Dustin R. Mulvaney, Ph.D.

Professor, Environmental Studies Department
College of Social Sciences, San José State University

ACADEMIC APPOINTMENTS

2020– **Professor**, Environmental Studies Department, San José State University.

2015–20 **Associate Professor**, Environmental Studies Department, San José State University.

2011–15 **Assistant Professor**, Environmental Studies Department, San José State University.

2020– **Fellow**, Payne Institute for Earth, Energy, & Environment, Colorado School of Mines.

2022–23 **Faculty in Residence**, HonorsX Interdisciplinary Program, San José State University.

2016–17 **Visiting Scholar**, Bill Lane Center for the American West, Stanford University.

2009–11 **Science, Technology, & Society Postdoctoral Scholar**, Department of Environmental Science, Policy, and Management, University of California, Berkeley.

2008–09 **Teaching Fellow, Sustainability Engineering & Ecological Design**, Electrical Engineering, University of California, Santa Cruz.

2006–09 **Lecturer**, University of California Santa Cruz Environmental Studies, Electrical Engineering, College 8/Rachel Carson College, Silicon Valley Center, UC Extension.

EDUCATION & TRAINING

2009–11 **Science, Technology, & Society Postdoctoral Scholar**, Department of Environmental Science, Policy, and Management, University of California, Berkeley.

Mentor: Alastair Iles, Funded by a National Science Foundation, Division of Science, Technology, and Society Postdoctoral Scholarship. SES-0924991. *Innovation and environmental justice in the clean tech space: Measuring performance and anticipating risks of renewable energy technologies*

2007 **Ph.D., Environmental Studies**, University of California, Santa Cruz.

Committee: David E. Goodman (advisor), Melanie Dupuis, Deborah Letourneau.

2002 **M.S., Environmental Policy Studies**, New Jersey Institute of Technology.

Committee: Eric Katz (advisor), David Rothenberg, Andrew Light

1999 **B.S., Chemical Engineering** (Minor: **Applied Physics** with a focus in Optical Science & Engineering), New Jersey Institute of Technology.

BOOKS

1. Mulvaney, D. (2019). *Solar Power: Sustainability, Innovation, and Environmental Justice*. University of California Press, Oakland. https://www.ucpress.edu/book/9780520288171/solar-power

TEXTBOOKS

1. Mulvaney, D. (2020). *Sustainable Energy Transitions: Socio-Ecological Dimensions of Decarbonization.* Palgrave-MacMillan, London. https://www.palgrave.com/us/book/9783030489113

2. Mulvaney, D. (2025). *Energy, Society, and the Environment: A Critical Introduction*. Blackwell-Wiley, London. (Under contract, out for peer review).

JOURNAL ARTICLES & BOOK CHAPTERS

37. Brian Tarroja, Dustin Mulvaney, Emily Grubert, Rebecca Peer. (2025, in press). Evaluating the effectiveness of cost-minimal planning of decarbonized electricity systems in reducing life cycle greenhouse gas emissions. *Environmental Research: Energy*. https://doi.org/10.1088/2753-3751/ada95c

[redacted]

36. Macdonald Amoah, Benjamin Sovacool, Dustin Mulvaney, Morgan Bazilian, Richard Luarkie, Daniel Cardenas. (2024). Critical Minerals Mining and Native American Sovereignty: Comparing Case Studies of Lithium, Copper, Antimony, Nickel and Graphite Mining in the United States. *Extractive Industries and Society*. 20: 101557. https://doi.org/10.1016/j.exis.2024.101557

35. Alida Cantor, James Blair, Dustin Mulvaney, Kate Berry, and Noel Vineyard. (2024). Water and renewable energy transitions. *Geographer Magazine*, A Publication of the Royal Scottish Geographical Society.

34. Melanie Dupuis and Dustin Mulvaney. (2024). Opening the Black Box: Carbon-Footprint Calculators, Meat Consumption, and the "Wicked Problem" of Metric Governance. *Sustainability: Science, Practice, and Policy*. 20(1): 2390232. https://doi.org/10.1080/15487733.2024.2390232

33. James Blair, Noel Vineyard, Alida Cantor, Ali Sharbat, Kate Berry, Dustin Mulvaney, Elizabeth Bartholomew, Ariana Firebaugh Ornelas, (2024). Lithium and Water: Hydrosocial Impacts across the Life Cycle of Energy Storage. *WIREs Water, Wiley Interdisciplinary Reviews*. https://doi.org/10.1002/wat2.1748

32. Dustin Mulvaney, (2024). Embodied Energy Injustice and the Political Ecology of Solar Power. *Energy Research and Social Science*. 115, 103607. https://doi.org/10.1016/j.erss.2024.103607

31. Dustin Mulvaney, (2024). Governing Solar Supply Chains for Improved Socio-Ecological Outcomes. In, Siddharth Sareen and Abigail Martin, *Geographies of Solar Energy Transitions: Conflicts, Controversies and Cognate Aspects*. UCL Press.

30. Brian Tarroja, Julie M. Schoenung, Oladele Ogunseitan, Alissa Kendall, Yang Qiu Timothy Malloy, Jens Peters, J. Mijin Cha, Dustin Mulvaney, Oliver Heidrich, and Manuel Baumann. (2024). Overcoming Barriers to Improved Decision-Making for Battery Deployment in the Clean Energy Transition. *iScience*. 27, 109898. https://doi.org/10.1016/j.isci.2024.109898

29. Dustin Mulvaney and Morgan Bazilian. (2023). Price Volatility, Human Rights, and Decarbonization Challenges in Global Solar Supply Chains. *Energy Research and Social Science*, 102, 103167. https://doi.org/10.1016/j.erss.2023.103167

28. B. Turley, A. Cantor, K. Berry, S. Knuth, D. Mulvaney, N. Vineyard. (2022). Emergent landscapes of renewable energy storage: Considering just transitions in the Western United States. *Energy Research and Social Science*, 90, 102583. https://doi.org/10.1016/j.erss.2022.102583

27. D. Mulvaney. (2022). Renewable Energy Supply Chains and the Just Transition. In Erika Weinthal, Jeannie Sowers, and Stacy Vanderveer (eds.). Oxford Handbook of Comparative Environmental Politics. Oxford University Press.

26. D. Mulvaney. (2022). Solar Power and the Just Transition. In Y. Ko and M. Caufman (eds.). *Sustainable Cities and Landscapes Handbook*. London, Routledge Press.

25. Yekang Ko, Makena Coffman, Dustin Mulvaney, Andrea Copping, Hsiao-Wen Wang, Brendan Barret. (2022). Conflicts of Greens' in Renewable Energy Landscapes: Case Studies and a Planning Framework. In Y. Ko and M. Caufman (eds.). Sustainable Cities and Landscapes Handbook. London, Routledge Press.

24. Mulvaney, D., Richards, R., Bazilian, M., Hensley, E., Seetharaman, S. (2021). Progress Towards a Circular Economy in Materials to Decarbonize Electricity and Mobility. *Renewable and Sustainable Energy Reviews*. 137: 110604. https://doi.org/10.1016/j.rser.2020.110604

23. Mulvaney, D., Busby, J., Bazilian, M. (2020). Pandemic Disruptions in Energy and the Environment. *Elementa: Science of the Anthropocene* 8(1): 052. https://doi.org/10.1525/elementa.052

22. Sovacool, B.K., S.H. Ali, M. Bazilian, B. Radley, B. Nemery, J. Okatz, D. Mulvaney. (2020). Sustainable Minerals and Metals for a Low Carbon Future. *Science*. 367(6473): 30–33. https://science.sciencemag.org/content/367/6473/30

21. Mulvaney, D. (2020). Integrating Life Cycle Assessment and Commodity Chain Analysis to Explore Sustainable and Just Photovoltaics. In *Solar Cells And Light Management: Materials, Strategies And Sustainability*. Edited by Francesco Enrichi and Giancarlo C. Righini, New York: Elsevier, 509–527. https://doi.org/10.1016/B978-0-08-102762-2.00015-X

20. Pellow, M. A., Ambrose, H., Mulvaney, D., Betita, R., & Shaw, S. (2020). Research Gaps in Environmental Life Cycle Assessments of Lithium ion Batteries for Grid-Scale Energy Storage Systems. *Sustainable Materials and Technologies*, 7: e00120. https://doi.org/10.1016/j.susmat.2019.e00120

19. Rebecca R. Hernandez, Alona Armstrong, Jennifer Burney, Greer Ryan, Kara Moore, Ibrahima Diedhiou, Steven M. Grodsky, Leslie Saul-Gershenz, Davis R., Jordan Macknick, Dustin Mulvaney, Garvin A. Heath, Shane B. Easter, Brenda Beatty, Michael F. Allen, and Daniel M. Kammen. (2019). Techno-ecological synergies of solar energy for global sustainability. *Nature Sustainability*, 2(7): 560–568. http://dx.doi.org10.1038/s41893-019-0309-z

18. Wade, A., R. Sinha, K. Drozdiak, D. Mulvaney, J. Slomka. (2018). Ecodesign, Ecolabeling and Green Procurement Policies – enabling more Sustainable Photovoltaics? *Proceedings of the IEEE Photovoltaic Specialist Conference and World Conference on Photovoltaic Electricity Conversion*. June 16, 2018.

17. Mulvaney, D. (2018). Geographies of Solar Power. K. Calvert and B. Solomon. *Handbook on the Geographies of Energy*. New York, Edward Elgar. ISBN-13: 978-1785365614.

16. Mulvaney, D. (2017). Identifying the roots of Green Civil War over utility-scale solar energy projects on public lands across the American Southwest. *Journal of Land Use Science,* 12(6): 493–515. https://dx.doi.org/10.1080/1747423X.2017.1379566

15. Mulvaney, D. (2016). Energy and Global Production Networks. *Handbook of the International Political Economy of Energy*. B. Sovacool, Van de Graaf, T., Kern, F., Ghosh, A., and Klare, M. B (Eds.). London, Palgrave. https://link.springer.com/chapter/10.1057/978-1-137-55631-8_25

14. Mulvaney, D. (2016). Renewable Energy. *Oxford Bibliographies in Geography*. First Edition. Barney Warf (Ed.). New York, Oxford University Press. http://dx.doi.org/10.1093/obo/9780199874002-0138

13. Mulvaney, D. (2014). Are Green Jobs Just Jobs? Cadmium Narratives in the Life Cycle of Photovoltaics. *Geoforum,* 54, 178–186. http://dx.doi.org/10.1016/j.geoforum.2014.01.014

12. Mulvaney, D. & Krupnik, T. (2014). Zero-tolerance for genetic pollution: Rice farming, pharm rice, and the risks of coexistence in California rice. *Food Policy*, 45, 121–131. http://dx.doi.org/10.1016/j.foodpol.2013.06.012

11. Mulvaney, D. (2014). Solar's Green Dilemma. Must cheaper photovoltaics come with a higher environmental price tag? *IEEE Spectrum*, September, 26–29. http://spectrum.ieee.org/green-tech/solar/solar-energy-isnt-always-as-green-as-you-think

10. Mulvaney, D. (2013). Opening the Black Box of Solar Energy Technologies: Exploring Tensions Between Innovation and Environmental Justice. *Science As Culture,* 22(3), 214–221. http://dx.doi.org/10.1080/09505431.2013.786995

9. Lipschutz, R. & Mulvaney, D. (2013). The Road not Taken, Round II: Centralized v. Distributed Energy Strategies and Human Security. In H. Dyer & M.J. Trombetta (Eds.), *International Handbook of Energy Security* (pp. 483–506). Northampton, MA, Edward Elgar.

8. Mulvaney, D. & Zivian, A. (2013). Sowing seeds of hope in California's fields of resistance to Pharm rice and Frankenfish. *Journal of Political Ecology*, 20, 159–179. http://jpe.library.arizona.edu/volume_20/Mulvaney-Zivian.pdf

7. Newell, P. & Mulvaney, D. (2013). The Political Economy of the Just Transition. *The Geographical Journal*, 178(3), 1-12. http://onlinelibrary.wiley.com/doi/10.1111/geoj.12008/abstract

6. Sakellariou, N. & Mulvaney, D. (2013). Engineers and the Renewable Energy Transition: Challenges and Opportunities. *Journal of Professional Issues in Engineering Education and Practice,* 139(1), 12–18. http://dx.doi.org/10.1061/(ASCE)EI.1943-5541.0000128

5. Bacon, C., Mulvaney, D., Ball, T., Crow, B., Dupuis, M., Gliessman, S., Lipschutz, R., & Shakouri, A. (2011). The Creation of an Integrated Sustainability Curriculum and Student Praxis. *International Journal of Sustainability in Higher Education,* 12(2), 193–208.

4. Mulvaney, D., Krupnik, T. & Koffler, K. (2011). Transgenic Rice Evaluated for Risks to Marketability. *California Agriculture,* 65(4), 161–167. http://dx.doi.org/10.3733/ca.E.v065n03p161

3. Mulvaney, D. (2008). Finding vulnerabilities, exploring opportunities: reconfiguring production, consumption, and conservation in California rice. *Agriculture, Food and Human Values*, 25, 173–176. http://dx.doi.org/10.1007/s10460-008-9123-3

2. Mulvaney, D. (2008). Making local places GE-Free in California's contentious geographies of genetic pollution and coexistence. In M. Boykoff, K. Evered & M. Goodman (Eds.), *Contentious Geographies: Environmental Knowledge, Meaning, and Scale* (pp. 147–164). London, Ashgate.

1. Hunt, J., Anderson, B., Phillips, B., Tjeerdema, R., Richard, N., Connor, V., Worcester, K., Angelo, M., Bern, A., Fulfrost, B., & Mulvaney, D. (2006). Spatial relationships between water quality and pesticide application rates in agricultural watersheds. *Environmental Monitoring and Assessment*, 121, 245–262. http://dx.doi.org/10.1007/s10661-005-9118-0

JOURNAL ARTICLES & BOOK CHAPTERS IN REVIEW

38. Abigail Martin, Siddharth Sareen, Daniel M Kammen, Dustin Mulvaney, Jonas Meckling, Ethan Elkind, Ryan Stock, Berenice Girard, Isa Ferrall, Samuel Miles. (accepted, revise and resubmit). Governance challenges for a rapid and just solar energy transition. Submitted to *Earth System Governance*.

37. D. Mulvaney, J. Blair, A. Cantor, (accepted, revise and resubmit). Sunlight and Salvation at the Salton Sea: Environmental Justice and Hydrosocial Dynamics of Solar Energy Transitions in Imperial Valley, California. Submitted to *Sustainability Science*.

EDITED BOOKS

5. D. Mulvaney. (2013). *Green Atlas*. Sage, London. http://www.sagepub.com/books/Book235903

4. D. Mulvaney. (2011). *Green Technology*. Sage, London. Reference Series on Green Society: Towards a Sustainable Future. Series Editor, Paul Robbins, ISBN: 9781412996921. http://www.sagepub.com/books/Book234026

3. D. Mulvaney. (2011). *Green Energy*. Sage, London. Reference Series on Green Society: Towards a Sustainable Future. Series Editor, Paul Robbins, ISBN: 9781412996778. http://www.sagepub.com/books/Book233505

2. D. Mulvaney. (2011). *Green Food*. Sage, London. Reference Series on Green Society: Towards a Sustainable Future. Series Editor, Paul Robbins, ISBN: 9781412996808. http://www.sagepub.com/books/Book233507

1. D. Mulvaney. (2011). *Green Politics*. Sage, London. Reference Series on Green Society: Towards a Sustainable Future. Series Editor, Paul Robbins, ISBN: 9781412996792. http://www.sagepub.com/books/Book233506

REGULATORY, UTILITY/SERVICE COMMISSION, & LEGISLATIVE TESTIMONY

2024. Expert Witness. Niagara Mohawk Power Corporation 2024 Rate Case, **New York Public Service Commission**, dockets 24-E-0322 and 24-G-0323. EarthJustice, September 29, 2024. topic: greenhouse gas accounting and biomethane.

2023. Testimony before the **United States House of Representatives**, Committee on Science, Space, and Technology. The Role of Federal Research in Establishing a Robust U.S. Supply Chain of Critical Minerals and Materials. November 28, 2023.

2023. Testimony before the **United States House of Representatives**, Subcommittee on Energy and Mineral Resources, Committee on Natural Resources, Oversight Hearing entitled, "Examining the Methodology and Structure of the U.S. Geological Survey's Critical Minerals List."
https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=116321

2023. Testimony before the **California Legislature**, Assembly Bills 2 & AB 1238. March 27, 2023.
https://drive.google.com/file/d/1BLQePoysLhTdPi9UXFtQZsLvBIz84jRG/view

2022. Testimony before the **United States House of Representatives,** Committee on Energy & Commerce, Energy Subcommittee, Wednesday, June 22, 2022.
https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=114932

2019–20. Expert Witness, Bio-methane Tariff Proceeding, Sierra Club & EarthJustice. **California Public Utilities Commission** Docket # A.19-02-015.

2019. Challenges and Opportunities to Recycling and Circular Economies in Photovoltaics and Lithium-Ion Batteries. **California Public Utilities Commission, California Energy Commission, CalRecycle, Department of Toxic Substances Control** Workshop. April 3, 2019, San Francisco, CA.

2014–17. Expert Witness, Energy Storage Proceeding at the **California Public Utilities Commission**, Sierra Club & EarthJustice. CPUC Rulemaking 15-03-011.

2014. Expert Witness Testimony, **Utah Public Service Commission**, Produced written report on behalf of Sierra Club in proceedings over Rocky Mountain Power's solar net metering and customer charges. Direct testimony DOI:

[redacted]

10.13140/RG.2.2.31415.52645, Net metering avoided cost methodology, PV payback model, Emissions estimates, & Surrebuttal testimony.

2014. Expert Witness Testimony, **California Public Utilities Commission**, produced a report on behalf of Sierra Club in proceedings over California investor owned utility plans to comply with the electricity storage mandate that requires investor owned utilities to install storage.

2013. Cal Recycle – **California Environmental Protection Agency**. Critical Reviewer for Used Oil Recycling Life Cycle Assessment Study. https://www2.calrecycle.ca.gov/Publications/Download/1074

2012. Expert Witness Testimony, **California Public Utilities Commission**, Produced written report on behalf of Sierra Club in proceedings over California investor owned utility plans to restructure electricity rates.

2012. Expert Witness Testimony, **California Public Utilities Commission**, Produced written report on behalf of Sierra Club against Pacific Gas & Electric's plan to offer voluntary, unbundled, Renewable Energy Credits (RECs) to customers.

2012. Prepared background information and analysis for an **Amicus Brief** on the Low Carbon Fuel Standard, *Rocky Mountain Farmers Union, et al. v. James Goldstene (California Air Resources Board)* submitted by the Environmental Defense Fund.

2010. Expert Witness Testimony, **California Public Utilities Commission**, Produced a written report on behalf of Sierra Club on Pacific Gas & Electric's plan to lower electricity rates for customers consuming over 200% of baseline.

2009. Expert Witness Testimony, **California Public Utilities Commission**, Prepared testimony for the Greenlining Institute against Pacific Gas &Electric's assessment of the cost of decommissioning and recycling of PV power plants.

GRANTS, AWARDS, & FELLOWSHIPS

2024	$80,000	**U.S. Department of Energy** - Solar Energy Technologies Office - Materials, Operation, and Recycling of Photovoltaics (MORE PV). https://www.energy.gov/eere/solar/materials-operation-and-recycling-photovoltaics-more-pv-funding-program Total: $8 million
2023	$100,500	Research, Scholarship, and Creative Activity Assigned Time Award, San Jose State, 2024–2029.
2023	$98,000	**U.S. Environmental Protection Agency**, Principal Investigator: Alida Cantor; Co-PI: Kate Berry, Dustin Mulvaney, James Blair, Lead Institution: Portland State University. Total $649,492. Environmental justice impacts across the life cycle of energy storage. July 1, 2023 through June 30, 2027. EPA Grant Number: R840556. https://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/display.abstractDetail/abstract_id/11395/report/0
2023	$1,250	College of Social Sciences, Professional Development Award.
2022	$84,065	**National Science Foundation**, Principal Investigator (PI): Alida Cantor; Co-PI: Kate Berry, Dustin Mulvaney, James Blair, Lead Institution: Portland State University ($400,000 total) Hydrosocial dynamics and environmental justice in water-energy transitions. Award, 00037554. https://www.nsf.gov/awardsearch/showAward?AWD_ID=2215409&HistoricalAwards=false
2020	$1,250	College of Social Sciences, Travel Grant
2019	$1,250	College of Social Sciences, Travel Grant
2018	$100,500	Research, Scholarship, and Creative Activity Assigned Time Award, 2019–2023.
2018	$5,000	College of Social Sciences, Research, Scholarship, and Creativity Research Momentum Award
2017	$10,500	College of Social Sciences, Research, Scholarship, and Creativity Assigned Time Award
2017	$5,000	College of Social Sciences, Summer Salary Award
2017	$11,115	Environmental & Economic Benefits of Small Electric Vehicles with Focus on Electric Motorcycles, Mineta Transportation Institute.
2016	$1,000	College of Social Sciences, Travel Grant
2015	$9,700	Research, Scholarship, and Creative Activity Grant, Center for Faculty Development, SJSU to study Integrating ecological resilience & environmental justice into California's solar energy strategies
2014	$9,700	Research, Scholarship, and Creative Activity Grant, Center for Faculty Development, SJSU, to study water and air socio-environmental vulnerabilities related to oil and gas extraction
2013	$5,067	Water Resources and Policy Initiatives Faculty Research Incentives Award, Water Resource Vulnerability and the Environmental Justice Dimensions of Developing the Monterey Shale. Office

		of the Chancellor, California State University
2013	$2,000	College of Social Sciences, Foundation Research Grant
2013	$1,500	College of Social Sciences, Dean's Travel Grant
2012	$40,000	Co-PI on Switzer Environmental Innovation Grant with Earthworks to look at water footprint, land use change, and regulatory policies related to extracting fossil fuels from the Marcellus and Monterey Shale, ($9,615 to SJSU for course relief, $2,000 for undergraduate research assistants)
2012	$750	College of Social Sciences Travel Grant, SJSU
2012	$1,500	College of Social Sciences Research Grant, SJSU, to study impacts of solar energy projects on public lands.
2012	$9,700	Research, Scholarship, and Creative Activity Grant, Academic Affairs, SJSU, $2,000 + 0.2 release ($8,700) to study the emergence of the Chinese solar sector and environmental implications.
2009	$119,996	**National Science Foundation**, Science, Technology, and Society Postdoctoral Fellowship, *Innovation and Environmental Justice in the Clean Tech Space: Measuring Performance and Anticipating Risks of Renewable Energy Technologies.* SES-0924991, co-PI Mulvaney, PI: Alastair Iles.
2010	$20,000	Switzer Foundation Environmental Leadership Grant, Justice and Sustainability in the Solar Industry
2009	$20,000	Switzer Foundation Environmental Leadership Grant, Justice and Sustainability in the Solar Industry
2008	$25,000	Switzer Foundation Environmental Leadership Grant, Justice and Sustainability in the Solar Industry
2006	$600	Switzer Foundation Professional Development Grant
2006	$21,000	University of California, President's Dissertation Year Fellowship
2002	$1,500	Environmental Studies Research Grants
2003	$1,500	Environmental Studies Research Grants
2004	$1,000	Environmental Studies Research Grants
2005	$1,000	Environmental Studies Research Grants
2004	$13,000	Switzer Foundation Environmental Leadership Fellowship
2003	$5,900	Doctoral Student Sabbatical Fellowship, Division of Graduate Studies
2001	$6,150	University of California Regents' Fellowship
1997	$2,000	Chemical Engineering Merit Scholarship
1994	$6,000	Local 68A Operating Engineers Scholarship

GRANTS SUPERVISED WITH STUDENT COLLABORATORS

2021	$1,500	Graduate Research Award, Padmaja Iyer, Lithium extraction controversy in Nevada, SJSU
2015	$1,500	Graduate Research Award, Tina Peterson, Motivations of Wilderness Volunteers, SJSU
2014	$1,000	Undergraduate Research Award, McNair Scholar Ada Truong, Oil & gas well depth, productivity, and water use, Center for Faculty Development, SJSU
2013	$747	Graduate Research Award, Justin Weiss, PaintCare: A case study of Product Stewardship Regulation in California, College of Social Sciences, SJSU
2013	$1,000	Graduate Research Award, Jason Reed, Grower Attitudes Towards Recycled Water in Santa Cruz and Monterey Counties, College of Social Sciences, SJSU
2012	$750	Graduate Research Award, Pedro Hernandez, Wine Grape Grower Attitudes Towards Water Use Regulations Protecting Salmon Habitat, College of Social Sciences, SJSU

WHITE PAPERS & REPORTS

20. Johanna Bozuwa, Dustin Mulvaney, Isabel Estevez, Adriana DiSilvestro, Kristina Karlsson, and Sunny Malhotra. 2024. Planning to Build Faster: A Solar Energy Case Study. Toward a Democratically Rooted, Nationwide Strategy to Accelerate Solar Deployment in the United States. Climate and Community Institute and Roosevelt Institute. https://rooseveltinstitute.org/publications/planning-to-build-faster-a-solar-energy-case-study/

19. Johanna Bozuwa and Dustin Mulvaney, 2023. A Progressive Take on Permitting Reform: Principles and Policies to Unleash a Faster, More Equitable Green Transition. Climate and Community Project and Roosevelt Institute. August 22, 2023. https://rooseveltinstitute.org/publications/a-progressive-take-on-permitting-reform/

18. Technical Advisory Committee for the Global Electronics Council's, Criteria for the Assessment of Ultra-Low Carbon Solar, March 17, 2023. https://globalelectronicscouncil.org/wp-content/uploads/EPEAT_ULCS_2023.pdf

17. Dashiell, S., Buckley, M., & Mulvaney, D. 2019. Green Light Study: Economic and Conservation Benefits of Low-Impact Solar Siting in California. The Nature Conservancy. https://www.scienceforconservation.org/products/green-light-study

16. Mulvaney, D. 2018. Water Footprint of Developing U.S. Tar Sands and Oil Shales. Report for Grand Canyon Trust. Unpublished.

15. Mulvaney, D., and John Niles. 2018. A Review and Assessment of the Environmental Impacts of Lithium-ion Battery Electric Motorcycles. Mineta Transportation Institute, San Jose.

14. Ambrose, H., Mulvaney, D., Betita, R., Shaw, S. 2017. *Review of Environmental Life Cycle Assessments of Lithium Ion Batteries for Grid-Scale Storage: Overview, Limitations, and Future Challenges*. Electric Power Research Institute, Technical Report 2003009293, December 2017.

13. Mulvaney, D., Gershenson, A., and Toscher, B. 2016. *How Production Horizons of Already Leased Federal Fossil Fuels Outlast Global Carbon Budgets.* A report for the Center for Biological Diversity and the Friends of the Earth.

12. Mulvaney, D. 2015. Photovoltaic Industry Primer: Overview of PV manufacturers, technologies, supply chains, performance standards & certifications. Prepared for the Green Electronics Council and National Standards Foundation International.

11. Mulvaney, D., Gershenson, A., and Toscher, B. 2015. *Potential Greenhouse Gas Emissions from Federal Fossil Fuels.* A report for the Center for Biological Diversity and the Friends of the Earth. http://www.ecoshiftconsulting.com/wp-content/uploads/Potential-Greenhouse-Gas-Emissions-U-S-Federal-Fossil-Fuels.pdf

10. Hansen, E., Mulvaney, D., and M. Betcher. 2013. Water Resource Reporting and Water Footprint from Marcellus Shale Development in West Virginia and Pennsylvania. A Report for Earthworks Oil and Gas Accountability Project. http://www.downstreamstrategies.com/documents/reports_publication/marcellus_wv_pa.pdf

9. Mulvaney, D. 2013. Life Cycle Assessment of GHGs from Brown Seaweed Ethanol production, unpublished, prepared for BioArchitecture Lab.

8. Mulvaney, D. 2012. Carbon Intensity Report for Sunoco's Fulton Ethanol Plant, unpublished, prepared for Sunoco.

7. Mulvaney, D. 2012. Ecological Risks from the Escape of Transgenic Salmon. White paper prepared for the Ocean Conservancy, in anticipation of FDA decision to deregulate transgenic salmon. Unpublished.

6. Newell, P., Phillips, J. & Mulvaney, D. 2011. *Pursuing Clean Energy Equitably*. Human Development Research Paper 3. United Nations Human Development Report. http://hdr.undp.org/en/reports/global/hdr2011/papers/

5. Gershenson, A., J. Barsimantov, and D. Mulvaney. 2011. Background Paper on Greenhouse Gas Assessment Boundaries and Leakage for the Cropland Management Project Protocol, prepared for Climate Action Reserve.

4. Silicon Valley Toxics Coalition, 2009. Towards a Just and Sustainable Solar Industry, San Jose, CA. http://svtc.org/solar_repor/

3. Center for Food Safety, 2005. *California Genetic Engineering Scorecard*. San Francisco, CA.

2. Mulvaney, D., & Wells, J. 2004. *Biotechnology, the Life Sciences Industry, and the Environment: An Annotated Bibliography*. Berkeley, CA: Berkeley Workshop on Environmental Politics. http://globetrotter.berkeley.edu/EnvirPol/pubs.html

1. Mulvaney, D. 1997. *Sonoluminescence Theory and Lab Manual*, (unpublished, written during Independent Study, Used in Advanced Topics in Physics Lab, Prof. Trevor Tyson, New Jersey Institute of Technology).

PUBLIC WRITING

28. D. Mulvaney. 2024. The future of extraction, energy dominance, and federal lands under Trump. *Bulletin of the Atomic Scientists*. December 9, 2024.

27. D. Mulvaney. 2024. Permitting reform is back from the dead. Will lawmakers sacrifice America's public lands to the fossil fuel industry? *Bulletin of the Atomic Scientists*. September 12, 2024.

26. D. Mulvaney. 2024. Expanding the bull's eye of solar development on public lands. *Bulletin of the Atomic Scientists*. April 2, 2024.

25. D. Mulvaney. 2023. The Public Lands Rule: Can conservation leasing mitigate impacts from energy and mining? *Bulletin of the Atomic Scientists*. July 1, 2023. https://thebulletin.org/2023/07/the-public-lands-rule-can-conservation-leasing-mitigate-impacts-from-energy-and-mining/

24. D. Mulvaney. 2023. A Brief History of the Pajaro River. *California Local*. March 15, 2023. https://californialocal.com/localnews/santa-cruz/ca/article/show/30138-brief-history-of-the-pajaro-river/

23. D. Mulvaney. 2023. Want clean energy, fast? 'Streamlining' environmental reviews could have the opposite effect. *Bulletin of the Atomic Scientists*. February 1, 2023. https://thebulletin.org/2023/02/want-clean-energy-fast-streamlining-environmental-reviews-could-have-the-opposite-effect/

22. D. Mulvaney. 2023. The Power of the San Lorenzo River ... A Short History. *California Local*. January 26, 2023. https://californialocal.com/localnews/santa-cruz/ca/article/show/24241/24241-history-of-the-san-lorenzo-river/

21. D. Mulvaney. 2022. Battle over solar power in the Golden State. *Bulletin of the Atomic Scientists*. June 3, 2022. https://thebulletin.org/2022/06/battle-over-solar-power-in-the-golden-state/

20. M. Bazilian, D. Mulvaney. 2021. To lead the green energy future, solar must clean up its supply chains. World Economic Forum. Agenda. September 28, 2021. https://www.weforum.org/agenda/2021/09/to-lead-the-green-energy-future-solar-must-clean-up-its-supply-chains/

19. Busby, J., M. Bazilian, D. Mulvaney. 2020. Energy Transition: Coal as the Canary. Yale Global. https://www.eurasiareview.com/22042020-energy-transition-coal-as-the-canary-analysis/

18. D. Mulvaney & M. Bazilian. 2019. The Downside of Solar Energy. Scientific American. December 1, 2019. https://blogs.scientificamerican.com/observations/the-downside-of-solar-energy/

17. Mulvaney, D. 2019. Degrowth should be a core part of the just transition: A review of Degrowth by Giorgos Kallis. Uneven Earth. October 3, 2019. http://unevenearth.org/2019/10/degrowth-should-be-a-core-part-of-the-just-transition/

16. M. K. Dorsey and D. Mulvaney. 2018. As Communities Build, The Right Infrastructure is Necessary for Health and Safety. https://medium.com/@mkdorsey/as-communities-rebuild-the-right-infrastructure-is-necessary-for-health-safety-co-authored-with-8cce48671e2b

15. Mulvaney, D. 2017. Transgenic Crops. *Encyclopedia of Food and Agricultural Ethics*. P. Thompson & P. Kaplan (Eds.). New York: Springer. http://dx.doi.org/10.1007/978-94-007-6167-4_100-2

14. Mulvaney, D. 2015. Act now to handle the coming wave of toxic PV waste. *Solar Industry Magazine* 8(6): 17–20. http://www.solarindustrymag.com/issues/SI1507/FEAT_02_Act-Now-To-Handle-The-Coming-Wave-Of-Toxic-PV-Waste.html

13. Mulvaney, D. 2013. Hazardous Materials Used in Silicon PV Cell Production: A Primer. *Solar Industry Magazine* 6(8): 17–9. http://www.solarindustrymag.com/issues/SI1309/FEAT_05_Hazardous_Materials_Used_In_Silicon_PV_Cell_Production_A_Primer.html

12. Mulvaney, D. 2011. Renewable Energy Deployment: Opportunities for Improvement. Desert Report, CNRCC Desert Committee, March 2011. www.desertreport.org

9–11. Mulvaney, D. 2009. "Precautionary Principle," "Environmental movements," & "New Jersey." *Encyclopedia of Climate Change*. S.G. Philander (Ed.). London: Sage.

2–8. Mulvaney, D. 2007. "Biotechnology," "Genetic Engineering," "Green Movement," "Maize," "Salmon," "Uncertainty," "Free Trade," *Dictionary of Environment and Society*. Paul Robbins (Ed.). London: Sage.

1. Mulvaney, D., Newton, L., & Warner, K. 2007. "Genetic Engineering." *Encyclopedia of Business Ethics and Society*. B. Kolb (Ed.). London: Sage.

CONFERENCE PAPERS

47. 2023. Tarroja, B., Mulvaney, D., Peer, R., & Grubert, E. Maximizing the Life Cycle Greenhouse Gas Emissions Reductions from Electricity Resource Portfolios, **American Geophysical Union,** December 2023. https://agu.confex.com/agu/fm23/prelim.cgi/Paper/1294352

46. 2023. Solar Power & Land, Keynote to the **Energy Geographies Conference**, Association of American Geographers Energy and the Environment Specialty Group, January 18, 2023.

45. 2022. Kate Berry, James Blair, Alida Cantor, Dustin Mulvaney, Noel Vineyard, Alexa Buss, and Bethani Turley. Making, un-making, and re-making deserts through mining and resistance to mining: Contested hydrosocial imaginaries and materialities of lithium in Nevada during the energy transition. **Association of American Geographers**. Virtual meeting, February 27, 2022.

[redacted]

44. 2019. Carbon Management on Federal Lands as a Decarbonization Strategy. **American Geophysical Union**, San Francisco, CA. December 8, 2019. https://agu.confex.com/agu/fm19/meetingapp.cgi/Paper/547015

43. 2019. Challenges and Opportunities to a Circular Economy and Sustainable Materials Use in Photovoltaics and Lithium-ion Batteries, **Materials Research Society**, Phoenix, AZ. April 23, 2019.

42. 2019. Mulvaney, D. Prospecting for Nature on the Solar Energy Frontier, **Association of American Geographers**, Washington, D.C. April 5, 2019.

41. 2018. Mulvaney, D. Circular Economy Opportunities in Photovoltaics and Lithium-ion Batteries. **Limits to Waste: Pushing Materials Manufacturing Towards Zero Waste for A Sustainable Future.** National Renewable Energy Laboratory/Colorado School of Mines. September 12–14, 2018.

40. 2018. Mulvaney, D. Keynote: Resources, Labor, Land, and Waste in the Global Solar Economy. **Capitalizing on the Sun: Critical Perspectives on Resources, Land and Waste in the Global Solar Economy**. University of Edinburgh. May 28–29, 2018.

39. 2018. (Ambrose, Hanjiro; D. Mulvaney, R, Betita, A, Kendall.) Life Cycle Assessment of Stationary Lithium Battery Systems: A Case Study of California's Energy Storage Mandate. **International Symposium for Sustainable Systems and Technology**, Buffalo, NY.

38. 2018. (Wade, A., R. Sinha, D. Mulvaney). Ecodesign, Ecolabeling and Green Procurement Policies – enabling more Sustainable Photovoltaics? **World Conference on Photovoltaic Electricity Conversion.**

37. 2016. (Ter Schure, A., H. Ambrose, D. Mulvaney, S. Shaw, A. Gershenson, R. Betita). Life Cycle Assessment of Lithium Ion Battery Chemistries For Different Grid-Connected Energy Storage Applications. **Life Cycle Assessment XVI**. American Center for Life Cycle Assessment. Charleston, South Carolina.

36. 2016. (with Jim Proctor). Why does STARS shine so bright? Exploring the standardization and codification of sustainability at U.S. institutions of higher education. **Association of Environmental Studies and Sciences**, Washington, D.C.

35. 2016. Integrating political ecology and life cycle assessment to understand solar energy commodity chains, **Association of American Geographers**, San Francisco.

34. 2015. Cleaning Up After Clean Energy: PV commodity chains, hazardous waste & environmental justice. *Workshop: Prospects for solar-powered irrigation systems in developing countries. May 27-29, 2015,* **Food and Agriculture Organization**, United Nations, Rome, Italy.

33. 2015. Using the Ocotillo Express Wind Farm controversy to illustrate socio-ecological vulnerability and resilience in renewable energy transitions. **Association of Environmental Studies and Sciences**, San Diego.

32. 2014. Energy literacy activities to explore socio-ecological vulnerability and resilience in renewable energy transitions. **Ecological Society of America**, Sacramento http://f1000.com/posters/browse/summary/1096948

31. 2014. Extended Producer Responsibility in the solar industry, **California Resource Recovery Association**, San Jose.

30. 2014. Technological Zones, Trojan Genes, & Blue Revolution Innovation: Untangling the Regimes of Transgenic Salmon Governance. **Association of American Geographers**, Tampa, FL.

29. 2013. What's in a number? Life Cycle Analysis and the Formation of Environmental Inequality. **Society for the Social Studies of Science**, San Diego

28. 2013. Solyndra, Sand Hill Road, and Shadow Banks: Grabbing Clean Energy Futures in the Great Solar Bubble. **Association of American Geographers**, Los Angeles

27. 2012. Sites of Conflict: Tensions in Siting utility-scale Solar. **Berkeley Energy & Resources Collaborative Symposium**, Panelists include the Bureau of Land Management, Center for Biodiversity, & First Solar.

26. 2012. Energy Politics and Policy: 2012 and Beyond, **Association for Environmental Studies and Sciences**, Santa Clara

25. 2012. Environmental Justice and Solar Energy Commodity Chains, **International Studies Association**, San Diego

24. 2012. Prospecting the Solar Energy Frontier: Decarbonization, Sputnik Moments, and the Political Ecology of the Green New Deal. **Association of American Geographers**, New York, NY

23. 2011. Of Solyndra, Sand Hill Road, and Shadow Banks: How the Venture Capital Mind Razed Energy Policy. **Society for the Social Studies of Science**, Cleveland, Ohio

22. 2011. Prospecting the Solar Energy Frontier: Decarbonization, Sputnik Moments, and the Political Ecology of the Green New Deal. **Society for the Social Studies of Science**, Cleveland, Ohio

21. 2011. Prospecting the Solar Energy Frontier: Decarbonization, Sputnik Moments, and the Political Ecology of the Green New Deal. **Association for Environmental Studies and Science**, Burlington, Vermont

20. 2011. Are Green Jobs, Just Jobs? **Association of American Geographers**, Seattle

19. 2011. Environmental Justice and Innovation in the political ecology of cadmium-based solar PV. **Political Ecology Working Group Mini-Conference,** University of Kentucky, Lexington, KY

18. 2010. Political ecologies of renewable energy metrics: Contestation and commensuration in the life cycle analysis of biofuels and solar PV. **Society for the Social Studies of Science**, Tokyo

17. 2010. Are Green Jobs, Just Jobs? A Political Ecology of PV Manufacturing, Deployment, and End-of-Life. **Global Environmental Justice: A New Agenda?** East Anglia University, Norwich, UK

16. 2010. Just Green Jobs? Anticipating Environmental Injustice in PV Manufacturing, Deployment, and End-of-Life. **Association for Environmental Studies and Science**, Portland, OR

15. 2010. Life Cycle Thinking in the Solar PV Industry: Uses, Methodological Trends, and Other Observations. **American Solar Energy Society**, Phoenix, AZ

14. 2009. Environmental Justice in Silicon Valley's Clean Tech Space: Governing the Life Cycle Impacts of Solar PV. **Society for the Social Studies of Science**, Washington, DC

13. 2009. Keeping PV Clean: The Silicon Valley Toxics Coalition's Green Job Platform. **Solar Power International**, Anaheim, CA

12. 2009. Capital, Governance, and Environmental Justice in the Clean Tech Space: Measuring Performance and Anticipating Risks from Solar Photovoltaics. **Association of American Geographers**, Las Vegas, NV

11. 2008. Political Ecologies of Scale: Explaining social resistance to agricultural biotechnology. **Association of American Geographers**, Boston

10. 2007. (with Anna Zivian). Anti-genetic engineering activists, pharm crops, and frankenfish: Sowing seeds of hope in California's fields of social resistance. **Society for Social Studies of Science**, Montreal

9. 2007. Adding creativity to critique in rural sociology: Multifunctionality and sustainability in the California rice industry: Linking production with consumption in rice agro-food networks. **Rural Sociological Society**, Santa Clara, CA

8. 2007. The political ecology of farmed and transgenic salmon, **Agriculture Food and Human Values Society**, Victoria, British Columbia

7. 2007. Containing Risk: Explaining Social Resistance to Transgenic Salmon, **Association of American Geographers**, San Francisco

6. 2006. From shaping technoscience to governing its seeds: locating neoliberalism in the social resistance to agricultural biotechnology, **Association of American Geographers**, Chicago, IL

5. 2005. Practicing a Political Ecology of Scale: A Comparative Study of GE-Free campaigns in Butte and Mendocino Counties. **Association of American Geographers**, Denver, CO

4. 2004. Resistance Against Coexistence: A Political Ecology of Genetic Pollution and Intellectual Property Rights. **Association of American Geographers**, Philadelphia, PA

3. 2003. Risk, Governance and Agricultural Biotechnologies: Beyond Anti-Science Zealotry and Techno-Fundamentalism. **Society for Social Studies of Science**, Atlanta, GA

2. 2003. The Politics of Scaling: Power Asymmetries, Governance, and Agricultural Biotechnologies. **Agriculture,**

Food and Human Values Society, Austin, TX

1. 2001. Human Impacts on Coastal Geomorphology: The Case of Developed Barrier Islands. *Coastal and Marine Specialty Group,* **Association of American Geographers**, New York City

BOOK REVIEWS

11. 2022. *Renewable Energy and Wildlife Conservation*, by Moorhead et al., 2019. The Quarterly Review of Biology. https://www.journals.uchicago.edu/doi/10.1086/720113

10. 2019. Degrowth should be a core part of the just transition: A review of *Degrowth* by Giorgos Kallis. Uneven Earth. October 3, 2019. http://unevenearth.org/2019/10/degrowth-should-be-a-core-part-of-the-just-transition/

9. 2018. Varun Sivaram, *Taming the Sun: Innovations to Harness Solar Energy and Power the Planet* (Cambridge, MA, USA: The MIT Press, 2018, ISBN 9780262037686). Michaël Aklin and Johannes Urpelainen, *Renewables: The Politics of a Global Energy Transition* (Cambridge, MA, USA: The MIT Press, 2018, ISBN 9780262534949). *International Politics Reviews*, https://doi.org/10.1057/s41312-018-0066-4

8. 2014. Matthew Huber, 2013, Lifeblood: Oil, Freedom, and the Forces of Capital. *Social and Cultural Geography* 16(5) http://dx.doi.org/10.1080/14649365.2014.927267

7. 2014. John Broome, Climate Matters: Ethics in a Warming World. *Environmental Ethics*.

6. 2012. Daniel Yergin, 2011, *The Quest: Energy Security and the Remaking of the Modern World*. *International Affairs* 88(3): 645–6.

5. 2011. Mark Smith & Piya Pangsapa, 2008, *Environment & Citizenship: Integrating Justice, Responsibility, and Civic Engagement. Environmental Ethics*. 33 Fall: 323–4.

4. 2008. Andrew Dobson & Derek Bell, 2007, *Environmental Citizenship. Environmental Ethics*. 30 Summer: 209–12.

3. w/Center for Tropical Research in Ecology and Agriculture Working Group. 2007. Review of C. Mann (2004) 1491: New Revelations of the Americas before Columbus. *Restoration Ecology*, 15(1), 168–9. http://dx.doi.org/10.1111/j.1526-100X.2006.00201.x

2. 2006. Deane Curtin, 2005, Environmental Ethics for a Postcolonial World. *Environmental Ethics*. 3 Fall: 327–330.

1. w/Center for Tropical Research in Ecology and Agriculture Working Group, 2005. Review of Terborgh et al., 2002, Making Parks Work: Strategies for Preserving Tropical Nature. *Conservation Biology*, 19(1), 279–81.

THESIS & DISSERTATION ADVISING

Thesis committees chaired

1. Christian Ardeleanu (MS, 2014) – An Analysis of an Andean Cosmovisión: Nature, Culture, Ecology, and Cosmos. https://scholarworks.sjsu.edu/etd_theses/4490/
2. Christina Peterson (MS, 2016) – Wilderness State Park Volunteers: A Qualitative Case Study of Meaning and Sustainability. https://scholarworks.sjsu.edu/etd_theses/4736/
3. Tara Caughlin (MS, 2016) – Climate Science Fiction and Environmental Studies
4. Jason Reed (MS, 2017) – Growers' Attitudes Towards Using Recycled Water to Mitigate Seawater Intrusion: A Case Study of the Castroville Seawater Intrusion Project. https://scholarworks.sjsu.edu/etd_theses/4856/
5. Kristina Zeynalova (MS, 2017) – The Role of Extended Producer Responsibility Policy and its Influence on Design for Environment within the Electronics Industry. https://scholarworks.sjsu.edu/etd_theses/4890/
6. Lee-Tan Lu (MS, 2019) – Photovoltaic Waste Management and Implementing Extended Producer Responsibility In the Solar Industry in California. https://scholarworks.sjsu.edu/etd_theses/5006
7. Justin Weiss (MS, 2019) – Analysis of Policy Implementation For Waste Paint: A Case Study of California Extended Producer Responsibility Policy Streams. https://scholarworks.sjsu.edu/etd_theses/5051
8. Peter Hilkene (MS, 2020) – Greenhouse Gas Emissions From Lithium-Ion Batteries Operating In California's Electrical Grid In 2019. https://scholarworks.sjsu.edu/etd_theses/5145/
9. Padmaja Iyer (MS, 2023) – Procedural Parity in Lithium Mining Development.
10. Nicole Chen (MS, 2023) – Decentralizing the Electric Grid: Giving Power Back to the People

[redacted]

11. Jamsheed Mistry (MS, 2024). Comparing Shade and Impervious Surface Area With Extreme Heat and Environmental Equity: An Analysis Of The Urban Heat Effect In Santa Clara County, California.

Thesis/Dissertation committees served

1. Julie Callahan (MS, 2012) – Ethics and Wolf Management: Attitudes Toward and Tolerance of Wolves in Washington State. https://scholarworks.sjsu.edu/etd_theses/4225/
2. Johnathan Fata (MS, 2012) – Motivating California Organic Farmers to Go Solar: Economics May Trump Philosophy in Deciding to Adopt Photovoltaics. https://scholarworks.sjsu.edu/etd_theses/4231/
3. Minako Nishiyama (MS, 2014) –Environmental Education as a Catalyst for Changing Students' Environmental Attitudes: A Survey of Ten Universities in the Tokyo Bay and San Francisco Bay Areas. https://scholarworks.sjsu.edu/etd_theses/4507/
4. Jeffrey Jenkins (Ph.D., 2011–2016, UC Santa Cruz; currently Assistant Professor, UC Merced) – Dissertation: Rare Earth at Bearlodge: Extractive mineral development, multiple use management, and socio-ecological values in the American West.
5. Swarali Bhat (MS, 2016) – Silicon Revolution: Sustainability Disclosures and Performance in the Semiconductor Manufacturing Industry (2010–14). https://scholarworks.sjsu.edu/etd_theses/4714/
6. Nicholas Aijuni (MS, 2016) – Using Recycled Water for Potable Reuse in Santa Clara County, California: High school students' knowledge and acceptance. https://scholarworks.sjsu.edu/etd_theses/4830/
7. Kathleen Saul (Ph.D., 2017) – Nuclear Accidents and the Social Impacts of Displacement, University of Delaware.
8. Julia Larson (MS, 2021) – Assessing Convolutional Neural Network Animal Classification Models for Practical Applications in Wildlife Conservation. https://scholarworks.sjsu.edu/etd_theses/5184/
9. Andreas Roos (Ph.D., 2021) – Renewing power Including global asymmetries within the system boundaries of solar photovoltaic technology, Human Ecology, Lund University.
10. Quratulain Ahmed (MS, 2022), Use of a Utility-Scale Solar Energy Facility by Avian Populations in Central California. https://scholarworks.sjsu.edu/etd_theses/5309/
11. Denise Fernandes (Ph.D., 2024) – Utility scale solar development in India and Morocco, Environmental Studies, University of Colorado at Boulder.

UNIVERSITY, COLLEGE, & DEPARTMENT SERVICE

2024	College Retention Tenure Promotion Committee, Department Lecturer Review Committee, University Scholarship Committee, College of Social Sciences Scholarship Committee, ENVS Department Scholarship Committee.
2022–23	College Retention Tenure Promotion Committee, College Election Committee, Department Graduate Admission Committee, University Area R GRP syllabus reviewer; Technical Advisory Committee, Waste Reduction Commission of Santa Clara County.
2011–22	College Assessment Committee, College Curriculum Committee, Department General Education Assessment Coordinator, Department Curriculum Committee, Scholarship Committee, Chair of Departmental Chair Review Committee, Faculty Search Committee, Lecturer Hiring Committee, Graduation Planning Committee.

PROFESSIONAL & COMMUNITY SERVICE

2024–	Author, National Climate Assessment, U.S. Global Change Research Program.
2024–	Minnesota Pollution Control Agency, Minnesota Solar PV Module and Installation Components Recycling and Reuse Project Advisory Team.
2023–	Lithium Valley Equity Technical Advisory Group, in assistance to Comite Civico del Valle.
2023–	Academic Task Force for the Lithium Valley Specific Plan and Programmatic Environmental Impact Report, County of Imperial, California.
2022–	Perovskite PV Accelerator for Commercial Technologies, Advisory Board Member, Electric Power Research Institute.
2021–	Climate and Community Project, Fellow. https://www.climateandcommunity.org/
2016–	Basin and Range Watch, Board of Advisors. https://www.basinandrangewatch.org/

2015– Sustainable Systems Research Foundation, Board of Directors. https://sustainablesystemsfoundation.org/

2021–23 Technical Committee, Ultra-Low Carbon Solar Standard. https://globalelectronicscouncil.org/wp-content/uploads/ULCS-State-of-Sustainability-Research-Final_v2-15JUL2021.pdf

2018–22 Tenure/promotion review cases: (5) California Polytechnic University, (4) Penn State University, (3) University of Michigan, (2) Pace University, (1) University of Guelph.

2019–20 Associate Editor, *Elementa*, University of California Press.

2017–20 External Evaluator, NASA, Center for Applied Atmospheric Research and Education. https://sites.google.com/a/sjsu.edu/caare/

2017–22 Co-Editor, Energy and the Environment - *Case Studies in the Environment*, University of California Press.

2017–20 College of Social Science, Assessment Committee.

2008– Journal, report, book, and grant peer reviewer:

Antipode (2017–24); *Energy Research and Social Science* (2017–24); *Annals of the Association of American Geographers* (2018–24); *Progress in Photovoltaics: Research and Applications* (2018–24); *Environment & Planning E* (2020–2024); *Geoforum* (2024); *East Asia Forum* (2024); *Environmental Research – Energy* (2024); Palgrave MacMillan (2024); Frontiers in Photonics (2024); University of California Press (2014–23); *Journal of Environmental Studies and Sciences* (2015–23); National Renewable Energy Laboratory (2016–23); Swiss National Science Foundation (2016–2023); U.S. National Science Foundation (2010–23); *Sustainability Science* (2017–20); *Solar Energy* (2012–20); *Climate and Development* (2017–20); *Nature – Sustainability* (2019–20); *Global Environmental Change* (2019–20); *Climatic Change* (2019–20); *Energy Strategy Reviews* (2019–20); *World Development* (2020); *The Geographical Journal* (2020); *Climate Policy* (2019); *Energy* (2018–19); *Energy Policy* (2018); *PLOS One* (2018); University Press of Colorado (2018); Routledge Press (2018); Taylor & Francis Press (2015, 2018); *Applied Energy* (2018); Oxford University Press (2018); *Engineering Studies* (2018); *Journal of Environment and Development* (2018); *Environment & Planning A* (2017–18); *Economy & Space* (2018); *Capitalism, Nature, Socialism* (2018); N.C. State Clean Energy Tech Center (2017); *Society and Natural Resources* (2014–17); *Transactions of the Institute of British Geographers* (2014–17); Czech National Science Foundation (2016); *Science, Technology and Human Values* (2016); *Nature – Energy* (2015); International Renewable Energy Agency (2015); *Globalizations* (2015); Elsevier Academic Press (2014, 2023); *Sustainability* (2013); *Climate Change* (2012); *Journal of Integrative Environmental Sciences* (2011–13); *International Journal of Sociology of Agriculture and Food* (2011); *Environmental Science and Technology* (2010); *Journal of Sustainable Agriculture* (2008–2011)

2012–23 Interviewer, Switzer Foundation Environmental Leadership Grant Program

2013–15 Treasurer/Secretary, Energy and Environment Specialty Group of the Association of American Geographers, elected term, ~700 members.

2012–14 Council member, Cultural and Political Ecology Specialty Group of the Association of American Geographers, elected term, ~600 members.

2013 Judge, Daniel B. Luten Award, American Association of Geographers

2013 Judge, Intel Environmental Award, San Jose Tech Museum

2013–15 Editorial Board Member, *Journal of Pollution Effects and Control*

2012–14 SJSU College of Social Sciences Curriculum Committee, Fall 2012–Spring 2014; Research Committee, Spring 2012

2012 External reviewer for Colorado State University NSF IGERT proposal

2002–06 UCSC: Graduate Student Representative to the Social Science Faculty Search Committee (2005–06), Graduate Student Steering Committee (2004–05), Graduate Student Representative, Curriculum Committee (2004), Committee Member, Graduate Research Seminar (2002–03)

1996–2001 New Jersey Institute of Technology: President Graduate Student Association (2001), President, Graduate Student Pugwash (1999–2000), President, American Chemical Society, NJIT student chapter (1996–1998)

COURSES TAUGHT AT SJSU 2011–

(1) Energy & the Environment, (2) Sustainable Energy Strategies, (3) Solar Energy Analysis, (4) Master's Thesis Research Proposals, (5) Senior Research Seminar, (6) Advanced Topics in Environmental Studies, (7) Public Service Internship, (8) Social Problems, (9) Introduction to Environmental Law.

COURSES TAUGHT AT UCSC 2006–2009

(1) Biotechnology: Social and Environmental Dimensions, Environmental Studies, 2009, 2007, 2006 (2) Sources of Renewable Energy, Electrical Engineering, 2009 (co-instructor) (3) Energy Politics and Policy, and Lab, 2009 (4) Political Ecology and Social Change, 2008 (5) Environment and Society, Rachel Carson College, UCSC, 2007–08 (6) Science, Policy, & the Environment, Silicon Valley Center, UC Extension, NASA-Ames, 2007

GRADUATE TEACHING & RESEARCH

2001–06, **Teaching Assistant**, Environment Studies, UC Santa Cruz: (1) Geographic Information Systems (Brian Fulfrost, spring '02, '03, '04; fall '04); (2) Principles of Sustainable Agriculture (Tim Vos, winter '06); (3) Environmental Law & Policy (Ruth Langridge, spring '06); (4) Environmental Studies Capstone (Karen Holl, winter '04); (5) Political Economy & the Environment (Alan Balch, winter '03); (6) Natural Resource Economics (Alan Richards, fall '02); (7) Sociology of Social Movements (Doug Bevington, summer '02); (8) National Environmental Policy (Daniel Press, winter '02, '05); (9) Sustainable Development & the U.S./Mexico Border (Roberto Sanchez-Rodriguez, fall '01)

2000–07, **Research Assistant**, (1) Environment Studies, UC Santa Cruz, 2005–07, Supervisor: Dennis Takahashi Kelso. Conducted interviews for a project examining the regulatory response to risks from transgenic salmon in North America. Project funded by the Pew Ocean Fellows Program. (2) Environment Studies, UCSC, 2005, Supervisor: Deborah Letourneau. Digitized landscape complexity on California's Central Coast near organic farms; conducted aerial photo interpretation of plant community alliances. (3) Environmental Politics Workshop, UC Berkeley, 2003 Supervisors: Michael Watts, Iain Boal. Authored an annotated bibliography called *Biotechnology, the Life-Sciences Industries, and the Environment*. (4) Environmental Policy Studies, New Jersey Institute of Technology, 2000 Supervisor: Nancy Jackson. Used aerial photos, SAS, & Army Corps archival data to explain the impact of fortification structures on shoreline erosion caused by hurricanes and nor'easters on New Jersey's barrier islands.

HONORS/AWARDS

2019, San Jose State University, College of Social Sciences, Author Award.

2012, Daniel B. Luten Award for best paper on Energy and the Environment by a professional geographer from the American Association of Geographers Energy specialty group. ("Prospecting the Solar Energy Frontier: Decarbonization, Sputnik Moments, and the Political Ecology of the Green New Deal")

2012, San Jose State University, College of Social Sciences, Author Award

1999–2001, Graduate Student Honor Society, New Jersey Institute of Technology

1997, New Jersey's Top Young Chemist, NJ American Institute of Chemists

1996, Otto York Award, NJ American Institute of Chemical Engineers

OTHER PROFESSIONAL EXPERIENCE

2009–2018. Cofounder, Principal, EcoShift Consulting.

2011–2014. Cofounder, Principal, SupplyShift.

1998–2001. SRE Inc., Bioremediation, Engineering Group Leader, Nutley, N.J. Managed technology on remediation sites contaminated by the fuel additive MTBE.

1998. Surfactants Project Engineer, Cytec Industries, Inc., Waverly, W.V., Supervised the transfer of operations from the NJ plant to a new facility in WV, inspected new facility to ensure it conformed to blueprints/process flow diagrams, co-designed SO_2 scrubber.

1997. Surfactants Process Development Researcher, Cytec Industries, Inc., Linden, N.J. Served as bench chemist and process engineer on several projects developing new batch protocols for reformulated processes with less hazardous

chemical constituents.

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