

Jessica M. Rudnick

email: jrudnick@ucdavis.edu
cell: (314) 488-7646

University of California- Davis
Dept. of Environmental Science and Policy

EDUCATION

Ph.D. Candidate in Ecology

Expected completion 2020

University of California-Davis (UCD), Davis, CA

B.A. Environmental Earth Science

2015

Washington University in St. Louis (WUSTL), St. Louis, MO

Honors Thesis in Interdisciplinary Environmental Studies; Minor in French

Undergraduate Studies Abroad

University of Edinburgh, Edinburgh, Scotland: *European Environmental Policy (6 months)* 2014

University of Queensland, Brisbane, Australia: *Green Energy Technologies (1 month)* 2013

GRANTS & FELLOWSHIPS

National Science Foundation Graduate Research Fellowship Program 2017- 2021

California Sea Grant Delta Science Fellowship 2017-2019

California Fertilizer Research and Education Program Grant 2017

Emerging Leaders in Policy and Public Service Fellowship 2016

Jastro Shields Research Grant 2016 & 2017

Political Networks Travel Fellowship 2016 & 2017

Policy Institute for Energy, Environment and the Economy Travel Fellowship 2016

Graduate Group in Ecology Fellowship 2015- 2017

PEER-REVIEWED PUBLICATIONS

Rudnick, J., Niles, M.T., Lubell, M., Cramer, L. 2019. A Comparative Analysis of Governance and Leadership in Agricultural Development Policy Networks. *World Development*, 117. pp. 112-126.
<https://doi.org/10.1016/j.worlddev.2018.12.015>

Lewis, J., and **Rudnick, J.** 2019. The Policy Enabling Environment for Climate Smart Agriculture: A Case Study of California. *Frontiers in Sustainable Food Systems*, 3: 31. pp. 1-12.
<https://doi.org/10.3389/fsufs.2019.00031>

NON-REFEREED PUBLICATIONS

Rudnick, J., DeVincentis, A., Méndez-Barrientos, L.E. 2016. The Sustainable Groundwater Management Act Challenges Diversity of California's Farms. *California Agriculture*, 70, 4.
<https://doi.org/10.3733/ca.2016a0015>

Rudnick, J. 2015. An Interdisciplinary Analysis of the Missouri River: The History of a Changing System and a Proposal for Sustainable Future Management. Undergraduate Honors Thesis. Washington University in St. Louis Undergraduate Research Review.

HONORS & AWARDS

Ecological Society of America Graduate Student Policy Award 2017

Agricultural Sustainability Institute Internal Steering Committee Member, UCD 2016-2017

National Science Foundation *Climate Change, Water and Society* I-GERT Associate, UCD 2015

Magna Cum Laude Honors with Thesis, WUSTL 2015

Courtney Werner Memorial Prize in Earth and Planetary Sciences, WUSTL 2015

Washington University Action Committee Member for Clinton Global Initiative 2013

RESEARCH EXPERIENCE

Barriers to Adoption of Improved Nitrogen Management Practices 2017-Present
Graduate Student Researcher with Dr. Mark Lubell, Dr. Patrick Brown, and Dr. Sat Darshan Khalsa
Surveys (n=2,000), interviews (n=30), participant observations (>100 hours); California farmers' decision making on N management; evaluation of agriculture non-point source pollution policy

Climate Change Agriculture and Food Security Research Project 2016-2018
Graduate Student Researcher with Dr. Meredith Niles
Social network analysis of climate change and agricultural organizations; global comparative study

Center for Environmental Policy and Behavior, UCD 2015- Present
Graduate Student Researcher with Dr. Mark Lubell
Environmental policy and human ecology; Farmer decision making and agricultural policy; Methods include quantitative surveys, focus groups, qualitative interviews

California Department of Food and Agriculture & UCD World Food Center 2016
Climate-Smart Agriculture Policy Fellow with Dr. Amrith Gunasekara & Dr. Josette Lewis
Built database of climate-smart agriculture practices for CA growers; Evaluated California policies enabling climate-smart agriculture develop; Lead outreach to growers and international partners

Remote Sensing Laboratory, WUSTL 2014-2015
Undergraduate Research Assistant with Dr. Ray Arvidson
Geospatial and archival analysis of historic land use change in Missouri River Basin

Aerosol and Air Quality Research Laboratory, WUSTL 2013
National Science Foundation Research Experience for Undergraduates with Dr. Pratim Biswas
Developed nanoscale solar-activated catalyst for carbon capture and conversion applications

TEACHING & MENTORSHIP EXPERIENCE

Undergraduate research mentor 2017-19
Kennedy Gould, Senior Honors Thesis in Environmental Science and Management
5 undergraduate research assistants

PLS 101: Agriculture and the Environment, UC Davis 2017-19
Invited Lecturer: Agricultural decision making and water quality policy in CA

ESP 172: Public Lands Management, UC Davis 2016
Teaching Assistant: Led three weekly discussion sections; graded coursework

ESP 123: Intro to Field Ecology, UC Davis 2016
Teaching Assistant: Led weekly ecology field labs; graded exams and lab reports

EPSc 323: Biogeochemistry, WUSTL 2015
Undergraduate Teaching Assistant: Led homework and exam reviews, graded tests and coursework

PRESENTATIONS

Rudnick, J. "Understanding Uncertainty in Farmer Decision Making in the Context of Climate Change and Nitrogen Management".

International Association for the Study of the Commons. Oral Presentation. Lima, Peru. July, 2019.

3rd Agriculture and Climate Change Conference. Oral Presentation. Budapest, Hungary. March 2019.

- Rudnick, J.** and A. DeVincentis. “Drought as a Driver of Change? Growers Perceptions and Participation in the Sustainable Groundwater Management Act.” California Plant and Soil Conference. Poster Presentation. February 2019. ****Won 2nd place for student poster presentation*
- Rudnick, J.** California Farmers’ Perspectives on Nitrogen Management and Water Quality. Invited Speaker to USDA California Regional Office. Oral Seminar. Davis, California. December 2018.
- Rudnick, J.** Khalsa, S.D., Lubell, M., and P. Brown. Barriers to Adoption of Improved Nitrogen Management Practices. 2018 California Department of Food and Agriculture Fertilizer Research and Education Program (FREP) Annual Conference. Poster Presentation. Seaside, California. October 2018.
- Rudnick, J.** “Governance and Leadership in Agricultural Development Policy Networks”. 2018 Sunbelt Conference. Poster Presentation. Utrecht, Netherlands. June 2018.
- Rudnick, J.** “Boundary Organizations in California Agricultural Water Quality Policy”. 2018 Midwest Political Science Association. Oral Presentation. Chicago, Illinois. April 2018
- Rudnick, J.,** DeVincentis, A. and K. Dobbin. “Who cuts the pie? Equitable distribution under the Sustainable Groundwater Management Act”. 2018 California Water Policy Conference. Flash Talk. Davis, California. March 2018.
- Rudnick, J.** “California Farmers’ Perceptions and Participation in Nonpoint Source Water Pollution Policy”. UC Davis Ecology Graduate Research Symposium. Oral Presentation. Davis, California. February 2018.
- Rudnick, J.** “California Farmers’ Perceptions and Participation in Nonpoint Source Water Pollution Policy”. 2017 American Political Science Association. Oral Presentation. San Francisco, California. September 2017.
- Rudnick, J.,** Niles, M.T., Lubell, M.N. “A Comparison of Agricultural Development Policy Networks across Multiple Regions and Places”.
2017 Duck Graduate Workshop in Environmental Politics and Governance. Oral Presentation. Seattle, Washington. May 2017.
2017 Political Networks Conference. Oral Presentation. Columbus, Ohio. June 2017.
- Rudnick, J.,** DeVincentis, A. “The Sustainable Groundwater Management Act Challenges Diversity of California’s Farms”. Climate Action Network Workshop. Poster Presentation. Davis, CA. Feb 2017.
- Rudnick, J.,** Niles, M.T., Lubell, M.N. “Organizational Coordination to Build Climate-Smart Food Systems.” Political Networks conference. Poster presentation. St. Louis, MO. June 2016.
- Rudnick, J.,** Niles, M., Lubell, M. “Influence of Organizational Network Structures on Reducing Vulnerability to Climate Change and Food Insecurity.” American Association of Geographers Annual Meeting. Poster Presentation. San Francisco, CA. April 2016.
- Hoal, J., Hoferlin, D., **Rudnick, J.***, Sims, T., Gunay, E. MISI-ZIIBI: Living with the Great Rivers, Climate Adaptation Strategies in the Midwest River Basin. Workshop presentation. UN Conference of the Parties 20. Lima, Peru. December 2014.
- Rudnick, J.,** Cirrincione, L., Kent, E., Oswald, W., Swenson, B. Campus Sustainability Initiatives: “The Eco-To-Go Project”. Net Impact Conference. Invited Speaker. San Jose, CA. October, 2013.

ORGANIZED WORKSHOPS & CONFERENCES

Chair of session *Managing Land for Humans and Wildlife* at 2018 California Bay-Delta Science Conference. Sacramento, CA. September 2018.

Rudnick, J., Eddy, J. Parker, D. “Drought Management Workshop: California- Vietnam Collaboration”. Co-organizer. Workshop jointly funded by California Department of Food and Agriculture, University of California Agriculture and Natural Resources, and Vietnamese Ministry of Agriculture. *University of California, Davis, Davis, CA.* October 2016.

Rudnick, J., et al. “Weathering Change: The Impact of Climate and the Sustainable Groundwater Management Act on California’s Water”. Co-organizer. Conference funded by National Science Foundation. *University of California, Davis, Davis, CA.* April 2016.

LEADERSHIP & SERVICE EXPERIENCE

Graduate Group in Ecology Executive Committee Student Representative, Davis, CA	2017-2019
Graduate Group in Ecology Diversity Committee Co-Chair, Davis, CA	2016-2019
Graduate Group in Ecology Graduate Peer Mentor, Davis, CA	2016-218
Food Distribution Intern, City Seeds Farm, Gateway Greening, St. Louis, MO	2015
Student President, Net Impact, Washington University in St. Louis Chapter, MO	2012- 2015
Garden Educator, Harvest Health Community Garden, St. Louis, MO	2014
Urban Farming Policy Intern, Environment Missouri, St. Louis, MO	2013

SCIENCE OUTREACH

Skype a Scientist on-call scientist; skype k-12 classrooms to answer science questions	2018-19
Barriers to Adoption outreach events Hosted and presented at 5 farmer field days to share survey results on nitrogen management https://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=27392	2017-18
Radio Interview and Podcast for California Agriculture Today https://californiaagtoday.com/survey-coming-gauge-nitrogen-fertilizer-use/	2018
Science Informed Leadership Co-Founder, National advocacy group https://www.esa.org/esablog/guest-posts/science-informed-leadership-graduate-students-mobilize-involvement-in-the-new-executive-administration/	2016-2018
Habitat Restoration Mentor, Center for Land Based Learning, Winters, CA	2016-2019
High School Science Fair Mentor, EnvironMentors, Davis, CA	2015-2016
Green Schools Quest Mentor, U.S. Green Building Council, St. Louis, MO	2014-2015
Guest Environmental Science Teacher, VERDE Elementary Education, St. Louis, MO	2012-2015

ADDITIONAL SKILLS

Language: French proficiency; Spanish elementary conversation
Statistical Software: R Programming Language; Stata
Geographic Information Systems: ArcGIS; ENVI

PROFESSIONAL ORGANIZATION MEMBERSHIPS

Ecological Society of America
Union of Concerned Scientists
American Political Science Association
American Association of Geographers
Natural Areas Association
Midwest Political Science Association