

## Lauren E Parker

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Valley Institute for Sustainability,  
Technology, and Agriculture  
University of California Merced  
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pronouns: she/her

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### EDUCATION

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**Ph.D. University of Idaho, Moscow, ID** 2017  
Department of Geography, advisor: Dr. John Abatzoglou  
*Certificate in Environmental Water Science, Environmental Science Program, May 2016*

**M.S. Oregon State University, Corvallis, OR** 2009  
Department of Geoscience, advisor: Dr. Anne Nolin  
*Graduate Certificate in GIS and Remote Sensing, Geosciences Department, June 2009*

**A.B. Mount Holyoke College, South Hadley, MA** 2006  
Department of Earth and Environment

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### PROFESSIONAL EXPERIENCE

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**Managing Director, Secure Water Future** 2024-present  
**Academic Coordinator III** 2024-present  
*VISTA, University of California Merced*

**Project Scientist** 2023-2024  
**Research Program Manager** 2022-2024  
**Coordinator** 2020-2024  
**Postdoctoral Fellow** 2018-2023  
*USDA-ARS California Climate Hub  
Institute of the Environment, University of California Davis*

**Grant Writer (independent contractor)** 2020-2021  
*Gunnison Valley Health Foundation*

**Scientific Researcher (independent contractor)** 2018  
*USFS Pacific Northwest Research Station*

**Postdoctoral Fellow** 2017-2018  
*Climatology Lab, Department of Geography  
University of Idaho*

**Conference Coordinator** 2015  
*6<sup>th</sup> Annual Northwest Climate Conference*

**Assistant Professor of Geoscience** 2013  
**Lecturer in Geoscience (Tenure Track)** 2010-2012  
*Department of Geoscience  
Salt Lake Community College*

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REFEREED PUBLICATIONS

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24. Silber-Coats N, Elias E, Fernald K, Gagliardi M, Hrozencik A, Levers L, Ostojica S, **Parker L**, Williamson J, Yao Y (2024) The Water Adaptation Techniques Atlas: A New Geospatial Library of Solutions to Water Scarcity in the U.S. Southwest. *PLOS Water*. [doi.org/10.1371/journal.pwat.0000246](https://doi.org/10.1371/journal.pwat.0000246)
23. Ikendi S, Pinzon NJ, Koundinya V, Taku-Forchu NC, Roche LM, Ostojica SM, **Parker LE**, Zaccaria D, Cooper MH, Diaz-Ramirez JN, Brodt S, Battany M, Rijal JP, Pathak TB (2024) Climate smart agriculture: Assessing needs and perceptions of California's farmers. *Frontiers in Sustainable Food Systems*. [doi.org/10.3389/fsufs.2024.1395547](https://doi.org/10.3389/fsufs.2024.1395547)
22. **Parker LE**, Zhang N, Abatzoglou JT, Kisekka I, McElrone AJ, Ostojica SM (2024) A variety-specific analysis of climate change effects on California winegrapes. *International Journal of Biometeorology*. [doi.org/10.1007/s00484-024-02684-8](https://doi.org/10.1007/s00484-024-02684-8)
21. Jha PK, Zhang N, Rijal JP, **Parker LE**, Ostojica S, Pathak TB (2023) Climate change impacts on insect pests for high value specialty crops in California. *Science of the Total Environment*. [doi.org/10.1016/j.scitotenv.2023.167605](https://doi.org/10.1016/j.scitotenv.2023.167605)
20. Johnson D, Almaraz M, Rudnick J, **Parker LE**, Ostojica SM, Khalsa SDS (2023) Farmer adoption of climate smart practices is driven by farm characteristics, information sources, and practice benefits and challenges. *Sustainability* 15(10). [doi.org/10.3390/su15108083](https://doi.org/10.3390/su15108083)
19. Johnson D\*, **Parker LE**+, Crothers L, Pathak TB, Ostojica SM (2023) Technical assistance providers identify climate change adaptation practices and barriers to adoption among California agricultural producers. *Sustainability* 15(7). [doi.org/10.3390/su15075973](https://doi.org/10.3390/su15075973)
18. Zakowski E\*, **Parker L**, Johnson D\*, Aguirre J, Ostojica S (2023) California winegrape growers need support to manage risks from wildfire and smoke. *California Agriculture*. [doi.org/10.3733/ca.2023a0006](https://doi.org/10.3733/ca.2023a0006)
17. Eaton W, Robertson T, Arbuckle J, Brasier K, and co-authors including **Parker LE** (2022) Advancing the scholarship and practice of stakeholder engagement in working landscapes: A co-produced research agenda. *Socio-Ecological Practice Research*. [doi.org/10.1007/s42532-022-00132-8](https://doi.org/10.1007/s42532-022-00132-8)
16. Sofaer HR, Jarnevich CS, Buchholtz EK, Cade BS, Abatzoglou JT, Aldridge CL, Comer PJ, Manier D, **Parker LE**, Heinrichs JA (2022) Potential cheatgrass abundance within lightly invaded areas of the Great Basin. *Landscape Ecology*. [doi.org/10.1007/s10980-022-01487-9](https://doi.org/10.1007/s10980-022-01487-9)
15. **Parker LE**, Zhang N, Abatzoglou JT, Ostojica SM, Pathak TB (2022) Observed changes in agroclimate metrics relevant for specialty crop production in California. *Agronomy* 12(1). [doi.org/10.3390/agronomy12010205](https://doi.org/10.3390/agronomy12010205)
14. Zhang N, Pathak TB, **Parker LE**, Ostojica SM (2021) Impacts of large-scale teleconnection indices on chill accumulation for specialty crops in California. *Science of the Total Environment*. [doi.org/10.1016/j.scitotenv.2021.148025](https://doi.org/10.1016/j.scitotenv.2021.148025)
13. **Parker L**, Pathak T, Ostojica S (2021) Climate change reduces frost exposure for high-value California orchard crops. *Science of the Total Environment*. 762:143971. [doi.org/10.1016/j.scitotenv.2020.143971](https://doi.org/10.1016/j.scitotenv.2020.143971)
12. Prev y JS, **Parker LE**, Harrington CA. (2020) Predicted impacts of climate change on three culturally-important shrub species of the Pacific Northwest. *PLOS One*. 15(5):e0232537. [doi.org/10.1371/journal.pone.0232537](https://doi.org/10.1371/journal.pone.0232537)
11. **Parker LE**, McElrone AJ, Ostojica SM, Forrestel EJ (2020) Extreme heat effects on perennial crops and strategies for sustaining future production. *Plant Science*. 295:110397. [doi.org/10.1016/j.plantsci.2019.110397](https://doi.org/10.1016/j.plantsci.2019.110397)

10. Reyes J, Elias E, Haacker E, Kremen A, **Parker L**, Rottler C (2020) Assessing agricultural risk management using historic crop insurance loss data over the Ogallala Aquifer. *Agricultural Water Management*. 232:106000. [doi.org/10.1016/j.agwat.2020.106000](https://doi.org/10.1016/j.agwat.2020.106000)
9. Prev y J, **Parker L**, Harrington C, Lamb C, Proctor M (2020) Climate change shifts the habitat suitability and phenology of black huckleberry. *Agricultural and Forest Meteorology* 280:107803. [doi.org/10.1016/j.agrformet.2019.107803](https://doi.org/10.1016/j.agrformet.2019.107803)
8. **Parker LE**, Abatzoglou JT (2019) Warming winters reduce chill accumulation for peach production in the southeastern United States. *Climate* 7(8):94. [doi.org/10.3390/cli7080094](https://doi.org/10.3390/cli7080094)
7. Abatzoglou JT, **Parker LE** (2018) Climate change and the American West. *Idaho Law Review Natural Resources and Environmental Law Edition* 54(256). <https://digitalcommons.law.uidaho.edu/idaho-law-review/vol54/iss1/7>
6. **Parker LE**, Abatzoglou JT (2017) Shifts in the thermal niche of almond under climate change. *Climatic Change* 147(1):211-224. [doi.org/10.1007/s10584-017-2118-6](https://doi.org/10.1007/s10584-017-2118-6)
5. **Parker LE**, Abatzoglou JT (2017) Comparing mechanistic and empirical approaches to modeling the thermal niche of almond. *International Journal of Biometeorology* 61(9):1593. [doi.org/10.1007/s00484-017-1338-9](https://doi.org/10.1007/s00484-017-1338-9)
4. Hicke JA, Abatzoglou JT, Daley-Laursen S, Esler J, **Parker L** (2016) Using scientific conferences to engage the public on climate change. *The Bulletin of the American Meteorological Society* 98(2):225. [doi.org/10.1175/BAMS-D-15-00304.1](https://doi.org/10.1175/BAMS-D-15-00304.1)
3. **Parker LE**, Abatzoglou JT (2016) Projected changes in cold hardiness zones over CONUS. *Environmental Research Letters* 11(3):034001. [doi.org/10.1088/1748-9326/11/3/034001](https://doi.org/10.1088/1748-9326/11/3/034001)
2. **Parker LE**, Abatzoglou JT (2015) Spatial coherence of extreme precipitation events in the Northwestern United States. *International Journal of Climatology* 36(6):2451. [doi.org/10.1002/joc.4504](https://doi.org/10.1002/joc.4504)
1. Edwards LM, Bunkers MJ, Abatzoglou JT, Todey DP, **Parker LE** (2014) October 2013 Blizzard in Western South Dakota [in "Explaining Extremes of 2013 from a Climate Perspective"]. *Bulletin of the American Meteorological Society* 95(9):S23. [journals.ametsoc.org/downloadpdf/journals/bams/95/9/1520-0477-95.9.s1.1.pdf](https://journals.ametsoc.org/downloadpdf/journals/bams/95/9/1520-0477-95.9.s1.1.pdf)

#### Manuscripts in Review

Zhang N, **Parker LE**, Ostojia S, Kisekka I (*in revision*) Assessing the impact of crop water, precipitation, and soil moisture on the estimation of evapotranspiration of applied water. *Agricultural Water Management*.

Pinzon NJ, Koundinya V, Galt RE, O'Dowling WR, Baukloh M, Taku-Forchu NC, Schohr T, Roche LM, Ikendi S, Cooper MH, **Parker LE**, Pathak TB (*in revision*) AI-powered fraud and the erosion of online survey integrity: An analysis of 31 fraud detection strategies. *Frontiers in Research Methods and Analytics*.

Egea JA, **Parker LE**, Lopez-Alcolea J, Dicenta F (*in review*) Viability of extra-late almond cultivars from CEBAS-CSIC in cold areas of the western US in future climate scenarios. *Acta Horticulturae*.

Taku-Forchu N, Koundinya V, **Parker LE**, Ikendi S, Pinzon NJ, Thaoxaochay L, Roche LM, Ostojia S, Vong M, Dahlquist-Willard RM, Cooper MH, Pathak TB. (*in review*) Climate adaptation information needs of limited resource farmers in California. *Climatic Change*.

Abatzoglou JT, **Parker LE**, Viers JH, Medllin-Azuara J, Escriva-Bou A, Huntington JL, Williams EL, Rajagopalan K (*in review*) Shorter growing seasons may moderate climate change effects on crop water demands. *Environmental Research Letters*.

Galeano M, McElrone AJ, **Parker LE**, Sanchez L, Dokoozlian N, Bagshaw S, Bringas P, Elmendorf K, Forrestel EJ. (*in review*) Cool drink on a hot summer day: Supplemental irrigation mitigates stress for grapevines during emerging heatwave events. *Global Change Biology*.

\*Indicates intern or mentee. †Indicates corresponding author role when not first author.

## EXTERNAL FUNDING

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### Current

<b>C DFA-SCBG</b> , Senior Collaborator (\$91,800, subaward) <i>California Winegrower Strategies and Tools to Mitigate and Adapt to Climate Change</i>	2022-
<b>NIFA-AFRI</b> , Senior Collaborator* (\$1.5M) <i>Multifaceted pathways to climate-smart agriculture through integrated participatory program development and delivery</i>	2021-
<b>NIFA-AFRI</b> , Senior Collaborator* (\$10M) <i>Sustaining Groundwater and Irrigated Agriculture in the Southwestern United States Under a Changing Climate</i>	2021-

### Completed

<b>USDA OCE</b> , Senior Collaborator* (\$50,000) <i>A water sensitivity analysis for sustaining irrigated agriculture in the Southwest</i>	2022-2023
<b>USDA OCE</b> , Senior Collaborator* (\$50,000) <i>Translating the USDA Climate Indicators for Assessing Agriculture report into region-specific, actionable information for California's economically-important agrisystems</i>	2020-2022
<b>University of California Davis Center for Global Affairs</b> , Senior Collaborator* (\$19,890) <i>Developing an international initiative for advancing the adaptive capacity of viticulture to climate change</i>	2020-2022
<b>California Department of Food and Agriculture</b> , Co-I (\$427,763) <i>Informing vineyard irrigation practices through improved understanding of grapevine physiological responses to heat extremes</i>	2019-2021
<b>USDA Northwest Climate Hub</b> , Senior Collaborator* (\$40,000) <i>Mapping the current and future suitability of specialty crop cultivation in the Northwest</i>	2017-2019
<b>USGS Northwest Climate Science Center</b> , Collaborator (\$70,464, Year 1) <i>Will climate warming affect locations or timing of availability of food sources from native Northwestern shrubs?</i>	2017-2018
<b>The Mazamas</b> , Collaborator* (\$1,000) <i>Climatic and geomorphic triggering mechanisms of Cascadian periglacial debris flows</i>	2008

### Under Review

### Unfunded

<b>USDA NIFA-SCRI</b> , Senior Collaborator* (\$3.88M) <i>Improving grapevine resilience through rootstock breeding for salt and drought tolerance</i>	2024
<b>Western SARE</b> , PI (\$89,942) <i>Supporting agricultural sustainability through climate change science and adaptation education</i>	2020

\*Indicates notable role in proposal development; institutional position limited ability to serve as PI or Co-PI.

## INTERNATIONAL EXPERIENCE

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<b>Parker L.</b> , Zhang N, Abatzoglou J, Kisekka I, McElrone A, Ostojica S. <i>Climate exposure and adaptive management opportunities for agriculture in the southwestern United States</i> . Second International Conference on Water Resources Management in Arid Regions, Dubai, UAE (Conference presentation)	2024
<b>Parker L.</b> , Zhang N, Abatzoglou J, Kisekka I, McElrone A, Ostojica S. <i>Climate change effects on California wine grapes</i> . International Organization of Vine and Wine, Beaune, France and	2024

- Comite Interprofessionnel du vin de Champagne, Epernay, France (Meeting presentations)
- Parker L.**, Baranski M, Ostoja S, and co-authors. *Linking climate information with CSA decisions and planning: Effects of climate change on agriculture and ecosystems* and *Linking climate information with CSA decisions and planning: Understanding climate change and using climate information*. 2019  
USDA Foreign Agricultural Service Landscape Climate Smart Agriculture Training, Morogoro and Zanzibar, Tanzania (Workshop presentations and sessions facilitated)
- Parker L.** *Public perception on US nuclear policy after the Fukushima Disaster* and *GIS and earthquake preparedness: A case study of Salt Lake City, Utah*. Shittennoji University IBU, Osaka, Japan (Invited lectures) 2011

## INVITED TALKS

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- Paso Robles Wine Vit Tech Series: Climate Change Impacts & Actionable Strategies for Adaptation and Mitigation 2024  
*Climate, water, and California winegrapes: challenges and solutions*
- Adaptive Silviculture for Climate Change Taylor Park Workshop 2022  
*Setting the climate context for adaptive silviculture treatments of lodgepole pine sites in the Taylor Park area of the Gunnison National Forest*
- Western Colorado Food and Farm Forum 2022  
*Climate-Ready Farms and Ranches for the New Not Normal*
- California Agriculture Labor Relations Board Meeting 2021  
*Changes in climate and extreme heat and implications for agriculture in California*
- RTF Turf Producers Association National Conference 2016  
*Will the grass always be greener? Climate change impacts on agricultural industries*
- Turf, Tree, and Landscape Conference 2016  
*Climate change and Northwest agriculture: Boom or bust?*
- Coeur d'Alene Rotary Club 2015  
*Climate change and Northwest agriculture*

## CONFERENCE AND WORKSHOP SESSIONS FACILITATED AND CONVENED

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- Managing agriculture under climate and weather extremes: A workshop for technical service providers* 2024  
A Multifaceted Pathways to Climate Smart Agriculture workshop. Davis, CA
- UC Davis Agricultural Water Center 2<sup>nd</sup> Annual Symposium*. Tempe, Arizona 2024
- The vineyard of the future: Climate resilient and carbon friendly viticulture for sustainable winegrape production*. California Sustainable Winegrowing Alliance and USDA California Climate Hub Technical Workshop, Sacramento, California. 2023
- Functional ecosystems under climate change* 2023  
USFS Pacific Southwest Research Station Research Initiatives Topic Forum
- Emerging digital tools for effective water management in water scarce regions*. 2023  
Session at American Water Resources Conference, Denver, Colorado.
- Climate-Ready Farms and Ranches for the New Not Normal* 2022
- Changes in climate and implications for agriculture in California's Central and Southern Coast Regions* 2021
- Climate Stressors and Solutions*, Women for the Land Learning Circle, Your Land, Your Leadership 2020
- Approaches and strategies for adapting to and mitigating climate change in California agriculture*. Session at Farming in the New Normal: A workshop on agriculture and climate. 2020

## NON-REFEREED PUBLICATIONS

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Oxarart A, **Parker L**. [Applications of global climate model data](#). USDA California Climate Hub 2024

Oxarart A, **Parker L**. [Downscaling](#). USDA California Climate Hub 2024

Oxarart A, **Parker L**. [Global climate models and emissions scenarios](#). USDA California Climate Hub 2024

Oxarart A, **Parker L**. [Climate fundamentals](#). USDA California Climate Hub 2024

**Parker L**, Johnson D, Pathak T, Wolff M, Jameson V, Ostoja S. [Adaptation Resources Workbook for California Specialty Crops](#). USDA California Climate Hub 2023

Eaton W, Robertson T, and co-authors including **Parker, L**. *Advancing the Scholarship and Practice of Stakeholder Engagement in Working Landscapes: 34 Co-produced Research Opportunities*. Advancing Scholarship and Practice of Stakeholder Engagement in Working Landscapes Engagement Workshop Series Report 2022

Winfield E, **Parker L**, Ostoja S. *Adaptation Resources for Agriculture, A Case Study: Full Belly Farm*. USDA California Climate Hub 2020

**Parker L**, Ostoja S. *California agriculture fact sheet series*. USDA California Climate Hub 2020

**Parker L**. *What Specialty Crops Might Thrive in the Northwest in the Future?* 2019  
Agricultural Climate Network, agclimate.net

**Parker L**, Abatzoglou J, Prendeville H, Edwards P. [Crop Suitability Tool Summary](#). 2019  
USDA Northwest Climate Hub

**Parker L**, ed. [Partner Spotlights](#). USDA California Climate Hub 2019-2020

**Parker L**, Ostoja S., Smith J., Johnson D. [Newsletter from the California Climate Hub](#) 2018-2022  
USDA California Climate Hub

**Parker LE**. *New perennial crops may be possible in Northwest under climate change*. 2018  
Agriculture Climate Network, agclimate.net

**Parker LE**. *Modeling the thermal niche for perennial agriculture under current and future climate*. 2017  
Doctoral Dissertation, University of Idaho

**Parker LE**. *Meteorological conditions associated with rain-related periglacial debris flows on Mount Hood, Oregon and Mount Rainier, Washington*. MS Thesis, Oregon State University 2009

#### CONFERENCE AND WEBINAR PRESENTATIONS

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**Parker L**, Abatzoglou J, Cayan D. [The next generation of climate models: Background and applications](#). 2024  
USDA Climate Integration Team Webinar Series

Pathak TB, Ostoja S, Jha P, **Parker L**, Zhang N, Johnson R, Feirer S. *CalAgroClimate – Web-based decision support system for managing agriculture under weather and climate risks*. American Geophysical Union Annual Meeting 2023

Santos N, Naumes S, **Parker L**, Waring ER, Bernacchi L, Moyers K, Meyer D, Viers J. *Harnessing decentralized team science to secure a climate resilient water future*. American Geophysical Union Annual Meeting 2023

**Parker L**, Santos N, Hegewisch K, Amidi-Abraham G, Burns J. *Emerging digital tools for effective water management in water scarce regions*. American Water Resources Association 2023

Ikendi S, Koundinya V, Bergren C, Taku-Forchu NC, **Parker L**, Pinzon N, Roche L, Cooper M, Zaccaria D, Ostoja S, Pathak T. *Communicating climate smart agriculture to tree nut growers in the San Joaquin Valley of California*. American Association for Agricultural Education Research Conference 2023

Zhang N, **Parker L**, Abatzoglou J, Kisekka I, McElrone A, Ostoja S. *Climate change effects on California winegrapes and implications for water resources*. UCOWR Annual Conference 2023

**Parker L**, Pathak B, Grimm R. *California agriculture in a changing climate: Resources for Resilience* 2023  
California Resource Conservation Districts Annual Conference

**Parker L**. *Irrigated agriculture's future climate suitability over key Southwestern groundwater basins* 2022  
Southwest Groundwater NIFA SAS CAP Annual Symposium

**Parker L**. *Climate change and agriculture in California's Central Coast* 2021  
Webinar presentation for the CAN Seminar Series

**Parker L**. *The USDA Climate Hubs: Actionable climate information for farmers, ranchers, and foresters* 2021  
Soil and Water Conservation Society Annual Meeting

**Parker L.** *Climate change and California agriculture: Trends, impacts, and adaptation* 2020  
American Farmland Trust Women for the Land Central Coast Learning Circle

Prevéy J, Harrington C, **Parker L**, Brodie L. *Climate impacts on important food-producing shrubs: predicting change and disseminating results.* American Geophysical Union Annual Meeting 2019

**Parker L**, Jagannathan K, Reyes J. *Frost damage in specialty crops: current concerns, future risks, and implications for water resources.* American Geophysical Union Annual Meeting 2019

**Parker L**, Hegewisch K, Abatzoglou JT. *Opportunities and Obstacles for Northwest Specialty Crops in a Changing Climate.* Northwest Climate Conference 2019

**Parker L**, Abatzoglou JT. *Climate tools for specialty crop growers in the Northwest.* 2019  
USDA Northwest Climate Hub and National Drought Mitigation Center

**Parker L** *From research to tools: How the California Climate Hub supports climate-smart agriculture.* 2019  
California Climate and Agriculture Network Summit

Prevéy JS, Harrington CA, **Parker LE**. *Changing ranges and phenology of culturally-important shrubs of the Pacific Northwest.* Ecological Society of America Annual Meeting 2018

**Parker L**. *Climate Mapper: A web-based tool for climate-informed decision making.* 2018  
UC Extension outreach.

**Parker LE**, Abatzoglou JT. *The Next California? Projected shifts in the climatological niche for perennial fruit and nut crops under climate change.* Northwest Climate Conference 2016

**Parker LE**, Abatzoglou JT. *Projected changes in cold hardiness zones and implications for Northwest agriculture.* Northwest Climate Conference 2015

**Parker LE**, Abatzoglou JT. *Projected changes in cold hardiness zones over CONUS.* 2015  
REACCH Annual Conference

**Parker LE**, Abatzoglou JT. *Spatial coherence of extreme precipitation across the Northwestern United States.* Pacific Northwest Climate Science Conference 2014

Edwards LM, Bunkers MJ, Abatzoglou JT, Todey DP, **Parker LE**. *Climatological context of extreme events: The South Dakota blizzard of October 2013.* REACCH Annual Conference 2014

Abatzoglou JT, Farrell PD, **Parker LE**. *Characteristics of extreme precipitation events across the Pacific Northwest.* Center for Environmental Research Education and Outreach 2013

**Parker L**. *Bringing international collaboration into the classroom: The Salt Lake Community College faculty exchange program.* Utah International Higher Education Summit 2011

Iles, P. ed., and Coauthors including **L Parker**. *A multifaceted study of the condition of the Jordan River.* 2011  
Spring Runoff Conference; Utah State University

Grant GE, Nolin AW, and Coauthors including **L Parker**. *From atmospheric rivers to rivers of debris: Coupling extreme precipitation events, glacial retreat, debris flows, and channel changes on Mount Rainier, Washington.* MtnClim Consortium for Integrated Climate Research in Western Mountains; HJ Andrews Research Forest 2010

**Parker L**, Nolin AW. *Climatological and meteorological conditions associated with rain-induced periglacial debris flows in the Cascade Range, USA.* European Geophysical Union 2009

Nolin AW, **Parker L**. *Climatic and geomorphic triggering mechanisms of Cascadian periglacial debris flows.* Northwest Glaciologists 2008

## CAMPUS AND DEPARTMENTAL TALKS

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*Convening, Synthesis, and Research in Support of California's Farmers and Ranchers* 2022

*Saving Eden: How climate change could impact California agriculture and what we can do about it* 2021

*Adapting California agriculture to climate change* 2020

*Adapting the food system to climate change: Opportunities and challenges* 2020

*Adapting agriculture to climate change through perennial crop translocation* 2018

*A climate science primer* 2017

*Climate change impacts to agriculture* 2017

*Climate shapes our world* 2016

*The hydroclimate of the Northwest: Extremes, change, and implications for agriculture and water security* 2015

## TEACHING EXPERIENCE

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### Salt Lake Community College

#### Courses Taught

Earth Surface Environments\*  
(Fall and Spring, 2010 - 2013)  
Natural Hazards\*  
(Fall and Spring, 2010 - 2013)  
Geospatial Technology (Fall, 2010 - 2012)  
Applied GIS I (Spring 2011 - 2013)  
Independent Studies (Spring 2011 - 2013)

### Oregon State University

#### Labs and Recitations Taught (TA)

Cartography (Fall 2007)  
Physical Geography: Surface of the Earth (Spring 2008; Lead TA, Fall 2008)  
Climatology (Spring 2009)

\*Indicates classroom and online formats

## RESEARCH EXPERIENCE

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### University of Idaho

2013-2017

Applied Climate Science Lab, Graduate Research Assistant

Dissertation: *Modeling the niche for perennial agriculture under current and future climate*

### Oregon State University

2008

Mountain Hydrology Research Group, Graduate Research Assistant

Thesis: *Meteorological conditions associated with rain-induced periglacial debris flows on Mount Hood, Oregon and Mount Rainier, Washington*

### National Park Service, Delaware Water Gap NRA

2006-2007

Conservation Intern, Division of Research and Resource Planning

## GRANT WRITING (2020-2021)

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### Total Awarded \$106,975

*Gunnison Valley Health Foundation*. Details of grants (sponsors, awardees, titles, and amounts) have been removed for confidentiality purposes. Please contact me for more information.

## PROFESSIONAL AND INSTITUTIONAL SERVICE

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### California's Fifth Climate Change Assessment

2024-2026

Sacramento Valley Regional Synthesis Report, co-author

**Journal Guest Editor:** *Agricultural Water Management, Special Issue*

2023-2024

**Journal Reviewer:** *Agriculture and Forest Meteorology, Atmosphere, Climate Research, Fire Ecology, Global Change Biology, Journal of Hydrometeorology, Journal of Applied Meteorology and Climatology, Nature, Nature Communications, Physical Geography, PLOS One, Science of the Total Environment, Water*

### Professional Advisory and Review Committees

NRCS California State Technical Advisory Committee

2024

Southwest Climate Adaptation Science Center Advisory Committee

2024

Western Water Resilience Collaborative Steering Committee

2023-

Climate Analogs Academy California Climate Hub Representative

2023-

National Climate Change Road Map Horizon Scan Working Group

2023

USDA Plant Hardiness Zones Technical Review Committee

2022-2023

CalEPA OEHHA Indicators of Climate Change in California Report Technical Reviewer

2022

Climate Hubs Strategic Planning Process

2020



UCANR California Naturalist Program <i>Climate Stewards</i>	2019
<b>Conference Sessions Moderated, Convened</b>	
<i>Emerging digital tools for water resources management</i> (Co-Lead)	2023
American Water Resources Association Meeting, Denver, CO	
<i>Resilient Agroecosystems</i> (Co-Chair)	2020
American Geophysical Union Annual Meeting, Online.	
<i>More fruitful food systems: Production to consumption in a changing climate</i> (Moderator)	2018
Global Climate Action Summit, Affiliate Event; San Francisco, CA	
<b>Conference, Workshop, and Meeting Committees</b>	
Southwest Groundwater Annual Symposium, Planning Committee	2022
Colorado Climate Summit & WERA102 Annual Meeting, Planning Committee	2019-2020
USDA-NRCS Solano County Producer Outreach Workshop, Planning Committee	2019-2020
WERA102 Annual Meeting, Co-Coordinator	2018
7 <sup>th</sup> Annual Northwest Climate Conference, Planning Committee	2016
6 <sup>th</sup> Annual Northwest Climate Conference, Coordinator and Planning Committees	2015
<b>University of California Davis Committees</b>	
Applied Regional Climate Research Postdoc, Hiring Committee	2024
Institute of the Environment Voting Committee	2023-present
Climate Hub Postdoctoral Fellow, Hiring Committee	2023
Project Policy Analyst I, Hiring Committee	2023
Climate Smart Agriculture Academic Coordinator I, Hiring Committee	2022
<b>University of Idaho Committees</b>	
Progress and Tenure Committee	2017, 2014
Faculty Search Committee	2015, 2014
<b>Salt Lake Community College Committees and Service Committees</b>	
Faculty Senate	2010-2013
Academic Calendar Committee	2013
Faculty Search Committee	2012
Student Clubs Advisor	2010-2012
<b>Curriculum Design and Assessment</b>	
Online course development for Earth Surface Environments	2012
Assessment plan for Earth Surface Environments	2011-2012
Geospatial Sciences Professional Advisory Committee	2010-2012
<b>Grant Editing</b>	
UK Research and Innovation (UKRI) Future Leaders Fellowship.	2019
<i>Enhancing crops with C2 photosynthesis</i> . Line edit and copyedit	
CDFA Specialty Crop Multi-State Program.	2019
<i>Trait-based selective expansion of grapevine germplasm driven by adaptive potential for sustainable viticulture</i> . Line edit, copyedit, and budget review	

## MEDIA COVERAGE AND SCIENCE COMMUNICATION

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**Media Coverage and Interviews:** *AgClimate.net*, *Boise State Public Radio*, *Environmental Research Web*, *Idaho Public Radio*, *InsideClimate News*, *Knee Deep Times*, *Marin Independent Journal*, *Moscow-Pullman Daily News*, *National Geographic*, *The Argonaut*, *University of Idaho News*, *Yale e360*, *Yale Climate Connections*

### Science Communication

Science and History Interpretive Guide, Rocky Mountain Biological Laboratory 2017

### Letters, Op-Eds, Articles, Blog Posts

*AgClimate.net*, New perennial crops may be possible in future 2018  
*Crested Butte News*, RuMBLER of the Week (newspaper weekly series of scientist interviews) 2017

## AWARDS AND HONORS

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### Research Awards

Mount Holyoke College, \$1000 2008  
*Climatic influences on Cascadian periglacial debris flows*

### Additional Awards and Honors

#### University of Idaho

Diane Haynes Memorial Outstanding Graduate Student Award 2017  
 Deans Graduate Student Award 2017

#### Oregon State University

Muckleston Award 2009

#### Mount Holyoke College

Claire Bates Davidson and Martha Godchaux Field Scholarships 2006

## SELECTED COMMUNITY INVOLVEMENT (past 5 years)

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Local Group Co-Lead, Trail Sisters Gunnison Valley 2023-present  
 Mad Moose Running Events Volunteer Team 2021-present  
 COVID-19 Gunnison County Pandemic Response Volunteer Team 2020-2021  
 Young at Heart Senior Meal Delivery Program, Gunnison Senior Center 2020

## AFFILIATIONS, CERTIFICATIONS, AND SKILL SETS

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### Affiliations

American Water Resources Association (current)  
 National Extension Climate Initiative (current)  
 American Geophysical Union (current)  
 Association for International Agricultural and  
 Extension Education (former)  
 American Association of Geographers (former)

### Training

CITI Social & Behavioral Research Training

### Specialized Software and Scripting

MATLAB  
 ArcGIS suite

### Certifications

*Environmental Water Science,*  
 University of Idaho  
*Graduate Certificate in GIS and Remote Sensing,*  
 Oregon State University

### Products

Data and tool design for cold hardiness zones and  
 crop suitability tools on the [Climate Toolbox](#)