

Kristin B. Hulvey

Working Lands Conservation
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EDUCATION

Ph.D. **University of California, Santa Cruz**, Environmental Studies (2010); Advisor: Erika Zavaleta
B.S. **Stanford University**, Biological Sciences
Dartmouth College, Environmental Studies

EMPLOYMENT & RESEARCH EXPERIENCE

- 2019-pres. **Founder and Chief Scientist** of Working Lands Conservation, Multiplier, Oakland, CA & Logan UT.
- Develop and manage working lands programs that bring science to multi-stakeholder partnerships in the Western US to create innovative, durable management on large landscapes
 - Raised funds from public and private sources (\$10M since 2018)
 - Developed collaborations with state (Utah Dept of Ag & Food, Division of Water Quality), federal agencies (BLM, NRCS), nonprofits (Western Landowners Alliance) that have led to improved management of Utah and Western US landscapes
- 2014-2019 **Assistant Professor**, Wildland Resources Department, Utah State University
- **Areas of expertise:** Ecosystem functioning and services; stakeholder partnerships; ecological restoration; working lands management.
 - Developed and taught three courses (1 undergrad, 2 grad); teaching is consistently rated as 'above average' in student evaluations
 - Developed extensive network of practitioners and academics who are collaborators on past and ongoing work, which ensures research directly leads to management action
 - Publish research in top scientific journals, including in ecology, restoration, and resource management fields
- 2014 **Consultant**, Archipelago Consulting, ME.
- Designed practitioner survey evaluating the effectiveness of incorporating results-based management into conservation practice
- 2013-14 **Postdoctoral Fellow**, UC Davis, John Muir Institute, Davis, CA; with **Mark Schwartz**
- Interviewed forest and carbon sequestration experts to determine whether implementing the US Forest Protocol to manage forest-based carbon offset projects (per California's *Global Warming Solutions Act: AB 32*) would negatively affect forest biodiversity
 - Examined how forest carbon programs influence biodiversity conservation based on forest ownership patterns
- 2010-13 **Postdoctoral Research Associate**, University of Western Australia, Ecosystem Restoration & Intervention Ecology Group with **Richard Hobbs**: (<http://www.erie-research.org/>)
- Designed and implemented a long-term study to restore multiple ecosystem services in degraded Western Australian woodlands with a postdoctoral team
 - Developed a decision framework that outlines management options for practitioners managing changing and novel ecosystems
- 2003-10 **Ph.D. Candidate**, Environmental Studies Dept. University of California, Santa Cruz, CA
- Studied how losses of native forbs with functional traits similar to non-native species affect grassland vulnerability to weed invasion
 - Collaborated with managers to test restoration methods that match traits of native grassland species with those of invaders to increase invasion resistance

- Interviewed homeowners, reserve managers, government scientists, and non-profit managers to identify opportunities for managing invasive plants in multi-use landscapes
- 2009 **Consultant**, Blue Ridge-Berryessa Natural Area Conservation Partnership, Winters, CA
- Co-organized & co-facilitated landowner focus group on regional conservation goals
- 2004-09 **Independent Researcher**, St. George Island, AK
- Initiated a collaborative monitoring and management project focused on introduced reindeer effects on the island tundra
 - Partners - US Fish & Wildlife Service, Natural Resources Conservation Service (NRCS), local Aleut organizations
- 2004-05 **Consultant**, Anacapa Island Restoration Project, Island Conservation, Santa Cruz, CA
- Organized and executed fieldwork to monitor birds of special concern on the US Channel Islands after a rat removal project
- 2002-03 **Research Assistant**, to Dr. Erika Zavaleta, UC Berkeley, CA
- Assessed climate change's influence on CA native oak regeneration; conducted a grassland diversity and invasibility study
- 2001-03 **Research Associate**, Island Conservation, Santa Cruz, CA
- Assembled an expert team to develop and implement a plan to mitigate non-target bird mortality during a rat eradication on Anacapa Island, US Channel Islands

RESEARCH GRANTS & AWARDS

<i>Innovative beef cattle management in Utah's semi-arid rangelands for climate-smart outcomes and commodity market development, Principal Investigator (PI), (2023-28), USDA</i>	\$4,999,000
<i>Northern New Mexico Hub of the Western Working Lands Climate-smart Network, Collaborator (\$800K), (2023-28), USDA</i>	\$4,999,000
<i>Southwest Hub of the Western Working Lands Climate-smart Network, Collaborator (\$800K), (2023-28), USDA</i>	\$4,999,000
<i>Colorado Hub of the Western Working Lands Climate-smart Network, Collaborator (\$800K), (2023-28), USDA</i>	\$4,999,000
<i>Enhancing Lesser Prairie Chicken and pronghorn grassland habitat through data-informed Adaptive grazing and restoration (Eastern NM), Collaborator (\$50,000), (2022-25), NFWF</i>	\$295,823
<i>Managing grazing to benefit soil and riparian ecosystem services in semi-arid rangelands, Principal Investigator (PI), National Institute of Food and Agriculture (NIFA) Agricultural and Food Research Initiative (AFRI) (2022-26)</i>	\$649,810
<i>Using grazing-duration to balance: livelihoods, clean water, sage-grouse habitat, and sustainable forage in semi-arid rangelands, Principal Investigator (PI), Western Sustainable Agriculture Research & Education (SARE) Research and Education Grant (2022-25)</i>	\$328,329
<i>Improving riparian ecosystem services at a watershed scale using an innovative grazing system, Principal Investigator (PI), Bureau of Land Management (BLM) (2020-25)</i>	\$250,000
<i>Using innovative livestock grazing systems to manage multiple riparian-based ecosystem services on public rangelands, Principal Investigator (PI), National Institute of Food and Agriculture (NIFA) Agricultural and Food Research Initiative (AFRI) (2019-23)</i>	\$466,000
<i>Can we manage public rangelands for producers and the environment?: Using grazing-duration to balance livelihoods, clean water, sage-grouse habitat, and sustainable forage, Principal Investigator (PI), Western Sustainable Agriculture Research & Education (SARE)</i>	\$349,979

Research and Education Grant (2019-22)	
<i>Habitat Assessment Framework (HAF) on BLM Lands in Utah, (Co-PI), Bureau of Land Management (BLM) (2016-21)</i>	\$1,240,000
<i>Forb Islands: Possible techniques to improve forb seedling establishment for diversifying sagebrush-steppe communities, Collaborator, Great Basin Native Plant Project, Forest Service (2015-21)</i>	\$36,106
<i>Novel Techniques to Increase Forb Establishment in Sagebrush-Steppe Communities, Principal Investigator (PI), Great Basin Native Plant Project, Forest Service (2016-20)</i>	\$7,610
<i>Improvement of rangeland forb seedling establishment in the Great Basin, Principal Investigator (PI), Agricultural Research Station (2015-20)</i>	\$22,000
<i>Using GPS and remotely sensed data to discern differences in forage-use among three common livestock grazing systems, Principal Investigator (PI), Utah State University (2017-18)</i>	\$9,992
<i>Using grazing systems to manage ecosystem services in Utah and Western Landscapes, Principal Investigator (PI), Utah Agricultural Experimental Station (2015-17)</i>	\$79,997
<i>Integrating ecological, economic, and social components to improve effectiveness of landscape restoration, (Co-PI), Utah State University (2015-17)</i>	\$54,000
<i>Estimation of plant height using photogrammetrically derived point clouds, (Co-PI), Conservation Effects Assessment Project (CEAP), USDA-NRCS (2015-16)</i>	\$14,590
<i>Using grazing systems to manage ecosystem services in Utah and Western landscapes, Principal Investigator (PI), Research Catalyst Award, Utah State University (2015-16)</i>	\$20,000
<i>Using livestock grazing systems to manage ecosystem services on Utah rangeland, Principal Investigator (PI), Utah State University Extension (2015-16)</i>	\$10,000

PUBLICATIONS

Peer reviewed journal articles: *First author is graduate student advised by K Hulvey

- Hulvey, KB**, C Mellon, A Kleinhesselink. 2021. Rotational grazing can mitigate ecosystem service tradeoffs between livestock production and water quality in semi-arid rangelands. *Journal of Applied Ecology*. 58:2113-2123. <https://besjournals.onlinelibrary.wiley.com/doi/pdfdirect/10.1111/1365-2664.13954>
- Fiedler, S, JAF Monteiro, **KB Hulvey**, RJ Standish, MP Perring, B Tietjen. 2021. Global change shifts trade-offs among ecosystem functions in woodlands restored for multifunctionality. *Journal of Applied Ecology*. 58:1705-1717. <https://besjournals.onlinelibrary.wiley.com/doi/pdf/10.1111/1365-2664.13900>
- Valentine, L, N Shackelford, B Johnson, M Craig, M Perring, **KB Hulvey**, L Hallett, et al. 2020. Richard J. Hobbs: how one ecologist influenced the way we think about restoration ecology. *Restoration Ecology*. 28 (5): 1042-1046.
- *York, EC, MW Brunson, and **KB Hulvey**. 2019. Influence of Ecosystem Services on management decisions by public land ranchers in the Intermountain West, United States. *Rangeland Ecology and Management*. 72 (4): 721-728.
- *Fund, A, **KB Hulvey**, SL Jensen, DA Johnson, MD Madsen, TA Monaco, DJ Tilley, E David and B Teller. 2019. Evaluating techniques for native forb restoration in the Great Basin. *Rangeland Ecology and Management*. 72(3): 492-500.
- Hulvey, KB**, K Thomas and E Thacker. 2018. Assessing ecosystem services in high-shrub rangelands using two herbaceous cover sampling methods: Photography-based grid point intercept (GPI) and quadrat sampling. *Rangelands*. 40(5): 152-159.
- Paquette, A, A Hector, B Castagneyrol, ... **Hulvey, KB** (+46 authors). 2018. A million and more trees for science. *Nature Ecology & Evolution* 2(5): 763-766.

- Redford, K, **KB Hulvey**, M Williamson, MW Schwartz. 2018. Assessment of the Conservation Measures Partnership's effort to improve conservation outcomes through adaptive management. *Conservation Biology*. 32: 926-937.
- Hulvey, KB**, BJ Teller. 2018. Site conditions determine a key native plant's contribution to invasion resistance in grasslands. *Ecology* 99: 1257-1264.
- Conover, MR, **KB Hulvey**, ML Monroe, CB Fitzgerald. 2018. Susceptibility of spring-flowering plants to herbivory by mule deer. *Wildlife Society Bulletin* 42: 131-135.
- Hulvey, KB**, EA Leger, LM Porensky, LM Roche, KE Veblen, A Fund, J Shaw, ES Gornish. 2017. Restoration Islands: A tool for efficiently restoring dryland ecosystems? *Restoration Ecology* 25: S124-S134.
- Matzek, V, Gornish, ES, **KB Hulvey**. 2017. Emerging approaches to successful ecological restoration: five imperatives to guide innovation. *Restoration Ecology* 25: S110-S113.
- Hobbs, RJ, ES Higgs, CM Hall, P Bridgewater, FS Chapin III, EC Ellis, JJ Ewel, LM Hallett, JA Harris, **KB Hulvey**, and 18 others. 2014. Managing the whole landscape: historical, hybrid and novel ecosystems. *Frontiers in Ecology and the Environment* 12: 557-564.
- Hulvey, KB** and P Aigner. 2014. Using filter-based community assembly models to improve restoration outcomes. *Journal of Applied Ecology* 51: 997-1005.
- Standish, RJ and **KB Hulvey**. 2013. Co-benefits of planting species mixes in carbon projects. *Ecological Management & Restoration* 15: 26-29.
- Hulvey, KB**, RJ Hobbs, RJ Standish, DB Lindenmayer, L Lach, MP Perring. 2013. Benefits of tree mixes in carbon plantings. *Nature Climate Change* 3: 869-874.
- Hulvey, KB**, and ES Zavaleta. 2012. Abundance declines of a native forb have nonlinear impacts on grassland invasion resistance. *Ecology* 93: 378-388.
- Lindenmayer, DB, **KB Hulvey**, RJ Hobbs, M Colyvan, A Felton, H Possingham, W Steffen, K Wilson, K Youngentob and P Gibbons. 2012. Avoiding bio-perversity from carbon sequestration solutions. *Conservation Letters* 5: 28-36.
- Perring, MP, RJ Standish, **KB Hulvey**, L Lach, TK Morald, R Parsons, RK Didham, RJ Hobbs. 2012. The Ridgefield Multiple Ecosystem Services Experiment: Can restoration of former agricultural land achieve multiple outcomes? *Agriculture, Ecosystems and Environment* 163: 14-27.
- Aigner, PA, **Hulvey, KB**, CE Koehler, and LE Scott. 2011. Restoring California's inland grasslands – Don't forget the forbs! *Fremontia* 39: 41-44.
- Zavaleta ES, J Pasari, **KB Hulvey**, and D Tilman. 2010. Sustaining multiple ecosystem functions in real assemblages requires higher biodiversity. *Proc. of the National Academy of Science* 107: 1443-1446.
- Zavaleta ES, **KB Hulvey**, and B Fulfrost. 2007. Regional patterns of recruitment success and failure in two endemic California oaks. *Diversity & Distributions* 13: 735-745.
- Zavaleta, ES and **KB Hulvey**. 2007 Realistic variation in species composition affects grassland production, resource use and invasion resistance. *Plant Ecology* 188: 39-51.
- Zavaleta, ES and **KB Hulvey**. 2004. Realistic species losses disproportionately reduce resistance to biological invasion. *Science* 306: 1175-1177.

Book chapters

- Hulvey, KB**, RJ Standish, LM Hallett, BM Starzomski, SD Murphy, CR Nelson, MR Gardener, PL Kennedy, T Seastedt, KN Suding. 2013. Incorporating Novel Ecosystems into Management Frameworks. In Hobbs, RJ, E Higgs & C Hall. *Novel Ecosystems: intervening in the new ecological world order*. 157-171 (Wiley).
- Hulvey, KB**. 2013. Case Study: How social barriers contribute to novel ecosystem maintenance: Managing reindeer populations on St. George Island, Pribilof Islands, Alaska. In Hobbs, RJ, E Higgs & C Hall. *Novel Ecosystems: intervening in the new ecological world order*. 180-184 (Wiley).
- LM Hallett, RJ Standish, **Hulvey, KB**, MR Gardener, KN Suding, BM Starzomski, SD Murphy, JA Harris. 2013. Towards a conceptual framework for the management of novel ecosystems. In Hobbs, RJ, E Higgs & C Hall. *Novel Ecosystems: intervening in the new ecological world order*. 16-28 (Wiley).

Reports

- Hulvey, KB.** 2020. 2019-20 Three Creeks Water Quality Summary Report. Final Report to the Utah Grazing Improvement Program (Utah Dept of Ag & Food) and the Utah Division of Water Quality.
- Hulvey, KB.** 2019, 2020. Summary of Ecosystem Service Research 2016-2018. Status Report to Deseret Land & Livestock.
- Redford, KH, MW Schwartz, **KB Hulvey.** 2014. Summative Evaluation of Conservation Measures Partnership and Conservation Coaches Network to Strengthen Results-Based Management in Conservation. Final Report to the Conservation Measures Partnership & Conservation Coaches Network.
- Hulvey, KB.** 2009. Using Native Tarweeds to Manage Yellow Starthistle in California Grasslands. Final Report to the Mid Peninsula Regional Open Space District.
- Hulvey, KB** and the St. George Traditional Council Kayumixtax. 2005. St. George Island Rangeland Monitoring Recommendations. Report to the Tanaq Native Corporation.
- Hulvey, KB** St. George Island Reindeer Utilization Assessment Report. 2004. Report to the U.S. Fish & Wildlife Service, Homer, AK.
- Hulvey, KB,** S Morrison, and C Nishida. 2002. Mitigation options for ground feeding resident birds during a rat eradication on West Anacapa Island. Final Report to the U.S. Park Service, Channel Islands NP.

Other Publications

- Hulvey, KB.** 2020. Collaborative approaches for landscape-scale restoration. *Ecesis Vol 29(3), 1-6.*: <https://static1.squarespace.com/static/5ce03b647c15a00001c36e1c/t/5e574bb0a362884fea89423c/1582779317037/SERCAL19iiiecesisHulvey.pdf>
- Hulvey, KB.** 2018. Collaboration between ranchers and scientists leads to rangeland management opportunities. *Union of Concerned Scientists, Science for a healthy planet and safer world Blog*: <https://blog.ucsusa.org/science-blogger/collaboration-between-ranchers-and-scientists-leads-to-rangeland-management-opportunities>
- Gornish, E and **KB Hulvey.** 2016. New Ecological Restoration Section at ESA! *Ecological Restoration*, 34:87.
- Teller, B., **K. Hulvey,** and E. Gornish. 2016. Demography and Big Data. *Official blog of Methods in Ecology and Evolution.*
- Hulvey, K.** and R Hobbs. 2013. Designing carbon forests: Do tree mixes stack up to monocultures in carbon plantings? *Decision Point* 76, 89-90.

SERVICE & OUTREACH

Leadership Activities

- Grant panel participant, Western Sustainable Agriculture Research and Education (SARE) grants: 2022, 2020, 2021
- Co-founder, co-director, Ecological Restoration Section at the Ecological Society of America, 2015-2017; Vice president 2018-2020: This is the largest ecological society in the United States.
- Founder and Director, Ecological Restoration Section mentorship program, links students with established restoration researchers, 2017-present
- Coordinating editor, Restoration Ecology, Special issue: "Beyond conceptual frameworks: Emerging approaches to successful restoration," 2015-17
- External reviewer, Master's thesis, Stellenbosch University, South Africa: Identifying priority areas for active restoration after alien plant clearing in the City of Cape Town, 2016
- Ad-Hoc peer reviewer: *Biological Conservation, Biological Invasions, Conservation Letters, Ecography, Ecological Applications, Ecology, Ecology & Society, Ecosystems, Global Change Biology, J. of App. Ecology, Nature Climate Change, Oikos, Plant Ecology, Proc. of the Nat. Acad. of Sci., Restoration Ecology, Weed Science*

- Member of TreeDivNet: A select group of multi-national researchers who conduct diversity-functioning research in forest ecosystems
- Professional associations: Ecological Society of America, Society for Range Management

Talks & Conference Presentations (last 10 years; only presentations given by K. Hulvey included):

- 2022 A Community on Ecosystem Services (ACES) Annual Meeting. **Hulvey, KB**, T Payne, J Danninger, M Nasto. Managing for multiple ecosystem services in semi-arid rangelands. Washington, DC.
- 2022 Idaho Rangeland Fall Forum. **Hulvey, KB**. University of Idaho, Pocatello, ID.
- 2022 Western Landowner Alliance podcast series. **Hulvey, KB**. 'Putting People and Data to Work: Collaborative Monitoring Successes'. Three examples of community-based and regional cooperative monitoring approaches. *Virtual*.
- 2022 Society for Range Management Annual Meeting. **Hulvey, KB**, T Payne, J Danninger, M Nasto. Managing cattle grazing timing and duration to support multiple ecosystem services in semi-arid rangelands water quality in rangeland streams. Albuquerque NM.
- 2021 Society for Range Management Annual Meeting. **Hulvey, KB**, C Mellon, A Kleinheslink. Using grazing timing and duration to manage water quality in rangeland streams. *Virtual*.
- 2021 Western Landowner Alliance podcast series. **Hulvey, KB & T Payne**. People, Places, Process, Paradigm: The Three Creeks Project. *Virtual*. https://www.youtube.com/watch?v=P1EGO_tEpy8
- 2020 Southwest Society for Ecological Restoration. **Hulvey, KB**. Can innovative grazing partnerships restore ecosystem services on arid Western workinglands. *Virtual*.
- 2020 Ecological Society of America Annual Meeting. **Hulvey, KB**, R Hobbs, MP Perring, RJ Standish, L Lach, R Parsons, T Morald. Does increasing tree diversity restore multifunctionality in forests planted for carbon sequestration? *Virtual*.
- 2020 University of Arizona School of Natural Resources and the Environment, Seminar Series. **Hulvey, KB**. Can we manage public rangelands for grazing and the environment?: Balancing livelihoods, clean water, and sage-grouse habitat. *Virtual*.
- 2019 68th United Nations Civil Society Conference. **Hulvey, KB**, A Hart. Partnerships: Creating dialogue in an era of climate change. Salt Lake City, UT.
- 2019 Society for Range Management Annual Meeting. **Hulvey, KB**, J Gaeta. Managing grazing in riparian areas to maintain multiple rangeland ecosystem services. Minneapolis, MN.
- 2018 Colorado Mesa Natural Resources in the West seminar series. **Hulvey, KB**. Can we manage public rangelands for grazing and the environment?: Balancing livelihoods, clean water, and sage-grouse habitat. Grand Junction, CO.
- 2018 Ecological Society of America Annual Meeting. **Hulvey, KB**, J Gaeta. Managing grazing disturbance in riparian areas to maintain multiple rangeland ecosystem services in the Intermountain West: water quality, sage-grouse habitat, streambank stability, and livestock production. New Orleans, LA.
- 2018 The Natural Capital Symposium. **Hulvey, KB**, J Gaeta. Managing grazing disturbance in riparian areas to maintain multiple rangeland ecosystem services. Stanford, CA.
- 2016 Sagebrush Ecosystem Conservation Conference: All Hands, All Lands. **Hulvey, KB**. Managing the Utah sagebrush ecosystem: Livestock grazing, ecosystem services, and sage-grouse. Salt Lake City, UT.
- 2015 Ecological Society of America Annual Meeting. **Hulvey, KB**, AJ Holfuin, J Siegel, MW Schwartz. Using forest-based carbon programs to conserve biodiversity. Baltimore, MD.
- 2013 Ecological Society of America Annual Meeting. **Hulvey, KB**, MP Perring, RJ Standish, L Lach, RJ Hobbs. Benefits of using tree mixtures rather than monocultures in carbon plantings. Minneapolis, MN.
- 2012 Ecological Society of Australia Annual Meeting. **Hulvey, KB**, MP Perring, RJ Standish, L Lach, RJ Hobbs. Using diverse tree plantings to restore multiple ecosystem functions in carbon projects. Melbourne, Australia.
- 2012 Ecological Society of America Annual Meeting. **Hulvey, KB**, MP Perring, RJ Standish, L Lach, RJ Hobbs. Restoring multiple woodland ecosystem functions through diverse carbon plantings. Portland, OR.

Hosted Symposiums/Workshops/Meetings

- 2023 Co-organized symposium: Beyond Meat – Livestock, soil carbon and ecosystem service markets in the U.S. West: generating complementary funding for rangeland and rural community stewardship? Society for Range Management Annual Meeting, Boise, ID. (Feb 2023)
- 2020 Organized and moderated symposium: Transforming public rangeland management through collaborative multi-stakeholder partnerships, Society for Range Management Annual Meeting, Denver, CO.
- 2017 Co-organized and moderated symposium: Ecological restoration for multiple ecosystem services and the people who value them, Ecological Society of America Annual Meeting, Portland, OR.
- 2015-17 Organized and facilitated meeting: Restoration Ecology Section Meeting, Ecological Society of America Annual Meeting, (Baltimore, MD; Ft. Lauderdale, FL; Portland, OR)
- 2005 Co-organized, co-hosted, and co-taught workshop: Non-native reindeer impacts on St. George Island rangelands. **Partner:** Natural Resources Conservation Service (NRCS). **Product:** Developed working relationships among stakeholders that facilitated reindeer management.

Invited Workshop Presentations

- 2021-22 Invited member of working group focused on stream restoration in the US Southwest and restoration of stream resilience, ecosystem service provision, and carbon sequestration (3 in-person meetings & ~ 10 virtual meetings)
- 2017 Grazing Management for Riparian-Wetland Areas Training, Rich County, UT. **Presentation:** Ongoing Water Quality Data Collected on Rich County Grazing Systems. **Host:** BLM.
- 2011 Novel ecosystems: when and how do we intervene in the new ecological world order?, Victoria, Canada. **Presentation:** Are novel ecosystems a slippery slope to degradation? **Host:** Richard Hobbs & Eric Higgs. **Product:** Book: Lead author of two peer reviewed chapters & co-author on one.
- 2011 Change & uncertainty in biodiversity offsets. Melbourne, Australia. **Presentation:** Carbon offsets and biodiversity. **Host:** Centre of Excellence for Environmental Decisions (CEED).
- 2011 Resilience Workshop, Crawley, Australia. **Presentation:** Socio-ecological systems and resilience. **Host:** Centre of Excellence for Environmental Decisions (CEED) & Richard Hobbs.

Stakeholder Outreach

Agency Partners (Managers, Policy Makers)

- 2022 Organized riparian ESD training with NRCS specialist for WLC researchers, regional NRCS employees, and local BLM riparian specialists
- 2022 Field day with scientists from the Utah Geological Service about ongoing coordinated work in the Three Creeks Area
- 2022 Presented during a 2-day field tour organized by the BLM for Utah State University researchers. Discussed the Three Creeks Grazing Project participants
- 2023 Presented in a Sage-grouse Workshop Field Tour organized by the Utah Department of Wildlife. Discussed the Three Creeks Grazing Project
- 2021 Utah Grazing Improvement Program (UGIP) Partner Meeting, Randolph, UT: Presented updates on grazing-ecosystem services research project to UGIP collaborators.
- 2021 Research Update to Utah Department of Environmental Quality, Salt Lake City, UT: Shared results of grazing-water quality research with staff and collaborating researchers from Utah State Agencies.
- 2020 Salt Lake City BLM Field Office Research update, Virtual: Presented results from ongoing research on grazing systems and ecosystem services to BLM agency managers.
- 2018 Rich County BLM Water Quality Meeting, Salt Lake City, UT: Presented results from ongoing research on *E-coli* levels in rangeland streams to BLM agency managers.
- 2017 Research Update to Utah Department of Environmental Quality, Salt Lake City, UT: Shared results of grazing-water quality research with staff and collaborating researchers from Utah State Agencies.

- 2016 Utah Grazing Improvement Program (UGIP) Partner Meeting, Randolph, UT: Presented updates on grazing-ecosystem services research project to UGIP collaborators.
- 2014 Utah Annual Coordinating Committee Meeting: UFWR, UDWR, USGS, Salt Lake City, UT: Overview presentation of new research project on grazing and ecosystem services in Utah.

Private Partners (Ranchers, Aleut Tribe)

- 2020-23 Three Creeks Grazing LLC, Randolph, UT: Shared ongoing research results on grazing systems and ecosystem services with member ranchers.
- 2020 Three Creeks Grazing LLC, Randolph, UT: Presented results from ongoing research on grazing systems and ecosystem services to the LLC Board.
- 2017 Deseret Land & Livestock Partner Meeting, Woodruff, UT: Presented remote sensing grazing-ecosystem research project to ranch managers.
- 2017 Deseret Land & Livestock Outreach Meeting, Woodruff, UT: Update of grazing and ecosystem services research project to ranch managers & cowboys.
- 2016 Deseret Land & Livestock Outreach Meeting, Woodruff, UT: Presented new grazing-ecosystem research project to Deseret managers & cowboys.
- 2005 Tanaq Native Corporation Board Meeting, St. George, AK: Invited by the Native owners of St. George Island reindeer herd to present research results on tundra use by reindeer.

Public Meetings (Interested public, Agency scientists & managers, Grazing permittees, Non-profit managers)

- 2020-23 Rich County Coordinated Resource Management Meeting, Virtual: Presented grazing-ecosystem services research project to stakeholders in Randolph including ranchers, agency managers, non-profit managers.
- 2020 Results Oriented Grazing for Ecological Resilience (ROGER) meeting, Elko, NV: Presented with UT BLM managers results from ongoing research on grazing systems and ecosystem services to ranchers, and state and federal NV agency managers.
- 2019 Private Land Partners Day, Randolph, UT: Presented results from ongoing research on grazing systems and ecosystem services to meeting attendees.
- 2019 Three Creeks Field Tour, Randolph, UT: Presented results from ongoing research on grazing systems and ecosystem services to tour attendees.
- 2018 Rich County Rancher and BLM Meeting, Randolph, UT: Presented results from ongoing research on *E-coli* levels in rangeland streams to permittees.
- 2018 Box Elder Stakeholder & All Agency Coordinated Resource Management Meeting, Park Valley, UT: Presented results from ongoing research on beaver dam analogue effects on E-coli and nutrient levels in rangeland streams to agency managers and local ranchers.
- 2017 Box Elder Stakeholder & All Agency Coordinated Resource Management Meeting, Park Valley, UT: Presented grazing and ecosystem services research to agency managers and local ranchers.
- 2017 Tooele County Coordinated Resource Management Meeting, Tooele, UT: Presented rangeland forb seeding work to agency managers, the public, non-profit managers in Tooele area.
- 2015 Rich County Coordinated Resource Management Meeting, Randolph, UT: Presented grazing-ecosystem services research project to stakeholders in Randolph including ranchers, agency managers, non-profit managers.
- 2015 Rich County Coordinated Resource Management, Public Land Policy and Coordination Office, and Conservation District Landowner Appreciation Dinner, Randolph, UT: Presentation of new research project on grazing and ecosystem services in Utah to landowners in the Randolph community.
- 2010 Future Farm Stakeholder Field Day, Brookton, Western Australia, AU: Presented research to landowners from properties around experimental site. Discussed planting trees to store carbon on farms and learned why trees are important to these farmers.

Media coverage

Idaho Rangeland Resources Commission. "Carbon sequestration in rangelands: An introduction"
To be released in 2023 at: <https://idrangeland.org/about/>

Reese, J. "Awareness, appreciation, conservation" in Utah Science Magazine, 69(1) 2-7.
(<http://uaes.usu.edu/html/publications/utah-science-magazine/>): My research focused on ecosystem services in Utah Rangelands was mentioned in this Utah Science Magazine article.

TEACHING

Lead Instructor, Utah State University, Logan, UT

- Capstone: Assessment and Synthesis in Natural Resource Science (WILD 4910): Capstone class for the Range Major. Students work with a partner-rancher and Utah rangeland experts (BLM, Utah Grazing Improvement Program, Dept. Wildlife Resources) to develop and write a comprehensive real-world management plan focused on ranch operations and landscape conservation (e.g.: water line development, sage grouse habitat improvement, elk management). Skills: Conservation plan development, stakeholder communication, literature review, scientific writing, oral presentations. 3 credits. **Taught annually** (2015-19).
- Ecosystem Services: Assessment, Restoration, and Management (WILD 4950/6900): Students examine the science behind ecosystem services, explore the concept's influence as a driver of resource management, and conduct a project assessing ecosystem services in local areas. 3 credits. **Taught every other year** (2016 & 2018).
- Invasive Species Ecology (WILD 4950/6900): Students learn about the development of the field of invasion ecology including: terminology, trends in invasions, transport vectors and pathways, propagule pressure, spread and dispersal, traits of successful invaders, relationship with disturbance, traits of invaded communities, ecological impacts, interactions with climate change, management, and philosophical debates. 3 credits. **Taught** (2017).