Eve-Lyn S. Hinckley
Curriculum Vitae

CONTACT
Sustainability, Energy, and Environment Complex
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RESEARCH INTERESTS

- Investigating interactions between biogeochemical and hydrological processes in managed and unmanaged systems
- Optimizing fertilizer, pesticide, and water management in agricultural systems
- Designing network observatories to measure and monitor the consequences of human activities for air, land, and water systems

EDUCATION

2009 **Ph.D., Stanford University**
Dept. of Geological and Environmental Sciences
Dissertation: *Biogeochemical and Hydrologic Sulfur Dynamics in an Agricultural System*
Advisor: Pamela A. Matson

2001 **B.A., Middlebury College**
Dept. of Environmental Studies/Conservation Biology, *Summa Cum Laude*, *Phi Beta Kappa*, highest departmental honors
Honors thesis: *Dissolved N Dynamics in an Undisturbed Coastal Forest: Controls on Retention and Implications for Grassland Restoration*
Advisors: Andrea H. Lloyd and Christopher Neill

PROFESSIONAL APPOINTMENTS (*Since 2009*)

2016 – present **Faculty Director,** Arikaree Environmental Lab, INSTAAR, Boulder, CO

2015 – present **Assistant Professor,** Environmental Studies Program and, University of Colorado, Boulder

2015 – present **Fellow**, Institute of Arctic and Alpine Research

2011 – 2015 **Staff Scientist**, Terrestrial Ecology Division, The National Ecological Observatory Network, Boulder, CO

2011 – 2015 **Affiliate Research Faculty**, Institute of Arctic and Alpine Research, Boulder, CO

2009 – 2011 **NSF Postdoctoral Fellow**, Institute of Arctic and Alpine Research, Boulder, CO

GRANTS (*Since 2009; Note: as a NEON scientist, I could not submit proposals)*

2018 "Quantifying Atmospheric Nutrient Deposition to the Critical Zone on Boulder Open Space Lands." Boulder Open Space (Co-PI, $8K)

2018 "RAPID: Wildfire, Wine, and Water Quality: Immediate Changes to Biogeochemical and Hydrological Flows from Vineyards After the Northern California Fires." The National Science Foundation (PI, $50K)

2017 "How Far Does Human Influence Go? Investigating Our Influence on the Nutrient that Supports Life on Earth." National Geographic Society (PI, $50K)

2017 "Long-term Research on the Dynamics of High-Elevation Ecosystems – A Framework to Understand Ecological Sensitivity to Climate Change" (Senior Personnel, $6,762,000)

2016 "TRESTLE: Quantitative Analysis and Critical Thinking for the Environmental Studies Major: Developing Part II of the Introductory Core Series" ($10K, PI)

2011 NSF Supplement to Boulder Creek Critical Zone Observatory – "Weathered profile development in a rocky environment and its influence on watershed hydrology and biogeochemistry" ($19,503; postdoctoral salary)

2010 NSF International Grant for Postdoctoral Researchers ($6800)

2009 NSF Earth Sciences Postdoctoral Fellowship ($160K)

UNIVERSITY AND DEPARTMENTAL SERVICE

2018 – present Member, Search Committee for Director of INSTAAR

2018 – present Chair, Faculty Learning Community: Mapping Learning Goals across the ENVS Major

2017 – present Departmental Coordinator for the CU Learning Assistants Program

2017 Chair, Environmental Studies 1000/1001 Pedagogy Committee

2016 – present Member, Graduate Committee, Environmental Studies Program

2016 – present Co-Chair, Research and Education Committee, Center for Water, Science, and Technology, INSTAAR

2016 – 2017 Member, Executive Committee, Environmental Studies Program

PROFESSIONAL ACTIVITIES

2018 – present Co-Chair, Science, Technology, and Education Advisory Board, NEON

2016 – 2018 Member, Science, Technology, and Education Advisory Board, NEON

2015 – present Member, Scientific Steering Committee, ENIGMA Project, ($14M/yr), Dept. of Energy

2015 – present Subject-Matter Editor, *Ecosphere*

2014 – 2016 Advisory Editor, *Environmental Science Online Bibliography*, Oxford Univ. Press

2013 Guest editor, *Ecological Applications*

2006 – present Reviewer: *Biogeochemistry, Biogeosciences, Earth Science Reviews, Ecological Applications*, *Ecology, Ecosystems, Environmental Science & Technology, Frontiers in Earth Sciences, Geoderma, Global Change Biology, Hydrological Processes,* The Kearney Foundation, Maryland Sea Grant, National Geographic Society, The National Science Foundation, *Oecologia,* Oxford University Press*, Pedosphere, Proceedings of the National Academy of Sciences, Soil Biology and Biochemistry, Soil Science Society of America Journal, Vadose Zone Journal, Water Resources Research*

SCIENTIFIC PLANNING ACTIVITIES

2018 *Cross-Network Data and Modeling Workshop.* The National Ecological Observatory Network, Boulder, CO, 13-15 Feb.

2017 Co-authored letter and memo to the leadership of NSF: "Early Career Perspective: The Importance of Sustaining The Critical Zone Observatory Network." 27 Sept.

2017 *Critical Zone Observatory Network PI Meeting*. University of California, Berkeley.

Berkeley, CA, 8-11 Sept.

2017 *NEON-LTER Synergies Workshop.* National Center for Ecological Analysis and Synthesis. Santa Barbara, CA, 29-31 Mar.

2017 *USAID Workshop on Innovation for Data-Driven Agriculture*, University of Colorado, Boulder, 27-28 Apr.

2016 *Critical Zone Observatory Hillslope Aspect Synthesis Workshop.* University of Arizona, Tucson, 28 Sept.-1 Oct.

2015 *NSF Food-Energy-Water-Systems (FEWS) Nexus Challenges Workshop: Technology and Information Fusion*. Napa, CA, 5-6 Nov.

2014 *Network Biogeochemistry in the Global Change Era* – Organized a workshop for participants from 5 observatory networks. INSTAAR, Boulder, CO, 12 Nov.

2013 *Frontiers in Ecosystem Science: Energizing the Research Agenda*. NSF SESYNC, Annapolis, MD, 1-2 Oct.

2013 *NSF EarthCube Workshop.* University of Delaware, 21-23 Jan.

2012 *Frontiers in Ecosystem Science: Energizing the Research Agenda* – Invited speaker. American Geophysical Union Meeting, San Francisco, CA, 3-7 Dec.

PROFESSIONAL MEMBERSHIPS

American Geophysical Union, American Society of Enology and Viticulture, Ecological Society of America

AWARDS AND HONORS (*Since 2012*)

2017 – 2018 RIO Faculty Fellow, University of Colorado, Boulder

2017 – 2019 ASSETT Teaching Fellow, University of Colorado, Boulder

2017, 2014, 2013 Excellence in Reviewing Award from *Biogeochemistry*

2012 Best Session Paper, Forest, Range, and Wildland Soils Division, SSSA Meeting

PUBLICATIONS

* Indicates student mentee

Hinckley, E.S., A.R. Townsend, P.A. Matson, M.C. Long, and P.M. Vitousek. From Earth Domination to Stewardship: How Can Science Help? *Nature Sustainability* (In review).

*Hess, L.J.T., **E.S. Hinckley**, G.P. Robertson, S.K. Hamilton, and P.A. Matson. Extreme rainfall patterns increase deep percolation from tilled and no-till cropping systems in the U.S. Midwest. *Vadose Zone Journal* Special Issue (In review).

Jones, J., P.M. Groffman, J. Blair, F.W. Davis, H. Dugan, E.S. Euskirchen, S.D. Frey, T. Harms, **E.S. Hinckley**, M. Kosmala, S. Loberg, S. Malone, K. Novick, S. Record, A.V. Rocha, B. Ruddell, E.H. Stanley, C. Sturtevant, A. Thorpe, T. White, W.R. Wieder, L. Zhai, and K. Zhu. The age of network science: Emerging synergies between NEON and the U.S. LTER networks. *Bioscience* (In review).

Pelletier, J.D., G.A. Barron-Gafford, H. Guttierez-Jurado, **E.S. Hinckley**, E. Istanbulluoglu, L.A. McGuire, G-Y Niu, M.J. Poulos, C. Rasmussen, P. Richardson, T.L. Swetnam, G.E. Tucker. Which way do you lean? Using slope aspect variations to understand Critical Zone processes and feedbacks. *Earth Surface Processes and Landforms*. DOI: 10.1002/esp.4306

Hinckley, E.S., B.A. Ebel, R.T. Barnes, S.F. Murphy, & S.P. Anderson. 2017. Erratum to: Critical zone properties control the fate of nitrogen during experimental rainfall in montane forests of the Colorado Front Range. *Biogeochemistry*, 134(3), 371-371.

Hinckley, E.S., B.A. Ebel, R.T. Barnes, S.F. Murphy, and S.P. Anderson. 2017. Critical zone properties control the fate of nitrogen during experimental rainfall in montane forests of the Colorado Front Range. *Biogeochemistry* DOI: 10.1007/s10533-017-0299-8.

Thorpe, A.T., D.T. Barnett, S.C. Elmendorf, **E.S. Hinckley**, D. Hoekman, K.D. Jones, K.E. LeVan, C.L. Meier, L.F. Stanish, and K.M. Thibault. 2016. Introduction to the sampling designs of The National Ecological Observatory Network Terrestrial Observation System. *Ecosphere* Special Issue.

Hinckley, E.S., G. Bonan, G. Bowen, B. Colman, P. Duffy, C. Goodale, B. Houlton, E. Marín-Spiotta, K. Ogle, S. Ollinger, E. Paul, P. Vitousek, K. Weathers, D. Williams. 2016. The soil and plant biogeochemistry sampling design for The National Ecological Observatory Network. *Ecosphere* Special Issue.

Weathers, K.C., P.M. Groffman, E. Van Dolah, E. Bernhardt, N.B. Grimm, K. McMahon, J. Schimel, M. Paolisso, R. Maranger, S.G. Baer, K. Brauman, and **E.S. Hinckley**. 2016. Frontiers in ecosystem ecology from a community perspective: The future is boundless and bright. *Ecosystems*. DOI: 10.1007/s10021-016-9967-0.

Hinckley, E.S., S. Anderson, J.S. Baron, P.D. Blanken, G. Bonan, W.D. Bowman, S. Elmendorf, N. Fierer, A. Fox, K. Goodman, K. Jones, D. Lombardozzi, C. Lunch, J. Neff, M. SanClements, K. Suding, W.R. Wieder. 2016. Optimizing available network resources to address questions in environmental biogeochemistry. *BioScience*, biw005.

Hinckley, E.S. 2015. Fate of sulfur fungicide in the vineyard and beyond. *Practical Winery and Vineyard* (May Issue).

Anderson, S.P., **E.S. Hinckley,** P. Kelly, and A. Langston. 2014. Variation in critical zone processes and architecture across slope aspects. *Procedia Earth and Planetary Science*, DOI: 10.1016/j.proeps.2014.08.006.

Hinckley, E.S., R.T. Barnes, M.W. Williams, S.P. Anderson, and S. Bernasconi. 2014. Nitrogen retention and transport differ by hillslope aspect at the rain-snow transition in the Colorado Front Range. *JGR-Biogeosciences*, DOI: 10.1002/2013JG002588.

Hinckley, E.S., W.R. Wieder, N. Fierer, and E.A. Paul. 2014. Digging into the world beneath our feet: Bridging across scales in the age of global change. *Eos Transactions, AGU,* DOI: 10.1002/2014EO110004.

Hinckley, E.S., B.A. Ebel, R.T. Barnes, R.S. Anderson, M.W. Williams, and S.P. Anderson. 2014. Aspect control of water movement on hillslopes near the rain-snow transition of the Colorado Front Range, U.S.A. *Hydrological Processes*, DOI: 10.1002/hyp.9549.

Kao, B.H., C.M. Gibson, R.E. Gallery, C.L. Meier, D.T. Barnett, K.M. Docherty, K.K. Blevins, P.D. Travers, E. Azuaje, Y.P. Springer, K.M. Thibault, V.J. McKenzie, M. Keller, L.F. Alves, **E.S. Hinckley**, J. Parnell, and D. Schimel. 2012. NEON terrestrial field observations: designing continental-scale, standardized sampling. *Ecosphere*, DOI: 10.1890/ES12-00196.1.

Hinckley, E.S. 2012. Tracking lost irrigation water. *Practical Winery and Vineyard*, Summer 2012. (Republished in *Australian and New Zealand Grapegrower & Winemaker*).

Wieder, W., C.C. Cleveland, P.G. Taylor, D.R. Nemergut, **E.S. Hinckley**, L. Philippot, D. Bru, S.R. Weintraub, M. Martin, A.R. Townsend. 2012. Experimental removal and addition of leaf litter inputs reduces nitrate production and loss in a lowland tropical forest. *Biogeochemistry*, DOI:10.1007/s10533-012-9793-1.

Ebel, B.A., **E.S. Hinckley**, and D.A. Martin. 2012. Soil-water dynamics and unsaturated storage during snowmelt following a wildfire. *Hydrology and Earth Systems Sciences* 9, 441-483, DOI:10.5194/hessd-9-441-2012, 2012.

Anderson, S.P., R.S. Anderson, **E.S. Hinckley**, P. Kelly, A. Blum. 2011. Exploring weathering and regolith transport controls on Critical Zone development with models and natural experiments. *Applied Geochemistry* 26: S3-S5.

Hinckley, E.S. and P.A. Matson. 2011. Transformations, transport, and potential unintended consequences of high sulfur inputs to Napa Valley vineyards. *Proceedings of the National Academy of Sciences,* DOI: 10.1073/pnas.1110741108.

Nicholas, K.A. and **E.S. Hinckley**. 2011. Conducting research on private farms and ranches: Approaches, issues, and tips. *Journal of Extension* 49(6) (Online: http://www.joe.org/joe/2011december/tt11.php).

Hinckley, E.S., S. Fendorf, and P.A. Matson. 2010. Short-term fates of high sulfur inputs in Northern California vineyard soils. *Nutrient Cycling in Agroecosystems* DOI: 10.1007/s10705-010-9383-3.

Hinckley, E.S., C. Kendall, and K. Loague. 2008. Not all water becomes wine: Sulfur inputs as an opportune tracer of hydrochemical losses from vineyards. *Water Resources Research* 44: DOI:10.1029/2007WR006672.

Hinckley, E.S., C. Neill, R. McHorney, and A. Lezberg. 2001. Nitrogen retention in the vadose zone and aquifer under a coastal Massachusetts forest. *Biological Bulletin* 201(2): 288-290.

OTHER CREATIVE WORKS

Hinckley, E.S. "Into the Wild for Rain | Part I. British Columbia. National Geographic Explorers blog. https://blog.nationalgeographic.org/2018/08/29/into-the-wild-for-rain-part-i-british-columbia/ 29 August 2018.

Hinckley, E.S. "The Mountains Are Calling and We Must Act". Invited article. Oxford University Press blog. https://blog.oup.com/2017/04/john-muir-mountains-are-calling/ 21 April 2017.

Hinckley, E.S. 2014. Cover art illustration for Paul, Eldor (Ed.) Soil Microbiology, Ecology, and Biochemistry (4th Ed.) Academic Press.

MEDIA COVERAGE

"Will Climate Change Make Severe Weather Like the Recent Hailstorms the Norm in Colorado?" Interview on Colorado Matters, Colorado Public Radio. 26 June 2017.

Dybas, Cheryl. 2013. "Earth Week: The Search for White Gold—Snowmelt." The National Science Foundation, Discovery Section.

Dybas, Cheryl. 2013. "High-peak Creeks, Forest Fires, and Landscape Erosion: Could They Be Linked?" The National Science Foundation, Discovery Section.

Bergeron, Louis. 2009. "Falling Through the Cracks: Stanford Researchers Track the Lost Water of Napa Valley Vineyards." *Stanford Report*. (Reprinted at Geology.com)

SCIENTIFIC PRESENTATIONS (*Since 2014*)

*Invited talk

*Hinckley, E.S., A. Hermes, O. Wigmore, Y. Chen, and B. Livneh. "Determining Changes to Landscape Connectivity with 'Too Much Summer' at Niwot Ridge LTER." Ecological Society of America Meeting. 6-10 August 2018.

*Hinckley, E.S. "A Surprising Path to Science." Distinguished Faculty Lecture, CU Honors Program admitted students reception. 7 April 2018.

*Hinckley, E.S. “Fire, Water, and Wine: New Directions in Hydro-biogeochemical Research to Inform Management in California's $62B Wine Industry.” Geosciences Seminar, Boise State University. 9 April 2018.

*Hinckley, E.S. “Science-Action Partnerships to Inform Sustainable Management in California’s $62B Wine Industry.” CU Hydrologic Sciences Symposium. 12-13 April 2018.

*Hinckley, E.S. “Not All Water Becomes Wine.” University of Colorado Board of Trustees Meeting. 11 November 2017.

*Hinckley, E.S. “What Does it Mean to Be Remote? Tales of Environmental Change from the Mountaintops.” CSU Distinguished Speaker, Graduate Student Invitee. Natural Resources Ecology Laboratory, Colorado State University, 8 November 2017.

*Hinckley, E.S. “Teaching Quantitative Methods for Environmental Studies Majors.” TRESTLE Conference, Indiana University, 28-30 September 2017.

*Hinckley, E.S. A Scope for the Subsurface: How Geophysics Can Inform Hydro-biogeochemical Studies in Managed and Unmanaged Systems. Keynote Address, AGU-SEG Geophysics Conference, Stanford University, 24-27 July 2017.

Hinckley, E.S., P. Carini, Y. Chen, C. Forrester, and A. Hermes. New Directions in CZO Biogeochemistry: Mechanisms Controlling the Fate and Transport of Nitrogen along Elevation Gradients. Critical Zone Observatory Network All Hands Meeting, Arlington, VA, 4-6 June 2017.

Hinckley, E.S. Does Rapid Ecological Change Have Consequences for the Deep Critical Zone? American Geophysical Union Meeting. 12-16 December 2016.

*Hinckley, E.S. The Critical Zone: A Novel Framework for Questions in Ecosystem Biogeochemistry. The National Science Foundation, Arlington, VA. 15 November 2016.

*Hinckley, E.S. Aspect Affects the Fate of N Deposition During Major Hydrologic Events in the BcCZO. University of Arizona, Tucson. 28 September 2016.

*Hinckley, E.S. Will the Vine or Oak Wither? Biophysical Implications of New Water Management Strategies in California’s $62B Crop. Department of Integrative Biology Seminar, University of Colorado, Denver, 26 February 2016.

*Hinckley, E.S. Will the Vine Wither? Toward Understanding How Growers’ New Water Management Strategies Will Affect the Future of California’s $62B Crop. Environmental Studies Colloquium Series, 2 December 2015.

*Hinckley, E.S. What Happens When It Rains? Ecosystem Fates of N Deposition During Experimental Rainfall in the Colorado Front Range. INSTAAR Noon Seminar Series, 27 April 2015.

*Hinckley, E.S. Humans On the Landscape: Exploring Our Immediate and Remote Impacts on Biogeochemical and Hydrologic Cycles. Invited speaker for the Program in Ecology and Cross-disciplinary Seminar Series, University of Wyoming, 26-28 March 2015.

Hinckley, E.S., E. Ayres, J. Parnell, and M. SanClements. An Update for the SSSA Community: The National Ecological Observatory Network’s (NEON) Soil Sampling Design. The Soil Science Society of America Meetings, Long Beach, CA, 2-5 November 2014.

TEACHING (*CU Boulder, unless otherwise indicated)*

Fall 2018	ENVS-5840 (Cross-listed in EBIO, GEOL and GEOG). Biogeochemistry (13 students)
Fall 2018 Spring 2018, 2017	ENVS-1001: Foundation in Quantitative Methods for Environmental Studies (Developed and instructed; pilot: 48, scaled: 120 students)
Spring 2016	ENVS-5520: Advances in Biogeochemistry (Developed and instructed; 9 students)

Spring 2016	ENVS/EBIO/GEOL 4160 and ENVS 5100: Introduction to Biogeochemistry (Developed and instructed; 28 students)
Fall 2015, 2016	ENVS-4050: Field Methods in Ecosystem Science (Developed and instructed; 18-22 students)
Spring 2011	GEOG-4120: Earth's Critical Zone (Co-developed and instructed with Suzanne Anderson; 26 students)
2013-2015	University of Utah Stable Isotopes in Ecology Summer Course (Instructor)

STUDENT ADVISEES

2018 –	Katelyn Eamen, Honors thesis student, Environmental Studies Program (Primary advisor)
2018 –	Rilyn Vandemerwe, Honors thesis student, Environmental Studies Program (Primary advisor)
2017 –	Ruth Heindel, Postdoctoral Scholar, INSTAAR (Co-advised with Mike Gooseff)
2017 –	Joel Singley, PhD student, Environmental Studies Program (Co-advised with Mike Gooseff)
2017	Amanda Lodge, REU student, Niwot Ridge LTER Program (Primary advisor)
2017	Leah Bollin, Honors thesis student, Environmental Studies Program (Co-advised with Joel Hartter)
2016 –	Anna Hermes, PhD student, Environmental Studies Program (Primary advisor)
2015 – 2017	Joel Singley, MS student, Environmental Studies Program (Primary advisor)
2015 – 2017	Youchao Chen, Visiting PhD student, INSTAAR (Primary advisor while in residence)
2015 – 2017	Cara Lauria, MS student, Environmental Studies Program (Co-advised with Kathryn Snell)

In addition, I am currently or have served on the thesis committees of 13 other graduate students and 5 honors thesis students across ENVS, EBIO, GEOL, and EVEN at CU Boulder. I have also served on the thesis committees of one student at Colorado School of Mines and one at Stanford University.