this privileged role. Approximately 30 participants at each of 16 sites.

Articles Written for Popular Media

- April 25, 2019. "Planned burns can reduce wildfire risks, but expanding use of 'good fire' isn't easy." Article, The Conversation. Schultz, C., Moseley, C., and Huber-Stearns, H. Link.
- November 20, 2018. "Better forest management won't end wildfires, but it can reduce the risks here's how." Article, The Conversation. Schultz, C. and Moseley, C. Link.

Media Coverage

- December 21, 2022. CSU Professor Dr Courtney Schultz discusses current fire danger in Colorado. KOA 850 AM & 94.1 FM Radio, Colorado's Morning News with Marty Lenz & Jeana Gondek (Hosts). Link.
- June 7, 2022. "Scientists, agriculturists sound alarm for federal action on Western drought at Senate hearing: Colorado's U.S. Sen. Michael Bennet chaired subcommittee hearing on drought, water." Article, Denver7 News. Miller, B. (Author). Link.
- June 7, 2022. "Experts call on federal government to mitigate drought, wildfires." Article, The Durango Herald. Heller, N. (Author). Link.
- June 6, 2022. "CSU professor to testify in Senate committee hearing on 'Western Water Crisis." Article, Warner College of Natural Resources Source. Giordano, J. (Author). Link.

- February 24, 2022. "Don't blame national forests for America's massive wildfires." Article, Popular Science. Kiefer, P. (Author). Link.
- October 4, 2021. "Sharing is caring: How a new approach to forest management is paying dividends." Article, American Forests Magazine. Poston, L. (Author). Link.
- October 24, 2021. "Communities want trees thinned. Timber companies want contracts. So what's the problem?" Article, PEW Charitable Trusts. Quinton, S. (Author). Link.
- February 16, 2021. "Forest thinning to reduce wildfire risk gives opportunity to new startups." Radio feature, Colorado Public Radio special series, "Environment and Energy Collaborative." Brasch, S. (Host). <u>Audio and transcript</u>.
- January 2021. "Data and dialogue: Assessing Forest Service risk management assistance." Article, Fire Management Today. Kooistra, C. and Schultz, C.A. Link.
- November 5, 2020. "A lesson in learning to live with fire, and each other." Article, Bloomberg CityLab. Bliss, L. (Author). Link.
- September 11, 2020. "How forest management can help prevent large wildfires." Article, 9News. Meckles, J. (Author). Link.
- August 4, 2020. "What the Great American Outdoors Act will mean for public lands in Colorado." Radio feature, KUNC Colorado Edition. O'Toole, E. (Host). Link.
- February 6, 2020. "The policy of starting fires with Professor Courtney Schultz." Podcast, State of Research: A CSU Research Podcast. Link.
- October 1, 2019. "Courtney Schultz finds her niche, transforming policy for forest and fire management." Article, CSU Source News. Guiden, M. (Author). Link.
- May 3, 2019. "Western forests have a 'fire debt' problem: Planned burns can reduce wildfire risks, but expanding use of 'good fire' isn't easy." Article, High Country News. Schultz, C., Moseley, C., and Huber-Stearns, H. <u>Link</u>.
- December 20, 2018. "Here's how California can use fire to solve its wildfire problem." Article, Los Angeles Times. Rosen, J. (Author). Link.
- September 19, 2018. "Can Colorado burn its way out of a wildfire crisis?" Article, 5280. Bouchard, J. (Author). Link.

Appendix A: Student comments and letters

NR 320 Student Comments

2018-2021

- It really felt like a course where the students were encouraged to learn and ask questions. The instructor and the TAs were super knowledgeable in the field but were never condescending about it. They wanted us to ask questions and learn.
- Courtney is not only great at explaining difficult topics in manners for everyone to understand, she is extremely accessible. This [COVID] is not an easy time for anyone, and Courtney went above and beyond to make sure we were okay.
- Dr. Schultz was really accommodating and listened to all of the struggles and suggestions from us and incorporated them into the class, which is admirable.
- Courtney did a great job of including everyone who raised their hands and had something to say. She never belittled or looked down on someone because of what they said, even if it was wrong.
- I was impressed by the instructor's ability to remain neutral in all cases politically. The class never felt like a partisan environment.
- The class discussions are very open as well as productive. It's a law class, but Courtney made sure to approach issues in a way so that it wouldn't exclude people of different political views.
- Courtney does an awesome job of facilitating an inclusive learning environment in a class that's so big. I've never felt more comfortable asking and answering questions, especially with how many people were in the room.
- I felt that even though it was a policy class, Courtney made sure that all points of view were welcomed and there were no biased undertones in the course material.

Previous years

- Thank you for a wonderful semester of learning! I loved the way you managed such a large class and ran your exams. You can make a huge room feel small and that is essential for my learning experience.
- I think that this class was amazing. Courtney did a great job explaining everything we need to know. I feel as if I have a better grasp of how our government works and how natural resources are managed, which I believe is critical to being an active, engage, and educated citizen. She clearly cares about what she does and the subject matter, and her sense of humor kept the class interesting. Even thought there were like 90 kids in the class, we all had opportunities to speak up and discuss controversial topics. I feel that everyone should take this course.
- I know that a class has been worthwhile when I often think about it outside of a class setting and in my everyday life. This was definitely the case with this class. I also have retained a lot of information from the beginning of the semester, which can sometimes be a challenge. Great overall teaching style and connection with students. Thank you for a great semester.
- This is one of the best classes I have taken as a forestry student. The instructor worked hard to make the material challenging as well as interesting. I really liked that she pushed us to actually learn the material and had high expectations of us. I loved this class!

NR 425 Student Comments

2018-2021

- I appreciated the level of writing at Dr. Schultz expected of us. My writing has improved because of her expectations and support.
- The learning environment was one of the most inclusive and engaging that I have experienced so far at CSU. Most influential to me were the clear expectations we received for each module and assignment. I never had to guess what was expected of me in a particular activity, and learning outcomes were clearly connected to all assignments in a way that was straightforward and relevant.
- Lots of writing papers, which helped me improve my writing skills and gain confidence about writing. I used to dread writing assignments, but after this class I know what to do and I feel confident in my ability to write.
- Courtney is one of the greatest professors I have ever had. She is truly valuable. I have learned more in her two classes than in any of the other courses I have taken at CSU. Taking her policy classes has inspired me to look into going to law school following graduation. I appreciated this class immensely.
- To be honest, I was dreading this course going into it. I would not say policy is something I found myself interested in. However, I was pleasantly surprised by this course, and especially by Courtney. She was an amazing professor and I

feel really lucky to have had her this semester. It was really cool seeing how she applies her knowledge in the real world and makes a difference. It is evident that she is an expert on this topic. Not only that, but she is able to teach students in a way that they can understand, which I really appreciated.

Previous years

- She's an effective professor because she really expects that people do work, think critically and creatively, and she balances lectures/readings/assignment/discussion in a way that really touches on higher level thinking. Her reading/summary assignments every week really helped me to go beyond just reading the article but actually think about it and retain the ideas presented.
- Such an important course for me this semester. It was so refreshing to be challenged and to have to apply so much of what I have learned into one class. I really enjoyed being able to see what many of the main issues and current happening in the policy world [are]. This was a great course for getting a glimpse of what grad school and further studies in the field could be.
- This was the best course I have taken so far at CSU. Thank you so much for insisting on excellence in student performance, class content, and instruction. I really appreciated the effort you put into the class. I know that you have high expectations and this makes me work harder as a student. This was the most intellectually challenging course I have taken and it was difficult at times but it was always worthwhile. You are my favorite professor! Keep it up!

NR 567 Student Comments

- This class was tough for someone unused to reading dense legal and policy documents, but I think those readings really pushed me to a greater understanding of the history and present of environmental policy. If others asked me about this class, I would say "That was really tough. And you should absolutely take it."
- I really enjoyed the course. The instructors did a good job of balancing theoretical material with real world examples. The final project was a good opportunity to delve deeply.
- Courtney and Tony did a great job of taking a subject that has the potential to be quite tedious and making it very engaging and interesting. I feel that in-depth knowledge of NEPA is critical for anyone who will be working in the field of natural resources and this class was helpful in understanding it at a deeper level beyond just the process.

Letters from Graduate Students

- Courtney has served as my adviser and mentor for the last three years. During this time she has spent an enormous amount of time and energy improving my writing, guiding me through the publication process, finding funding and projects that match my interests, and providing support and encouragement at every step along the way. Above all, she has pushed me to achieve and accomplish more than I ever could have imagined on my own.... She has also helped nurture a supportive lab culture, one in which the more senior students provide guidance assistance and support to newer ones. Indeed, perhaps the greatest thing that I have learned from Courtney is *how* to be an incredible mentor. (Letter from Zack Wurtzebach, Ph.D. student)
- What makes Courtney such an amazing mentor is her combination of both professional and academic drive and her genuine care for students. All of her graduate students continuously discuss what an awesome source of knowledge, wisdom, and kindness she is. As a strong leader, she always provides direction and feedback. She takes the time to listen, discuss issues, questions, and ideas. She genuinely wants to see her students succeed, and is equally ignited by their passion. Courtney is always searching for unique research opportunities, grants, scholarships, and conferences for her students. She is consistently pushing us to be better students and apply ourselves. Courtney has been an amazing source of inspiration to me, and reminds me to continuously strive and be the best academic and person I can be. (Letter from Kathleen McIntyre, Ph.D. student).
- During my second semester of graduate school, I found my dream job with the National Park Service in Lakewood, Colorado. Dr. Schultz supported my application, was an incredible reference, and after accepting the part-time position she has worked with me to ensure I complete my graduate degree program in a timely matter (two and half years) and transition into my dream job full time. Dr. Schultz is new-er to the Forest and Rangeland Stewardship department but her two graduate students before me efficiently completed their degrees and obtained incredible jobs that will lead to careers in the Forest Service and private industry. Dr. Schultz has been an incredible mentor and excelled in supporting our career development. As a female in the forestry world, Dr. Courtney Schultz is honestly a role model and an inspiration. She is a powerhouse and I feel honored that I was able to study under and with her. She is an incredible asset to Colorado State University. (Letter from Aleksandra Pitt, M.S. student)