LYDIA H. ZEGLIN
Division of Biology, Kansas State University
116 Ackert Hall, Manhattan, KS 66506-4900
Office: +1 785-532-5579, Lab: +1 785-532-0615, Fax: +1 785-532-6653
Email: lzeglin@ksu.edu, Website: http://zeglinlab.weebly.com
ORCID: 0000-0003-2907-0742

RESEARCH INTERESTS

Microbial Ecology and Diversity, Ecosystem Ecology, Carbon and Nitrogen Biogeochemistry, Soil Microbiology, Stream Ecology, Terrestrial-Aquatic Interactions, Global Change

PROFESSIONAL PREPARATION

Postdoc	2014	USGS Alaska Science Center	Molecular Ecology
Postdoc	2013	Oregon State University	Soil Microbiology
PhD	2008	University of New Mexico	Biology
	2008	Marine Biological Laboratories	Microbial Diversity Summer Course
BS	2002	University of Wisconsin	Zoology
BS	2002	University of Wisconsin	Biological Aspects of Conservation
Certificate	2002	University of Wisconsin	Environmental Studies

POSITIONS HELD

2026-present Professor, Division of Biology, Kansas State University
2020-2026 Associate Professor, Division of Biology, Kansas State University
2014-2020 Assistant Professor, Division of Biology, Kansas State University
2013-2014 Research Ecologist (Mendenhall Postdoctoral Fellow), Alaska Science Center, U.S. Geological Survey (USGS)
2008-2013 Faculty Research Associate (Postdoctoral), Department of Crop and Soil Science, Oregon State University (OSU)
2005-2008 NSF Graduate Research Fellow, Department of Biology, University of New Mexico (UNM)
2002-2005 Freshwater Sciences IGERT Trainee and Teaching Assistant (Microbiology), UNM Department of Biology
Summer 2001 Undergraduate field research assistant, North Temperate Lakes Field Station, University of Wisconsin Center for Limnology
1999-2002 Field Ranger and Naturalist, University of Wisconsin Arboretum
1999-2002 Program Assistant, Bureau of Endangered Resources & Natural Heritage Inventory Program, State of Wisconsin Department of Natural Resources

PEER-REVIEWED PUBLICATIONS *(*undergraduate author)*

63. M. M. Zaret, E. Kailer, H. Dea, B. Bookout, J. Hawkins, E. Akley, E. Wilson, M. A. Nieland, I. Wanithunga, A. Pandey, N. Vega Anguiano, C. M. Broderick, P. Nieves-Otero, T. L. Carter, T. Poydras, J. D. Figge, Z. Wai Htoo, **L. H. Zeglin**. Bison grazing and prairie fire shape soil microbial community diversity and assembly. *Accepted*: Ecology.

62. B. A. Nave, Jr., C. Bond, S. Zipper, K. Aho, A. J. Burgin, K. A. Keuhn, E. Seybold, Y. You, and **L. H. Zeglin**. 2026. Spatiotemporal dynamics of bacterial and fungal abundance in Great Plains non-perennial streams. Freshwater Science: doi.org/10.1086/743800.
61. Z. Bunch, M. L. Avolio, S. E. Koerner, K. R. Wilcox, **L. H. Zeglin**, K. J. Komatsu. 2026. Understanding the effects of patch-burn grazing management on aboveground grassland invertebrate biodiversity. Oikos, 7: e11935.
60. T. J. Kohler, I. Hawes, A. Howkins, **L. H. Zeglin**, M. N. Gooseff, & D. M. McKnight. 2026. Cold comfort for change: Stream mats as biological indicators of ecosystem processes in the McMurdo Dry Valleys, Antarctica. Journal of Phycology, 62(2): 261-292.
59. A. MacDougall, B. Vanzant, J. Sulik, and 149 more coauthors including **L. H. Zeglin**. 2026. The global extent of the grassland biome and implications for the terrestrial carbon sink. Nature Ecology & Evolution, 10: 246-257.
58. A. L. Kemajou Tchamba, C. T. Bond, B. A. Nave, Jr., C. Utzman, J. Ibal, D. M. Peterson, C. N. Jones, C. L. Atkinson, E. C. Seybold, R. J. Ramos, A. J. Burgin, **L. H. Zeglin**, Y. You, K. Aho K. A. Kuehn, C. R. Jackson. 2025. Streambed microbial activity and its spatial distribution in two intermittent stream networks. Microorganisms, 14(1): 71.
57. A. L. Kemajou Tchamba, C. T. Bond, B. A. Nave, Jr. R. Ramos, E. C. Seybold, A. J. Burgin, **L. H. Zeglin**, Y. You, K. Aho K. A. Kuehn, C. R. Jackson. 2025. Spatial variation in microbial enzyme activity in an intermittent stream network. Discover Water 6(1): 15.
56. K. J. Komatsu, M. L. Avolio, J. M. Blair, S. E. Koerner, Z. Ratajczak, M. D. Smith, E. Welti, K. R. Wilcox, **L. H. Zeglin**. 2025. Consistent timelines, divergent end points: Plant community change in multiple tallgrass nitrogen addition experiments. Oecologia, 207(11): 1-13.
55. C. T. Bond, B. A. Nave, Jr., A. L. Kemajou Tchamba, E. Stanley, K. Aho, A. J. Burgin, C. R. Jackson, Y. You, **L. H. Zeglin**, S. C. Zipper, R. Ramos, K. A. Kuehn. 2025. Fungal communities across a surface water permanence gradient in a non-perennial prairie stream network. ISME Communications, 5: 1. https://doi.org/10.1093/ismeco/ycaf151.
54. E. Wilson, S. T. M. Lee, **L. H. Zeglin**, L. Arias-Rodriguez, M. Tobler. 2025. Host-microbiome associations in livebearing fishes adapted to toxic environments rich in hydrogen sulfide. Molecular Ecology, 34 (17): e70034.
53. C.-J. Hsiao, G. Sassenrath, **L. H. Zeglin**, G. Hettiarachchi, and C. W. Rice. 2025. Long-term tillage and compost shape soil microbes under soil organic carbon equilibrium. European Journal of Soil Science, 76 (3): e70125.
52. Z. Bunch, M. L. Avolio, S. E. Koerner, K. R. Wilcox, **L. H. Zeglin**, K. J. Komatsu. 2025. Patch-burn grazing is similar to annual burning in effects on belowground invertebrates in tallgrass prairie. Rangeland Ecology & Management, 101: 140-146.
51. S. Sarkar, A. Kazarina, P. M. Hansen, K. Ward, C. Hargreaves, N. Reese, Q. Ran, W. Kessler, L. F. T. de Souza, T. D. Loecke, M. V. M. Sartos, C. W. Rice, **L. H. Zeglin**, B. A. Sikes, S. T. M. Lee. 2025. Ammonia-oxidizing archaea and bacteria differentially contribute to ammonia oxidation in soil under precipitation gradients and land legacy. Applied Soil Ecology, 206: 105831.
50. M. A. Nieland and **L. H. Zeglin**. 2024. Plant and microbial feedbacks maintain soil nitrogen legacies in burned and unburned grasslands. Journal of Ecology, 112 (9): 2093-2106.
49. N. Vega Anguiano, J. D. Figge, K. M. Freeman*, J. H. Hawkins, and **L. H. Zeglin**. 2024. Bison and cattle grazing increase soil nitrogen cycling in a tallgrass prairie ecosystem. Biogeochemistry, 167: 759-773.

48. M. A. Nieland, C. M. Carson, V. Floyd*, and **L. H. Zeglin**. 2024. Product-inhibition feedbacks, not microbial population growth tradeoffs or soil pH, regulate decomposition potential under nutrient eutrophication. Soil Biology and Biochemistry, 189: 109247.
47. C. M. Broderick, K. M. Freeman*, **L. H. Zeglin**, and J. M. Blair. 2022. Climate legacy effects shape tallgrass prairie nitrogen cycling. Journal of Geophysical Research Biogeosciences, 127 (10): e2022JG006972.
46. L. L. Vilonen, J. M. Blair, P. Trivedi, **L. H. Zeglin**, and M. D. Smith. 2022. Limited legacy effects of extreme mutli-year drought on carbon and nitrogen cycling in a mesic grassland. Elementa, 10 (1): 000093.
45. J. H. Hawkins and **L. H. Zeglin**. 2022. Microbial dispersal, including bison dung vectored dispersal, increases soil microbial diversity in a grassland ecosystem. Frontiers in Microbiology, 13: 825193.
44. L. Mino, M. R. Kolp, S. Fox, C. Reazin, **L. H. Zeglin**, and A. Jumpponen. 2021. Fire severity and history are stronger determinants of soil chemistry and microbiomes than woody encroachment in a tallgrass prairie system. FEMS Microbiology Ecology, 97 (12): fiab154.
43. M. C. Kelly, **L. H. Zeglin**, A. Husic, and A. J. Burgin. 2021. High supply, high demand: A unique nutrient addition decouples nitrate uptake and metabolism in a large river. Journal of Geophysical Research – Biogeosciences, 126(12): e2021JG006469.
42. R. K. Connell, **L. H. Zeglin**, and J. M. Blair. 2021. Plant legacies and soil microbial community dynamics control soil respiration. Soil Biology and Biochemistry, 160: 108350.
41. J. W. Dallas, W. M. Meshaka, **L. H. Zeglin** and R. W. Warne. 2021. Taxonomy, not locality, influences the cloacal microbiota of two nearctic colubrids: a preliminary analysis. Molecular Biology Reports: 48: 6435-6442.
40. M. Nieland, P. Moley, J. Hanschu*, and **L. H. Zeglin.** 2021. Differential resilience of soil microbes and ecosystem functions following cessation of long-term fertilization. Ecosystems: 24: 2042-2060.
39. M. Ardón, **L. H. Zeglin**, R. M. Utz, S. D. Cooper, W. K. Dodds, A. Rosemond, B. Bixby, A. Burdett, N. Griffiths, T. Harms, L. T. Johnson, S. L. Johnson, J. Jones, J. S. Kominoski, W. McDowell, M. Trentman, J. J. Follstad Shah, D. Van Horn and A. Ward. 2021. Experimental nitrogen and phosphorus enrichment stimulates multiple trophic levels of algal and detrital-based food webs: A global meta-analysis from streams and rivers. Biological Reviews, 96(2): 692-715.
38. W. K. Dodds, **L. H. Zeglin**, R. J. Ramos, T. G. Platt, A. Pandey, T. Michaels, M. Masigol, A. M. L. Klompen, M. C. Kelly, A. Jumpponen, E. Hauser, P. M. Hansen, M. J. Greer, N. Fattahi, C. S. Delavaux, R. K. Connell, S. Billings, J. D. Bever, N. Barua, F. B. Agusto. 2020. Connections and feedbacks: Aquatic, plant, and soil microbiomes in a heterogeneous and changing world. BioScience, 70(7): 548-562.
37. A. M. Veach and **L. H. Zeglin**. 2020. Historical drought affects microbial population dynamics and activity during soil dry-down and re-wet. Microbial Ecology, 79(3), 662-674.
36. C.-J. Hsiao, Sassenrath, G., Hettiarachchi, G., Rice, C., and **L. H. Zeglin.** 2019. Temporal variation of soil microbial properties in a corn-wheat-soybean system. Soil Science Society of America Journal, 83(6): 1696-1711.

35. S. Hotaling, M. E. Foley*, **L. H. Zeglin,** D. S. Finn, J. J. Giersch, C. C. Muhlfeld, L. M. Tronstad and D. W. Weisrock. 2019. Microbial assemblages reflect environmental heterogeneity in alpine streams. Global Change Biology, 25(8): 2576-2590.
34. R. W. Warne, L. Kirschman and **L. H. Zeglin.** 2019. Manipulation of gut microbiota during critical development windows affects host physiological performance and disease susceptibility across ontogeny. Journal of Animal Ecology, 88(6): 845-856.
33. C. M. Carson, A. Jumpponen, J. M. Blair and **L. H. Zeglin.** 2019. Soil fungal community changes in response to long-term fire cessation and N fertilization in tallgrass prairie. Fungal Ecology, 41: 45-55.
32. **L. H. Zeglin,** C. L. Crenshaw, C. N. Dahm, R. W. Sheibley and C. D. Takacs-Vesbach. 2019. Watershed hydrology and salinity, but not nutrient chemistry, are associated with arid-land stream microbial diversity. Freshwater Science, 38(1): 77-91.
31. K. Grond, B. K. Sandercock, A. Jumpponen and **L. H. Zeglin.** 2018. The avian gut microbiota: Community, physiology and function in wild birds. Journal of Avian Biology, 49(11): e01788.
30. C. M. Carson and **L. H. Zeglin.** 2018. Long-term fire management history affects N-fertilization sensitivity, but not seasonality, of grassland soil microbial communities. Soil Biology and Biochemistry, 121: 231-239.
29. C.-J. Hsiao, G. Sassenrath, **L. H. Zeglin,** G. Hettiarachchi and C. Rice. 2018. Vertical changes of soil microbial properties in claypan soils. Soil Biology and Biochemistry, 121: 154-164.
28. R. W. Warne, L. Kirschman and **L. H. Zeglin.** 2017. Manipulation of gut microbiota reveals shifting community structure shaped by host developmental windows in amphibian larvae. Integrative and Comparative Biology, 57(4): 786-794.
27. J. J. Follstad Shah, M. Ardón, J. S. Kominoski, W. K. Dodds, M. O. Gessner, N. A. Griffiths, S. L. Johnson, A. Lecerf, C. J. LeRoy, D. Manning, A. D. Rosemond, C. M. Swan, J. R. Webster and **L. H. Zeglin.** 2017. Litter identity, macroinvertebrates, and temperature drive leaf breakdown in streams: A global synthesis. Global Change Biology, 23(8): 3064-3075.
26. A. M. Romaní, E. Chauvet, C. Febria, J. Mora-Gómez, U. Resse-Buhl, X. Timoner, M. Weitere and **L. H. Zeglin.** 2017. The biota of intermittent rivers and ephemeral streams: prokaryotes, fungi and protozoans. Pages 161-188 in: T. Datry, N. Bonada and A. Boulton (eds.). Intermittent Rivers and Ephemeral Streams: Ecology and Management. Elsevier, Inc., Cambridge, MA. ISBN: 9780128038352.
25. J. G. Mortensen, R. González-Pinzón, C. Dahm, J. Wang, **L. H. Zeglin** and D. J. Van Horn. 2016. Nutrient cycling in arid river corridors: Advancing the food-energy-water nexus by closing nutrient loops. Environmental Science and Technology, 50(16): 8485-8496.
24. **L. H. Zeglin,** B. Wang, F. Rainey, C. Waythomas and S. L. Talbot. 2016. Organic matter quantity and source affects microbial community structure and function following volcanic eruption on Kasatochi Island, Alaska. Environmental Microbiology, 18(1): 146-158.
23. M. F. Kirk, B. H. Wilson, K. A. Marquart**, L. H. Zeglin,** D. S. Vinson and T. M. Flynn. 2015. Solute concentrations influence microbial methanogenesis in coal-bearing strata of the Cherokee basin, USA. Frontiers in Microbiology, 6: 1287.
22. **L. H. Zeglin.** 2015. Stream microbial diversity responds to environmental changes: Review and synthesis of existing research. Frontiers in Microbiology, 6: 454.

21. K. J. Goodman, S. M. Parker, J. W. Edmonds and **L. H. Zeglin.** 2015. Expanding the scale of aquatic sciences: The role of the National Ecological Observatory Network (NEON). Freshwater Science, 34(1): 377-385.
20. D. D. Myrold, **L. H. Zeglin** and J. K. Jansson. 2014. The potential of metagenomic approaches for understanding soil microbial processes. Soil Science Society of America Journal, 78: 3-10.
19. **L. H. Zeglin**, P. J. Bottomley, A. Jumpponen, C. Rice, M. Arango, A. Lindsley*, A. McGowan, P. Mfombep and D. D. Myrold. 2013. Altered precipitation regime affects the function and composition of soil microbial communities on multiple time scales. Ecology, 94(10): 2334-2345.
18. D. J. Van Horn, M. L. Van Horn, J. E. Barrett, M. N. Gooseff, A. Alrichter, K. Geyer, **L. H. Zeglin** and C. D. Takacs-Vesbach. 2013. Factors Controlling Soil Bacterial Biomass, Diversity, and Community Composition in a Cold Desert Ecosystem: Role of Geographic Scale. PLOS One, 8(6), e66103.
17. **L. H. Zeglin** and D. D. Myrold. 2013. Fate of decomposed fungal cell wall material in organic horizons of old-growth Douglas-fir forest soils. Soil Science Society of America Journal, 77: 489-500.
16. **L. H. Zeglin**, L. A. Kluber and D. D. Myrold. 2013. The importance of amino sugar turnover to C and N cycling in organic horizons of old-growth Douglas-fir forest soils colonized by ectomycorrhizal mats. Biogeochemistry, 112(1): 679-693.
15. A. E. Taylor, **L. H. Zeglin**, T. Wanzek*, D. D. Myrold and P. J. Bottomley. 2012. Dynamics of ammonia-oxidizing archaea and bacteria populations and contributions to soil nitrification potentials. ISME Journal, 6: 2024-2032.
14. M. Keiluweit, J. J. Bougoure, **L H. Zeglin**, D. D. Myrold, P. K. Weber, M. Kleber, J. Pett-Ridge, and P. S. Nico. 2012. Nano-scale investigation of the association of microbial nitrogen residues with iron (hydr)oxides in a forest soil O-horizon. Geochimica et Cosmochimica Acta, 95: 213-226.
13. **L. H. Zeglin**, A. E. Taylor, D. D. Myrold and P. J. Bottomley. 2011. Bacterial and archaeal amoA gene distribution covaries with soil nitrification properties across a range of land uses. Environmental Microbiology Reports, 3(6): 717-726.
12. **L. H. Zeglin**, C. N. Dahm, R. L. Sinsabaugh, J. E. Barrett, M. N.Gooseff, S. Fitzpatrick and C. D. Takacs-Vesbach. 2011. Bacterial community structure along moisture gradients in the parafluvial sediments of two ephemeral desert streams. Microbial Ecology, 61: 543-556.
11. A. M. Helton, G. C. Poole, J. L. Meyer, W. M. Wollheim, B. J. Peterson, P. J. Mulholland, E. S. Bernhardt, J. A. Stanford, C. Arango, L. R. Ashkenas, L. W. Cooper, W. K. Dodds, S. V. Gregory, R. O. Hall Jr., S. K. Hamilton, S. L. Johnson, W. H. McDowell, J. D. Potter, J. L. Tank, S. M. Thomas, H. M. Valett, J. R. Webster, and **L. H. Zeglin**. 2011. Thinking outside the channel: Modeling nitrogen cycling in networked river ecosystems. Frontiers in Ecology and the Environment, 9 (4): 229-238.
10. A. E. Taylor, **L. H. Zeglin**, S. Dooley, D. D. Myrold and P. J. Bottomley. 2010. Evidence for different contributions of archaea and bacteria to the ammonia-oxidizing potential of diverse Oregon soils. Applied and Environmental Microbiology, 76 (23): 7691-7698.
9. C. L. Crenshaw, N. B. Grimm, **L. H. Zeglin**, R. W. Sheibley, C. N. Dahm and A. D. Pershall. 2010. Nitrogen dynamics in hyporheic zones of reference and human-altered streams. Fundamental and Applied Limnology, 176 (4): 391-405.

8. C. D. Takacs-Vesbach, **L. H. Zeglin**, J. E. Barrett, M. N. Gooseff and J. D. Priscu. 2010. Processes and conditions promoting microbial diversity in the McMurdo Dry Valleys. *In:* P. Doran, D. McKnight and B. Lyons, eds. Astrobiological Analogues: Life in Antarctic Deserts and other Cold Dry Environments. Cambridge University Press Astrobiology Series.
7. **L. H. Zeglin**, R. L. Sinsabaugh, J. E. Barrett, M. Gooseff and C. Takacs-Vesbach. 2009. Landscape distribution of microbial activity in the McMurdo Dry Valleys: Linked biotic processes, hydrology and geochemistry in a cold desert ecosystem. Ecosystems, 12: 562-573.
6. M. L. Northcott, M. N. Gooseff, J. E. Barrett, **L. H. Zeglin**, C. D. Vesbach and J. Humphrey. 2009. Hydrologic characteristics of lake- and stream-side riparian wetted margins in the McMurdo Dry Valleys, Antarctica. Hydrological Processes, 23 (9): 1255-1267.
5. R. L. Sinsabaugh, C. L. Lauber, M. N. Weintraub, B. Ahmed, S. D. Allison, C. L. Crenshaw, A. R. Contosta, D. Cusack, S. Frey, M. E. Gallo, T. B. Gartner, S. E. Hobbie, K. Holland, B. L. Keeler, J. S. Powers, M. Stursova, C. Takacs-Vesbach, M. P. Waldrop, M. D. Wallenstein, D. R. Zak and **L. H. Zeglin.** 2008. Stoichiometry of soil enzyme activity at global scale. Ecology Letters, 11 (11): 1252-1264.
4. S. L. Collins, R. L. Sinsabaugh, C. L. Crenshaw, L. Green, A. Porras-Alfaro and **L. H. Zeglin**. 2008. Pulse dynamics and microbial processes in aridland ecosystems. Journal of Ecology, 96 (3): 413-420.
3. **L. H. Zeglin**, M. Stursova, R. L. Sinsabaugh and S. L. Collins. 2007. Microbial responses to nitrogen addition in three contrasting grassland ecosystems. Oecologia, 154 (2): 349-359.
2. M. N. Gooseff, M. Northcott, J. E. Barrett, D. B. Bate, K. R. Hill, **L. H. Zeglin**, M. Bobb and C. D. Vesbach. 2007. Controls on the spatial dimensions of wetted hydrologic margins of two Antarctic lakes. Vadose Zone Journal, 6 (4): 841-848.
1. N. B. Grimm, R. W. Sheibley, C. L. Crenshaw, C. N. Dahm, W. J. Roach and **L. H. Zeglin**. 2005. Nitrogen retention and transformation in urban streams. Journal of the North American Benthological Society, 24 (3): 626–642.

OTHER PUBLICATIONS, PRODUCTS, AND REPORTS:

J. Allenbrand, C. M. Carson and **L. H. Zeglin**. 2021. Fertilizer and fire change microbes in prairie soil. Data Nugget 1.8.21: http://datanuggets.org/2021/01/fertilizer-and-fire-change-microbes-in-prairie-soil/

L. H. Zeglin, M. Ardón, R. Utz, S. Cooper, W. Dodds, R. Bixby, A. Burdett, J. Shah, N. Griffiths, T. Harms, S. Johnson, J. Jones, J. Kominoski, W. McDowell, A. Rosemond, M. Trentman, D. Van Horn, and A. Ward. 2020. Synthesis of stream ecosystem responses to nutrient enrichment at multiple trophic levels ver 1. Environmental Data Initiative. https://doi.org/10.6073/pasta/b674589d1a67589adadcb7762d928bba.

C.-J. Hsiao, G. Sassenrath, **L. H. Zeglin,** G. Hettiarachchi and C. Rice. 2019. Changes in soil microbiology under conventional and no-till production during crop rotation. Kansas Agricultural Experiment Station Research Reports, 5 (2).

C.-J. Hsiao, G. Sassenrath, C. Rice, G. Hettiarachchi and **L. H. Zeglin**. 2018. Soil health profile in claypan soils. Kansas Agricultural Experiment Station Research Reports, 4 (3).

C.-J. Hsiao, G. Sassenrath, C. Rice, **L. H. Zeglin** and G. Hettiarachchi. 2017. Key components of healthy soils and their role in crop production. Kansas Agricultural Experiment Station Research Reports, 3 (2).

C.-J. Hsiao, G. Sassenrath, C. Rice, **L. H. Zeglin** and G. Hettiarachchi. 2016. Soil microbial activity with depth in claypan soils of southeast Kansas. Kansas Agricultural Experiment Station Research Reports, 2 (3).

MANUSCRIPTS SUBMITTED, IN REVIEW OR IN REVISION:

64. B. Bookout, K. Stevermer, A. Van Zelfden, J. Haukos, **L. H. Zeglin**, and Z. Ratajczak. Reintroducing bison restores landscape diversity, widespread salty ephemeral wetlands, and heterogeneity. Ecology, *revised and resubmitted*.
65. C. M. Currier, C. Parrinello, C. Dick, D. J. Augustine, J. M. Blair, E. H. Boughton, C. Coetsee, A. S. David, J. D. Derner, S. E. Hobbie, F. Isbell, K. S. Modimola, P. B. Reich, B. Wigley, K. Worm, **L. H. Zeglin**, and A. Pellegrini. Dependency of belowground productivity in grasslands and savannas on shifting fire and herbivory regimes. Global Change Biology, *in revision*.
66. A. Winstead, E. Broemmelsiek, J. Figge, M. Halsey, and **L. H. Zeglin.** Interactive effects of fire and bison grazing on soil nitrogen dynamics across a tallgrass prairie landscape. Ecosystems, *in review.*
67. M. A. Nieland, J. M. Blair, J. H. Taylor, and **L. H. Zeglin**. Divergent plant and microbial community states persist after ceasing long-term nitrogen enrichment. Journal of Ecology, *in review*.
68. E. Wilson, S. T. M. Lee, **L. H. Zeglin**, L. Arias-Rodriguez, and M. Tobler. Comparative phylogenetic analysis of Poeciliid microbiomes: effects of evolutionary history and the environment. Proceedings of the Royal Society B: Biological Sciences, *in review*.
69. N. Vega Anguiano, R. Garcia-Prudencio*, and **L. H. Zeglin**. Feedbacks between soil nitrogen cycling and forage quality in bison and cattle grazed tallgrass prairie. Plant and Soil, *in review*.
70. **L. H. Zeglin,** K. M. Freeman*, J. Figge, and N. Vega Anguiano. Bison and cattle grazing affect soil nitrogen availability and microbial indicators across a regional pH gradient. Applied Soil Ecology, *submitted*.
71. S. Flynn, E. Seybold, T. Loecke, **L. Zeglin**, C. Brown, M. H. Busch, A. Sommerville, C. Utzman, and A. Burgin. Wet, Dry, Repeat: The Impact of Experimental Flow Diversion on Stream Nitrogen Processing. Limnology and Oceanography Letters, *submitted*.
72. C. Bond, C. D. Peterson, A. L. Kemajou Tchamba, C. Smith, K. Zarek, S. Plont, J. Ibal, E. Rutledge, A. Stafford, C. N. Jones, C. Atkinson, Y. You, C. Jackson, **L. Zeglin,** K. Aho, A. Burgin, and K. Kuehn. Microbial communities across a non-perennial stream network in a humid subtropical forest. FEMS Microbiology Ecology, *submitted*.

GRANTS RECEIVED

NSF-LTER, Gooseff PI (UC-Boulder), Adams (BYU), Diaz (UC-Boulder), Morgan-Kiss (U Miami-Ohio), Vesbach (U. New Mexico) co-PIs, Zeglin and 7 others (co-Is). "LTER: MCM6: The roles of legacy and ecological connectivity in a polar desert ecosystem". 2023-2029. Total request $7,650,000, Zeglin (KSU) subcontract $326,176. NSF Award #OPP-2224760.

DOE-BER, Pierce PI (Oak Ridge National Laboratory), Zeglin and 19 others co-PIs. "Watershed Dynamics and Evolution (WaDE) Science Focus Area". 2023-2026. Zeglin (KSU) subcontract $364,724.

FFAR, Ruiz Diaz PI (KSU Agronomy), Rice (KSU), Holman (KSU), Raiman (Bayer Crop Science), Rosa (Bayer Crop Science) co-PIs, Aguilar (KSU), Archontoulis (Iowa State U.), Dhillon (Mississippi State U.), Kumar (KSU), Obour (KSU), Olson (KSU), Ortez (Ohio State U.), Zeglin (KSU), Zipper (KU, KGS) co-(P)Is. "Increasing Water Productivity, Soil Carbon, and Sustainability of Integrated Multi-Crop Systems Using Field Scale Research". 2023-2027. Total request $7,859,435; Zeglin lab budget $409,902.

KDHE, Zeglin PI. "Harmful Algal Bloom Mitigation Efficacy Monitoring at Jerry Ivey Pond". 2022-2023. Total budget $50,000.

USDA NRCS, Zeglin PI. "Soil biology status of representative soil series in managed and unmanaged rangelands". 2022-2026. Total budget $499,793.

Kansas NSF-EPSCoR REI: Zeglin PI (KSU). "Life Technologies 7500 Real-Time PCR system for quantitative assessment of microbial functional genes, genotypes, and gene expression levels." 2022. Total budget $54,229 from NSF Award #OIA-1656006.

NSF-LTER, Nippert PI (KSU), Baer (SIU), Gido (KSU), Smith (CSU), Zeglin (KSU) co-PIs, and others (co-Is). "LTER: Manipulating drivers to assess grassland resilience." 2020-2026, total (KSU) budget $7,122,000. Estimated ~$160,000 in direct costs to Zeglin Lab. NSF Award #DEB-2025849.

NSF-EPSCoR RII Track 2: Burgin (KU) PI, Aho (Idaho State U), Allen (OU), Atkinson (U Alabama), Godsey (ISU), Hale (ISU), Jackson (U Mississippi), Keuhn (U Southern Mississippi), Meisel (Haskell Indian U), Seybold (KU), You (ISU), Zipper (KU), and Zeglin (KSU) co-(P)Is. "Aquatic Intermittency effects on Microbiomes in Streams (AIMS)". 2020-2024, total request $5,998,875, Zeglin (KSU) subaward $335,478. NSF Award #OIA-2019603.

USDA AFRI BNRE Soil Health: Functions, Processes and Management, Koerner (UNC-Greensboro) PI, Avolio (Johns Hopkins U), Komatsu (SERC), Wilcox (U Wyoming) and Zeglin (KSU) co-PIs. "Assessing impacts of patch-burn grazing management on sustainability of multiple agroecosystem services". 2020-2024, total request $499,900, Zeglin (KSU) subaward $78,847. USDA Grant No. 2020-67019-31171.

NSF-DEB-ES, Zeglin PI (KSU). "CAREER: How do microorganisms and grazing mammals interact at local to regional scales to maintain grassland nitrogen cycling processes?" 2020-2025, including Research Experience for Postbaccalaureate Students (REPS) and outreach supplements, total $767,541. NSF Award #DEB-1943492.

(pre-tenure)

Davis-Phinney Foundation for Parkinson's Research Funding Program, Haub PI (KSU), Zeglin co-PI. "The innovative therapeutics with probiotics and vitamin B to enhance the wellbeing of people with Parkinson's disease (PD)." 2019-2020, total budget $36,761.

Kansas-NSF-EPSCoR Research and Education Innovation (REI) in Microbiome Research, Burgin (KU) PI, Zeglin (KSU) senior personnel. "Connecting stream microbiomes to in-stream energetics and nutrient processing across the precipitation and land use." 2019-2020, total budget $50,000.

NSF-BIO-DEB ES, Zeglin (KSU) PI, Burgin (KU) co-PI. RAPID: "Are biogeochemical responses linked to the microbial composition of a defined nutrient and microbial input to a large river?" DEB-1822960. 2018-2019, total (KSU) budget $200,000. NSF Award #1822960.

NSF-GEO-EAR Geobiology and Low-Temperature Geochemistry, Kirk PI (KSU), Jin (U. Oregon), Zeglin (KSU) co-PIs. "Collaborative Research: Biogeochemical drivers of

interspecies electron transfer from iron reducers to methanogens". 2018-2020, KSU budget $196,330. NSF Award #1753436.

DOE Office of Biological and Environmental Research, Environmental System Science, Nippert PI (KSU), McCulloh (U. Wisconsin), Wilcox (U. Wyoming), Zeglin (KSU) co-PIs. "Using root and soil traits to forecast woody encroachment dynamics in mesic grassland" (DE-SC0019037). 2018-2022, total (KSU) budget $998,259 plus $37,689 supplement, $1,035,948 total.

NSF-EPSCoR RII Track 1, Bowman-James PI, Bever & Billings co-PIs (KU), Dodds & Rice co-PIs (KSU), Zeglin and others (co-Is): "Microbiomes of Aquatic, Plant and Soil Systems (MAPS) mediating sustainability: An observational and experimental network across Kansas". 2017-2022, KSU budget $2,163,500.

National Park Service - University of Wyoming Research Center small grants program, Tronstad (U. Wyoming) PI, and co-PIs Finn (Missouri State U.), Giersch (USGS), Hotaling (Washington State U.), Zeglin (KSU). "A unique "icy seep" aquatic habitat in the high Tetons: potential refuge for biological assemblages imperiled by climate change", 2016, 2017, 2018, 2019 total annual budgets each $10,000.

Kansas NSF-EPSCoR First Grant, Zeglin PI (KSU): "Microbial mechanisms of drought tolerance and the implications for grassland soil carbon storage". 2014-2015, total (KSU) budget $128,986.

NSF-LTER, Nippert PI (KSU), Baer (SIU), Blair (KSU), Dodds (KSU), Hartnett (KSU) co-PIs, Zeglin and others (co-Investigators). "LTER VII: Long-term research on grassland dynamics- Assessing mechanisms of sensitivity and resilience to global change." 2014-2020, total (KSU) budget $6,762,000. Estimated $80,000 in direct costs to Zeglin Lab.

LTER Network Synthesis Working Group, Zeglin PI, Ardon, Bixby, Dodds, Johnson, Rosemond co-PIs: "Synthesis of stream ecosystem responses to nutrient enrichment at multiple trophic levels". 2012-2013, total budget $20,000.

Sevilleta LTER Program Summer Graduate Student Grants: 2003, 2004, 2008.

State of New Mexico Graduate Research Development Grant: 2007.

New Mexico Water Resources Research Institute Graduate Student Award: 2004-2005.

NSF Graduate Research Fellowship, 2004.

UNM Department of Biology Student Research Allocation Committee Grants: 2002, 2003, 2004.

UNM Graduate Research Allocation Committee Grants: 2002, 2003, 2004.

AWARDS, FELLOWSHIPS, HONORS

University Outstanding Scholar, Kansas State University, 2025.

Outstanding Graduate Faculty Award from the KSU Division of Biology Graduate Student Association, 2017; nominated 2024.

USGS Mendenhall Postdoctoral Fellowship, Zeglin lead PI, Talbot, Wang, Rainey, Waythomas co-PIs: "Development of microbial structure and function on soils with contrasting geochemistry: Microbial succession of the Kasatochi Island terrestrial ecosystem post-volcanic eruption": received 2012, total budget $418,261.

Planetary Biology Internship Scholarship to the Marine Biological Laboratory Microbial Diversity summer course: 2008.

Best Graduate Student Oral Presentation, New Mexico Water Resources Research Symposium, Socorro, New Mexico: 2006.

NSF Graduate Research Fellowship: 2003.

NSF Interdisciplinary Graduate Education and Research Traineeship, Freshwater Sciences Interdisciplinary Doctoral Program at UNM: 2002.

TEACHING AND MENTORING

COURSE INSTRUCTION (KSU Biology course if not specified otherwise)
Co-Instructor: Principles of Biology (BIOL 198). Fall 2026, 79 students, in progress.
Instructor: Microbial Ecology (BIOL 687). Spring 2026, 8 students, TEVAL 4.3.
Co-Instructor: Principles of Biology (BIOL 198). Fall 2025, 80 students, TEVAL 4.2.
Instructor: Microbial Ecology (BIOL 687). Spring 2025, 12 students, TEVAL 3.3.
Instructor: Microbial Diversity (BIOL 890). Fall 2024, 7 students, TEVAL 4.5.
Guest lectures: Soil Microbial Ecology (AGRON955). Spring 2024, KSU Agronomy, 6 students.
Instructor: Microbial Ecology (BIOL 687). Spring 2024, 14 students, TEVAL 3.7.
Instructor: Microbial Ecology (BIOL 687). Spring 2023, 9 students, TEVAL 4.3.
Instructor: Microbial Diversity (BIOL 890). Fall 2022, 6 students, TEVAL 5.0.
Instructor: Microbial Ecology (BIOL 687). Spring 2022, 15 students, TEVAL 4.1.
Co-Instructor: Principles of Biology (BIOL 198). Fall 2021, 80 students, TEVAL 4.3.
Instructor: Microbial Ecology (BIOL 687). Spring 2021, 25 students, TEVAL 4.8.
Instructor: Microbial Diversity (BIOL 890). Fall 2020, 5 students, TEVAL 4.7.
Instructor: Microbial Ecology (BIOL 687). Spring 2020, 39 students, TEVAL 3.6.
Co-Instructor: Ecology (BIOL 529). Spring 2020, 83 students, TEVAL 4.3.
Instructor: Microbial Ecology (BIOL 687). Spring 2019, KSU Biology, 37 students, TEVAL 3.4.
Instructor: Microbial Diversity (BIOL 890). Fall 2018, 10 students, TEVAL 4.4.
Guest lecture: Fire Ecology. Summer 2017 and Summer 2018, College of William and Mary, Biology 404, ~15 students.
Instructor: Microbial Ecology (BIOL 687). Spring 2018, 33 students, TEVAL 3.6.
Guest lectures: Microbiomes of Aquatic, Plants and Soils (BIOL 890). Spring 2018, KSU Biology/KU EEB/Fort Hays State Biology, ~20 students.
Co-Instructor: Principles of Biology (BIOL 198). Fall 2017, 73 students, TEVAL 4.6.
Instructor: Microbial Ecology (BIOL 687). Spring 2017, 37 students, TEVAL 4.0.
Guest lecture: Stable Isotope Ecology (BIOL 890). Fall 2016, ~12 students.
Instructor: Microbial Diversity (BIOL 890). Fall 2016, 7 students, TEVAL 4.2.
Guest lectures: Soil Microbiology (AGRON 645). Fall 2016, KSU Agronomy, ~20 students.
Guest lectures: Soil Microbial Ecology (AGRON 955). Spring 2016, KSU Agronomy, ~8 students.
Co-Instructor: Principles of Biology (BIOL198). Spring 2016, 78 students, TEVAL 3.8.
Instructor: Advanced Problems in Biology (BIOL 891). Fall 2015, 1 student (Kirsten Grond).
Guest lecture: Ecology (BIOL 529). Fall 2015, ~100 students.
Guest lecture: Microbial Ecology (BIOL 687). Spring 2015, ~6 students.
Guest lecture: Soil Microbiology (AGRON 645). Fall 2014, KSU Kansas State University (KSU) Agronomy, ~20 students.
Co-instructor: Soil Microbial Ecology, Fall 2012. OSU Department of Crop and Soil Science.
Guest lectures: Soil Organic Matter Dynamics, Microbial Diversity. Soil Biology, Winter 2010 and 2011. Oregon State University (OSU) Department of Crop and Soil Science.
Guest lecture: Aquatic-Terrestrial Interactions. Soil Microbial Ecology, Fall 2010. Oregon State University Department of Crop and Soil Science.

Guest lectures: Cells, Photosynthesis and Respiration. Biology, Fall 2007 and 2008. Southwest Acupuncture College, New Mexico.

Guest lectures: Nitrogen Cycle, Trace Metals and Micronutrients. Limnology, Spring 2007. University of New Mexico (UNM) Department of Biology.

Co-instructor: Limnology, Spring 2006. UNM Department of Biology.

Teaching Assistant, Microbiology for the Health Sciences. Spring 2004. UNM Biology.

MENTORING

Postdoctoral: Michaela Halsey, Kansas State University, 2024-present
Max Zaret, Kansas State University, 2023-2024
Allison Veach, Kansas State University, 2015-2016

Graduate: Morgan Gill (Ph.D. Biology 2031), Kansas State University, 2026-present
David Roberts (Ph.D. Biology 2028), Kansas State University, 2023-present
Claire Utzman (Ph.D. Biology 2028), Kansas State University, 2023-present
Amy Winstead, Kansas State University, M.S. Biology 2026
Tessa Erwin, Kansas State University, 2024-2025
Elsa Broemmelsiek, Kansas State University, 2023-2024
Nicholas Vega Anguiano, Kansas State University, M.S. Biology 2024
Brett Nave, Jr., Kansas State University, M.S. Biology 2023
Matthew Nieland, Kansas State University, Ph.D. Biology 2023
Joshua Dimapilis, Kansas State University, 2019-2021
Jaide (Allenbrand) Hawkins, Kansas State University, M.S. Biology 2020
Priscilla Moley, Kansas State University, 2016-2018
Christine Carson, Kansas State University, M.S. Biology 2017

Undergraduate: Emely Abreu, Union College, MCM LTER REU, 2026; Michelle Thompson, KSU Biology, 2026-present; Roberto Maldonado Flores, KSU Biology, 2023-present; Xoie Blackburn, KSU Biology, 2024-present; Janeth Morales Miramontes (KSU Biology), Developing Scholars Program, 2024-2026; Maddie Dee, KSU Biology, 2024-2026; Rain Grace (KSU Biology), KNZ LTER REU, 2024-2026; Sebastean Wilhoite, KSU Biology, 2023-2025; Laura van Bergeijk, KSU Biology, 2023-2024; Alicia Pham (KU EEB), AIMS-UP summer researcher, 2024; Jessica Davis, KSU Medical Laboratory Science, LSAMP RiPS 2023; Caroline Gatschet, KSU Biology, 2022-2023; Rissa Garcia-Prudencio (Haskell Indian Nations University) REPS supplement, 2021-2022; Brooke Vogt, KSU Chemistry/Biochemistry, 2021-2022; Harley-Payj Leatherman, KSU Biology, 2021-2022; Diana Diaz (Florida Gulf Coast University), EPSCoR MAPS REU, 2021; Domnique Byrd, KSU Biology, 2021; Kiona Freeman, KSU Conservation Biology, 2019-2021; Brett Nave, KSU Microbiology, 2018-2020; Justin Brisendine, KSU Biology, 2019-2020; Nicholas Vega Anguiano (Humboldt State University) Konza LTER REU, 2019; Jessica Stanford, KSU Biological and Agricultural Engineering, 2017-2018; Janaye (Hanschu) Figge, KSU Biology, 2016-2018; Jordyn Fales, KSU Microbiology, 2017-2018; Matthew Nieland (Morningside University), K-State Biology REU, 2017; Victoria Floyd, KSU Pre-Med, 2014-2017; Charles Schaeffer, KSU Biology, 2016-2017; Emmi Mueller (University of Michigan), K-State Biology REU, 2016; Rebecca Malanchuk, KSU Microbiology, 2015-2016; Sean Morris, KSU Microbiology, 2015-2016; Katherine Culbertson (Harvard University), K-State Biology REU, 2015; Gabriel DeGange, USGS Alaska Science Center, 2014-2015; Christy Haughey, USGS Alaska Science Center, 2013-2014; Adam Lindsley, OSU, 2011-2012; Calvin Elser, OSU, 2010-2011; Michele

Noble, OSU, 2009-2010; Gurdeep Singh, UNM 2006-2007; Nathan Daves-Brody, UNM 2004-2006; Kris Mossberg, UNM 2003-2004

GRADUATE COMMITTEE

Ph.D. Bess Bookout, KSU Division of Biology, 2020-2025
M.S. Tiffany Poydras, KSU Department of Agronomy, 2022-2024
Ph.D. Elizabeth Wilson, KSU Department of Biology, 2018-2024
M.S. Kiona Freeman, KSU Landscape Architecture and Regional and Community Planning, 2021-2023
M.S. Hannah Dea, KSU Division of Biology, 2020-2023
M.S. Molly Fisher, KSU Division of Biology, 2021-2022
Ph.D. Patil Tawidian, KSU Department of Biology, 2019-2022
Ph.D. Zaw Wai Htoo, KSU Department of Food, Nutrition, Dietetics & Health, 2017-2022
M.S. Kyle Ismert, KSU Division of Biology, 2019-2022
Ph.D. Caitlin Broderick, KSU Division of Biology, 2018-2022
Ph.D. Priscila Guzman, KSU Division of Biology, 2017-2022
Ph.D. Leena Vilonen, Colorado State University Department of Biology, 2017-2022
M.S. Anna Shats, KSU Division of Biology, 2021
M.S. Janaye Hanschu, University of Kansas Ecology & Evolutionary Biology, 2019-2021
M.S. Anna Kazarina, KSU Division of Biology, 2019-2021
Ph.D. Samantha Fox, KSU Division of Biology, 2017-2021
Ph.D. Anne Schechner, KSU Division of Biology, 2017-2021
M.S. Javil Hansen, KSU Department of Geology, 2019-2021
Ph.D. Catherine Stewart, KSU Department of Agronomy, 2018-2021
Ph.D. Elina Adkhari, KSU Interdepartmental Genetics Program, 2019-2020 (outside chair)
Ph.D. Laura Starr, KSU Department of Agronomy, 2018-2020
Ph.D. Kent Connell, KSU Division of Biology, 2016-2020
Ph.D. Joshua Maher, KSU Department of Food Science, 2019-2020 (outside chair)
M.S. Emily Jones, KSU Department of Animal Science and Industry, 2018-2019
Ph.D. Laura Mino, KSU Division of Biology, 2017-2019
M.S. Christina Richardson, KSU Department of Geology, 2017-2019
Ph.D. Tiffany Carter, KSU Department of Agronomy, 2016-2019
Ph.D. Edwin Korba Akley, KSU Department of Agronomy, 2016-2019
Ph.D. Drew Scott, Southern Illinois University Department of Plant Biology, 2015-2018
Ph.D. Che-Jen Hsaio, KSU Department of Agronomy, 2015-2018
M.S. Sophie Higgs, KSU Division of Biology, 2015-2018
Ph.D. Shelby Servais, Florida International University Biological Sciences, 2014-2018
M.S. Kyle Marquart, KSU Department of Geology, 2016-2017
M.S. Erica Jacquay, KSU Department of Animal Science, 2015-2017
Ph.D. Allison Veach, KSU Division of Biology, 2014

STUDENT HONORS, AWARDS, FELLOWSHIPS

Matt Nieland: Chris Edler Award for Outstanding Research on Konza Prairie, 2023
Matt Nieland: KSU Biology Graduate Student Association Travel, Research, Finishing Awards, 2021, 2022, 2023
Nicholas Vega Anguiano: Golden Torch Award (most volunteer fire crew hours), 2023

Nicholas Vega Anguiano: KSU College of Arts & Sciences Research Travel Award, Spring 2023
Nicholas Vega Anguiano: Rachel Snyder Memorial Scholarship, Grassland Heritage Foundation, 2022
Matt Nieland: KSU College of Arts & Sciences Research Travel Award, Spring 2022
Matt Nieland: KSU Graduate Student Association Travel Award, 2022
Matt Nieland: KSU Biology Ecology & Evolutionary Biology Seminar: best slides, 2019; best overall presentation, 2020; best slides, 2021
Jaide Allenbrand: KSU Biology Ecology & Evolutionary Biology Seminar: best overall presentation, 2019; best science, 2020
Jaide Allenbrand: KSU College of Arts & Sciences Research Travel Award, Spring 2020
Matt Nieland: KSU College of Arts & Sciences Research Travel Award, Summer 2019
Jaide Allenbrand: Rachel Snyder Memorial Scholarship, Grassland Heritage Foundation, 2019
Priscilla Moley: KSU Biology Graduate Student Association Travel Award, 2018
Priscilla Moley: KSU Biology Ecology & Evolutionary Biology Seminar: best slides, 2017
Christine Carson: KSU College of Arts & Sciences Research Travel Award, Summer 2017
Janaye Hanschu: KSU College of Arts & Sciences Undergraduate Research Scholarship, Summer 2017
Victoria Floyd: KSU Biology Most Promising Undergraduate Student, Spring 2016
Christine Carson: Missouri Mycological Society Scholarship, 2016
Christine Carson: Science Communication Fellowship at the Sunset Zoo, 2016
Christine Carson: KSU Biology Graduate Student Association Research Award, 2016
Christine Carson: KSU Biology Ecology & Evolutionary Biology Seminar: best graduate student presentation, 2016

PEER REVIEW ACTIVITIES

PROPOSAL REVIEWER

Panelist: NSF DEB Population and Community Ecology Panelist 2023
NSF IOS Integrative Ecological Physiology Panelist 2022
NSF DEB Ecosystem Science Panelist 2021
NSF LTER Site Review Panelist 2020 and 2021
DOE Environmental System Science Linking Aboveground/Belowground Processes Panelist 2020
NSF Dimensions of Biodiversity Panelist 2018 (DEB and Integrated Organismal Studies (IOS))
NSF MacroSystems Biology and Early NEON Science Program Panelist 2017 (Divisions of Environmental Biology (DEB) and Emerging Frontiers (EF))
NSF Doctoral Dissertation Improvement Grant (DDIG) Panelist 2016 (DEB Ecosystem Science)
NSF DDIG Panelist 2014 (DEB Population & Community Ecology)

Ad-hoc: Various institutions, external reviewer of Promotion materials 2023, 2024
NSF DEB Ecosystem Science Ad-hoc 2024, 2023, 2020, 2016, 2015, 2014 and 2013
Chilean National Research and Development Agency 2023
DOE ESS Aboveground/Belowground Processes 2023
Israeli Ministry of Science and Technology Ad-hoc 2021
NSF DEB Population & Community Ecology Ad-hoc 2021
NSF GEO OPP Arctic Sciences Ad-hoc 2020

State of Hawaii Water Resources Research Institute Ad-hoc 2019
NSF IOS Excellence in Research Ad-hoc 2019
Deutsche Forschungsgemeinschaft (DFG) German Research Foundation, Life Sciences 1: Molecular and Organismic Biology Ad-hoc 2019
NSF DEB and USDA Plant-Biotic Interactions Ad-hoc 2016
NSF DEB Dimensions of Biodiversity Ad-hoc 2015
NSF CAREER (DEB Ecosystem Science) Ad-hoc 2014 and 2013
NSF CREST-RISE Ad-hoc 2012

Other: KSU KAWSE Postdoctoral Travel Grants, 2021
UNM Biology Graduate Student Association grants, 2007 and 2008
UNM Graduate and Professional Student Association, Spring 2006

JOURNAL REVIEWER (107 total)

ACS Earth & Space Chemistry (1), Applied & Environmental Microbiology (6), Applied Soil Ecology (5), Aquatic Microbial Ecology (1), Arctic Antarctic & Alpine Research (1), Biogeochemistry (11), Biology & Fertility of Soils (2), BioScience (1), Computational and Structural Biotechnology Journal (1), Ecological Applications (2), Ecology (3), Ecosphere (1), Ecosystems (2), Elementa (1), Environmental Microbiology (3), Extremophiles (3), FEMS Microbiology Ecology (2), Freshwater Science (Journal of the North American Benthological Society) (10), Frontiers in Microbiology (2), Freshwater Biology (2), Functional Ecology (1), Geoderma (2), Global Change Biology (4), International Society for Microbial Ecology (ISME) Journal (3), Journal of Environmental Management (2), Journal of Geophysical Research-Biogeosciences (4), Journal of Microbiology (1), Journal of Soil Science & Plant Nutrition (1), Limnology & Oceanography (1), Microbial Ecology (2), Nature Biofilms & Microbiomes (2), Nature Communications (1), Nature Ecology & Evolution (1), Nature Microbiology (1), New Phytologist (1), Oecologia (1), Pedosphere (2), PeerJ (2), Plant & Soil (2), PLOS One (1), Proceedings of the Royal Society B (2), Science of the Total Environment (1), Soil Biology & Biochemistry (6), Soil Science Society of America Journal (3), Wetlands (1)

PROFESSIONAL SERVICE AND OUTREACH

KSU Interim Dean of College of Arts & Sciences Search Committee, 2026.

KSU Department of Agronomy Biotechnology Faculty Search Committee: Synthetic Microbial Communities - Rhizosphere Interactions, 2025.

Member, KSU Indigenous Faculty-Staff Alliance, 2024-present. Support for local meetings including Indigenous People's day, recruitment of and participation in volunteer support of Indigenous community events such as the Kaw Nation Youth Powwow and the rematriation of Iⁿ'zhúje 'waxóbe (https://sacredredrock.com/allegawaho-park/).

McMurdo Dry Valleys LTER Executive Committee, 2023-present.

Konza Prairie Biological Station Fire Crew volunteer, 2015-present. Zeglin Lab received "Golden Torch Award" in 2023 for most collective volunteer hours that season.

Prairie Listening project, 2022-present: An ongoing collaboration with Kaw Nation citizen and language expert, Ms. Charlee Huffman. Goal, to establish a forward-thinking perspective on the relationship between people and prairie. See https://prairie-listening.weebly.com/ and open forum seminars in 2023 (44 attended, average 16 per session; 40%/60% researchers/educators, landowners, and other interested community members).

KSU Advancement of Women in Science and Engineering (KAWSE) Postdoctoral Award Committee member, 2021-present.
KSU Integrated Genomics Facility (IGF) Advisory Board member, 2021-present.
KSU Division of Biology Well-Being and Belonging Committee 2021-present; Chair, 2022-present.
LTER Network Broadening Participation Committee, Fundraising Subcommittee Chair, 2020-present.
KSU Division of Biology Seminar Committee, 2016-present.
KSU Division of Biology Ecology and Evolutionary Biology (EEB) Section Seminar Committee, 2016-present.
Konza LTER Diversity, Equity, and Inclusion (DEI) Committee 2020-2025, Chair 2020-2023.
Ecological Society of America (ESA) Soil Ecology Section: Council Representative, 2024; Chair, 2021-23; Vice-Chair, 2019-21; Secretary, 2017-19.
ESA Strategies for Ecology Education, Diversity and Sustainability (SEEDS) Field Trip host, Konza Prairie Biological Station (KBPS), 2023.
KSU Biology Graduate Programs review committee, 2023.
Kansas State University (KSU) Safe Zone Training 2015, 2018, Ally credentials 2022.
Trained Facilitator: Center for the Improvement of Mentored Experiences in Research (CIMER) Entering Mentoring Program, April 2022.
KBPS Advisory Committee Member, 2019-2020 (committee dissolved by KBPS Director).
National Ecological Observatory Network Aquatic Observational Sampling Strategy Technical Working Group, 2017-2020.
Women in Soil Ecology (national coordinated group) graduate student mentor. 2019-2020.
Scientific Steering Committee, Biogeochemistry group and Synthesis group co-leader, NSF LTER, "Konza Prairie LTER: Long-Term Research on Grassland Dynamics – Assessing Mechanisms of Sensitivity and Resilience to Global Change", 2014-2020.
KSU Microbial Ecology Discussion Group organizer, 2015- 2020: participants from 7 labs and 3 divisions/departments across 2 colleges (Biology, Agronomy, Animal Science).
KS-NSF-EPSCoR High School Teachers Summer Institute, 17-21 June 2019.
Rock Creek High School Girls in STEM Camp, 4 May 2019: Disturbance and biological interactions maintain tallgrass prairie.
Konza Prairie LTER Geographic Information Specialist search committee, 2019. Committee successfully hired Pam Blackmore.
Konza Prairie LTER Research Synthesis Symposium organizer, 2017; co-organizer, 2019.
Workshop leader: Facilitating greater integration of microbial ecology into LTER research. 2018. With K. DeAngelis (U. Mass), R. Rowher (U. Wisconsin), A. James (UCSB), Lee Stanish (NEON Inc.). LTER Network All-Scientists Meeting, Pacific Grove, CA.
Microbes of the Prairie Fact Sheet. 2018. L. H. Zeglin, J. Haukos, M. F. Kirk, and J. Allenbrand. Distributed by the Konza Prairie Biological Station & Konza Environmental Education Docent Program.
KSU Division of Biology Faculty Search Committee: Community Ecologist and Grassland Ecologist, 2018-2019. Committee successfully hired Drs. Allison Louthan and Zak Ratajczak.
Konza LTER Staff Annual Review Committee, 2017 and 2018.
KSU Division of Biology Faculty Search Committee: Microbial Metagenomicist, 2017-2018. Committee successfully hired Dr. Sonny Lee.

KSU Division of Biology Faculty Search Committee: Community Ecologist, 2017. Stepped off committee before conclusion of the search.

National Ecological Observatory Network Microbial Working Group, 2011-2017. Stepped off this Working Group to move onto a different NEON Working Group.

Konza Prairie Biological Station tour guide for various groups including Grassland Restoration National Meeting, The Nature Conservancy Prairie Celebration, National Soil Judging Competition: 2015, 2016, 2017.

REU selection committee, 2015, 2016, 2017; Morgan, Snyder PIs (Kansas State University), "Undergraduate Research in the Ecology and Evolution of Changing Environments: Mechanisms to Responses".

KSU Division of Biology Seminar host: Fall 2015, Spring 2017, Spring 2019.

KSU Division of Biology EEB section Seminar host: Spring 2016, Fall 2016, Spring 2017.

Coordinator, LTER Synthesis Working Group, "Synthesis of stream ecosystem responses to nutrient enrichment at multiple trophic levels", 2012-2016. Member, 2016-present. Handed leadership to Dr. Marcelo Ardón because I was overcommitted.

LTER Synthesis Working Group, "MASS-LOSS: Meta-Analysis & SynthesiS-Leaf decOmposition in StreamS", 2011-2016. Working Group only exists informally after the major product came out in 2016.

Society for Freshwater Science: Student presentation judge, 2015, 2016, 2019; Student-mentor mixer participant, 2015.

Panelist, KSU REU Program ethics discussion, Summer 2015 and 2016.

Konza Prairie Biological Station Edler Award selection committee member, 2015 and 2016.

KSU Division of Biology Ecology and Evolutionary Biology Section strategic planning group, Fall 2015/Spring 2016.

Session Moderator, Ecological Genomics Symposium, Manhattan, KS, 2015.

NEON/CZO microbial ecology intercomparison with cyberinfrastructure-enabled data synthesis workshop, invited participant, Argonne, IL, 2015.

KSU Division of Biology, Ecology and Evolutionary Biology Section Graduate Presentations judge, Fall 2015, Fall 2014.

Field research highlighted in local newspaper (Adak, AK) via Alaska Maritime Fish & Wildlife Refuge (AMNWR): The Adak Eagle's Call September 2015 Volume 4 Issue 9, p. 3.

Scientific consultant (*gratis*): "The Friendly Microbe Coloring Book", by Artist Jessica Zeglin. Made for *The Floating Library* at Silverwood Park, MN, Summer 2015.

KSU Division of Biology, Konza Graduate Student Forum judge, Spring 2015.

STREON (STReam Ecological Observatory Network) Working Group, 2008-2015. Working Group dissolved when STREON was descoped.

NEON Advanced Analysis of Genomic Data in Microbial Ecology Research Workshop invited participant, Boulder, CO, 2014.

Session Chair, "Stream microbial ecology: where are we now and where are we going", Joint Aquatic Sciences Meeting, Portland, OR, 2014.

Graduate Student Representative, Sevilleta LTER, 2007-2008.

Session Co-chair, "Biogeochemistry in Polar Environments", American Geophysical Union Fall Meeting, 2007.

Chair, 3% Award Student Committee, UNM Department of Biology, 2005-2006.

New Graduate Student Representative, UNM Department of Biology, 2005-2006.

President, Biology Graduate Student Association. UNM Department of Biology, 2004-2005.

Biology Department Student Representative to the University Graduate and Professional Student Association. UNM, 2003-2004.

SEMINARS AND PRESENTATIONS

*INVITED SEMINARS AND TALKS *undergraduate author **undergraduate presenter*

L. H. Zeglin. 2026. Bison and cattle influences on the tallgrass prairie soil microbiome. Midwest Microbiome Conference, University of Illinois-Champaign.

L. H. Zeglin. 2026. Microbial ecology in tallgrass prairie soils. Department of Biology, Pittsburg State University.

L. H. Zeglin. 2025. Microbial biodiversity and ecosystem function from local to global scales. Ecology and Evolutionary Biology Department, Iowa State University.

L. H. Zeglin. 2023. Microbial resilience to global changes: Unexpected legacies with functional consequences. Ecology and Evolutionary Biology Department, University of Kansas.

L. H. Zeglin. 2022. Working towards diversity, equity, and inclusion in site-based scientific research. Geography and Atmospheric Sciences Department, University of Kansas.

L. H. Zeglin. 2022. Watershed connectivity and microbial diversity in perennial and intermittent streams. Montana Aquatic Research Conference, Flathead Lake Biological Station, MT.

L. H. Zeglin, B. A. Sikes and S. T. M. Lee. 2021. Impacts of precipitation on terrestrial-aquatic microbiome connectivity. ESA Annual Meeting, Virtual.

L. H. Zeglin and A. M. Veach. 2020. Rainfall timing legacy affects soil microbial population, community and functional responses to drying-rewetting. ESA Annual Meeting, Virtual.

L. H. Zeglin. 2020. Invited Panelist: Ecology Underground, Virtual Live Events on Belowground Ecology, https://ecologyunderground.github.io/

L. H. Zeglin. 2019. Small organisms are indicators of big changes: Landscape and decadal scale shifts in soil microbiome structure and function. Department of Plant Pathology Seminar, Kansas State University.

L. H. Zeglin, Microbes of the Prairie. Public Seminar: 21 August 2019. The Land Institute, Salina, KS.

L. H. Zeglin, Microbes of the Prairie. Public Seminar: 22 August 2019. Tallgrass Range School, Camp Wood YMCA, Elmdale, KS.

L. H. Zeglin, J. Hanschu, A. J. Burgin, M. Kelly, E. Overstreet, M. Nieland. 2019. Large river microbial community structure and function is affected by inputs of a fertilizer-enriched inoculum. Society for Freshwater Science Annual Meeting, Salt Lake City, UT. Special Session, Invited: Bridging the lotic-microbial gap: understanding drivers of microbial diversity in stream ecosystems.

L. H. Zeglin, Microbes of the Prairie. Public Seminar: 2 April 2019. Konza Prairie Biological Station & Konza Environmental Education Docent Program.

L. H. Zeglin. 2018. Small organisms are indicators of big changes: Landscape and decadal scale shifts in soil microbiome structure and function. Ecological Genomics Symposium, Kansas State University.

L. H. Zeglin. 2017. Disturbance and soil microbes: How small organisms respond to big changes. Department of Natural Resources and Environmental Sciences Seminar, University of Illinois, Champaign-Urbana, IL.

L. H. Zeglin, B. Wang, F. A. Rainey, C. Waythomas and S. L. Talbot. 2017. Recovery of heterotrophic communities following the 2008 eruption of Kasatochi Volcano on Kasatochi Island, Alaska. Ecological Society of America Annual Meeting, Portland, OR.

Special Session: Volcano Ecology.

L. H. Zeglin. 2017. Disturbance and soil microbes: How small organisms respond to big changes. Department of Biological Sciences Seminar, Wichita State University, Wichita, KS.

L. H. Zeglin, C. N. Dahm, C. L. Crenshaw, R. W. Sheibley and C. D. Takacs-Vesbach. 2016. Watershed hydrology, not nutrient chemistry, is related to microbial diversity in stream surface and subsurface waters. Ecological Society of America Annual Meeting, Ft. Lauderdale, FL. Special Session: Subsurface Microbial Ecology.

L. H. Zeglin. 2015. Microbial colonization and activity on post-eruption Kasatochi Volcano, Alaska. Alaska Maritime Wildlife Refuge, Homer, AK.

L. H. Zeglin. 2015. Experiences with and potential for successful cross-site and cross-network microbial ecology studies. "LTER based perspectives on analyzing microbial community structure, function, and process" workshop. Long-term Ecological Research Program All-Scientists Meeting, Estes Park, CO.

L. H. Zeglin. 2015. Microbial mechanisms of drought tolerance and the implications for grassland soil carbon storage. Ecological Genomics Symposium, Kansas State University.

L. H. Zeglin. 2014. Microbial colonization and activity on recent tephra deposits, Kasatochi Volcano, Alaska. Department of Geology Seminar, Kansas State University.

L. H. Zeglin. 2014. Diversity and function of soil microbiota following volcanic eruption on Kasatochi Island. Division of Biology EEB Seminar, Kansas State University.

L. H. Zeglin. 2014. Science Center Seminar, USGS Alaska Science Center

L. H. Zeglin. 2014. Department of Biological Sciences Seminar, University of Alaska Anchorage

L. H. Zeglin. 2013. Division of Biology Seminar, Kansas State University

L. H. Zeglin. 2013. Kellogg Biological Station Seminar, Michigan State University

L. H. Zeglin. 2012. The value of cross-ecosystem comparisons to the study of stream microbial diversity and function. Society for Freshwater Science Annual Meeting, Louisville, KY.

L. H. Zeglin. 2012. Department of Ecology and Evolutionary Biology Seminar, University of Kansas

L. H. Zeglin. 2012. Department of Biological Sciences Seminar, Virginia Tech

L. H. Zeglin. 2012. Department of Crop, Soil and Environmental Sciences Seminar, Virginia Tech

L. H. Zeglin. 2010. Department of Crop and Soil Sciences Seminar, Oregon State University

L. H. Zeglin. 2009. Bacterial biofilm communities in streams: structure, function and food web interactions. Oregon Hatchery Research Center Advisory Committee, Alsea, OR.

L. H. Zeglin. 2009. Department of Fisheries and Wildlife Stream Team Seminar, Oregon State University

L. H. Zeglin, C. L. Crenshaw, C. N. Dahm, R. W. Sheibley, C. D. Takacs-Vesbach. 2008. Hyporheic zone bacterial community structure and nutrient transformation in intermittent desert streams. Annual Meeting of the North American Benthological Society, Salt Lake City, UT.

L.H. Zeglin, C. D. Vesbach, C.N. Dahm, J.E. Barrett, M.N. Gooseff. 2006. Nitrogen cycling and bacterial diversity in hot and cold desert stream margins. American Geophysical Union Fall Meeting, San Francisco, CA.

L. H. Zeglin, D. J. Van Horn, C. N. Dahm, G. P. Oelsner, P. D. Brooks. 2006. Controls on water quality in a highly managed arid-land river. Annual Meeting of the North American Benthological Society, Anchorage, AK.

*CONTRIBUTED PRESENTATIONS (ORAL) *undergraduate author **undergraduate presenter*

C. R. Utzman, A. L. K. Tchamba, S. Flynn, **L. H. Zeglin**. 2026. Flow regime shifts alter microbial extracellular enzyme production in non-perennial river systems. Society for Freshwater Sciences Annual Meeting, Spokane, Washington.

D. Roberts, M. Halsey, R. Maldonado Flores*, and **L. H. Zeglin**. 2026. The Impact of Non-perennial Flow Regimes and Urban Land Use on Headwater Stream Microbial Community Composition and Extracellular Enzyme Activities. Society for Freshwater Sciences Annual Meeting, Spokane, Washington.

L. H. Zeglin and M. Halsey. 2026. Intraseasonal covariation in autotrophic and heterotrophic microbial function in a non-perennial polar stream. Society for Freshwater Sciences Annual Meeting, Spokane, Washington.

A. Winstead, E. Broemmelsiek, M. Halsey, N. Vega Anguiano, **L. H. Zeglin**. Fire frequency and grazing affect N cycling and retention in a tallgrass prairie ecosystem. 2026. Kansas Natural Resources Conference, Manhattan, KS.

L. H. Zeglin, E. Broemmelsiek, J. Figge, C. Gatschet, and A. Winstead. Bison grazing influences fire frequency effects on soil carbon. 2026. Kansas Natural Resources Conference, Manhattan, KS.

M. M. Zaret, X. Blackburn*, M. K. Halsey, **L. H. Zeglin**. 2025. Bison grazing can modify the diversity-function relationships of soil nitrogen cycling microbes. Ecological Society of America Annual Meeting, Baltimore, MD.

C. R. Utzman, D. P. Roberts, A. Pham*, **L. H. Zeglin**. 2025. Flow permanence influences carbon dioxide and methane production in streambed sediments. Society for Freshwater Sciences Annual Meeting, San Juan, Puerto Rico.

L. H. Zeglin, L. van Bergeijk, N. Aranda, M. Halsey, B. Krzysiak, R. Morgan-Kiss. 2025. Microbial functional and diversity potential preceding seasonal rewetting of ephemeral streams in the McMurdo Dry Valleys, Antarctica. Society for Freshwater Sciences Annual Meeting, San Juan, Puerto Rico.

D. M. McKnight, K. Cawley, **L. H. Zeglin**. 2025. Dissolved organic matter biogeochemistry in the McMurdo Dry Valleys, Antarctica: varying chemical quality of microbially-derived DOM in glacial meltwater streams. European Geophysical Union Annual Meeting, Vienna, Austria.

D. Roberts, J. Brisendine, K. Freeman*, A. Wolher, S. G. Thomas, and **L. H. Zeglin**. 2024. Aridity predicts stream microbial community composition and function better than land use across a broad spatial gradient. Great Plains Limnology Conference, Omaha, NE.

L. H. Zeglin, J. D. Figge, K. Decker, and E. Smith. 2024. Monitoring effects of bioremediation in a Kansas urban pond with a persistent toxic cyanobacterial bloom. Great Plains Limnology Conference, Omaha, NE.

L. H. Zeglin, N. Vega Anguiano, C. Carson, K. Freeman, J. Hanschu, J. Hawkins. 2024. Soil history constrains grazing effects on microbial diversity and nutrient cycling processes across the Great Plains. 2024. Natural Areas Conference, Manhattan, KS.

E. Broemmelsiek and **L. H. Zeglin**. Fire and Grazing Management Effects on Soil Nutrient Cycling. 2024. Natural Areas Conference, Manhattan, KS.

M. Zaret and **L. H. Zeglin**. 2024. Bison and fire interactively modify microbial metacommunity dynamics. Ecological Society of America Annual Meeting, Long Beach, CA.

D. Roberts, J. Brisendine, K. Freeman*, A. Wolher, S. G. Thomas, and **L. H. Zeglin**. 2024. Aridity predicts stream microbial community composition and function better than land use across a broad spatial gradient. Ecological Society of America Annual Meeting, Long Beach, CA.

J. Ajowele, S. E. Koerner, K. J. Komatsu, **L. H. Zeglin**, M. L. Avolio, K. R. Wilcox. 2024. Impacts of fire and grazing heterogeneity on ecosystem functions in tallgrass prairie. Ecological Society of America Annual Meeting, Long Beach, CA.

E. Broemmelsiek, J. Davis*, J. Figge, C. Gatschet, and **L. H. Zeglin**. 2024. Fire and grazing management effects on soil health metrics of carbon and nitrogen cycling. Kansas Natural Resources Conference, Manhattan, Kansas.

L. H. Zeglin, K. Freeman*, C. Gatschet, K. C. Olson, A. Tajchman. 2024. Season of burn effects on soil carbon and microbial biodiversity. Kansas Natural Resources Conference, Manhattan, Kansas.

M. A. Nieland and **L. H. Zeglin**. 2023. Burning decreases grassland sensitivity, and increases resilience, to nitrogen fertilization. Ecological Society of America Annual Meeting, Portland, Oregon.

N. Vega Anguiano, R. Garcia-Prudencio*, and **L. H. Zeglin**. 2023. Does grazing by bison and cattle have a similar impact on tallgrass prairie N-cycling? Ecological Society of America Annual Meeting, Portland, Oregon.

R. Ramos, B. A. Nave, Jr., C. T. Bond, K. A. Kuehn, C. Wheeler, K. Aho, A. J. Burgin, Y. You, **L. H. Zeglin**. 2023. Patterns of microbial abundance and diversity relating to discontinuity in a non-perennial Kansas stream. Ecological Society of America Annual Meeting, Portland, Oregon.

J. D. Figge, K. Decker, E. Smith, and **L. H. Zeglin**. 2023. Monitoring effects of bioremediation in a Kansas urban pond with a persistent toxic cyanobacterial bloom. Kansas Governor's Water Conference, Manhattan, KS.

N. Vega Anguiano, R. Garcia-Prudencio*, and **L. H. Zeglin**. 2023. Does grazing by bison and cattle have a similar impact on tallgrass prairie N-cycling? Kansas Natural Resources Conference, Manhattan, Kansas.

K. Freeman, L. Skabelund, T. Moore, **L. H. Zeglin**. 2023. The potential impacts of urban land development and management on soil health and function. Kansas Natural Resources Conference, Manhattan, Kansas.

L. H. Zeglin, N. Vega Anguiano, C. Carson, K. Freeman, J. Hanschu, J. Hawkins. Soil health and microbial activity in Flint Hills rangelands. 2023. Kansas Natural Resources Conference, Manhattan, Kansas.

M. A. Nieland and **L. H. Zeglin**. 2022. Burning decreases grassland sensitivity, and increases resilience, to nitrogen fertilization. Ecological Society of America Annual Meeting, Montréal, Québec, Canada.

L. H. Zeglin, Rachel M. Keen, E. Greg Tooley, Jesse Nippert. 2022. Particulate soil carbon loss through priming in response to woody encroachment of a tallgrass prairie ecosystem. Ecological Society of America Annual Meeting, Montréal, Québec, Canada.

C. M. Broderick, K. M. Freeman*, **L. H. Zeglin**, and J. M. Blair. 2022. Historic precipitation regimes alter current N cycling in tallgrass prairie. Ecological Society of America Annual Meeting, Montréal, Québec, Canada.

L. H. Zeglin, J. Brisendine, K. Freeman*, A. Wohler, A. J. Burgin, W. K. Dodds, M. Foster*, P. Hansen, M. F. Kirk, S. T. M .Lee, T. Semenova-Nelsen, B. Sikes, S. G. Thomas, C. Tobler, M. VanderPutten*. 2022. Assessing terrestrial-aquatic microbiome connectivity across a regional precipitation gradient. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

A. J. Burgin, K. Aho, D. Allen, C. L. Atkinson, J. Benstead, J. Brooks-Keiffer, S. Godsey, R. Hale, C. Jackson, J. T. Johnson, N. Jones, K. A. Kuehn, D. Lemke, K. Lohse, J. Meisel, E. C. Seybold, A. J. Shorgren, Y. You, **L. H. Zeglin**, S. C. Zipper, S. C. Cook, B. L. Richards, S. Speir, S. G. Thomas, A. Belskis, E. Bilbrey, C. T. Bond, C. L. Brown, H. Czech, S. M. Flynn, A. L. K. Tchamba, T. Kerner, R. S. Lanfear, L. Swanson, B. A. Nave, Jr., D. Peterson, C. Smith, C. Wheeler, J. F. Wilhelm, M. A. Wolford. 2022. Building the AIMS Network: Exploring the Aquatic Intermittency effects of Microbiomes in Streams. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

J. Hanschu, **L. H. Zeglin**, A. N. Pruitt, A. J. Burgin. 2022. Nitrogen form and concentration effects on biomass, toxins, and the microbiome in contrasting lakes. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

A. L. K. Tchamba, B. A. Nave, Jr., C. T. Bond, **L. H. Zeglin**, K. A. Kuehn, A. Burgin, C. Jackson. 2022. Extracellular enzyme activity of leaf litter and sediment in an intermittent stream system. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

M. A. Nieland, V. Floyd*, C. M. Carson and **L. H. Zeglin**. 2022. Fire influences tallgrass prairie recovery from nitrogen fertilization. Kansas Natural Resources Conference, Manhattan, KS.

N. Vega Anguiano, K. Freeman* and **L. H. Zeglin**. 2022. Do bison and cattle grazed landscapes harbor any differences in N cycling microbes? Kansas Natural Resources Conference, Manhattan, KS.

L. H. Zeglin, H. I. Dea, R. Keen, E. G. Tooley and J. B. Nippert. 2022. Soil carbon cycling at depth changes following woody encroachment of tallgrass prairie. Kansas Natural Resources Conference, Manhattan, KS.

M. A. Nieland, V. Floyd*, C. M. Carson and **L. H. Zeglin**. 2021. Above- and belowground responses to increased N and P availability from chronic fertilization and fire suppression. ESA Annual Meeting, Virtual.

N. Vega Anguiano, K. Freeman* and **L. H. Zeglin**. 2021. Do bison and cattle grazed landscapes harbor any differences in N cycling microbes? ESA Annual Meeting, Virtual.

L. H. Zeglin, A. J. Burgin, K. Cochran, J. Hanschu, Y. Hiripitiyage, M. Kirk, B. Nave, E. Overstreet, B. Sturm, S. Thomas, M. VanderPutten*. 2021. Whole-microbial community assembly across the river continuum. Society for Freshwater Science Annual Meeting, Virtual.

J. R. Dimapilis, J. Hanschu, A. J. Burgin, M. Kirk, A. Pruitt*, S. Thomas, M. VanderPutten*, **L. H. Zeglin**. Watershed row-crop agriculture does not correlate with microbial nitrogen cycling genetic potential across a gradient of eastern Kansas streams. 2021. Society for Freshwater Science Annual Meeting, Virtual.

M. A. Nieland, P. Moley, J. Allenbrand, J. Hanschu* and **L. H. Zeglin**. 2020. Differential recovery of soil microbial functional groups and ecosystem functions following cessation of chronic fertilization. ESA Annual Meeting, Virtual.

J. Allenbrand and **L. H. Zeglin**. 2020. Bison grazing effects on soil microbial communities across Great Plains prairies. ESA Annual Meeting, Virtual.

L. H. Zeglin, C. Carson, J. Hanschu, P. Moley, M. Nieland. 2020. Fire history and fertilization changes tallgrass prairie soil fertility and microbial diversity. Kansas Natural Resources Conference, Manhattan, KS.

J. Allenbrand and **L. H. Zeglin**, 2020. Bison grazing and fire impact tallgrass prairie soil carbon and nitrogen cycling and microbial diversity. Kansas Natural Resources Conference, Manhattan, KS.

L. H. Zeglin, J. Allenbrand, K. Connell, P. Moley, P. Guzman, E. K. Akley, C. Carson, T. Carter, N. Noortebaert. 2019. Grassland fire and grazing management affects soil microbial diversity and heterogeneity. ESA Annual Meeting, Louisville, KY.

M. C. Kelley, A. J. Burgin, **L. H. Zeglin**. 2019. Supply and demand: Understanding how large-scale microbial community change alters riverine processing using coupled diel nitrate and metabolism. Society for Freshwater Science Annual Meeting, Salt Lake City, UT.

A. J. Burgin, **L. H. Zeglin**, M. C. Kelley, J. Hanschu, M. Nieland. 2019. Whole river estimates of denitrification in response to a large-scale nitrogen enrichment of the Kansas River (USA). Society for Freshwater Science Annual Meeting, Salt Lake City, UT.

M. Ardón, **L. H. Zeglin,** R. M. Utz, S. D. Cooper, W. K. Dodds, B. Bixby, A. Burdett, N. Griffiths, T. Harms, L. T. Johnson, S. L. Johnson, J. Jones, J. S. Kominoski, W. McDowell, A. Rosemond, M. Trentman, J. J. Follstad Shah, D. Van Horn and A. Ward. 2019. Experimental nutrient enrichment stimulates multiple trophic levels through algal and detrital food web pathways: A global meta-anlaysis from streams and rivers. Society for Freshwater Science Annual Meeting, Salt Lake City, UT.

A. J. Burgin, **L. H. Zeglin**, M. C. Kelley, J. Hanschu, E. Overstreet. 2018. Are biogeochemical responses linked to the microbial composition of a defined nutrient and microbial input to a large river? Kansas Governor's Water Conference, Manhattan, KS.

M. F. Kirk, Q. Jin, T. Flynn, **L. H. Zeglin**. 2018. PH dependent interactions between iron reduction and methanogenesis suggest a new model for methanogenesis. Geological Society of America, Indianapolis, IN.

A. J. Burgin, **L. H. Zeglin**, M. C. Kelley, C. Thompson, J. Hanschu. 2018. Are biogeochemical responses linked to the microbial composition of a defined nutrient and microbial input to a large river? Great Plains Limnology Meeting, Lawrence, KS.

L. H. Zeglin, A. J. Burgin, J. Hanschu, Y. Hiripitiyage, B. Sturm, P. Sullivan, S. Thomas, W. K. Dodds. 2018. Linking the aquatic microbiome and water quality across the precipitation and land-use gradients of Kansas. Great Plains Limnology Meeting, Lawrence, KS.

P. Moley, J. Hanschu, M. Nieland, **L. H. Zeglin**. 2018. Differential responses of N-cycling soil microbial functional groups to cessation of chronic fertilization. Ecological Society of America Annual Meeting, New Orleans, LA.

D. S. Finn, L. M. Tronstad, S. Hotaling, J. J. Giersch, R. J. Bixby, **L. H. Zeglin**. 2018. Alpine streams fed by subterranean ice as potential climate refugia for temperature-sensitive taxa. Society for Freshwater Sciences Annual Meeting, Detroit, MI.

A. J. Burgin, **L. H. Zeglin**, M. C. Kelley, C. Thompson, J. Hanschu, P. Moley. 2018. Are biogeochemical responses linked to the microbial composition of a defined nutrient and microbial input to a large river? Society for Freshwater Sciences Annual Meeting, Detroit, MI.

E. Jones, E. Jacquay, J. Kouba, J. Lillich, **L.H. Zeglin**. Foal gut microbiome resembles parental mare gut microbiome within months after birth. 2018. American Society of Animal Science Midwest Section Meeting, Omaha, NE.

L. H. Zeglin. 2017. Stream microbial structure and function: a semi-quantitative metaanalysis. Great Plains Limnology Meeting, Columbia, MO.

C. Carson and **L. H. Zeglin.** 2017. Grassland soil microbial community turnover in response to long-term nitrogen management. Ecological Society of America Annual Meeting, Portland, OR.

E. Mueller and **L. H. Zeglin. 2017. Soil microbial diversity and ecology in response to nitrogen additions. Annual National Council on Undergraduate Research, Memphis, TN.

C.-J. Hsiao, G. F. Sassenrath, C. W. Rice, **L. H. Zeglin** and G. M. Hettiarachchi. 2016. Soil microbial communities in claypan soils. Soil Science Society of America Annual Meeting, Phoenix, AZ.

L. H. Zeglin, J. Blair, C. Carson, M. Carson, *V. Floyd, *E. Mueller. 2016. Microbial feedbacks to soil N availability in tallgrass prairie following 30-year experimental burning and fertilization treatments. International Long-Term Ecological Research Meeting, Skukuza, South Africa.

E. Mueller and **L. H. Zeglin. 2016. Effects of nitrogen addition on belowground microbial diversity and ecology. K-State Biology REU Symposium, Manhattan, KS.

L. H. Zeglin, C. N. Dahm, C. L. Crenshaw, R. W. Sheibley and C. D. Takacs-Vesbach. 2016. Microbial diversity in desert streams is related to geochemistry and surface - subsurface interaction. Society for Freshwater Science Annual Meeting, Sacramento, CA.

J. J. Follstad Shah, C. Crenshaw, M. Harner, D. McDonnell, T. Tibbets, and **L. H. Zeglin.** 2016. Cliff Dahm's leadership influence on the Freshwater Sciences Interdisciplinary Doctoral Program. Society for Freshwater Science Annual Meeting, Sacramento, CA.

K. A. Marquart, B. H. Wilson, **L. H. Zeglin,** D. S. Vinson, T. M. Flynn and M. F. Kirk. 2015. Pathway of microbial methanogenesis varies with formation water salinity in a coalbed methane reservoir. Geological Society of America Annual Meeting, Baltimore, MD.

L. Zeglin, B. Wang, F. Rainey, C. Waythomas and S. Talbot. 2015. Links between soil organic matter input & microbial community structure following volcanic eruption on Kasatochi Island, Alaska. Ecological Society of America Annual Meeting, Baltimore, MD.

A. Veach and **L. H. Zeglin.** Microbial mechanisms of drought tolerance and the implications for grassland soil carbon storage. 2015. Ecological Society of America Annual Meeting, Baltimore, MD.

K. Culbertson, A. Veach and **L. H. Zeglin. 2015. Got Carbon? Investigating Organic Nutrient Sources Among Biofilm and Sediment Communities Throughout a Prairie Stream Network. K-State Biology REU Symposium, Manhattan, KS.

L. H. Zeglin, A. Veach. Microbial mechanisms of drought tolerance and the implications for grassland soil carbon storage. 2015. Konza Prairie Long-term Ecological Research Program Annual Symposium, Manhattan, KS.

L. H. Zeglin, R. M. Utz, S. D. Cooper, W. K. Dodds, M. Ardón, B. Bixby, A. Burdett, N. Griffiths, T. Harms, L. T. Johnson, S. L. Johnson, J. Jones, J. S. Kominoski, W. McDowell, A. Rosemond, M. Trentman, J. J. Follstad Shah, D. Van Horn and A. Ward. 2015. Synthesis of stream ecosystem responses to nutrient enrichment at multiple trophic levels. Society for Freshwater Science Annual Meeting, Milwaukee, WI.

L. H. Zeglin, M. M. David, R. Sharma, E. Prestat, P. J. Bottomley, A. Jumpponen, C. W. Rice, S. G. Tringe, N. C. VerBerkmoes, R. L. Hettich, J. K. Jansson , D. D. Myrold. 2014. Microbial community and functional responses to rainfall manipulations in a prairie soil. Soil Science Society of America Annual Meeting, Long Beach, CA.

M. M. David, **L. H. Zeglin,** R. Sharma, E. Prestat, P. J. Bottomley, A. Jumpponen, C. W. Rice, S. G. Tringe, N. C. VerBerkmoes, R. L. Hettich, J. K. Jansson , D. D. Myrold. 2014. Microbial community and functional responses to rainfall manipulations in a prairie soil. International Society of Microbial Ecology Annual Meeting, Seoul, South Korea.

L. H. Zeglin. 2014. Stream microbial structure and function: a semi-quantitative metaanalysis. Joint Aquatic Sciences Meeting, Portland, OR.

L. H. Zeglin, M. M. David, P. J. Bottomley, R. L. Hettich, J. K. Jansson, A. Jumpponen, C. W. Rice, S. G. Tringe, N. C. VerBerkmoes, D. D. Myrold. Microbial functional response to altered precipitation timing and duration – implications for the soil carbon cycle.
2012 Argonne Soil Metagenomics Meeting, Chicago, IL.
2012 Ecological Society of America Annual Meeting, Portland, OR.

J. J. Follstad Shah, M. Ardon, J. Kominoski, W. Dodds, M. Gessner, N. Griffiths, S. Johnson, A. Lecerf, C. LeRoy, D. Manning, A. Rosemond, C. Swan, J. Webster, **L. H. Zeglin**. MASS LOSS: A quantitative synthesis of leaf decomposition in streams and rivers.
2012 Society for Freshwater Science Annual Meeting, Louisville, KY.

L. H. Zeglin, A. E. Taylor, D. M. Myrold, P. J. Bottomley. Soil nitrification properties and bacterial and archaeal nitrifier communities vary by land management.
2010 Soil Science Society of America Annual Meeting, Long Beach, CA.

M. Keiluweit, P. Nico, **L. Zeglin**, J. Pett-Ridge, P. Weber, D. Myrold & M. Kleber. C & N Dynamics in Soil Microstructures: A Joined STXM/NEXAFS & NanoSIMS Approach.
2010 Goldschmidt Conference, Knoxville, TN.

L. H. Zeglin, C. N. Dahm, R. L. Sinsabaugh, J. E. Barrett, M. Gooseff, and C. D. Takacs-Vesbach. Microbial taxonomic and functional diversity in parafluvial sediments of cold and hot desert streams.
2007 McMurdo Dry Valleys LTER Annual Symposium, Boulder, CO.
2007 Annual Meeting of the North American Benthological Society, Columbia, SC.
2006 Sevilleta LTER/REU Summer Seminar Series. Socorro, NM.

L. H. Zeglin, D. J. Van Horn, C. N. Dahm, G. P. Oelsner, P. D. Brooks. Controls on water quality in a highly managed arid-land river.
2006 New Mexico Water Resources Research Symposium. Socorro, NM.

L. H. Zeglin, M. Stursova, R. L. Sinsabaugh, S. L. Collins. Soil enzyme activity and response to N deposition in three grasslands.
2006 Sevilleta LTER Annual Symposium. Socorro, NM.

C.L. Crenshaw, A.D. Pershall, C.N. Dahm, R.W. Sheibley, N.B. Grimm, **L.H. Zeglin**. Nitrate dynamics in stream hyporheic zones assessed using $^{15}N–NO_3$ tracer.
2004 Annual Meeting of the North American Benthological Society. Vancouver, B.C.

R.W. Sheibley, N.B. Grimm, C.L. Crenshaw, C.N. Dahm, H. Van Vleck, A.D. Pershall, **L.H. Zeglin**. Methods of measuring nutrient spiraling in urban streams.
2004 Annual Meeting of the North American Benthological Society. Vancouver, B.C.

N.B Grimm, R.Sheibley, C. Crenshaw, C.N. Dahm, A. Pershall, W. Roach, H. Van Vleck, **L. H. Zeglin**. Urban stream management and nitrogen retention efficiency in desert streams.
2004 Annual Meeting of the North American Benthological Society. Vancouver, B.C.

L. H. Zeglin, D. Pennington, R. Parmenter, J. Gosz , J. Brunt. Assessing semi-arid grassland recovery from grazing using multispectral imagery.
2003 Annual Meeting of the Ecological Society of America, Savannah, GA.

*CONTRIBUTED PRESENTATIONS (POSTER) *undergrad author **undergrad presenter*

M. Halsey, J. Adams, J. Behrens, R. Brown, M. Kurz, N. Griffiths, D. Roberts, S. Tiegs, **L. H. Zeglin**. 2025. Microbial decomposition of organic matter in Appalachian streams. Ecological Society of America Annual Meeting, Baltimore, MD.

A. Winstead, M. Halsey, **L. H. Zeglin**. 2025. Effects of bison grazing on N cycling and retention in a Tallgrass Prairie ecosystem. Ecological Society of America Annual Meeting, Baltimore, MD.

R. Grace, c. huffman, **L. H. Zeglin**. Restoration gardening and reconnection of people and land. 2025. Ecological Society of America Annual Meeting, Baltimore, MD.

D. Roberts, M. Podar, **L. H. Zeglin**. 2025. Urban land use exacerbates non-perennial stream microeukaryotic community dissimilarity. Society for Freshwater Sciences Annual Meeting, San Juan, Puerto Rico.

C. Utzman, A. Pham*, D. Roberts, **L. H. Zeglin**. 2024. Flow permanence influences on carbon dioxide and methane production in streambed sediments. Great Plains Limnology Conference, Omaha, NE.

L. van Bergeijk, N. Aranda, **L. H. Zeglin**. 2024. Impact of Antarctic stream benthic mats on microbial communities in underlying sediments. Great Plains Limnology Conference, Omaha, NE.

E. Broemmelsiek, J. Davis*, J. Figge, C. Gatschet, and **L. H. Zeglin**. 2024. Grazing and fire frequency interactively affect soil carbon and nitrogen cycling. Ecological Society of America Annual Meeting, Long Beach, CA.

C. Utzman, A. Pham*, D. Roberts, **L. H. Zeglin**. 2024. Flow permanence influences on carbon dioxide and methane production in streambed sediments. Ecological Society of America Annual Meeting, Long Beach, CA.

J. Davis**, J. Figge, C. Gatschet, E. Broemmelsiek, and **L. H. Zeglin**. 2023. The effects of fire and grazing on soil carbon cycling in a tallgrass prairie. Summer Undergraduate Research Symposium, Kansas State University, Manhattan, KS.

L. H. Zeglin, N. Vega Anguiano, K. Freeman, J. Hanschu, J. Hawkins. 2023. Soil type constrains grazing effects on microbial diversity and nitrogen cycling processes across the Great Plains. Ecological Society of America Annual Meeting, Portland, Oregon.

B. A. Nave, Jr., C. T. Bond, S. C. Cook, C. Wheeler, E. C. Seybold, S. C. Zipper, Y. You, K. A. Kuehn, T. Kerner, A. J. Burgin, **L. H. Zeglin**. 2023. Bacterial and Fungal Abundance Responses to Hydrological Dynamics in an Intermittent Stream. Ecological Society of America Annual Meeting, Portland, Oregon.

L. H. Zeglin, C. Bond, J. Brisendine, K. Freeman*, S. Lee, T. Semenova-Nelsen, P. Hansen, T. Kerner, B. J. Nave, A. L. K. Tchamba, R. J. Ramos, A. Wohler, Y. You, K. Aho, A. J. Burgin, C. Jackson, K. Kuehn, E. Seybold, B. A. Sikes, L. Swenson, S. G. Thomas, C. Wheeler, S. Zipper. 2022. *Invited*: Assessing terrestrial-aquatic microbiome connectivity in non-perennial streams. American Geophysical Union Annual Meeting, Chicago, IL.

R. J. Ramos, A. J. Burgin, K. Cochran, J. Hanschu, D. Hiripitiyage, M. Kirk, E. Overstreet, B. Sturm, S. Thomas, M. VanderPutten*, **L. H. Zeglin**. 2022. Whole-microbial community (Bacteria and Eukarya) assembly across the river continuum. Ecological Society of America Annual Meeting, Montréal, Québec, Canada.

N. Vega Anguiano, R. Garcia-Prudencio*, and **L. H. Zeglin**. 2022. Does grazing by bison and cattle have a similar impact on tallgrass prairie N-cycling? Ecological Society of America Annual Meeting, Montréal, Québec, Canada.

R. Garcia-Prudencio**, N. Vega Anguiano, and **L. H. Zeglin**. 2022. Impacts of Ungulate Grazers on Plant Root Associated Fungi in Tallgrass Prairie. Ecological Society of America Annual Meeting, Montréal, Québec, Canada.

B. A. Nave, Jr., C. T. Bond, S. C. Cook, C. Wheeler, E. C. Seybold, S. C. Zipper, Y. You, K. A. Kuehn, T. Kerner, A. J. Burgin, **L. H. Zeglin**. 2022. Bacterial and Fungal Abundance Responses to Hydrological Dynamics in an Intermittent Stream. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

B. M. Vogt**, J. R. Dimapilis, M. F. Kirk, W. K. Dodds, D. Diaz*, **L. H. Zeglin**. 2022. Evaluating the Impact of Land Use on the Biogeochemistry of Streams and Their Microbial Inhabitants. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

T. Kerner, B. A. Nave, Jr., C. Wheeler, C. T. Bond, A. J. Burgin, E. C. Seybold, K. A. Kuehn, **L. H. Zeglin**, S. C. Zipper, S. C. Cook, K. Aho, Y. You. 2022. Bacterial and Archaeal Communities Across an Intermittent Stream Network in the Konza Prairie. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

C. T. Bond, B. A. Nave, Jr., C. Wheeler, T. Kerner, K. Aho, A. J. Burgin, C. Jackson, E. C. Seybold, Y. You, **L. H. Zeglin**, S. C. Zipper, K. A. Kuehn. 2022. Fungal biodiversity across an intermittent stream network at the Konza Prairie, Kansas, USA. Joint Aquatic Sciences Meeting, Grand Rapids, MI.

K. Freeman**, K. C. Olson. A. J. Tajchman, **L. H. Zeglin**. Changes in seasonal burn treatments shown to affect soil microbial decomposition enzyme activity. 2022. Kansas Natural Resources Conference, Manhattan, KS.

N. Vega Anguiano**, A. Jumpponen and **L. H. Zeglin**. 2021. Fire and grazing management affect root-associated fungal communities more than plant species identity. SACNAS National Diversity in STEM Conference, Virtual.

B. Nave**, M. A. Nieland, E. Meuller*, V. Floyd* and **L. H. Zeglin**. 2021. Does chronic nitrogen fertilization affect soil microbial tradeoffs? SACNAS National Diversity in STEM Conference, Virtual.

K. Freeman**, J. Brisendine, M. Forester, S. Thomas, M. VanderPutten*, A. Wohler, A. J. Burgin, M. F. Kirk, **L. H. Zeglin**. 2021. Analysis of benthic sediment microbial activity and nutrient demands in relation to aridity, stream order, and land-use. SACNAS National Diversity in STEM Conference, Virtual.

N. Vega Anguiano**, A. Jumpponen and **L. H. Zeglin**. 2020. Fire and grazing management affect root-associated fungal communities more than plant species identity. ESA Annual Meeting, Virtual.

B. Nave**, M. A. Nieland, E. Meuller*, V. Floyd* and **L. H. Zeglin**. 2020. Does chronic nitrogen fertilization affect soil microbial tradeoffs? ESA Annual Meeting, Virtual.

K. Freeman**, J. Brisendine, M. Forester, S. Thomas, M. VanderPutten*, A. Wohler, A. J. Burgin, M. F. Kirk, **L. H. Zeglin**. 2020. Analysis of benthic sediment microbial activity and nutrient demands in relation to aridity, stream order, and land-use. Society for Freshwater Science Summer of Science, Virtual.

J. Allenbrand and **L. H. Zeglin**, 2020. Bison grazing and fire impact tallgrass prairie soil carbon and nitrogen cycling and microbial diversity. Rangeland Ecology Society, Denver, CO.

L. H. Zeglin, H. I. Dea, R. Keen, E. G. Tooley and J. B. Nippert. 2019. Soil carbon cycling at depth changes following woody encroachment of tallgrass prairie. American Geophysical Union Annual Meeting, San Francisco, CA.

J. H. Allenbrand and **L. H. Zeglin**. 2019. Bison grazing increases N availability, but fire cessation increases both C availability and denitrification potential, in tallgrass prairie soils. ESA Annual Meeting, Louisville, KY.

M. Nieland, P. Moley, J. Hanschu and **L. H. Zeglin**. 2019. Differential recovery of N-cycling soil microbial functional groups following cessation of chronic fertilization. ESA Annual Meeting, Louisville, KY.

S. E. Koerner, M. L. Avolio, D. L. Hoover, K. J. Komatsu, M. D. Smith, K. R. Wilcox, and **L. H. Zeglin**. Fire frequency affects multi-trophic community and ecosystem dynamics: A snapshot in time. 2019. ESA Annual Meetings, Louisville, KY.

J. Hanschu, K. Cochran, A. Pruitt, E, Overstreet, S. Thomas, A. J. Burgin, **L. H. Zeglin**. 2019. Variation in stream microbiome across the Kansas precipitation and land use gradients. Society for Freshwater Science Annual Meeting, Salt Lake City, UT.

A. Pruitt, J. Hanschu, E, Overstreet, S. Thomas, A. J. Burgin, **L. H. Zeglin**. 2019. Variation in nutrient concentrations in streams across the Kansas precipitation gradient. Society for Freshwater Science Annual Meeting, Salt Lake City, UT.

Hamilton, T., Price, T., Hotaling, S., Tronstad, L.M., Finn, D., **L. H. Zeglin**. 2019. Diverse microbial communities associated with ice, biofilms, and sediments in the high Teton Range. Society of Freshwater Science, Salt Lake City, Utah.

A. J. Burgin, M. C. Kelley, J. Hanschu, M. Nieland and **L. H. Zeglin**. 2018. Linking the presence and function of denitrification genes to whole river estimates of denitrification in response to a large-scale nitrogen enrichment of the Kansas River (USA). American Geophysical Union Annual Meeting, Washington, D.C.

C. Richardson, M. Kirk, R. Alexandria, **L. H. Zeglin**. 2018. Impact of Land Use on Groundwater Chemistry and Microbial Communities in Great Bend Prairie Aquifer. Geological Society of America, Indianapolis, IN.

J. Hanschu, **L. H. Zeglin**, A. J. Burgin, M. Kelly, E. Overstreet, C. Thompson. 2018. Do novel inputs to the Kansas River affect the water or sediment microbiome, water chemistry, or nitrogen cycling? Great Plains Limnology Conference, Lawrence, KS.

J. Allenbrand, K. Connell, P. Guzman, P. Moley, E. K. Akley, C. Carson, T. Carter, N. Noortebaert, and **L. H. Zeglin.** Grassland fire and grazing management affects soil microbial diversity and heterogeneity. 2018. Long-term Ecological Research Network All-Scientists Meeting, Pacific Grove, CA.

M. Nieland, J. Hanschu, P. Moley, and **L. H. Zeglin**. Effects of fire and N-cycling soil microbes on ecosystem recovery from chronic fertilization. 2018. Long-term Ecological Research Network All-Scientists Meeting, Pacific Grove, CA.

L. H. Zeglin, C. Carson, *V. Floyd, J. Hanschu, P. Moley, *E. Mueller, *M. Nieland, A. Jumpponen, J. Blair. Summary of soil nutrient cycling and microbial community responses to a 30 year fertilization and fire cessation experiment. 2018. Long-term Ecological Research Network All-Scientists Meeting, Pacific Grove, CA.

K. Komatsu, M. Alvolio, S. Koerner, K. Wilcox, and **L. H. Zeglin**. Synthesis of long-term fertilization experiment responses at Konza Prairie. 2018. Long-term Ecological Research Network All-Scientists Meeting, Pacific Grove, CA.

L. A. Mino, A. Jumponnen, **L. H. Zeglin**, K. Ismert, C. Reazin. 2018. Fungal communities associated with two alternate ecosystem states of tallgrass prairie. International Mycological Association 11, San Juan, Puerto Rico.

Hanschu, J. and **L. Zeglin. Environmental changes affect stream biofilm nutrient limitation & enzyme activity. 2018. Biology Undergraduate Research Symposium, Manhattan, KS.

P. Moley and **L.H. Zeglin**. Impacts of prairie land management on nitrous oxide production. 2017. Kansas State University Research and the State Forum, Manhattan, KS.

E. Mueller and **L. H. Zeglin. 2017. Ecological responses of prairie soil microbial communities to increased nitrogen. Annual Argonne Soil Metagenomics Meeting, Bloomingdale, IL.

Hanschu, J. and **L. H. Zeglin. Environmental changes affect stream biofilm nutrient limitation and enzyme activity. 2017. Great Plains Limnology Meeting, Columbia, MO.

P. Moley, K. Connell, P. Guzman, E. Korba Akley, C. Carson, T. Carter, N. Noortebaert, and **L. H. Zeglin.** Grassland fire and grazing management affects soil microbial diversity and heterogeneity. 2017. Ecological Society of America Annual Meeting, Portland, OR.

C. Carson and **L. H. Zeglin.** Microbe-managing: Grassland soil microbial community turnover in response to long-term management controlling nitrogen availability. 2016. Konza Prairie Long-term Ecological Research Program Annual Symposium, Manhattan, KS.

J. Hanschu, P. Moley, E. Mueller, J. M. Blair, **L. H. Zeglin**. Belowground C and N cycling responses to contrasting long-term fire disturbance regime and N fertilization. 2016. Konza Prairie Long-term Ecological Research Program Symposium, Manhattan, KS.

*V. Floyd and **L. H. Zeglin.** Microbial extracellular enzyme activity responses to long-term nitrogen addition and annual burning in tallgrass prairie soil. 2016. Konza Prairie Long-term Ecological Research Program Annual Symposium, Manhattan, KS.

A. Veach and **L. H. Zeglin.** Historical precipitation regime impacts microbial community responses to dry-down/re-wet events. 2016. Konza Prairie Long-term Ecological Research Program Annual Symposium, Manhattan, KS.

M. E. Foley, S. Hotaling, **L. H. Zeglin, J. J. Giersch, D. S. Finn, L. M. Tronstad, C. C. Muhlfeld, D. W. Weisrock. 2016. Microbial diversity of alpine streams: A North American perspective. Evolution, Austin, TX.

V. Floyd and **L. H. Zeglin. Microbial extracellular enzyme activity responses to long-term nitrogen addition and annual burning in tallgrass prairie soil. 2016. Missouri Valley American Society for Microbiology Annual Meeting, Kansas City, MO.

A. Veach and **L. H. Zeglin.** Microbial mechanisms of drought tolerance and the implications for grassland soil carbon storage. 2015. Long-term Ecological Research Program All-Scientists Meeting, Estes Park, CO**.**

L. H. Zeglin and *V. Floyd. Soil microbial activity responds to long-term fire and N addition treatments in native tallgrass prairie. 2015. Long-term Ecological Research Program All-Scientists Meeting, Estes Park, CO.

L. H. Zeglin and *V. Floyd. Fire and nitrogen addition affects seasonality of soil microbial activity. 2015. Konza Prairie Long-term Ecological Research Program Annual Symposium, Manhattan, KS.

D. D. Myrold, **L. H. Zeglin**, M. M. David, E. Prestat, S. Brown, J. Dvornik, P. J. Bottomley, R. L. Hettich, A. Jumpponen, J. K. Jansson, C. W. Rice, S. G. Tringe, N. VerBerkmoes. Meta-"omics" analysis of microbial carbon cycling responses to altered rainfall inputs in native prairie soils.

2014 DOE Genomic Science Contractors-Grantees Meeting. Bethesda, MD.

2013 DOE Genomic Science Contractors-Grantees Meeting. Bethesda, MD.

2011 DOE Genomic Science: Systems Biology for Energy and Environment, Joint Meeting. Crystal City, VA.

L. H. Zeglin, M. M. David, P. J. Bottomley, R. L. Hettich, J. K. Jansson, A. Jumpponen, C. W. Rice, S. G. Tringe, N. C. VerBerkmoes, D. D. Myrold. Microbial functional response to altered precipitation timing and duration – implications for the soil carbon cycle.
2012 Soil Science Society of America Annual Meeting, Cincinnati, OH.
2012 LTER All Scientists Meeting, Estes Park, CO.
2011 American Geophysical Union Fall Meeting, San Francisco, CA.

L. H. Zeglin, L. A. Kluber and D. D. Myrold, Organic nitrogen cycling in ectomycorrhizal mat and non-mat soils of an old-growth Douglas-fir forest.
2009 Soil Science Society of America Annual Meeting, Pittsburgh, PA.

L. H. Zeglin, A. E. Taylor, D. D. Myrold, P. J. Bottomley. Distribution and diversity of ammonia-oxidizing archaea and bacteria in soils along an upland to lowland transect receiving either high or low nitrogen inputs.
2009 Ecological Society of America Annual Meeting, Albuquerque, NM.
2009 First International Conference on Nitrification. Louisville, KY.

L. H. Zeglin, C. L. Crenshaw, C. N. Dahm, R. W. Sheibley, C. D. Vesbach. Hyporheic zone bacterial community structure and nutrient transformation in southwestern streams.
2007 American Geophysical Union Fall Meeting, San Francisco, CA.

L. H. Zeglin, C.D. Vesbach, M.D. Bobb, C.N. Dahm, J.E. Barrett, M.N. Gooseff. Biological, physical and nutrient gradients in near-stream hydrologic margins of hot and cold deserts.
2007 The Center for Biodiversity and Conservation's Twelfth Annual Symposium, "Small Matters: Microbes and Their Role in Conservation". American Museum of Natural History, New York, NY.
2007 Freshwater Sciences Meeting of the American Society for Limnology and Oceanography. Santa Fe, NM.
2006 LTER All Scientists Meeting. Estes Park, CO.
2006 Annual Meeting of the North American Benthological Society. Anchorage, AK.

L. H. Zeglin, M. Stursova, R. L. Sinsabaugh, S. L. Collins. Soil enzyme activity and response to N deposition in three grasslands.
2006 LTER Program All Scientists Meeting. Estes Park, CO.
2006 UNM, Biology Department Annual Symposium. Albuquerque, NM.

L. H. Zeglin, C.L. Crenshaw, A.D. Pershall, and C.N. Dahm. Seasonal nutrient dynamics of undeveloped, agricultural and urban arid-land streams.
2006 University of New Mexico Water Forum. Albuquerque, NM.
2004 Sustainability of semi-Arid Hydrology and Riparian Areas (SAHRA) Annual Meeting. Albuquerque, NM.
2004 Freshwater Sciences IGERT Workshop. Socorro, NM.
2003 Annual Meeting of the North American Benthological Society, Athens, GA.
2003 Aquatic Sciences Meeting of the American Society of Limnology and Oceanography, Salt Lake City, UT.

Oelsner, G., P. D. Brooks, J. Hogan, H. Lacey, D. McDonnell, **L. H. Zeglin**, S. Mills, J. Villinski. Quantifying nitrogen sources and cycling along the Upper Rio Grande.
2005 Joint Assembly of the American Geophysical Union and the North American Benthological Society. New Orleans, LA.

Bobb, M., **L. H. Zeglin**, M. N. Gooseff, J. E. Barrett, C. N. Dahm, C. D. Vesbach. Spatial scaling of microbial community diversity within Antarctic riparian zones.
2005 American Geophysical Union Fall Meeting, San Francisco, CA.

2005 Annual Meeting of the Ecological Society of America, Montreal, Quebec, Canada.
2005 McMurdo LTER Annual Conference. Portland, OR.
2005 Aquatic Sciences Meeting of the American Society of Limnology and Oceanography, Salt Lake City, UT.
2005 Joint Assembly of the American Geophysical Union and the North American Benthological Society. New Orleans, LA.

L. H. Zeglin, S. Collins, D. Pennington, R. Parmenter, J. Gosz, J. Brunt. Assessing semi-arid grassland recovery from livestock grazing.
2003, 2004, 2005 Sevilleta LTER Annual Symposium. Socorro, NM.
2004 Sevilleta LTER Site Review. Socorro, NM.
2003 Annual Meeting of the Ecological Society of America, Savannah, GA.
2003 LTER Program All Scientists Meeting, Seattle, WA.