

CURRICULUM VITAE

Eve-Lyn S. Hinckley, Ph.D.

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RESEARCH INTERESTS

- Studying human manipulation of biogeochemical and water cycles
- Designing network observatories to measure and monitor environmental change
- Optimizing fertilizer, pesticide, and water management in agricultural 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, *Summa Cum Laude, Phi Beta Kappa*, highest 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 -

2015 – present **Assistant Professor**, Dept. of Environmental Studies, 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

2009 **Postdoctoral Researcher**, The Carnegie Institute for Science, Stanford, CA

AWARDS AND HONORS - Since 2012 -

2020 NSF CAREER Awardee

2017 – present National Geographic Society Explorer

2017 Research and Innovation Office Faculty Fellow, University of Colorado, Boulder

2017 Arts & Sciences Support of Education Through Technology 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

RESEARCH

PUBLICATIONS

*Graduate student advisee, †postdoctoral advisee; last author position indicates senior author/advisor role—for graduate student papers I made substantial contributions to the study design and writing.

In Review

Hinckley, E.S. and C.T. Driscoll. Sulfur outpaces change in other fertilizer inputs to U.S. Midwest croplands. *Nature Communications Earth and Environment*.

Hinckley, E.S., *H. Miller, A. Lezberg, and B. Anacker. Changes to soil nitrogen cycling with Tall Oatgrass invasion of a Colorado tallgrass prairie ecosystem. *Oecologia*.

*Hermes, A.L., T.E. Dawson, and **E.S. Hinckley**. Sulfur isotopes illuminate new aspects of sulfur cycling in human-dominated systems. *Environmental Research Letters*.

*Singley, J.G., M.N. Gooseff, M.R. Salvatore, D.M. McKnight, and **E.S. Hinckley**. Differentiating physical and biological storage of nitrogen along an intermittent Antarctic stream corridor. *Freshwater Science*.

*Singley, J.G., K. Singha, M.N. Gooseff, A.S. Ward, R. González-Pinzón, T.P. Covino, J. Dorley, and **E.S. Hinckley**. Identification of hyporheic extent and functional zonation during seasonal streamflow recession by unsupervised clustering of time-lapse electrical resistivity models. *Hydrological Processes*.

Published

37. *Rey, D.M., **E.S. Hinckley**, M. Walvoord, and K. Singha. Integrating observations and models to determine the effect of seasonally frozen ground on hydrologic partitioning in alpine hillslopes in the Colorado Rocky Mountains, USA *Hydrological Processes* 35(10), e14374.
36. Feinberg, A., A. Stenke, T. Peter, **E.S. Hinckley**, C.T. Driscoll, and L.H.E. Winkel. 2021. Reductions in the deposition of sulfur and selenium to agricultural soils pose risk of future deficiencies. *Nature Communications Earth and Environment*, doi:10.1038/s43247-021-00172-0.
35. *Singley, J.G., M.N. Gooseff, D.R. McKnight, and **E.S. Hinckley**. 2021. The role of hyporheic connectivity in determining nitrogen availability: Insights from an intermittent Antarctic stream. *JGR-Biogeosciences*, doi: e2021JG006309.
34. 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. 2020. Synergies among environmental science research and monitoring networks: A research agenda. *Earth's Future* e2020EF001631
33. †Crawford, J.T., **E.S. Hinckley**, and J.C. Neff. 2020. Long-term trends in acid precipitation and watershed elemental export from an alpine catchment of the Colorado Rocky Mountains, USA. *JGR-Biogeosciences*, e2020JG005683.
32. *Hermes, A.L., H.M. Wainwright, O. Wigmore, N. Falco, and **E.S. Hinckley**. 2020. From patch to catchment: A statistical framework to identify and map soil moisture patterns across complex alpine terrain. Special Issue: Chemical Export to River Systems from the Critical Zone, *Frontiers in Water*, 2, 48.
31. *Hermes, A.L., B.A. Ebel, S.F. Murphy, and **E.S. Hinckley**. 2020. Fates and fingerprints of sulfur and carbon following wildfire in economically important croplands of California, U.S. *Science of the Total Environment* DOI: <https://doi.org/10.1016/j.scitotenv.2020.142179>.

30. Devadoss, J., N. Falco, B. Dafflon, Y. Wu, M. Franklin, *A.L. Hermes, **E.S. Hinckley**, and H.M. Wainwright. 2020. Remote sensing informed zonation for understanding snow, plant, and soil moisture dynamics within a mountain ecosystem. *Remote Sensing – Biogeosciences*. 12(17): 2733
29. **Hinckley, E.S.**, J.T. *Crawford, H. Fakhraei, and C.T. Driscoll. 2020. A shift in sulfur cycle manipulation from atmospheric emissions to agricultural additions. *Nature Geoscience* DOI: 10.1038/s41561-020-0620-3.
28. †Heindel, R.C., A.L. Putman, S.F. Murphy, D.A. Repert, and **E.S. Hinckley**. 2020. Atmospheric dust deposition varies by season and elevation in the Colorado Front Range. *JGR-Earth Surface Processes*.
27. *Chen, Y., W.R. Wieder, A.L. Hermes, and **E.S. Hinckley**. 2020. The role of the physical template in controlling soil nitrogen cycling across a tundra-forest ecotone of the Colorado Rocky Mountains, U.S. *Catena*, 186, 104369.
26. †Crawford, J.T., **E.S. Hinckley**, I.M. Litaor, J.L. Brahney, and J.C. Neff. 2019. Strong evidence for accelerated climate-driven weathering and sulfate export in high alpine environments. *Environmental Research Letters*.
25. *Hess, L.J.T., **E.S. Hinckley**, G.P. Robertson, and P.A. Matson. 2019. Rainfall intensification increases nitrate leaching from tilled but not no-till cropping systems of the U.S. Midwest. *Agriculture, Ecosystems, and Environment* <https://doi.org/10.1016/j.agee.2019.106747>.
24. Carini, P., M. Delgado-Baquerizo, **E.S. Hinckley**, H. Holland-Moritz, T.E. Brewer, G. Rue, C. Vanderburgh, D. McKnight, and N. Fierer. 2019. Unraveling the effects of spatial variability and relic DNA on the temporal dynamics of soil microbial communities. *mBio* <https://doi.org/10.1101/402438>
23. *Hess, L.J.T., **E.S. Hinckley**, G.P. Robertson, S.K. Hamilton, and P.A. Matson. 2018. Extreme rainfall patterns increase deep percolation from tilled and no-till cropping systems in the U.S. Midwest. *Vadose Zone Journal* Special Issue, 17(1).
22. Pelletier, J.D., G.A. Barron-Gafford, H. Guttierrez-Jurado, **E.S. Hinckley**, E. Istanbuluoglu, L.A. McGuire, G-Y Niu, M.J. Poulos, C. Rasmussen, P. Richardson, T.L. Swetnam, G.E. Tucker. 2017. 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
21. **Hinckley, E.S.**, B.A. Ebel, R.T. Barnes, S.F. Murphy, & S.P. Anderson. 2017. Publisher’s 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.
20. **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.
19. 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.
18. **Hinckley, E.S.**, G. Bonan, G. Bowen, B. Colman, P. Duffy, C. Goodale, B. Houlton, E. Marin-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.
17. 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.

16. **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.
15. **Hinckley, E.S.** 2015. Fate of sulfur fungicide in the vineyard and beyond. *Practical Winery and Vineyard* (May Issue).
14. 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.
13. **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.
12. **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.
11. **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.
10. 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.
9. **Hinckley, E.S.** 2012. Tracking lost irrigation water. *Practical Winery and Vineyard*, Summer 2012. (Republished in *Australian and New Zealand Grapegrower & Winemaker*).
8. 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.
7. 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.
6. 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.
5. **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.
4. 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>).
3. **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.
2. **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.

1. **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 illustration for Paul, Eldor (Ed.) *Soil Microbiology, Ecology, and Biochemistry* (4th Ed.) Academic Press.

GRANTS - Proposal submissions not allowed while a NEON scientist, 2011—2015 -

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| 2022 – 2025 | “Toward Sustainable Crop Sulfur Use: Probing the Link between High Sulfur Applications and Methylmercury Production.” USDA/NIFA (PI, \$655,176) |
| 2021 – 2026 | “Collaborative Research: GCR: Co-defining Climate Refugia to Inform the Management of Mountain Headwater Systems.” National Science Foundation (Co-PI, \$1,863,927). |
| 2020 – 2025 | “Collaborative Research: Collaborative Research Network Cluster: Quantifying Controls and Feedbacks of Dynamic Storage on Critical Zone Processes in Western Montane Watersheds. National Science Foundation (Co-PI, \$3,854,890) |
| 2020 – 2025 | “CAREER: Acid Rain to Agriculture: An Integrated Research and Education Platform to Understand Human Manipulation of the Sulfur Cycle.” National Science Foundation (PI, \$495,486) |
| 2019 – 2024 | “The Role of Disruptive Technologies in Enhancing U.S. Food Security: Interdisciplinary Training of Graduate Fellows to Be Food System Leaders.” USDA/NIFA (Co-PI, \$262,500) |
| 2019 – 2020 | “Does Burn History and Abundance of <i>Arrhenatherum elatius</i> Influence Soil Nitrogen Cycling in Boulder OSMP Lands?” Boulder Open Space (PI, \$9,990) |
| 2019 | Women’s Professional Development Award – one-week residence at Syracuse University with Prof. Charles Driscoll. National Geographic Society (PI, \$2,835) |
| 2018 – 2020 | “RAPID: Wildfire, Wine, and Water Quality: Immediate Changes to Biogeochemical and Hydrological Flows from Vineyards After the Northern California Fires.” National Science Foundation (PI, \$50,000) |
| 2018 – 2019 | “Quantifying Atmospheric Nutrient Deposition to the Critical Zone on Boulder Open Space Lands.” Boulder Open Space (Co-PI, \$8,000) |
| 2017 – 2021 | “How Far Does Human Influence Go? Investigating Our Influence on the Nutrient that Supports Life on Earth.” National Geographic Society (PI, \$50,000) |
| 2017 – 2022 | “Long-term Research on the Dynamics of High-Elevation Ecosystems – A Framework to Understand Ecological Sensitivity to Climate Change.” National Science Foundation (Co-PI, \$6,762,000) |
| 2016 | “TRESTLE: Quantitative Analysis and Critical Thinking for the Environmental Studies Major: Developing Part II of the Introductory Core Series.” (PI, \$10,000) |

- 2010 National Science Foundation International Grant for Postdoctoral Researchers (PI, \$6,800)
- 2009 National Science Foundation Earth Sciences Postdoctoral Fellowship (PI, \$160,000)

SCIENTIFIC PRESENTATIONS - Since 2014 -

Invited Seminars and Keynote Addresses

- “Current State of the Global Sulfur Cycle.” 12th International Plant Sulfur Conference, Western University, London, Canada. 15-18 July 2022 (*Forthcoming*)
- “The Changing Picture of Agricultural Sulfur Use: Global Patterns and Local Insights from Napa Valley, CA.” University of California, Davis. 18 October 2021.
- “Creating a Path in the Emergent Discipline of Critical Zone Science.” Department of Environmental Studies Colloquium. University of Colorado, Boulder. 17 March 2021.
- “Bringing Critical Zone Science from the Forests to Croplands.” Bringing the Science Home! A Cybersymposium for Earth Surface Scientists. Colorado School of Mines. 23-24 June 2020.
- “From Acid Rain to Agriculture: A Path to Studying How We Change the Planet and What to Do About It.” Distinguished Faculty Seminar, Honors Program, University of Colorado, Boulder. 3 December 2019.
- “Our Changing Manipulation of the Sulfur Cycle.” University of Wisconsin, Madison. 19 April 2019.
- “It’s Not Just About Nitrogen and Phosphorus: Why Sulfur in Agriculture is a Growing Concern.” Rocky Mountain Science Seminar. U.S. Geological Survey, Lakewood, CO. 16 April 2019.
- “What Will Be Your Path of Discovery at CU Boulder?” Distinguished Faculty Lecture, Honors Program Admitted Students Reception, University of Colorado, Boulder. 6 April 2019.
- “Long-term Trends in Nitrogen Inputs and Outputs at Niwot Ridge – Why Do We Care, What Do We Know, and What Do We Do?” Niwot Climate Change Seminar with the City of Boulder. 23 January 2019.
- “We’ve Already Got the Wheel! Five Ideas Based on Lessons Learned from Three Observatory Networks.” Leveraging Distributed Research Networks to Understand Watershed Systems. Department of Energy, Washington, D.C., 27-29 January 2019.
- “From Acid Rain to Agriculture.” Hawaii Ecosystems Meeting. 9-11 January 2019.
- “How Far Does Human Influence Go? Establishing a Rainfall Chemistry Network with National Geographic’s Unique Lodges of the World.” The National Geographic Society. Washington, DC. 11 December 2018.
- “Agriculture and the Sulfur Cascade”. Colorado State University Soil and Crop Sciences Seminar. 29 November 2018.
- “Science-Action Partnerships to Inform Sustainable Management in California’s \$62B Wine Industry.” CU Hydrologic Sciences Symposium. 12-13 April 2018.
- “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.
- “A Surprising Path to Science.” Distinguished Faculty Lecture, CU Honors Program admitted students reception. 7 April 2018.
- “Not All Water Becomes Wine.” University of Colorado Board of Trustees Meeting. 11 November 2017.

- “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.
- “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.
- “The Critical Zone: A Novel Framework for Questions in Ecosystem Biogeochemistry.” The National Science Foundation, Arlington, VA. 15 November 2016.
- “Aspect Affects the Fate of N Deposition During Major Hydrologic Events in the BcCZO.” University of Arizona, Tucson. 28 September 2016.
- “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.
- “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.
- “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.
- “Humans On the Landscape: Exploring Our Immediate and Remote Impacts on Biogeochemical and Hydrologic Cycles.” Distinguished Faculty Speaker for the Program in Ecology and Cross-disciplinary Seminar Series, University of Wyoming, 26-28 March 2015.

Presentations at National and International Meetings (‡Invited, *graduate student advisee, †postdoctoral advisee)

‡ **Hinckley, E.S.** The Role of Critical Zone Processes in Mediating Changes to Biogeochemical Cycling in Warming Alpine Ecosystems. Goldschmidt Conference, Honolulu, HI. 10-15 July 2022. *Forthcoming.*

‡ **Hinckley, E.S.** Designing Network Observatories to Foster Inclusivity, Promote Interdisciplinary Research, and Address Our Grand Challenges. American Geophysical Union Conference. New Orleans, LA. 13-17 December 2021.

Hinckley, E.S. and C.T. Driscoll. It’s Not Just About N and P: Sulfur Inputs Are Increasing in Major Agricultural Regions. American Geophysical Union Conference. New Orleans, LA. 13-17 December 2021.

*Hermes, A.L., M. Logan, B. Poulin, A. McKenna, T. Borch, and **E.S. Hinckley**. Advanced Atomic- and Molecular-level Techniques Reveal Alterations to Soil and Stream Organic Matter from Agricultural Sulfur Applications. American Geophysical Union Conference. New Orleans, LA. 13-17 December 2021.

*Miller, H.R., C.R. Adamchak, P.G. Thornton, R.C. Heindel, and **E.S. Hinckley**. Mercury Storage, Transformation, and Transfer in the Colorado Rocky Mountains. American Geophysical Union Conference. New Orleans, LA. 13-17 December 2021.

*Singley, J.G., M.N. Gooseff, M. Salvatore, D.M. McKnight, and **E.S. Hinckley**. Physical and Biological Nitrogen Storage Along an Entire Intermittent Stream Corridor. American Geophysical Union Conference. New Orleans, LA. 13-17 December 2021.

‡*Hermes, A.L., H.M. Wainwright, O. Wigmore, N. Falco, and **E.S. Hinckley**. A data-model fusion approach to identify and map zones of similar hydrologic function across an alpine catchment. American Geophysical Union Fall Meeting, Online. 1-17 December 2020.

- ‡*Singley, J.G., M.N. Gooseff, K. Singha, and **E.S. Hinckley**. Delimiting and quantifying seasonal changes in hyporheic extent using inverted electrical resistivity data. American Geophysical Union, Fall Meeting (Virtual), 1–17 December 2020.
- †Heindel, R.C., A.L. Putman, S.F. Murphy, D.A. Reper, **E.S. Hinckley**. Particulate matter delivers nutrients and heavy metals to the Colorado Front Range. Goldschmidt Conference, Online. 21-26 June 2020.
- *Hermes, A.L., Mambelli, S., Yang, W., Dawson, T.E., and **E.S. Hinckley**. Sulfur stable isotopes illuminate a biogeochemical “fingerprint” to trace agricultural sulfur through the critical zone. American Geophysical Union Fall Meeting, San Francisco, CA. December 2019.
- *Singley, J.G., M.N. Gooseff, K. Singha, and **E.S. Hinckley**. Delimiting hyporheic area and sub-compartments using electrical resistivity inversions and time series clustering algorithms. American Geophysical Union, Fall Meeting, San Francisco, CA, 9-13 December 2019.
- ‡**Hinckley, E.S.**, †J.T. Crawford, and C.T. Driscoll. “A Transition in Human Manipulation of the Sulfur Cycle.” National Atmospheric Deposition Program Meeting, Boulder, CO. 7 November 2019.
- †Heindel, R.C., A.L. Putman, S.F. Murphy, D.A. Reper, and **E.S. Hinckley**. Dry deposition delivers nutrients and heavy metals to the Colorado Front Range. National Atmospheric Deposition Program Meeting, Boulder, Colorado, 6-7 November 2019.
- *Forrester, C., and **E.S. Hinckley**. “Trends in long-term grapevine phenology: Can they be explained by microclimatic change?” American Society of Enology and Viticulture Meeting. Napa, CA. 17-20 June 2019.
- *Hermes, A.L. and **E.S. Hinckley**. Fire, water, and wine: Effects of the North Bay Wildfires on Napa Valley vineyard soil carbon and sulfur losses. American Society for Enology and Viticulture National Conference, Napa, CA. 17-20 June 2019.
- Hinckley, E.S.** and C.T. Driscoll. “From Acid Rain to Agriculture: Our Changing Manipulation of the Sulfur Cycle.” American Geophysical Union Meeting. 10-14 December 2018.
- *Hermes, A.L. and **E.S. Hinckley**. Stable isotope approaches to determine the transport, fate, and unintended consequences of high sulfur applications in regional agricultural systems. American Geophysical Union Meeting, Washington, D.C., 10-14 December 2018.
- *Singley, J.G., M.N. Gooseff, and **E.S. Hinckley**. Short-term Nitrogen cycling in an ephemeral glacial meltwater stream, Antarctica. American Geophysical Union Meeting, Washington D.C., 10-14 December 2018.
- *Singley, J.G., M.N. Gooseff, and **E.S. Hinckley**. Short-term Nitrogen cycling in an ephemeral glacial meltwater stream, Antarctica. American Geophysical Union Meeting, Washington D.C., 10-14 December 2018.
- ‡**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.
- *Singley, J.G., M.N. Gooseff, and **E.S. Hinckley**. “Sub-daily biogeochemical cycling in sediment of an ephemeral meltwater stream.” Scientific Committee on Antarctic Research, POLAR2018 Open Science Conference, Davos, Switzerland, 15-26 June 2018.
- *Singley, J.G., **E.S. Hinckley**, and M.N. Gooseff. “Nitrate dynamics under unsteady and intermittent sub-daily discharge in an Antarctic glacial meltwater stream.” Gordon Research Seminar and Conference on Catchment Science, Lewiston, ME, 24-30 June 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., 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.

SCIENTIFIC PLANNING ACTIVITIES AND WORKSHOPS

- 2021 *Integrating Soil Biogeochemistry and Fertilizer Sciences to Improve Ecosystem Services across Agricultural Landscapes*. Fountainworks, 15 January.
- 2020 *The Potential of Soil Carbon Storage in Winegrowing*, Napa Valley Vineyard Technical Group, Napa, CA, 8 January. (Organizer)
- 2019 *Sustainability 2.0*. Future Earth Workshop, Denver, CO, 24 May.
- 2019 *Leveraging Distributed Research Networks to Understand Watershed Systems*. Department of Energy, Washington, D.C., 27-29 January.
- 2019 *Hawaii Ecosystems Meeting*. Waimea, Hawaii, 9-11 January. (Organizer)
- 2018 *Cross-Network Data and Modeling Workshop*. The National Ecological Observatory Network, Boulder, CO, 13-15 February.
- 2017 Co-authored letter and memo to the leadership of NSF: "Early Career Perspective: The Importance of Sustaining The Critical Zone Observatory Network." 27 September.
- 2017 *Critical Zone Observatory Network PI Meeting*. University of California, Berkeley. Berkeley, CA, 8-11 September.
- 2017 *NEON-LTER Synergies Workshop*. National Center for Ecological Analysis and Synthesis. Santa Barbara, CA, 29-31 March.
- 2017 *USAID Workshop on Innovation for Data-Driven Agriculture*, University of Colorado, Boulder, 27-28 April.
- 2016 *Critical Zone Observatory Hillslope Aspect Synthesis Workshop*. University of Arizona, Tucson, 28 Sept.-1 October.
- 2016 *Interdisciplinary Approaches to Sustaining Agriculture in a Water-Poor World – Session*, American Geophysical Union Meeting, San Francisco, CA, 12-16 December. (Co-organizer)
- 2015 *NSF Food-Energy-Water-Systems (FEWS) Nexus Challenges Workshop: Technology and Information Fusion*. Napa, CA, 5-6 November.
- 2014 *Network Biogeochemistry in the Global Change Era – Workshop for participants from 5 observatory networks*. INSTAAR, Boulder, CO, 12 November. (Organizer)
- 2013 *Frontiers in Ecosystem Science: Energizing the Research Agenda*. NSF SESYNC, Annapolis, MD, 1-2 October.
- 2013 *NSF EarthCube Workshop*. University of Delaware, 21-23 January.
- 2012 *Frontiers in Ecosystem Science: Energizing the Research Agenda*. American Geophysical Union Meeting, San Francisco, CA, 3-7 December.

WORKSHOPS AND TRAININGS: JUSTICE, EQUITY, DIVERSITY, AND INCLUSION IN ACADEMIA

- 2021 *Let's Talk LGBTQ+*. Training, CU Boulder. 8:30-10:00am, 1 Dec. (Participant)
- 2021 *Better Field Work Futures Training*. INSTAAR. 12-1:30pm, 12 May. (Participant)
- 2021 *Racial Equity Challenge for Institutes 2021*. 5 Friday sessions to examine personal and institutional attitudes about race, including break-out room discussion training. 3-5pm, February – March. (Break-out room discussion leader)
- 2021 *Anti-Racism I. Training*. Coursera On-line Course. Readings and journaling during February and March. (Completed)
- 2020 *Department of Environmental Studies Friday Town Halls* during Summer 2020. Purpose: to open dialogue between faculty and graduate students regarding race in academia and define steps to improve the Department of Environmental Studies. (Participant)
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TEACHING

COURSES DEVELOPED AND TAUGHT - CU Boulder, unless otherwise indicated -

- Fall 2021 **Ecosystem Ecology** (EBIO-4155/5155) 4 credits, 50 undergraduate students.
- Fall 2018; Spring 2020, 2019, 2018, 2017 **Foundation in Quantitative Methods for Environmental Studies** (ENVS-1001) 4 credits, 120-160 undergraduate students.
- Fall 2020, 2019, 2016, 2015 **Field Methods in Ecosystem Science** (ENVS-4050; will become EBIO-4630 Field Methods in Ecosystem Ecology) 2 credits, 18-22 undergraduate students.
- Spring 2016 **Introduction to Biogeochemistry** (ENVS/EBIO/GEOL 4160 and ENVS 5100) 3 credits, 28 undergraduate and graduate students.
- Spring 2011 **Earth's Critical Zone** (GEOG-4120) 3 credits, 26 undergraduate students. Co-developed and instructed with Prof. Suzanne Anderson.
- Fall 2020, 2018 **Global Biogeochemical Cycles** (ENVS-5840) Cross-listed in EBIO, GEOL and GEOG. 3 credits, 13-20 graduate students.
- Spring 2016 **Advances in Biogeochemistry** (ENVS-5520) 1-3 credits, 9 students.
- Summer 2019, 2018 **The Scientific Basis of Environmental Change** (ENVM-6100) 3 credits, 76 students. Co-taught with Prof. Jason Neff, Prof. Sharon Collinge ('19), and Prof. Nichole Barger ('18)
- 2013-2015 **University of Utah Stable Isotopes in Ecology Summer Course**. Instructor.

TEACHING PRESENTATIONS (‡Invited, **Undergraduate learning assistant)

Hinckley, E.S., **C. Adamchak, **S. Angelides Jr., **N. Goodkind, **L. Kennedy, and **Z. Schwartz. "Learning Assistants Are Key Members of the Teaching Team in Large, Active-learning, Quantitatively-oriented Courses." International Learning Assistant Conference, University of Colorado, Boulder, CO. 19-20 October 2019.

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

TEACHING WORKSHOP LEADERSHIP AND PARTICIPATION

- 2018 **Faculty Learning Community** to Map Learning Goals Across the ENVIS Undergraduate Introductory Courses, Chair, Spring Semester. Convened a FLC with colleagues from Environmental Studies to initiate curriculum reform efforts.
- 2017 – 2018 **Arts & Sciences Support of Education Through Technology (ASSETT) Faculty Fellows Meetings**. Fellow/participant. Attended regular meetings during Spring 2017 to learn about approaches to pedagogical reform within classes and departments.
- 2017 **CU TRESTLE Annual Meeting**, Roundtable Discussion Leader, 11-1pm, 28 February, Workshop Presenter, 28-30 September. Presented activities used in the introductory Environmental Studies course that I developed. Brainstormed digital resources that would help promote innovative teaching strategies across campus with other TRESTLE awardees.
- 2017 **CU TRESTLE Annual Meeting**, Panelist and Discussion Leader, 3-5:30pm, 23 January. Presented activities used in the introductory Environmental Studies course that I developed. Shared approaches that work/do not in the active learning classroom with other TRESTLE awardees.
- 2017 **TRESTLE Conference**, Indiana University, Bloomington, IN. Led a breakout group to demo active learning exercises that I developed for my introductory Environmental Studies course. Participated in other breakout groups to learn from colleagues.
- 2016 **ASSETT Flipped Classroom Workshop**, Participant, 11-4pm, 9 June. Workshopped my existing Field Methods in Ecosystem Science course to convert it to a flipped model. Developed recorded lectures, quizzes, and reading modules for use in subsequent semesters.
- 2015 – 2019 **Faculty Teaching Excellence Program** – Natural Sciences. Regular participant in discussions. Topics range from successful approaches to student mentoring, to student mental health, to grant funding strategies.
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MENTORING

POSTDOCTORAL MENTORING

- 1/2019 – 10/2020 Dr. John Crawford, INSTAAR. Co-advised with Prof. Jason Neff. Current position: Water Resources Analyst for the City of Northglenn, CO (started 10/2020).
- 8/2017 – 12/2019 Dr. Ruth Heindel, INSTAAR. Co-advised with Prof. Michael Gooseff. Current position: Assistant Professor at Kenyon College (started 1/2020).

GRADUATE STUDENT MENTORING

Primary Advisor or Co-Advisor

Summary: 2 Ph.D. students and 3 M.S. students graduated; 2 additional Ph.D. students in training.

- 2021 – present Laura Rea, Ph.D. student, Department of Environmental Studies (Primary advisor)
- 2019 – present Hannah Miller, Ph.D. student, Department of Environmental Studies (Primary advisor)
- 2019 – 2021 Molly Huber, M.S. student, Department of Environmental Studies (Primary advisor). Current position: Research Technician, USGS, Reston, VA.
- 2016 – 2021 Anna Hermes, Ph.D. student, Department of Environmental Studies (Primary advisor). Current position: Sr. Watershed Scientist, Northern Water.

- 2017 – 2021 Joel Singley, Ph.D. student, Department of Environmental Studies (Co-advised with Prof. Michael Gooseff). Current position: Postdoctoral Scholar, Colorado School of Mines.
- 2015 – 2017 Joel Singley, M.S. student, Department of Environmental Studies (Co-advised with Prof. Michael Gooseff)
- 2015 – 2017 Youchao Chen, Visiting Ph.D. student, INSTAAR (Primary advisor while at CU). Current position: Research Faculty, Wuhan Botanical Gardens and Chinese Academy of Sciences.
- 2015 – 2017 Cara Lauria, M.S. student, Department of Environmental Studies (Co-advised with Prof. Kathryn Snell). Current position: Biological Research Technician, USGS, Moab, UT.

Graduate Student Committee Participation

Summary: Served (or currently serving) on 18 Ph.D. committees and 2 M.S. committees.

CU Departments: Ecology and Evolutionary Biology (EBIO), Environmental Engineering (EVEN), Environmental Studies (ENVS), Geological Sciences (GEOL); non-CU Universities: Stanford University (STANFORD), Colorado School of Mines (MINES). Dark gray = Ph.D., light gray = M.S.

Student Name (Dept)	'21-22	'20-21	'19-20	'18-19	'17-18	'16-17	'15-16
Claire Winfrey (EBIO)							
Toby Halamka (GEOL)							
Nicholas Dragone (EBIO)							
Jessica Rush (EBIO)							
Anna Wright (ENVS)							
Blessing Sokoya (EBIO)							
Garret Boudinot (GEOL)							
Rachel Havranek (GEOL)							
Anne Fetrow (GEOL)							
Ciara Asamoto (GEOL)							
Michael Rush (EVEN)							
Chiara Forrester (EBIO)							
Anna Bergstrom (EVEN)							
Margaret Bowman (ENVS)							
Christa Torrens (ENVS)							
Kelsey Dailey (ENVS)							
Blake Stevison (EBIO)							
Teal Potter (EBIO)							
Rania Eldam (MINES)							
Laura Hess (STANFORD)							

UNDERGRADUATE STUDENT MENTORING

Undergraduate Research Trainees

Summary: 15 undergraduate students mentored as research assistants in my lab; 2 students completed work toward honors degrees with UROP funding, 2 honors students currently in training with UROP funding, committee member for 8 other honors students; 3 students completed a UROP fellowship toward an independent study; 3 students conducted or currently conducting research as part of an external program.

Departments: Ecology and Evolutionary Biology (EBIO), Environmental Engineering (EVEN), Environmental Studies (ENVS), Geological Sciences (GEOL); External Programs: National Science Foundation Research Experience for Undergraduates (REU), Research Experience for Community College Students (RECCS); Abbreviations: Honors thesis advisor (*Hon*), Undergraduate Research Opportunities Program Fellowship (*UROP*).

Student Name (Major)	'21-22	'20-21	'19-20	'18-19	'17-18	'16-17	'15-16
Bhawana Paudel (EBIO)							
Korie Lynch (EBIO)							
Sarah Brookins (GEOL)							
Madeleine Zenir (EBIO)							
Phillip Thornton (ENVS)	Hon/UROP						
Michelle Leung (ENVS)	Hon/UROP						
Magdalena Franchois (RECCS)							
Aubrey Jackson (RECCS)							
Edward Riccio (GEOL)							
Jane Hill (ENVS)							
Josie Marquez (GEOL)							
Clifford Adamchak (ENVS)		Hon/UROP					
Zachary Lacasse (ENVS)			UROP				
Page Hartwell (ENVS)		UROP					
Jack Pool (ENVS)							
Megan Percy (EVEN)							
Katelyn Eamen (ENVS)							
Janey Le (ENVS)							
Jonn von Oosten (GEOL)							
Emily Boardman (EBIO)							
Michael Gross (GEOL)							
Amanda Lodge (REU)							
Kaelin Williams (ENVS)				2x UROP			
Leah Bollin (ENVS)					Hon/UROP		

SERVICE AND OUTREACH

PROFESSIONAL SOCIETY MEMBERSHIPS

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

PROFESSIONAL SERVICE ACTIVITIES

2021 – present Associate Editor, *Frontiers in Water* – Water and the Critical Zone

2020 – present Subject Matter Editor, *Ecosphere* – Critical Zone

2019 – 2021 Review Editor, *Frontiers in Water* – Water and the Critical Zone

2018 – 2019 Co-Chair, Science, Technology, and Education Advisory Board, NEON

2016 – 2019 Member, Science, Technology, and Education Advisory Board, NEON

2015 – present Member, Scientific Steering Committee, ENIGMA Project, Dept. of Energy

2015 – 2020 Guest 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*, *Bulletin of the American Meteorological Society*, *Catena*, *Earth Science Reviews*, *Ecological Applications*, *Ecology*, *Ecosystems*, *Environmental Science & Technology*, *Frontiers in Earth Sciences*, *Frontiers in Water*, *Geoderma*, *Geophysical Research Letters*, *Global Change Biology*, *Hydrological Processes*, *JGR-Biogeosciences*, 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, Science of the Total Environment, Soil Biology and Biochemistry, Soil Science Society of America Journal, Vadose Zone Journal, Water Resources Research

UNIVERSITY AND DEPARTMENTAL SERVICE

- 2022 – present Chair, Search Committee for TT hire in Aquatic Ecology/Aquatic Biogeochemistry, INSTAAR and EBIO
- 2021 – present Member, RIO Faculty Fellows Advisory Board
- 2021 – present Associate Chair for Undergraduate Studies, ENVS
- 2021 – present Co-Chair, Quality Teaching Initiative, ENVS
- 2021 – present Co-Chair, Justice, Equity, Diversity, and Inclusion Task Force, INSTAAR
- 2021 Reviewer, Undergraduate Research Opportunities Program (UROP)
- 2019 – present Member, Sustainability Innovation Lab at Colorado Advisory Board
- 2019 – 2021 Member, Environmental Systems Science Scoping Committee
- 2019 – 2021 Member, Undergraduate Curriculum Committee, ENVS
- 2019 – 2020 Member, Peer Teaching Evaluation Committee, ENVS
- 2018 – 2019 Member, Search Committee for Director of INSTAAR
- 2018 – 2019 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 – 2021 Co-Chair, Executive Committee, Center for Water, Earth Science, and Technology
- 2016 – 2019 Member, Graduate Committee, Department of Environmental Studies
- 2016 – 2018 Member, Merit Review Committee, Department of Environmental Studies
- 2016 – 2017 Member, Executive Committee, Department of Environmental Studies
- 2015 – present Faculty Director, Arikaree Environmental Laboratory, INSTAAR

PUBLIC TALKS

- “Trends in Atmospheric Nutrient Deposition to the Alpine & How They Can Guide Future Action.” Center for Sustainable Landscapes and Communities. Virtual. 4 November 2021.
- “Trends in Nitrogen Deposition to High Alpine Lakes.” Colorado Lake and Reservoir Management Association. Virtual. 14 April 2021.
- “Long-term Water Quality Trends.” Water and Climate Summit. City of Boulder. 22 February 2021.
- ETown event – Film showing and panel: The Biggest Little Farm (panelist). ETown Hall, Boulder, CO. 26 February 2020.
- “Tales from the Mountains and Tips for Conservation.” Wild Bear Nature Center, Nederland, CO. 17 November 2019.
- “How Do Farms and Cars Influence Forests of the Front Range?” Carillon Community Seminar, Boulder, CO. 23 April 2019.
- “Will Climate Change Make Severe Weather Like the Recent Hailstorms the Norm in Colorado?” Interview on Colorado Matters, Colorado Public Radio. 26 June 2017.

Regular research briefings to: NAviP Winegrowers Organization, Napa Vit Tech Group, CalEPA, California Department of Pesticide Regulation, Napa Agricultural Commissioner's Office, California State Water Boards.