Curriculum Vitae
Nancy Beth Grimm

School of Life Sciences
Global Change Biology Faculty
Arizona State University [ASU]
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EDUCATION AND EMPLOYMENT HISTORY

Education

B.A. in Natural Science (ecology), Hampshire College, Amherst, MA, 1978. Thesis title: Factors controlling abundance of *Nostoc parmeloides* in Oregon mountain streams. Advisors: C. D'Avanzo, J. Sedell

M.S. in Zoology, ASU, Tempe, AZ, 1980. Thesis title: Nitrogen and phosphorus dynamics in southwestern desert stream ecosystems. Advisor: W. L. Minckley

Ph.D. in Zoology, ASU, Tempe, AZ, 1985. Dissertation title: Roles of primary producers and consumers in the nitrogen cycle of a Sonoran Desert stream. Advisor: W. L. Minckley

Post-doctoral Fellowship (National Science Foundation [NSF]), ASU, Tempe, AZ, 1987–1989. Factors controlling periphyton abundance and production during stream succession. Mentor: S. G. Fisher

Principal Professional Employment

2023	Coleman P. Burke Distinguished Lecturer, School of the Environment, Yale University (on leave from ASU, fall semester)
2022 –	Special Assistant to the Director for Diversity, Equity, and Inclusion, School of Life Sciences, ASU
2021–	Special Assistant to the Director for Faculty Mentoring and Development, School of Life Sciences, ASU
2019–	Regents Professor, ASU
2019–	Distinguished Sustainability Scientist, Global Institute of Sustainability and Innovation/Global Futures Laboratory, ASU
2018–	Virginia M. Ullman Professor of Ecology, School of Life Sciences, ASU
2003–2018	Professor, School of Life Sciences, ASU
2010–2019	Senior Sustainability Scientist, Global Institute of Sustainability, ASU
2011–2012	Senior Scientist for the National Climate Assessment, US Global Change Research Program (on detail from the NSF)
2010–2012	Program Director and Interdisciplinary Liaison, NSF (on detail from ASU)
2007–2009	Faculty Leader, Faculty of Ecology, Evolution, and Environmental Science, School of Life Sciences, ASU
1999–2003	Professor, Department of Biology, ASU
1997–1999	Associate Professor, Department of Biology, ASU
1994–1997	Associate Research Scientist, Department of Zoology, ASU
1990–1994	Assistant Research Scientist, Department of Zoology, ASU

1989–1990 Faculty Research Associate, Department of Zoology, ASU
1987–1989 NSF Postdoctoral Fellow, ASU
1985–1987 Faculty Research Associate, Department of Zoology, ASU

Other Appointments

Affiliated Faculty, Global Drylands Center, ASU (ASU), 2018–
Affiliated Faculty, Center for Biodiversity Outcomes, ASU, 2016–
Graduate Faculty, School of Sustainability, ASU, 2010 –
Affiliated Professor, School of Sustainability, ASU, 2007–
Visiting Professor, Centre d'Estudis Avançats de Blanes, 2007
Adjunct Professor of Biology, University of New Mexico UNM, 2005–
Visiting Researcher, National Center for Ecological Analysis and Synthesis, 1998–1999

PROFESSIONAL HONORS AND AWARDS

Award of Excellence, Society for Freshwater Science, 2023
Alfred C. Redfield Lifetime Achievement Award, Association for the Sciences of Limnology and Oceanography, 2023
Regents Professor, ASU, 2019
Member, National Academy of Sciences, elected 2019
Fellow, Society for Freshwater Science, elected 2019
Sustainability Science Award, Ecological Society of America, 2019
H. J. Oosting Lecturer, Duke University, 2019
Virginia M. Ullman Chair in Ecology, ASU, 2018
Fellow, American Geophysical Union, elected 2017
Distinguished Ecologist, Marine Biological Laboratory Ecosystems Center, 2015
Inaugural William Mitsch Lecturer, University of Notre Dame, 2015
Eminent Ecologist, Kellogg Biological Station, 2015
Jenner Lecturer, University of North Carolina, 2015
Eugene and Bill Odum Lecturer, University of Georgia, 2015
Director's Award for Collaborative Integration, NSF, 2012
Fellow, Ecological Society of America, elected 2012
Distinguished Scientist Award (LTER network), American Institute of Biological Sciences, 2011
Founders' Day Faculty Award for Excellence in Research, ASU Alumni Association, 2010
Fellow, American Association for the Advancement of Science, elected 2008
Inaugural Minshall Lecturer, Idaho State University, 2007
Governing Board Member-At-Large, Council of Scientific Society Presidents, 2006
President, Ecological Society of America, 2005-2006
(President-Elect 2004–2005, Past President 2006–2007)
Distinguished Ecologist, Colorado State University Graduate Program in Ecology, 2004
Distinguished Ecologist, Utah State University Ecology Program, 2003
President, North American Benthological Society (now Society for Freshwater Science),1999–2000
(President-Elect 1998–1999, Past President 2000–2001).
Kaeser Visiting Scholar, Center for Limnology, University of Wisconsin-Madison, 1998
NSF Postdoctoral Fellow, 1987–1989.

CURRENT ACTIVITIES OVERVIEW

Research Interests

Global environmental change; biogeochemistry; ecosystem structure and function; nitrogen cycling in streams and cities; interactions between surface and ground waters; terrestrial-aquatic linkages; resilience; climate-change adaptation in urban social-ecological-technological systems; sustainable future scenarios for cities

Current Primary Research Projects and Collaborations

Four active research grants. Major projects:

Effects of climate variability and change on stream ecosystem processes (1978–1999; 2009–2021) and RAPID FIRE (2020–2023): Long-term study of Sycamore Creek, a spatially intermittent desert stream-riparian ecosystem. Current research focuses on how climate variability and change drive ecosystem state change from gravel runs to wetlands, resilience of these contrasting reach types to the hydrologic disturbance regime (flash floods, drying), and the impacts of a 2020 fire that burned half the watershed on stream ecosystem processes and nutrient and carbon export. Collaborators include an early-career group of stream ecologists conducting data analysis and synthesis on dryland streams and rivers.

Central Arizona – Phoenix LTER (1997–2028): Comprehensive investigation of an urban social-ecological system. Executive committee member and co-PI 2016–present; lead PI and director 2012–2016; executive committee member 2010–2012; lead PI and co-director 1997–2010; ~100 collaborators from diverse natural and social science fields and engineering, mostly from ASU and local partnerships. My research is focused on biogeochemical patterns and processes as they affect and are affected by society, adaptation options in the face of increased temperature and extreme events, and synthesis and scenarios of future change in this complex system under continued demographic, land-use, and climatic change.

NATure-based solutions for Urban Resilience in the Anthropocene (NATURA) (2019–2024): An international network of >40 networks working on nature-based solutions, on all continents and featuring opportunities for early-career researchers and practitioners to participate in five- to 15-week exchange fellowships with other networks. NATURA also provides support for thematic and synthesis working groups. I co-direct this network of networks and lead the North American node.

Converging Social, Ecological, and Technological Infrastructure Systems (SETS) for Urban Resilience (SETS Convergence, a UREx project; 2019–2024): Accelerating advances in convergent urban systems science to provide cities with the knowledge and methods for building integrated SETS resilience strategies to extreme events. We are developing and refining an urban resilience conceptual framework to guide an emerging, convergent urban systems science for cities to test and deploy in San Juan (PR), Atlanta, New York, and Phoenix.

Current Educational Activities

Graduate Training: Developing and leading ESSA Graduate Scholars, a new graduate training initiative to prepare the next generation of scholars in Earth Systems Science for the Anthropocene (ESSA). This transformational program brings together students who are working on degrees in disciplines ranging from social science to engineering, emphasizing individualized curriculum, problem-based research, and competencies of collaboration and

team science; systems thinking; understanding of justice, equity, diversity, and inclusion; science communication beyond the academy; and a solutions focus.

Research in Urban Latin America International Research Experience for Students (RULA IRES) (2016–2024): Leading a program that gives graduate and undergraduate students experience doing problem-based research in Latin American cities on nature-based solutions and resilience to extreme events.

Current and Recent Teaching: Ecosystem Ecology; Urban Ecosystems; Urban Resilience Reading Group; Ecosystems Reading Group; ESSA Readings and Reflections Seminar; Rio Reimagined Intensive, Interdisciplinary, Identity-Based Team Science Experience (IIITSE); Nature and Urban Resilience in Ecuador; Nature and Urban Resilience in Colombia

Mentoring: five graduate students, one postdoc, one post-bac researcher, four undergraduate researchers, five RULA-IRES fellows and xx IIITSE fellows.

Racial Equity: Immersive, Interdisciplinary, Identity-based Team Science Experiences for Indigenous Graduate Scholars (2022–2026): Program coupling a short course in team science and Indigenous knowledge with a summer research experience for graduate students.

Professional Memberships

American Association for the Advancement of Science; American Geophysical Union; American Institute of Biological Sciences; Association for the Sciences of Limnology and Oceanography; Arizona Riparian Council; Ecological Society of America; Society for Freshwater Science; Society for Urban Ecology; Societas Internationalis Limnologiae; The Nature Conservancy; United States National Academy of Sciences

Current Service

Member: National Academies Roundtable on Science and Technology for Sustainability (2020–2025)
Member: NASEM Advisory Committee for the Gulf Scholars Program (2021–2024)
Advisory Board Member: H_2O'Lyon: School of Integrated Watershed Sciences (2019–)
Editorial Board Member: *Watershed Ecology & the Environment* (2018–), *Sustainability* (2018–), *Perspectives in Earth and Space Sciences (*2020–)
Editorial Advisory Board: *Journal of Urban Ecology* (2015–)
Member: International Scientific Committee for OneWater (France) (2022–)
Chair: Sulzman Award Committee, Biogeosciences, American Geophysical Union (2020–2022)

PUBLICATIONS

Refereed Journal Articles, Book Chapters, Reports, and Symposia

(*post-doctoral scholars; graduate or undergraduate students)

In press

Sauer*, Jason, Arun Pallathadka*, Idowu Ajibade, Marta Berbés-Blázquez, Heejun Chang, Elizabeth Cook, **Nancy B. Grimm,** David M. Iwaniec, Robert Lloyd*, Grisha Post*. Relating social, ecological, and technological vulnerability to future flood exposure at two scales in four U.S. cities. Sustainable Cities and Society: *In press.*

Wang*, J., **N. B. Grimm**, S. Lawler, and X. Dong. Novel climatic niches and reorganized biotic interactions amplify community sensitivity to warming. PNAS: *In press.*

2023

230. Allen, D. C., B. A. Gill, A. Metcalf, S. Bonjour*, S. Starr, J. Wang*, D. Valentin, and **N. B. Grimm.** 2023. Taxonomic identity, biodiversity, and antecedent disturbances shape the dimensional stability of stream invertebrates. Limnology and Oceanography Letters. doi: 10.1002/lol2.10303
229. Berbés-Blázquez, M., E. M. Cook, **N. B. Grimm,** D. M. Iwaniec, L. M. Manetti, T. A. Muñoz-Erickson, and D. Wahl. 2023. Assessing resilience, equity, and sustainability of future visions across two urban scales. Sustainability Science 2023 (1):1–18. https://doi.org/10.1007/S11625-023-01396-Z
228. Chester, M. V., T. R. Miller, T. A. Muñoz-Erickson, A. M. Helmrich, D. M. Iwaniec, T. McPhearson, E. M. Cook, **N. B. Grimm**, and S. A. Markolf. 2023. Sensemaking for entangled urban social, ecological, and technological systems in the Anthropocene. *Npj Urban Sustainability*, *3*(1), 39. https://doi.org/10.1038/s42949-023-00120-1
227. **Grimm, N. B.**, Y. Kim*, J. R. Sauer*, and S. R. Elser*. 2023. Chapter 2: Nature-based solutions and climate change resilience. Pages 13-28 *in* T. McPhearson, N. Kabisch, and N. Frantzeskaki, editors. Nature-based solutions for cities. Edward Elgar Publishing. https://doi.org/10.4337/9781800376762.00010
226. Halpern, B. S., C. Boettiger, M. C. Dietze, J. A. Gephart, P. Gonzalez, **N. B. Grimm**, P. M. Groffman, J. Gurevitch, S. E. Hobbie, K. J. Komatsu, K. J. Kroeker, H. J. Lahr, D. M. Lodge, C. J. Lortie, J. S. S. ALowndes, F. Michelli, H. P. Possingham, M. H. Ruckelshaus, C. Scarborough, C. L. Wood, G. C. Wu, and L. Lancaster. 2023. Priorities for synthesis in ecology and environmental science. Ecosphere 14:e4342. https://doi.org/10.1002/ecs2.4342
225. Helmrich*, A., A. Kuhn*, A. Roque*, A. Santibanez*, Y. Kim*, **N. B. Grimm**, and M. Chester. Interdependence of social-ecological-technological systems in Phoenix, AZ: consequences of an extreme precipitation event. Journal of Infrastructure Preservation and Resilience 4(1): 19. https://doi.org/10.1186/s43065-023-00085-6
224. Shaw*, J.A., S. L. Collins, T. J. Ohlert*, H. Heavenrich, E. Cook, M. M. Wheeler, **N. B. Grimm**, and S. J. Hall. 2023. Seasonal rainfall, shrub cover and soil properties drive production of winter annuals in the northern Sonoran Desert. Ecosystems. https://doi.org/10.1007/s10021-023-00850-4

2022

223. Andersson, E., **N. B. Grimm**, T. Elmqvist, J. A. Lewis, C.L. Redman, S. Barthel, and J. Colding. Urban climate resilience through hybrid infrastructure. 2022. Current Opinion in Environmental Sustainability 55: 101158. https://doi.org/10.1016/J.COSUST.2022.101158
222. Bernhardt, E. S., P. Savoy, M. J. Vlah, A. P. Appling, L. E. Koenig, R. O. Hall, Jr., M. Arroita, J. R. Blaszczak, A. M. Carter*, M. Cohen, J. W. Harvey, J. B. Heffernan, A. M. Helton, J. D. Hosen, L. Kirk*, W. H. McDowell, E. H. Stanley, C. B. Yackulic, and **N. B. Grimm.** 2022. Light and flow regimes regulate the metabolism of rivers. Proceedings of the National Academy of Sciences of the United States 119 (8). https://doi.org/10.1073/PNAS.2121976119
221. Blaszczak, J. R., L. E. Koenig, F. H. Mejia, L. Gómez-Gener, C. L. Dutton, A. M. Carter*, **N. B. Grimm**, J. W. Harvey, A. M. Helton, and M. J. Cohen. 2022. Extent, patterns, and drivers of hypoxia in the world's streams and rivers. Limnology and Oceanography Letters https://doi.org/10.1002/lol2.10297.
220. **Grimm, N. B.,** D. Quattrochi, C. Clark, C. Boone, C. Rosenzweig, S. Pincetl, A. de Sherbenin, W. Solecki, M. Susman, B. Bornstein, M. Shepherd, and B. Stone. 2022. Urban systems and climate change in context. Pages 15-78 *in* W. D. Solecki and C. Rosenzweig. Climate change and US cities: urban systems, sectors, and prospects for action. Island Press.

219. Handler*, A. M., A. K. Suchy*, and **N. B. Grimm**. 2022. Denitrification and DNRA in urban accidental wetlands in Phoenix, Arizona. Journal of Geophysical Research: Biogeosciences, 127, e2021JG006552. https://doi.org/10.1029/2021JG006552
218. McPhearson, T., E. Cook, M. Berbés-Blázquez, C. Cheng, **N.B. Grimm**, E. Andersson, O. Barbosa, D.G. Chandler, H. Chang, M. Chester, D. Childers, S. Elser*, N. Frantzeskaki, Z. Grabowski, P. Groffman R.L. Hale, D.M. Iwaniec, N. Kabisch, C. Kennedy, S.A. Markolf, A.M. Matsler, L.E. McPhillips, T.R. Miller, T.A. Muñoz-Erickson, E. Rosi, T.G. Troxler. 2022. A social-ecological-technological systems framework for urban ecosystem services. One Earth 5: 505-518. doi: 10.1016/j.oneear.2022.04.007
217. Pallathadka*, A., J. Sauer*, H. Chang, and **N. B. Grimm.** 2022. Urban flood risk and green infrastructure: Who is exposed to risk and who benefits from investment? A case study of three U.S. cities. Landscape and Urban Planning 223. https://doi.org/10.1016/j.landurbplan.2022.104417.
216. Ribot*, Miquel, **Nancy B. Grimm,** Lindsey D. Pollard, Daniel von Schiller, Amalia Handler* and Eugènia Martí. 2022. Consequences of an ecosystem state shift for nitrogen cycling in a desert stream. Limnology & Oceanography. doi: 10.1002/lno.12706.
215. Sauer*, J. R., O. Barbosa, E. M. Cook, **N. Grimm,** C. Lamarca, J. Maira, A. Schueftan, and D. M. Iwaniec. 2022. Envisioning future scenarios to manage pluvial flooding in social-ecological-technological systems. 18 pp *In* V. Shandas, and D. Hellman, editors. Collaborating for climate equity: Researcher–practitioner partnerships in the Americas (1st ed.). Routledge. https://doi.org/10.4324/9781003208723
214. Verelli, B. C., M. Alberti, S. Des Roches, N C. Harris, A. P. Hendry, M. T. J. Johnson, A. M. Savage, A. Charmantier, K. M. Gotanda, L. Govaert, L. S. Miles, L. R. Rivkin, K. M. Winchell, K. I. Brans, C. Correa, S. E. Diamond, B. Fitzhugh, **N. B. Grimm,** S. Hughes, J. M. Marzluff, J. Munshi-South, C. Rojas, J. S. Santangelo, C. J. Schell, J. A. Schweitzer, M. Szulkin, M. C. Urban, Y. Zhou, and C. Ziter. A global horizon scan for urban evolutionary ecology. Trends in Ecology and Evolution. doi: 10.1016/j.tree.2022.07.012.

2021

213. Berbés-Blásquez, M. **N. B. Grimm**, E. M. Cook, D. M. Iwaniec, T. A. Muñoz-Erickson, V. Verduzco, and D. Wahl. 2021. Assessing future resilience, equity, and sustainability in scenario planning. Pages 113–127 *in* Z. A. Hamstead, D.M. Iwaniec, T. McPhearson, M. Berbés-Blázques, E. M. Cook, and T. A. Muñoz-Erickson, editors. Resilient Urban Futures. The Urban Book Series. Springer-Nature. https://doi.org/10.1007/978-3-030-63131-4_8.
212. Chang, Heejun, Arun Pallathadka*, Jason Sauer*, **Nancy Grimm,** Rae Zimmerman, Chingwen Cheng, David Iwaniec, Yeowon Kim, Robert Lloyd, Timon McPhearson, Bernice Rosenzweig, Tiffany Troxler, Claire Welty, Ryan Brenner, and Pablo Herreros-Cantis. 2021. Assessment of urban flood vulnerability using the social-ecological-technological systems framework in six US cities. Sustainable Cities and Society. doi: 10.1016/j.scs.2021.102786
211. Cook, E. M., M. Berbés-Blázquez, L. M. Mannetti, **N. B. Grimm**, D. M. Iwaniec, and T. A. Muñoz-Erickson. 2021. Setting the stage for co-production. Pages 99–111 *in* Z. A. Hamstead, D. M. Iwaniec, T. McPhearson, M. Berbés-Blázques, E. M. Cook, and T. A. Muñoz-Erickson, editors. Resilient Urban Futures. The Urban Book Series. Springer-Nature. https://doi.org/10.1007/978-3-030-63131-4_7.

210. Des Roches, S., K. I. Brans, M. R. Lambert, L. R. Rivkin, A. M. Savage, C. J. Schell, C. Correa, L. De Meester, S. E. Diamond, **N. B. Grimm**, N. C. Harris, A. P. Hendry, L. Govaert, M. T. J. Johnson, J. Munshi-South, E. P. Palkovacs, M. Szulkin, M. C. Urban, B. C. Verrelli, and M. Alberti. 2021. Socio-eco-evolutionary dynamics in cities. Evolutionary Adaptations. doi: 10.1111/eva.13065.
209. Elmqvist, T, E. Andersson, T. McPhearson, X. Bai, L. Bettencourt, E. Brondizio, J. Colding, G. Daily, C. Folke, **N. Grimm,** D. Haase, D. Ospina, S. Parnell, S. Polasky, K. C. Seto, and S. Van Der Leeuw. 2021. Urbanization in and for the Anthropocene. Nature Urban Sustainability 1:6. https://doi.org/10.1038/s42949-021-00018-w.
208. Iwaniec, D. M., M. Berbés-Blázquez, E. M. Cook, **N. B. Grimm,** L. M. Mannetti, T. McPhearson, and T. A. Muñoz-Erickson. 2021. Positive futures. Pages 85–97 *in* Z. A. Hamstead, D.M. Iwaniec, T. McPhearson, M. Berbés-Blázques, E. M. Cook, and T. A. Muñoz-Erickson, editors. Resilient Urban Futures. The Urban Book Series. Springer-Nature. https://doi.org/10.1007/978-3-030-63131-4_6.
207. Iwaniec, D. M., **N. B. Grimm,** T. McPhearson, M. Berbés-Blázquez, E. M. Cook, and T. A. Muñoz-Erickson. 2021. A framework for resilient urban futures. Pages 1–9 *in* Z. A. Hamstead, D.M. Iwaniec, T. McPhearson, M. Berbés-Blázques, E. M. Cook, and T. A. Muñoz-Erickson, editors. Resilient Urban Futures. The Urban Book Series. Springer-Nature. https://doi.org/10.1007/978-3-030-63131-4_1.
206. Kim*, Y., M. V. Chester, **N. B. Grimm**, and C. L. Redman. 2021. Capturing practitioner perspectives on infrastructure resilience using Q-methodology. Environmental Research: Infrastructure and Sustainability 1: 025002. https://doi.org/10.1088/2634-4505/ac0f98
205. Kim*, Y., L. M. Manetti, D. M. Iwaniec, **N. B. Grimm,** M. Berbés, and S. Markolf. 2021. Social, ecological, and technological strategies for climate adaptation. Pages 29–45 *in* Z. A. Hamstead, D.M. Iwaniec, T. McPhearson, M. Berbés-Blázques, E. M. Cook, and T. A. Muñoz-Erickson, editors. Resilient Urban Futures. The Urban Book Series. Springer-Nature. https://doi.org/10.1007/978-3-030-63131-4_3.
204. McPhearson, T., D. M. Iwaniec, Z. A. Hamstead, M. Berbés-Blázquez, E. M. Cook, T. A. Muñoz-Erickson, L. Mannetti, and **N. B. Grimm.** 2021. A vision for resilient urban futures. Pages 173-186 *in* Z. A. Hamstead, D.M. Iwaniec, T. McPhearson, M. Berbés-Blázques, E. M. Cook, and T. Muñoz-Erickson, editors. Resilient Urban Futures. The Urban Book Series. Springer-Nature. https://doi.org/10.1007/978-3-030-63131-4_12.
203. Muñoz-Erickson, T. A., S. Meerow, R. Hobbins*, E. Cook, D. M. Iwaniec, M. Berbés-Blázquez, **N. B. Grimm**, A. Barnett*, J. Cordero*, C. Gim*, T. R. Miller, F. Tandazo-Bustamante*, and A. Robles-Morua. 2021. Beyond bouncing back? Comparing and contesting urban resilience frames in US and Latin American contexts. Landscape and Urban Planning 214:104173.
202. Wheeler*, M. M., S. L. Collins, **N. B. Grimm,** E. M. Cook, C. Clark, R. A. Sponseller, and S. J. Hall. 2021. Water and nitrogen shape winter annual plant diversity and community composition in near-urban Sonoran Desert preserves. Ecological Monographs 00(00):e01450. doi: 10.1002/ecm.1450.

2020

201. Alberti, M., E. P. Palkovacs, S. Des Roches, L. De Meester, K. I. Brans, L. Govaert, **N. B. Grimm**, N. C. Harris, A. P. Hendry, C. J. Schell, M. Szulkin, J. Munshi-South, M. C. Urban, and B. C. Verrelli. 2020. The complexity of urban eco-evolutionary dynamics. BioScience 70:772-793.

200. Dong*, X., **N. B. Grimm**, J. B. Heffernan, and R. Muneepeerakuhl. 2020. Interactions between physical template and self-organization shape plant dynamics in a stream ecosystem. Ecosystems: doi: 10.1007/s10021-019-00444-z
199. **Grimm, N. B.** 2020. Urban ecology: what is it and why do we need it? Chapter 1, pp 1-14 in Barbosa, P. (editor). Urban ecology: its nature and challenges. CAB International. http://dx.doi.org/10.1079/9781789242607.0001.
198. Guardaro*, M., M. Messerschmidt, D. Hondula, **N. B. Grimm**, and C. L. Redman. 2020. Building community heat action plans story by story: a three-neighborhood case study. Cities 107: 102886. doi: 10.1016/j.cities.2020.102886
197. Helmrich*, A. M., M. V. Chester, S. Hayes, S. A. Markolf*, C. Desha, **N. B. Grimm**. 2020. Using biomimicry to support resilient infrastructure design. Earth's Future 8. https://doi.org/10.1029/2020EF001653
196. Hobbie, S. E., and **N. B. Grimm.** 2020. Nature-based approaches to managing climate change impacts in cities. Philosophical Transactions of the Royal Society B 375: 20190124. http://dx.doi.org/10.1098/rstb.2019.0124
195. Hoover, D. L., B. Bestelmeyer, **N. B. Grimm,** T. E. Huxman, S. C. Reed, O. Sala, T. R. Seastedt, H. Wilmer, S. Ferrenberg. 2020. Traversing the wasteland: a framework for assessing ecological threats to drylands. BioScience: doi:10.1093/biosci/biz126.
194. Iwaniec, D. M., E. M. Cook, M. Davidson*, M. Berbés Blázquez*, M. Georgescu, E. S. Krayenhoff, A. Middel, D. A. Sampson, and **N. B. Grimm**. 2020. The co-production of sustainable future scenarios. Landscape and Urban Planning 197: 103744. https://doi.org/10.1016/j.landurbplan.2020.103744
193. Iwaniec, D. M., M. J. Davidson*, E. M. Cook, M. Berbés Blásquez*, and **N. B. Grimm**. 2020. Integrating existing climate adaptation planning into future visions: a strategic scenario for the central Arizona–Phoenix region. Landscape and Urban Planning 200: 103820. https://doi.org/10.1016/j.landurbplan.2020.103820
192. Sampson, D. A., E. M. Cook, M. J. Davidson*, **N. B. Grimm**, and D. M. Iwaniec. 2020. Simulating alternative sustainable water futures. Sustainability Science, 2020. doi: 10.1007/s11625-020-00820-y

2019

191. Corman*, J. R., S. L. Collins, E. Cook*, X. Dong*, L. A. Gherardi*, **N. B. Grimm,** R. L. Hale*, T. Lin, J. Ramos*, L. G. Reichmann*, and O. E. Sala. 2019. Foundations and frontiers of ecosystem science: legacy of a classic paper (Odum 1969). Ecosystems 22:1160-1172. https://doi.org/10.1007/s10021-018-0316-3
190. Iwaniec, D. M., E. M. Cook, O. Barbosa, and **N. B. Grimm**. 2019. Criteria for urban sustainability transformations. Sustainability 11:573. doi:10.3390/su1103057.
189. McPhillips*, L. E., S. Earl, R. L. Hale, and **N. B. Grimm**. 2019. Urbanization in semi-arid United States watersheds results in decreased stream flashiness. Water Resources Research 55:9436-9453. doi: 10.1029/2019WR025835.
188. Solecki, W., **N. B. Grimm,** P. Marcotullio, C. G. Boone, A. Bruns, J. Lobo, A. E. Lueke, P. Romero-Lankao, A. F. Young, R. Zimmerman, R. Breitzer, C. Griffith, A. Aylett. 2019. Extreme events and climate adaptation-mitigation linkages: understanding low-carbon transitions in the era of global urbanization. Wiley Interdisciplinary Reviews: Climate Change 10: (6): e616. doi:10.1002/wcc.616

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25. McPhillips, L. E., R. Hale, S. Earl, **N. B. Grimm,** and M. Herndon. 2019. Flashiness of urban and desert streams in arid Arizona watersheds (2003-2016) [data set]. Environmental Data Initiative. https://portal.edirepository.org/nis/mapbrowse?scope=knb-lter-cap&identifier=663
24. Allen, J., **N. Grimm**, S. Hall, and J. Kaye. 2018. Desert Fertilization Experiment: composition of annual plants in study plots within desert preserves in and around the greater Phoenix metropolitan area, spring 2008 ver 1. [data set] Environmental Data Initiative. https://doi.org/10.6073/pasta/1217bf533d4e5c8d6b1efab795c69c77. Accessed 2020-08-10.
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15. **Grimm, N.B.**, D. Hope, C. Gries, C.A. Martin, and E.K. Burns. 2018. Survey 200 long term study of multiple sites in central Arizona-Phoenix: decomposition, mycorrhizae, and on-site climate - survey year 2000 ver 12. [data set] Environmental Data Initiative. https://doi.org/10.6073/pasta/9bacb18c7d23d5dcc36cfafb5fd147d9. Accessed 2020-08-10.
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13. Bateman, H. and **N. Grimm.** 2016. Vegetation surveys at CAP LTER riparian-area bird-monitoring locations in the greater Phoenix metropolitan area (2013) ver 3. [data set] Environmental Data Initiative. https://doi.org/10.6073/pasta/75ac46d5374c289f826ed99dd65ffdc4. Accessed 2020-08-10.
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9. **Grimm, N. B.,** and K. L. Jacobs. 2013. Evaluating climate impacts on people and ecosystems. Frontiers in Ecology and the Environment 11:455. Doi: 10.1890/1540-9295-11.9.455

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4. **Grimm, N. B.** 2006. Ecology 2020. A message from the President. Annual Report, Ecological Society of America, Washington, D.C.
3. **Grimm, N. B.**, A. Covich, and J.M. Melillo. 2006. A vision for ecology's future: where are we today? Frontiers in Ecology and the Environment 4:115.
2. Melillo, J.M., **N. B. Grimm**, and W.H. Schlesinger. 2005. Ecology and the transition to sustainability. Frontiers in Ecology and the Environment 3:3.
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Manuscripts in Review

Feagan, M., T. A. Muñoz-Erickson, R. Hobbins, K. Baja, M. Chester, E. M. Cook, **N. Grimm**, M. Grove, D. M. Iwaniec, S. Iyer, T. McPhearson, P. Méndez-Lázaro, C. Miller, D. Sauter, B. Solecki, C. Tomateo, T. Troxler, and C. Welty. Co-producing knowledge systems for resilient and just coastal cities: a social-ecological-technological systems (SETS) approach. Cities: *in revision.*

Lauck, Marina, **Nancy B. Grimm,** and Daniel E. Winkler. Lagged plant productivity responses to drought mediated by seasonal flooding in an arid riparian system.

Mustafa, A., L. Ortiz, P. Herreros-Cantis, E. M. Cook, D. M. Iwaniec, A. M. Matsler, B. Rosenzweig, P.M. Groffman, M. Grove, C. Welty, **N. B. Grimm**, M. Berbés-Blázquez, A. Phillips, T. Muñoz-Erickson, K. Baja, and T. McPhearson. Modeling resilient climate futures: How do future land-use outcomes produced by diverse stakeholder visions affect exposure to multi-hazard weather extremes? Earth's Future: *In review.*

Sauer*, J. R., **N. B. Grimm,** E. M. Cook, O. Barbosa, A. Mustafa, K. Kunkel, T. McPhearson, and A. Ballinger. Estimating future flood risk due to climate change and land cover change in Valdivia, Chile. *In review.*

Smith*, M. A., J. S. Kominoski, O. Barbosa, E. Cook, S. Elser, N. B. Grimm, J. Morse, and J.Sauer. Dissolved organic matter composition and nutrient stoichiometry mediate nutrient uptake in urban wetlands. Ecological Applications: *in review.*

PRESENTATIONS

Invited, Plenary, and Keynote Presentations

119. Redfield Award Presentation, *Resilience and Recovery in Aquatic Systems.* Title: Disturbance and resilience of ecosystems: from streams to cities. Association for the Sciences of Limnology and Oceanography Annual Meeting. Palma, Mallorca, June 2023.
118. Award of Excellence Presentation, *Freshwater Science Down Under.* Title: Disturbance and resilience of ecosystems: from streams to cities. Society for Freshwater Science Annual Meeting. Brisbane, Australia, June 2023 (recorded presentation played during opening

session).

117. Plenary. *SIL 100. The next 100 years: sensing and safeguarding inland waters.* Title: Resilience to climate change in streams and cities: looking to the past and the future. 36th Congress of the International Society of Limnology. Berlin, Germany, August 2022.
116. Keynote. *Front Range Student Ecology Symposium.* Title: Envisioning positive futures and nature-based solutions for the Anthropocene. Colorado State University, Fort Collins, CO, February 2022.
115. Plenary. *INTECOL Wetlands.* Title: Ecosystem services of natural, accidental, and designed wetlands in urban environments. Virtual conference, October 2021.
114. Plenary. *The Future of Synthesis in Ecology.* Title: Merging concepts of resilience to meet challenges of the Anthropocene. Virtual, National Center for Ecological Analysis and Synthesis, February 2021.
113. Webinar Presentation, *Sustainability Roundtable Webinar Series.* Title: Urban sustainability: resilience to extreme events in social-ecological-technological systems (SETS). Virtual, November 2020.
112. Margalef Plenary Lecture. *Limnología 2020: Limnología en un mundo en cambio.* Title: The need for positive thinking in times of crisis: co-producing sustainable future scenarios and nature-based solutions for cities. Virtual Conference, October 2020.
111. Invited presentation. Special Session, *Urban Ecohydrology: New Concepts, Observations, and Models.* Title: Ecohydrological and biogeochemical dynamics of urban stormwater in arid central Arizona. AGU Fall Meeting, San Francisco, CA, December 2019.
110. Special Invitational Seminar, School of Life Sciences, ASU. Title: Rivers of our dreams: water futures in urban central Arizona. Tempe, AZ, November 2019.
109. Plenary. *Society for Freshwater Science Annual Meeting.* Title: Rivers of our dreams: water futures in urban central Arizona. Salt Lake City, UT, May 2019.
108. Keynote. *H. J. Oosting Lecture.* Title: Climate change, disturbance, and extreme events: how will cities respond? Duke University, Durham, NC, March 2019.
107. Invited. *Comparative Urbanism Conference.* Title: Extreme events call for resilient urban infrastructure and positive future visions. Atlanta, GA, March 2019.
106. Keynote. *Baltimore Ecosystem Study 20th annual meeting*. Title: Twenty years of urban ecological research: parallels and contrasts of a Rust Belt and a Sun Belt city. Baltimore, MD, October, 2018.
105. Invited presentation. *Generous Cities Summit.* Title: Ecosystem services of the Salt River's accidental wetlands. ASU Biomimicry Center, Tempe, AZ, April 2018.
104. Keynote. *Our Common Future* symposium. Title: Urban resilience to extreme climate events. Donald Blechman Memorial Lecture Series, School of Environment, Arts & Society, Florida International University, Miami, FL, January, 2018.
103. Invited presentation (with Marta Berbés Blásquez, Chingwen Cheng, Elizabeth Cook, Timon McPhearson, Lauren McPhillips, and Monica Palta). Symposium: *Aquatic ecosystem services in a changing world.* Title: Assessing urban aquatic services in the face of climate-driven extreme events. Ecological Society of America Annual Meeting, Portland, OR, August, 2017.
102. Invited presentation. Ignite Session: *What is the single greatest threat to dryland ecosystems in a changing world?* Title: Climate change and urbanization: colliding threats to desert streams. Ecological Society of America Annual Meeting, Portland, OR, August, 2017.
101. Keynote. International Conference: *HydroEco2017: Ecohydrology on the edge: ecology-hydrology- human interactions in a changing world.* Title: Building resilience to extreme

weather-related events in urban environments through social-ecological-technological systems (SETS) infrastructure. Birmingham, UK, June 2017.

100. Invited presentation (with C. L. Redman). *Sustainability Research Networks Awardees Conference.* Title: UREx SRN overview. NSF, Arlington, VA, June 2017.
99. Keynote. *International Urban Wildlife Conference.* Title: The rise of urban ecology as an integrative, interdisciplinary science for the Anthropocene. San Diego, CA, June, 2017.
98. Panelist. International Conference: *Interdisciplinary perspectives on urban infrastructure history and the social sciences.* Host: NYU Paris. Paris, France, May 2017.
97. Keynote. International Conference: *Green Infrastructures: Nature Based Solutions for sustainable and resilient cities.* Title: A SETS perspective on green infrastructure and its services. Orvieto, Italy, April 2017.
96. Invited presentation. Chapman Conference: *Extreme climate event impacts on aquatic biogeochemical cycles and fluxes.* Title: Designing social-ecological-technological systems (SETS) to build resilience to extreme weather-related events in urban environments. San Juan, PR, February 2017.
95. Invited. *The Stockholm Seminar.* Title: Extreme events call for a resilient SETS infrastructure. Royal Swedish Academy of Sciences, Stockholm, Sweden, May, 2016.
94. Keynote: *EnviroDay 2016.* Title: The future of cities: addressing challenges from the collision of urbanization and climate change. Environmental Sciences Department, University of Virginia, Charlottesville, VA, February 2016.
93. Invited presentation. Special Workshop: *Urban Systems.* Title: Urban resilience to extremes: a new Sustainability Research Network. Complex Systems Symposium, Tempe, AZ, October 2015.
92. Keynote. International Conference: *2nd Water Sensitive Cities Conference.* Title: Developing a concept of social-ecological-technological systems to characterize resilience of urban areas and infrastructure to extreme events. CRC for Water Sensitive Cities, Brisbane, Australia, September 2015.
91. Invited presentation (with C. L. Redman, M. Chester, D. Iwaniec, T. McPhearson, T. Miller, and T. Muñoz-Erickson). Symposium: *An ecology in, of, and for cities.* Title: Developing a concept of social-ecological-technological systems to characterize resilience of urban areas and infrastructure to extreme events. Ecological Society of America (ESA) Annual Meeting, Baltimore, MD, August 2015.
90. Invited presentation (with R. Hale, S.T.A. Pickett, M. L. Cadenasso). Organized Oral Session: *The Emergence, Rise, and Future of Urban Ecology in the United States.* Title: Disturbance in urban ecosystems. ESA Annual Meeting, Baltimore, MD, August 2015.
89. Keynote. International Conference: *Hydroeco2015: Advances in monitoring, predicting and managing hydroecological processes.* Title: Spatial and temporal variation in responses of ecosystem structure and processes to short- and long-term hydrological regime shifts in a semi-arid watershed. Vienna, Austria, April 2015.
88. Invited presentation (with X. Dong, A. Ruhí, and J. L. Sabo). Special Session: *Climate-driven changes in coupled terrestrial-aquatic ecological stoichiometry.* Title: Spatial and temporal patterns of nutrient limitation, plant biomass and productivity, and stream metabolism vary in response to short- and long-term hydrological regime shifts. American Geophysical Union (AGU) Fall Meeting, San Francisco, CA, December 2014.
87. Plenary. International Workshop: *Urbanization in watersheds: ecological and environmental responses.* Title: How shall we compare urban and urbanizing watersheds globally? Concepts and case studies. Xiamen, China, October 2014.

86. Plenary. International Workshop: *Climate driven changes on coupled terrestrial-aquatic ecological stoichiometry.* Title: Global change effects on riverine hydrological, biogeochemical, and ecological processes. Abisko, Sweden, September 2014.
85. Invited Presentation. IGNITE Session, *From Mountains to Coasts: Ecosystems in the Third National Climate Assessment.* Title: Climate change, ecosystem services, and biogeochemical cycles. ESA Annual Meeting, Sacramento, CA, August 2014.
84. Invited presentation. Special Session, *Environmental Impacts of Urbanization at Multiple Scales: Neighborhood to Globe.* Title: Prospects for resilience and sustainability of urban socio-techno-ecological systems to evolving stressors at global, regional, and local scales. AGU Fall Meeting, San Francisco, CA, December 2013.
83. Plenary. Symposium of the Syracuse Center of Excellence: *Urban Reinvention and Resilience.* Title: Adding the "techno" into urban socioecological systems. Syracuse, NY, October 2013.
82. Invited presentation. International Conference: "CIGMA 2013: Conferencia International de Geographía y Medio Ambiente." Title: Urban socio-techno-ecological systems: Prospects for resilient urban water systems. Session on Climate Change, Mexico City, Mexico, October 2013.
81. Plenary. *International Conference.* Title: Urban socio-techno-ecological systems: Prospects for resilient urban water systems. Triennial Meeting, International Society of Ecology (INTECOL), and 100th Anniversary Meeting, British Ecological Society (BES), London, UK, August 2013.
80. Invited Presentation. Organized Oral Session: *Implications of climate change for ecosystem processes in the Southwest U.S.* Title: Overview of the 2013 US National Climate Assessment, with special reference to impacts of climate change on ecosystems, hydrology, and urban areas of the Southwest. ESA Annual Meeting, Minneapolis, Minnesota, August 2013.
79. Invited Presentation. IGNITE Session: *Urban Ecology: From Biophysics to Society.* Title: Urban stormwater and the new normal. ESA Annual Meeting, Minneapolis, Minnesota, August 2013.
78. Plenary. International Symposium: *Methodological approaches for dealing with socio-ecological complexity of urban areas.* Title: Understanding urban socio-techno-ecological systems. First International Congress, Society for Urban Ecology. Berlin, Germany, July 2013.
77. Plenary. *Arizona Riparian Council meeting.*Title: A global perspective on urban streams and rivers. Tempe, AZ, April 2013.
76. Plenary. *LTER Graduate Student Symposium.* Title: Interdisciplinary research: a view from two perches. LTER All-Scientists Meeting, Estes Park, CO, September 2012.
75. Invited presentation. Symposium: *Urban biogeochemistry.* Title: Modulation of storm-driven water and nutrient loads by infrastructure in an arid urban ecosystem. EcoSummit 2012, Columbus, OH, October 2012.
74. Invited presentation. Symposium, *The National Climate Assessment: Preliminary Findings, Building Assessment Capacity, and Implementing a Sustained Assessment Process.* Title: Current and future impacts of climate and global change on the structure and functioning of ecosystems. ESA Annual meeting, Portland, Oregon, August 2012.
73. Plenary. Annual Meeting, *Association for the Sciences of Limnology and Oceanography (ASLO).* Title: Global environmental change and the water challenges of cities. Lake Biwa, Japan, July 2012.
72. Keynote. *Annual Undergraduate Symposium, SOLUR.* Title: The challenges of global environment change for ecosystems, people, and the Southwest. ASU. Tempe. AZ, March 2012.

71. Invited presentation. International Conference: *Grasslands in a Global Context.* Title: Hydrogeomorphic drivers of stream ecosystem structure and function in deserts and grasslands. Manhattan, Kansas, September 2011.
70. Plenary. International Conference: *SCARCE.* Title: Challenges in water provisioning, delivery, and quality for urban populations: analysis of global patterns and an aridland case study. International Conference, Institut Catalan de Reserches Aquatic, Girona, Spain, December 2010.
69. Keynote. International Conference: *Urban Environmental Forum.* Title: Challenges in water provisioning, delivery, and quality for urban populations: analysis of global patterns and an aridland case study. Xiamen, China, December 2010.
68. Invited presentation. Organized Oral Session: *Long-Term Research in Environmental Biology.* Title: Interannual variability in hydrologic regimes leads to shifts in nutrient availability and vegetative biomass in a desert stream. ESA Annual Meeting, Pittsburgh, PA, August, 2010.
67. Invited presentation. Special Session: *Drought, climate change, and ecosystems: monitoring and assessing regional impacts for adaptation.* Title: Climate-change impacts and the role of ecosystem services in mitigation and adaptation in urban areas: a case study from an aridland city. AGU Fall Meeting, San Francisco, CA, December 2009.
66. Welcome address: *Water-ecosystem services, drought and environmental justice.* ESA First Millennium Conference, Athens, GA, November 2009.
65. Invited speaker/panelist. Forum: *Transitioning to sustainability: the challenge of developing sustainable urban systems.* The National Academies' Second Sustainability R&D Forum, Washington, DC, September 2009.
64. Invited presentation. Symposium, *Out on a limb: sustainability of urban ecosystems under changing climates.* Title: Global change in the urban century. Annual symposium, Association of Ecosystem Research Centers, Washington, DC, September 2009.
63. Invited panelist. Synthesis Panel: *Coupled biogeochemical cycles.* Couple Biogeochemical Cycles - ESA event, Albuquerque, NM, August 2009.
62. Invited presentation. Symposium: *Human macroecology.* Title: Ecosystem processes associated with human settlements at local, regional, and continental scales. ESA Annual meeting, Albuquerque, NM, August 2009.
61. Invited presentation. Workshop: *Climate change impacts and integrated assessment.* Title: Central Arizona–Phoenix LTER: urbanization and global environmental change. Snowmass, CO, July 2009.
60. Invited Presentation. International Workshop: *Developing a bi-national or collaborative long-term ecological research platform in the Arava Valley.* Title: Central Arizona – Phoenix LTER: Social-ecological dynamics in a rapidly urbanizing, arid region. Joint Israel-Jordan workshop, Aqaba, Jordan. June 2009.
59. Invited Presentation. International conference: *Implementing the ISSE in regional LTER research.* Title: Central Arizona – Phoenix LTER: Social-ecological dynamics in a rapidly urbanizing, arid region. Israel LTER workshop, Haifa, Israel. June 2009.
58. Invited presentation. International conference: *Dynamic Deserts.* Title: Drivers and consequences of interannual variability in nitrogen transport and retention in aridland stream–riparian ecosystems. Tempe, AZ, February 2009.
57. Keynote. International conference: *Urban Futures: the challenge of sustainability.* Title: Global change in the urban century. Annual Meeting of the Alliance for Global Sustainability, Zurich, Switzerland, January 2009.

56. Invited presentation. Symposium: *Urban areas and global change.* Title: Urbanization across gradients: testing hypotheses on effects of land change at multiple scales. AGU Fall Meeting, San Francisco, CA, December 2008.
55. Invited presentation. Inaugural Freshwater Biology Summit: *Multiple stressors in aquatic ecosystems.* Title: Combined influences of climatic and anthropogenic drivers on nitrogen transport and retention in aridland stream-riparian systems. Freshwater Biological Association, Windermere, UK, September 2008.
54. Invited presentation (with E.K. Larson). Symposium: *Second Symposium on Urban Stream Ecology.* Title: Ecosystem function in urban streams. Salt Lake City, UT, May 2008.
53. Invited Presentation. Mini-Symposium, Long-Term Ecological Research Program, *Social-ecological systems in a changing world: Perspectives from long-term ecological research.* Title: The changing landscape: ecosystem responses to urbanization and pollution across continental and regional gradients. NSF, Arlington, VA, February 2008.
52. Keynote. International Workshop (inaugural): *The Hyporheic Network.* Title: The role of hyporheic zone processes in nutrient dynamics of streams: a retrospective analysis. Sheffield, UK, June 2007.
51. Invited Speaker and Senior Mentor. International Workshop, *Urbanization Interactions with Biogeochemistry and Climate.* Young Scientist Network of the Analysis, Integration and Modeling of the Earth System project, International Geosphere-Biosphere Programme. Mexico City, Mexico, September 2006.
50. *Presidential Address.* Plenary and Awards Session: ESA Annual Meeting, Memphis, Tennessee, August 2006.
49. Plenary. Annual Symposium, *Sustainability.* Title: Urban ecosystems: a challenge for sustainability science. St Olaf College, St Paul, MN, May 2006.
48. Opening lecture. Leadership Workshop, Ecological Society of America's Strategies for Ecology Education, Diversity and Sustainability (SEEDS): *Leadership.* Title: Thoughts on leadership. Tempe, AZ, March 2006.
47. Opening and closing comments. International Conference: *Ecology in an era of globalization.* Special ESA themed meeting, Merida, Yucatan, Mexico, January 2006.
46. Plenary presentation. International Conference: *The circular economy and sustainable development.* Title: Urban ecosystems and the challenge to sustainability science. Hangzhou, Zeiming Province, China, November 2005.
45. Presentation for the China Ministry of Land Resources, *Sustainable Land Use and Planning Training - Phoenix.* Title: CAP - LTER: Instrument of Phoenix. ASU, September 26-28, 2005
44. Special Session, *Ecological sustainability in a world of constant change: Developing a new research agenda for ESA.* Introductory and synthesis comments. ESA Annual Meeting, Montreal, Quebec, Canada, August 2005.
43. Moderated roundtable luncheon discussion, *Building an ecological observatory network for regional- to continental-scale research: NEON, the National Ecological Observatory Network.* Opening remarks. ESA Annual Meeting, Montreal, Quebec, Canada, August 2005.
42. Invited 'tutorial' presentation. Special Session, *Biodiversity and ecosystem function in human-altered streams.* Title: Sorting out mechanisms from syndromes in the study of human-altered streams. ASLO Annual Meeting, Santiago de Campostela, Galicia, Spain, June 2005.
41. Invited. Fulbright International Scholars Seminar, *Managing and Protecting Natural Resources.* Title: Impact of urban environments on streams and rivers. Tempe, AZ, February 2005.

40. Invited presentation. International Workshop, *Riparian biogeochemistry in semi-arid ecosystems.*Title: Hydrologic controls on nitrogen dynamics in riparian ecosystems of semi-arid landscapes. Skukuza, Kruger National Park, South Africa, October 2004.
39. Invited presentation. Science conference, *Interactions between changes in climate and disturbance regimes.* Title: Urban disturbance (with S.T.A. Pickett). US LTER Coordinating Committee, Fairbanks, AK, August 2004.
38. Invited presentation. Symposium: *In the footsteps of Lewis & Clark: rediscovering earth from land to sea—a biogeoscience perspective.* Title: A unique urban biogeochemistry? (with J.P. Kaye, S.J. Hall, J.O. Allen, and D.B. Lewis). ESA Annual Meeting, Portland, OR, August 2004.
37. Plenary. International Conference, *Urbanization and stream ecology.* Title: Nitrogen retention and transformation in urban streams (with C.L. Crenshaw, C.N. Dahm, W.J. Roach, R.W. Shielbley III, and L.H. Zeglin). Melbourne, Australia, December 2003.
36. Plenary. Estuarine Research Foundation/US Long-Term Ecological Research Joint Symposium. Seattle, WA, September 2003.
35. Invited presentation. Chapman Conference *Ecosystem interactions with land-use change.* Title: Effects of land-use change from urbanization on nutrient dynamics in aridland streams. Santa Fe, NM, 2003.
34. Invited presentation. Mini-Symposium, Long-Term Ecological Research Program, *Integration of Geosciences and Social Science within the LTER Program: Progress and Prospects.* Title: Introduction. NSF, Arlington, VA, February 2003.
33. Invited presentation. Chapman Conference: *Interactions between Vegetation and Hydrological Processes in Semiarid Landscapes.* Title: Nutrient retention in stream-channel and riparian hotspots of semi-arid watersheds. Taos, NM, September 2002.
32. Invited presentation. Special Symposium, *Cities of Resilience*. ESA Annual meeting, Tucson, AZ, August 2002. (with C. Redman)
31. Invited presentation. Special Session, *Physical forcing and pelagic-benthic interactions in aquatic systems,* ASLO Annual meeting, Victoria, BC, June 2002.
30. Invited presentation. Mini-Symposium, Long-Term Ecological Research Program, *LTER Network Major Research Accomplishments.* Title: Urban crossroads: integration of earth, life, and social sciences in the city. NSF, Arlington, VA, February 2002.
29. Plenary. First Annual Conference, *Global Nitrogen Enrichment Program*. University of Wales, Bangor, Wales, September 2001.
28. Plenary. 16th Annual Symposium of the U.S. Chapter of International Association of Landscape Ecology, Tempe, Arizona, April 2001.
27. Invited presentation. Special Symposium, ESA Annual meeting, Snowbird, Utah, August 2000.
26. Plenary. *Presidential Address.* NABS Annual Meeting, Keystone, Colorado, May 2000.
25. Plenary. Joint symposium of the BES and the ESA: *Ecology: Achievement and Challenge.* Orlando, Florida, April 2000.
24. Invited presentation. Arizona Floodplain Management Association Conference: *Southwest River Management and Restoration: Non-Structural Approaches.* Phoenix, Arizona, April 2000.
23. Invited presentation. Annual Meeting of the Association of Ecosystem Research Centers. Washington, DC, November 1999. (Invited)
22. Plenary. Eighth Cary Conference, *Understanding urban ecosystems: a new frontier for science and education.* Millbrook, NY, April 1999.
21. Invited presentation. Special LTER Session on *Urban Ecosystems*, Annual Meeting, Ecological Society of America, Baltimore, Maryland, August 1998.

20. Keynote. *Kaeser Visiting Scholar lecture*. Center for Limnology, University of Wisconsin, Madison, WI.
19. Invited presentation. International LTER meeting, Taipei, Taiwan, November 1997.
18. Invited presentation. Special Session, *Natural and applied hydrologic variation: influences on the functioning and restoration of lotic ecosystems in semi-arid and arid regions.* Aquatic Sciences Meeting, ASLO, Santa Fe, NM.
17. Invited presentation. Special Session, *Stream ecosystems as products of coupled hydrologic and biogeochemical processes in catchments and channels.* Aquatic Sciences Meeting, ASLO, Santa Fe, NM. (with E. Marti and others)
16. Invited presentation. *Special session on undergraduate research programs.* Annual Meeting, NABS, Kallispell, MT, June 1996.
15. Invited presentation. National Center for Ecological Analysis and Synthesis Conference, *Spatio-temporal dynamics in ecological systems.* National Center for Ecological Analysis and Synthesis, Santa Barbara, California, USA, February-March 1996.
14. Plenary. EAWAG Workshop, *Heterogeneity, surface/groundwater interaction, retention, nutrient turnover and biodiversity in the transition zones of lotic ecosystems.* The Limnological Research Center, EAWAG, Kastanienbaum, Switzerland, February 1996.
13. Invited presentation. Co-operative Research Centre for Freshwater Ecology Symposium, *Spatial and Temporal Scaling of Ecological Processes in Freshwater Systems.* Monash University, Clayton, Victoria, Australia, December 1995. (with S. Fisher and others)
12. Invited presentation. Co-operative Research Centre for Freshwater Ecology Symposium, *Spatial and Temporal Scaling of Ecological Processes in Freshwater Systems.* Monash University, Clayton, Victoria, Australia, December 1995.
11. Invited presentation. Symposium, *Testing the influence of environmental heterogeneity on patterns and processes in streams.* Annual Meeting, NABS, Keystone, Colorado, May-June 1995.
10. Plenary. 5th Cary Conference: *Linking species and ecosystems.* Millbrook, NY, May 1993.
9. Invited presentation. Symposium, *Benthic algal ecology: processes and differential species performance.* Annual Meeting, North American Benthological Society. Calgary, Alberta, Canada, May 1993.
8. Invited presentation. Symposium: *Aquatic ecology: scale, pattern and process.* BES and ASLO, Cork, Ireland, April 1992.
7. Invited presentation. Gordon Research Conference: *Estuarine processes.* New Hampton, New Hampshire, June 1991.
6. Invited presentation. Workshop: *Evolutionary, population, and community responses to global change.* Friday Harbor Labs, Washington, September 1991.
5. Invited presentation. Special *Symposium honoring Gerald Cole.* Arizona-Nevada Academy of Science Annual Meeting, Tempe, Arizona, April 1990.
4. Invited presentation. Symposium: *Temporal variability and disturbance in fluvial environments.* Annual Meeting, AGU, San Francisco, California, December 1990.
3. Invited presentation. USEPA/NASA/NABS - sponsored Symposium: *Troubled waters of the greenhouse earth: climate change, water resources, and freshwater ecosystems.* Blacksburg, Virginia, May 1990.
2. Invited presentation. Symposium: *Groundwater limnology.* International Society of Limnology. Munich, West Germany, August 1989.
1. Invited presentation. *Boden Conference on Stream Ecology,* Australian Society of Limnology. Thredbo, New South Wales, Australia, January 1985.

Contributed Presentations and Abstracts

2022 Ecological Society of America (ESA) Annual Meeting, Montreal, Quebec, Canada, August 2022: 1 paper presented, 1 paper co-authored.
Joint Aquatic Sciences Meeting, Grand Rapids, MI, May 2022: 1 paper presented, 2 papers co-authored.

2021 American Geophysical Union (AGU) Fall Meeting, New Orleans, LA, December 2021: 1 poster presented, 1 paper and 2 posters co-authored.

2020 Society for Freshwater Science (SFS)–Association for the Sciences of Limnology and Oceanography (ASLO) Joint Meeting, Madison, WI, June 2020: cancelled due to pandemic. Hosted plenary panel discussion (virtual).
ESA Annual Meeting, Salt Lake City, UT, August 2020 (virtual): 2 papers presented, 4 papers co-authored.

2019 SFS Annual Meeting, Salt Lake City, UT, May 2019: 1 paper and 1 poster co-authored.
ESA Annual Meeting, Louisville, KY, August 2019: 1 paper presented.
Transformations 2019 Conference, Santiago, Chile, October 2019: 1 paper presented, 3 papers co-authored
AGU Fall Meeting, San Francisco, CA, December 2019: 4 papers co-authored.

2018 SFS Annual Meeting, Detroit, MI, June 2018: 1 paper and 2 posters co-authored.
Long-Term Ecological Research (LTER) All-Scientists Meeting, Asilomar, CA, October 2018: 2 talks presented, 1 poster presented, 2 posters co-authored.
AGU Fall Meeting, Washington, DC, December 2018: 2 posters co-authored.
International Forum on Urbanism, Barcelona, Spain, December 2018: 1 paper presented, 2 papers co-authored.

2017 American Association of Geographers (AAG) Annual Meeting, Boston, MA, April 2017: 1 paper co-authored.
ESA Annual Meeting, Portland, OR, August 2017: 3 papers and 2 posters co-authored.
Resilience 2017 Conference, Stockholm, Sweden, August 2017: 1 paper presented, 2 papers co-authored.
Program on Ecosystem Change and Society (PECS)-II Conference, Oaxaca, México, November 2017: 1 paper presented, 3 papers co-authored.
AGU Fall Meeting, New Orleans, LA (Dec 2017): 1 paper presented, 1 paper co-authored.

2016 ESA Annual Meeting, Fort Lauderdale, FL (August 2016): 2 papers co-authored
International LTER Open Science Meeting, Skukuza, South Africa, October 2016: 1 poster presented.
Habitat III Conference, Future Earth Side Event, Quito, Ecuador, October 2016: 1 paper presented, 1 panel discussion moderated.

2015 Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting, Granada, Spain, February 2015: 1 paper presented.
ESA Annual Meeting, Baltimore, MD, August 2015: 3 papers co-authored.
Long-Term Ecological Research (LTER) All-Scientists Meeting, Estes Park, CO, September 2015: 3 posters co-authored.
Complex Systems Symposium, Tempe, AZ (September 2015): 1 paper presented.
Geological Society of American Annual Meeting, Baltimore, MD (November 2015): 1 paper co-authored.
AGU Fall Meeting, San Francisco, CA, December 2015: 2 papers co-authored.

2014 Joint Aquatic Sciences Meeting (ASLO, SFS), Portland, OR, May 2014: 1 paper presented, 3 papers co-authored, 1 poster co-authored.
ESA Annual Meeting, Sacramento, CA, August 2014: 2 papers co-authored
AGU Fall Meeting, San Francisco, December 2014: 1 paper co-authored.

2013 ASLO Aquatic Sciences Meeting, New Orleans, LA, February 2013: 1 paper presented.
SFS Annual Meeting, Jacksonville, FL, May 2013: 1 paper and 1 poster co-authored.
ESA Annual Meeting, Minneapolis, MN, August 2013: 3 papers co-authored.
AGU Fall Meeting, San Francisco, CA, December 2013: 1 paper co-authored.

2012 SFS (formerly NABS) Annual Meeting, Louisville, KY, May 2012: 2 papers co-authored.
ESA Annual Meeting, Portland, OR, August 2012: 3 papers and 2 posters co-authored.
LTER All-Scientists Meeting, Estes Park, CO, September 2012: 3 posters co-authored.
International LTER All-Scientists Meeting, Lisbon, Portugal, September 2012: 2 posters presented.
AGU Fall Meeting, San Francisco, CA, December 2012: 1 paper presented and 1 co-authored.

2011 NABS Annual Meeting, Providence, RI, May 2011: 2 papers and 1 poster co-authored.
Society for European Freshwater Science (SEFS) Triennial Meeting, Girona, Spain, July 2011: 1 paper presented and 1 paper co-authored.
ESA Annual Meeting, Austin, TX, August 2011: 6 papers and 2 posters co-authored.
AGU Annual Meeting, San Francisco, CA, December 2011: 2 papers co-authored and 1 poster co-authored.

2010 NABS and ASLO Joint Annual Meeting, Santa Fe, NM, June 2010: 2 posters and 1 paper co-authored.

2009 NABS Annual Meeting, Grand Rapids, MI, May 2009: 3 papers co-authored.
ESA Annual Meeting, Albuquerque, NM, August 2009: 2 papers co-authored.
LTER Triennial Symposium, Estes Park, CO, September 2009: 1 poster presented, 2 posters co-authored, 2 workshops organized.
ESA Millennium Conference, Athens, GA, November 2009: 1 poster co-authored.
American Geophysical Union (AGU) Annual Meeting, San Francisco, CA, December 2009: 1 paper presented, 1 poster co-authored.

2008 NABS Annual Meeting, Salt Lake City, UT, May 2008: 5 papers co-authored.
ESA Annual Meeting, Milwaukee, WI, August 2008: 1 poster co-authored.
AGU Annual Meeting, San Francisco, CA, December 2008: 1 paper co-authored.

2007 Advancing the Science of Limnology and Oceanography (ASLO), Aquatic Sciences Meeting, Santa Fe, NM, February 2007: 2 papers co-authored.
NABS Annual Meeting, Columbia, SC, May 2007: 4 papers co-authored.
ESA Annual Meeting, San Jose, CA, August 2007: 2 papers co-authored.

2006 LTER All-Scientists Meeting, Estes Park, CO, September 2006: 1 poster authored, 6 posters co-authored.
ESA Annual Meeting, Memphis, TN, August 2006: 7 posters co-authored.
NABS Annual Meeting, Anchorage, AK, June 2006: 1 paper presented, 2 papers co-authored, 1 poster co-authored.

2005 ESA Annual Meeting, Montreal, Quebec, August 2005: 2 papers co-authored.
ASLO Annual Meeting, Santiago de Campostela, Galicia, Spain, June 2005: 1 poster co-authored.
NABS and AGU Joint Annual Meeting, New Orleans, LA, June 2005: 3 papers co-authored.

2004 NABS Annual Meeting, Vancouver, BC, June 2004: 1 paper presented, 5 papers co-authored.
ESA Annual Meeting, Portland, OR, August 2004: 1 paper presented, 3 papers co-authored.

2003 NABS Annual Meeting, Athens, GA, June 2003: 1 paper co-authored.
Chapman Conference "Ecosystem interactions with land-use change." Santa Fe, NM, June 2003: 1 paper co-authored.
AGU, Spring Meeting, Nice, France, April 2003: 1 poster presented; 1 paper co-authored.
2002 AGU Fall Meeting, San Francisco, CA, December 2002: 1 paper co-authored.
NABS Annual Meeting, Pittsburgh, PA, May 2002: 2 papers co-authored.
ASLO Annual Meeting, Victoria, BC, June 2002: 1 poster co-authored.
ESA Annual Meeting, Tucson, AZ, August 2002: 2 papers co-authored.
2001 Arizona Riparian Council, Tucson, Arizona, May 2001: 1 paper co-authored.
International Association of Landscape Ecology (IALE), U.S. Chapter Tempe, Arizona, April 2001: 2 posters co-authored.
NABS Annual Meeting, LaCrosse, Wisconsin, June 2001: 1 paper presented, 3 papers co-authored.
ESA Annual Meeting, Madison, Wisconsin, August 2001: 1 paper presented, 7 papers co-authored.
2000 NABS Annual Meeting, Keystone, Colorado, June 2000: 2 papers co authored
AGU Annual Meeting, Washington, DC, May 2000. 1 paper co- authored
All-Scientists' Meeting, US LTER Network, Snowbird, Utah, August 2000. 1 poster co-authored
ESA Annual Meeting, Snowbird, Utah, August 2000: 4 papers and 2 posters co authored
American Meteorological Society, Third Symposium on the Urban Environment: 1 paper co-authored
1999 ESA Annual Meeting, Spokane, WA, August 1999. 5 papers co authored
IALE Annual Meeting, Snowmass, CO, July 1999: 1 paper coauthored
NABS Annual Meeting, Duluth, MN, May 1999: 3 papers co-authored
1998 ESA Annual Meeting, Baltimore, Maryland, August 1998: 3 papers co authored
Societas Internationalis Limnologiae (SIL) Triennial Meeting. Dublin, Ireland, August 1998: 1 papered presented, 2 papers co authored
NABS Annual Meeting, Prince Edward Island, June 1998: 8 papers co authored.
Seventh International Symposium on Society and Resource Management: Culture, Environment, and Society. Columbia, Missouri, May 1998. 1 paper co authored
1997 ESA Annual Meeting, Albuquerque, NM: 1 paper presented, 5 papers co authored
ASLO Annual Meeting, Santa Fe, NM. 1paper co authored
1996 NABS Annual Meeting, Kallispell, MT.: 1 paper presented, 4 papers co-authored.
ASLO Annual Meeting, Milwaukee, WI.: 1 paper co-authored
1995 NABS Annual Meeting, Keystone, Colorado: 5 papers and 1 poster co authored
Entomological Society of America, Las Vegas, Nevada. 1 paper co authored
ESA Annual Meeting, Snowbird, Utah: 1 paper presented, 1 paper co authored
1994 Southwestern Association of Biologists, Abiquiui, NM: 2 papers co authored
International Conference on Ground-Water Ecology, Atlanta, Georgia: 2 papers co authored
NABS Annual Meeting, Orlando, Florida: 2 papers co authored
AGU and ASLO, Annual Ocean Sciences Meeting. San Diego, California: 1 paper co authored
1993 NABS Annual Meeting, Calgary, Alberta, Canada: 4 papers co authored
Jornadas Tecnicas Internacionales: Bases ecológicas para la restauración de humedales en la cuenca Mediterranea. La Rabida, Huelva, Spain, June: 1 poster presented
1992 SIL Triennial Meeting, Barcelona, Spain, August: 1 poster presented; 2 posters co authored
NABS Annual Meeting. Louisville, Kentucky, May : 1 paper presented, 3 papers co authored

ESA Annual Meeting. Honolulu, Hawaii: 1 paper co authored
International Conference on Ground-Water Ecology, Tampa, Florida, April: 1 paper co authored.

1991 NABS Annual Meeting. Santa Fe, New Mexico, May: 3 papers co authored
AGU Annual Meeting, San Francisco, California, December: 1 paper co authored

1990 ESA Annual Meeting. Snowbird, Utah, July–August: 1 paper presented.

1989 Workshop on Solute Dynamics in Stream Ecosystems, University of Mississippi, February: 1 paper presented.

1988 NABS Annual Meeting. Tuscaloosa, Alabama: 1 paper presented, 2 paper co authored.
ESA Annual Meeting. Davis, California: 1 paper presented

1987 SIL Triennial Meeting. Hamilton, New Zealand: 1 paper co authored

1985 NABS Annual Meeting. Corvallis, Oregon: 1 paper presented.

1984 NABS Annual Meeting. Raleigh, North Carolina: 1 paper presented.

1983 NABS Annual Meeting. LaCrosse, Wisconsin: 1 paper presented.

1980 ASLO Annual Meeting. Knoxville, Tennessee: 1 paper co authored
Arizona–New Mexico Chapter, American Fisheries Society. Thatcher, Arizona: 1 paper presented.

1979 Arizona-Nevada Academy of Science. Tempe, Arizona: 1 presented, 2 papers co authored.

Invited Lectures, Seminars, and Colloquia

Australian Society of Limnology, Melbourne Chapter (1985); University of New Mexico (1986); Appalachian Environmental Laboratory, University of Maryland (1988); ASU (Zoology, 1989); The Ecosystems Center, Woods Hole Marine Biological Laboratory (1989); Hampshire College (1989); Institute for Ecosystem Studies, Cary Arboretum (1990); University of New Mexico (1990); Northern Arizona University (1992); University of British Columbia (1992); ASU (Zoology, 1993); Cornell University (1995); Universitat de Barcelona, Spain (1995); Virginia Polytechnical and State University (1997); ASU (Civil Engineering, 1997); ASU West (1997); ASU (Biology, Geology, 1998); University of Colorado (1998); University of Wisconsin (Kaeser Visiting Scholar, 1998); Stanford University (1999); University of California, Santa Barbara (1999); ASU (Geography, 2000); University of California at Riverside (May 2001); University of California at Davis (May 2001); Cornell University (October 2001); USDA-ARS Water Conservation Laboratory, Phoenix (January 2002); NSF (February 2002); University of Georgia (September 2002); Utah State University (Eminent Ecologist, January 2003); NSF (February 2003); University of Arizona (April 2003); Colorado State University (Eminent Ecologist, March 2004), Pennsylvania State University (April 2005); St Olaf College (May 2006); Carnegie Institution of Washington (May 2006); Chinese Academy of Sciences, Beijing, China (August 2006); Centre d'Estudis Avançats de Blanes, Spain (March 2007); Universidad de Murcia, Spain (March, 2007); Universitat de Barcelona, Spain (May, 2007); University of Arizona (January 2008); US Arid Land Agricultural Research Center (December 2008); Brown University (April 2009); Cornell University (May 2009); NSF (March 2010); Environmental Protection Agency (March 2010); Cary Institute of Ecosystem Studies (March 2011); University of Connecticut (Teale Lecture, April 2011); Oak Ridge National Laboratory (November 2011); University of Maryland (February 2012); ASU (March 2012); Duke University (April 2012); Georgetown University (November 2012); Syracuse University (October 2013); University of Texas, Arlington (October 2013); University of Puerto Rico Rio Piedras (September 2014); University of Melbourne (November 2014); Cornell University (November 2014); University of North Carolina

(Jenner Memorial Lecture, spring 2015); University of Georgia (30th Eugene and Bill Odum Lecture, April 2015); Michigan State University (Eminent Ecologist, June 2015); Universidad Austral de Chile (August 2015); Griffiths University, Australia (September 2015); University of Notre Dame (October 2015); Marine Biological Laboratory Ecosystems Center (Distinguished Ecologist, October 2015); University of Virginia (EnviroDay 2016 keynote speaker, February 2016); Royal Swedish Academy of Sciences (Stockholm Seminar, May 2016); MISTRA Urban Futures, Chalmers University, Sweden (May, 2016); Florida International University, Miami, FL (January 2018); Duke University (Oosting Lecture, March 2019); Idaho State University, Pocatello, ID (April 2019); Flathead Lake Biological Station, Kallispell, MT (April 2019); University of Montana, Missoula, MT (April 2019); ASU, Tempe, AZ (November 2019); University of Utah, Salt Lake City, UT (February 2020); University of California, Berkeley, CA (April 2020, virtual), Johns Hopkins University, Baltimore, MD (October 2020, virtual); Colorado State University (February 2022); University of Stellenbosch (Center for Sustainability Transitions, March 2023)

RESEARCH GRANTS AWARDED

Active Awards:

"CAP V: Investigating how relationships between urban ecological infrastructure and human-environment interactions shape the structure and function of urban ecosystems." PI and Director D. L. Childers, Co-PIs B. Ball, N. B. Grimm, K. Larson, and B. L. Turner ($7.65M). NSF (NSF; 2224662), 2012-2028.

"RAPID: Indirect impacts of a novel wildfire on a well-studied desert stream: connectivity, carbon, and communities." PI N. B. Grimm, Co-PIs M. Bogan and T. K. Harms ($196K+$87K, $50K supplements, 2220497). Ecosystem Studies Program, NSF (2040194, 2135491, 2220497), 2020-2023.

"GCR: Convergence: Converging social, ecological, and technological infrastructure systems (SETS) for urban resilience." Senior Personnel (M. Chester, PI; $1.6M). Growing Convergence Research Program, NSF, 2019-2024.

"Accel-Net: Collaborative: Nature-Based Solutions for Urban Resilience in the Anthropocene (NATURA)." PI N. B. Grimm ($1.03M to ASU); co-PIs T. McPhearson (The New School) and E. M. Cook (Barnard College). NSF $2 2019-2024.

Previous Awards:

"Application of graphite nanoparticles in reducing nitrogen loss from agricultural systems." PI Yuqiang Bi, Co-PIs N. B. Grimm, C. R. Penton, P. Westerhoff ($469,000). US Department of Agriculture, Nanotechnology for Agricultural and Food Systems, 2020-2023.

"LTER: CAP IV - Investigating urban ecology and sustainability through the lens of urban ecological infrastructure." PI and Director D. L. Childers, Co-PIs B. Ball, N. B. Grimm, B. L. Turner, and A. York ($4.5M). NSF (1832016), 2018-2022.

"SRN: Urban resilience to extreme weather-related events." PI/Co-Director C. L. Redman, Co-PI/Co-Director N.B. Grimm, Co-PIs M. Chester, T. McPhearson, T. Muñoz-Erickson ($12 M). SEES Program, NSF (1444755), 2015-2022.

"Collaborative Research: Defining stream biomes in order to better understand and forecast stream ecosystem change." PI N. B. Grimm for ASU portion ($492,775). Collab. with Duke (lead institution; E. Bernhardt PI), U Florida, U Connecticut, U Wyoming, U Wisconsin, U New Hampshire. Macrosystems Biology Program, NSF (1442522, 1822425, 2037178), 2015-2022.

"SRN: Urban Water Innovation Network (U-WIN): Transitioning Toward Sustainable Water Systems." Senior Personnel, ASU Sub-Contract (M. Georgescu, ASU PI) (~$2M). SEES Program, NSF, 2015-2021.

"LTREB: Multiscale effects of climate variability and change on hydrologic regimes, ecosystem function, and community structure in a desert stream and its catchment." PI N. B. Grimm, Co-PI J.L.Sabo ($450,000). Ecosystem Program, NSF (1457227), 2015-2021.

"Nature's cooling systems: participatory action planning to address landscape vulnerability to heat." The Nature Conservancy (lead) PI M. Messerschmidt; ASU co PIs N. B. Grimm, D. Hondula; Maricopa County Department of Public Health co-PIs V. Berisha, J. White; Desert Botanical Garden co-PI S. Buete ($125K). Vitalyst Foundation, 2017-2019.

"SCC-Planning: Building resilient coastal cities through smart and connected communities." PI N. B. Grimm, Co-PIs M. Feagan, T. A. Muñoz-Erickson, T. Troxler, and C. Welty ($100K). NSF (1737626), 2017-2019.

"LTER: CAP IV: "Design with nature" infrastructure in Phoenix: A research framework for exploring urban ecology and sustainability." PI and Director D. L. Childers, Co-PIs N. B. Grimm, S. J. Hall, B. L. Turner, and A. York (~$2M). NSF (1637590), 2016-2018.

"CAP3: Urban sustainability in the dynamic environment of central Arizona." PI N.B. Grimm, substitute PI 2010-2012 D.L. Childers, Co-PIs C.G. Boone, C.L. Redman, B.L. Turner III ($5.4M). Long-Term Studies Program, NSF (1026865), 2010-2018.

"Collaborative Research: RIPS Type 2: Resilience Simulation for Water, Power & Road Networks." T. Seager, PI; N. B Grimm, Senior Personnel ($2.5 M). NSF, 2014-2017.

"Urban aquatic ecosystems." PI N. B. Grimm, LTER cross-site workshop series, ($26,000). LTER Network Office, 2012-2013.

"Collaborative Research: Impacts of urbanization on nitrogen biogeochemistry in xeric ecosystems." PI N.B. Grimm, Co-PI S. Earl (Earl substitute PI 2010-2012), collaborative with University of Arizona (lead PI, K. Lohse; Co-PIs P. Brooks, T. Meixner) and Purdue University (PI G. Mikulski) ($259,769 to ASU). Ecosystem Studies Program, NSF (0918457, 1027315), 2009-2012.

"LTREB: Multi-scale effects of climate variability and change on hydrologic regimes, ecosystem function, and community structure in a desert stream and its catchment." PI N.B. Grimm, Co-PI J.L.Sabo (substitute PI 2009-2010; $449,298). Long Term Studies Program/ARRA, NSF (0918262), 2009-2014.

"CAP LTER REU, Other, Schoolyard, and Social Science Supplements." PI/PD N.B. Grimm, Co-PD C.L. Redman, Co-PIs M. Elser, C. Gries, A. Brazel, C. Johnson, K. Larson ($64,000). Long Term Studies Program, NSF (1042148), 2009–2010.

"RAPID: Responses of herbaceous annual plants to material deposition from the urban atmosphere under contrasting conditions of antecedent drought and winter rainfall," PI N.B. Grimm, Co-PI S.J. Hall ($29,904). Ecosystem Studies Program, NSF (0937397), 2009-2010.

"Dissertation Research: The fate of nitrate in stormwater retention basins in an arid metropolitan area." PI/PD N.B. Grimm with graduate student E. Larson ($7,005). Division of Environmental Biology, NSF (0808524), 2008-2009.

"CAA: Environmental and economic impacts of material used in future urban development." J. Crittenden (PI), 19 Co-PIs with N.B. Grimm ($399,280). Science Foundation Arizona, 2007–2008.

"Collaborative Research: Ecosystem response to N and organic C deposition from the urban atmosphere." PI/PD N.B. Grimm, Co-PIs J.O. Allen, S.J Hall; Collaborator J.P. Kaye (Penn

State) ($712 K total award, $630K ASU portion, including 2006-2007 supplements). Ecosystem Studies Program, NSF (0514382), 2005–2008.

"Central Arizona-Phoenix LTER: Phase 2." PI/PD N.B. Grimm, Co-PD C.L. Redman, 23 Co-PIs. ($5,389,038 including 2005-2008 supplements). Long-Term Studies Program, NSF (0423704), 2004–2010.

"CAP LTER: Land-use change and ecological processes in an urban ecosystem of the Sonoran Desert." PI/PD N.B. Grimm, Co-PD C.L. Redman ($866K including supplements). Accomplishment-Based Renewal, Long-Term Studies program, NSF (0350807), 2003–2004.

"BE MUSES: Decision Support for Urban Development: Air Quality, Social Injustice, Material and Energy and the Impact of Social Decision Making – A Proof of Concept Demonstration." J. Crittenden, E. Corley, J. Fernando, N. Grimm, S. Guhathakurta, P. McCartney, A. Sawhney, Y. Chen. ($163,458.) NSF (0438447). 2004-2005.

"A Decision Support Tool for Sustainable Urban Water Management." J. Crittenden, N. Grimm, S. Guhathakurta, P. McCartney, E. Corley, P. Westerhoff, P. Fox. EPA P3 Design ($10,000.) 2004-2005.

"Agrarian Landscapes in Transition: A Cross-Scale Approach." PI/PD C.R. Redman, Co-PIs D. Foster, M. Guttman, P. Kareiva, and A.P. Kinzig, Senior Personnel N.B. Grimm (and others) ($1,999,952). Biocomplexity Special Competition Coupled Human and Natural Systems, NSF, 2003–2006.

"Coupled biogeochemical cycles in human-dominated ecosystems" (PI/PD P. Brezonik, U. of Minnesota, Senior Personnel N.B. Grimm ($100,000). Biocomplexity Special Competition on Coupled Biogeochemical Cycles (Incubation), NSF, 2001–2002.

"Nitrate uptake and retention in streams: mechanisms and effects of human disturbance." PI/PD P. Mulholland, Co-PIs Webster, S. Hamilton, J. Tank, and R.O. Hall, Senior Personnel and PI for Southwest N.B. Grimm ($3 M, $137,619 ASU portion). Integrated Research Challenges in Environmental Biology Special Competition, NSF, 2001–2006.

"Organic matter removal in urban streams." PI/PD; with graduate student Jennifer Edmonds ($10,000). Competitive Grants Integrating Applied and Basic Benthic Biology (open to NABS student membership), Proctor and Gamble, 2000–2002.

"A science and technology center for the sustainability of water resources in semi-arid regions." Senior Associate/Participant (of 50; PI/PD Soroosh Sorooshian, Senior Associate N.B. Grimm with 50 others from 17 universities and governmental organizations ($33M total award; $285,512 ASU subcontract to NBG). Science and Technology Centers Programs, NSF (9876800), 1999–2004.

"Long term monitoring of Phoenix forest ecosystem/CAP LTER." PI/PD N.B. Grimm, Co-PD C.L. Redman ($10,000). U.S. Department of the Interior, Forest Service, 1998–1999.

"Integrating linkages among aquatic and terrestrial components of arid landscapes." PI/PD S.G. Fisher, Co-PI N.B. Grimm ($250,000). Ecosystem Studies Program, NSF (9727311), 1998–1999

"Dissertation Research: The effects of heterogeneity and scale on nutrient dynamics in a desert stream." PI/PD N.B. Grimm with graduate student C. Lisa Dent ($6,107). Division of Environmental Biology, NSF (9800912), 1998–1999.

"Central Arizona-Phoenix LTER: Land use change and ecological processes in an urban ecosystem of the Sonoran Desert." PI/PD N.B. Grimm, Co-PD C.L. Redman, 16 Co-PIs ($4,999,066 including Geosciences-Engineering, General, Curation, Schoolyard LTER, Connectivity, and REU Supplements 1997–2003). Long Term Studies Program, NSF (9714833), 1997–2003.

"LTREB: Short-Term Climate Change and Variable Response to Disturbance in an Arid Land Watershed-Stream Ecosystem." PI/PD N.B. Grimm, Co-PI S.G. Fisher ($254,959 including REU supplement 1997). Long Term Studies Program, NSF (9615358), 1997–2002.

"Nitrogen Uptake, Retention, and Cycling in Stream Ecosystems: An Intersite N-15 Tracer Experiment." Lead PIs J.R. Webster, J.L. Meyer, P.J. Mulholland, B.J. Peterson; Co-PIs W.B. Bowden, W.K. Dodds, S. Findlay, S.G. Fisher, S.V. Gregory, N.B. Grimm, S.K. Hamilton, A.E. Hershey, S.L. Johnson, W.B. McDowell, E. Martí, H.M. Valett, Co-PI's ($1,100,000; $53,185 ASU sub-contract to N.B. Grimm, E. Marti, S. Fisher). Ecosystem Studies Program, NSF, 1996–1999.

"Effects of Disturbance and Spatial Heterogeneity on Nutrient Retention and Transport in a Stream-Riparian Ecosystem." PI/PD S.G. Fisher, Co-PI N.B. Grimm ($800,000). Ecosystem Studies Program, NSF (9306909), 1993–1998.

"Functional Assessment of Effluent Dominated Riparian Ecosystems." PI/PD D.T. Patten, Co-PIs N.B. Grimm, J.C. Stromberg, R.D. Ohmart, T. Maddock III ($27,020). Research Grants Program, Water Resources Research Program, US Geological Survey, 1995–1996.

"Ecology of Hyporheic and Groundwater Communities: Distribution, Response to Stress, and Recovery from Disturbance." PI/PD S.G. Fisher, Co-PI N.B. Grimm ($128,465). Exploratory Research Grants Program, United States Environmental Protection Agency, 1994–1996.

"LTREB: Short-Term Climate Change and Variable Response to Disturbance in an Arid Land Watershed-Stream Ecosystem." PI/PD N.B. Grimm, Co-PI S.G. Fisher ($236,000 including REU Supplements, 1992, 1993, 1994, 1996). Long Term Studies Program, NSF (9108362), 1991–1996.

"Stability of a Stream Ecosystem: LTER Supplement." PI/PD S.G. Fisher, Co-PI N.B. Grimm ($24,620). Ecosystem Studies Program, NSF, 1991–1992.

"Patterns, controls, and ecosystem consequences of trophic structure in a stream." PI/PD S.G. Fisher, Co-PIs N.B. Grimm, T.L. Dudley ($99,000). Ecosystem Studies Program, NSF (9008114), 1990–1992.

"Stability of a stream ecosystem to disturbance by flooding and drying." PI/PD S.G. Fisher, Co-PI N.B. Grimm ($622,000 including REU supplements 1990, 1991). Ecosystem Studies Program, NSF (8818612), 1989–1992.

"Factors controlling periphyton abundance and production during stream succession." PI/PD N.B. Grimm ($58,000). Post-Doctoral Research Fellowship Program, Biotic Systems and Resources, NSF (8700122), 1987–1989.

Pending:

EDUCATIONAL AND INFRASTRUCTURE GRANTS/PROJECTS

Active Awards:

"Racial Equity: Immersive, Interdisciplinary, Identity-based Team Science Experiences for Indigenous Graduate Scholars." Senior personnel (PI M. K. Nelson, Co-PIs L. Caughman, M. Clark, M. Hale ($1.65 M). Racial Equity in STEM Program, NSF, 2022–2026.

"Earth System Science for the Anthropocene (ESSA): a graduate scholars network." PI/director N. B. Grimm, co-Director Abigail York. ($1.25M). President's Strategic Initiative Fund, ASU, 2020-

2025.

"IRES Track 1: Nature-Based Solutions Research in Urban Latin America: International Research Experience for Students (NBS-RULA-IRES)." PI N. B. Grimm, Co-PIs M. Berbés Blázquez, E. M. Cook, M. Feagan ($292K). Office of International Science and Engineering, NSF (2107545), 2021-2024.

"IRES: Interdisciplinary student research on urban resilience in Latin America." PI N. B. Grimm, Co-PIs T. A. Muñoz-Erickson, C. L. Redman, and E. Vivoni ($250K). Office of International Science and Engineering, NSF (1658731), 2017-2022.

Previous Awards:

"REU: A cross-city comparison of strategies for better urban futures." M. Berbés Blázquez, N. B. Grimm, and Y. Kim ($13K, two students). Supported by the UREx SRN and ESA SEEDS Spurs program, 2020.

"REU: Ecosystem services in future visions for cities." S. Elser, M. Berbés Blázquez, and N. B. Grimm ($13K, two students). Supported by the CAP LTER and ESA SEEDS Spurs program, 2020.

"REU: Collaborative Research: Defining stream biomes in order to better understand and forecast stream ecosystem change." PI N. B. Grimm ($13K). Macrosystems Biology Program, NSF, 2016-2020.

"Ecohydrological interfaces as critical hotspots for transformations of ecosystem exchange fluxes and biogeochemical cycling" (INTERFACES)." PI S. Krausse (University of Birmingham, UK), Associated Academic Partner, N. B. Grimm. Training Network, European Commission, 2013-2018.

"Intergovernmental Personnel Agreement." PI N. B. Grimm, for salary payment while at NSF as a rotator. NSF (1065983), 2010-2012.

"REU: Collaborative Research: Impacts of urbanization on nitrogen biogeochemistry in xeric ecosystems." PI N.B. Grimm, Co-PI S. Earl (Earl substitute PI 2010-2012), collaborative with University of Arizona (lead PI, K. Lohse; Co-PIs P. Brooks, T. Meixner) and Purdue University (PI G. Mikulski) ($7,000 per year). Ecosystem Studies Program, NSF, 2010, 2011, 2012.

"Strategic investment in ARENA (The Arizona Environmental Array)," PI/PD N.B. Grimm, Co-PIs J.M. Briggs and C. Gries ($60,440). Science Foundation Arizona, 2007–2008.

"REU: Ecosystem response to N and organic N deposition from the urban atmosphere." PI/PD N.B. Grimm, Co-PIs J.O. Allen, S.J Hall; $7,000). Ecosystem Studies Program, NSF, 2006, 2007, 2008.

"Technician Support: ICP-MS research in the W. M. Keck Foundation Laboratory for Environmental Biogeochemistry, ASU. Phase I." PI/PD A.D. Anbar, Co-PIs N.B. Grimm, L.A. Leshin, E.L. Shock ($224,994). Instrumentation & Facilities Program, Earth and Atmospheric Research, NSF0 (0520648), 2005–2008.

"IGERT Formal Proposal: Integrative Graduate Education and Research Training in Urban Ecology." PI/PD S.G. Fisher, Co-PIs N.B. Grimm, A.P. Kinzig, E. Hackett, and C.L. Redman ($3,184,586). IGERT Program, NSF (0504248), 2005–2011.

"Sustainability science and engineering education." J Crittenden (PI), B. Allenby, Y. Chen, N.B. Grimm, S. Guhathakurta, D. Pijawka, S. Van der Leeuw, P Westerhoff, J. Wu ($89,917). Carnegie-Mellon University sub, 2005–2008.

"W. M. Keck Foundation Laboratory for Environmental Biogeochemistry." PI/PD E. Shock, Co-PIs N.B. Grimm, L. Leshin, and P. O'Day ($900,000). W.M. Keck Foundation, 2002–2003.

"Down to Earth Science: Graduate Teaching Fellows in K-12 Education." PI/PD B.L. Ramakrishna, Co-PI N.B. Grimm and 20 others ($1,324,145). GK-12 Program, NSF, 2001–2006.

"IGERT Formal Proposal: Integrative Graduate Education and Research Training in Urban Ecology." PI/PD S. Fisher, Co-PIs C. Redman, W.L. Graf, N.B. Grimm, E. Hackett, and P. Christensen ($2,699,970). IGERT Program, NSF (9987612), 2000–2005.

"Networking our research legacy: infrastructure to document, manage, and access ecological data resources." PI/PD P. McCartney, Co-PIs T.P. Craig, C. Gries, N.B. Grimm, and C.L. Redman ($720,489). Database Activities Program, NSF (9983132), 1999–2002.

"UMEB: Diverse approaches to environmental research." PI/PD D.L. Pearson, Co-PIs J.P. Collins, S.H.Faeth, N.B. Grimm, R.L. Rutowski ($215,983). Undergraduate Mentoring in Environmental Biology Program, NSF (9975321), 1999–2003.

"UMEB: Research Experience for Undergraduates in Ecology." PI/PD N.B. Grimm, Co-PIs J.P. Collins, J.J. Elser, S.H. Faeth, S.G. Fisher, S.W. Rissing ($250,933). Division of Environmental Biology, NSF (9317340), 1993–1998.

"Analytical Laboratory for Research in Environmental Biology." PI/PD N.B. Grimm, Co-PIs J.J. Elser, J.H. Fewell, S.G. Fisher, J.F. Harrison, T.A. Markow, M.C. Moore, G.E. Walsberg ($150,000). Instrumentation and Instrument Development Program, NSF (9115978), 1993.

Pending:

"RaMP: Long Term Networked Ecological Research for the Future (LT-NERF)." PI L. Zeglin, Co-PIs N. B. Grimm, B. Halpern, M. R. Downs ($2,998,280 requested). Division of Biological Infrastructure, NSF, 2023-2027.

PROFESSIONAL SERVICE ACTIVITIES

Editorial Boards

Editorial Service, ad hoc: *Proceedings of the National Academy of Science of the USA* (2019–)
Editorial Board Member: *Perspectives in Earth and Space Science* (2019–)
Editorial Board Member: *Watershed Ecology & the Environment* (2018–)
Editorial Advisory Board: *Journal of Urban Ecology* (2015–)
Editorial Board Member: *Sustainability* (2018–2022)
Editor: *Earth's Future* (2014–2022)
Associate Editor: *Frontiers in Built Environment, Urban Science* (2017–2020)
Guest Editor: *Proceedings of the National Academy of Science of the USA* (2008, 2009, 2012, 2013, 2014)
Editor: *Ecohydrology* (2007–2020)
Assigning Editor: *Ecological Applications* (2007–2010)
Editor: *Ecology Letters* (2001–2002)
Editor: *Ecosystems* (1997–2006)
Editor: *Ecology* and *Ecological Monographs* (1994–1997; emeritus 1998, ad hoc 2008–2010)
Associate Editor: *Journal of the North American Benthological Society* (1991–1994)

Review Panels and Advisory Boards

Panelist: Integrated Field Laboratories Program, US Department of Energy (2022)
Advisory Board Member: Team TERRA Graduate Training Program, University of Connecticut (2022)

Member: Standing Committee for the Gulf Scholars Program, National Academies of Science, Engineering, and Medicine (2022–)
International Scientific Advisory Board Member: OneWater (Eau Bien Commun), France (National Programme), Paris, France (2022–2026)
External Advisory Board Member: Centre des Estudis Avançats de Blanes (Blanes Center for Advanced Studies), CSIC, Spain (2021–)
Panel Member: National Research Traineeship Program, NSF (2021)
Panel Member: Dynamics of Integrated Socio-Environmental Systems, NSF (2021)
Reviewer: Next Generation Earth Systems Science report for the National Academies of Science, Engineering, and Medicine (2021)
Jury Member: Environmental Systems Research: Urban Environments, Vienna Science and Technology Fund (2020)
Advisory Board Member: H_2O'Lyon: School of Integrated Watershed Sciences (2019–)
Committee Member: National Academy Standing Committee to Advise the United States Global Change Program (2014–2021)
Jury Member: Premi Ramón Margalef (Margalef Prize) (2016–2018)
Advisory Board Member: Network Advisory Board, INTERFACES Training Network, European Commission (2013–2018)
Jury Member: *Environmental Systems Research: Urban Environments*, Vienna Science and Technology Fund (2017)
Research Advisory Sub-Committee Member: Program B of the CRC for Water Sensitive Cities, Australia (2013–2016)
Advisory Board Member: DataONE (2010–2014)
National Advisory Board Member: Long-Term Ecological Research Network (2010– 2013)
Scientific Committee Member: Catalan Institute for Water Research, Girona, Spain (2007–2013)
Advisory Board Member: EPSCoR Program, University of Alaska, Fairbanks (2007–2010)
Advisory Board Member: Integrative Graduate Education and Research Training program in urban hydrology, University of Maryland Baltimore County (2006–2010)
Site Review Team Member: H.J. Andrews LTER, NSF (2005)
Advisor: Willamette River Biocomplexity Project, Oregon State University, Corvallis, OR (2004)
Panel Member: National Ecological Observatory Network (NEON) Panel, NSF (2004)
External Advisory Board Member: Coweeta Long-Term Ecological Research Project (2004)
ASU Representative: Consortium of Universities for the Advance of Hydrological Sciences, Inc. (2001–2004)
Committee Member: Committee on Hydrologic Sciences, National Research Council (2002–2003)
Panel Member: Science and Technology Centers Panel, NSF (2000)
Site Review Team Chair: H.J. Andrews LTER, NSF (1999)
Scientific Advisor: University of Évora Center for Applied Ecology (Centro de Ecologia Aplicada), Évora, Portugal, 1998–2000 (annual meetings).
Panel Member: Long-Term Ecological Research Panel, NSF (1998)
Scientific Advisory Board Chair: National Center for Ecological Analysis & Synthesis (1999–2000)
Scientific Advisory Board Member: National Center for Ecological Analysis & Synthesis (1997–2000)

Site Review Team Member: McMurdo Dry Valleys LTER, NSF (1997)
Panel Member: Ecosystem Studies Panel, NSF (1990, 1991–1994)
Panel Member: Environmental Biology Exploratory Research Panel, U.S. Environmental Protection Agency (1991–1993)
Site Review Team Member: Bonanza Creek and Toolik Lake LTERs, NSF (1991)
Review Team Member: Walker Branch Watershed Project, Environmental Research Division, U.S. Department of Energy (1991)
Advisory Panel Member: Sevilleta Long-Term Ecological Research Project (1991)

Service to Professional Societies

ECOLOGICAL SOCIETY OF AMERICA, ESA: Special Nominating Subcommittee to increase diversity in awards (Chair, 2014); Nominating Committee (Chair, 2006-2007); Past President (2006–2007); President (2005–2006); President-Elect (2004–2005); Governing Board (Member, 2004–2007); Eminent Ecologist Award and Distinguished Service Citation Selection Committee (Member 1994–1997); Research Needs Committee (Member, 1993–2003).

SOCIETY FOR FRESHWATER SCIENCE, SFS (POST-2011; FORMERLY NORTH AMERICAN BENTHOLOGICAL SOCIETY): Program Committee, Joint ASLO-SFS Meeting, Madison, WI, 2020 (Co-Chair, 2018–2020). Board of Directors for the Endowment (Director, 2009–2014); Name Evaluation Committee (Member, 2002–2003); President-Elect (1998–1999); President (1999–2000); Past President (2000–2001); Awards Selection Committee (Chair, 1999–2000); Executive Committee (Chair, 1994–1995, Member 1995–1996, 1998–2001); Award of Excellence Committee (Member, 2001–2005); Special Symposium (October 1994), *Freshwater Ecosystems and Climate Change in North America.* (Chair, Regional Working Group for the Basin and Range, Arid Southwest and Mexico region; Member, Steering Committee; 1993–1994); NABS Name Committee (Chair, 1992–1993); Program Committee, North American Benthological Society Annual Meeting, Santa Fe, New Mexico (Co-chair, 1990–1991); Elections and Place Committee (Chair, 2000–2001, Member, 1984–1985 and 1988–1989).

AMERICAN GEOPHYSICAL UNION, AGU: Biogeosciences Sultzman Award Committee (Member, 2019–2020; Chair 2021–2022)

ASSOCIATION FOR THE SCIENCES OF LIMNOLOGY AND OCEANOGRAPHY, ASLO: Program Committee, Joint ASLO-SFS Meeting, Madison, WI, 2020 (Co-Chair, 2018–2020). Special Symposium (October 1994), *Freshwater Ecosystems and Climate Change in North America.* (Chair, Regional Working Group for the Basin and Range, Arid Southwest and Mexico region; Member, Steering Committee; 1993–1994).

COUNCIL OF SCIENTIFIC SOCIETY PRESIDENTS: Governing Board (Member-at-large [elected], 2006)

CONSORTIUM OF UNIVERSITIES FOR THE ADVANCEMENT OF HYDROLOGIC SCIENCES, INC., CUAHSI: Board of Directors (ASU Representative, 2002–2009); Synthesis Center Committee (Member, 2003).

SOCIETAS INTERNATIONALIS LIMNOLOGIAE, SIL: USA National Representative (2000–2004).

Workshop/Session Organization

Mentoring Workshop (with M. Clark): Mutually Enriching Mentorship: learning how to mentor from one another. Natural Sciences DEI Seed Project, ASU, December 2022, May 2023.

Workshop Co-Organizer (with A. Kuhn, D. Iwaniec, L. Caughman): Long-term data and pathways to transformative, nature-based urban futures. US LTER All Scientists Meeting, Asilomar, CA, September 2022.

Meeting Organizer, Plenary Speaker, and Host (with T. McPhearson, E. Cook): NATURA All-Hands Meeting, Malta, April 2022.

Meeting Organizer and Host (with C. Redman, A. Grobstein): Urban Resilience to Extremes Sustainability Research Network All-Hands Synthesis Meeting (virtual) March 2021.

Co-Organizer (with E. Cook, Y. Kim, T. Martinez, T McPhearson): NATURA plenary, seed sessions, and regional node meetings for global road map of nature-based solutions. The Nature of Cities Global Festival, Virtual, February 2021.

Co-Organizer (with E. Cook, Y. Kim, and T McPhearson): Nature-based solutions for urban resilience in the Anthropocene (NATURA). Inspire session, Ecological Society of America, Virtual, August 2020.

Co-Organizer (with E. Cook, Y. Kim, T. Martinez, and T. McPhearson): NATURA Virtual All-Hands Meeting, Virtual, June 2020.

Panel Moderator: *Cultural, Structural, and Educational Issues.* Symposium on NAS Grand Challenges. National Academy of Sciences Annual Meeting, Virtual, April 2020.

Workshop Organizer and Host: StreamPULSE All-Hands meeting. Tempe, AZ, February 2020.

Co-Organizer (with D. Iwaniec): *Understanding and responding to extreme weather events in ecosystems and social-ecological-technological systems (SETS).* Workshop, ILTER Open Science Meeting, Leipzig, Germany, September 2019.

Co-Organizer (with M. Berbés Blásquez, D. Iwaniec): *Understanding and responding to extreme weather events in ecosystems and social-ecological-technological systems.* Workshop, LTER All Scientists Meeting, Asilomar, CA, October 2018.

Co-Organizer (with M. Berbés Blásquez, D. Iwaniec): *LTER scenarios.* Workshop, LTER All Scientists Meeting, Asilomar, CA, October 2018.

Organizer: *Planning future scenarios for Syracuse, Portland, and Miami.* Syracuse, NY, August 2018.

Organizer and Host (with M. Berbés Blásquez, M. Davidson): *Future scenarios for South Phoenix.* Phoenix, AZ, May 2018.

Meeting Organizer and Host (with C. Redman, A. Grobstein): Urban Resilience to Extremes Sustainability Research Network All-Hands Meeting, Tempe, AZ, March 2018. Also co-organized Diversity and Inclusion, Mentoring, and Comparative Future Scenarios workshops at this meeting.

Co-Organizer, Host, and Facilitator (with M. Berbés Blásquez, M. Davidson): *South Phoenix World Café.* Phoenix, AZ, January 2018.

Session Organizer (with T. McPhearson and C. L. Redman): *Co-producing urban resilience to extreme events.* Resilience 2017, Stockholm, Sweden, September 2017.

Panel Organizer: Educational activities within the SRNs. SRN Awardees Conferences, NSF, Arlington, VA, June 2017; Alexandrian, VA, June 2018, June 2019, June 2020

Poster Session Organizer: Early career research in the SRNs. SRN Awardees Conferences, NSF, Arlington, VA, June 2017; Alexandrian, VA, June 2018, June 2019, June 2020

Organizer and Host: *Planning future scenarios for Hermosillo, Phoenix, and Baltimore.* Tempe, AZ, September 2017.

Union Session Organizer (with Ben van der Pliujm): *Earth's Future: The Food-Water-Energy Nexus.* American Geophysical Union Fall Meeting, San Francisco, CA, December 2016

Session/Side Event Organizer (with T. McPhearson, T. Elmqvist): *Building urban resilience to extreme events: lessons across cultures.* Habitat III Conference, Future Earth-sponsored side event. Quito, Ecuador, October 2016

Session Organizer (with Emily Bernhardt): *Are there stream biomes?* Annual Meeting, Association for the Sciences of Limnology and Oceanography, Granada, Spain, February 2015

Session Organizer (with Charles Kroll, Glenn Guntenspergen, Theodore Endreny): *Urban Ecosystem Services: Monitoring, Modeling, and Management (PA11),* Fall Meeting, American Geophysical Union, San Francisco, CA, December 2014

Session Organizer (with Ben van der Pluijm, Guy Brasseur, Mike Ellis): *Earth's Future: Navigating the Science of the Anthropocene (GC41)*, Fall Meeting, American Geophysical Union, San Francisco, CA, December 2014

Workshop Organizer: *Urban aquatic systems,* SESYNC, Annapolis, MD, July 2013.

Symposium Organizer (with Ben van der Pluijm): *Sustainable Future (GC052),* Fall Meeting, American Geophysical Union, San Francisco, CA, December 2012.

Town Hall Organizer (with Kathleen Weathers): *Frontiers in Ecosystem Science: Energizing the Research Agenda,* Fall Meeting, American Geophysical Union, San Francisco, CA, December 2012.

Symposium Organizer (with Julia Jones): *Ecosystem capacity for sustaining long-term water supplies,* Annual Meeting, Ecological Society of America, Portland, OR, August 2012.

Steering Committee: Society for European Freshwater Science, Triennial Meeting 2011, Girona, Spain (2010-2011).

International Scientific Committee: Resilience 2011: Resilience, Innovation, and Sustainability: navigating the complexities of global change. 2nd International Science and Policy Conference, Tempe, AZ (2011).

Special Session Organizer (with E. Marti): *Advances in stream biogeochemistry: the legacy and promise of 30 years of the nutrient spiralling concept.* Annual Meeting, North American Benthological Society, Grand Rapids, MI (2009).

Workshop Organizer (with C.L. Redman): *Urbanization in context: how environmental problems and their solutions vary among biophysical and societal settings.* LTER All-Scientists Meeting, Estes Park, CO, September 2006.

Special Session Organizer (with A. Covich and C. Duke): *An ecologists' community discussion of funding agency initiatives.* Annual Meeting of the Ecological Society of America, Memphis, TN, August 2006

Retreat Co-Organizer (with M. Nation, C. Redman, J. Wu, J. Briggs, and P. Gober): *Interactions of urbanization with climate change.* CAP LTER/DCDC retreat, Flagstaff, AZ, July 2006

Workshop Organizer (with J. Lobo, C.L. Redman, and B.L. Shears): *The rise of cities: adaptive solutions for urbanization in desert, coastal, and tropical regions.* Ecological Society of America Special Meeting, Merida, Yucatan, Mexico, January 2006.

Special Session Organizer (with G. Shaver and C. Duke): *Sustainability science: a research agenda for the Ecological Society of America.* Annual Meeting of the Ecological Society of America, Montreal, Quebec, Canada, August 2005.

International Conference Co-Chair (with Prof. Wenhua Li): *The circular economy and sustainable development.* Hangzhou, Zeiming Province, China, November 2005.

Symposium Organizer: *Integration of geosciences and social sciences into the LTER program: progress and prospects.* 3rd Annual NSF Mini-Symposium, NSF, Arlington, Virginia, February 2003.

Symposium Organizer (with S.E. Gergel and W.H. McDowell): *Integrating aquatic and terrestrial biogeochemistry in heterogeneous landscapes.* Annual Meeting, Ecological Society of America, Madison, Wisconsin, August 2001. Sponsored by the Aquatic Section.

Special Session Organizer (with J. Edmonds): *Urban stream and watershed ecology.* North American Benthological Society, LaCrosse, Wisconsin, June 2001.
Host: Semi-annual Coordinating Committee Meeting, US LTER Network, Tempe, AZ, April 2001.

Workshop Co-Organizer: *Human modifications of hydrological cycles and their impact on biogeochemistry at local and regional scales*, with L. Band and D. Childers; LTER All Scientists' Meeting, Snowbird, UT, August 2000.

Workshop Co-Organizer: *Development of coupled hydrological-biogeochemical models of materials transport at the landscape scale*, with J. Melack, LTER All Scientists' Meeting, Snowbird, UT, August 2000.

Organizer: NCEAS working group on *Integrating Terrestrial and Aquatic Perspectives of Biogeochemistry.* National Center for Ecological Analysis and Synthesis, Santa Barbara, CA, 1999–2001.

Co-Organizer (with Kareiva): NCEAS workshop on *Developing a modeling paradigm for spatially explicit urban ecology models.* National Center for Ecological Analysis and Synthesis, Santa Barbara, CA, October 1998.

Member, Planning Committee: NCEAS working group on *Interdisciplinary synthesis of recent natural and managed floods.* National Center for Ecological Analysis and Synthesis, Santa Barbara, CA, 1998–1999. Planning meeting, Washington, D.C., September 1998.

Member: Conference Organizing Committee, Second International Conference on Ground Water Ecology. (Sponsored by the U.S. Environmental Protection Agency and the American Water Resources Association; 1993–1994)

Workshop Participation and Facilitation (invited)

Participant: *Critical Response Process.* Mutually Enriching Mentoring (MEM), Natural Sciences DEI Seed Project, ASU (2 sessions), November-December 2022.

Facilitator: ADVANCEGeo Bystander Intervention training, ADVANCEGeo. Facilitated five workshops in spring, fall 2022.

Participant: *Ecological Resilience workshop.* NATURA, Djuronaset, Stockholm, Sweden, May 2022.

Participant: *NASEM-NSF AGU Town Hall on Earth Systems Science.* American Geophysical Union Fall Meeting, New Orleans, LA, December 2021.

Participant: *The Future of Synthesis in Ecology.* Virtual, National Center for Ecological Analysis and Synthesis, February 2021.
Participant: *Accel-Net PI meeting.* Alexandria, VA, November 2019, January 2021.
Facilitator and co-organizer (with M. Hartman, M Guardaro): *Workshop Tour: Urban heat, green infrastructure, and health outcomes – approaches, solutions, and adaptation.* Meeting of the Minds Summit. Phoenix, AZ, February 2020.
Facilitator: *Future scenarios for Hermosillo, Part 2.* Urban Resilience to Extremes Future Scenarios workshop, Hermosillo, Sonora, México, February 2020.
Facilitator: *Governance for resilience in Portland.* Workshop, Portland, OR, November 2019.
Participant: *Climate2020: Seven Generations for Arizona.* State Summit, Arizona Universities. Flagstaff, AZ, November 2019.
Facilitator: *Future scenarios for Portland.* Urban Resilience to Extremes Future Scenarios workshop, Portland, OR, September 2019.
Participant: *2nd NSF Sustainable Smart Cities International Workshop.* Sustainable Urban Systems workshop series, Cairo, Egypt, June 2019.
Facilitator: *Future scenarios for Syracuse.* Urban Resilience to Extremes Future Scenarios workshop, Syracuse, NY, May 2019.
Facilitator: *Taller de escenarios de transición a la sostenibilidad en San Juan.* Urban Resilience to Extremes Future Scenarios workshop, San Juan, PR, February 2019.
Participant: *Urbanization in the Anthropocene.* Stockholm, Sweden, January 2019.
Facilitator: *Climate change and ecosystems.* Sackler Forum, US National Academy of Sciences and the Royal Society, Washington, DC, November 2018.
Facilitator: *Heat Action Planning workshop.* Nature's Cooling Systems workshops with local community members in three Phoenix area neighborhoods, Phoenix and Mesa, AZ, June, July, August, September 2018 (five workshops total).
Participant: *Respiration regimes in river networks: a cross-biome perspective.* Swiss Science Foundation- and NSF-funded workshop. Ovrannaz, Switzerland, September 2018.
Facilitator: *Future scenarios for central Maryland.* Urban Resilience to Extremes Future Scenarios workshop, Baltimore, MD, June 2018.
Facilitator: *Future scenarios for South Phoenix.* Urban Resilience to Extremes Future Scenarios workshop, Phoenix, AZ, May 2018.
Participant: *Miami Innovation Lab.* Resilient Coastal Communities Smart & Connected Communities workshop, Miami, FL, March 2018.
Participant: *AGU Editors workshop.* Coral beach, FL, February 2018.
Participant: *From disaster to transformation: lessons from Puerto Rico in the aftermath of Hurricane María.* San Juan, PR, February 2018.
Participant: Report of RULA IRES student research in Valdivia to Valdivia practitioners. Valdivia, Chile, February 2018.
Participant and Project Host: *Future scenarios for Hermosillo.* Urban Resilience to Extremes Future Scenarios workshop, Hermosillo, Sonora, México, November 2017.
Participant: Assessment workshop: *The future of field stations.* Jasper Ridge Biological Reserve, Stanford, CA, July 2017
Participant, Note-Taker, and Project Host: *Future scenarios for Valdivia.* Valdivia, Chile, May 2017.
Participant: AGU Chapman Conference, *Extreme climate event impacts on aquatic biogeochemical cycles and fluxes.* San Juan, PR, January 2017.

Participant: *City-business collaboration on resilience planning in Phoenix.* C2SE workshop, Phoenix, AZ, December 2016

Participant: *Planning future scenarios for New York, San Juan, and Valdivia.* New York, NY, November 2016.

Participant: Workshop on *Input for Development of an Integrated Field Laboratory.* US Department of Energy, Germantown, MD, February 2015.

Participant: Workshop on *Human-Carbon Interactions in Urban Systems.* National Center for Atmospheric Research, Boulder, CO, October 2013.

Participant: SESYNC Venture Working Group on *Green infrastructure design.* National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD, 2013–2014.

Participant: NCEAS working group on *Ecology of environmental justice in metropolitan areas.* National Center for Ecological Analysis and Synthesis, Santa Barbara, CA, 2010–2011.

Participant: NCEAS working group on *Ecosystem services on an urbanizing planet: toward a global assessment.* National Center for Ecological Analysis and Synthesis, Santa Barbara, CA, 2009–2010.

Participant: *Managing nitrogen in human-dominated landscapes.* Research Coordination Network on Denitrification, University of Rode Island Bay Campus, May 2009.

Participant: ASLO workshop, *Emerging Research Issues for Limnology: The Study of Inland Waters.* Boulder, CO, December 2002.

Participant: Lincoln Institute for Land Policy Workshop, *Greater Phoenix 2100.* The Flynne Foundation Headquarters, Phoenix, Arizona, April 2001.

Participant: *The role of boundaries in ecology.* Institute for Ecosystem Studies, Millbrook, NY, October 2000.

Participant and Plenary Speaker: *Ecology: Achievement and Challenge* – a joint symposium of the British Ecological Society and the Ecological Society of America. Orlando, Florida, April 2000.

Participant and Plenary Speaker: 8th Cary Conference: *Understanding urban ecosystems: a new frontier for science and education.* Millbrook, NY, May 1999.

Participant: NCEAS working group on *Unifying models of nitrogen fixation* for international SCOPE project on "Nitrogen transport and transformations: a regional and global analysis." National Center for Ecological Analysis and Synthesis, Santa Barbara, CA, 1998–1999 (2 meetings).

Participant: David H. Smith Conservation Research Fellowships Science Advisors Workshop, sponsored by The Nature Conservancy, St. Louis, MO, June 1998.

Participant and Presenter: Western Water Policy Advisory Commission, Scientific Workshop*, Sustainability of Western Watersheds.* Tempe, AZ, February 1997.

Participant and Speaker: International Long-Term Ecological Research Annual Meeting, Taipei, Taiwan. Nov 1997.

Participant: Seventh Cary Conference, *Successes, Limitations, and Frontiers in Ecosystem Science.* Institute for Ecosystem Studies, Millbrook, NY, May 1997.

Participant: NCEAS Symposium, *Synthesis in Ecology: Applications, Opportunities, and Challenges.* National Center for Ecological Analysis and Synthesis, Santa Barbara, CA, November 1996.

Participant and Speaker: 1st NCEAS Symposium, *Spatio-temporal dynamics in ecological systems.* National Center for Ecological Analysis and Synthesis, Santa Barbara, California, USA, February–March 1996.

Participant and Plenary Speaker: 5th Cary Conference: *Linking species and ecosystems.* Millbrook, NY, May 1993.
Member: Ground Water Ecology Strategic Workgroup, US Environmental Protection Agency (1992–1993)

Other Professional Service Activities

Member: International Long-Term Ecological Research (ILTER) Executive Committee (2021–)
Chair: ILTER Committee, US LTER (2021–2024)
Member: ILTER Committee, US LTER (2020–2024)
Member: ILTER Science Committee (2018–2024)
Member: National Academies Roundtable on Science and Technology for Sustainability (2019–2021)
Chair: Review team for Yale's programs in urban ecology, November 2020 (virtual).
Chair: Review team for Cornell's Ecology and Evolutionary Biology Department, March 2020.
Working Group Member: The Royal Society Policy Project, *Resilience to extreme weather.* (2013–2014)
Lead Author: US Global Change Research Program, National Climate Assessment, Chapter 8: Ecosystems, Biodiversity, and Ecosystem Services. 2012–2014.
Lead Author: US Global Change Research Program, National Climate Assessment, Chapter 17: Biogeochemical Cycles (2012–2014)
Staff Coordinator: US Global Change Research Program, National Climate Assessment, Chapters 8, 11, and 17 (2011–2012)
Member: Ecological Society of America's Rapid Response Team (a team of scientists on call as experts to answer questions of policymakers and others in Washington, DC; 2009–).
Review Team Member: The Ecosystems Center, Woods Hole Marine Biological Laboratory. (September–November 2009)
Member: Steering Committee, Urbanization and Global Environmental Change International Conference. UGEC is part of the International Human Dimensions Program (2009–2010)
Contributing Author: U.S. Climate Change Science Program (CCSP), Global climate change impacts in the United States (2008–2009)
Member: Writing Team, Long-Term Ecological Research Network Integrative Science for Society and Environment Proposal (2006–2007)
Member: Steering Committee, Consortium for Connectivity at Continental Scales (3Cs). coordinated national response to the National Ecological Observatory Network (NEON) request for information, D. Peters and others, Lead Scientists (2006–2007); also Team Leader for *Land change: ecosystem responses to urbanization and pollution across climatic and societal gradients* and Member, Steering Committee, for *STREON: Stream experiment and observational network.*
Member: Steering Committee, Cary Conference on *Ecology and Urban Design* (2006–2007)
Senior Mentor: Workshop of the Young Scientist Network of the Analysis, Integration and Modeling of the Earth System project, International Geosphere-Biosphere Programme. Mexico City, Mexico (September 2006)
Member: Conference Committee, Long-Term Ecological Research Network Planning (2006)

Member: US LTER Network Science Council (2006–2016)
Member: US LTER Network Coordinating Committee (1997–2006)
Chair: Working Group on Sustainability of Western Watersheds, Western Water Policy Advisory Commission (1996–1997)
Dissertation Examiner/Tribunal Member: E. Martí Roca, Universitat de Barcelona, Barcelona, Spain (1995)
Dissertation Examiner/Tribunal Member: R. Gómez Cerezo, Universidad de Murcia, Murcia, Spain (1995)
Review Team Member: Biological Research Forum on the Edwards Aquifer, Austin Texas (Sponsored by the Nature Conservancy; April 1994)
Extramural Reviewer for Funding Agencies: NSF (DISES, Ecosystem Studies, Ecology, Environmental Geochemistry and Biogeochemistry, Hydrological Studies, UMEB, International Programs), US Environmental Protection Agency, British NSF, Vienna Science and Technology Fund
Reviewer for Journals: *Ambio, American Midland Naturalist, Applied Geochemistry, Archiv fur Hydrobiologie, Australian Journal of Marine and Freshwater Research, BioScience, Biogeochemistry, Cities & the Environment, Earth, Freshwater Biology, Freshwater Science, Frontiers in Ecology & the Environment, Ecology, Ecology Letters, Ecology & Society, Ecological Applications, Ecological Modeling, Environmental Management, Environmental Research Letters, Environmental Science & Technology, Geophysical Research Letters, Global Biogeochemical Cycles, Global Change Biology, Hydrobiologia, Hydrological Processes, Journal of Ecology, Journal of Geophysical Research–Biogeosciences, Journal of the North American Benthological Society, Journal of Phycology, Landscape Ecology, Landscape and Urban Planning, Limnology & Oceanography, Oecologia, Nature, Nature Climate Change, Nature Geosciences, Nature Sustainability, PLOS One, Proceedings of the National Academy of Science, Science, Science of the Total Environment, Sustainability Science, Urban Ecosystems, Water Resources Research.*
Tenure and Promotion Reviews: Ben Gurion University, Cary Institute of Ecosystem Studies, Colby College, Colorado College, Colorado State University, Columbia University, Cornell University, Dartmouth College, Duke University, Florida International University, Indiana University, Johns Hopkins University, McGill University, Michigan Tech, Michigan State University, Northeastern University, The Pennsylvania State University, State University of New York at Binghamton, Virginia Tech, United States Department of Agriculture–Forest Service, United States Environmental Protection Agency, University of Arizona, University of California–Berkeley, University of California–Davis, University of California–Los Angeles, University of California–Riverside, University of California–Santa Barbara, University of Cincinnati, University of Colorado, University of Georgia, University of Helsinki, University of Illinois at Chicago, University of Kansas, University of Maryland, University of Massachusetts, University of Minnesota, University of Montana, University of Nebraska, University of New England (Australia), University of North Carolina, University of Notre Dame, University of Pittsburgh, University of Saskatchewan, University of Vienna, University of Wisconsin, Utah State University, University of Utah, Washington State University

TEACHING AND SUPERVISORY ACTIVITIES

Courses Taught

Impacts of Climate Change on Freshwater Ecosystems (lecture and seminar; Yale School of the Environment, 2023); Biogeochemistry, Urban Ecological Systems (1998–2010; 2017), Fundamentals of Ecology (5y), Ecosystem Ecology (2017 UNM, 2018, 2019), Global Change Biology (2017 UNM), undergraduate ecology research seminar (9y), graduate seminars (Linking Species and Ecosystems, Urban Ecology, Ecosystems Reading Group [all semesters, all years], Biogeochemistry of Terrestrial and Aquatic Ecosystems, Urban Ecology Reading Group, Urban Resilience Reading Group [2016-2020], Earth Systems Science for the Anthropocene Readings and Reflection [2021–], Collaborative Workshop on Geomorphic and Social History of Indian Bend Wash, Ecohydrology, Ecological Boundaries), Freshman seminars (Sustainability and Environment; Global Change and Cities), Limnology (lecture and lab), Graduate Ecology Core (UNM)

Guest Lectures

Conservation Biology (ASU), Biogeochemistry (Colorado State University), Biology & Management of Terrestrial Resources (ASU), Biology & Management of Aquatic Resources (ASU), Stream Ecology (ASU and Cornell), Ecosystem Analysis (ASU), Limnology (ASU), Planning Studio (ASU), Urban Climatology (ASU), UMEB Seminar (ASU), Nature of Biological Science (ASU), Professional Values (ASU), Biology Careers (ASU), Introduction to Sustainability (ASU), Sustainable Ecosystems (grad and undergrad, ASU), Sustainability (George Washington University), Urban Ecology (North Carolina State University, Boston University), Environmental Life Sciences (ASU), Theory in Ecology (University of Georgia), Biogeochemistry (Yale University)

Post-doctoral Scholars Supervised (current post-docs in bold)

Tom L. Dudley (1989–1991), currently Research Biologist, Marine Sciences Institute, University of California Santa Barbara
Christopher G. Peterson (1989–1991), currently Professor and Chair, Loyola University of Chicago
H. Maurice Valett (1991), currently Professor, University of Montana
Andres Millan (1991–1992), currently Prof. Titular, University of Murcia, Spain
Josefa Velasco (1991–1992), currently Prof. Titular, University of Murcia, Spain
Rosa Gómez (1995), currently Prof. Titular, University of Murcia, Spain
Eugènia Martí (1995–1997), currently Prof. Titular, Centre d'Estudis Avançats de Blanes, Spain
Diane Hope (1997–1998), Project Manager, Central Arizona–Phoenix LTER 1998–2006, currently in private sector, Arizona
Mark Hostetler (1998–1999), currently Professor, University of Florida
Kimberley Knowles-Yanez (1998–1999), currently Professor, California State University San Marcos
Markus Naegeli (1998– 1999), currently in private sector, Switzerland
Nancy McIntyre (1998–2000); currently Professor, Texas Tech
Weixing Zhu (1999–2000), currently Professor, SUNY Binghamton
Russell Watkins (1999), current position unknown
Amy Nelson (1999–2001), currently in private sector, USA
Madhusudan Katti (2000–2002), currently Assoc. Prof., North Carolina State University
Eyal Shochat (2000–2002), currently in private sector, Israel
John Schade (2000–2003), formerly Program Director, NSF; deceased
David Lewis (2000– 2003), currently Assoc. Prof., Univ. of South Florida

Susanne Grossman-Clarke (2000–2003), currently Training and Outreach Coordinator, Environmental Data Initiative, Univ. Wisconsin
Sarah Gergel (at NCEAS; 2000–2003), currently Assoc. Prof., University of British Columbia
Rich Sheibley (2002–2003), currently hydrologist, US Geological Survey, Tacoma, WA
Margot Kaye (2002–2004), currently Assoc. Prof., Pennsylvania State University
William Cook (2003–2005), currently Professor, St. Cloud State University
David Casagrande (2003–2005), currently Assoc. Prof., Lehigh University
Kathleen Lohse (2005– 2006), currently Assoc. Prof., Idaho State University
Amber Wutich (2006–2007), currently Professor, ASU
Ryan Sponseller (2006–2007), currently Assoc. Prof., University of Umea, Sweden
Melissa McHale (2007–2008), currently Asst. Prof., University of British Columbia
Lin Ye (2007–2008 and 2009-2010), currently Assoc. Prof., Institute of Hydrology, Chinese Academy of Sciences
Chi Zhang (2009–2011), currently Professor, Xinjiang Institute of Ecology and Geography, Chinese Academy of Sciences
Chelsea Crenshaw (2010–2011), currently consultant, NM
Kristina Hopkins (2014–2015) (at SESYNC), currently staff scientist, US Geological Survey
Elizabeth Cook (2014-2016), currently Asst. Prof., Barnard College
David Iwaniec (2014–2017), currently Assoc. Prof., Georgia State University
Monica Palta (2012–2014; 2016–2017), currently Asst. Prof., Pace University
Lauren McPhillips (2016–2018), currently Asst. Prof., Pennsylvania State University
Marta Berbés Blásquez (2016–2019), currently Asst. Prof., University of Waterloo
Yeowon Kim (2018–2020), currently Asst. Prof., Carleton University
Michele Clark (2020–2021), currently Program Manager, Earth System Science for the Anthropocene
David Proffitt (2020–2022), currently with Arizona Department of Transportation, Phoenix, AZ
Marina Lauck (2022), currently postdoc, Corteva Agriscience
Jason Sauer (2022), currently NSF postdoc (Earth Science), Portland, OR and Valdivia, Chile
Liliana Caughman (2021–2023)

Graduate Scholars Supervised (current students in bold)

Sandra M. Clinton (advisor–M.S. 1996: "Temporal dynamics and response to disturbance of a desert stream hyporheic invertebrate community"), currently Research Assoc. Prof., U North Carolina Charlotte
C. Lisa Dent (advisor–Ph.D. 1999: "The effects of ecosystem configuration on nutrient dynamics in a Sonoran Desert stream ecosystem"), formerly post-doc U Wisconsin; deceased
Aisha Goettl (advisor–M.S. 2001: "Seasonal and spatial variation in chemistry and nutrient limitation in a highly modified urban stream"), currently faculty, Rio Salado Community College
Shero Holland (advisor–M.N.S. 2003: "Nutrient transformations and aquatic biota diversity in an effluent-dominated river"), formerly technician, CAP LTER; deceased
Jennifer W. Edmonds (advisor–Ph.D. 2004: "Understanding linkages between dissolved organic carbon quality and microbial and ecosystem processes in Sonoran Desert riparian-stream ecosystems"), currently Assoc. Prof., Nevada State College
W. John Roach (advisor–Ph.D. 2005: "How anthropogenic modifications influence the cycling of nitrogen in Indian Bend Wash"), currently Author, SymBiotic Software, Missoula, MT
John Jung (advisor–M.N.S. 2005: no thesis), currently high-school teacher, Mesa, AZ

Tamara Harms (advisor–Ph.D. 2008: "Riparian nutrient and material cycling: influences of patches and flowpaths"), currently Assoc. Professor, University of Alaska Fairbanks

Christina Wong (advisor– Sustainability Ph.D. program, 2008-2010; changed advisors); Ph.D. 2014, currently Urban Sustainability Advisor, USAID, Washington, DC

Elisabeth Larson (advisor–Ph.D. 2010: "Water and nitrogen in designed ecosystems: Biogeochemical and economic consequences"), currently Senior Support Scientist at NASA Goddard Space Flight Center, Washington, DC

Rebecca Hale (advisor–Ph.D. 2013: "Coupled hydrology and biogeochemistry in social-ecological watersheds"), currently Senior Research Ecologist, Smithsonian Environmental Research Center, Edgewater, MD

Katherine Kemmitt (advisor–M.S. 2018: "Sources and decomposition of dissolved organic matter in desert streams"), currently Water Resources Scientist, Stantec, Minneapolis, MN

Melissa Davidson (advisor–Ph.D. student, Sustainability, 2016-2018; left program in 2019), currently in nursing, Phoenix, AZ

Amalia Handler (advisor–Ph.D. 2019, Environmental Life Sciences: "Watershed nitrogen transport, retention, and fate in dryland and urban ecosystems") – currently Scientist, Environmental Protection Agency, Corvallis, OR

Stephen Elser (advisor–Ph.D. 2022, Environmental Life Sciences: "Ecosystem services from urban ecological infrastructure: perceptions, performance, and priorities for climate resilient cities") – currently Scientist, Delta Stewardship Council, Sacramento, CA

Marina Lauck (advisor–Ph.D. 2022, Environmental Life Sciences: "The role of primary producer traits in moderating community structure and ecosystem function") – currently postdoc, Corteva Agriscience, Indianapolia, IN

Mengdi Lu (co-advisor – M.S. 2022, Biology: "Drivers of spatiotemporal variability of ecosystem metabolism in aridland streams") – currently in consulting, Tempe, AZ

Jason Sauer (advisor–Ph.D. 2022, Environmental Life Sciences: "Pluvial flood risk modeling, assessment, and management under evolving urban climates and land cover") – currently NSF postdoc, Portland, OR and Valdivia, Chile

Amanda Kuhn (advisor–Ph.D. candidate, Environmental Life Sciences: "Enabling pathways for local and regional urban river transformations") – current student

Julia Grabow (advisor–M.S. student, Biology: "Dissolved organic carbon and black carbon transport from a burned watershed to a desert stream") – current student

<u>Co-Advised Students</u>

H. Maurice Valett (co-mentor–Ph.D. 1991: "The role of the hyporheic zone in the structure and function of a desert stream ecosystem"), currently Professor, U Montana

Emily H. Stanley (co-mentor–Ph.D. 1993: "Drying disturbance and stability in a desert stream ecosystem"), currently Professor, U Wisconsin

Jeremy B. Jones (co-mentor–Ph.D. 1994: "Hydrologic linkage and hyporheic metabolism in a Sonoran Desert stream"), currently Professor, U Alaska Fairbanks

Robert M. Holmes (co-mentor–Ph.D. 1995: "Parafluvial nutrient dynamics in a desert stream ecosystem), currently Acting Director, Woodwell Climate Research Center, Woods Hole, MA

John D. Schade (co-mentor–Ph.D. 2000: "Direct and indirect effects of primary producers on nitrogen retention"), former Program Director, NSF; deceased

Matthew A. Luck (co-advisor–M.S. 2001: "A landscape analysis of the spatial patterns of human-ecological interactions"), Ph.D. U New Mexico, currently Res. Scientist, ISciences, LLC

Xiaoli Dong (co-advisor–Ph.D. 2015: "Ecosystem spatial heterogeneity: Formation, consequences, and feedbacks"), currently Asst. Prof., Univ. California at Davis
Ruby Sainz (co-advisor–M.S. 2021), currently hydrologist, US Forest Service
Qi Deng (co-advisor–Ph.D. 2022, Environmental Life Sciences: "Establishing explainability in data-driven modeling for ecohydrology: from rainfall, river flow, to fish migration") – currently postdoc, Tulane University< New Orleans, LA
Joseph Holway (co-advisor–Ph.D. candidate, Environmental Life Sciences: "Assessing The Impacts of Hydrologic Variance on Food Systems in the Lower Mekong Basin") – current student
Rebecca Snyder (co-advisor–Ph.D., Environmental Life Sciences) – current student
Rebecca Tiernan (co-advisor–Ph.D., Biology and Society) – current student

<u>On Committee</u>
Delaine Wood (M.S. 1990), currently instructor, Mesa Community College
Neil Mackay (Ph.D. 1996), currently instructor, Scottsdale Community College
Jennifer Johnson (M.N.S. 1997), current position unknown
Joanne Romagni (Ph.D. 1998), currently Professor and VP Research, DePaul U
Ann Schrot (M.S. 1998), consulting (ABR, Inc.)
Jonathan Snyder (M.S. 1998), current position unknown
Ayoola Folarin (M.S. 2001), US Fish and Wildlife Biologist
Linda Gudex (M.S. 2003), current position unknown
Anne Huth (Ph.D. 2003, Hydrology, University of Arizona), currently Pima Comm. Coll. (adjunct)
Darrel Jenerette (Ph.D. 2003, Plant Biology), currently Professor, University of California Riverside
Jill Welter (Ph.D. 2004), currently Assoc. Prof., St. Catherine's University
Julia Henry (M.S. 2005), currently research associate, University of North Carolina Wilmington
Shannon Johnson (PhD 2005, Microbiology), currently staff scientist, Los Alamos National Laboratory
Steven Metzger (M.N.S. 2006), current position unknown
Ryan Sponseller (Ph.D. 2006), currently Assoc. Prof., University of Umea
Chelsea Crenshaw (Ph.D. 2007, University of New Mexico), currently consultant, NM
Candan Soykan (Ph.D. 2007), currently Quantitative Scientist, Audubon Society
Daniel Gonzalez (Ph.D. 2007, Chemical, Material, and BioEngineering), currently in private sector, CA
Alexander Buyantuyev (Ph.D. 2008, currently Asst. Prof., SUNY Albany)
Kristin Gade (Ph.D. 2010), currently Arizona Department of Transportation
Elizabeth Hagen (Ph.D. 2010), currently faculty, Rio Salado College
Christofer Bang (Ph.D. 2010), currently senior instructor, ASU
Michelle McCrackin (Ph.D. 2010), currently Science Policy Analyst, National Science Board, Washington, DC
Xiaoding Zhuo (Ph.D. 2010, Chemistry and Biochemistry), currently Data Scientist, San Francisco, CA
Elizabeth Cook (Ph.D. 2014, Plant Biology), currently Asst. Prof., Barnard College
Laureano Gherardi (Ph.D. 2014, Environmental Life Sciences), currently Asst. Prof, University of California Berkeley
Jessica Corman (Ph.D. 2015, Biology), currently Asst. Prof., U of Nebraska
Robin Greene (M.S. 2015, Biology)
Michael Bernstein (Ph.D. 2016, Sustainability), currently Asst. Res. Prof., ASU

Amanda Suchy (Ph.D. 2016, Environmental Life Sciences), currently Asst. Prof., Central Michigan University
Jorge Ramos (Ph.D. 2017, Environmental Life Sciences), currently Executive Director, Jasper Ridge Biological Station, Stanford University
Joomie Lee (Environmental Planning & Design); left program
Neng Iong Chen (Ph.D. 2020, Environmental Life Sciences)
Megan Wheeler (Ph.D. 2020, Environmental Life Sciences), currently Environmental Scientist, San Francisco Estuary Institute
Ethan Baruch (Ph.D. 2021, Environmental Life Sciences), currently postdoc, UC Davis
Alysha Helmrich (Ph.D. 2021, Sustainable Engineering: "Alternative design approaches for advancing infrastructure resilience"), currently Asst. Prof., Univ. Georgia
Ashley Foster (Ph.D. student, Environmental Life Sciences) – current student

External Graduate Dissertation Juries/Reviews/Supervision

Rosa Gómez Cerrezo, University of Murcia (Ph.D. 1995) – jury
Eugènia Martí Roca, University of Barcelona (Ph.D. 1995) – jury
Daniel von Schiller, University of Barcelona (Ph.D. 2008) – jury
Carijn Beumer, Maastricht University (Ph.D. 2014) – review
Matt Smith (Ph.D., Florida International University) – supervised in RULA IRES program, Valdivia, Chile, 2018
Anamarie Shreves (M.S., Georgia State University) – supervised in RULA IRES program, Valdivia, Chile, 2018
Therese O'Neill (M.S., California State University at Long Beach) – supervised in RULA IRES Program, San Juan, PR, 2021
Addison Martin (M.S., University of Utah) – supervised in RULA IRES Program, Guayaquil, Ecuador, 2022
Margot Mattson (M.S., San Diego State University) – supervised in RULA IRES Program, Guayaquil, Ecuador, 2022
Nicole Hernández (Ph.D., ASU) – supervised in Weaving Relations River Futures cohort
Lauren Emer (Ph.D., Florida International University) – supervised in RULA IRES Program, Bogotá, Colombia, 2023
Amé Min-Venditti (Ph.D., ASU) – supervised in RULA IRES Program, Bogotá, Colombia, 2023
Nathasha Simmons (M.S., Univ. of California Los Angeles) – supervised in RULA IRES Program, Bogotá, Colombia, 2023

Post-baccalaureate Scholars Supervised (current - bold)

Jack Barendrick (ASU 2022) – Research Experience for Postbaccalaureate Scholars
Latasha Hosteen (ASU 2023) – supervised in Weaving Relations River Futures cohort
Samantha Yazzie (ASU 2023) – supervised in Weaving Relations River Futures cohort

Undergraduate Scholars Supervised (current - bold) *graduate/professional school

Amy C. Weibel (ASU),* Ph.D. Wayne State, current position unknown
Philip Camill (U Tennessee),* Ph.D. Duke, currently Assoc. Prof., Bowdoin College
Derek L. Buschman (Regis College),* Ph.D. Purdue, currently science teacher, Santa Fe, NM
Suzanne Stibbe (U Georgia),* M.S. U Georgia, current position unknown

Kimberly Bailey (ASU), current position unknown
Kevin C. Petrone (Hampshire Coll),* Ph.D. U Alaska Fairbanks, currently research scientist, CSIRO
Deborah Bishop,* M.S. Baylor University, currently Recycling Coordinator for City of Fort Worth
Tegan Blaine (Brown),* Ph.D., currently Director, Climate, Environment, and Conflict (CEC) Program at the U.S. Institute of Peace (USIP).
Dena Greene (U Alabama),* M.S. Southern Mississippi, current position unknown
Karen Shorty (ASU), current position unknown
E. Miguel Murphy (ASU),* M.F.A., currently poet in CA
Lisa David (Occidental Coll),* current position unknown
Bryan J. Harper (ASU),* M.S. Michigan, current position unknown
Andrea J. Jackson (ASU, Honors),* M.S. Queen Mary& Westfield, J.D. UCLA; currently, attorney
Alicia M. Corbett (ASU, Honors),* Duke University - J.D., 2002, currently attorney in Phoenix
Jaime L. Seddon (ASU),* currently Scientist, Biology, Optimer Pharmaceuticals
Teresa M. Tibbets (ASU),* Ph.D. University of New Mexico, currently post-doc Montana
Jennifer Hunter (ASU), current position unknown
Kelly Donovan,* current position unknown
Andy Chan (UC Berkeley),* current position unknown
Erik Lohman (ASU), current position unknown
Katherine Malone, current position unknown
Matthew de la Peña Mattozzi (Harvey Mudd),* Ph.D., currently post-doc, Harvard University
Noah Dillard,* international peace worker
Katharina Zinnow,* current position unknown
Jennifer Zachary (ASU, Honors),* J.D. Harvard; currently attorney in Washington, D.C.
Brian Lutz (ASU),* M.S., M.S., M.P.A., currently with UN Development Program
Laura Calandrella (ASU), current position unknown
Jill Koehler (ASU),* M.S. education, owner, Smart Aleck Tutoring (CA)
Nicole Garber (ASU, Honors),* M.D., currently Chief Psychiatrist, The Meadows (AZ)
Vanessa Hamer,* Peace Corps
Amanda Smith,* current position unknown
Kelly Balcarzyk (U Rochester),* Ph.D., currently Presidential Management Fellow, USFS
Philip Tarrant (ASU),* M.S., currently Director of Informatics and Technology, GIOS, ASU
Sone Sithonnorath (ASU), M.S. student, Northern Arizona University
Megan Wegehoft (ASU), current position unknown (Amherst, NH)
Michelle McCrackin* (ASU), Ph.D., currently staff, National Science Board
Christina Wong* (Occidental Coll), Ph.D., currently Visiting Scholar, Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences
Kayla Graham* (ASU, Honors), M.S., currently Communications Mgr Sutter Health
Rebecca Bellmore (nee Martin)* (ASU, Honors), Ph.D., currently Science Director, SE Alaska Watershed Coalition, Juneau, AK
Bashar Ahmed* (ASU, Honors), currently M.D., Arizona
Nicholas Weller* (ASU, Honors), Ph.D., currently ASU postdoc
Kevin Zeck (ASU, Honors 2013), graduated 2013
Sarah Moratto* (ASU 2013), M.S.
Danielle Shorts (ASU 2013), current position unknown
Emma Holland* (ASU2014), currently Ph.D. student
Erin Worth (ASU 2014), current position unknown
Marena Sampson* (ASU, Honors 2015), currently M.S. student, ASU

Truman Combs* (ASU 2015), currently medical school
Samuel Lu (ASU), current position unknown
Alex Mayr (ASU 2016), current position unknown
Nick Armijo (ASU 2017), current position unknown
David Nardeli* (Paul Smith's College 2017), current position unknown
Shannon Newell (Northern Arizona Univ 2018), currently field tech, NEON
Jeremiah McGehee (ASU)
Kody Landals (ASU 2018), currently in construction work, Phoenix area
Corey Caulkins (ASU, Honors 2018), currently environmental consultant, Arcadis
Riya Patel (Coronado High School), summer-fall 2017, currently BS student, Vanderbilt University
Neesha Basnyat (Davidson College 2018), currently Interpretive Intern, Jewel Cave Natl Monument
Miranda Turner (BS Boston College 2019, MS Stonybrook 2020), currently biological technician
Tearsa Saffel (BS ASU 2018), currently Sustainability programs Coordinator, Creighton Community Foundation
Matthew Gonzalez (ASU 2019), current position unknown
Elana Berlin (Stockton University 2019), current position unknown
Dave DeBacker (Notre Dame 2023)
Daniela Garcia Moreno (Cornell 2022)
Matt Millado (Notre Dame 2021)
Caitlyn (Finnley) Rickman (Berea College 2021)
Olivia Powell (ASU 2021), CAP LTER REU
Michael Convey (ASU 2021), LTREB REU, currently Enforcement Officer, US EPA
Brandi Harris (ASU 2022), URA
Daniela Garcia Moreno (Cornell University 2022) – Supervised in RULA IRES in PR
Sanjana Roy (Middlebury College 2022) – Supervised in RULA IRES in PR
Ananth Udupa (ASU 2022) – Supervised in RULA IRES in PR
Baylie Alley (ASU 2024), URA
Savage Cree Hess (ASU 2025), CAP LTER REU
Shruti Jadala (University of Florida 2023) – Supervised in RULA IRES in Guayaquil, Ecuador
Isabella Pacenza (Barnard College 2024) – Supervised in RULA IRES in Guayaquil, Ecuador
Carlos Romero (Columbia University 2022) – Supervised in RULA IRES in Guayaquil, Ecuador
Carly Steckling (ASU 2025) Barrett Scholar
Madison Harris (ASU 2023) Barrett Scholar
Tanishq Jain (ASU 2023) Barrett Scholar
Zoe Gentry (ASU 2025) CAP LTER REU
Arshonne Cazares (ASU 2025) CAP LTER REU
Julián Jaramillo (Cornell University 2024) – supervised in RULA IRES Program, Bogotá, Colombia, 2023
Isabel Kwass-Mason (Barnard College 2025) – supervised in RULA IRES Program, Bogotá, Colombia, 2023
Daniella Rivera-Agudelo (Barnard College 2025) – supervised in RULA IRES Program, Bogotá, Colombia, 2023
Mackenzie Willits (ASU 2025) Barrett Scholar

UNIVERSITY AND PUBLIC SERVICE

School Committees and Activities

Search Committee, IKSA Presidential Postdoctoral Fellows, Schools of Life Sciences (SoLS), Earth and Space Exploration, and Human Evolution and Social Change (2023)
Presidential Postdoctoral Fellows Support Committee, Chair, SoLS, 2022–
Special Advisor to the Director for Diversity, Equity, and Inclusion, 2022–
Diversity, Equity, and Inclusion Task Force, Chair (to 2/2023 and member 2023–), SOLS, 2022–
Search Committee, Program Manager for DEI Initiatives, SOLS, 2022
Special Advisor to the Director for Faculty Mentoring and Development, 2021–2023
Search Committee, Presidential Postdoctoral Fellows, School of Life Sciences (SoLS), 2021
Search Committee, Director, School of Life Sciences (SoLS), 2018–2019
Search Committee, Macrosystems Biology, SoLS, 2014–2015
Search Committee, Environmental Science and Sustainability, School of Sustainability (SoS), 2013–2014
Facilities Committee, SoLS, Member, 2012–2013
Cluster Search (3 committees), Global Change Ecology, Coordinator; Community/Ecosystem Ecology, Chair; Physiological Ecology, Member; Global Ecology, Member, SoLS, 2009-2010
Personnel Committee (elected), member, Ecology, Evolution and Environmental Science (EEES) Faculty, SoLS, 2009-2010
Faculty Leader (elected), EEES, SoLS, 2007–2009
Personnel Committee, Chair, EEES Faculty, SoLS, 2007–2009
Executive Committee, SoLS, 2007–2009
Executive Committee, SoS, 2007–2008
Personnel Committee, SoS, 2007–2008
Biogeochemistry/Microbial Ecology Search Committee, Chair, SoLS, Spring–Fall 2004
Initiatives Program Committee, SoLS: EEES Faculty Representative (elected), 2003–2004
Personnel Committee (elected), 1996–97, 1997–98, 1999–2000, 2000–01 (Chair), 2003–2004 (special Ad-Hoc for defunct Biology Department), 2005–2006
Discussion Leader, EEES faculty of SoLS, 2002–2003
Graduate Program Committee, 2001–2002
Biology & Society Program Steering Committee, 1999–2003
Biology & Society Search Committee, 1998–1999
Ecology Research Experience for Undergraduates Program (ECOREU), 1993–1998: Director, Principal Investigator, Chair of Steering Committee.

- ECOREU served 24 students, 58% from underrepresented groups and 83% women, who were placed in research labs early in their college careers. Of the 24 students, half began the program in their freshman year and 7 as sophomores; 10 are Latino/a, 2 are African American, 3 are Indian, 2 are Asian American, and 8 are Anglo; 20 of the 24 are women. Responsibilities of the Director included vigorous recruitment of members of underrepresented groups (using individual mailings, announcement at campus organizations, letters to local high schools, and by working with the Honors College, ASU admissions, and the SUMS Institute to identify qualified incoming students). As of December 1998, 6 of the 9 UMEB students who had graduated from college were in graduate or medical (1) school (2 not in biology), and 2 were employed as research specialists in environmental biology. I also advised all of the students on a highly individualized basis, led the seminar series for all years of the program, and took students to national meetings (such as the Ecological Society of America meeting in Snowbird, UT, 1995), in addition to serving as research supervisor for several of the students.

Undergraduate Summer Research Symposium (UBEP Program), 1990–2000: Organized symposium, solicited speakers, coached students on presentations

Hughes Program Steering Committee, 1994–1997
Septennial Review Committee, 1994–1996
Graduate Committees of Ph.D., M.S. students in Biology, Plant Biology, Microbiology, Chemical, Material & Bioengineering, Geological Sciences, Chemistry & Biochemistry, Hydrology & Water Resources [UA], Biology [UNM])
Environmental Biology Laboratory (later Stable Isotope Laboratory), 1993–1998: Director, Principal Investigator. Wrote successful grant proposal to fund acquisition of equipment. Supervised technician. Laboratory is now a university facility.

College Committees and Activities

Unit Diversity, Equity, and Inclusion Committee, The College, 2022–
Reader, Honors Thesis, Ruby Sainz, BS 2020 (Barrett Honors College [BHC])
Reader, Honors Thesis, Sara Thompson, BS 2019 (BHC)
Supervisor, Honors Thesis, Corey Caulkins, BS 2018 (BHC): Graduated Summa Cum Laude
Dean's Faculty Advisory Committee (Promotion and Tenure), College of Liberal Arts & Sciences, 2013–2015; 2016–2018
Supervisor, Honors Thesis, Marena Sampson, BS 2015 (BHC): Graduated Cum Laude
Faculty Advisory Committee, the Goldwater Environmental Laboratory (College of Liberal Arts and Sciences [CLAS]), 2009–2010
Executive Council, W.M. Keck Laboratory for Environmental Biogeochemistry (CLAS), 2002–2010
Terrestrial Biogeochemist Search Committee (Chair, CLAS), 2001–2002
Supervisor, Honors Thesis, Bony Ahmed, BS 2009 (BHC): Graduated Cum Laude. Currently: M.D.
Supervisor, Honors Thesis, Rebecca Martin, BS 2008 (BHC): Graduate Cum Laude. Currently: Post-doc with US EPA, Portland, OR.
Supervisor, Honors Thesis, Nicole Garber, BS 2003 (BHC): Graduated Cum Laude. Currently: St. Louis University Medical School.
Supervisor, Honors Thesis, Jennifer Zachary, BS 2001 (BHC): Graduated Summa Cum Laude; Biology Department Service Award. Currently: Attorney.
Supervisor, Honors Thesis, Andrea Jackson, BS 1996 (BHC): Graduated Cum Laude; Marshall Scholarship. Currently: Attorney.
Reader, Honors Thesis, Amanda McLeod, 2003 (BHC)
Reader, Honors Thesis, Tatjana Polony, 1997 (BHC)
Biosciences Council (committee to unify Life Sciences departments; CLAS), 1995–1997
Goldwater Oversight Committee (CLAS), 1994–1997
Presentation, faculty workshop for Life Sciences, Senior Honor Day (BHC), 1997
Mentor for Gammage Scholar (BHC), 1996–1997
GRSO graduate student award competition: proposal review— 1996 (The Graduate College)
Graduate Concentration in Ecology (Departments of Zoology and Botany), 1992–1997: Director, Chair of Steering Committee (CLAS)

University Committees and Activities

Deans' Designee Council for Diversity, Equity and Inclusion, 2022–
Earth Systems Science for the Anthropocene Graduate Scholars Network, co-Director, 2020 –
Central Arizona-Phoenix Long-Term Ecological Research Program (CAP LTER), Executive Committee, 2016–present; Justice, Equity, Diversity, and Inclusion Committee, 2020–present.
Committee on Academic Freedom and Tenure at ASU, 2018–2021

Reader, Honors Thesis, Sawyer Treese (School of Sustainability), BS 2019 (BHC)
CAP LTER, 1997–2016: Lead Principal Investigator, Co-Project Director, Co-Chair of Executive Committee.

- Coordinate research by faculty members, graduate students, and post-docs from ~12 different departments across campus.

Standing Committee for Sustainability Education at ASU, 2013–2014
Faculty Women's Association Leadership Summit: Invited panelist, 2010
Member, Search Committee for Dean and Director, Global Institute of Sustainability (GIOS), 2009–2010
Chair, Council of Project Directors, GIOS, 2005–2006
Planning Council, GIOS, 2005–2007
President's Academic Council, ASU, 2003–2009
Faculty Women's Association Grants & Fellowships Workshop: Invited discussion leader, 2000
Personnel Committee, Office of the Vice Provost for Research, ASU, 1999–2000
Water Environment in Arid Lands Initiative, 1995–1998: member of core group

Education and Public Outreach

Expert Panel, Urban Heat Leadership Academy, The Nature Conservancy, Phoenix, AZ (2023)
Featured in *ASU News* story, "ASU professor reaches 'pinnacle' of aquatic sciences with 2 awards," April 2023
Featured in *ASU News* story, "Life in the City: ASU a powerhouse of urban ecology research," November 2022
Featured in *ASU News* story, "Mentorship program to address graduate student inclusion," February 2022
Presentation to Foothills Forum, "Nature-based solutions for cities to adapt and transform in response to climate change," Tucson, AZ, March 2022 (virtual).
Instructor, Urban Heat Leadership Academy, The Nature Conservancy, Phoenix, AZ (2021- virtual)
Featured in ASU *Healthy Urban Environments News* story, "ESSA: a new graduate training initiative solving global challenges from the bottom-up," February 2021
Presentation Spirit of the Senses intellectual club, "Extreme events call for resilient urban infrastructure and positive future visions," Phoenix, AZ, April 2020 (virtual)
Tour organizer, "Urban Heat, Green Infrastructure & Health Outcomes: Approaches, Solutions and Adaptation" (50 participants), Meeting of the Minds Summit, Phoenix, AZ, February 2020
Featured in *ASU Now* story, "The nature of cities is a lifelong fascination for new Regents Professor," February 2020
Featured in *ASU Now* story, "ASU ecologist launches international effort to improve urban resilience," January 2020
Featured in *ASU Now* story, "Mapping the way to resilient cities," December 2019
Featured in *ASU Now* story, "5 top ASU researchers earn prestigious Regents Professor title," December 2019
Featured in *ASU Now* story, "ASU is 7th in national research ranking," November 2019
Facilitator, future scenarios workshops, Portland, OR, September and November 2019
Meeting Mentor, Ecological Society of America's (ESA) Strategies for Ecology Education, Development, and Sustainability (SEEDS) program, ESA meeting, 2019
Facilitator, future scenarios workshop, Syracuse, NY, May 2019

Featured in *ASU Now* story, "Trio of ASU professors elected to National Academy of Sciences," May 2019
Featured in *ASU Now* story, "Streamlining the study of nature in cities," April 2019
Bi-monthly "Practitioner-Researcher Meeting" with City of Phoenix, The Nature Conservancy, Maricopa County Flood Control District, and other community partners (2016–2019)
Facilitator, participatory workshops with community members for heat action planning, three neighborhoods in central Phoenix, South Phoenix, and Mesa (series of nine workshops, facilitator for four, summer 2018)
Facilitator, future scenarios workshop, Baltimore, MD, June 2018
Facilitator, future scenarios workshop, South Phoenix, AZ, May 2018
Workshop on themes for future scenarios, South Mountain Village community, January 2018
Featured in *ASU Now* story, "ASU researcher named American Geophysical Union Fellow," July 2017
Facilitator, workshop on urban heat, City of Phoenix, April 2017
Presentation on urban resilience to extreme events, C2SE workshop on city-business collaboration for resilience in Phoenix, December 2016
Featured in *ASU Now* story, "The Future of Water in the Southwest," October 2016
Featured in *ASU Now* story, "Beating heat in future takes more than AC," August 2016
Presentation to Science Diplomacy course on resilience of cities to extreme events. Washington, DC, June 2016
Quoted in *Environmental Health News*, "Engineers struggle to put streams back into the urban landscape," February 2016
Various presentations to city managers, leaders, planners in Portland, OR, Syracuse, NY; New York, NY; Baltimore, MD; San Juan, PR; Valdivia, Chile; and Hermosillo, Mexico; 2015–2016
Quoted in *Nature* news story, "Ecologists embrace their urban side," August 2015
Featured in *Phys.Org*, "Changing the way we think about urban infrastructure," July 2015
Press Release on UREx SRN, picked up by AAAS *EurekAlert*, July 2015; *Next City,* August 2015
News story on sustainable cities, *ASU news*, May 2015
Lightning Presentation, "Flood." Presented at the Sustainable Future Scenarios kickoff workshop with 30-40 local governmental and NGO leaders, 2015
Quoted in *NBC News,* "Extreme Weather Requires New Focus on Resilience, Report Says," November 2015
Quoted in *International Business Times*, "Mankind Must Prepare for Extreme Weather Events Warns Royal Society," November 2014
Lecture, "Climate change impacts in the US Southwest." Presented to the Conservation Alliance, Phoenix metro area organization focused on conservation in desert/mountain parks. February 2014.
Story featured on ASU News, Science & Tech, covering the special issue of *Frontiers in Ecology & the Environment* on climate-change impacts on ecosystems, biodiversity, and ecosystem services. November 2013.
Press Release by the Ecological Society of America on the special issue of *Frontiers in Ecology & the Environment* on climate-change impacts on ecosystems, biodiversity, and ecosystem services. November 2013.
Tele-press conference, sponsored by Climate Nexus: Emerging Consensus Shows Climate Change Already Having Major Effects on Ecosystems. Discussion of the technical input report, "Climate change on ecosystems, biodiversity, and ecosystem services." December, 2012.

Press Release by USGS on the technical input report, "Climate change on ecosystems, biodiversity, and ecosystem services." This release and tele-press conference covered by DotEarth blog, *Arizona Republic*, *Deseret News*, Climatewire, E&E, *Summit County Voice*, Phys.org, UPI, *Cleveland Leader*, *Santa Fe New Mexican*, *The Coloradoan*, TopNews United States, and ASU News with quotes by NBG.

Outreach presentations for the NSF and National Climate Assessment (Oak Ridge National Laboratory, ASU, University of Connecticut, Ecological Society of America, North American Benthological Society, Association for the Sciences of Limnology and Oceanography, American Geophysical Union, American Fisheries Society, American Meteorological Society, Gordon & Betty Moore Foundation, University of Maryland, Duke University, George Washington University)

Mentor, MentorNet (online mentoring program for minority/women Ph.D. students, 2008, 2009, 2011-2012

Mentor, High-school teachers summer research program (five teachers for four weeks), 2009

Interview, Channel 12 evening news on global climate change, June 2009

Interview, Horizon ((KAET) on global climate change, June 2009

Speaker and Panelist, Community Conversation on Arizona Water, sponsored by the National Oceanic and Atmospheric Administration, Arizona Science Center, May 2009

Speaker, Interfaith Power & Light (a faith community response to global climate change), "Potential impacts of and responses to global climate change in Arizona," April 2009

Speaker, "Global change in the urban century," President's Community Enrichment Program (ASU), Desert Botanical Garden, January 2009

Presentation on urban ecology to "Spirit of the Senses" intellectual club, Phoenix, AZ, 2007

Meeting Mentor, Ecological Society of America's (ESA) Strategies for Ecology Education, Development, and Sustainability (SEEDS) program, ESA meetings, 2006, 2007

Host and speaker, ESA's SEEDS Leadership Workshop, 2006

Leader and speaker for the ESA SEEDS field trip to Sevilleta LTER and UNM, 2005

International Science & Engineering Fair Judge (Team Captain), Phoenix, AZ**,** 2005

Interviewed on National Public Radio's 'Science Friday'; 1-hour topic: Urban Ecology, 2004

Workshop presenter for Sally Ride Science Festival for Girls, annually 2003–2005, ASU campus

Lecture on urban ecology to teacher workshop, 1998, 1999

Teacher internships in my laboratory (3 teachers, one week in summer), 1999

International Science & Engineering Fair Judge (Team Captain), Tucson, AZ, 1996

Presentations (4-5) in elementary school classes on pollution, aquatic ecosystems, and Antarctica (Carmenati School, Tempe; Roosevelt School, Mesa), 1996, 1997

Presentations to Girl Scouts of America "jamboree", 1996

TRAINING AND PROFESSIONAL DEVELOPMENT

Culturally Aware Mentoring, Facilitated workshop, 9 hours, online. Spring 2023.

Culturally Aware Mentoring, CIMER/University of Wisconsin, Credit or CPE Hours: 2, 1-3 hour, online, self-guided. Spring 2022

Training for trainers, ADVANCEGeo (in collaboration with ASU INCLUDES), Credit or CPE Hours: 6, to develop a cadre of trained faculty who are able to offer INCLUDES training in SOLS, SESE, and SMS. Spring 2022.

Entering Mentoring, Center for the Improvement of Mentored Experiences in Research (CIMER). Credit or CPE Hours: 13.5. The goal is to accelerate the process of becoming an effective research

mentor by providing mentors with an intellectual framework, an opportunity to experiment with various methods, and a forum in which to solve mentoring dilemmas with the help of their peers. By the end of the training, mentors will have articulated their personal style and philosophy of mentoring and have a toolbox of strategies they can use when faced with difficult mentoring situations. Certified facilitator for this workshop. Fall 2021.

ADVANCEGeo Bystander Intervention training, ADVANCEGeo (in collaboration with ASU INCLUDES). Credit or CPE Hours: 2.5. Based on a community model for intervention training for academic leaders and faculty that identifies sexual and other types of harassment, bullying and discrimination as scientific misconduct and equips individuals and departments with skills to 1) recognize ways in which exclusionary and harmful behaviors manifest in different research and educational settings and how they are experienced by people of different gender, racial, ethnic and other identities, 2) implement direct and indirect behaviors to stop harmful behaviors, 3) produce, implement, and enforce ethical codes of conduct, and 4) educate themselves about resources to reduce the harm caused by harassment, bullying and other exclusionary behaviors that create hostile workplaces and contribute to low diversity in STEM fields. A main goal of ADVANCEGeo is to produce material that can be adapted to different training modules, including in-person and online, for departments, and for broader audiences at scientific conferences as well as different disciplines. Fall 2021.

Re-Thinking Mentoring: How to Build Communities of Inclusion, Support, and Accountability, National Center for Faculty Development and Diversity (with Carlita Favero). Credit or CPE Hours: 2. Presents an alternative framework for mentoring that focuses on needs assessment and shifts the idea of mentoring from a relationship between two faculty members towards building a broad network of support, community and accountability. Fall 2021.

Optimizing the Practice of Mentoring 101: For Research Mentors of Graduate Students, Fellows, and Early-Career Faculty, University of Minnesota, Clinical and Translational Science Institute. Credit or CPE Hours: 1.5. This course is designed to help faculty members or other experienced scientists become more effective research mentors for graduate students, postdoctoral fellows, and early-career faculty. Fall 2021.

Optimizing the Practice of Mentoring: Enhancing Motivation Using the CARES Mentoring Model, University of Minnesota, Clinical and Translational Science Institute, Credit or CPE Hours: 1.5, This course describes an approach to mentoring that focuses on fulfilling the core psychological needs that enhance a mentee’s motivation. Targeted to faculty who are mentoring students, fellows, or other faculty in academic settings, including research training programs. Fall 2021.

Reflexivity and positionality, ASU Career EDGE (with Pardis Mahdavi, Dean SS). Credit or CPE Hours: 3. To understand the methodological importance of considering the position and perspective of the research and researcher in designing, conducting and writing up ethnography. Fall 2021.

Implicit bias and Microagressions, ASU Career EDGE. Credit or CPE Hours: 1.5. Understanding concepts of diversity, inclusion, belonging, implicit bias, types of bias, types and impact of microaggressions. Fall 2021.

Unlearning Racism in the Geosciences, American Geophysical Union. Credit or CPE Hours: 8. Tempe, Arizona, Group or "pod" (my reading group) followed the online curriculum over 8 weeks. Spring 2021.