

Joseph Edward Fargione

Director of Science
North America Region
The Nature Conservancy

<http://www.nature.org/science-in-action/our-scientists/our-scientists-joe-fargione.xml>

CURRENT POSITIONS

2013-Present Director of Science for North America Region, The Nature Conservancy
2009-Present Adjunct Faculty, Ecology, Evolution and Behavior Department, University of Minnesota
2009-Present Adjunct Faculty, Forest Resources Department, University of Minnesota

PAST POSITIONS

2009-2013 Lead Scientist for North American Region, The Nature Conservancy
2007-2009 Regional Science Director for Central United States, The Nature Conservancy,
2007-2007 Research Associate, Departments of Applied Economics & Ecology, Evolution, Behavior,
University of Minnesota (With Drs. Steve Polasky and David Tilman)
2006-2007 Assistant Professor, Departments of Forestry and Natural Resources & Biology, Purdue
University
2004-2006 Research Faculty, University of New Mexico (with Dr. Scott Collins)

EDUCATION

Ph.D. Ecology; University of Minnesota, St. Paul, MN, 2004
Advisor: Dr. David Tilman
Thesis: *Biodiversity and community structure in a tallgrass prairie: consequences of resource competition in space and time.*
B.A. Ecology; Hampshire College, Amherst, MA, 1996

HONORS AND FELLOWSHIPS

University of Minnesota, Doctoral Dissertation Fellowship, 2003-2004
Charles J. Brand Fellowship, 2001-2002
University of Minnesota, Graduate Student Fellowship, Fall 2000
University of Minnesota, Graduate Student Fellowship, 1998-1999
National Science Foundation, Pre-Doctoral Fellowship Honorable Mention, 1998, 1999
Johnson Scholar, Hampshire College, 1992-1996

GOOGLE SCHOLAR INDICES

Citations: 14,000
h-index: 36

GRANTS

3/18-2/21 Natural Climate Solutions Phase II: Build Momentum for Large-Scale Impact (J Adams, C. Moore, L Almond, J Fargione, A Snyder, J Verdieck, E. Brolis). Doris Duke Charitable Foundation (\$3,521,000)

- 7/17-12/18 Northern Great Plains: Developing Regional Strategies for People and Nature (J Fargione, N Feeken) Anne Ray Foundation (\$370,000)
- 6/17-5/19 Testing the effects of high-intensity, short duration grazing on grazing productivity, soil carbon, and conservation (J Fargione, H Copeland, C Kazanski, J Ritten, L Washkoviak). Jason Spaeth (\$236,183)
- 1/16-12-17 Natural Climate Solutions Initiative: Transforming Land Use to Curb Climate Change (Phase 1) (J Adams, B Griscom, J Fargione, J Campari, P Elias, L Almond) (\$4,000,000).
- 7/15-6/16 Conserving the Stage: Completing a Resilient Network of Conservation Lands for the Continental United States (M Anderson, K Hall, M Clark, A Olivero, A Barnett, J Platt, B McRae, J Prince, J Fargione) Doris Duke Charitable Foundation (\$750,000).
- 1/15-12/16 Building the Case for Natural Infrastructure in Flood and Storm Management Providing Communities with Climate-Ready Solutions for a Resilient Future (M Smith, K Andrews, J Fargione). Kresge (\$575,000)
- 1/15-12/16 Land-use change and conservation policy in Brazil and the U.S. for biodiversity, ecosystem services and economic returns (S Polasky, J Fargione, D Pennington, A Plantinga, J Lawler, C Durrigan). Moore (\$292,190)
- 1/15 -12/15 Identifying refugia from future climate change (B McRae, J Fargione, S Dobrowski, M Anderson, S Buttrick). Wilburforce (\$25,000).
- 1/15-12/15 Soil Health Partnership (S McMahan, D Cleary, J Fargione). Walton Family Foundation (\$100,000).
- 1/15-12/16 Conserving the Stage: Identifying a Resilient Network of Conservation Lands in the Great Lakes and Great Plains Ecoregions (M Anderson, J Fargione, M Cornett, K Hall, B McRae) Doris Duke Charitable Foundation (\$650,000)
- 1/14-12/15 Landscape Resilience to Climate Change: Applying a Resilient Site Analysis to Eastern North America, Northern California, and the Pacific Northwest (M Anderson, S Buttrick, J Fargione, B McRae) Doris Duke Charitable Foundation (\$775,680)
- 12/13-12/14 Soil Health Partnership (S McMahan, D Cleary, J Fargione) Walton Family Foundation (\$73,671)
- 12/13-12/15 Impacts of hydraulic fracturing on water quantity and quality for nature and people: Are we prepared for the future? (S Baruch-Mardo, A Trainor, J Ryan, J Fargione, J Kiesecker) SNAP-Science for Nature and People (\$257,810)
- 7/13-8/14 Consensus priority areas for the Partnership for Gulf Coast Land Conservation (J Fargione) Land Trust Alliance (\$30,000)
- 7/13-9/14 Expansion of 'Probability of Being Cropped' Analysis to Minnesota and Iowa (J Fargione, J Evans) US Fish & Wildlife Service (\$8,519)
- 8/12-2/13 Mapping High Conservation Value Forests in the United States (J Fargione) Forest Stewardship Council (\$30,000)

- 9/11-12/12 Avoided Grassland Conversion Carbon Project. (R Dell, J Fargione) USDA-Conservation Innovation Grant (\$161,180)
- 1/10-1/13 Conservation biocontrol and carbon sequestration in agroecosystems: The role of land use and management in maximizing ecosystem services to agriculture and society (HI Rowe, JD Holland, J Dukes, BM Graming, and J Fargione) USDA-EPA (\$500,000)
- 10/09-10/10 Energy by Design: Science-Based Wind Energy Siting. (J Fargione and J Kiesecker) Department of Energy (\$95,000)
- 5/09-5/10 Energy by Design: Science-Based Wind Energy Siting. (J Fargione and J Kiesecker) American Wind and Wildlife Institute (\$200,000)
- 5/09-5/10 Energy by Design: Wind Siting for the Northern Great Plains (J Fargione and J Kiesecker) World Wildlife Fund, (\$25,000)
- 12/08-12/11 Conservation for a Changing Climate: Protecting Nature in the Great Lakes Region. (J Fargione) Donnelley Foundation (\$120,000)
- 7/05-7/09 Global change effects on grass-shrub interactions in an arid ecosystem. (J Fargione, S Collins and W Pockman) NSF Ecology Panel (\$297,494)

PUBLICATIONS

- Soterroni, A. C., F. M. Ramos, A. Mosnier, J. Fargione, P. R. Andrade, L. Baumgarten, J. Pirker, M. Obersteiner, F. Kraxner, G. Camara, A. X. Y. Carvalho, and S. Polasky. 2019. Expanding the Soy Moratorium to Brazil's Cerrado. *Science Advances* **5**:eaav7336.
- Griscom, B. W., G. Lomax, T. Kroeger, J. E. Fargione, J. Adams, L. Almond, D. Bossio, S. C. Cook-Patton, P. W. Ellis, C. M. Kennedy, and J. Kiesecker. 2019. We need both natural and energy solutions to stabilize our climate. *Global Change Biology* **25**:1889–1890.
- Correa, D. F., H. L. Beyer, J. E. Fargione, J. D. Hill, H. P. Possingham, S. R. Thomas-Hall, and P. M. Schenk. 2019. Towards the implementation of sustainable biofuel production systems. *Renewable & Sustainable Energy Reviews* **107**:250–263.
- Dickson, B. G., C. M. Albano, R. Anantharaman, P. Beier, J. Fargione, T. A. Graves, M. E. Gray, K. R. Hall, J. J. Lawler, P. B. Leonard, C. E. Littlefield, M. L. McClure, J. Novembre, C. A. Schloss, N. H. Schumaker, V. B. Shah, and D. M. Theobald. 2019. Circuit-theory applications to connectivity science and conservation. *Conservation Biology* **33**:239–249.
- Lawler, J., P. Beier, B. Dickson, J. Fargione, J. Novembre, and D. Theobald. 2019. A tribute to a true conservation innovator, Brad McRae, 1966-2017 Obituary. *Conservation Biology* **33**:480–482.
- Runge, C. A., J. C. Withey, D. E. Naugle, J. E. Fargione, K. J. Helmstedt, A. E. Larsen, S. Martinuzzi, and J. D. Tack. 2019. Single species conservation as an umbrella for management of landscape threats. *PLoS One* **14**(1):e0209619.
- Runge, C. A., A. J. Plantinga, A. E. Larsen, D. E. Naugle, K. J. Helmstedt, S. Polasky, J. P. Donnelly, J. T. Smith, T. J. Lark, J. J. Lawler, S. Martinuzzi, and J. Fargione. 2019. Unintended habitat loss on private land from grazing restrictions on public rangelands. *Journal of Applied Ecology* **56**:52–62.
- Wing, O. E., P. D. Bates, C. C. Sampson, A. M. Smith, J. Fargione, and K. Johnson. 2018. Three times as many Americans are exposed to flooding than previously thought. *Eos* **99**, <https://doi.org/10.1029/2018EO106321>.
- Tallis, H. M., P. L. Hawthorne, S. Polasky, J. Reid, M. W. Beck, K. Brauman, J. M. Bielicki, S. Binder, M. G. Burgess, E. Cassidy, A. Clark, J. Fargione, E. T. Game, J. Gerber, F. Isbell, J. Kiesecker, R.

- McDonald, M. Metian, J. L. Molnar, N. D. Mueller, C. O'Connell, D. Ovando, M. Troell, T. M. Boucher, B. McPeck. 2018. An Attainable Global Vision for Conservation and Human Well-Being. *Frontiers in Ecology and the Environment*. **16**(10): 563-570
- Wing, O. E. J., P. D. Bates, A. M. Smith, C. C. Sampson, K. A. Johnson, J. Fargione, and P. Morefield. 2018. Estimates of present and future flood risk in the conterminous United States. *Environmental Research Letters* **13**:034023.
- Entrekin, S., A. Trainor, J. Saiers, L. Patterson, K. Maloney, J. Fargione, J. Kiesecker, S. Baruch-Mordo, K. Konschnik, and H. Wiseman. 2018. Water stress from high-volume hydraulic fracturing potentially threatens aquatic biodiversity and ecosystem services in Arkansas, United States. *Environmental Science & Technology* **52**:2349-2358.
- Armsworth, P. R., H. B. Jackson, S.-H. Cho, M. Clark, J. E. Fargione, G. D. Iacona, T. Kim, E. R. Larson, T. Minney, and N. A. Sutton. 2018. Is conservation right to go big? Protected area size and conservation return-on-investment. *Biological Conservation* **225**:229-236.
- Patterson, L. A., K. E. Konschnik, H. Wiseman, J. Fargione, K. O. Maloney, J. Kiesecker, J.-P. Nicot, S. Baruch-Mordo, S. Entrekin, and A. Trainor. 2017. Unconventional oil and gas spills: Risks, mitigation priorities, and state reporting requirements. *Environmental Science & Technology* **51**:2563-2573.
- Odadi, W. O., J. Fargione, and D. I. Rubenstein. 2017. Vegetation, wildlife, and livestock responses to planned grazing management in an African pastoral landscape. *Land Degradation & Development* **28**:2030-2038.
- Maloney, K. O., S. Baruch-Mordo, L. A. Patterson, J.-P. Nicot, S. A. Entrekin, J. E. Fargione, J. M. Kiesecker, K. E. Konschnik, J. N. Ryan, and A. M. Trainor. 2017. Unconventional oil and gas spills: Materials, volumes, and risks to surface waters in four states of the US. *Science of the Total Environment* **581**:369-377.
- Lennox, G. D., J. Fargione, S. Spector, G. Williams, and P. R. Armsworth. 2017. The value of flexibility in conservation financing. *Conservation Biology* **31**:666-674.
- Kiesecker, J. M., J. S. Evans, K. Sochi, J. Fargione, D. Naugle, and K. Doherty. 2017. Win-Win for Wind and Wildlife. Pages 52-64, Energy Sprawl Solutions. Island Press, Washington, DC.
- Griscom, B. W., J. Adams, P. W. Ellis, R. A. Houghton, G. Lomax, D. A. Miteva, W. H. Schlesinger, D. Shoch, J. V. Siikamäki, and P. Smith. 2017. Natural climate solutions. *Proceedings of the National Academy of Sciences* **114**:11645-11650.
- Fargione, J. 2017. An expanding footprint. *Nature Energy* **2**:770.
- Armsworth, P. R., H. B. Jackson, S.-H. Cho, M. Clark, J. E. Fargione, G. D. Iacona, T. Kim, E. R. Larson, T. Minney, and N. A. Sutton. 2017. Factoring economic costs into conservation planning may not improve agreement over priorities for protection. *Nature communications* **8**:2253.
- Trainor, A. M., R. I. McDonald, and J. Fargione. 2016. Energy sprawl is the largest driver of land use change in United States. *PLoS One* **11**:e0162269.
- Barnett, A., J. Fargione, and M. P. Smith. 2016. Mapping trade-offs in ecosystem services from reforestation in the Mississippi alluvial valley. *Bioscience* **66**:223-237.
- Ahlering, M., J. Fargione, and W. Parton. 2016. Potential carbon dioxide emission reductions from avoided grassland conversion in the northern Great Plains. *Ecosphere* **7**(12) e01625.
- Creutzig, F., N. H. Ravindranath, G. Berndes, S. Bolwig, R. Bright, F. Cherubini, H. Chum, E. Corbera, M. Delucchi, and A. Faaij. 2015. Bioenergy and climate change mitigation: an assessment. *Global Change Biology Bioenergy* **7**:916-944.
- Jungers JM, CC Sheaffer, J Fargione, C Lehman. 2014. Short-term harvesting of biomass from conservation grasslands maintains plant diversity. *Global Change Biology Bioenergy*. DOI: 10.1111/gcbb.12195
- Rowe HI, J Fargione, JD Holland. 2013. Prairie restorations can protect remnant tallgrass prairie plant communities. *American Midland Naturalist*. 170(1): 26-38.
- Banerjee S, S Secchi, J Fargione, S Polasky, S Kraft. 2013. How to sell ecosystem services: a guide for designing new markets. *Frontiers in Ecology and the Environment* **11**(6): 297-304
- Jungers JM, JE Fargione, CC Sheaffer, DL Wyse, C Lehman. 2013. Energy potential of biomass from conservation grasslands in Minnesota, USA. *PLoS One* **8**(4): e61209.

doi:10.1371/journal.pone.0061209

- McDonald RI, JD Olden, J Opperman, WM Miller, J Fargione, C Revenga, J Higgins, and J Powell. 2012. Energy, water and fish: Biodiversity impacts of energy-sector water demand in the United States depend on efficiency and policy measures. *PLoS One*. 7(11): e50219.
doi:10.1371/journal.pone.0050219
- Fargione J, J Kiesecker, J Slaats, S Olimb. 2012. Wind and wildlife in the Northern Great Plains: Identifying low-impact areas for wind development. *PLoS One*. 7(7): e41468. *doi:10.1371/journal.pone.0041468*
- Craine JM, TW Ocheltree, JB Nippert, EG Towne, AM Skibbe, SW Kembel, JE Fargione. 2012. Global diversity of drought tolerance and grassland climate-change resilience. *Nature Climate Change* DOI: 10.1038/NCLIMATE1634
- Gough, L, KL Gross, EE Cleland, CM Clark, SL Collins, JE Fargione, SC Pennings, KN Suding. 2012. Incorporating clonal growth form clarifies the role of plant height in response to nitrogen addition. *OECOLOGIA* 169(4): 1053-1062
- Obermeyer B, R Manes, J Kiesecker, J Fargione, and K Sochi. 2011. Development by Design: Mitigating Wind Development's Impacts on Wildlife in Kansas. *PLoS One* 6(10): e26698.
doi:10.1371/journal.pone.0026698
- Swaty R, K Blankenship, S Hagen, J Fargione, J Smith, and J Patton. 2011. Accounting for ecosystem alteration doubles estimates of conservation risk in the conterminous United States. *PLoS One* 6(8): e23002
- Fargione J, C Lehman, and S Polasky. 2011. Entrepreneurs, chance, and the deterministic concentration of wealth. *PLoS One* 6(7): e20728
- Wiens J, J Fargione, and J Hill. 2011. Biofuels and biodiversity. *Ecological Applications* 21: 1085-1095 [doi:10.1890/09-0673.1]
- Kiesecker JM, JS Evans, J Fargione, K Doherty, KR Foresman, TH Kunz, D Naugle, NP Nibbelink, and ND Niemuth. 2011. Win-win for wind and wildlife: A vision to facilitate sustainable development. *PLoS One*: 6(4): e17566. *doi:10.1371/journal.pone.0017566*
- Cleland EE, CM Clark, SL Collins, JE Fargione, L Gough, KL Gross, SC Pennings, and KN Suding. 2011. Patterns of trait convergence and divergence among native and exotic species in herbaceous plant communities are not modified by nitrogen enrichment. *Journal of Ecology*. 99(6): 1327-1338.
- Fargione JE, RJ Plevin, and JD Hill. 2010. The ecological impact of biofuels. *Annual Review of Ecology, Evolution, and Systematics* 41:351–77
- Collins SL, JE Fargione, CL Crenshaw, E Nonaka, JT Elliott, and WT Pockman. 2009. Rapid plant community responses during the summer monsoon to nighttime warming in a Northern Chihuahuan Desert grassland. *Journal of Arid Environments* *doi:10.1016/j.jaridenv.2009.10.005*
- Opperman, J, GE Galloway, J Fargione, J Mount, BD Richter, and S Secchi. 2009. Sustainable floodplains through large-scale reconnection to rivers. *Science* 326: 1487-1488
- Fargione J, TR Cooper, DJ Flaspohler, J Hill, C Lehman, T McCoy, S McLeod, EJ Nelson, KS Oberhauser, and D Tilman. 2009. Bioenergy and Wildlife: Threats and Opportunities for Grassland Conservation. *BioScience* 59: 767-777
- McDonald RI, J Fargione, J Kiesecker, WM Miller, and J Powell. 2009. Energy sprawl or energy efficiency: Tradeoffs in U.S. climate policy effects on natural habitats. *PLoS One* 4(8): e6802
- Ravindranath NH, R Manuvie, J Fargione, JG Canadell, G Berndes, J Woods, H Watson, and J Sathaye. 2009. Green House Gas Implications of Land Use and Land Conversion to Biofuel Crops. Pages 111-125, *in* Scope Biofuels Report (B. Howarth, editor)
- Dybzinski R, J Fargione, DR Zak, D Fornara, and D Tilman. 2008. The fertility effect: resource supply increases across an experimental plant species diversity gradient. *Oecologia* 158: 85–93
- Collins SL, KN Suding, EE Cleland, M Batty, SC Pennings, KL Gross, JB Grace, L Gough, JE Fargione, and CM Clark. 2008. Rank clocks and plant community dynamics. *Ecology* 89: 3534-3541
- Fargione JE, J Hill, D Tilman, S Polasky, P Hawthorne. 2008. Land clearing and the biofuel carbon debt. *Science* 319: 1235-1238
- Cleland EE, CM Clark, SL Collins, JE Fargione, L Gough, KL Gross, DG Milchunas, SC Pennings, WD

- Bowman, IC Burke, WK Lauenroth, GP Robertson, JC Simpson, D Tilman, and KN Suding. 2008. Data paper: Species responses to nitrogen fertilization in herbaceous plant communities, and associated species traits. *Ecology* 89: 1175
- Clark CM, EE Cleland, SL Collins, JE Fargione, L Gough, KL Gross, SC Pennings, KN Suding, and JB Grace. 2007. Environmental and plant community determinants of species loss following nitrogen enrichment. *Ecology Letters* 10: 596-607
- Fargione J, D Tilman, R Dybzinski, J Hille Ris Lambers, C Clark, WS Harpole, JMH Knops PB Reich, and M Loreau. 2007. From selection to complementarity: Shifts in the causes of biodiversity-productivity relationships in a long-term biodiversity experiment. *Proceedings of the Royal Society B: Biological Sciences* 274: 871-876
- Baez S, J Fargione, DI Moore, SL Collins, and JR Gosz. 2007. Nitrogen deposition in the northern Chihuahuan desert: Temporal trends and potential consequences. *Journal of Arid Environments* 68: 640-651
- Diaz S, J Fargione, FS Chapin III, and D Tilman. 2006. Biodiversity loss threatens human well-being. *PLoS Biology* 4: 1300-1305
- Fargione J, and D Tilman. 2006. Predicting relative yield and abundance in competition with plant species traits. *Functional Ecology* 20: 533-540
- Diaz S, D Tilman, J Fargione, et al. 2005. Biodiversity and the regulation of ecosystem services. In Millennium Ecosystem Assessment editors. *Ecosystems and Human Well Being: Current State and Trends*. Island Press, DC, USA
- Fargione J, and D Tilman. 2005. Niche differences in phenology and rooting depth promote coexistence with a dominant C₄ bunchgrass. *Oecologia*, 143: 598-606
- Fargione J, and D Tilman. 2005. Diversity decreases invasion via both sampling and complementarity effects. *Ecology Letters*, 8: 604-611
- Craine J, J Fargione, and S Sugita. 2005. Supply preemption, not concentration reduction, is the mechanism of competition for nutrients. *New Phytologist*, 166: 933-940
- Tilman D, C Lehman, J Hille Ris Lambers, WS Harpole, R Dybzinski, J Fargione, and C Clark. 2004. Does metabolic theory apply to community ecology? It's a matter of scale. *Ecology*, 85: 1797-1799
- Neuhauser C, and J Fargione. 2004. A mutualism-parasitism continuum model and its application to plant-mycorrhizae interactions. *Ecological Modeling*, 177: 337-352
- Fargione J, CS Brown, and D Tilman. 2003. Community assembly and invasion: An experimental test of neutral versus niche processes. *Proceeding of the National Academy of Sciences*, 100: 8916-8920 (Highlighted on *Minnesota Public Radio* and in *BioScience*)
- Craine JM, PB Reich, GD Tilman, D Ellsworth, J Fargione, and J Knops. 2003. The role of plant species in biomass production and response to elevated CO₂ and N. *Ecology Letters*, 6: 623-630
- Fargione J, and D Tilman. 2002. Competition and coexistence in terrestrial plants. Pages 156-206 In U. Sommer and B Worm editors. *Competition and Coexistence*. Springer-Verlag, Berlin, Germany
- Tilman D, J Fargione, B Wolff, C D'Antonio, A Dobson, R Howarth, D Schindler, W Schlesinger, D Simberloff, and D Swackhamer. 2001. Forecasting agriculturally driven global environmental change. *Science* 292: 281-284 (Highlighted in *Trends in Ecology & Evolution*)

COMMENTARIES

- Fargione, JE. 2010. Is Bioenergy for the Birds? An evaluation of alternative future bioenergy landscapes. *Proceedings of the National Academy of Sciences* 107: 18745-18746. doi/10.1073/pnas.1014045107
- Fargione, J. *In Press*. Closing the Biofuel Crop Yield Gap. *Nature Climate Change*

REPORTS

- Dale VH, KL Kline, J Wiens, and J Fargione. 2010. *Biofuels: Implications for Land Use and Biodiversity*. Ecological Society of America, Washington DC.

PUBLISHED CORRESPONDENCE

- Fargione JE, J Hill, D Tilman, S Polasky, P Hawthorne. 2008. Biofuels: Effects on land and fire - Response. *Science* 321: 199-200
- Fargione JE, J Hill, D Tilman, S Polasky, P Hawthorne. 2008. Putting current practices in perspective - Response. *Science* 320: 1420-1422

SEMINARS AND PAPERS PRESENTED

- Fargione J. 2015. Land clearing and conservation. *Ecology of Global Change*, Carleton College
- McRae B, C Carroll, J Lawler, M Anderson, J Fargione, M Krosby. 2014. Identifying corridors for movement under climate change. *North America Congress for Conservation Biology*. Missoula, Montana.
- Trainor A, J Fargione. 2014. Energy Sprawl: Comparison of conventional, non-conventional, and renewable energy sources footprint in the United States. *North America Congress for Conservation Biology*. Missoula, Montana.
- Fargione JE, BH McRae, JL McGuire. 2013. Conservation planning for resilience to climate change: Putting paleobiology into practice. *Ecological Society of America Annual Meeting*. Minneapolis, Minnesota.
- Jungers JM, J Fargione, C Lehman, C Sheaffer. 2013. Linking plant community composition to bioenergy potential in conservation grasslands. *Ecological Society of America Annual Meeting*. Minneapolis, Minnesota.
- Fargione J. 2013. Mitigation Costing: A Kansas Wind Energy Example. *Bureau of Land Management, Solar Regional Mitigation Planning – Dry Lake Solar Energy Zone Pilot Project*. Las Vegas, Nevada.
- Fargione J. 2012. Peak Land: What's left after the population bomb detonates? *The Nature Conservancy, ScienceFest*. Arlington, Virginia.
- Fargione J. 2012. Energy Sprawl: Threats and Opportunities for Biodiversity Conservation. *St. Thomas University, Biology Department Seminar*. St. Paul, Minnesota.
- Fargione J. 2012. Development by Design. *Burns and McDonnell, Environmental Studies & Permitting Services*. Kansas City, Missouri.
- Fargione J. 2012. Conservation Concerns in Wind Energy Development. *The Nature Conservancy California Chapter, Renewable Energy Initiative Workshop*. Los Angeles, California.
- Fargione J. 2012. Everything you wanted to know about fracking but were afraid to ask. *The Nature Conservancy, Central Division Science and Stewardship Meeting*. Lincoln, Nebraska.
- Fargione J. 2012. Landscape Assessment Tool & Kansas Wind Energy Certification. *Minnesota Society for Conservation Biology Seminar*. St. Paul, Minnesota.
- Fargione J. 2012. Renewable Energy and Biodiversity: Threats and Opportunities from Biofuels and Wind. *University of Minnesota, Conservation Biology Graduate Program Seminar*. St. Paul, Minnesota.
- Fargione J, J Ward. 2012. Conservation by Design: The Nature Conservancy's Evolving Conservation Approach. *U.S. Fish and Wildlife Service, Strategic Growth Implementation Team*. Denver, Colorado.
- Fargione J. 2012. Presentation and panel discussion on Energy for the Next 20 Years: Protecting the Environment and Meeting Our Demands. *New York Academy of Sciences*. New York City, New York.
- Fargione J, T Allison. 2011. The American Wind Wildlife Institute's Landscape Assessment Tool. *U.S. North American Bird Conservation Initiative*. Webinar.
- Fargione J. 2011. Development by DESIGN: Blending Conservation Planning & The Mitigation Hierarchy. *Battelle*. Cleveland, Ohio.
- Fargione J, M Smith. 2011. Floodplains by Design. *Conservation Science for People and Nature, The Nature Conservancy*, Olive Branch Mississippi.
- Fargione J, R McDonald. 2011. Promoting Sustainable Agricultural Practices. *Global Volunteer Leadership Summit*. The Nature Conservancy, Washington DC.
- McDonald RI, J Fargione, J Kiesecker, W Miller, J Powell. 2010. Energy sprawl or energy efficiency: Climate policy impacts on natural habitat for the U.S. *Ecological Society of America Annual Meeting*. Pittsburgh Pennsylvania, USA.
- Scharf L, J Evans, J Fargione, J Kiesecker. 2010. The Impact of Human Disturbance Patterns on Conservation

- Design.” Society for Conservation GIS Annual Meeting. Monterey, California.
- Kiesecker J, J Fargione, J Evans et al. 2010. Energy by Design: Science-Based Wind Energy Siting and Mitigation. Invited Symposium: Wind Energy and Wildlife. Annual Meeting of the Society for Range Management and the Weed Science Society of America. Denver, Colorado, USA.
- Kiesecker J, M Heiner, J Evans, J Fargione and B McKenney. 2010. The Conservation/Development Balancing Act: Maintaining Balance with Mitigation. Invited seminar: American Cultural and Information Center. Ulaanbaatar, Mongolia.
- Fargione J and J Kiesecker. 2010. Biofuels and Wind: Threats and opportunities for conservation. North American Wildlife and Natural Resources Conference, Milwaukee, Wisconsin.
- Fargione J. 2010. Biofuels: Threats and opportunities for conservation. Conservation Biology Graduate Program, University of Minnesota.
- Fargione J. 2010. Biofuels and Wind: Threats and opportunities for conservation. Kansas board of trustees, The Nature Conservancy
- Collins SL, J Fargione, Y Xia, WT Pockman. 2009. Community and ecosystem responses to multiple environmental drivers in a Northern Chihuahuan Desert grassland. *Ecological Society of America Annual Meeting*. Albuquerque, New Mexico.
- Fargione J. 2009. Biofuels: Threats and opportunities for grassland conservation. Indiana Chapter of The Nature Conservancy
- Fargione J. 2009. Biofuels and Wind: Threats and opportunities for conservation. Wisconsin Chapter of The Nature Conservancy
- Fargione J. 2009. Biofuels and biodiversity. Biology Department, Kansas State University
- Fargione J. 2008. Biofuels: Threats and opportunities for conservation. Minnesota chapter donor meeting, The Nature Conservancy
- Fargione J. 2008. Biofuels: Threats and opportunities for conservation. Conservation Exchange (ConEx), Vancouver, Canada
- Fargione J. 2008. Renewable Energy and Birds: Threats and Opportunities from Biofuels and Wind. Missouri Bird Conservation Initiative Annual Conference.
- Fargione J. 2008. Modeling impacts of land clearing. Webinar for Midwestern Governors Association Low Carbon Fuel Standard Working Group.
- Fargione J. 2008. Modeling impacts of land clearing. Fuel Lifecycle Modeling Workshop, Berkeley, CA
- Fargione J. 2008. Mapping Wind and Wildlife. American Wind and Wildlife Institute, Minneapolis, MN
- Fargione J. 2008. Renewable Energy: Threats and opportunities from biofuel and wind. Central and Mesoamerican regions staff enrichment training, The Nature Conservancy, Nebraska City, NE
- Fargione J. 2008. Biofuels: Threats and opportunities. Eastern Region, All staff conference, The Nature Conservancy
- Fargione J. 2008. Land Clearing and the Biofuel Carbon Debt. Capital Hill Briefing, American Meteorological Society, DC
- Fargione J. 2008. Biofuels: Threats and opportunities. Metropolitan Energy Policy Coalition
- Fargione J. 2008. Biofuels: Threats and opportunities. Wesleyan University
- Fargione J. 2008. Land Clearing and the Biofuel Carbon Debt. Press Release, German Marshall Fund, DC
- Fargione J. 2008. Biofuels: Threats and opportunities. Nebraska Board of Trustees, The Nature Conservancy
- Fargione J. 2008. Biofuels: Threats and opportunities. Iowa Board of Trustees, The Nature Conservancy
- Wiens J, and J Fargione. 2008. Biofuels and biodiversity. Ecological consequences of biofuels, Ecological Society of America, Washington DC
- Fargione J. 2007. Biofuels: Threats and opportunities. Next Gen Energy Task Force, MN legislature
- Fargione J. 2007. Biofuels: Threats and opportunities. WI Chapter, The Nature Conservancy
- Fargione J. 2007. Biofuels: Threats and opportunities. MO Chapter, The Nature Conservancy
- Fargione J. 2007. Biofuels: Threats and opportunities. MI Chapter, The Nature Conservancy
- Fargione J. 2007. Biofuels: Threats and opportunities. MN Chapter, The Nature Conservancy
- Fargione J. 2007. Biofuels: Threats and opportunities. Illinois Board of Trustees, The Nature Conservancy
- Fargione J. 2007. Biofuel's footprint: Current and future land use for biofuel production. Biofuel and Wildlife

Conference, University of Minnesota

- Fargione J. 2007. Biofuel production and conversion of natural areas: Consequences for greenhouse gas emissions. Visit by the Japan Ecosystem Conservation Society, University of Minnesota
- Fargione J. 2007. Global change, biodiversity, and invasion. Department of Wildland Resources, Utah State University
- Fargione J. 2007. New insights from long term biodiversity experiments. Biology Department, Purdue University
- Fargione J. 2007. Global change, biodiversity, and invasion. Department of Agronomy, Purdue University
- Fargione JE, SL Collins, WT Pockman, JR Elliott, CL Crenshaw, E Nonaka. Rapid plant community responses to nighttime warming in a desert grassland. *Ecological Society of America Annual Meeting*. San Jose, California.
- Collins S, KN Suding, E Cleland, M Batty, SC Pennings, KL Gross, JB Grace, L Gough, JE Fargione, C Clark. 2007. Rank clocks and plant community dynamics. *Ecological Society of America Annual Meeting*. San Jose, California.
- Fargione J. 2006. Global change, biodiversity, and invasion. Department of Plant Biology, Michigan State University
- Fargione J. 2006. Global change, biodiversity, and invasion. Kellogg Biological Station, Michigan State University
- Fargione J. 2006. Global change, biodiversity, and invasion. Purdue Climate Change Research Center, Purdue University
- Fargione JE, and D Tilman. 2006. Functional groups and community assembly: Assumptions, predictions, and empirical tests. Invited presentation in the symposium "Niche, neutrality, and community assembly". *Ecological Society of America Annual Meeting*, Memphis, Tennessee.
- Cleland E, K Suding, C Clark, S Collins, J Fargione, L Gough, J Grace, K Gross, S Pennings. 2006. Crashing the party: non-native plant species have different traits than native species in a cross-site synthesis of fertilization studies. *Ecological Society of America Annual Meeting*. Memphis, Tennessee.
- Fargione J. 2005. New insights from long term biodiversity experiments. Institute of Environmental Sciences, University of Zurich
- Fargione J. 2005. New insights from long term biodiversity experiments. Institute of Ecology, University of Jena
- Fargione J. 2005. Biodiversity and resource competition in a tallgrass prairie. Department of Botany, University of Toronto
- Fargione J. 2005. Plant species coexistence and global change: current and future research. Department of Botany, University of Toronto
- Fargione J. 2005. New root productivity and global change experiments at the Sevilleta. *Sevilleta Symposium*, Sevilleta National Wildlife Refuge, Socorro, New Mexico
- Fargione JE, S Pennings, C Clark, KN Suding, L Gough, JB Grace, EL Cleland, SL Collins, and KL Gross. 2005. A negative relationship between species richness and productivity response to N addition in a synthesis of N fertilization studies. *Ecological Society of America Annual Meeting*, Montreal, Canada.
- Fargione J, and D Tilman. 2004. Plant invader abundance increases with differences in invaders and residents seasonal and spatial nitrogen uptake patterns. *Ecological Society of America Annual Meeting*, Portland, Oregon.
- Fargione J. 2003. Interspecific niche differentiation: Consequences for invasion, coexistence, and biodiversity effects in a prairie plant community. Department of Biology, University of New Mexico
- Fargione J, and D Tilman. 2003. Plant traits and resource competition: Controls on prairie plant abundances. Annual Cedar Creek Symposium, Cedar Creek Natural History Area, University of Minnesota
- Fargione J, C Lehman, and S Polasky. 2003. Capitalism and the concentration of wealth. Environmental Resource Economics Seminar Series, Department of Applied Economics, University of Minnesota
- Fargione J, R Dybzinski, C Clark, J Hill Ris Lambers, S Harpole, D Tilman, and M Loreau. 2003. Species effects and temporal trends in a long-term biodiversity experiment. Cedar Creek Science Seminar Series, Department of Ecology, Evolution, and Behavior, University of Minnesota

- Fargione J, R Dybzinski, C Clark, J Hill Ris Lambers, S Harpole, D Tilman, and M Loreau. 2003. From selection to complementarity: Temporal trends in a long-term biodiversity experiment. *Ecological Society of America Annual Meeting*, Savannah, Georgia.
- Brown CS, JE Fargione, and GD Tilman. 2001. Species diversity, resource competition and community invasibility: a Minnesota grassland experiment. Invited presentation in the symposium "Current status of knowledge on invasive species: Theory and practice". *Ecological Society of America Annual Meeting*, Madison, Wisconsin.
- Hadley JL, J Schedlbauer, J Fargione. 2001. Diffuse illumination in an eastern hemlock (*Tsuga canadensis*) stand: Effects on photosynthesis and carbon storage. *Ecological Society of America Annual Meeting*, Madison, Wisconsin.
- Fargione J, and D Tilman. 2000. Plant invasions are reduced by abundance of native perennial bunchgrass. *Ecological Society of America Annual Meeting*, Snowbird, Utah.
- Fargione JE, CA Klausmeier, and CL Lehman. 1999. Community invasibility is increased by habitat destruction. *Ecological Society of America Annual Meeting*, Spokane, Washington.
- Tilman D, J Fargione, and B Wolff. 1999. Forecasting the long-term effects of human-caused global change. *Ecological Society of America Annual Meeting*, Spokane, Washington.
- Jungers J, JE Fargione, C Lehman, C Sheaffer. 2013. Linking plant community composition to bioenergy potential in conservation grasslands. *Ecological Society of America Annual Meeting*. Minneapolis, Minnesota.
- Vaness BM, PJ Drohan, SL Collins, MH, DJ Merkler, JE Fargione, BJ Buck, CL Crenshaw, E Nonaka, JR Elliott, Y Xia, WT Pockman, and T Monaco. 2013. Monitoring belowground processes and responses of bioavailable soil nutrients in arid ecosystems. *Ecological Society of America Annual Meeting*. Minneapolis, Minnesota.
- Hill J, J Fargione, D Tilman, S Polasky, P Hawthorne. 2008. Land clearing and the biofuel carbon debt. *Ecological Consequences of Biofuels*, *Ecological Society of America*, Washington, DC.
- Smith CC, CL Crenshaw, JE Fargione. 2007. N₂O flux in a semiarid grassland depends on rainfall event size, N addition and soil microsite. *Ecological Society of America Annual Meeting*. San Jose, California.
- Fargione JE, and D Tilman. 2006. Plant traits and resource competition: Controls on prairie plant abundances. *Long Term Ecological Research network All-Scientists Meeting*, Estes Park, Colorado.
- Suding K, S Collins, E Cleland, L Gough, C Clark, J Fargione, J Grace, K Gross, S Pennings. 2006. The influence of primary productivity, community structure, and the abiotic environment on diversity loss due to nitrogen fertilization. *Long Term Ecological Research network All-Scientists Meeting*, Estes Park, Colorado.
- Dybzinski R, J Fargione, D Tilman. 2006. The fertility effect: resource supply increases across an experimental plant species diversity gradient. *Long Term Ecological Research network All-Scientists Meeting*, Estes Park, Colorado
- Baez S, J Fargione, D Moore, S Collins, J Gosz. 2006. N deposition in the northern Chihuahuan Desert: Temporal trends and potential consequences. *Annual Seville Symposium*, San Acacia, New Mexico.
- Fargione J, S Collins, and W Pockman. 2005. A proposed experiment: Global change effects on grass-shrub interactions. *Global Change and Biodiversity Meeting*, Dourdan, France.
- Fargione J, and D Tilman. 2003. Plant traits and resource competition: Controls on prairie plant abundances. *Long Term Ecological Research network All-Scientists Meeting*, Seattle, Washington.
- Brown CS, GD Tilman, and J Fargione. 2000. The effect of plant species diversity and identity on success of invading plants. *Long Term Ecological Research network All-Scientists Meeting*, Snowbird Utah.
- Fargione JE, and TR Huggins. 1997. Species coexistence and community structure in epiphytic orchids in a citrus orchard on the island of Dominica. *Ecological Society of America Annual Meeting*, Albuquerque, New Mexico.

COMMITTEE MEMBERSHIP

Jacob Jungers, University of Minnesota
Justin Meissen, University of Minnesota

POSTDOCTORAL FELLOWS SUPERVISED

Anne Trainor, Yale University (co-supervised with Os Schmitz)

TEACHING PUBLICATIONS

Fargione J, and D Tilman. 2004. How does plant species biodiversity affect ecosystem productivity? Teaching Issues and Experiments in Ecology, Vol. 2: Data Set #1. [Online]
http://tiee.ecoed.net/vol/v2/issues/data_sets/cedar_creek/abstract.html

COURSES TAUGHT

Introduction to Environmental Conservation (Purdue University, Fall 2006, enrollment 440)

PUBLISHED REVIEWS

Fargione, J. 2011. Keeping the West Wild: Conservation and Rapid Energy Development. A review of: Energy Development and Wildlife Conservation in Western North America. David E. Naugle, ed. *BioScience*.

Fargione, J. 2005. Book Review: Models in Ecosystem Science, CD Canham, JJ Cole, and WK Lauenroth editors. *Journal of Vegetation Science* 16: 143-144

EXPERT CONSULTATIONS

EPA's conceptual models for biofuel feedstock production, 2011
EPA Report to Congress on Environmental Impacts of Renewable Fuels Standard, 2011
EPA Renewable Fuels Standard 2 rulemaking, 2009
UK government Biofuels Research Scoping Study, 2009
Government Accounting Office, Lifecycle energy balances and greenhouse gas emissions of biofuels, 2008
Government Accounting Office, Environmental impacts of increased biofuels production in the U.S., 2008
Union of Concerned Scientists, Biofuels research program development study, 2008
McKnight, Biofuels program development study, 2008

ACADEMIC SERVICE

Aquatic Community Ecology Search Committee, Department of Forestry and Natural Resources, Purdue University 2006
Buell Award Judge, Ecological Society of American Annual Meeting, Montreal, Canada, 2005
College of Biological Sciences Consultative Committee, University of Minnesota 2002-2003
Friday Noon Seminar Committee, University of Minnesota 2000-2001
Co-President Ecology, Evolution and Behavior Graduate Student Association, University of Minnesota 1999-2000
Ecology, Evolution and Behavior Written Preliminary Examination Committee, University of Minnesota 1999-2000
College of Biological Sciences Consultative Committee, University of Minnesota 1998-1999

JOURNAL REVIEWS

Acta Oecologia; American Naturalist; Biological Conservation; Biological Invasions; BioScience; Climatic Change; Condor; Conservation Biology; Crop Science; Diversity and Distributions; Earth's Future; Ecological Applications; Ecological Economics; Ecology; Ecology Letters; Energy Policy; Environmental Modeling and Assessment; Environmental Science & Technology; Frontiers in Ecology and the Environment; Functional Ecology; Global Change Biology; Global Change Biology Bioenergy; International Forestry Review; Journal of Ecology; Journal of Applied Ecology; Journal of Nature Conservation; Journal of Vegetation Science; Mountain Research; Nature Climate Change; Nature Energy; Natural Areas Journal; Oecologia; Oikos; Perspectives in Plant Ecology, Evolution, and Systematics; Plant Ecology; Proceedings of the National Academy of Sciences; Science

INVITED EDITOR

Proceedings of the National Academy of Sciences

OTHER REVIEWS

US National Science Foundation

Swiss National Science Foundation

Zurich-Basel Plant Science Center

World of 7 Billion video contest

BOOK REVIEWS

Island Press

DISSERTATION AND THESIS REVIEWS

Eva Vojtech, Dissertation, University of Zurich