Aug 2025

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- **EXPERTISE**

Earth system models, climate, extreme events, detection and attribution, climate impacts, air quality, hydrometeorological hazards, paleoclimatology, and planetary habitability

- **EDUCATION**

Ph.D., Geological Sciences, University of Michigan, Ann Arbor, MI	2011
B.S., Atmospheric Sciences, Texas A&M University, College Station, TX	2002
B.S., Physics (*cum laude*), minor Geology, Tulane University, New Orleans, LA	2001

- **EMPLOYMENT**

Associate Professor, Northwestern University, Evanston, IL	
Dept. of Earth, Environmental, and Planetary Sciences	2024-present
Dept. of Civil & Environmental Engineering (by courtesy)	2024-present
Assistant Professor, Northwestern University, Evanston, IL	
Dept. of Earth & Planetary Sciences	2015-2024
Dept. of Civil & Environmental Engineering (by courtesy)	2018-2024
Postdoctoral Research Scholar, Stanford University, Stanford, CA	
Dept. of Earth System Science	2011-2015
U.S. Air Force Weather Officer	
Deputy Flight Commander, Aviano AB, Italy	2005-2006
Assistant Flight Commander, Sembach AB, Germany	2002-2005
Americorps – South Whidbey Island, Langely, WA	
Trail Boss	1998-1999

- **PUBLICATIONS**

Mentorship key: high school****, undergraduate***, graduate**, or postdoc*

64. H.C. Garcia**, P.M. Graffy**, B.W. Barrett**, M.A Visa**, J. Jia, E. Mallen, R. Mansour, G. Briggs, T. Ford, D. Wuebbles, T. Horton, N. Allen, A. Kho & D.E. Horton (under review) Increasing urban tree canopy associated with Reduced mortality: a longitudinal analysis of Chicago neighborhoods, ***Journal of Urban Health***.

63. P.M. Graffy**, B.W. Barrett**, D.E. Horton, N.B. Allen & A.N. Kho (under review) Heat and hearts: computational phenotyping of cardiovascular disease during extreme

heat events using electronic health record data, ***Journal of the American Medical Informatics Association.***

62. C. Li**, F. Batibeniz, Y. Wang, Y. Fang, P. Ray, G. Koren, M. Apple, J. Mao, M. Shi, L. Li, S.P. Vasu, M. Tewari, D.E. Horton, S. Moon, Y. Quilcaille (invited, under revision) The critical role of soil moisture in compound hazards in a changing climate, ***Nature Geoscience***.

61. V.A. Lang**, S.F. Camilleri**, A. Montgomery**, M.A. Visa***, J.L. Schnell**, M. Janssen, Z.E. Adelman, S.C. Anenberg, E.A. Grubert & D.E. Horton (under 2nd review) Watts-to-wheel comparison of the air quality, health, and equity impacts of light- v. heavy-duty vehicle electrification in the U.S. Midwest, ***Environmental Research: Health***.

60. S. Farhoodi, P. Neri, R. Scheu, S. Haratian, S. Morse, K. Woods, R. Mansour, D.E. Horton, B. Stephens & M. Heidarinejad (under revision) Indoor heat extremes in Chicago homes, ***Environmental Research: Health***.

59. K. Shlipak***, S.F. Camilleri*, V.A. Lang**, A. Montgomery**, J.L. Schnell*& D.E. Horton (under review) Air quality and health impacts of $PM_{2.5}$ exposure from U.S. winter-time residential wood combustion, ***Science Advances***.

58. C. Li**, A. Handwerger & D.E. Horton (2025) Mixed hydrometeorological processes explain regional landslide potential, ***Geophysical Research Letters***, doi.org/10.1029/2025GL115912.

57. L.T. Zhou**, D. Gokyer, K. Madkins, M. Beestrum, D.E. Horton, F.E. Duncan, E. Babayev (2025) The effects of heat stress on the ovary, follicles and oocytes: a systematic review, ***Biology of Reproduction***, doi.org/10.1093/biolre/ioaf150.

56. B. Yanites, M.K. Clark, J.J. Roering, A.J. West, D. Zekkos, J.W. Baldwin, C. Cerovski-Darriau, S.F. Gallen, D.E. Horton, E. Kirby, B.A. Leshchinsky, H.B. Mason, S. Moon, K. Barnhardt, A. Booth, J.A. Czuba, S. McCoy, L. McGuire, A. Pfeiffer & J. Pierce (2025) Cascading land surface hazards as a nexus in the Earth system, ***Science***, doi.org/10.1126/science.adp9559.

55. V.A. Lang**, S.F. Camilleri*, N. Deylami, M.H. Harris, L. Koehler, B. Urbaszewski, A. Montgomery** & D.E. Horton (2025) Assessing the air quality, public health, and equity implications of an Advanced Clean Trucks policy for Illinois, ***Frontiers of Earth Science***, doi.org/10.1007/s11707-024-1144-8.

54. V.A. Lang**, S.F. Camilleri*, S. van der Lee, G. Rowangould, B. Antonczak, T.M. Thompson, M.H. Harris, C. Harkins, D. Tong, M. Janssen, Z.E. Adelman & D.E. Horton (2025) Intercomparison of modeled urban-scale vehicle emissions – implications for equity assessments, ***Environmental Science and Technology***,

doi.org/10.1021/acs.est.4c09777.

53. R.D. Harp*, T.N. Taguela, A.A. Akintomide & D.E. Horton (2024) Evaluation of historical precipitation interannual variability in CMIP6 over the United States, ***Environmental Research: Climate***, doi.org/10.1088/2752-5295/ada17c.

52. T. Olsen, A.M Pfeiffer, N.J. Finnegan, C. Li** & D.E. Horton (2024) Impacts of post-fire debris flows on fluvial morphology and sediment transport in a California Central Coast Stream, ***Journal of Geophysical Research – Earth Surface***, doi.org/10.1029/2024JF007740.

51. P.M. Graffy**, A. Sunderraj**, M.A. Visa**, C. Miller, B.W. Barrett**, S. Rao, S.F. Camilleri*, R.D. Harp, C. Li**, A. Brenneman, J. Chan, A. Kho, N. Allen & D.E. Horton (2024) Methodological approaches for measuring the association between heat exposure and health outcomes: a comprehensive global scoping review, ***GeoHealth***, doi.org/10.1029/2024GH001071.

50. S. Huang, S. Wang, Y. Gan, C. Wang, D.E. Horton, C. Li**, X. Zhang, D. Niyogi, J. Xia & N. Chen (2024) Widespread global exacerbation of extreme drought induced by urbanization, ***Nature Cities***, doi.org/10.1038/s44284-024-00102-z.

49. S. Huang, Y. Gan, N. Chen, C. Wang, X. Zhang, C. Li** & D.E. Horton (2024) Urbanization enhances channel and surface runoff: A quantitative analysis using both physical and empirical models over the Yangtze River Basin, ***Journal of Hydrology***, doi.org/10.1016/j/hydrol.2024.131194.

48. B.B. Sageman, M.M. Jones, M.A. Arthur, I. Niezgodzki & D.E. Horton (2024) Late Cenomanian Plenus event in the Western Interior Seaway, ***Cretaceous Research***, doi.org/10.1016/j.cretres.2023.105798.

47. S.F. Camilleri*, G.H. Kerr, S.C. Anenberg & D.E. Horton (2023) All-cause NO_2-attributable mortality burden and associated racial and ethnic disparities in the U.S., ***Environmental Science & Technology Letters***., doi.org/10.1021/acs.estlett.3c00500.

46. Y. Gao, Y. Wu, X. Guo, W. Kou, S. Zhang, L.R. Leung, X. Chen, J. Lu, N.S. Diffenbaugh, D.E. Horton, H. Wang, X. Yao, H. Gao & L. Wu (2023) More frequent and persistent heat waves due to increased temperature skewness projected by a high-resolution Earth System Model, ***Geophysical Research Letters***, doi.org/10.1029/2023GL105840.

45. A. Montgomery**, M.I.G. Daepp, M.I. Abdin, S. Malvar, S. Counts & D.E. Horton (2023) Intraurban NO_2 hotspot detection across multiple air quality products, ***Environmental Research Letters***, doi.org/10.1088/1748-9326/acf7d5.

44. M.A. Visa***, S.F. Camilleri*, A. Montgomery**, J.L. Schnell*, Z. Adelman, M. Janssen, S.C. Anenberg, E.A. Grubert & D.E. Horton (2023) Neighborhood-scale air

quality, public health, and equity implications of multi-modal vehicle electrification, ***Environmental Research: Infrastructure and Sustainability***, doi.org/10.1088/2634-4505/acf60d.

43. S.F. Camilleri*, A. Montgomery**, M.A. Visa***, J.L. Schnell*, Z. Adelman, M. Janssen, E.A. Grubert, S.C. Anenberg & D.E. Horton (2023) Air quality, health & equity implications of electrifying heavy-duty vehicles, ***Nature Sustainability***, doi.org/10.1038/s41893-023-01219-0.

42. C. Li**, G. Yu, J. Wang & D.E. Horton (2023) Toward improved regional hydrological model performance using a novel soil data-informed calibration method, ***Water Resources Research***, doi.org/10.1029/2023WR034431.

41. R.D. Harp* & D.E. Horton (2023) Observed changes in interannual precipitation variability in the United States, ***Geophysical Research Letters***, doi.org/10.1029/2023GL104533.

40. A. Montgomery**, J.L. Schnell*, Z. Adelman, M. Janssen & D.E. Horton (2023) Simulation of neighborhood-scale air quality with two-way coupled WRF-CMAQ over southern Lake Michigan-Chicago region, ***JGR: Atmospheres***, doi.org/10.1029/2022JD037942.

39. R.D. Harp* & D.E. Horton (2022) Observed changes in daily precipitation intensity in the United States, ***Geophysical Research Letters***, doi.org/10.1029/2022GL099955.

38. L. Yang***, N. Zerega, A. Montgomery** & D.E. Horton (2022) Potential of breadfruit cultivation to contribute to a climate-resilient low latitude food system, ***PLOS Climate,*** doi.org/10.1371/journal.pclm.0000062.

37. C. Li**, A.L. Handwerger, J. Wang, W. Yu, X. Li, N.J. Finnegan, Y. Xie, G. Buscarnera & D.E. Horton (2022) Augmentation and use of WRF-Hydro to simulate runoff-generated debris flow hazards in burn scars, ***Natural Hazards and Earth System Science***, doi.org/10.5194/nhess-22-2317-2022.

36. K.R. Marion Suiseeya, M.G. O'Connell, E. Lesoso, M. DeFoe, A. Anderson, M. Bang, P. Beckman, A. Boyer, J. Dunn, J. Gilbert, J. Hester, D.E. Horton, D. Bizhikiins, P. Kebec, N. Loeb, P. Loew, W. Miller, K. Moffit, A.I. Packman, M. Waasegiizhig, B. Redbird, J. Rogers, R. Sankaran, J. Schwoch, P. Silas, W. Twardowski &N. Zerega (2022) Waking from paralysis: revitalizing conceptions of climate knowledge and justice for more effective climate action, ***The ANNALS of the American Academy of Political and Social Science***, doi.org/10.1177/00027162221095495.

35. J.M. Garrido-Perez, C. Ordóñez, D. Barriopedro, R. García-Herrera, J.L. Schnell, & D.E. Horton (2021) A storyline view of the projected role of remote drivers on

summer air stagnation in Europe and the United States, ***Environmental Research Letters***, doi.org/10.1088/1748-9326/ac4290

34. D.E. Horton (2021) Assessing co-benefits incentivizes climate mitigation action, ***One Earth***, doi.org/10.1016/j.oneear.2021.08.003.

33. M.S. Bryan, J. Sun, J. Jagai, D.E. Horton, A. Montgomery**, R. Sargis & M. Argos (2021) COVID-19 mortality and neighborhood characteristics in Chicago, ***Annals of Epidemiology***, doi.org/10.1016/j.annepidem.2020.10.011.

32. H. Chen**, Z. Zhuchang, A. Youngblood, E.T. Wolf, A. Feinstein, & D.E. Horton (2021) Persistence of flare-driven atmospheric chemistry on rocky habitable zone worlds, ***Nature Astronomy***, doi.org/10.1038/s41550-020-01264-1.

31. J.L. Schnell*, D.R. Peters***, D. Wong, X. Lu, H. Zhang, H. Guo, P.L. Kinney & D.E. Horton (2020) Potential for electric vehicle adoption to mitigate extreme air quality events in China, ***Earth's Future***, doi.org/10.1029/2020EF001788.

30. J.J. Hess, N. Ranadive, C. Boyer, L. Aleksandrowicz, S. Annenberg K. Aunan, K. Belesova, M. Bell, S. Bickersteth, K. Bowen, M. Burden, D. Campbell-Lendrum, E. Carlton, G. Cisse, F. Cohen, H. Dai, A. Dangour, P. Dasgupta, H. Frumkin, R. Gould, A. Haines, S. Hales, I. Hamilton, T. Hasegawa, M. Hashizume, Y. Honda, D.E. Horton, A. Karambelas, H. Kim, P. Kinney, I. Kone, K. Knowlton, J. Lelieveld, V. Limay, Q. Liu, L. Madaniyazi, M. Martinez, D. Mauzerall, J. Milner, J. Mossinger, T. Neville, M. Nieuwenhuijsen, S. Pachauri, G. Peng, F. Perera, H. Pineo, J. Remais, R. Saari, J. Sampedro, K. Satbyul, P. Scheelbeek, J. Schwartz, D. Shindell, P, Shyamsundar, T. Taylor, C. Tonne, D. Van Vuuren, C. Wang, N. Watts, J. West, P. Wilkinson, S. Wood, J. Woodcock, A. Woodward, Y. Xie, Y. Zhang & K.L. Ebi (2020) Guidelines for modeling and reporting health effects of climate change mitigation actions, ***Environmental Health Perspectives***, doi.org/10.1289/EHP6745.

29. D. Peters***, J.L. Schnell*, P.L. Kinney, V. Naik & D.E. Horton (2020) Public health and climate co-benefits and tradeoffs of U.S. vehicle electrification, ***GeoHealth***, doi.org/10.1029/2020GH000275.

28. N.S. Diffenbaugh, C.B. Field, E. Appel, I. Azevedo, D. Baldocchi, M. Burke, J. Burney, P. Ciais, S.J. Davis, A.M. Fiore, S. Fletcher, T. Hertel, D.E. Horton, S. Hsiang, R.B. Jackson, X. Jin, M. Levi, D. Lobell ,G.A. McKinley, F.C. Moore, A. Montgomery**, K.C. Nadeau, D. Pataki, J.T. Randerson, M. Reichstein, J.L. Schnell*, S.I. Seneviratne, D. Singh, A. Steiner & G. Wong-Parodi (2020) The COVID-19 lockdowns: a window into the Earth System, ***Nature Reviews Earth and Environment***, doi.org/10.1038s43017-020-0079-1.

27. C. Deser, F. Lehner, K. Rodgers, T. Ault, T. Delworth, P. DiNezio, A. Fiore, C. Frankignoul, J. Fyfe, D.E. Horton, J.E. Kay, R. Knutti, N. Lovenduski, J. Marotzke, K. McKinnon, S. Minobe, J. Randerson, J.A. Screen, I.R. Simpson & M. Ting (2020)

Insights from Earth system model initial-condition large ensembles and future prospects, ***Nature Climate Change***, doi.org/10.1038/s41558-020-0731-2.

26. K.N. Braun***, E.J. Theuerkauf, M.T. Hurtgen, A.L. Masterson & D.E. Horton (2020) Loss-on-ignition estimates for soil organic carbon on a Great Lakes freshwater coastal wetland, ***Wetlands***, doi.org/10.1007/s13157-020-01270-z.

25. Z. Liu, D.E. Horton, C. Tabor, B.B. Sageman, L.M.E. Percival, B.C. Gill & D. Selby (2019) Assessing the contributions of comet impact and volcanism toward the climate perturbations of the Paleocene-Eocene thermal maximum, ***Geophysical Research Letters***, doi.org/10.1029/2019GL084818.

24. H. Chen**, E.T. Wolf, Z. Zhuchang & D.E. Horton (2019) Habitability and spectroscopic observability of warm M-dwarf exoplanets evaluated with 3D chemistry-climate models, ***The Astrophysical Journal***, doi.org/10.3847/1538-4357/ab4f7e.

23. D. Touma, S. Stevenson, S.J. Camargo, D.E. Horton, & N.S. Diffenbaugh (2019) Variations in the intensity and spatial extent of tropical cyclone precipitation, ***Geophysical Research Letters***, doi.org/10.1029/2019GL083452.

22. X. Tan, T.Y. Gan, S. Chen, D.E. Horton, X. Chen, B. Liu & K. Lin (2019) Trends in persistent seasonal-scale atmospheric circulation patterns responsible for seasonal precipitation totals and occurrences of precipitation extremes over Canada, ***Journal of Climate***, doi.org/10.1175/JCLI-D-18-0401.1.

21. J.L. Schnell*, V. Naik, L.W. Horowitz, F. Paulot, P. Ginoux, M. Zhao & D.E. Horton (2019) Air quality impacts from the electrification of light-duty passenger vehicles in the United States, ***Atmospheric Environment***, doi.org/10.1016/j.atmosenv.2019.04.003.

20. C.W. Callahan***, J.L. Schnell* & D.E. Horton (2019) Multi-index attribution of extreme winter air quality in Beijing, China, ***Journal of Geophysical Research – Atmospheres***, doi.org/10.1029/2018JD029738.

19. K.N. Braun***, E.J. Theuerkauf, A.L. Masterson, B.B. Curry & D.E. Horton (2019) Modeling organic carbon loss from a rapidly eroding freshwater coastal wetland, ***Scientific Reports***, doi.org/10.1038/s41598-019-40855-5.

18. H. Chen**, E.T. Wolf, S. Domagal-Goldman, R. Kopparapu & D.E. Horton (2018) Biosignature anisotropy modeled on temperate tidally-locked M-dwarf planets, ***The Astrophysical Journal Letters***, doi.org/10.3847/2041-8213/aaebd2.

17. A. Sharma, A.F. Hamlet, H.J.S. Fernando, C.E. Catlett, D.E. Horton, V.R. Kotamarthi, D.A.R. Kristovich, A.I. Packman, J.L. Tank & D.J. Wuebbles (2018) The

need for an integrated land-lake-atmosphere modeling system, exemplified by North America's Great Lakes region, ***Earth's Future***, doi.org/10.1029/2018EF000870.

16. X. Tan, T.Y. Gan & D.E. Horton (2018) Projected timing of perceivable changes in climate extremes for terrestrial and marine ecosystems, ***Global Change Biology***, doi.org/10.1111/gcb.14329.

15. D.L. Swain, D. Singh, D.E. Horton, J.S. Mankin, T. Ballard & N.S. Diffenbaugh (2017) Remote linkages to anomalous winter atmospheric ridging over the northeastern Pacific, ***Journal of Geophysical Research – Atmospheres***, doi.org/10.1002/2017JD026575.

14. N.S. Diffenbaugh, D. Singh, J.S. Mankin, D.E. Horton, D.L. Swain, D. Touma, A. Charland, Y. Liu, M. Haugen, M. Tsiang & B. Rajaratnam (2017) Quantifying the influence of global warming on unprecedented extreme climate events, ***Proceedings of the National Academy of Science***, doi.org/10.1073/pnas.1618082114.

13. S.H. Paull, D.E. Horton, M. Ashfaq, D. Rastogi, L.D. Kramer, N.S. Diffenbaugh & A.M. Kilpatrick (2017) Drought and immunity determine the intensity of West Nile virus epidemics and climate change impacts, ***Proceedings of the Royal Academy B***, doi.org/10.1098/rspb.2016.2078.

12. D. Singh, D.L. Swain, J.S. Mankin, D.E. Horton, L.N. Thomas, B. Rajaratnam & N.S. Diffenbaugh (2016) Recent amplification of the North American winter temperature dipole, ***Journal of Geophysical Research – Atmospheres***, doi.org/10.1002/2016JD025116.

11. D.L. Swain, D.E. Horton, D. Singh & N.S. Diffenbaugh (2016) Trends in atmospheric patterns conducive to seasonal precipitation and temperature extremes in California, ***Science Advances***, doi.org/10.1126/sciadv.1501344.

10. D.E. Horton, N.C. Johnson, D. Singh, D.L. Swain, B. Rajaratnam & N.S. Diffenbaugh (2015) Contribution of changes in atmospheric circulation patterns to extreme temperature trends, ***Nature***, doi.org/10.1038/nature14550.

9. C. Li, E. Sinha, D.E. Horton, N.S. Diffenbaugh & A.M. Michalak (2014) Joint bias correction of temperature and precipitation in climate model simulations, ***Journal of Geophysical Research - Atmospheres***, doi.org/10.1002/2014JD022514.

8. D. Singh, D.E. Horton, M. Tsiang, M. Haugen, M. Ashfaq, R. Mei, D. Rastogi, N.C. Johnson, A. Charland, B. Rajaratnam & N.S. Diffenbaugh (2014) Severe precipitation in Northern India in June 2013: Causes, historical context, and changes in probability, in "Explaining Extremes of 2013 from a Climate Perspective", ***Bulletin of the American Meteorological Society***, 95(9), S58-61.

7. D.E. Horton, C.B. Skinner, D. Singh & N.S. Diffenbaugh (2014) Occurrence and persistence of future air stagnation events, ***Nature Climate Change***, doi.org/10.1038/nclimate2272.

6. D.P. Lowry, C.J. Poulsen, D.E. Horton, T.H. Torsvik & D. Pollard (2014) Thresholds for Paleozoic ice sheet initiation, ***Geology***, doi.org/10.1130/G35615.1.

5. D.E. Horton, Harshvadhan & N.S. Diffenbaugh (2012) Response of air stagnation frequency to anthropogenically enhanced radiative forcing, ***Environmental Research Letters***, doi.org/10.1088/1748-9326/7/4/044034.

4. D.E. Horton, C.J. Poulsen, I.P. Montañez & W.A. DiMichelle (2012) Eccentricity-paced late Paleozoic climate change, ***Palaeo-3****,* doi.org/10.1016/j.palaeo.2012.03.014.

3. D.E. Horton, C.J. Poulsen & D. Pollard (2010) Influence of high-latitude vegetation feedbacks on late Palaeozoic glacial cycles, ***Nature Geoscience***, doi.org/10.1038/NGEO922.

2. D.E. Horton & C.J. Poulsen (2009) Paradox of late Paleozoic glacioeustasy, ***Geology***, 37, 715-718, doi.org/10.1130/G30016A.1.

1. D.E. Horton, C.J. Poulsen & D. Pollard (2007) Orbital and CO_2 forcing of late Paleozoic continental ice sheets, ***Geophysical Research Letters***, doi.org/10.1029/2007GL031188.

- **EXTERNAL RESEARH SUPPORT**
  Mentorship key: undergraduate***, graduate**, or postdoc*

1. D.E. Horton (PI) & A.I.B. Stathopoulos (Co-I) (2024) Roadmap for MHDV fleet renewal: Maximizing Health and Environmental Justice Benefits in Air Pollution-Burdened Warehouse-Adjacent Communities, Health Effects Institute RFQ 24-1, $443k, (awarded).

2. D.E. Horton (PI) (2024) Efficacy of vehicle emission control interventions in ameliorating air pollution exposure and health burdens in marginalized communities, Health Effects Institute RFQ 23-2, $800k, (awarded)

3. D.E. Horton (2023) CAREER: CAS-Climate: Neighborhood-scale Assessment of the Air Quality Co-Benefits and Tradeoffs of Transportation Electrification, NSF Directorate of Engineering, Division of Chemical, Bioengineering, Environmental and Transport Systems, Programs in Environmental Engineering and Environmental Sustainability, $600k, (awarded).

4. D.E. Horton (2022) Health and environmental justice benefits of reducing heavy duty vehicle NO_x emissions, Environmental Defense Fund, $154k (awarded).

5. Argonne National Lab, with NU subaward to A. Packman (PI), D.E. Horton (Co-I) & W. Miller (Co-I) (2022) Community Research on Climate and Urban Science (CROCUS), U.S. Department of Energy-Urban Field Lab, $25M (awarded).

6. D.E. Horton (2021) Urban Climate Resilience and Hyper-Local Sensing, Microsoft Research, $25k (awarded).

7. D.E. Horton & H. Chen** (2019) Habitability and observational prospects of rocky exoplanets evaluated with 3D chemistry-climate models, NASA FINESST, $135k (awarded).

8. G. Buscanera (PI), K. Daniels (Co-PI), A. Handwerger (Co-PI) & D.E. Horton (Co-PI) (2018) Defining precursors of ground failure: a multiscale framework for early landslide prediction through geomechanics and remote sensing, NSF PREEVENTS, $1.45M (awarded).

9. A. Packman (PI), D.E. Horton (Co-PI), S.L. Young (Co-PI), M.H. Garcia (Co-PI) & S. Collis (Co-PI) (2018) RAISE: Systems Approaches for Vulnerable Evaluation and Urban Resilience (SAVEUR), NSF Convergence, $1M (awarded).

10. C.B. Phillips*, A. Packman & D.E. Horton (2018) Effects of river flow variability and sediment dynamics on habitat stability under changing climate and hydropower development, The Nature Conservancy NatureNet Science Fellows Post-doctoral Research Grant, $44.2k (awarded).

- **POST DOCTORAL AWARDS AND RECOGNITION**

Weinberg College Excellence in Mentoring Undergraduate Research Award	2025
Robert and Maude Gledden Visiting Fellowship, Univ of Western Australia	2025
IOP Publishing Outstanding Reviewer Award	2024
Appointed to NASEM *Committee on Communities, Climate Change, and Health Equity – Lessons Learned in Addressing Inequities in Heat-Related Climate Change Impacts*	2023-2024
NSF CAREER Award	2023
Finalist, NU Fletcher Prize for Excellence in Research Mentorship	2021
Scialog Signatures of Life in the Universe Fellow (declined)	2020
NU Associated Student Government Faculty & Administrator Honor Roll	2018
JGR-Atmospheres Top 10 downloaded papers	2017
2016 Editor's Citation for Excellence in Refereeing, *JGR-Atmospheres*	2017
AGU Congressional Visit Day – State of Illinois representative	2017
Hewlett Diversity Curriculum Fellow, Weinberg College, Northwestern University	2016
Outstanding Achievement in Mentoring, SEES, Stanford University	2015
ESI "Highly Cited Paper", Horton et al. (2014)	2015
National Council of Grad. Schools-ProQuest Distinguished Dissertation Nominee	2012
UM Rackham Graduate School-ProQuest Distinguished Dissertation Award	2011

- **PRE-DOCTORAL AWARDS AND HONORS**

Outstanding Student Paper Award, American Geophysical Union	2010
Outstanding Graduate Student Instructor, UM, university-level	2009
Outstanding Graduate Student Instructor, UM, department-level	2009
Rocky Mountain Association of Geologists Veterans Scholarship	2007
Scott Turner Award in Earth Sciences, UM Dept of Geological Sciences	2007
Horace H. Rackham Research Grant, UM	2007
Departmental Fellowship, UM Dept of Geological Sciences	2006-2007
Commendation Medal, U.S. Air Forces in Europe	2004 & 2005
Distinguished Graduate, U.S. Air Force Combat Weather Course	2005
Basic Meteorology Scholarship, U.S. Air Force, Texas A&M University	2001-2002
ROTC Supplemental Academic Scholarship Award, Tulane University	1997-2001
U.S. Air Force Reserve Officer Training Corps Academic Scholarship	1996-2001

- **PEER-REVIEW AND RELATED ACTIVITIES**

1. *Environmental Research Letters* Editorial Board 2025-
2. *Environmental Research Letters* Advisory Panel Member 2024-2025
3. *PNAS* Guest Editor 2024
4. IOP Publishing Outstanding Reviewer Award 2024
5. IOP Trusted Reviewer Status 2023
6. Editor's Citation for Excellence in Refereeing, *JGR-Atmospheres* 2016
7. Journal Review for:
   Atmospheric Chemistry & Physics; Atmospheric Environment; Atmospheric Research; Bulletin of the American Meteorological Society; Cell Reports Sustainability; Climates of the Past; Climatic Change; Communications Earth & Environment; Earth and Planetary Science Letters; Earth's Future; Earth-Science Reviews; Elementa; Emerging Topics in Life Science; Environment, Development, and Sustainability; Environment International; Environmental Research: Climate; Environmental Research: Communications; Environmental Research Letters; Environmental Science & Technology; GeoHealth; GSA-Bulletin; Geology; Geophysical Research Letters; Global and Planetary Change; Global Change Biology; Global Ecology and Biogeography; Heliyion; Hydrology and Earth System Sciences; International Journal of Climatology; Journal of Applied Meteorology and Climatology; Journal of Climate; Journal of Geophysical Research-Atmospheres; Journal of South American Earth Sciences; Nature; Nature Climate Change; Nature Communications; Nature Geoscience; Nature Mental Health; Nature Sustainability; npj Climate and Atmospheric Science; One Earth; Palaeo-3; Proceedings of the National Academy of Science; Science Advances; Science of the Total Environment; Scientific Reports; Sustainable Cities; Tellus A; The Sedimentary Record; Transportation Research Part D: Transport & Environment