Scott W. McCoy

University of Nevada
Dept. of Geological Sciences and Engineering
1664 N. Virginia, MS 0172
Reno, NV 89557

website: https://scottwmccoy.github.io/
email: scottmccoy@unr.edu
work phone: (775) 682-7205

DEGREES

2012, Ph.D., University of Colorado, Boulder, Geological Sciences, Dissertation Title: *Controls on Erosion and Transport of Mass by Debris Flows*
2005, B.S., cum laude, University of Washington, Seattle, Geology
2005, B.A., cum laude, University of Washington, Seattle, Business Administration

APPOINTMENTS

2020 – present	Associate Professor, Dept. of Geological Sciences and Engineering, University of Nevada, Reno
2014 – 2020	Assistant Professor, Dept. of Geological Sciences and Engineering, University of Nevada, Reno
2012 – 2013	Postdoctoral Fellow, Canadian Institute for Advanced Research, Massachusetts Institute of Technology, and ETH Zurich

HONORS AND AWARDS

AEG Presidential Citation in recognition of outstanding service, leadership and dedication to AEG (2025)
Peter Vardy Endowed Chair in Geological Engineering (2020-present)
Canadian Institute for Advanced Research Postdoctoral Fellow (2012)
USGS Mendenhall Postdoctoral Fellow (2012 - declined)
Young Investigator Award, 5th Conference on Debris Flow Hazards and Mitigation, Padua, Italy (2011)
NSF Graduate Fellowship (9/2007-9/2011)
DOD Graduate Fellowship (declined)
CIRES Graduate Fellowship (2007)
Outstanding Student Paper-Hydrology Section of the American Geophysical Union, 2008
W.O. Thompson Award 2007
Douglas E. Merrill Prize for Excellence, 2005-2006 (Awarded to top graduating senior in the Earth and Space Sciences Department at the University of Washington)

PUBLICATIONS

Google Scholar Profile https://scholar.google.com/citations?user=jLzYjgcAAAAJ&hl=en
Citations: 2996, h-index: 21, i10-index: 32 as of June 2026

*** = UNR graduate student/postdoc author advised by McCoy**
****= UNR undergraduate student advised by McCoy**

Author ordering generally follows total level of effort put forth on the paper. For papers out of my group, I always put primary student contributors first. First author is also corresponding author except in cases in

which M.S. students or undergraduates are the first author. In these cases, McCoy is corresponding author.

In Review or In Revision:

*Anderson, L.S., Scherler, D., **McCoy, S. W.**, McGrath, D., Kirkbride, M.P., Zeller, L., Anderson, R.S. Debris cover controls glacial thinning, lakes, and hazards in High Mountain Asia. *Nature Geoscience.*

*Delgado, N., *Cavagnaro, D.B., **McCoy, S. W.**, Thomas, M.A., Lindsay, D.N., Breitmeyer, R., Cromie, R. Wildfire-induced perturbations to unsaturated soil water retention behavior and their implications for postfire debris-flow research. *International Journal of Wildland Fire.*

*Ring, C.M., **McCoy, S. W.**, *Cavagnaro, D.B., Deal, E., McGuire, L.A. Hydraulic geometry of debris-flow channel networks with implications for discharge estimation. *Geophysical Research Letters.*

Roth, D.L., Reijm, C., Bedwell, C.J., **McCoy, S. W.**, *Cavagnaro, D.B., *Delgado, N., Rengers, F.K. The influence of methodological inconsistency on estimates of burned field saturated soil hydraulic conductivity and sorptivity. *International Journal of Wildland Fire.*

*Rothman, S.D., Scheingross, J.S., **McCoy, S. W.** Waterfalls perturb channel and hillslope dynamics in the San Gabriel Mountains, California. *Geophysical Research Letters.*

*Struble, W.T., McGuire, L.A., **McCoy, S. W.**, Barnhart, K.R. Debris-flow dominated valley morphology records uplift and erosion rates. *Geophysical Research Letters.*

*Winner, A., Ferrier, K.L., Dufek, J., **McCoy, S. W.**, Breard, E.C.P. Quantifying the role of fluid and solid flow properties on bed force distributions in granular flows. *Journal of Geophysical Research: Earth Surface*

Zeller, L., McGrath, D., **McCoy, S. W.** 21st Century Expansion of Supraglacial Lakes in High Mountain Asia. *Geophysical Research Letters.*

Published (Peer reviewed unless noted):

UNR Publications

42. Robinson, M.J., Scheingross, J.S., **McCoy, S. W**., Struble, W.T. (2026). Equilibrium Ridge-Crest Morphology Records External Forcing. Journal of Geophysical Research: Earth Surface 131, e2025JF008670. https://doi.org/10.1029/2025JF008670

41. McGrath, D., Sass, L., Armstrong, W. H., Florentine, C., & **McCoy, S. W.** (2026). Rapid ice-marginal lake growth in Alaska driven by glacier retreat through bed overdeepenings. *Proceedings of the National Academy of Sciences*, *123*(12), e2513289123. https://doi.org/10.1073/pnas.2513289123

40. *Struble, W. T., **McCoy, S. W.**, Tucker, G. E., Hobley, D. E. J., Gregory, L. C., & Mason, H. B. (2025). Dip Angles of Mountain-Front Facets Encode Long-Term Slip Rates Along the Wasatch Normal Fault, USA. *Geophysical Research Letters*, *52*(22), e2025GL117713. https://doi.org/10.1029/2025GL117713

39. *Cavagnaro, D. B., **McCoy, S. W.**, Thomas, M. A., Kostelnik, J., & Lindsay, D. N. (2025). Improved Prediction of Postfire Debris Flows Through Rainfall Anomaly Maps. *Geophysical Research Letters*, *52*(16), e2025GL114791. https://doi.org/10.1029/2025GL114791

38. Yanites, B. J., Clark, M. K., Roering, J. J., West, A. J., Zekkos, D., Baldwin, J. W., Cerovski-Darriau, C., Gallen, S. F., Horton, D. E., Kirby, E., Leshchinsky, B. A., Mason, H. B., Moon, S., Barnhart, K. R., Booth, A., Czuba, J. A., **McCoy**, **S. W.,** McGuire, L., Pfeiffer, A., Pierce, J. (2025). Cascading land

surface hazards as a nexus in the Earth system. *Science*, *388*(6754), eadp9559. https://doi.org/10.1126/science.adp9559

37. *Cavagnaro, D. B., **McCoy, S. W.**, Lindsay, D. N., McGuire, L. A., Kean, J. W., & Trugman, D. T. (2025). Rainfall Thresholds for Postfire Debris-Flow Initiation Vary With Short-Duration Rainfall Climatology. *Journal of Geophysical Research: Earth Surface*, *130*(6), e2024JF007781. https://doi.org/10.1029/2024JF007781

36. *Rothman, S. D., Scheingross, J. S., & **McCoy, S. W.** (2024). Waterfalls Alter Reach-Scale Fluvial Erosion Rates: Evidence From Field Data and Process Modeling. *Journal of Geophysical Research: Earth Surface*, *129*(12), e2024JF007792. https://doi.org/10.1029/2024JF007792

35. *Cavagnaro, D. B., **McCoy, S. W.**, Kean, J. W., Thomas, M. A., Lindsay, D. N., McArdell, B. W., & Hirschberg, J. (2024). A Robust Quantitative Method to Distinguish Runoff-Generated Debris Flows From Floods. *Geophysical Research Letters*, *51*(15), e2024GL109768. https://doi.org/10.1029/2024GL109768

34. Gartner, J. E., Kean, J. W., Rengers, F. K., **McCoy, S. W.**, Oakley, N., & Sheridan, G. (2024). Post-Wildfire Debris Flows. In M. Jakob, S. McDougall, & P. Santi (Eds.), Advances in Debris-flow Science and Practice (pp. 309–345). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-48691-3_11

33. Zeller, L., McGrath, D., **McCoy, S. W.**, & Jacquet, J. (2024). Seasonal to decadal dynamics of supraglacial lakes on debris-covered glaciers in the Khumbu region, Nepal. The Cryosphere, 18(2), 525–541. https://doi.org/10.5194/tc-18-525-2024

32. *Feehan, S. A., **McCoy, S. W.,** Scheingross, J. S., & Gardner, M. H. (2023). Quantifying Variability of Incipient-Motion Thresholds in Gravel-Bedded Rivers Using a Grain-Scale Force-Balance Model. Journal of Geophysical Research: Earth Surface, 128(9), e2023JF007162. https://doi.org/10.1029/2023JF007162

31. McGuire, L. A., **McCoy, S. W.,** Marc, O., *Struble, W., & Barnhart, K. R. (2023). Steady-state forms of channel profiles shaped by debris flow and fluvial processes. Earth Surface Dynamics, 11(6), 1117–1143. https://doi.org/10.5194/esurf-11-1117-2023

30. Rick, B., McGrath, D., **McCoy, S. W**., & Armstrong, W. H. (2023). Unchanged frequency and decreasing magnitude of outbursts from ice-dammed lakes in Alaska. Nature Communications, 14(1), 6138. https://doi.org/10.1038/s41467-023-41794-6

29. *Rothman, S. D., Scheingross, J. S., **McCoy, S. W**., & Dow, H. W. (2023). Impacts of Spontaneous Waterfall Development on Bedrock River Longitudinal Profile Morphology. Journal of Geophysical Research: Earth Surface, 128(7), e2022JF007057. https://doi.org/10.1029/2022JF007057

28. *Struble, W. T., McGuire, L. A., **McCoy, S. W**., Barnhart, K. R., & Marc, O. (2023). Debris-Flow Process Controls on Steepland Morphology in the San Gabriel Mountains, California. Journal of Geophysical Research: Earth Surface, 128(7), e2022JF007017. https://doi.org/10.1029/2022JF007017

27. Thomas, M. A., Kean, J. W., **McCoy, S. W**., Lindsay, D. N., Kostelnik, J., *Cavagnaro, D. B., et al. (2023). Postfire hydrologic response along the Central California (USA) coast: insights for the emergency assessment of postfire debris-flow hazards. Landslides. https://doi.org/10.1007/s10346-023-02106-7

26. Thomas, M. A., Lindsay, D. N., *Cavagnaro, D. B., Kean, J. W., **McCoy, S. W.**, & Graber, A. P. (2023). The Rainfall Intensity-Duration Control of Debris Flows After Wildfire. Geophysical Research Letters, 50(10), e2023GL103645. https://doi.org/10.1029/2023GL103645

25. Stokes, M. F., Larsen, I. J., Goldberg, S. L., **McCoy, S. W.**, Prince, P. P., & Perron, J. T. (2023). The Erosional Signature of Drainage Divide Motion Along the Blue Ridge Escarpment. Journal of Geophysical Research: Earth Surface, 128(1), e2022JF006757. https://doi.org/10.1029/2022JF006757

24. *Beeson, H. W., & **McCoy, S. W.** (2022). Disequilibrium river networks dissecting the western slope of the Sierra Nevada, California, USA, record significant late Cenozoic tilting and associated surface uplift. Geological Society of America Bulletin, 130, 45. https://doi.org/10.1130/B35463.1.

23. Rick, B., McGrath, D., Armstrong, W., & **McCoy, S. W.** (2022). Dam type and lake location characterize ice-marginal lake area change in Alaska and NW Canada between 1984 and 2019. *The Cryosphere*, 16(1), 297–314. https://doi.org/10.5194/tc-16-297-2022

22. East, A. E., Logan, J. B., Dartnell, P., Lieber-Kotz, O., *Cavagnaro, D. B., **McCoy, S. W.**, & Lindsay, D. N. (2021). Watershed Sediment Yield Following the 2018 Carr Fire, Whiskeytown National Recreation Area, Northern California. *Earth and Space Science*, 8(9). https://doi.org/10.1029/2021EA001828

21. *Cramer, A., W. Calvin, **S. W. McCoy**, R. Breitmeyer, M. Haagsma, and C. Kratt, Mapping Temporal Change on Abandoned Mine Lands Using Remotely Piloted Aerial Systems and Remote Sensing Techniques (2021), *Minerals*, 11(4), 365. https://doi.org/10.3390/min11040365.

20. Scheingross, J. S.; A. B. Limaye, **S. W. McCoy**, A. C. Whittaker (2020), The shaping of erosional landscapes by internal dynamics, Nature Reviews Earth & Environment, 1(12), 661–676. https://doi.org/10.1038/s43017-020-0096-0

19. Tucker, G. E., *D. E. J. Hobley, **S. W. McCoy**, and ** W. T. Struble (2020), Modeling the Shape and Evolution of Normal-Fault Facets, *JGR-Earth Surface,* 125, 1–20. https://doi.org/10.1029/2019JF005305.

18. *Beeson, H. W., and **S. W. McCoy (**2020), Geomorphic signatures of the transient fluvial response to tilting*, Earth Surface Dynamics,* 8, 123–159, 2020 https://doi.org/10.5194/esurf-8-123-2020.

17. **Felling, G, **A. Myers, and **S. W. McCoy** (2019), Post-Fire Debris-Flow Hazard Analysis for Interstate 80, Truckee River Canyon, Near the California-Nevada State Line, USA*, 7th International Conference on Debris-Flow Hazards Mitigation, 659-676.*

16. Willett, S. D., **S. W. McCoy**, and *H. W. Beeson (2018), Transience of the North American High Plains landscape and its impact on surface water*, Nature,* 561, 528-532.

15. Tucker, G. E., **S. W. McCoy**, *D .E .J. Hobley (2018), A lattice grain model of hillslope evolution, *Earth Surface Dynamics,* 6(3), 563-582.

14. *Beeson, H. W., **S. W. McCoy**, and A. Keen-Zebert (2017), Geometric disequilibrium of river basins produces long-lived transient landscapes*, Earth and Planetary Science Letters,* 475, 34-43.

13. *Jacquet, J., **S. W. McCoy**, D. McGrath, D. A. Nimick, M. Fahey, J. Okuinghttons, B. A. Friesen, and J. Leidich (2016), Hydrologic and geomorphic changes resulting from episodic glacial lake outburst floods: Rio Colonia, Patagonia, Chile*, Geophysical. Research Letters,* 44.

12. **McCoy, S. W.** (2015), Landscapes in the lab, *Science*, *349,* 6243: 32-33. (editor solicited/reviewed)

11. Kean, J. W., J. A. Coe, V. Coviello, J. B. Smith, **S. W. McCoy**, and M. Arattano (2015), Estimating rates of debris flow entrainment from ground vibrations, *Geophysical Research Letters*, 42.

10. **McCoy, S. W.** (2015), Infrequent, large-magnitude debris flows are important agents of landscape change, *Geology*, *43* 5: 463-464. (editor solicited/reviewed)

9. Willett, S. D., **S. W. McCoy**, J. T. Perron, L. Goren, and C. Chen (2014), Dynamic Reorganization of River Basins, *Science, 343*.

Pre-UNR Publications

8. Kean, J. W., **S. W. McCoy**, G. E. Tucker, D. M. Staley, and J. A. Coe (2013), Runoff-generated debris flows: Observations and modeling of surge initiation, magnitude, and frequency, *Journal of Geophysical Research*, *118*.

7. **McCoy, S. W.**, G. E. Tucker, J. W. Kean, and J. A. Coe (2013), Field measurement of basal forces generated by erosive debris flows, *Journal of Geophysical Research*, *118*.

6. **McCoy, S. W.**, J. W. Kean, J. A. Coe, G. E. Tucker, D. M. Staley, and T. A. Wasklewicz (2012), In situ measurements of sediment entrainment from the headwaters of a steep catchment, *Journal of Geophysical Research*, 117, F03016.

5. **McCoy, S. W.**, J. A. Coe, J. W. Kean, G. E. Tucker, D. M. Staley, and T. A. Wasklewicz (2011), Observations of debris flows at Chalk Cliffs, Colorado, USA: Part 1, In situ measurements of flow dynamics, tracer particle movement and video imagery from the summer of 2009, *Italian Journal of Engineering Geology and Environment,* 1(11), 65–75.

4. Staley, D. M., T. A. Wasklewicz, J. A. Coe, J. W. Kean, **S. W. McCoy**, and G. E. Tucker (2011), Observations of debris flows at Chalk Cliffs, Colorado, USA: Part 2, Changes in surface morphometry from terrestrial laser scanning in the summer of 2009, in Genevois, R., Hamilton, D.L., and Prestininzi, A., eds., Debris Flow Hazards Mitigation/Mechanics, Prediction, and Assessment, Casa Editrice Universita La Sapienza, Rome, Italy, p. 759-768.

3. Tucker, G. E., **S. W. McCoy**, A. C. Whittaker, G. P. Roberts, S. T. Lancaster, and R. Phillips (2011), Geomorphic significance of post-glacial bedrock scarps on normal-fault footwalls, *Journal of Geophysical Research, 116,* F01022.

2. **McCoy, S. W.**, J. W. Kean, J. A. Coe, D. M. Staley, T. A. Wasklewicz, and G. E. Tucker (2010), Evolution of a natural debris flow: In situ measurements of flow dynamics, video imagery, and terrestrial laser scanning, *Geology*, *38*(8), 735.

1. Coe, J. A., J. W. Kean, **S. W. McCoy**, D. M. Staley, and T. A. Wasklewicz (2010), Chalk Creek Valley: Colorado's natural debris-flow laboratory, in *Through the Generations: Geologic and Anthropogenic Field Excursions in the Rocky Mountains from Modern to Ancient: Geological Society of America Field Guide 18*, edited by L. Morgan and S. Quane, The Geological Society of America.

Dissertation:

McCoy, S. W. (2012), Controls on Erosion and Transport of Mass by Debris Flows**,** PhD dissertation**,** University of Colorado.

INVITED TALKS

Utah Quaternary Fault Parameters Working Group (2026)
California State University, Chico (2024)
CLASH NSF Geohazard workshop (2023)
ETH Zurich, Engineering Geology Seminar (2023)
ETH Zurich, Geology Seminar (2023)
University of California, Santa Cruz (2021)
USGS Landslide Hazards Seminar (2021)
University of Washington, Seattle, Geology Seminar (2019)
University of Nevada, Las Vegas, Geology Seminar (2018)
AGU Fall Meeting, two invited talks (2017)
University of Arizona, Geology Seminar (2017)

University Nevada, Reno, Joint GPHS-DGSE Colloquium (2017).
University of Cincinnati, Geology Seminar (2016)
University Nevada, Reno, Geological Sciences and Engineering, Department Colloquium (2016).
University of Idaho, Geology Seminar (2014)
ETH Zurich, Geology Seminar (2014)
AGU Fall Meeting, Natural Hazards focus group (2014)
University Nevada, Reno, Geological Sciences and Engineering, Department Colloquium (2014).
Montana State University, Earth Sciences, Department Colloquium (2013).
University of Oregon, Geological Sciences, Department Colloquium (2013).
University Nevada, Reno, Geological Sciences and Engineering, Department Colloquium (2012).
Harvard University, Earth and Planetary Sciences, Solid Earth Seminar Series (2012).
University of Colorado, Boulder, Civil Engineering Department, Hydrologic Sciences and Water Resources Engineering Seminar (2012).
United States Geological Survey, Golden, CO, Natural Hazards Seminar (2008).
University of Washington, Earth and Space Sciences Department, Department Colloquium (2005).

CONFERENCE PRESENTATIONS (2020 to present)

Or, D., McCoy, S.W., (2026). Enhanced erosion of pyrolyzed soil surfaces drives rapid recovery of post-fire landscape hydrologic functions. Presented at the EGU26, Copernicus Meetings. https://doi.org/10.5194/egusphere-egu26-4293

Deal, E., Benavides, S., & McCoy, S. W. (2025). Scale-invariant hydraulic geometry in rivers, glaciers, and other self-formed channels on Earth and across the solar system. In Fall Meeting 2025. AGU.

McCoy, S. W., Jacquet, J., McGrath, D., & Ghuffar, S. (2025). Increasing frequency and magnitude of Himalayan glacial outburst flows. In Fall Meeting 2025. AGU.

Robinson, M., Scheingross, J., McCoy, S. W., Struble, W., & Lague, D. (2025). Ridgelines Record Tectonic Forcing. In Fall Meeting 2025 (pp. EP41B-08). AGU.

*Rothman, S., Scheingross, J. S., & McCoy, S. W. (2025). Waterfall erosion creates local disequilibrium in mountain rivers. In AGU25. AGU.

*Rothman, S. D., Scheingross, J. S., & McCoy, S. W. (2025). Waterfall alteration of bedrock channel form in the San Gabriel Mountains. Presented at the EGU25, Copernicus Meetings. https://doi.org/10.5194/egusphere-egu25-16311

*Russo, C., & McCoy, S. W. (2025). Constraining empirical relationships for predicting debris-flow velocity. In Fall Meeting 2025. AGU.

Struble, W. T., McGuire, L., McCoy, S. W., & Barnhart, K. R. (2025). Uplift and erosion rates are encoded in the morphology of steep, debris-flow dominated valleys across landscapes. In Fall Meeting 2025. AGU.

McCoy, S. W., & Dow, H. (2025). Disequilibrium river networks dissecting the western slope of the Sierra Nevada, California, USA, record significant late Cenozoic tilting and associated surface uplift.. In *Northern California and Northern Nevada Geomorphology Symposium*.

*Cavagnaro, D. B., McCoy, S. W., Thomas, M. A., Kostelnik, J., & Lindsay, D. N. (2024). The spatial distribution of debris flows in response to observed rainfall anomalies: insights from the Dolan Fire and three other fires in California. In *Establishing Directions in Postfire Debris-Flow Science Conference*.

McCoy, S. W., & Deal, E. (2024). Channel Width in Self-Formed Channels: Simply Explained. In *Northern California and Northern Nevada Geomorphology Symposium*.

McCoy, S. W., *Cavagnaro, D. B., Lindsay, D. N., McGuire, L. A., & Kean, J. W. (2024). Rainfall thresholds for postfire debris-flow initiation vary regionally with hydroclimate. In *Establishing Directions in Postfire Debris-Flow Science Conference*.

*Ring, C. M., McCoy, S. W., & *Cavagnaro, D. B. (2024). Estimating characteristic debris-flow discharge using channel geometry scaling relationships from steeplands. In *Establishing Directions in Postfire Debris-Flow Science Conference*.

Roth, D. L., Reijm, C., Bedwell, C. J., McCoy, S. W., & *Cavagnaro, D. B. (2024). Environmental controls on regional postfire soil hydrology and runoff response across the Western U.S. In *Establishing Directions in Postfire Debris-Flow Science Conference*.

*Rothman, S., Scheingross, J. S., & McCoy, S. W. (2024). Influence of waterfalls on channel narrowing in the San Gabriel Mountains. In *AGU Fall Meeting 2024*.

Rupper, S. B., Andrews, L. C., & McCoy, S. W., et al. (2024). NASA's High Mountain Asia Team (HiMAT): Advancing Understanding of Historical and Future Changes in High Mountain Asia. In *AGU Fall Meeting 2024*.

*Cavagnaro, D., McCoy, S. W., Kean, J. W., Lindsay, D. N., & Thomas, M. (2023). A robust quantitative method to identify the occurrence of a runoff-generated debris flow. Presented at the AGU Fall Meeting 2023, Agu. Retrieved from https://agu.confex.com/agu/fm21/webprogrampreliminary/Paper921613.html

*Cavagnaro, D., McCoy, S. W., Thomas, M., Kostelnik, J., & Lindsay, D. N. (2023). The spatial distribution of post-fire debris flows in relation to observed rainfall anomalies. Presented at the Cordilleran Section - 119th Annual Meeting - 2023, GSA. Retrieved from https://gsa.confex.com/gsa/2023CD/webprogram/Paper387569.html

*Cavagnaro, D. B., McCoy, S. W., Thomas, M. A., Kostelnik, J., & Lindsay, D. N. (2023). The spatial distribution of debris flows in relation to observed rainfall anomalies: Insights from the Dolan Fire, California. E3S Web of Conferences, 415, 04003. https://doi.org/10.1051/e3sconf/202341504003

Deal, E., & McCoy, S. W. (2023). Channel width in self-formed channels. In Fall Meeting 2023. AGU.

Jacquet, J., McCoy, S. W., & McGrath, D. (2023). Mapping the Proximal Hazard of Glacial Lake Outburst Floods across High Mountain Asia. In Fall Meeting 2023. AGU.

McCoy, S. W., Jacquet, J., McGrath, D., & Ghuffar, S. (2023). Mapping Glacial Lake Outburst Flood Hazard Through Time and Space in High Mountain Asia. In Fall Meeting 2023. AGU.

McCoy, Scott W., *Cavagnaro, D. B., Kean, J. W., Thomas, M. A., & Lindsay, D. N. (2023). A robust method to identify the occurrence of a runoff-generated debris flow. E3S Web of Conferences, 415, 01013. https://doi.org/10.1051/e3sconf/202341501013

Reijm, C., Roth, D. L., McCoy, S. W., Thomas, M., & *Cavagnaro, D. (2023). Postfire Debris Flows across Variable Hydroclimates: A Regional-scale Analysis of Rainfall Partitioning. Presented at the AGU Fall Meeting 2023.

*Ring, C., McCoy, S. W., & *Cavagnaro, D. (2023a). Hydraulic Geometry and Scaling Relationships for channels cut by Runoff- and Landslide-generated Debris Flows. Presented at the AEG Fall Meeting, GSA.

*Ring, C., McCoy, S. W., & *Cavagnaro, D. (2023b). The relationship between scoured channel width and drainage area for runoff- and landslide-generated debris flows. Presented at the Cordilleran Section - 119th Annual Meeting - 2023, GSA. Retrieved from https://gsa.confex.com/gsa/2023CD/webprogram/Paper387277.html

*Rothman, S., Scheingross, J. S., & McCoy, S. W. (2023). How do waterfalls influence erosion rates? Presented at the Cordilleran Section - 119th Annual Meeting - 2023, GSA. Retrieved from https://gsa.confex.com/gsa/2023CD/webprogram/Paper387335.html

*Struble, W. T., McGuire, L., McCoy, S. W., Barnhart, K. R., & Marc, O. (2023). Modeled Debris Flows Reproduce Steepland Topographic Signatures in the San Gabriel Mountains, California. In Fall Meeting 2023. AGU.

*Cavagnaro, D**., McCoy, S. W**., *Delgado, N., & Lindsay, D. N. (2022). Perturbation and Recovery of Soil Hydraulic Properties Across a Climate Gradient in Burned Areas of Northern California and Nevada. Presented at the GSA Connects 2022 meeting in Denver, Colorado, GSA.

*Feehan, S. A., **McCoy, S. W**., Scheingross, J. S., & Gardner, M. (2022). Exploring the Controls on Riverbed Grain Size Distributions. In Fall Meeting 2022. AGU.

Lindsay, D., **McCoy, S. W**., *Cavagnaro, D. B., Thomas, M., Swanson, B., & *Delgado, N. (2022). Post-Fire Runoff Response Across Multiple Hydrogeomorphic Provinces in California: A Look at Using Peak Bulk-Flow Multipliers to Estimate Flow Type. Presented at the GSA Connects 2022 meeting in Denver, Colorado, GSA.

Rick, B., McGrath, D., **McCoy, S. W**., & Armstrong, W. H. (2022). Decreasing Hazards from Ice-dammed Lakes in Alaska since the 1960s. In Fall Meeting 2022. AGU.

Robinson, M., Scheingross, J. S., & **McCoy, S. W**. (2022). Understanding Ridgeline Profiles. In Fall Meeting 2022. AGU.

Rothman, S., Scheingross, J. S., & **McCoy, S. W.** (2022). Measuring rates and controls on waterfall erosion rates. In Fall Meeting 2022. AGU.

*Struble, W. T., McGuire, L., **McCoy, S. W**., & Barnhart, K. R. (2022). Steepland Morphology Predicts Erosion Rate: Comparison of Debris-Flow Metrics with Established Hillslope and Fluvial Counterparts in the Oregon Coast Range. In Fall Meeting 2022. AGU.

Thomas, M., Kean, J. W., **McCoy, S. W**., Lindsay, D. N., Kostelnik, J., & Rengers, F. K. (2022). Debris Floods and Flows Along the Central California Coast Following Record-Breaking Wildfire Activity Across the State. Presented at the GSA Connects 2022 meeting in Denver, Colorado, GSA.

Zeller, L., McGrath, D., & **McCoy, S. W.** (2022). Supraglacial lakes on debris-covered glaciers: high resolution observations of subseasonal lake expansion, drainage, and the controlling processes. In Fall Meeting 2022. AGU.

McGuire, L., **McCoy, S. W.**, *Struble, W. T., Barnhart, K. R., & Marc, O. (2021). *A numerical modeling investigation of steady state channel profiles incised by debris flow and fluvial processes.* GSA Fall Meeting.

*Cavagnaro, D., *Delgado, N., East, A. E., Finnegan, N. J., Lindsay, D. N., **McCoy, S. W.**, & Thomas, M. A. (2021). *Variability in hydrologic response to rainfall across a burn scar: observations from the Dolan Fire, California*. Presented at the AGU Fall Meeting.

*Delgado, N., **McCoy, S. W.**, Thomas, M. A., Cavagnaro, D. B., Lindsay, D. N., & Kean, J. W. (2021). *Quantification of wildfire-induced perturbations to soil-water characteristic curves and their importance in generation of post-fire debris flows*. Presented at the AGU Fall Meeting.

East, A., Logan, J. B., Dartnell, P., Leiber-Kotz, O., *Cavagnaro, D. B., **McCoy, S. W**., & Lindsay, D. N. (2021). *Sediment yield from three watersheds following the 2018 Carr Fire, Whiskeytown National Recreation Area, northern California*. Presented at the AGU Fall Meeting.

*Feehan, S., **McCoy, S. W.**, & Scheingross, J. S. (2021). *Alluvial-bed evolution over variable hydrographs at the grain scale*. Presented at the AGU Fall Meeting.

Proulx, H., McGrath, D., & **McCoy, S. W.** (2021). *Assessing changes in glacial lakes in Hindu Kush Himalayan region from 1975 to 2018*. Presented at the AGU Fall Meeting.

Rick, B., McGrath, D., Armstrong, W. H., & **McCoy, S. W**. (2021). *Ice-dammed lake drainage events in Alaska between 1985 and 2020 using Landsat and Sentinel-2 imagery*. Presented at the AGU Fall Meeting.

Roth, D., Bedwell, C., **McCoy, S. W.**, *Cavagnaro, D. B., & *Delgado, N. (2021). *Variability in Post-Wildfire Soil Hydraulic Properties Related to Local and Regional Climatological*, Geological, and Burn Characteristic Factors. Presented at the AGU Fall Meeting.

*Rothman, S., Scheingross, J. S., **McCoy, S. W.**, & Beeson, H. W. (2021). *Waterfall Erosion Rate and Long Profile Form*. Presented at the AGU Fall Meeting.

Zeller, L., McGrath, D., & **McCoy, S. W.** (2021). *Evolution of supraglacial ponds on debris-covered glaciers in the Everest region of High Mountain Asia from PlanetScope satellite imagery*. Presented at the AGU Fall Meeting.

*Feehan, S., **S. W. McCoy,** and J. S., Scheingross (2020), *Testing Formulations for Incipient Motion of Boulders Reveals the Importance of Fluctuating Force Distributions and Parameter Uncertainty*, AGU Fall Meeting.

Stokes, M. F., I. J. Larsen, **S. W. McCoy,** S. L. Goldberg, and T. Perron (2020), *A Tale of Three Divides: Investigating the erosional signature of divide motion along the Blue Ridge Escarpment,* AGU Fall Meeting.

Winner, A., K. L. Ferrier, J. Dufek, **S. W. McCoy**, and E. C. P. Breard (2020), *Quantifying the role of fluid and solid flow properties on bed force distributions in multiphase granular flows*, AGU Fall Meeting.

*Rothman, S., J. S., Scheingross, **S. W. McCoy**, and H.W. Beeson (2020), *Influence of Autogenic Bedrock Steps on Long Profile Development*, AGU Fall Meeting.

Bedwell, C., D. L., Roth, *D. Cavagnaro, *N. Delgado, and **S. W. McCoy** (2020), *Compilation and re-analysis of post-wildfire soil hydraulic properties across climate zones of the western United States*, AGU Fall Meeting.

*Delgado, N., *D. Cavagnaro, **S. W. McCoy**, D. Lindsay, J. W. Kean, and R. Breitmeyer (2020), *Variation in Post-Wildfire Perturbations to Soil Hydraulic Properties Across a Climatic Gradient*, AGU Fall Meeting.

Lindsay, D., *D. Cavagnaro, *N. Delgado, **S. W. McCoy**, and J. W. Kean (2020), *Post-fire Runoff Response in Northern California: Testing current models used to predict post-fire runoff magnitude and debris flow triggering thresholds*, AGU Fall Meeting.

*Cavagnaro, D., *Delgado, N., **S. W. McCoy**, D. Lindsay, L. McGuire, N. Oakley and J. Lancaster (2020), *Rainfall-intensity thresholds for post-wildfire debris-flow initiation vary with climatology of extreme rainfall*, AGU Fall Meeting.

*Cramer, A., **S. W. McCoy**, and R. Breitmeyer (2020), *Change Detection on Abandoned Mine Lands Using Unmanned Aerial Systems*, AGU Fall Meeting.

Rick, B., D. McGrath, **S. W. McCoy**, A. Hengst, and W. H. Armstrong (2020), *Ice-marginal Lake Evolution in Alaska (1970 to 2019) and Associated Glacial Lake Outburst Flood (GLOF) Hazard*, AGU Fall Meeting.

TEACHING

Geological Engineering 106 *Introduction to Geological Engineering*, 2 credits (Fall 2025)
N = 13, Teaching = 3.7/4.0, Dept. mean = 3.5/4.0, Course = 3.7/4.0, Dept. mean = 3.4/4.0

Geological Engineering 441/641 *Advanced Geomorphology,* 4 credits (Fall 2025)
N = 15, Teaching = 3.8/4.0, Dept. mean = 3.5/4.0, Course = 3.8/4.0, Dept. mean = 3.5/4.0

Geology 710, *Introduction to UNR Geoscience Program*, 1 credit (Fall 2025)
N = 11, Teaching = 3.6/4.0, Dept. mean = 3.5/4.0, Course = 3.4/4.0, Dept. mean = 3.5/4.0

Geology 787, *Numerical Modeling of Processes in Earth Science*, 3 credits (Spring 2025)
N = 7, Teaching = 3.7/4.0, Dept. mean = 3.6/4.0, Course = 3.7/4.0, Dept. mean = 3.6/4.0

Geological Engineering 106 *Introduction to Geological Engineering*, 2 credits (Fall 2024)
N = 11, Teaching = 3.3/4.0, Dept. mean = 3.6/4.0, Course = 3.5/4.0, Dept. mean = 3.6/4.0

Geological Engineering 481/681 *Introduction to Geomechanics*, 4 credits (Fall 2024)
N = 14, Teaching = 3.7/4.0, Dept. mean = 3.6/4.0, Course = 3.8/4.0, Dept. mean = 3.6/4.0

Geology 790 *Department Seminar,* 1 credit (Fall 2024)
N = 25, Teaching = 3.9/4.0, Dept. mean = 3.6/4.0, Course = 3.8/4.0, Dept. mean = 3.6/4.0

Geological Engineering 106 *Introduction to Geological Engineering*, 2 credits (Fall 2023)
N = 10, Teaching = 4.0/4.0, Dept. mean = 3.5/4.0, Course = 3.8/4.0, Dept. mean = 3.5/4.0

Geological Engineering 481/681 *Introduction to Geomechanics*, 4 credits (Fall 2023)
N = 14, Teaching = 4.0/4.0, Dept. mean = 3.5/4.0, Course = 3.8/4.0, Dept. mean = 3.5/4.0

Geological Engineering 441/641 *Advanced Geomorphology,* 4 credits (Fall 2023)
N = 25, Teaching = 3.7/4.0, Dept. mean = 3.5/4.0, Course = 3.7/4.0, Dept. mean = 3.5/4.0

Geology 787, *Numerical Modeling of Processes in Earth Science*, 3 credits (Spring 2022)
N = 8, Teaching = 3.7/4.0, Dept. mean = 3.6/4.0, Course = 3.7/4.0, Dept. mean = 3.5/4.0

Geological Engineering 106 *Introduction to Geological Engineering*, 2 credits (Fall 2021)
N = 5, Teaching = 3.7/4.0, Dept. mean = 3.1/4.0, Course = 3.3/4.0, Dept. mean = 3.0/4.0

Geological Engineering 481/681 *Introduction to Geomechanics*, 4 credits (Fall 2021)
N = 12, Teaching = 3.8/4.0, Dept. mean = 3.1/4.0, Course = 3.5/4.0, Dept. mean = 3.0/4.0

Geological Engineering 481/681 *Introduction to Geomechanics*, 4 credits (Fall 2020)
N = 17, Teaching = 3.5/4.0, Dept. mean = 3.4/4.0, Course = 3.8/4.0, Dept. mean = 3.5/4.0

Geological Engineering 441/641 *Advanced Geomorphology,* 4 credits (Fall 2020)
N = 19, Teaching = 3.7/4.0, Dept. mean = 3.4/4.0, Course = 3.6/4.0, Dept. mean = 3.5/4.0

Geology 260 *Introductory Field Geology*, 2 credits (Spring 2020)
N = 33, Teaching = 3.3/4.0, Dept. mean = 3.5/4.0, Course = 3.0/4.0, Dept. mean = 3.5/4.0

Geology 787, *Numerical Modeling of Processes in Earth Science*, 3 credits (Spring 2020)

N = 9, Teaching = 3.7/4.0, Dept. mean = 3.5/4.0, Course = 3.9/4.0, Dept. mean = 3.6/4.0

Geological Engineering 481/681 *Introduction to Geomechanics*, 4 credits (Fall 2019)
N = 22, Teaching = 3.8/4.0, Dept. mean = 3.5/4.0, Course = 3.7/4.0, Dept. mean = 3.5/4.0

Geological Engineering 481/681 *Introduction to Geomechanics*, 4 credits (Fall 2018)
N = 17, Teaching = 3.8/4.0, Dept. mean = 3.3/4.0, Course = 3.7/4.0, Dept. mean = 3.4/4.0

Geology 441/641 *Advanced Geomorphology,* 4 credits (Fall 2018)
N = 12, Teaching = 3.6/4.0, Dept. mean = 3.3/4.0, Course = 3.6/4.0, Dept. mean = 3.4/4.0

Geology 260 *Introductory Field Geology*, 2 credits (Spring 2018)
N = 38, Teaching = 3.5/4.0, Dept. mean = 3.2/4.0, Course = 3.6/4.0, Dept. mean = 3.1/4.0

Geology 701, *Numerical Modeling of Processes in Earth Science*, 3 credits (Spring 2018)
N = 7, Teaching = 2.8/4.0, Dept. mean = 3.2/4.0, Course = 3.1/4.0, Dept. mean = 3.1/4.0

Geological Engineering 481/681 *Introduction to Geomechanics*, 4 credits (Fall 2017)
N = 23, Teaching = 3.5/4.0, Dept. mean = 3.2/4.0, Course = 3.5/4.0, Dept. mean = 3.3/4.0

Geology 260 *Introductory Field Geology*, 2 credits (Spring 2017)
N = 28, Teaching = 3.8/4.0, Dept. mean = 3.2/4.0, Course = 3.8/4.0, Dept. mean = 3.1/4.0

Geology 701, *Numerical Modeling of Processes in Earth Science*, 3 credits (Spring 2017)
N = 7, Teaching = 3.8/4.0, Dept. mean = 3.2/4.0, Course = 3.9/4.0, Dept. mean = 3.3/4.0

Geological Engineering 481/681 *Introduction to Geomechanics*, 4 credits (Fall 2016)
N = 18, Teaching = 4.0/4.0, Dept. mean = 3.3/4.0, Course = 3.8/4.0, Dept. mean = 3.4/4.0

Geology 441/641 *Advanced Geomorphology,* 4 credits (Spring 2016)
N = 20, Teaching = 3.4/4.0, Dept. mean = 3.1/4.0, Course = 3.5/4.0, Dept. mean = 3.3/4.0

Geological Engineering 481/681 *Introduction to Geomechanics*, 4 credits (Fall 2015)
N = 23, Teaching = 3.9/4.0, Dept. mean = 3.1/4.0, Course = 3.8/4.0, Dept. mean = 3.3/4.0

Geology 701 *Climate and Tectonics of the Sierra Nevada*, 3 credits (Fall 2015)
N = 10, Teaching = 3.0/4.0, Dept. mean = 3.2/4.0, Course = 3.5/4.0, Dept. mean = 3.3/4.0

Geology 260 *Introductory Field Geology*, 3 credits (Spring 2015)
Evaluation not available because they were all sent out under co-instructor's name

Geology 701 *Numerical Modeling of Processes in Earth Science*, 3 credits (Spring 2015)
N = 10, Teaching = 3.1/4.0, Dept. mean = 3.4/4.0, Course = 3.6/4.0, Dept. mean = 3.5/4.0

Geological Engineering 481/681 *Introduction to Geomechanics*, 4 credits (Fall 2014)
N = 22, Teaching = 3.5/4.0, Dept. mean = NA, Course = 3.5/4.0, Dept. mean = NA

Guest Lecturer: MIT, EAPS 12.001 *Introduction to Geology* (Fall 2012)
Lecturer: CU, GEOL 2700 *Introduction to Field Geology* (Fall 2011)

ADVISING AND MENTORSHIP

* = co-advisor

Current students in bold. Past students, degree awarded in final year noted. First job obtained after leaving McCoy group is listed following graduation date.

Undergraduates:

Lincoln Karas (2025 – present) – Hazard cascades in High Mountain Asia
Vincent Soldano* (2021– 2024) – Martian deltas and shorelines
Nate Delgado (2017 – 2018) – Lake Tahoe Outburst Floods
Lauren Beaty (2016 – 2017) – Grain size analysis using high-resolution aerial photography
Timothy Mick (2015 – 2017) – Landslides in the Truckee River canyon,
Westfall Scholar mentor Spring 2017
William Struble (2014 – 2016) – Awarded top Undergrad in GEOL 2016,
Honors Thesis: *Tectonics from Topography: Utilization of Normal Fault Bedrock Facet Slopes as a Quantitative Predictor of Slip Rate*

Ph.D.

Isaac Leb, Ph.D. GE (Aug. 2026 – Expected Spring 2031)- post-fire debris flows and erosion

Cody Russo, Ph.D. GE (Aug. 2024 – Expected Spring 2029) – debris-flow hazards

Sophie Rothman*, Ph.D. GPHS (Aug. 2019 – Aug. 2024) –> Postdoc France, Dissertation: *Waterfall Erosion and Alteration of River Form*

David Cavagnaro, Ph.D. GEOL (Aug. 2019 – Aug. 2023) –> Research scientist for the California Geological Survey. Dissertation: *Understanding post-wildfire debris-flow activity across climates:insights on initiation conditions and flow identification*

Scott Feehan, Ph.D. GPHS (Aug. 2017 – May 2023) –> River engineer at the US Army Corps of Engineers –> USGS Mendenhall. Dissertation: *Controls on the uncertainty of sediment transport thresholds and the implications for interpreting river processes*

Helen Beeson, Ph.D. Geology (Aug. 2014 – Aug. 2019) –> postdoctoral researcher ETH Zürich –> Research Scientist USGS. Dissertation: *Quantification of internal system dynamics and external forcing in bedrock river networks*

M.S.

Aaron Bennett, Professional M.S. GE (Aug. 2022 – May 2025)

Caleb Ring, M.S. GE (Aug. 2022 – May 2024) –> Geological Engineer, BGC
Thesis: *Hydraulic geometry of debris-flow channel networks with implications for discharge estimation*

Ingrid Sutter, M.S. GE (Aug. 2020 – May 2022) –> Geotech Engineer, Haley & Aldrich, Oahu
Thesis: *Mapping post-wildfire erosion across California using very high-resolution multitemporal satellite imagery*

Nate Delgado, M.S. GEOL (Aug. 2019 – May 2022) –> Geomorphologist Cardno

Thesis: *Quantification of wildfire-induced perturbations to soil-water retention curves and their impact on rainfall runoff*

Alison Cramer, M.S. GE (Aug. 2018 – May 2021) –> Environmental Specialist, Resource Concepts Inc.

Thesis: *Mapping Temporal Changes Of Surface Elevation And Potentially Acid Generating Material On Abandoned Mine Lands Using Remotely Piloted Aerial Systems*

Sara Jensen, M.S. GE (Aug. 2014 – May 2016) –> Geotechnical Engineer NDOT

Thesis: *Numerical Investigation of Granular Flow Dynamics Over Complex Topography: Quantifying the Efficacy of In-Path Engineered Structures to Control Granular Flow Mobility and Impact Velocity*

Jonathan Jacquet, M.S. GPHS (Aug. 2014 – Dec. 2016) – Best GPHS M.S. 2016 –> Geological Engineer

Balance Hydrologic

Thesis: *Quantifying environmental controls on the magnitude of glacial lake outburst floods and the resulting impacts to hydrology and geomorphology: Lago Cachet Dos, Patagonia, Chile*

Brian Anderson*, M.S. GPHS (Aug. 2014 – May 2016) –> Environmental consultant

Thesis*: Analysis of fault rupture potential resulting from large-scale groundwater withdrawal: application to Spring Valley, Nevada*

Postdoctoral Researchers:

Will Struble* (July 2023 – Sept. 2024) –> Assistant Professor, University of Houston
Leif Anderson (Oct. 2021 – July 2023) –> Research Scientist, University of Utah
Amelia Winner (April 2021 – May 2023) –> High school physics teacher
Kerri Johnson (May 2016 – Dec. 2018) –> Postdoctoral Researcher, UC Berkeley

Research Scientist:

Jonathan Jacquet (2022– Present)

Daniel Allen (Fall 2012): Served as a graduate student mentor.
Benjamin Hoffman (2011): Served as a graduate student mentor
Ben Keys (2010): Served as a graduate student mentor.
Leif Anderson (2009) Served as a graduate student mentor.
Humberto Torres (2008): Served as a graduate student mentor.
Emily Knowles (2007): Served as a graduate student mentor.
Daniel Eldridge (2007): Supervised an undergraduate working on a UROP project.

Graduate Committee Member for:

Current:
John Whiting, Ph.D. GPHS, UNR
Saige Howard, M.S., GEOL, UNR
Ryan Rutherford, M.S., GEOL, UNR
Maya Gross, M.S., GEOL, UNR
Gbenga L Alawode, Ph.D. GPHS, UNR
Priyasha Negi, Ph.D. GPHS, UNR
Yair Franco, Ph.D. GEOG, UNR

Danielle Kinkel, Ph.D. GEOL, UNR
Alexander Audet, Ph.D. GEOG, UNR
Michael Robinson, Ph.D. GEOL, UNR

Past:
Cameron Caywood, M.S. GEOG, UNR
Thomas Kaps, M.S., CHEM ENGR, UNR, 2024
Mohsen Takhtravan, Ph.D. GE, UC Davis
Ellyn Huggins, Ph.D. GEOL, UNR, 2023
Mara Nutt, M.S. GEOL, UNR, 2023
Brianna Rick, Ph.D. GEOL, CSU, 2023
Maddy Fontaine, M.S. GE, UNR, 2022
Samual Cartwright, M.S GEOL, UNR, 2021
Erika Groh, M.S. GEOL, UNR, 2021
Kyle O'Connor, M.S GE, UNR, 2020
Matthew Ruel, M.S. Mining, UNR, 2019
Noah Abramson, M.S. GEOL, UNR, 2019
Behnaz Balmaki, Ph.D. GEOL, UNR, 2019
Lauren Fissel, M.S. GE, UNR, 2016

OUTREACH AND SERVICE

Outreach:

- Sierra Expeditionary Learning School (charter school K-8 Truckee, CA): Developed and led a full day field trip for ~50 5th grade students to explore the water cycle and the geomorphic record of that water cycle. The field trip started from Lake Tahoe and ended at the terminal lake Pyramid (2026).
- NOAA Flood Preparedness Workshop, Invited Presenter (2025)
- Truckee River Watershed Symposium, Invited Presenter (2024, 2025)
- Sierra Expeditionary Learning School (charter school K-8 Truckee, CA): Developed a unit for first grade to explore landforms and geomorphology around Truckee California using sandbox experiments and field trips (2024, 2025).
- Watershed University: Floodplain Management in Arid Regions; Keynote presenter on Post-Fire Debris Flows (2022).
- Douglas County Flood After Fire community workshop, Invited Presenter (2022).
- Sierra Expeditionary Learning School (charter school K-8 Truckee, CA): Developed and taught a unit exploring natural hazards using benchtop landslide flumes (2016, 2017, 2018). Developed field trip guides to showcase geologic history of the Tahoe region with particular focus on hazards past and present ranging from glacial lake outburst floods, earthquakes and landslides, as well as surface processes like glaciers that left large imprints on the landscape students live in (2018, 2019).
- Advent School (private elementary school Boston, MA): Developed and taught a unit exploring how ice sheets have shaped the geography/geology of Eastern Massachusetts, as well as how humans from the Wampanoags, Pilgrims, and Revolutionaries utilized the unique glacial landscape (2012).
- Studio School (a diverse arts integrated elementary school outside of Denver, CO): Helped develop grade-appropriate weather and water cycle units and participated in the in-class implementation of these units (2012).

Studio School (Denver, CO): Led activities on plate tectonics, mountain building, and natural hazards (2008-2012).
Studio School: Helped develop a grade-appropriate geology unit. This unit covers basic rock types, plate tectonics, mountain building, and erosion (2008).
Friends School (Private school in Boulder, CO): Worked with second and third grade classes to teach Earth science. Focused on water cycle, floods, and landscape change due to rivers. Took classes on a field trip to a local floodplain (2007).

External Service:

AEG student chapter faculty advisor (2023 – present)
AEG Great Basin Professional Chapter Board Member (2023 - present)
Participant in National Academies of Sciences, Engineering, and Medicine Committee on Geological and Geotechnical Engineering: Meeting on Geotechnical Engineering Research Needs for Natural Hazard Mitigation (January, 2026)
Organized AGU topical session: *Land Surface Hazards: Linking Processes Across Landscapes* (2025)
GEMS (geoscience education and mentorship support) mentor (2024-2025)
Organized AGU topical session: *Autogenic Dynamics of Bedrock and Sedimentary* (2020)
Organized AGU topical session *The Oso Disaster and Other New Perspectives on High-Mobility Landslides and Debris Flows* (2014)
Organized AGU topical session *Debris Flows: From Hazard Mitigation to Landscape Evolution.* (2011)
Graduate Student Reviewer for 7-year external review of the Civil Engineering Department, University of Colorado (2010)
Organized GSA topical session *Debris Flows: From Hazard Mitigation to Landscape Evolution.* (2010)
Co-led GSA fall meeting field trip *Chalk Creek Valley: Colorado's natural debris-flow laboratory.* (2010)

Community Surface Dynamics Modeling System (CSDMS): contributor

Completed reviews for Journals:
Arctic, Antarctic, and Alpine Research; Basin Research; Bulletin of Engineering Geology and the Environment; Computers and Geosciences; Geophysical Journal International; Debris-flow Hazards Mitigation conference proceedings; *Earth Surface Dynamics*, *Earth Surface Processes and Landforms*; *Engineering Geology; Environmental and Engineering Geoscience; G-Cubed; Geology; Geophysical Research Letters; GSA Bulletin; Journal of Geophysical Research - Earth Surface; Journal of Geophysical Research – Solid Earth; Natural Hazards and Earth System Sciences; Nature, Nature Data, Nature Geoscience; Proceedings of the National Academy of Sciences; Science; Science Advances;* U.S. Geological Survey; *Quaternary Science Reviews*; *Remote Sensing*; *Water Resources Research*.

Completed reviews for funding and other agencies:
NASA: Space grant; **NSF** – Career, EPSCoR Research Infrastructure Improvement, Geomorphology and Landuse Dynamics, GRFP, Hydrologic Sciences, Petrology and Geochemistry, PIRE, Tectonics, Postdoctoral fellowships; Swiss National Science Foundation, FWF Austrian National Science Foundation, Graduate Women in Science; Israel Science Foundation

Completed international Ph.D. dissertation reviews/examinations:
Ben Gurion University of the Negev, Earth Science (2024)
Hong Kong University of Science and Technology, Civil Engineering (2024)

UNR Service:

College level:
College of Science Personnel Committee (2025 – Present)
Chair College of Science Bylaws committee (2024– 2025) - *Successfully updated/adopted COS bylaws from previous 2008 version.*
College of Science Associate Dean search committee (2024)
College of Science Bylaws committee (2019– 2021)
LeMay Teaching Excellence Award Committee (2018)
UNR Undergraduate Honors Research Fellowship Committee (Fall 2016)
Mousel-Feltner Award Recommendation Committee (2014)
Mentoring/lab tours for students in SCI 110 (2014)

Department level:
Chair DGSE Personnel Committee (2025 – Present)
Lead and coordinate all ABET accreditation activities for GE program (2024 – Present)
DGSE Curriculum Committee (2024--Present)
DGSE student recruiting activities Nevada Bound (2024-Present)
Academic advisor for 1/4 of upper division Geological Engineers (2014 – Present)
DGSE Graduate admissions Committee (2018 - Present)
DGSE Chair for 3rd year review of pre-tenure faculty Kait Keegan (2025)
DGSE Personnel Committee (2024)
Assist with all required ABET accreditation activities (2014 – 2023)
DGSE Chair of Geological Engineering Faculty Search Committee (2019–2021)
Curriculum committee Graduate Program In Hydrological Sciences (2014 – 2019)
DGSE Geological Engineering Faculty Search Committee (2019)
DGSE Curriculum Committee (2014 – 2018)
DGSE Earth Surface Processes Faculty Search Committee (2018)
Organized department seminar series and associated graduate classes (Fall 2016)
DGSE Structural Geology Faculty Search Committee (2016)
DGSE Graduate admissions Committee (2015)
Organized department seminar series and associated graduate classes (2015)
DGSE Igneous Petrology Faculty Search Committee (2015)
Attended ABET accreditation workshop, Seattle Washington (2015)
Organized department seminar series (2015)

MEMBERSHIPS

Association of Environmental and Engineering Geologists
American Geophysical Union
Geological Society of America
Community Surface Dynamics Modeling System