

KATHERINE B. LININGER

Assistant Professor, Department of Geography
University of Colorado Boulder

Research interests

fluvial geomorphology, ecogeomorphology, river corridors and the carbon cycle, floodplain dynamics, instream and floodplain wood

Education

Ph.D. in Earth Sciences – Fluvial Geomorphology, *Colorado State University*, 2018
M.A. in Geography with Certificate of Watershed Science, *University of Texas at Austin*, 2013
B.A. in Geography and Political Science, *University of Wisconsin-Madison*, 2008

Professional Experience

2018-Present Assistant Professor, Department of Geography, University of Colorado Boulder
2013-2018 NSF Graduate Research Fellow and Research Assistant, Department of Geosciences, Colorado State University
2011-2013 NSF Graduate Research Fellow and Donald D. Harrington Fellow, Department of Geography and the Environment, University of Texas at Austin
2009-2011 Program & Research Assistant, Tropical Forests & Climate Initiative, Union of Concerned Scientists, Washington, DC

Honors and Awards

2023 National Science Foundation CAREER Award recipient
2023 Research and Innovation Office Faculty Fellow, University of Colorado Boulder
2022 William L. Graf Early Career Award, Geomorphology Specialty Group, American Association of Geographers
2018 Association for Women Geoscientists (AWG) Outstanding Student Award
2012-2017 National Science Foundation Graduate Research Fellowship
2014 Robert E. Horton Research Grant, American Geophysical Union Hydrology section
2010 Ecological Society of America W.S. Cooper Award, for Gill et al., 2009

Research activities

Peer-reviewed publications

1st author = lead author

*indicates graduate student advisee author, with PI Lininger as 2nd author

Total peer-reviewed publications = 33 (30 journal articles, 6 book chapters and peer-reviewed reports)

1st authored = 11; graduate student advisee 1st authored = 4

Web of Science statistics (from April 29, 2024): h-index = 13, total citations = 962

Google Scholar statistics (from April 29, 2024): h-index = 17, total citations = 1960

Journal articles

30. Cathcart, C.N., Falke, J.A., Fox, J., Henszey, R., and **Lininger, K. B.** Multiscale processes drive formation of logjam habitats and use by juvenile Chinook salmon across a boreal stream network in Alaska, in press at *River Research and Applications*.
29. **Lininger, K. B.**, & Lave, R. (2024). River restoration can increase carbon storage but is not yet a suitable basis for carbon credits. *BioScience*, biae083.
<https://doi.org/10.1093/biosci/biae083>
28. *Rees, J. C., **Lininger, K. B.**, Landis, J. D., & Briles, C. E. (2024). Assessing controls on sedimentation rates and sediment organic carbon accretion in beaver ponds. *Science of The Total Environment*, 949, 174951. <https://doi.org/10.1016/j.scitotenv.2024.174951>
27. Ockelford, A., Wohl, E., Ruiz-Villanueva, V., Comiti, F., Piegay, H., Parsons, D., Darby, S.,.....**Lininger, K. B.**,.....et al., (2024) Working with Wood in Rivers in the Western United States, *River Research and Applications*. <https://doi-org.colorado.idm.oclc.org/10.1002/rra.4331>
26. *Johaneman, T. M., **Lininger, K. B.**, Schook, D. M., Pitlick, J., & Martin, M. (2023). The Influence of Knickpoint Development and Channel Incision on Riparian Vegetation in Semi-Arid River Corridors. *Water Resources Research*, 59(10), e2023WR034872.
<https://doi.org/10.1029/2023WR034872>
25. *Fogel, C. B., & **Lininger, K. B.** (2023). Geomorphic complexity influences coarse particulate organic matter transport and storage in headwater streams. *Frontiers in Water*, 5, 1227167. <https://doi.org/10.3389/frwa.2023.1227167>
24. Hwang, K., Harpold, A., Tague, C., Lowman, L., Boisramé, G., **Lininger, K.B.**, Sullivan, P.L., Manning, A., Graup, L., Litvak, M., Lewis, G., Miller, K., Brooks, P., and Barnard, H. (2023). Seeing the Disturbed Forest for the Trees: Remote Sensing Is Underutilized to Quantify Critical Zone Response to Unprecedented Disturbance. *Earth's Future*, 11(8), e2022EF003314. <https://doi.org/10.1029/2022EF003314>
23. **Lininger, K. B.**, & Hilton, S. (2022). Large Wood in Small Channels: A 20-Year Study of Budgets and Piece Mobility in Two Redwood Streams. *Water Resources Research*, 58(11), e2022WR033047. <https://doi.org/10.1029/2022WR033047>

22. *Guiney, M. R., & **Lininger, K. B.** (2022). Disturbance and valley confinement: Controls on floodplain large wood and organic matter jam deposition in the Colorado Front Range, USA. *Earth Surface Processes and Landforms*, 47(6), 1371–1389. <https://doi.org/10.1002/esp.5321>
21. **Lininger, K. B.**, Rowan, A. V., Livers, B., Kramer, N., Ruiz-Villanueva, V., Sendrowski, A., & Burrough, S. (2021). Perspectives on being a field-based geomorphologist during pregnancy and early motherhood. *Earth Surface Processes and Landforms*, 46(14), 2767–2772. <https://doi.org/10.1002/esp.5238>
20. **Lininger, K. B.**, Scamardo, J. E., & Guiney*, M. R. (2021). Floodplain Large Wood and Organic Matter Jam Formation After a Large Flood: Investigating the Influence of Floodplain Forest Stand Characteristics and River Corridor Morphology. *Journal of Geophysical Research: Earth Surface*, 126(6), e2020JF006011. <https://doi.org/10.1029/2020JF006011>
19. Jensen, A., Fastovich, D., Watson, B. I., Gill, J. L., Jackson, S. T., Russell, J. M., Bevington, J., Hayes, K., **Lininger, K. B.**, Rubbelke, C., Schellinger, G. C., Williams, J. W. (2020). More than one way to kill a spruce forest: The role of fire and climate in the late-glacial termination of spruce woodlands across the southern Great Lakes. *Journal of Ecology*, 109(1), 459–477. <https://doi.org/10.1111/1365-2745.13517>
18. **Lininger, K. B.**, & Polvi, L. E. (2020). Evaluating floodplain organic carbon across a gradient of human alteration in the boreal zone. *Geomorphology*, 370, 107390. <https://doi.org/10.1016/j.geomorph.2020.107390>
17. Livers, B., **Lininger, K. B.**, Kramer, N., & Sendrowski, A. (2020). Porosity problems: Comparing and reviewing methods for estimating porosity and volume of wood jams in the field. *Earth Surface Processes and Landforms*, 45(13), 3336–3353. <https://doi.org/10.1002/esp.4969>
16. Wohl, E., **Lininger, K. B.**, Rathburn, S. L., & Sutfin, N. A. (2020). How geomorphic context governs the influence of wildfire on floodplain organic carbon in fire-prone environments of the western United States. *Earth Surface Processes and Landforms*, 45(1), 38–55. <https://doi.org/10.1002/esp.4680>
15. **Lininger, K. B.**, Raimondi, J., Kramer, N., Homrighausen, D., & Covich, A. (2019). Comparison of discharge pulses in temperate and tropical rainforest headwater stream networks. *Journal of Hydrology*, 579, 124236. <https://doi.org/10.1016/j.jhydrol.2019.124236>
14. Wohl, E., Kramer, N., Ruiz-Villanueva, V., Scott, D. N., Comiti, F., Gurnell, A. M., Piegay, H., **Lininger, K. B.**, Jaeger, K. L., Walters, D. M., Fausch, K. D. et al. (2019). The Natural Wood Regime in Rivers. *BioScience*, 69(4), 259–273. <https://doi.org/10.1093/biosci/biz013>
13. **Lininger, K. B.**, Wohl, E., Rose, J. R., & Leisz, S. J. (2019). Significant floodplain soil organic carbon storage along a large high latitude river and its tributaries. *Geophysical Research Letters*, 46, 2121–2129. <https://doi.org/10.1029/2018GL080996>
12. **Lininger, K. B.**, & Wohl, E. (2019). Floodplain dynamics in North American permafrost regions under a warming climate and implications for organic carbon stocks: A review and synthesis. *Earth-Science Reviews*. <https://doi.org/10.1016/j.earscirev.2019.02.024>

11. **Lininger, K. B.**, Wohl, E., & Rose, J. R. (2018). Geomorphic Controls on Floodplain Soil Organic Carbon in the Yukon Flats, Interior Alaska, From Reach to River Basin Scales. *Water Resources Research*, (54), 1934–1951. <https://doi.org/10.1002/2017WR022042>
10. Wohl, E., **Lininger, K. B.**, & Scott, D. N. (2018). River beads as a conceptual framework for building carbon storage and resilience to extreme climate events into river management. *Biogeochemistry*, 141(3), 365–383. <https://doi.org/10.1007/s10533-017-0397-7>
9. Wohl, E., Scott, D. N., & **Lininger, K. B.** (2018). Spatial distribution of channel and floodplain large wood in forested river corridors of the Northern Rockies. *Water Resources Research*, 54, 7879–7892. <https://doi.org/10.1029/2018WR022750>
8. **Lininger, K. B.**, Wohl, E., Sutfin, N. A., & Rose, J. R. (2017). Floodplain downed wood volumes: a comparison across three biomes. *Earth Surface Processes and Landforms*, 42(8), 1248–1261. <https://doi.org/10.1002/esp.4072>
7. Wohl, E., **Lininger, K. B.**, & Baron, J. (2017). Land before water: the relative temporal sequence of human alteration of freshwater ecosystems in the conterminous United States. *Anthropocene*, 18, 27–46. <https://doi.org/10.1016/j.ancene.2017.05.004>
6. Wohl, E., Hall, R. O., **Lininger, K. B.**, Sutfin, N. A., & Walters, D. M. (2017). Carbon dynamics of river corridors and the effects of human alterations. *Ecological Monographs*, 87(3), 379–409. <https://doi.org/10.1002/ecm.1261>
5. Wohl, E., **Lininger, K. B.**, Fox, M., Baillie, B. R., & Erskine, W. D. (2017). Instream large wood loads across bioclimatic regions. *Forest Ecology and Management*, 404, 370–380. <https://doi.org/10.1016/j.foreco.2017.09.013>
4. Scott, D. N., Brogan, D. J., **Lininger, K. B.**, Schook, D. M., Daugherty, E. E., Sparacino, M. S., & Patton, A. I. (2016). Evaluating survey instruments and methods in a steep channel. *Geomorphology*, 273, 236–243. <https://doi.org/10.1016/j.geomorph.2016.08.020>
3. **Lininger, K. B.**, & Latrubesse, E. M. (2016). Flooding hydrology and peak discharge attenuation along the middle Araguaia River in central Brazil. *CATENA*, 143, 90–101. <https://doi.org/10.1016/j.catena.2016.03.043>
2. **Lininger, K. B.**, Records, R., Smull, E., & Wehner, C. (2016). Creating Local Support Networks for Graduate Student Women. *Eos*, 97. <https://doi.org/10.1029/2016EO046879>
1. Gill, J. L., Williams, J. W., Jackson, S. T., **Lininger, K. B.**, and Robinson, G. S. (2009). Pleistocene Megafaunal Collapse, Novel Plant Communities, and Enhanced Fire Regimes in North America. *Science*, 326(5956), 1100–1103. <https://doi.org/10.1126/science.1179504>

Peer-reviewed book chapters and technical reports

6. Johaneman, T., **Lininger, K. B.**, Schook, D., & Martin, M. (2024). *Geomorphic and ecological responses to human modification of the Fremont River, Capitol Reef National Park, Utah*. National Park Service Science Report Series. National Park Service. <https://doi.org/10.36967/2302455>

5. Morrison, R., Jones, N., **Lininger, K. B.**, Thoms, M. C., & Wohl, E. (2023). Resilient floodplains in the Anthropocene. In M. Thoms & I. Fuller (Eds.), *Resilience and Riverine Landscapes*. San Diego: Elsevier.
4. Wohl, E., & **Lininger, K. B.** (2022). High-Latitude Rivers and Permafrost. In *Treatise on Geomorphology* (pp. 926–942). Elsevier. <https://doi.org/10.1016/B978-0-12-818234-5.00074-2>
3. Wohl, E., & **Lininger, K. B.** (2022). Hydrology and Discharge. In A. Gupta (Ed.), *Large Rivers* (2nd ed., pp. 42–75). Wiley. <https://doi.org/10.1002/9781119412632.ch3>
2. Wohl, E., Kramer, N., & **Lininger, K. B.** (2022). The Yukon and the Mackenzie: Large Arctic Rivers of North America. In A. Gupta (Ed.), *Large Rivers* (2nd ed., pp. 368–387). Wiley. <https://doi.org/10.1002/9781119412632.ch13>
1. Diamond, S., **Lininger, K. B.**, and Young, K. R. (2016). La minería de oro en la amazonia peruana desde una perspectiva socio-ecológica (Gold mining in the Peruvian Amazon from a social-ecological perspective). In *Naturaleza y Sociedad: Perspectivas socio-ecológicas sobre cambios globales en America Latina* (Social-ecological perspectives in Latin America), eds. J. Postigo and K. R. Young. Lima, Peru: Instituto de Estudios Peruanos.

Datasets

Richardson, Paul W.; Seehafer, Jayme E.; Keppeler, Elizabeth T.; Sutherland, Diane G.; Wagenbrenner, Joseph W.; Bladon, Kevin D.; Dymond, Salli F.; Cole, Ryan P.; **Lininger, Katherine B.**; Hilton, Susan J. 2022. Caspar Creek Experimental Watersheds Phase 2 (1985-2017) data. 3rd Edition. Updated 10 January 2024. Fort Collins, CO: Forest Service Research Data Archive. <https://doi.org/10.2737/RDS-2020-0018-3>

Publications in review

3. Eckland, A., Overeem, I., Carlson, B., and **Lininger, K.B.** Accelerated organic carbon burial rates reconstructed in Elephant Butte Reservoir, New Mexico during a megadrought, in review at *Water Resources Research*
2. Bush, S.A., Birch, A.L, Warix, S.R., Lininger, K.B., Musselman, K.N., Barnard, H.R. Runoff composition is insensitive to summer rain contributions in a montane headwater stream, in review at *Journal of Hydrology: Regional Studies*
1. Ruiz-Villanueva, V., **Lininger, K. B.**, Rowan, A. V., Livers, B., Kramer, N., Sendrowski, A., & Burrough, S. Perspectivas y experiencias sobre los retos de la investigación de campo para las mujeres en ciencias de la Tierra, in review for *Enseñanza de las Ciencias de la Tierra* (*Journal Spanish Association for the Teaching of Earth Sciences*)

Publications in preparation

3. *Comratie Clemons, S., **Lininger, K.B.**, Brooks, R., Markle, B., and Barnard, H. Using dendrochronology and isotope methods to identify the spatial origin of wood in the river corridor, to be submitted in June 2024 to *Earth Surface Processes and Landforms*.
2. *Adamchak, C., **Lininger, K.B.**, *Rees, J., and Hinckley, E. Beaver as critical zone engineers., to be submitted in August 2024 to *Frontiers in Water*.
1. **Lininger, K.B.**, Ruiz-Villanueva, V., and *Welsh, J. Floodplain wood dynamics and related ecogeomorphic processes: a review, to be submitted in October 2024 to *Earth Surface Processes and Landforms*.

Non-refereed contributions and professional reports

4. **Lininger, K. B.**, (2014). Assessing organic carbon storage and carbon dynamics in boreal river floodplains. *American Geophysical Union Hydrology Section Newsletter*, December 2014.
3. **Lininger, K. B.** and Nelson, M. (2014). Yukon Expedition: The forgotten carbon sink. *National Geographic Society Explorers Journal blog*, available online at <http://voices.nationalgeographic.com/2014/08/11/yukon-expedition-the-forgotten-carbon-sink/>
2. Boucher, D., Elias, P., **Lininger, K.B.**, May-Tobin, C., Roquemore, S., and Saxon, E. (2011). The root of the problem: What's driving tropical deforestation today? *Union of Concerned Scientists Publication*, available online at http://www.ucsusa.org/global_warming/solutions/stop-deforestation/drivers-of-deforestation.html#.VkJTUspkCEw.
1. Elias, P. and **Lininger, K. B.** (2010). The plus side: Management techniques and policies to promote sustainable carbon sequestration in tropical forests. *Union of Concerned Scientists Publication*.

External funding received as lead Principal Investigator (PI) – \$1,233,862 total

2024	Biophilia Foundation, “Investigating the impact of river restoration on organic carbon storage”, 2024-2025, \$24,250
2024	U.S. Forest Service Grant, “Lake George dam removal: Geomorphic monitoring and analysis”, 2024-2026, \$158,988
2023	Biophilia Foundation, “Sample processing costs for Snake River floodplain carbon storage project”, 2023-2025, \$8,232
2023	National Science Foundation Human-Environment and Geographical Sciences program, “CAREER: Rivers of carbon: assessing how humans have altered floodplain organic carbon stocks across the contiguous United States”, SBE-2237366, 2023-2028, \$499,120
2023	National Park Service Grant, “Floodplain dynamics on the Snake River and its tributaries”, 2023-2024, \$44,969
2021	National Science Foundation Geomorphology and Landuse Dynamics Program, “Collaborative Research: Floodplain ecogeomorphic processes: interactions

	between floodplain forest characteristics, wood accumulations, and hydrogeomorphology”, EAR-2125441, 2021-2025, \$407,205 total award, \$307,205 to CU Boulder
2021	National Park Service Grant, supplement to “Fremont River geomorphic analysis”, 2020-2022, \$16,098
2020	National Park Service Grant, “Fremont River geomorphic analysis”, 2020-2022, \$75,000

External funding received as a Co-PI

2024	Co-PI, Bureau of Reclamation, “Nature based solutions for distributed sediment storage”, PI: Joel Sholtes, \$143,064, \$98,775 to Lininger
2023	Co-PI, City of Boulder, “Assessing Hyporheic Processes”, PI: Diane McKnight, Additional co-PIs: Julie Korak, Cresten Mansfeldt, \$10,000
2020	Co-PI, National Science Foundation, “Collaborative Research: Network Cluster: Quantifying controls and feedbacks of dynamic storage on critical zone processes in western montane watersheds”, EAR-2012669, 2020-2025, \$3,654,791 to CU Boulder

CU Boulder internal funding received as lead or co-PI

2023	Co-PI, CU Restoration Ecology Experimental Learning Program, CU Boulder Outreach Award, 2023-2024, \$24,000
2022	Co-PI, CU Restoration Ecology Experimental Learning Program, CU Boulder Outreach Award, 2022-2023, \$23,700
2021	Co-PI, CU Restoration Ecology Experimental Learning Program, CU Boulder Outreach Award, 2021-2022, \$23,900
2020	Co-PI, Research and Innovation Office (RIO) Seed Grant, University of Colorado Boulder, “Adapting to the ‘Waterless’ City: The production of extreme water scarcity and gender, class, and ethno-religious inequalities in Shimla, India”, \$44,902
2019	Faculty Success Grant, Leadership Education for Advancement and Promotion, University of Colorado Boulder, \$3,750

Funding received prior to appointment at University of Colorado Boulder

2017-2018	University Distinguished Professors’ Scholarship, Colorado State University \$10,000
2016	Schumm Graduate Fellowship, Warner College of Natural Resources Geosciences Department, Colorado State University, \$5,000
2016	Pathfinder Fellowship, CUAHSI, \$5,000
2016	National Science Foundation Graduate Opportunities Worldwide award, \$5,000

- 2016 Swedish Research Council additional living cost award, NSF GROW opportunity, \$3000
- 2015 P.E.O. Scholar Award, \$15,000
- 2015-2016 Marie Morisawa Fellowship, Warner College of Natural Resources, Colorado State University, \$5,000
- 2015 GSA Research Grant, Geological Society of America, \$1,875
- 2014 Marie Morisawa Award in Geomorphology, Geological Society of America Quaternary Geology and Geomorphology Division, \$2,500
- 2014 M. Gordon “Reds” Wolman Graduate Research Award, American Association of Geographers Geomorphology Specialty Group, \$600

Invited presentations and panels

- Lininger, K.B.** Biophysical controls and human impacts on floodplain organic carbon storage and implications for river restoration, Ecological Society of America Meeting, Long Beach, CA, 6 August 2024
- Lininger, K.B.** Expanding understanding of wood dynamics in river corridors, NOAA Fisheries Watershed program seminar series, 6 November 2023
- Lininger, K.B.** Expanding understanding of wood in river corridors: floodplain wood dynamics and long-term datasets, Minnesota State University Geography Department Colloquium, 13 October 2023
- Lininger, K.B.** Invited panelist for Women in Geography I: Academic Careers, 2023, Panel at the American Association of Geographers Annual Meeting, Denver, CO
- Lininger, K.B.** The hard science of ‘soft’ geomorphology: ecogeomorphology and carbon dynamics in river corridors, Hydrology and Water Resources seminar, University of Colorado Boulder, 15 March 2023
- Lininger, K.B.** Expanding understanding of wood in river corridors: floodplain wood dynamics and long-term datasets, University of Colorado Boulder Hydrologic Sciences Symposium, 8 April 2022
- Lininger, K.B.** Expanding understanding of wood in river corridors: floodplain wood dynamics and long-term datasets, Department of Geography Colloquium, University of Colorado Denver, 4 March 2022
- Lininger, K.B.** The hard science of ‘soft’ geomorphology: flow-vegetation-organic carbon feedbacks in rivers and floodplains, Women Advancing River Research Seminar Series, Virtual, 17 March 2022
- Lininger, K.B.** Logjam patterns, wood recruitment, and salmon habitat in a sub-arctic boreal river system, International Association of Geomorphology North American Webinar, Virtual, 1 March 2022
- Lininger, K.B.** Understanding wood dynamics in river corridors over time and space, Department of Geological and Atmospheric Science Seminar Series, Iowa State University, Virtual, 1 February 2022
- Lininger, K.B.** and S. Hilton. 2021. Controls on long-term changes in large wood budgets and wood mobility in two headwater streams. EP51A-04. American Geophysical Union Fall Meeting, New Orleans, Louisiana

- Lininger, K.B.**, N. Sutfin, and M. Guiney. 2021 Hydrogeomorphic disturbance as a mediator of the spatial distribution and magnitude of organic carbon stocks in river corridors. EP12B-01. American Geophysical Union Fall Meeting, New Orleans, Louisiana
- Lininger, K.B.** Floodplain carbon storage in soil and wood: expanding the benefits of river corridor restoration, Sustaining Colorado Watersheds Conference Workshop, *Understanding and restoring floodplain functions*, Avon, Colorado, 2021
- Lininger, K.B.** River corridors and the carbon cycle: geomorphic controls on carbon in floodplain soil and wood, Department of Earth and Atmospheric Sciences Seminar Series, University of Northern Colorado, Virtual, 2021
- Lininger, K.B.** River corridors and the carbon cycle: geomorphic controls on carbon in floodplain soil and wood, Department of Geography and the Environment colloquium, University of Texas at Austin, Virtual, 2021
- Lininger, K.B.** Biogeomorphic controls on wood and organic matter loads in floodplains, International Association of Geomorphologists webinar for North America and Costa Rica, Virtual, 2021
- Lininger, K.B.** Floodplain carbon stocks in soil and large wood across diverse environments: controls and comparisons. 2020. EP020-0001. American Geophysical Union Fall Meeting, Virtual
- Lininger, K.B.** River corridors and the carbon cycle: floodplain organic carbon storage in the central Yukon River Basin, Department of Geography seminar series, University of Denver, Denver, Colorado, 2020
- Lininger, K.B.** and D. Scott. The role of floodplain wood in enhancing river corridor resilience. 2019. H51C-07. American Geophysical Union Fall Meeting, San Francisco, California
- Lininger, K.B.** and J. Rowland. 2019. River corridor dynamics in permafrost regions under a changing climate: Detecting signatures of change and assessing implications for geomorphic processes and the carbon cycle. EP34B-01. American Geophysical Union Fall Meeting, San Francisco, California
- Lininger, K.B.** River corridors and the carbon cycle: floodplain organic carbon storage in the central Yukon River Basin, Department of Geology and Geological Sciences seminar series, Colorado School of Mines, Golden, Colorado, 2019
- Lininger, K.B.** Floodplain carbon storage and large wood: expanding the benefits of river restoration in river corridors, Rocky Mountain Restoration Conference, Estes Park, Colorado, 2019
- Lininger, K.B.** An underestimated and vulnerable carbon stock: floodplain soil carbon storage in permafrost regions and the potential for future changes due to warming, National Snow and Ice Data Center seminar series, Boulder, Colorado, 2019
- Lininger, K.B.** River Corridors and the Carbon Cycle: Floodplain Organic Carbon Storage along Boreal Rivers, Hydrology and Water Resources seminar series, University of Colorado Boulder, 2018
- Lininger, K.B.** and E. Wohl. 2017. Floodplain soil organic carbon storage in the central Yukon River Basin.” U24B-03. eLightning presentation at American Geophysical Union Fall Meeting, New Orleans, LA.
- Lininger, K.B.** Fluvial controls on the terrestrial carbon cycle: floodplain organic carbon storage in sediments and downed wood along boreal rivers, Department of Ecology and Environmental Science seminar series, Umeå University, Sweden, 2016

Conference abstracts and presentations (not invited)

*Student advisee

*Johaneman, T., and **K.B. Lininger**. 2023. Linking Fluvial Ecogeomorphic Processes and Surface Age to Floodplain Organic Carbon Storage. EP53D-1759. Poster presentation at the American Geophysical Union Fall Meeting, San Francisco, CA

*Adamchak, C., K.B. Lininger, and E.S. Hinckley. 2023. Beavers as Critical Zone Engineers: Effects on Biogeochemical Processes. H21M-1521. Poster presentation at the American Geophysical Union Fall Meeting, San Francisco, CA

*Rees, J., **K.B. Lininger**, C. Briles, and J. Landis. 2023. Beaver dams as sites of carbon accretion and sediment storage and implications for river restoration. Oral presentation, American Association of Geographers Annual Meeting, Denver, CO

Lininger, K.B., C. Fogel, and L. Magliozzi. 2023. Coarse particulate organic matter dynamics in disturbed and undisturbed streams in the Colorado Front Range. Oral presentation, American Association of Geographers Annual Meeting, Denver, CO

*Rees, J., **K.B. Lininger**, C. Briles, and J. Landis. 2022. Quantifying Sediment and Carbon Storage and Aggradation Rates within Beaver Mediated River Corridors in the Southern Rocky Mountains, USA. EP35C-1356. Poster presentation at the American Geophysical Union Fall Meeting, Chicago, IL

*Comratie Clemmons, S., H. Barnard, **K.B. Lininger**, and J. R. Brooks. 2022. Where Does Wood Come From? Using Dendrochronology and Isotopic Methods to Identify the Watershed Origin of Wood in the River Corridor. EP52C-0774. Poster presentation at the American Geophysical Union Fall Meeting, Chicago, IL

*Fogel, C. and **K.B. Lininger**. 2022. Drivers of coarse particulate organic matter transport and storage in headwater streams. 165-9. Poster presentation at the Geological Society of America Meeting, Denver, CO

Lininger, K.B., Rowan, A. V., Livers, B., Kramer, N., Ruiz-Villanueva, V., Sendrowski, A., and Burrough, S. 2022. Promoting and supporting field-based geomorphologists during pregnancy and early motherhood. EGU22-726. Oral presentation at EGU General Assembly 2022, Vienna, Austria.

*Johaneman, T., **K.B. Lininger**, D. Schook, and M. Martin. 2021. The Influence of Hydrogeomorphic Characteristics On Riparian Vegetation Along The Fremont River, Utah. Poster presentation at the American Association of Geographers Annual Meeting, Virtual

Lininger, K.B. and S. Hilton. 2021. Wood budgets and wood mobility in two headwater streams in the Pacific Northwest, USA. Oral presentation, American Association of Geographers Annual Meeting, Virtual

Hwang, K., H. Barnard, A. Harpold, N. Tague, P. Sullivan, and **K.B. Lininger**. Opportunities and challenges in remote sensing-based critical zone ecohydrology. 2021. H45F-1239. Poster presentation at the American Geophysical Union Fall meeting, New Orleans, Louisiana.

- *Johaneman, T., **K.B. Lininger**, D. Schook, and M. Martin. 2021. The Influence of Hydrogeomorphic Characteristics On Riparian Vegetation Along The Fremont River, Utah. EP25C-1339. Poster presentation at the American Geophysical Union Fall meeting, New Orleans, Louisiana.
- Lininger, K.B.** and S. Hilton. 2021. Controls on in-stream large wood mobilization and movement. Caspar Creek Experimental Watershed Annual Meeting, Virtual.
- *Guiney, M.R., **K.B. Lininger**, and J.E. Scamardo. 2020. The Influence of disturbance and reach-scale geomorphology on depositional patterns and loads of large downed wood in semi-arid rivers, Colorado, USA. EP052-0016. Poster presentation at the American Geophysical Union Fall meeting, Virtual.
- *Hurtado, A. and **K.B. Lininger**. 2019. The Influence of Floodplain Large Wood Jams on Soil Moisture in the Colorado Front Range, USA. ED23G-1102. Poster presentation at the American Geophysical Union Fall meeting, San Francisco, CA.
- Sutfin, N.A., E. Wohl, S. Rathburn, and **K.B. Lininger**. 2019. Burning River: The influence of wildfire on sediment and carbon dynamics within Rocky Mountain floodplains. H31H-01. Oral presentation at the American Geophysical Union Fall meeting, San Francisco, CA.
- Falke, J., C.N. Cathcart, J. Fox, R. Henszey, and **K.B. Lininger**. 2019. Longitudinal patterns of logjams and occupancy by juvenile chinook salmon along a sub-arctic boreal riverscape. Oral presentation at the American Fisheries Society Annual Meeting, Columbus, Ohio.
- Lininger, K. B.**, and L. Polvi. 2018. Evaluating floodplain organic carbon stocks across a gradient of human alteration in the boreal zone. EP51B-24. eLightning presentation at American Geophysical Union Fall Meeting, Washington, DC.
- Lininger, K.B.**, E. Wohl, and D.N. Scott. 2017. How interactions between fluvial processes and large wood structure forested river corridors. EP33F-07. Oral presentation at American Geophysical Union Fall Meeting, New Orleans, LA.
- Lininger, K.B.**, E. Wohl, and J. Rose. 2017. Floodplain carbon storage in the central Yukon River Basin. Oral presentation at American Association of Geographers Meeting, Boston, MA.
- Wohl, E., and **K.B. Lininger**, 2017. Preventing a leak: Two perspectives on creating supportive environment for graduate student colleagues. Oral presentation at European Geophysical Union General Assembly, Vienna, Austria.
- Lininger, K.B.**, E. Wohl, and J. Rose. 2016. Geomorphic controls on floodplain organic carbon storage in sediment along five rivers in interior Alaska. EP23B-0962. Poster at American Geophysical Union Fall Meeting, San Francisco, CA.
- Lininger, K.B.**, E. Wohl, J. Benshoof, and J. Rose. 2016. The influence of channel migration rate and grain size on differences in floodplain organic carbon storage between two rivers in interior Alaska. 36-4. Oral presentation at Geological Society of America Meeting, Denver, CO.

- J. Benshoof*, **K.B. Lininger**, and E. Wohl. 2016. Changes in instream wood over time and the potential impact of log jams on floodplain dynamics in two rivers in interior Alaska. 59-23. Poster at Geological Society of America Meeting, Denver, CO.
- Lininger, K.B.**, E. Wohl, and J. Rose, 2015. Conditions that maximize floodplain downed wood volumes: a comparison across three biomes. H11E-1398. Poster at American Geophysical Union Annual Meeting, San Francisco, CA.
- Livers, B., **K.B. Lininger**, N. Kramer, and E. Wohl, 2015. Porosity problems: Developing a methodology for logjam porosity calculations in field projects. Poster at Third International Conference on Wood in World Rivers. University of Padova, Italy.
- Lininger, K.B.**, and E.E. Wohl. 2014. Floodplain organic carbon storage in the central Yukon River basin. Poster at American Geophysical Union Annual Meeting, San Francisco, CA.
- Lininger, K.B.**, E.M. Latrubesse, and M. Bayer. 2012. Analysis of floodplain storage and sedimentation in the middle Araguaia River, an anabranching system in central Brazil. Poster at American Geophysical Union Annual Meeting, San Francisco, CA.
- Lininger, K.B.**, E.M. Latrubesse, and K.R. Young. 2012. Environmental change caused by mining in the Peruvian Amazon: The Madre de Dios watershed. Poster at Association of American Geographers Annual Meeting, New York City, New York.
- Lininger, K.B.** 2011. Geomorphologic change and stakeholder groups in the western Amazon: Proposed research on the impacts of gold mining. Poster at Southwest Association of American Geographers Regional Meeting, Austin, TX.
- May-Tobin, C.C., D.H. Boucher, P. Elias, **K.B. Lininger**, S. Roquemore and E. Saxon. 2011. The root of the problem: A comprehensive literature review of what's driving tropical deforestation today. Poster at Ecological Society of America Annual Meeting, Austin, TX.
- Gill, J.L., E.C. Grimm, S.T. Jackson, **K.B. Lininger**, P. Mueller, G.C. Schellinger, L.E. Straka, and J.W. Williams, 2010. Reconstructing the spatiotemporal patterns of late-glacial no-analog plant communities and megafaunal collapse in the upper Midwest, USA. Ecological Society of America Annual Meeting, Pittsburgh, PA.
- Gill, J.L., J. Donnelly, S.T. Jackson, **K.B. Lininger**, J.P. Marsicek, G. Robinson, B.M. Simonson, and J.W. Williams, 2009. Pleistocene megafaunal collapse in North America preceded the Younger Dryas: Evidence from the Midwest. American Geophysical Union Annual Meeting, San Francisco, CA.
- Gill, J.L., J.W. Williams, and **K.B. Lininger**, 2008. Were no-analogue plant communities during the late Pleistocene driven in part by herbivory release following the North American megafaunal extinction? Association of American Geographers Annual Meeting, Boston, MA.

Teaching and Mentoring

University of Colorado Teaching

Year	Semester	Course #: Title	Credit Hours
2018	Fall	GEOG/GEOL 4241: Principles of Geomorphology	4
2019	Spring	GEOG 5241: Ecogeomorphology in River Corridors	3
2019	Fall	GEOG/GEOL 4241: Principles of Geomorphology	4
2020	Spring	GEOG 5241: Fluvial Geomorphology (In person, remote starting in March)	3
2020	Spring	GEOG 1011: Landscapes and Water (In person, remote starting in March)	4
2021	Spring	GEOG 1011: Landscapes and Water (Online lecture, in person and remote labs)	4
2021	Fall	GEOG/GEOL 4241: Principles of Geomorphology	4
2021	Fall	GEOG 1011: Landscapes and Water (Online lecture, in person and remote labs)	4
2022	Fall	GEOG/GEOL 4241: Principles of Geomorphology	4
2022	Fall	GEOG 5241: Fluvial Geomorphology	3
2023	Fall	GEOG/GEOL 4241: Principles of Geomorphology	4
2023	Fall	GEOG 5241: Fluvial Geomorphology	3
2024	Spring	GEOG 5161: Research Design	3

Colorado State University

Year	Semester	Course #: Title	Credit Hours
2017	Spring	Geology 454: Geomorphology	4

Committees

Chaired

Josie Welch, M.A., ongoing, University of Colorado Boulder
Taylor Johaneman, Ph.D., ongoing, University of Colorado Boulder
Caleb Fogel, M.A., 2023, University of Colorado Boulder
James (Huck) Rees, M.A., 2023, University of Colorado Boulder
Taylor Johaneman, M.A., 2022, University of Colorado Boulder, *The influence of knickpoint development on fluvial ecogeomorphic interactions*
Molly Guiney, M.A., 2021, University of Colorado Boulder, *Floods, fires, and valley confinement: controls on floodplain large wood and organic matter jam deposition in the Colorado Front Range*

Co-advised

Christina Thompson, M.S., ongoing, University of Colorado Boulder
Cliff Adamchak, Ph.D., ongoing, University of Colorado Boulder
Sáde Cromratie Clemons, M.A., 2023, University of Colorado Boulder

Committee member, University of Colorado

Christopher McNabb, Ph.D. student in Geography, ongoing, primary advisor: H. Barnard
 Theodore Kuhn, M.A. student in Geography, ongoing, primary advisor: H. Barnard
 Vanessa Gabel, Ph.D. student in Geology, ongoing, primary advisor: G. Tucker
 Abigail Eckland, Ph.D. student in Geology, ongoing, primary advisor: I. Overeem
 Amir Romly, B.A. in Geology, senior honor's thesis, primary advisor: L. Trower
 Kate Droblich, B.A. in Geology, senior honor's thesis, primary advisor: L. Trower
 Briana Prado, M.A. student in Geography, primary advisor: M. Diaz
 Xueqian Wang, Ph.D. student in Geography, primary advisor: P. Blanken
 Ethan Burns, M.A. in Geography, primary advisor: H. Barnard
 Sidney Bush, Ph.D. in Geography, primary advisor: H. Barnard
 Kate Hale, Ph.D. in Geography, primary advisor: N. Molotch
 Hallie Adams, Ph.D. student in Geography, primary advisor: H. Barnard
 Sabrina Kainz, B.A. in Geology, senior honor's thesis, primary advisor: L. Abbot
 Erin Cantrell, M.S. M.S. in Civil Engineering, primary advisor M. Gooseff
 Nadine Reitman, Ph.D. in Geology, primary advisor: K. Mueller
 Will Wicherski, M.A. in Geography, primary advisor: J. Pitlick
 Margaret Spangler, M.S. in Civil Engineering, primary advisor M. Gooseff
 Baylee Sergeant, B.A. in Geology, senior honor's thesis, primary advisor: B. Hynek
 Sarah K Jamison-Todd, B.A. in Geology, senior honor's thesis, primary advisor: L. Trower

Committee member, other Universities

Heather Neace, M.S. student in Department of Soil and Water Systems, University of Idaho,
 primary advisor: L. Lynch

Undergraduate advising and mentoring

2023	Supervised undergraduate geography intern Kate Droblich
2022	Research co-mentor to UNAVCO RESESS intern, topic: Variability in tree ring width based on geomorphic position and role in understanding the source of downed large wood in rivers, CU Boulder
2021	Supervised undergraduate geography intern Lucy Citrine in research group
2019	Research mentor to UNAVCO RESESS intern, topic: The influence of floodplain logjams on floodplain soil moisture, CU Boulder
2014-2017	Supervised two undergraduate research assistants and three independent study projects, Geology Department, Colorado State University

Teaching improvement workshops attended

2024	Hidden STEM Inclusive Pedagogy Workshop, Department of Geography, University of Colorado, 2 day workshop, April 12-13, 2024
2021	Active Learning by Design Course, University of Colorado, 8 sessions, Fall 2021
2021	Getting started with Playposit, University of Colorado OIT and Playposit, December 12, 2021
2020	Creating engaging Canvas course sites using Cidilabs, University of Colorado ASSETT program, December 14, 2020
2019	Active learning and group work for groups of any size, University of Colorado Faculty Teaching Excellence Program (FTEP), January 24, 2019
2018	Teaching large classes, University of Colorado Faculty Teaching Excellence Program (FTEP), December 5, 2018

Student advisee awards and grants

2024	Geological Society of American Stanley Schumm Award, \$3,000, Josie Welsh
2024	University of Wyoming-National Park Service Grant, \$5,000, Taylor Johaneman
2023	University of Wyoming-National Park Service Grant, \$5,000, Taylor Johaneman
2021	Geological Society of America Student Grant, \$1500, Taylor Johaneman
2021	Beverly Sears Student Grant, CU Boulder, \$1000, Taylor Johaneman
2019	Colorado Water Center Student Research Grant, \$5,000, Molly Guiney

Additional teaching activities

2019-2023	NSF Promoting Research-based Instructional Methods for Enhancing and Reforming STEM Education (PRIMERS) Roundtable Member and Geography Department Representative
2014-2018	Graduate Teaching Certificate Program, The Institute for Teaching and Learning, Colorado State University, attended multiple workshops to improve teaching techniques

Service activities

University of Colorado

2023-Present Graduate student committee, Department of Geography
 2020-Present Faculty co-coordinator, Undergraduate hydrology certificate, Department of Geography
 2023-2024 Faculty search committee member, Department of Geography
 2023 Member of George R. Aiken Graduate Fellowship Review Committee
 2022 Faculty search committee member, Department of Geography
 2020-2023 Personnel committee, Department of Geography
 2021 Member of PUEC committee, Department of Geography
 2020-2021 Faculty search committee member, Department of Geography
 2018-2020 Colloquium committee, Department of Geography

Professional service activities

External committees, boards, and panels

2024-present CUAHSI member representative
 2024 Proposal committee for BeaverCon, a national conference on beavers in river corridors
 2023 Review panelist, National Science Foundation Geomorphology and Landuse Dynamics program
 2021-2023 Review Editor, *Frontiers in Water*, Water and Critical Zone specialty section
 2020-present American Association of Geographers Geomorphology Specialty Group Executive Board, Awards Committee Chair 2022-2023, Secretary/Treasurer 2023-2024, President 2024-2025

Journal reviews (multiple from each journal listed per year)

2024: *Earth Surface Processes and Landforms*, *Science Advances*, *Environment and Planning F*, *Environmental Conservation*, *Water Resources Research*, *Nature Geosciences*
 2023: Selected as an Outstanding Reviewer for *Water Resources Research*
 2023: *Earth Surface Processes and Landforms*, *Water Resources Research*, *Geomorphology*, *Science of the Total Environment*, *AGU Advances*, *Geology*, *Frontiers in Water*, *Forest Ecology and Management*
 2022: *Earth Surface Processes and Landforms*, *River Research and Applications*, *Water Resources Research*
 2021: *Science Advances*, *Earth Surface Processes and Landforms*, *Nature Communications*, *Water Resources Research*
 2020: *Water Resources Research*
 2019: *Earth Surface Processes and Landforms*, *Geomorphology*, *Geophysical Research Letters*, *Water Resources Research*, *Water*, *Wetlands*, *Earth-Science Reviews*, *Anthropocene*
 2018: *Eos*, *Geophysical Research Letters*, *Remote Sensing*, *Water Resources Research*

Proposal reviews

National Science Foundation: Hydrologic Sciences; National Science Foundation: Geomorphology and Landuse Dynamics; National Science Foundation: Geochemistry and Geobiology

Conference sessions organized

- 2023 Co-convenor and chair, American Geophysical Union Fall Meeting, EP42B and EP43D, Ecohydraulics and Ecomorphodynamics: Biophysical Interactions Within Fluvial Systems across an Elevation Gradient I and II
- 2022 Co-convenor and chair, Geological Society of America Annual Meeting, 181 - T10: Physical and Biological Processes, Interactions, and Restoration in River Systems, Oral and Poster sessions
- 2022 Co-convenor and chair, American Association of Geographers Annual Meeting, General Geomorphology Poster Session
- 2021 Co-convenor and chair, American Geophysical Union Fall Meeting, EP21A and EP25C: Biophysical Interactions in Rivers: Processes, Feedbacks, and Restoration I and II.
- 2019 Co-convenor and chair, American Geophysical Union Fall Meeting, EP41D and EP53A: Feedbacks among life, landscapes, and processes I and II
- 2018 Primary convenor and chair, American Geophysical Union Fall Meeting, EP34B and EP41D: The influence of vegetation and large wood on water, sediment, and nutrient dynamics in fluvial and coastal environments I and II
- 2016 Co-convenor, American Geophysical Union Fall Meeting, EP22B: The Flow of Organic Carbon through the Landscape
- 2016 Co-convenor and chair, Geological Society of America Annual Meeting, T53: Floodplain Hydrogeomorphology: Dynamics of Sediment, Vegetation, and Organic Matter in Altered and Unaltered Systems

Additional service activities

- 2024 Participated in “Letters to a Scientist.” Wrote response letters to 4th grade students at University Hill Elementary School in Boulder, CO, answering their science questions.
- 2022-Present Scientist mentor with Earth Explorers, an outreach program in which middle school students work with a scientist and create short films incorporating science topics
- 2018-Present Advisor for river restoration projects, Lefthand Watershed Oversight Group
Provide advice and support to Lefthand Watershed Oversight Group for their restoration projects. Activities include providing feedback on monitoring

- protocols, help in the field, and attending planning meetings for restoration activities.
- 2023 Created and led activities with a stream table for Geography day, an outreach day for high school students organized by the Department of Geography at CU Boulder
- 2021-2023 Member of REEL (CU Restoration Ecology Experimental Learning Program), which involves attending and helping with volunteer projects in collaboration with Wildland Restoration Volunteers along with local high school and middle school student groups
- 2022-2023 Led a field activity at CalWood educational center in collaboration with CU Science Discovery for local middle and high school students, teaching students about stream surveying and river change due to fire, one time per summer in 2022 and 2023.
- 2015-2016 Mentor, PROmoting Geoscience Research Education & SuccesS (PROGRESS) program
Mentored for an NSF-funded program aimed at retaining undergraduate women in the geosciences.
- 2014-2017 Co-founder and Treasurer, Northern Colorado Graduate Women in Science chapter, Colorado State University
Co-founded and was treasurer for a local chapter of Graduate Women in Science, a national organization aimed at supporting women in the science fields. Activities included organizing panels and speakers on enhancing diversity in science, advocating for implementation of paid parental leave policy, and establishing workshop series on diversity for graduate students at Colorado State University.
- 2013-2018 Outreach to elementary schools, Fort Collins, Colorado
Gave guest lectures and lessons to elementary age students on river system health and flooding; organized and judged elementary school science fair.

Media Coverage

- Lovel, S. L. & Reporter-Herald. 2019. Scientists to monitor ecology while Left Hand Creek site undergoes flood restoration this summer [online] Available from: <https://www.denverpost.com/2019/05/05/left-hand-creek-flood-restoration/>
- Witze A. 2016. Arctic river flood plains are home to hidden carbon. Nature News DOI: 10.1038/nature.2016.20679 [online] Available from: <http://www.nature.com/news/arctic-river-flood-plains-are-home-to-hidden-carbon-1.20679>
- Dicamillo L. 2016. Parental leave for grad assistants a reality. SOURCE [online] Available from: <http://source.colostate.edu/move-in-2016-parental-leave-for-grad-assistants-a-reality/>
- Wardell B. 2014. On a rising tide. SOURCE [online] Available from: <http://source.colostate.edu/rising-tide/>

Additional professional development and synergistic activities

University of Colorado Boulder

- 2023 CU Boulder Research and Innovation Office Faculty Fellow workshops on leadership and communication, January 12-13, May 15-16, and August 15-16, 2023
- 2022 LEAP Introductory Leadership Workshop, January 4-5, 2022
- 2019 PI Academy SEED grant workshop, University of Colorado PI Academy, November 6, 2019
- 2018 PI Academy Orientation, University of Colorado PI Academy, August 30, 2018
- 2018 Strategic Career Planning workshop, University of Colorado PI Academy, October 11, 2018

External professional development activities

- 2020 Faculty Success Program, National Center for Faculty Development and Diversity, semester-long program for faculty development
- 2018 Workshop participant, NSF Workshop on the Application of SmallSat and Commercial Imagery to Arctic Science, University of Minnesota Polar Geospatial Center
- 2016-2017 Sustainability Leadership Fellow, School of Global Environmental Sustainability, Colorado State University, Participated in fellowship program with professional development and science communication workshops
- 2016 Workshop participant, Science communication, Compass
- 2016 Workshop participant, National Center for Earth Surface Dynamics Summer Institute on Earth Surface Dynamics, “Coupled hydro-eco-geomorphologic processes in human dominated landscapes: cascade of changes and the use of modeling for management and decision making”, St. Anthony Falls Laboratory, MN
- 2015 Workshop participant, Polar Geospatial Bootcamp, University of Minnesota Polar Geospatial Center

Membership in professional organizations

- American Association of Geographers
- American Geophysical Union
- Geological Society of America
- Earth Science Women’s Network