

Rachel K. Owen, Ph.D.

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Education

University of Missouri, PhD Natural Resources (2015-2019)
South Dakota State University, MS Plant Science (2013-2014)
Iowa State University, BS Agronomy (2009-2013)
Iowa State University, BS Global Resource Systems (2009-2013)

Employment

Consultant/Owner, Rachel K. Owen, LLC, Horizon Soil Solutions, LLC (2020-present)
Co-Editor & Founder, SciTech Forefront (*A Medium Publication*) (2021-present)
Development Director, Engineers and Scientists Acting Locally (2021-present)

Director & Founder, MOST Policy Initiative (2016-2021)
Graduate Research Assistant, University of Missouri (2015-2019)
Graduate Research Assistant, South Dakota State University (2013-2014)

Publications

Owen, R.K., A. Anderson, A. Bhandari, K. Clark, M. Davis, A. Dere, N. Jelinski, C. Moorberg, K. Osterloh, D. Presley, J. Turk, R. Young. 2021. Evaluating student attitudes and learning at remote collegiate soil judging events. *Natural Sciences Education*. 50 (2): e20065. DOI: <https://doi.org/10.1002/nse2.20065>.

Owen, R.K., E.B. Webb, D.A. Haukos, K.W. Goynes. 2020. Projected climate and land use changes drive plant community composition in agricultural wetlands. *Environmental and Experimental Botany*. 175: 104039. DOI: <https://doi.org/10.1016/j.envexpbot.2020.104039>.

Owen, R.K., E.B. Webb, D.A. Haukos, F.B. Fritsch, K.W. Goynes. 2020. Barnyardgrass (*Echinochloa crusgalli*) emergence and growth in a changing climate in Great Plains wetlands. *Wetlands Ecology and Management*. 28 (1): 35-50. DOI: <https://doi.org/10.1007/s11273-019-09693-0>.

Owen, R.K., E.B. Webb, K.W. Goynes, B. Svoma, S. Gautam. 2019. Framework for using climate model projections in ecological experiments to quantify vegetative and soil responses. *Ecosphere*. 10 (9). DOI: <https://doi.org/10.1002/ecs2.2857>.

Birru, G.A., D.E. Clay, T.M. DeSutter, C.L. Reese, A.C. Kennedy, S.A. Clay, S.A. Bruggeman, R.K. Owen, D.D. Malo. 2019. Chemical amendments of dryland saline-sodic soils did not enhance productivity. *Agronomy Journal*. 111 (2): 1-13. DOI: [10.2134/agronj2018.04.0296](https://doi.org/10.2134/agronj2018.04.0296).

Matthees, H.L., Y. He, R.K. Owen, D. Hopkins, B. Deutsch, J. Lee, D. Clay, C. Reese, D. Malo, and T. DeSutter. 2017. Predicting electrical conductivity of the saturated extract from a 1:1 soil to water ratio. *Communications in Soil Science and Plant Analysis*. 48 (18): 2148-2154. DOI: [10.1080/00103624.2017.1407780](https://doi.org/10.1080/00103624.2017.1407780).

Chintala, R., R.K. Owen, T.E. Schumacher, K.A. Spokas, L.M. McDonald, S. Kumar, D.E. Clay, D.D. Malo, and B. Bleakley. 2015. Denitrification kinetics on biomass and biochar amended soils on different landscape positions. *Environ Sci Pollut Res*. 22 (7): 5152-5163. DOI: [10.1007/s11356-014-3762-2](https://doi.org/10.1007/s11356-014-3762-2).

Teaching Experience

Lead Instructor, Soil Judging Team, *University of Missouri* (2017-present)
Instructor, Introduction to Soil Science (SOIL 2100), *University of Missouri* (Spring 2021)
Guest Lecturer, School of Natural Resources, *University of Missouri* (2018-2020)
Presenter/Coordinator, Extension Field Days, *South Dakota State University* (Summer 2014)
Guest Lecturer, Department of Plant Science, *South Dakota State University* (Spring 2014)

Selected Leadership and Service

- MOST Policy Initiative – Board of Directors President 2019-present
- Citizens Climate Lobby - MO-03 Congressional Liaison 2020-present
- National Science Policy Network - Grants & Finance Committee 2019-present
- SSSA Recognition and Retention Task Force – Member 2018-present
- City of Refuge, Columbia MO – Homework Helper 2020-2021
- SSSA Science Policy Committee – Member 2018-2020
- MU Graduate Professional Council – Director of National Affairs 2017-2018

Selected Honors and Achievements

- Courtesy Resolution, Missouri House of Representatives 2019
- Gutermuth Award for Community Service, University of Missouri Grad School 2019
- D.L. Hallett Fellowship, Missouri Cooperative Fish & Wildlife Research Unit 2019
- Mizzou 18 Award, University of Missouri Alumni Association 2019
- Natural Resources Outstanding Graduate Student, University of Missouri 2017
- Trans World Airlines Scholarship, University of Missouri System 2017
- Complimentary 6-month Membership to The Wildlife Society, Diana L. Hallett 2017
- Carl Morrow Graduate Scholarship, Conservation Federation of Missouri 2017
- Fenske Memorial Award Finalist, Midwest Fish & Wildlife Conference 2017
- C.E. Marshall Scholarship, MU School of Natural Resources 2016
- Future Leaders in Science Award, ASA, CSSA, SSSA 2016

Selected Presentations

- Solving Climate 2030: Finding local solutions. 2021. Washington University Solving Climate 2030 Symposium. (invited)
- A case for nonpartisan science advisors in state governments. 2021. Massachusetts Institute of Technology State Policy Seminar. (invited)
- Growing the reach of soil science through policy engagement. 2021. Iowa State University Department of Agronomy Seminar. (invited)
- Building state science policy networks in the Midwest. 2021. Indiana Day of Science. (invited)
- Learning S&T policy through state-level fellowships. 2021. American Association for the Advancement of Science annual meeting. (invited)
- Science and technology legislative outlook. 2021. MOST Policy Initiative Briefing.
- Science policy inside and outside the Missouri Statehouse: A case study. 2020. American Geophysical Union annual meeting. (invited)
- How does our government work? A science policy workshop. 2019. Missouri Natural Resources Conference.
- Engaging scientists, citizens, and midterm candidates to promote evidence-based policy. 2018. Research!America Post-Election Briefing. (invited)
- Interdisciplinary science communication experiences in China: A graduate student perspective. 2018. Global Plant Council Symposium on Building Global Collaborations at American Society of Agronomy and Crop Science Society of America annual meeting. (invited)
- Playa ecosystem vulnerability in future climates: Stakeholder perceptions in the Great Plains. 2018. 24th International Symposium on Society and Resource Management.