Julia Hobson Haggerty

Department of Earth Sciences Montana State University, Bozeman MT 59715 USA e-mail: julia.haggerty@montana.edu; phone (406) 994-6904

EDUCATION & TRAINING

B.A. Liberal Arts. Colorado College, Colorado Springs, Colorado, USA, 1994

Ph.D. History. University of Colorado, Boulder, Colorado, USA, 2004

Post-Doctoral Fellow. Centre for Study of Food, Agriculture and Environment, University of Otago, Dunedin, New Zealand. 2005-2007

PROFESSIONAL APPOINTMENTS

2021-present.	Interim Director, Montana State University. Montana Institute on Ecosystems
2019-present.	Montana State University, Department of Earth Sciences, Associate Professor
2013-2019.	Montana State University, Department of Earth Sciences, Assistant Professor
2013-present.	Montana State University, Institute on Ecosystems, Faculty Fellow
2007-2013.	Headwaters Economics, Bozeman, Montana, Professional Research Associate

AWARDS AND HONORS

2020.	Fulbright Global Scholar Award.
2020.	Betty Coffey Outstanding Achievement Award, Montana State University.
2019.	Professional Geographer Award, Energy and Environment Specialty Group, American Association of Geographers.
2018.	Named one of 125 MSU Extraordinary Women by the MSU President's Council on the Status of University Women.
2018.	Award for Excellence in Teaching, Montana State Alumni Foundation.
2015.	Inspiring Women in Stem Award, INSIGHT Into Diversity Magazine.

PUBLICATIONS

* undergraduate student author; ** graduate student author

Books

2021. Jacquet, J., J. H. Haggerty, and G. Theodori, Eds. *Coordinating Research on the Social Impacts of Energy Development: Synthesis across the social sciences*. Boulder: Social Ecology Press/University of Colorado Press.

Refereed Journal Articles

In Press. Ahmed, S., T. Warne, H. Goemann, G. Linse, M. Greenwood, J. Kedziora, M. Sapp, D. Kraner, K. Roemer, J. H. Haggerty, D. Swanson, B. Poulter, P. Stoy. Systematic Review of Effects on Bioenergy from Edible versus Inedible Feedstocks on Biosecurity. *NPJ Science of Food*. Accepted 2/5/2021.

In Press. Jacquet, J., R. Pathak**, J. H. Haggerty, G. L. Theodori, A. Kroepsch. Research Fatigue in Unconventional Oil and Gas Boomtowns: Perceptions, Strategies and Obstacles among Social Scientists collecting Human Subjects Data. *Energy Research and Social Science*. Revised version accepted 1/6/21.

- 2021. Roemer, K.** and J. H. Haggerty. Coal Communities and the U.S. Energy Transition: A Policy Corridors Assessment. *Energy Policy*. Vol. 151: online only.
- 2021. Taylor, S., K. B. Walsh, G. L. Theodori, J. Jacquet, A. Kroepsch, J. Haggerty. Addressing Research Fatigue in Energy Communities: New Tools to Prepare Researchers for Better Community Engagement. *Society and Natural Resources*. 10.1080/08941920.2020.1866724
- 2021. K. Epstein**, D.Wood**, K. Roemer**, B. Currey**, H. Duff**, J. Gay**, H. Goemann**, S. Loewen**, M. Milligan**, J. Wendt**, E.N. Brookshire**, B. Maxwell, L. McNew, D. McWethy, P. Stoy, J. H. Haggerty. Towards an urgent yet deliberate conservation strategy: sustaining social-ecological systems in rangelands of the Northern Great Plains, Montana. *Ecology and Society* 26 (1):10. [online] https://www.ecologyandsociety.org/vol26/iss1/art10/
- 2020. Smith, K. K.** and J. H. Haggerty. Exploitable Ambiguities & the Unruliness of Natural Resource Dependence: Public Infrastructure in North Dakota's Bakken Formation. *Journal of Rural Studies*. 80: 13-22.
- 2020. Walsh, K. B.**, J. H. Haggerty, J. B. Jacquet, G. L. Theodori, and A. Kroepsch. Uneven impacts and uncoordinated studies: A systematic review of research on unconventional oil and gas development in the United States. *Energy Research and Social Science*. 66: 101465. doi: 10.1016/j.erss.2020.101465
- 2020. Walsh, K. B.** and J.H. Haggerty. Social License to Operate during Wyoming's Coalbed Methane Boom: Implications of Private Participation. *Energy Policy*. 138: 111217. doi: 10.1016/j.enpol.2019.111217
- 2019. Epstein, K.**, J. H. Haggerty, and H. Gosnell. Super-Rich Landowners in Social-Ecological Systems: Opportunities in Affective Political Ecology and Life Course Perspectives. *Geoforum* 105: 206-209.

- 2019. Smith, K. K.**, J. H. Haggerty, D. L. Kay and R. Coupal. Shared Services in Energy Boomtowns: Resourcefulness or Overadaptation? *Journal of Rural and Community Development*. 14(2): 66-86.
- 2019. Higuera, P.E., A.L. Metcalf, C. Miller, B. Buma, D.B. McWethy, E. C. Metcalf, Z. Ratajczak, C.R. Nelson, B.C. Chaffin, R.C. Stedman, S. McCaffrey, T. Schoennagel, B.J. Harvey, S.M. Hood, C.A. Schultz, A.E. Black, D. Campbell, J.H. Haggerty, R.E. Keane, M.A. Krawchuk, J.C. Kulig, R. Rafferty, and A. Virapongse. Integrating subjective and objective dimensions of resilience in fire-prone landscapes. *Bioscience* 69:5 (May): 379-388. doi: 10/1093/biosci/biz030
- 2019. Walsh, K. B.** and J. H. Haggerty. 'I'd do it again in a heartbeat': Coalbed methane development and satisfied surface owners in Sheridan County, Wyoming. *Extractive Industries and Society.* 6(1): 85-93. doi: 10.1016/j.exis.2018.08.014
- 2019. Haggerty, J. H., K. K. Smith**, J. Weigle, T. J. Kelsey, R. Coupal, D. Kay, K. B. Walsh**, P. Lachapelle. Tradeoffs, balancing, and adaptation in the agriculture-oil and gas nexus: Insights from farmers and ranchers in the United States. *Energy Research and Social Science* 47 (Jan.): 84-92. doi: 10.1016/j.erss.2018.08.012
- 2018. Lachapelle, P., K. K. Smith**, J. H. Haggerty, T. W. Kelsey. A National Extension Oil and Gas Network. *Journal of Extension* 56(7). Published online: https://joe.org/joe/2018december/iw6.php
- 2018. Haggerty, J. H., A. Kroepsch, K. B. Walsh**, K. K. Smith**, and D. Bowen. Geographies of Impact and the Impacts of Geography: Unconventional Oil and Gas in the American West. *Extractive Industries and Society* 5(4): 619-633. doi: 10.1016/j.exis.2018.07.002
- 2018. Haggerty, J. H., M. Auger, and K. Epstein**. Ranching Sustainability in the Northern Great Plains: An Appraisal of Local Perspectives. *Rangelands* 40(3): 71-98. doi: 10.1016/j.rala.2018.03.005
- 2018. Haggerty, J. H., M. N. Haggerty, J. Rose*, and K. Roemer**. Planning for the Local Economic Impacts of Coal Facility Closure: Emerging Strategies in the American West. *Resources Policy* 57(Aug.): 69-80. doi: 10.1016/j.resourpol.2018.01.010
- 2018. Haggerty, J. H., E. L. Rink, R. McAnally and E. Bird. Restoration and the Affective Ecologies of Healing: Buffalo & the Fort Peck Tribes. *Conservation & Society* 16(1): 21-29. doi: 10.4103/cs.cs_16_90
- 2018. Stoy, P. C., S. Ahmed, M. Jarchow, B. Rashford, D. Swanson, S. Albeke, G. Bromley, E. N. J. Brookshire, M. D. Dixon, J. H. Haggerty, P. Miller, B. Peyton, A. Royem, T. Sohl, L. Spangler, C. Straub, and B. Poulter. Opportunities and tradeoffs between BECCS and food, water, energy, biodiversity, and social systems at regional scales. *Bioscience* 68(2): 100-111. doi: 10.1093/biosci/bix145
- 2018. Haggerty, J. H., K. Epstein**, M. Stone**, and P. Cross. Land Use Diversification & Intensification on Elk Winter Range in the Greater Yellowstone Ecosystem. *Rangeland Ecology and Management* 71(2): 171-174. doi: 10.1016/j.rama.2017.11.002

- 2018. Haggerty, J. H., K. K. Smith**, T. Mastel, and P. Lachapelle. Assessing, Monitoring, and Mitigating Energy Boomtown Impacts in the U.S.: Evaluating a Public Health Model. *Impact Assessment and Project Appraisal* 36(1): 115-127.
- 2017. Smith, R., R. McAnally, L. Red Elk, E. Bird, E. L. Rink, D. Jorgensen, and J. H. Haggerty. Fort Peck Buffalo Project A Case Study. *Tribal College & University Research Journal* 1(2): 1-29.
- 2016. Haggerty, J. H. and K. McBride*. Does local monitoring empower fracking host communities? A case study from the gas fields of Wyoming. *Journal of Rural Studies* 43(Feb.): 235-247.
- 2015. Allred, B. W., W. K. Smith, D. Tidwell, J. H. Haggerty, S. W. Running, D. E. Naugle, and S. D. Fuhlendorf. Ecosystem Services lost to oil and gas in North America. *Science* 348(6233): 401-402. Apr. 23, 2015. doi:10.1126/science.aaa4785
- 2014. Haggerty, J. H., P. H. Gude, M. Delorey, R. Rasker. Long-term effects of income specialization in oil and gas extraction: the U.S. West, 1980–2011, *Energy Economics* 45: 186-195. doi: 10.1016/j.eneco.2014.06.020
- 2014. Haggerty, J. H., M. N Haggerty, R. Rasker, P. H. Gude. County Economic Development at a Glance: A Single Measure of Opportunity. *Western Economics Forum* XIII:1, Spring 2014.
- 2014. Haggerty, J. H., Haggerty, M. N., Rasker, R. Uneven Local Benefits of Renewable Energy in the U.S. West: Property Tax Policy Effects. *Western Economics Forum* XIII:1, Spring 2014.
- 2012. Gude, P. H., R. Rasker, K. L. Jones, J. H. Haggerty, M. C. Greenwood. 2012. The Recession and the New Economy of the West: The Familiar Boom and Bust Cycle? *Growth and Change* 43(3): 419-441.
- 2009. Haggerty, J. H. and H. Campbell. Keeping the stress off the sheep?: neoliberalism, animal bodies, and 'good' pastoral farming in New Zealand. *Geoforum* 40: 767-777.
- 2008. Moller, H., C. MacLeod, J. H. Haggerty, C. Rosin, G. Blackwell, C. Perley, S. Meadows, F. Weller and M. Gradwohl. Intensification of New Zealand agriculture: Implications for biodiversity. *New Zealand Journal of Agricultural Research*, 51(3): 253-263. doi: 10.1080/00288230809510453
- 2007. Haggerty, J. H. 'I'm not a greenie but...': Environmentality, eco-populism and governance in New Zealand: Experiences from the Southland whitebait fishery. *Journal of Rural Studies* 23: 222-237.
- 2007. Gosnell, H., J. H. Haggerty, and P. Byorth. Ranch Ownership Change and Water Resource Management in Southwestern Montana: Implications for Fisheries. *Journal of the American Water Resources Association* 43(4): 990-1003.
- 2006. Haggerty, J. H. and W. R. Travis. Out of Administrative Control: Absentee Owners, Resident Elk and the Shifting Nature of Wildlife Management in Southwestern Montana. *Geoforum* 37: 816-830.

2006. Gosnell, H., J. H. Haggerty, and W. R. Travis. Ranchland Ownership Change in the Greater Yellowstone Ecosystem, 1990 - 2001: Implications for Conservation. *Society and Natural Resources* 19: 743-758.

Refereed Reports

2021. National Academies of Sciences, Engineering, and Medicine. *Goals and Policies for Accelerating Decarbonization in the United States.* Washington, DC: The National Academies Press. doi: https://doi.org/10.17226/25932. (Authors: Pacala, S. W., C. Conliff, D. Deane-Ryan, D., J.H. Haggerty, C. Hendrickson, J. Holmes, J. Jenkins, R. Johnson, T. Liewen, V. Loftness, C. A. Miller, B. Pizer, V. Rai, E. Rightor, K. Sims Gallagher, S. F. Tierney, J. Wilcox.)

Book Chapters

- 2018. Smith, K. K.** and J. H. Haggerty, "Devolved Governance & Alternative Dispute Resolution Programs: An Example from the Bakken." In *Governing Shale Gas: Development, Citizen Participation and Decision Making in the US, Canada, Australia and Europe*, eds. J. Whitton, J. Cotton, I. Charnley-Parry & K. Brasier. NY: Routledge.
- 2018. Bills, K.** and J. H. Haggerty, "Governing Unconventional Legacies: Lessons from the Coalbed Methane Boom in Wyoming." In *Governing Shale Gas: Development, Citizen Participation and Decision Making in the US, Canada, Australia and Europe*, eds. J. Whitton, J. Cotton, I. Charnley-Parry & K. Brasier. NY: Routledge.
- 2018. Jacquet, J. B., Witt, K., Rifkin, W., and J. H. Haggerty. "A complex adaptive system or just a tangled mess? Property rights and shale gas governance in Australia and the US." In *Governing Shale Gas: Development, Citizen Participation and Decision Making in the US, Canada, Australia and Europe*, eds. J. Whitton, J. Cotton, I. Charnley-Parry & K. Brasier. NY: Routledge.
- 2017. Haggerty, J. H. "A horse that has left the barn: expanding geographies of natural gas." In *Handbook of Energy Geographies,* ed. B. Solomon and K. Calvert, 57-71. Northampton, MA USA: Edward Elgar Press.
- 2015. Haggerty, M. N. and J. H. Haggerty. "Energy Development as Opportunity and Challenge in the Rural West." In *The Rural West: Common Regional Issues*, ed. D. Danbom, 161-190. Salt Lake City, UT USA: University of Utah Press.

Encyclopedia Entries

2008. Haggerty, J. H. and H. Campbell. "Farming and the Environment." *Te Ara, The Encyclopedia of New Zealand* (www.TeAra.govt.nz)

2008. Campbell, H. and J. H. Haggerty. "Kiwifruit." *Te Ara, The Encyclopedia of New Zealand,* (www.TeAra.govt.nz)

Book Reviews

2015. Haggerty, J. H. "America's Public Lands: From Yellowstone to Smokey Bear to Beyond" by Randall K. Wilson. *The AAG Review of Books*. Issue 3(4).

Currently in Review

Haggerty, M. N. and J. H. Haggerty. "Rethinking Fiscal Policy for Inclusive Rural Development." Invited contribution to Federal Reserve Bank of America, *Rural Development*.

Epstein, K.**, J.H. Haggerty and H. Gosnell. With, not for, money: Ranch management trajectories of the super-rich in Greater Yellowstone. *Annals of the American Association of Geographers*. Moderate revisions requested 9/30/2020.

GRANTS

Extramural

2020-2022. USDA National Institute of Food and Agriculture #2019-0743, sabbatical research grant \$106,777. Land Inequality as Economic Development Challenge in Remote Regions. *Principal Investigator:* J. H. Haggerty.

2018-2020. National Science Foundation Social, Behavioral and Economic Sciences-Geography and Spatial Sciences #1832452. \$225,000. High Net Worth Property Regimes: Trajectories and Implications for Resource Management in Critical Conservation Landscapes. *Principal Investigator:* J. H. Haggerty.

2018-2023. National Science Foundation EPSCoR. RII Track-1 #1757351. \$20,000,000 (Haggerty share ca. \$650,000). Consortium for Research on Environmental Water Systems. *Principal Investigator:* R. M. Callaway. *Role:* Co-Investigator.

2018-2020. USDA National Institute of Food and Agriculture #2018-68006-27648. \$367,479 (MSU Share \$206,667). *Project:* Understanding and Addressing Research Fatigue in Rural Communities: Lessons for the Social Sciences from Energy Boomtowns. *Director:* J. H. Haggerty.

2016-2020. National Science Foundation EPSCoR #0IA 1632810. \$6,000,000 (MSU Share \$2,000,000). *Project:* Water, Agriculture, Food & Energy Research Nexus. *Principal Investigator:* P. Stoy, MSU. *Role:* Co-Investigator.

2016-2018. U.S. Geological Survey #G16AC00385. \$66,450. *Project:* Social Dimensions of Private Land Use and Elk Winter Range: Toward a Complex Systems Model in Brucellosis Ecology. *Director:* J. H. Haggerty.

2015-2018. National Science Foundation Social, Behavioral and Economic Sciences-Sociology #1528422. \$282,723 (MSU Share \$38,000). *Project:* Research Coordination Network: Fostering Cross-Disciplinary Research on Energy Development. *Co-Directors:* J. Jacquet, South Dakota State University and J. H. Haggerty.

2014-2018. USDA National Institute of Food and Agriculture #2015-68006-22850. \$474,190 (MSU Share \$264,391). Escaping the Resource Curse: Developing Governance and Investment Frameworks to Leverage the Benefits of Energy Development for Rural Sustainability. *Director:* J. H. Haggerty.

2015-2016. World Wildlife Foundation. \$52,639. *Project:* Ranch Ownership and Management Trends in the Northern Great Plains. *Director:* J. H. Haggerty.

2015. Mountain SEON Research Coordination Network, University of Idaho. \$12,500. Buffalo Restoration as Resilience. *Co-Directors:* J. H. Haggerty, E. L. Rink, and E. Bird.

Intramural

- 2017. Montana State University Outreach and Engagement Council. \$4,885. *Project:* Prairie Communities in Action. *Director:* J. H. Haggerty.
- 2016. Montana Institute on Ecosystems \$41,325. *Project:* Socioecological Systems Research. *Role:* PI with Elizabeth Rink (Montana State University) and Brady Allred (Univ. of Montana).
- 2015. Montana State University Vice-President for Research \$123,000 *Role:* Co-PI. *Project:* Human Ecology Learning and Problem Solving (HELPS) Lab. PI: Dr. Eric Raile.
- 2014. Montana State University Faculty Center for Excellence \$1,500 *Role:* Project Leader. Crowd Sourcing Migration Data, Instruction Innovation Grant.
- 2006. University of Otago Research Grant NZ\$22,000

INVITED PRESENTATIONS

Extramural: National and International

- 2019. "Social Impacts of Oil and Gas Development." SciLine/American Association for the Advancement of Science Bootcamp for Journalists. State College, PA (Oct. 24).
- 2019. "Societal and Policy Issues: Decarbonization & Resource Peripheries." Deep Decarbonization Workshop, National Academies of Sciences, Engineering, and Medicine. Washington DC (Jul. 22).
- 2019. "The Third West in Transition: The Big Picture on Small Places." Geographical Sciences Committee Meeting, National Academies of Sciences, Engineering, and Medicine. Washington DC (May 1).
- 2019. "Geographies of Impact and the Impacts of Geography: Unconventional Oil and Gas in the American West." Professional Geographer Lecture, Energy and Environment Specialty Group, American Association of Geographers. Washington DC (Apr. 5, with Adrianne Kroepsch).
- 2017. "Social impact assessment and mitigation/Évaluation de l'impact social & atténuation." Plenary Lecture and Instruction Session. Workshop on Social Impact Assessment. University of Quebec-Rimouski, Canada (Apr. 4-5).
- 2015. "Restoration as Resilience: Buffalo, Land and the Fort Peck Tribes." Research presentation. White House Office of Science and Technology Policy workshop on Resilient People at the

Intersection of Climate, Culture and Community: Mental Health and Wellness Impacts. Washington DC (Apr. 6).

Extramural: State and Regional

- 2020. "Community Resilience in the Third West." Plenary Lecture, Montana Watershed Coordination Council Annual Conference. Helena, Montana (Jan. 21).
- 2019. "Oil and Gas in the Rural West." Central Montana Resource Council Public Lecture. Lewistown, MT (Oct. 17, with Stephanie Ewing).
- 2019. "The Third West in Transition: Exploring Resilience in Contemporary Rural Landscapes." Beartooth Front Coalition Public Lecture. Absarokee, Montana (May 21).
- 2018. "Rural Communities and a Changing Economy." Montana Association of Conservation Districts Annual Convention. Billings, Montana (Nov. 15, with Mark Haggerty).
- 2018. "The Third West in Transition: Exploring Resilience in Contemporary Rural Landscapes." Center for Western Lands and Peoples at Montana State University. Museum of the Rockies. Bozeman, Montana (Oct. 1).
- 2018. "Grassland Ownership Trends and Community Resilience." Plenary lecture. Transboundary Grassland Workshop. Glasgow, Montana (Feb. 13).
- 2017. Workshop on the Subsurface in the American West. Panelist. Center of the American West, University of Colorado Boulder. Boulder, Colorado (May 21-23).
- 2016. "Escaping the Resource Curse: Findings from comparative energy impacts research in the Bakken, Powder River Basin and Marcellus." Seminar talk. University of Montana Geography Department. Missoula, Montana (Oct 4).
- 2015. "Amenity Migration & Sharing our Backyard(s) the Stream Access Challenge in Montana." USGS and Montana Chapter of Society of Conservation Biology. Public lecture, Science in our Backyard series. Bozeman, Montana (May 3)
- 2015. "Natural Resource Extraction and Local Economic Development." Asia-Montana Energy Summit Expert Conference. University of Montana, Mike & Maureen Mansfield Center. Missoula, Montana (Apr. 29).
- 2012. "Effects of High Voltage Transmission Lines on Real Estate Values." Invited comments. Montana State University Extension. Bozeman, Montana (Mar. 21).
- 2004. "Ranch Ownership Change in Greater Yellowstone." Research presentation. Animals and Access: Complexity, Contradictions and Cultural Changes, annual Burton K. Wheeler Center policy forum. Helena, Montana (May 12).
- 2004. Briefing. Greater Yellowstone Coordinating Committee. Jackson, Wyoming (Apr. 3).

2003. "Ranch Ownership Change in Greater Yellowstone." Research presentation. Annual Meeting of The Nature Conservancy Wyoming Board of Trustees (Sep. 14).

Intramural

- 2019. Invited Panelist. "Team Building." Women in Science and Engineering Annual Conference. Bozeman, Montana (Oct. 19).
- 2018. Invited Lecture. Leadership MSU class of 2018. (Feb. 22).
- 2018. "People, Place & the Coal Transition in the US West: Recent Research and Future Priorities." Rough Cut Series, Montana Institute on Ecosystems. Montana State University (Feb. 7).
- 2017. "Rural Communities and Change: What is Resilience?" 10x10 Innovation Road Show: From Brains to Weeds. Montana State University. The Ellen Theatre, Bozeman, Montana (Oct. 26).
- 2017. "Trade Secrets: Essential Skills Most Advisors Can't or Won't Teach You." Women in Science and Engineering Seminar Series. Montana State University, Bozeman, Montana (Mar. 30).
- 2017. Presenter. 994-Calling Seminar series. Office of the Vice President for Research. Montana State University, Bozeman, Montana (Mar. 27).
- 2016. "Escaping the Resource Curse: Findings from comparative energy impacts research in the Bakken, Powder River Basin and Marcellus." Research seminar with K. Bills and K. Smith. Earth Sciences Department Seminar Series. Montana State University, Bozeman, Montana (Oct. 13).
- 2016. "Ranching and Grasslands Conservation Strategies in the Northern Great Plains: Insights from an Operation Lifecycle Framework" Land Resources and Environmental Sciences Seminar series, Montana State University, Bozeman, Montana (Oct. 10).
- 2015. "Social-Ecological Dimensions of Montana's Amenity Economy." Rough Cut Series, Montana Institute on Ecosystems. Montana State University, Bozeman, Montana (Dec. 3).
- 2013. "Energy and the West." Research seminar. Earth Sciences Department Seminar Series. Montana State University, Bozeman, Montana (Oct. 28).

INVITED WORKSHOPS & RESIDENCIES

- 2019. Guest scholar. Australian Centre for Culture, Environment, Society and Space. University of Wollongong, Australia (Dec. 1-15).
- 2018. "Transforming agri-food systems: scales of governance, 'alternatives', and the role of social sciences." Centre for Sustainability (CSAFE), University of Otago, Dunedin, New Zealand (Nov. 9).
- 2018. Aspen Energy Governance Forum. Aspen Institute, Aspen, Colorado (Oct. 14-17).
- 2018. Coal Transition Solutions Forum. Headwaters Economics, Bozeman, Montana (Jul. 10-12).

- 2018. Energy Impacts and Transitions Incubator. Cornell University, Ithaca, New York (May 3-5).
- 2017. Defining ecological and social resilience in fire-prone ecosystems. University of Montana, Missoula, Montana (May 11-12).
- 2015. Bakken Researchers Convening. Dickinson State University, Dickinson, North Dakota (May 12-14).
- 2014. Energy Impacts Research Coordination Workshop. South Dakota State University, Brookings, South Dakota (Jan. 28-30).

CONFERENCES

Conference Chair or Organizer

- 2019. Montana Environmental Social Sciences Summit. Homestake, Montana (Nov 17-18). Co-chair with L. Metcalf and K. Epstein.
- 2019. International Conference on Energy and Social Science. Arizona State University, Tempe, Arizona (May 29-Jun 2). Co-chair with C. Miller and M. Pasqualetti.
- 2017. Energy Impacts Symposium. Ohio State University, Columbus, Ohio (Jul. 26-27). Co-chair with J. Jacquet.
- 2016. Onshore Unconventional Hydrocarbon Development: Legacy issues, induced seismicity, and innovations in managing risk. Roundtable on Unconventional Hydrocarbon Development. National Academies of Sciences, Engineering and Medicine. Washington DC (Dec. 1-2). Co-chair with B. Anderson, Workshop Planning Committee.

Conference Sessions Organized

- 2018. Energy Impacts "track" (6 paper sessions, 2 round tables), co-organized with J. Jacquet. International Symposium for Society and Natural Resources. Snowbird, Utah (Jun. 17-21).
- 2017. Taking the blinders off SIA for energy projects. Co-chair with W. Rifkin, M-J. Fortin, and K. Witt. Annual Conference of the International Association for Impact Assessment. Quebec, Canada (Apr. 6).
- 2016. The Interior in Social-Ecological Systems 1 and 2: Affective Transformations and Intentional Acts of Biophysical Rehabilitation. With H. Gosnell. American Association of Geographers Annual Meeting. San Francisco, California (Apr. 1).

Discussant

2018. Resource Royalties: Rural Investment Mechanisms in an Age of Uncertainty I. American Association of Geographers Annual Meeting, New Orleans, Louisiana (Apr. 13).

Panels

- 2018. Escaping the Resource Curse. International Symposium for Society and Natural Resources. Snowbird, Utah (Jun. 21).
- 2018. Diverse and Liveable Worlds III. American Association of Geographers Annual Meeting, New Orleans, Louisiana (Apr. 12).
- 2017. New Geographies of the American West II: Rethinking/Reclaiming Public Lands. American Association of Geographers Annual Meeting, Boston, Massachusetts (Apr. 7).
- 2016. Boomtown effects from oil and gas development. Roundtable. Annual Conference of the International Association for Impact Assessment. Nagoya, Japan (May 13).

Papers Presented since 2013

- 2020. "Ownership trajectories of the ranches of the super-rich: a mixed methods approach to emerging rural land tenure questions." International Symposium of Society and Natural Resources. Virtual (July 23).
- 2019. "The Shale Research Boom part 2: Implications of where and how shale impacts research has been conducted, 2000-2018." Energy and Society in Transition. Tempe, Arizona (May 29).
- 2018. "The Dynamics of Disruption and Transformation: Insights from 'Escaping the Resource Curse." International Symposium for Society and Natural Resources. Snowbird, Utah (Jun. 21).
- 2017. "Impact Assessment & Monitoring in Energy Boomtowns: Benefits and Drawbacks of Adapting Existing Planning Models." American Association of Geographers Annual Meeting, Boston, Massachusetts (Apr. 8).
- 2017. "Boomtowns: Adapting existing planning models to SIA." Annual Conference of the International Association for Impact Assessment. Quebec, Canada (Apr. 6).
- 2016. "Impacts of cultural keystone species restoration." Annual Conference of the International Association for Impact Assessment. Nagoya, Japan (May 13).
- 2016. "Community Resilience as Origin and Outcome of Restoration Processes: Conceptual and Operational Considerations." American Association of Geographers Annual Meeting, San Francisco, California (Apr. 1).
- 2015. "Who Owns Montana? Amenity Migration, Control of Natural Capital and Property Politics" American Association of Geographers Annual Meeting, Chicago, Illinois (Apr. 1).
- 2014. "Peripheralism and the Dilemmas of Hosting Energy Development: Examples from the Energy Colonies of the U.S. West" American Association of Geographers Annual Meeting, Tampa, Florida (Apr. 12).

TEACHING EXPERIENCE

Montana State University

GPHY 121D Human Geography (Fall 2013, 2014, 2016, 2018, 2019)

GPHY 326 Geography of Energy Resources (Spring 2015, 2016, 2017, 2018, 2020)

GPHY 445/545 Advanced Regional Geography (Fall 2014, Spring 2016, Spring 2018)

GPHY 591 Graduate Seminar: Resource Geography (Fall 2015, Fall 2018)

ERTH 594 Earth Science Seminar in Research Design and Professional Development (Fall 2016, Fall 2017)

ESCI 102CS Montana Energy Systems (Spring 2016)

ESCI 102CS Public Lands and Climate Change (Fall 2015)

University of Otago

ANTH 414 Ideological Forces in Society: Animals and Society (Terms 1 & 2, 2006)

University of Colorado-Boulder

CAMW 2001 The American West (Fall 2000, Fall 2001)

Graduate Student Supervision

Alex Leone, MSc Geography (2015)

Carl Hamming, MSc Geography (2016)

Kathryn Bills, PhD Geography (2020)

Jackson Rose, MSc Geography (2020)

Kristin Smith, PhD Geography (2020)

Kathleen Epstein, PhD Geography (2020)

Michael Stone, MSc Geography (enrolled Fall 2016)

Kelli Roemer, PhD Geography (enrolled Fall 2017)

Grete Gansauer, PhD Geography (enrolled Fall 2019)

Elise Otto, MSc Geography (enrolled Fall 2020)

Graduate Committee service at MSU

Dionne Zoanni, MSc Earth Sciences-Geography (2017)

Linnea Sando, PhD Earth Sciences-Geography (2018)

Megan Moore, MSc Earth Sciences-Geography (2019)

Robert Briwa, PhD Earth Sciences-Geography (2019)

Nicholas Bergmann, PhD Earth Sciences-Geography (2020)

Thomas Bass, PhD Land Resources and Environmental Sciences

Honors Degree Supervision

Angela McKenzie, B.A. Hons., Anthropology, University of Otago. 2006. co-supervised with Hugh Campbell

Hazel Fowler, B.A. Hons., 2007, Consumer Food Science, University of Otago. 2007.

RESEARCH TRAINING

2002-2004. Research Assistant, Department of Geography, University of Colorado-Boulder *Project:* Complexity Across Boundaries Coupled Human and Natural Systems in the Yellowstone Northern Elk Winter Range (NSF GRANT#CNH0216588). *Supervisor:* Dr. William R. Travis

1999-2002. Research Assistant, Center of the American West, University of Colorado-Boulder *Projects:* Ranchland Dynamics; Western Futures: Tracking the Changing West; "Justice for All" Environmental Justice Curriculum Guide. *Supervisors:* Dr. William R. Travis, Dr. Patricia N. Limerick

1995. Field Assistant, University of Nevada at Reno. *Study:* Ecology and Population Dynamics of the Mexican Spotted Owl in New Mexico. *Supervisor:* Dr. Peter Stacey

1995. Laboratory Assistant, Laboratory of Neurophysiology, Harvard Medical School *Supervisors:* Dr. James Quatrocci and Dr. Robert Stickgold

SERVICE

Professional

Editorial Board Member, Energy Research and Social Science, 2021-onward.

Editorial Board Member, Environmental Research: Infrastructure & Sustainability, 2020-present.

Co-Chair, Energy Impacts Research Coordination Network, with J. Jacquet, 2016-present.

Member, National Academies of Science, Technology and Engineering, Roundtable on Unconventional Hydrocarbons, 2015-2019.

Secretary Treasurer, Energy and Environment Specialty Group, American Association of Geographers, 2015-2017

Panel and Ad-hoc review service: USDA NIFA, National Science Foundation, Alfred P. Sloan Foundation.

Occasional reviewer, Energy Economics, Energy Policy, Geoforum, Society and Natural Resources, Rural Sociology, Conservation and Society, Journal of Rural Studies, Energy Research and Social Science

University and Department

Member, Steering Committee, Montana State University Faculty Senate, 2020-present

Chair, Campus Sustainability Advisory Council, Montana State University, 2019-present

Department Representative, Montana State University Faculty Senate, 2015-present

Montana State University Faculty Senate Liaison to President's Council on Status of University Women, 2016-2018

IoE Faculty Advisory Board, 2014-present

Environmental Systems Analyst Search Committee (LRES), 2019

Planning & Sustainability Geographer Search Committee (Earth Sciences), 2018

IoE Director Search Committee (Institute on Ecosystems), 2017

Sedimentologist Search Committee (Earth Sciences), 2016

Environmental Economist Search Committee (Institute on Ecosystems), 2014

Geography Curriculum Committee, Earth Sciences Department, 2014-present

Awards Committee, Earth Sciences Department, 2014-2017

MEDIA COVERAGE

2020. Cramer, R. and N. Lister. "Montana's Family Farms And Ranches Face Uncertain Future As Producers Age Out." Yellowstone Public Radio (Jun. 18). Online: https://www.ypradio.org/post/montanas-family-farms-and-ranches-face-uncertain-future-producers-age-out#stream/0

2017. "Town That Helped Power Northwest Feels Left Behind In Shift Away From Coal." National Public Radio (Jun. 10). Online: https://www.npr.org/2017/06/10/531789870/town-that-helped-power-northwest-feels-left-behind-in-shift-away-from-coal

WHITE PAPERS & REPORTS

- 2018. Rose, J.** and J. Haggerty. Community Benefits Agreements. Report to the Meagher County stewardship group. November 2018.
- 2018. Haggerty, J. H., K. Epstein**, and M. Stone**. Petroleum County Land Ownership Profile. Report to the Winnett ACES group. February 2018.
- 2017. Haggerty, J. H., K. B. Walsh**, M. N. Haggerty, and J. Rose**. Colstrip: The Status of Key Policies and Decision Processes. Resources & Communities Research Group, Montana State Univ.
- 2016. Haggerty, J. H., R. McAnally and E. Rink. "The Path Back: Buffalo, & the Assiniboine and Sioux Tribes of Fort Peck: Report to Pté Community Group." 21 pp. Montana State University, Bozeman, MT.
- 2014. Haggerty, J. H. and Keegan McBride**. "Navigating beyond the resource curse: Do local monitoring programs empower fracking host communities?" 33 pp. Headwaters Economics, Bozeman, MT http://headwaterseconomics.org/wphw/wp-content/uploads/Energy Monitoring SubletteCounty.pdf
- 2012. Haggerty, M.N. and J. H. Haggerty, "Improving Fiscal Policy to Maximize Benefits of Unconventional Oil Development in Montana Communities." Invited submission, *Montana Policy Review* 16:2.
- 2012. Headwaters Economics and Sonoran Institute. "Evaluating Purpose and Need for the Proposed SunZia Transmission Line: A Guide for Decision Makers and Stakeholders." 40 pp. Headwaters Economics, Bozeman, MT.
- 2012. Headwaters Economics, "Tax Revenue from an Installed High Voltage Transmission Line: A Guide to Fiscal Impact Analysis in Montana and Idaho." Headwaters Economics, Bozeman, MT. 28 pp. (http://www.mstireviewproject.org/TAX%20REVENUE 6.pdf)
- 2012. Headwaters Economics, "Transmission Lines & Property Value Impacts: A Review of Proposed Research on Property Value Impacts from High Voltage Transmission Lines." Headwaters Economics, Bozeman, MT. 33 pp. (http://www.mstireviewproject.org/PROPERTY%20VALUE 9.pdf)
- 2012. Headwaters Economics, "MSTI Questions & Answers: Economic and Policy Analysis Related to the Proposed Mountain States Transmission Intertie." Headwaters Economics, Bozeman, MT. 28 pp. (http://www.mstireviewproject.org/PROPERTY%20VALUE 9.pdf)
- 2012. Headwaters Economics, "Green Jobs Metrics: A Guide to Efforts to Quantify the Green Economy." Headwaters Economics, Bozeman, MT. 24 pp. (http://headwaterseconomics.org/energy/clean/green-jobs-metrics/)
- 2011. Headwaters Economics, "Fossil Fuel Extraction and Western Economies." Headwaters Economics, Bozeman, MT. 102 pp. (http://headwaterseconomics.org/wphw/wp-content/uploads/Fossilfuel West Report.pdf)
- 2011. Headwaters Economics, "The Agricultural Economy and Public Lands Ranching Strategies in

Southern Utah." Headwaters Economics, Bozeman, MT. 38 pp. (http://headwaterseconomics.org/wphw/wp-content/uploads/AgEconomy-PublicLands-SouthernUtah.pdf)

2010. Headwaters Economics, "Clean Energy Leadership in the Rockies: Competitive Positioning the Emerging Green Economy." Headwaters Economics, Bozeman, MT. 86 pp. (http://headwaterseconomics.org/energy/clean/clean-energy-report/)

2010. Headwaters Economics, "Oil Shale in the West: 14 Unanswered Questions" Headwaters Economics, Bozeman, MT. 32 pp.

(http://headwaterseconomics.org/pubs/energy/14Questions_2010.pdf)

2009. Headwaters Economics, "Impacts of Energy Development in Colorado, with a Case Study of Mesa and Garfield Counties." *Energy in the West* series. Headwaters Economics, Bozeman, MT. 99 pp.

(http://headwaterseconomics.org/pubs/energy/HeadwatersEconomicsImpactsofEnergyCO.pdf)

2009. Headwaters Economics, "Impacts of Energy Development in Wyoming, with a Case Study of Sweetwater County" *Energy in the West* series. Headwaters Economics, Bozeman, MT. 62 pp. (http://headwaterseconomics.org/pubs/energy/HeadwatersEconomicsImpactsEnergyWY.pdf)

2008. Headwaters Economics, "Land Ownership Change and the Ranching Economy in the Okanogan Valley and Eastern Okanogan County, Washington." Headwaters Economics, Bozeman, MT. 33 pp. (http://headwatersEconomics.org/wphw/wp-content/uploads/HeadwatersEconomics.org/wphw/wp-content/uploads/HeadwatersEconomics.org/wphw/wp-content/uploads/HeadwatersEconomics.OkanoganLandStudy.pdf)

- 2003. J. H. Haggerty, H. Gosnell, T. Dickinson, Geneva Mixon and W.R. Travis: "Summary Report: Ranchland Dynamics in the Greater Yellowstone Ecosystem." Center of the American West, University of Colorado, Boulder. 42 pp. plus maps.
- 2003. J. H. Haggerty, H.G. Schneider, T. Dickinson, Geneva Mixon and W.R. Travis: "Ranchland Dynamics in the Greater Yellowstone Ecosystem: Madison County, Montana." Center of the American West, University of Colorado, Boulder. 38p pp. plus maps.
- 2003. J. H. Haggerty, H.G. Schneider, T. Dickinson, Geneva Mixon and W.R. Travis: "Ranchland Dynamics in the Greater Yellowstone Ecosystem: Beaverhead County, Montana." Center of the American West, University of Colorado, Boulder. 30p pp. plus maps.
- 2003. J. H. Haggerty, H.G. Schneider, T. Dickinson, Geneva Mixon and W.R. Travis: "Ranchland Dynamics in the Greater Yellowstone Ecosystem: Park County, Montana." Center of the American West, University of Colorado, Boulder. 31p pp. plus maps.
- 2002. J. H. Haggerty, H.G. Schneider, T. Dickinson, Geneva Mixon and W.R. Travis: "Ranchland Dynamics in the Greater Yellowstone Ecosystem: Fremont County, Wyoming." Center of the American West, University of Colorado, Boulder. 26 pp. plus maps.

Other Publications (as co-author)

2016. T. Mastel, K. Smith, J. H. Haggerty, P. Lachapelle, K. B. Walsh. "Communities in Action Program Evaluation: Report to Richland County Department of Public Health." Resources & Communities

Research Group, Montana State Univ.

2016. Auger, M. and J. H. Haggerty. "Ranch Management and Ownership Dynamics in the Northern Great Plains: Report to the World Wildlife Fund's Sustainable Ranching Initiative." Resources & Communities Research Group, Montana State Univ.

2015. M. N. Haggerty and J. H. Haggerty. An Assessment of U.S. Federal Coal Royalties: Current Royalty Structure, Effective Royalty Rates, and Reform Options. Headwaters Economics, Bozeman, MT. 42 pp. (http://headwaterseconomics.org/energy/coal-royalty-valuation)

2012. Headwaters Economics, Implementing Climate Change Adaptation: Lessons Learned From Ten Examples. Headwaters Economics, Bozeman, MT. 59 pp. (http://headwaterseconomics.org/wphw/wp-content/uploads/Climate Adaptation Lessons Learned.pdf)

2003. H.G. Schneider, J. H. Haggerty, T. Dickinson, Geneva Mixon and W.R. Travis: "Ranchland Dynamics in the Greater Yellowstone Ecosystem: Sweet Grass County, Montana." Center of the American West, University of Colorado, Boulder. 33p pp. plus maps.

2003. H.G. Schneider, J. H. Haggerty, T. Dickinson, Geneva Mixon and W.R. Travis: "Ranchland Dynamics in the Greater Yellowstone Ecosystem: Park County, Wyoming." Center of the American West, University of Colorado, Boulder. 35p pp. plus maps.

2002. H.G. Schneider, J. H. Haggerty, T. Dickinson, Geneva Mixon and W.R. Travis: "Ranchland Dynamics in the Greater Yellowstone Ecosystem: Sublette County, Wyoming." Center of the American West, University of Colorado, Boulder. 25 pp. plus maps.

2002. W.R Travis, J. H. Haggerty, H.G. Schneider, and T. Dickinson: "Ranchland Dynamics in the Greater Yellowstone Ecosystem: Lincoln County, Wyoming." Center of the American West, University of Colorado, Boulder. 25 pp. plus maps.

PROFESSIONAL MEMBERSHIPS

American Association of Geographers

International Association of Impact Assessment

International Association for Society and Natural Resources