

## **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**

1<sup>st</sup> author = lead author, \*indicates student advisee author

Total peer-reviewed publications = 29 (25 journal articles, 4 book chapters); 1<sup>st</sup> authored = 11;

Total student advisee 1<sup>st</sup> authored = 2; Web of Science statistics (from February 2023):

h-index = 13, total citations = 781

*Journal articles*

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

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.

#### Publications in review

4. Ockelford et al. Working with wood in rivers, in review at *Earth Surface Processes and Landforms*
3. \*Johaneman, T., **Lininger, K.B.**, Schook, D., Pitlick, J., and Martin, M. The Influence of Knickpoint Development and Channel Incision on Riparian Vegetation in Semi-arid River Corridors, in review at *Water Resources Research*.
2. Morrison, R., Jones, N. C., **Lininger, K. B.**, Thoms, M., and Wohl, E. Resilient floodplains in the Anthropocene, book chapter in review for *Resilience and riverine landscapes*, edited by Thoms, M. and Fuller, I.
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

5. \*Comratie Clemmons, 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 to *Earth Surface Processes and Landforms*.

4. \*Rees, J., Lininger, K.B., Briles, C. and Landis, J. Sedimentation and organic carbon storage in beaver ponds within the southern Rocky Mountains, USA, to be submitted to *Science of the Total Environment*.
3. Cathcart, C.N., Falke, J.A., Fox, J., Henszey, R., and **Lininger, K. B.** Multiscale responses of logjams and juvenile Chinook salmon (*Oncorhynchus tshawytscha*) to a sub-Arctic boreal riverscape, to be submitted to the *Canadian Journal of Fisheries and Aquatic Sciences*.
2. \*Adamchak, C., **Lininger, K.B.**, \*Rees, J., and Hinckley, E. Beaver as critical zone engineers., to be submitted to *Frontiers in Water*.
1. **Lininger, K.B.**, Ruiz-Villanueva, V., \*Fixler, S., and \*Welsh, J. Floodplain wood dynamics and related ecogeomorphic processes: a review, to be submitted 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](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) – \$1,042,392 total

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| 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**

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**

- Invited panelist for Women in Geography I: Academic Careers, 2023, Panel at the American Association of Geographers Annual Meeting, Denver, CO
- 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
- Expanding understanding of wood in river corridors: floodplain wood dynamics and long-term datasets, University of Colorado Boulder Hydrologic Sciences Symposium, 8 April 2022
- 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
- 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
- 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
- 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
- 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
- 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
- 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
- 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

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

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

Floodplain carbon storage and large wood: expanding the benefits of river restoration in river corridors, Rocky Mountain Restoration Conference, Estes Park, Colorado, 2019

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

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.

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

\*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

#### **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*

Cliff Adamchak, Ph.D., ongoing, University of Colorado Boulder  
 Sâde Cromratie Clemons, M.A., 2023, University of Colorado Boulder

### *Committee member, University of Colorado (\*denotes active)*

Vanessa Gabel\*, Ph.D. student in Geology, primary advisor: G. Tucker  
 Xueqian Wang\*, Ph.D. student in Geography, primary advisor: P. Blanken  
 Abigail Eckland\*, Ph.D. student in Geology, primary advisor: I. Overeem  
 Briana Prado\*, M.A. student in Geography, primary advisor: M. Diaz  
 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 Sergent, 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 (\*denotes active)*

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**

- 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**

- 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 Member of George R. Aiken Graduate Fellowship Review Committee
- 2022 Faculty search committee member, Department of Geography
- 2020-Present Personnel committee, Department of Geography
- 2020-Present Faculty co-coordinator, Undergraduate hydrology certificate, Department of Geography
- 2021 Member of PUEC committee, Department of Geography
- 2020-2021 Faculty search committee member, Department of Geography
- 2019-2020 Colloquium committee, Department of Geography
- 2018-2019 Colloquium committee, Department of Geography

**Professional service activities***External committees and boards*

- 2021-present Review Editor, *Frontiers in Water*, Water and Critical Zone specialty section  
 2020-present *Earth Surface Processes and Landforms*, Early Career Researcher Board  
 2020-present American Association of Geographers Geomorphology Specialty Group  
 Executive Board, Awards Committee (Chair of Awards committee 2022-2023)

*Journal reviews*

- 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-convener and chair, American Geophysical Union Fall Meeting  
 2022 Co-convener 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-convener and chair, American Association of Geographers Annual Meeting, General Geomorphology Poster Session  
 2021 Co-convener and chair, American Geophysical Union Fall Meeting, EP21A and EP25C: Biophysical Interactions in Rivers: Processes, Feedbacks, and Restoration I and II.  
 2019 Co-convener and chair, American Geophysical Union Fall Meeting, EP41D and EP53A: Feedbacks among life, landscapes, and processes I and II  
 2018 Primary convener 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-convener, American Geophysical Union Fall Meeting, EP22B: The Flow of Organic Carbon through the Landscape  
 2016 Co-convener 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**

- 2022-Present Member of a group of scientists working with Earth Explorers, an outreach program in which middle school students work with a scientist and create short films incorporating science topics
- 2021-Present 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
- 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.
- 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 once per year on river system health and flooding; organized and judged elementary school science fair once per year.

**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