

Benjamin S. Rashford

Department of Agricultural and Applied Economics
Dept. 3354, 1000 E. University Ave., Laramie, WY 82071

PROFESSIONAL EXPERIENCE

- 2017 – present Department Head & Associate Professor, Agricultural and Applied Economics, University of Wyoming (50% Administration, 15% Research, 25% Teaching/Advising, 5% Extension, 5% Service)
- 2012 – 2017 Associate Professor, Agricultural and Applied Economics, University of Wyoming (25% Research, 25% Teaching, 25% Administration, 20% Extension, 5% Service);
- 2006 – 2012 Assistant Professor, Agricultural and Applied Economics, University of Wyoming (45% Research, 40% Extension, 10% Teaching, 5% Service)
- 2001 – 2006 Graduate Research Assistant, Agricultural and Resource Economics, Oregon State University
- 2003 – 2004 Consultant, Northwest Economic Associates/ENTRIX, Vancouver WA

EDUCATION

- 2006 Ph.D., Agricultural and Resource Economics, Oregon State University
Field: Environmental and Natural Resource Economics
Dissertation Topic: Economics of Wildlife Conservation
Major Advisor: Richard M. Adams
- 2001 M.S., Economics, University of Wyoming
- 1999 B.S., Economics, University of Wyoming

HONORS AND AWARDS

- Top Prof, University of Wyoming Cap and Gown Chapter of Mortar Board (2019)
- Supervisor of the Year Award, UW Staff Senate (2019)
- Nominee, Distinguished Graduate Faculty Mentor Award, University of Wyoming (2018)
- Reflections Magazine, Top Story Award, College of Agriculture and Natural Resources, University of Wyoming (2015)
- Nominee, Distinguished Graduate Faculty Mentor Award, University of Wyoming (2013)
- Albert N. Halter Endowment Fellowship, Department of Agricultural and Resource Economics, Oregon State University (2006)
- Sally Bell Perry Scholarship, Delta Waterfowl Foundation (2004 – 2005)
- Chiles P & Evelyn Plummer Scholarship, University of Wyoming (1999 – 2000)
- Top Graduating Senior, Department of Economics, University of Wyoming (Spring 1999)
- Harold Baker Scholarship, University of Wyoming (1997 – 1998)

PUBLICATIONS (*indicates graduate student co-author)

Refereed Journal Articles/Book Chapters

23. *Hanson, E., A. Nagler, J. Ritten, B.S. Rashford. 2022. Farm-level Economics of Bioenergy in the Upper Missouri River Basin. *Journal of the American Society of Farm Managers and Rural Appraisers* 2022: 16-30.
22. Jones Ritten, C., A. Nagler, K.M. Hansen, D.E. Bennett, and B.S. Rashford. 2022. Incorporating Landowner Preferences into Successful Migratory Species Conservation Policy. *Western Economics Forum* 21(1): 83-94.
21. Rashford, B.S., *A.M. Scott, L.S. Smutko and A. Nagler. 2019. Assessing Economic and Ecological Tradeoffs to Target Conservation Easements in Western Rangelands. *Western Economics Forum* 17(1): 9-23.
20. *Sandler, A., and B.S. Rashford. 2018. Misclassification Error in Satellite Imagery Date: Implications for Empirical Land-Use Models. *Land Use Policy* 75: 530-537.
19. Stoy, P.C., S. Ahmed, M. Jarchow, B.S. Rashford, D. Swanson, S. Albeke, G. Bromley, E.N.J. Brookshire, M.D. Dixon, J. Haggerty, P. Miller, B. Peyton, T. Sohl, L. Spangler, C. Straub, A. Royem, and B. Poulter. 2018. Opportunities and tradeoffs between BECCS and food, water, energy, biodiversity and social systems at regional scales. *Bioscience* 68(2): 100-111.
18. *Maurer, G., B.S. Rashford, V. Chanthavong, B. Mulot, and O. Gimenez. 2017. Wild-captive dynamics and economics drive dynamics of Asian elephants in Laos. *Nature Scientific Reports* 7(November 1, 2017).
17. *Clark, A., B.S. Rashford, D.M. McLeod, R.H. Coupal, S. Lieske and S. Albeke. 2016. The Impact of Residential Development Pattern on Wildfire Suppression Expenditures. *Land Economics* 92(4): 656-678.
[Profiled in *The Daily Yonder*, April 6, 2016]
16. Sofaer, H.R., S.K. Skagen, J.J. Barsugli, B.S. Rashford, G.C. Reese, J.A. Hoeting, A.W. Wood, and B.R. Noon. 2016. Projected Wetland Densities under Climate Change: Habitat Loss but Little Shift in Conservation Strategy. *Ecological Applications*, 26(6): 1677-1692.
15. Rashford, B.S., R.M. Adams, J. Wu, R.A. Voldseth, G.R. Guntenspergen, B. Werner and W.C. Johnson. 2016. Impacts of Climate Change on Land Use and Wetland Productivity in the Prairie Pothole Region of North America. *Regional Environmental Change*, 16: 515-526.
14. Hohman, W.L., E. Lindstrom, B.S. Rashford, and J.H. Devries. 2014. Opportunities and Challenges to Waterfowl Habitat Conservation on Private Lands. Invited Paper. *Wildfowl*, Special Issue 4: 368-406.

13. Attanavich, W., B.S. Rashford, R.M. Adams and B.A. McCarl. 2014. *Land Use, Climate Change and Ecosystem Services*. Chapter 10 in J.M. Duke and J. Wu eds. Oxford Handbook of Land Economics, Oxford University Press.
12. *Steele, J.R., B.S. Rashford, J.A. Tanaka, T.K. Foulke and D.T. Taylor. 2013. Wolf Predation Impacts on Livestock Production: Direct Effects, Indirect Effects, and Implications for Compensation Ratios. *Rangeland Ecology and Management*, 66(5): 539-544.
11. *Wasson, J., D.M. McLeod, C.T. Bastian and B.S. Rashford. 2013. The Effects of Environmental Amenities on Agricultural Land Values. *Land Economics*, 89(3): 466-478.
10. Rashford, B.S., S.E. Albeke, and D.J. Lewis. 2013. Modeling Grassland Conversion: Challenges of Using Satellite Imagery Data. Invited Paper. *American Journal of Agricultural Economics*, 95(2): 404-411.
9. Ritten, J.P., C.T. Bastian and B.S. Rashford. 2012. Profitability of Carbon Sequestration in Western Rangelands of the US. *Rangeland Ecology and Management*, 65(4): 340-350.
8. *Kauffman, M.E., B.S. Rashford and D.E. Peck. 2012. Unintended Consequences of Bovine Brucellosis Management on Demand for Elk Hunting in Northwest Wyoming. *Human Wildlife Interactions*, 6(1): 12-29.
7. Rashford, B.S., C.T. Bastian and *J.G. Cole. 2011. Agricultural Land Use Change in Prairie Canada: Implications for Wetland and Waterfowl Conservation. *Canadian Journal of Agricultural Economics*, 59(2): 185-205.
6. Rashford, B.S., J.A. Walker and C.T. Bastian. 2011. Economics of Grassland Conversion to Cropland in the Prairie Pothole Region. *Conservation Biology*, 25(2): 276-284.
5. Rashford, B.S., T. Foulke and D.T. Taylor. 2010. Ranch-level Impacts of Predation in a Range Livestock System. *Rangelands* 32(3): 21-26.
[Profiled in *The Wildlife Professional* magazine, 4(3) – Fall 2010]
4. Ritten, J.P., C.T. Bastian, B.S. Rashford, J. Norton, U. Norton, S.I. Paisley and P. Bergener. 2009. Can Carbon Find a Home on the Range? *Western Economics Forum* 8(2): 14-20.
3. Rashford, B.S., *J.M. Grant, and *B. Strauch. 2008. Economics of Predator Control to Protect Agriculture: The Unanswered Questions. *Western Economics Forum* 7(2): 25-32.
2. Rashford, B.S., B. Dugger, and R.M. Adams. 2008. Application of a Bioeconomic Optimization Model to Improve Waterfowl Management. *Journal of Wildlife Management* 72(2): 510-517.

1. Rashford, B.S. and R.M. Adams. 2007. Improving the Cost-Effectiveness of Ecosystem Management: An Application to Waterfowl Production. *American Journal of Agricultural Economics* 89(3): 755-768.

Published Abstracts and Proceedings

- *Wettimuny, D., C. Gifford, J. Kern, T. Foulke, B. Rashford, J. Kieth. 2023. Nutrient Characteristics of Ancient Grains: Wyoming-Grown Neolithic Grains Emmer and Spelt. *Journal of the Academy of Nutrition and Dietetics* 123(9), Supplement A70.
- *Gardiner, L.K., B.S. Rashford, J.P. Hewlett and B.M. Alexander. 2010. Economic Impacts of Ram Mating Behavior. *Journal of Animal Science* 88(E-Suppl. 2): 304.
- *Uthlaut, V.A., J.P. Hewlett, P. Jain, B.S. Rashford and B.M. Alexander. 2009. Ram Management Practices: Results of a 2008 Wyoming Sheep Producer Survey. *Proceedings, Western Section of the American Society of Animal Science* 60.
- Rashford, B.S. and C.T. Bastian. 2009. Agricultural Land Use Change in Prairie Canada: Implications for Habitat Conservation. *Journal of Agricultural and Resource Economics* 34(3): 539.
- Rashford, B.S., B. Dugger. 2006. *Of Ducks and Dollars: Improving the Cost-Effectiveness of Waterfowl Management in the Prairie Pothole Region*. Proceedings of the 4th North American Duck Symposium, Bismarck, ND.

Extension Publications

- Nagler, A., J. Bannon, and B.S. Rashford. 2021. *Landowner and Economic Benefits from Migration Corridor Designation in Wyoming*. UW Extension Bulletin, B-1374.2, August 2021.
- Korfanta, N., B.S. Rashford, A. Pocewicz, E. Schacht, B. Alley, and J. Luchsinger. *Wyoming Conservation Easements: Lands, Services, and Economic Benefits*. Wyoming Open Spaces Initiative, Ruckelshaus Institute of Environment and Natural Resources & UW Extension Bulletin, B-1317, January 2018.
- Romich, E., M. Geiger, and B.S. Rashford. 2017. *Evaluating Solar Option for Your Farm or Ranch*. *Progressive Forage*, 6 (June 1, 2017): 8-10.
- Romich, E., M. Geiger, and B.S. Rashford. 2016. *Solar Electric Investment Analysis: Part 1 – Estimating System Production*. UW and Ohio State University Extension Service Bulletin, B-1291.1, August 2016.
- Romich, E., M. Geiger, and B.S. Rashford. 2016. *Solar Electric Investment Analysis: Part 2 – Assessing System Costs*. UW and Ohio State University Extension Service Bulletin, B-1291.2, August 2016.
- Romich, E., M. Geiger, and B.S. Rashford. 2016. *Solar Electric Investment Analysis: Part 3 – Forecasting the Value of Electricity*. UW and Ohio State University Extension Service Bulletin, B-1291.3, August 2016.

- Romich, E., M. Geiger, and B.S. Rashford. 2016. *Solar Electric Investment Analysis: Part 4 – Understanding Incentives*. UW and Ohio State University Extension Service Bulletin, B-1291.4, August 2016.
- Romich, E., M. Geiger, and B.S. Rashford. 2016. *Solar Electric Investment Analysis: Part 5 – Conducting a Financial Analysis*. UW and Ohio State University Extension Service Bulletin, B-1291.5, August 2016.
- Romich, E., M. Geiger, and B.S. Rashford. 2016. *Solar Electric Investment Analysis: Part 6 – PV Solar Example*. UW and Ohio State University Extension Service Bulletin, B-1291.6, August 2016.
- *Scofield, A., B.S. Rashford, D.M. McLeod, R. Coupal and S. Lieske. 2015. *Wildfire Suppression Costs – The Role of Residential Development Pattern*. Wyoming Open Spaces Initiative, Ruckelshaus Institute of Environment and Natural Resources & UW Extension Bulletin, B-1268, October 2015. [Profiled in *Wyoming Livestock Roundup*, 27 (42), February 20, 2016]
- Rashford, B.S., *A.M. Scott, M. Hayes and H. Sawyer. 2015. *Targeting Conservation Easements to Benefit Wildlife*. Wyoming Open Spaces Initiative Bulletin, Ruckelshaus Institute of Environment and Natural Resources & UW Extension Bulletin, B-1266, September 2015. [Profiled in *Western Confluence* magazine, Aug. 30, 2016]
- *Harlan, M.K., J. Ritten, B.S. Rashford and K. Cammack. 2015. *Valuation of Residual Feed Intake as a Selection Tool for Northeastern Wyoming Range Sheep Producers*. University of Wyoming, Agricultural Experiment Station, 2015 Field Days Bulletin.
- *Scofield, A., B.S. Rashford, D.M. McLeod, and R.H. Coupal. 2015. *Managing Residential Development Spatial Pattern Could Reduce the Cost of Fighting Wildfires*. University of Wyoming, College of Agriculture and Natural Resources, Reflections Magazine. [Winner of Top Student Contribution]
- Rashford, B.S., T. Foulke, *J. Steele and D.T. Taylor. 2015. *Collaboration Across Continents: Predator Compensation Policies in the US and France*. University of Wyoming, College of Agriculture and Natural Resources, Reflections Magazine. [Winner of Top Story Award]
- Rashford, B.S., *N. Macsalka and M. Geiger. 2013. *Renewable Energy Investments – What's the Payback?* UW Cooperative Extension Service Bulletin, B-1235. July 2013.
- Rashford, B.S., A.V. Latchininsky and J.P. Ritten. 2013. *Toward a More Comprehensive Valuation of Western Rangelands*. UW Cooperative Extension Service Bulletin, B-1245. February 2013.
- Peck, D.E., B.S. Rashford, J.P. Ritten and *T. Roberts. 2012. *The Cost of Brucellosis Prevention: Fencing Stackyards*. UW Cooperative Extension Service Bulletin, B-1232. August 2012.

- *Gardiner, L., B.S. Rashford, J. Hewlett B. and Alexander. 2012. *The State of the Wyoming Sheep Industry*. UW Cooperative Extension Service Bulletin, B-1229. April 2012.
- Rashford, B.S., A.V. Latchininsky and J.P. Ritten. 2012. *An Economic Analysis of the Comprehensive Uses of Western Rangelands*. Report prepared for USDA, Animal and Plant Health Inspection Service, 31 pp.
- *Macsalka, N. and B.S. Rashford. 2011. *Economic Evaluation of Residential Off-Grid Renewable Energy Systems*. UW Extension Video. Available at: http://www.youtube.com/watch?v=JhF5I3bi5Y&feature=player_embedded&list=PL139C50E735A660B5.
- Ritten, J.P., B.S. Rashford and C.T. Bastian. 2011. *Can Rangeland Carbon Sequestration Help Ranchers and Rural Communities Adapt to Climate Change?* Rural Connections – A Publication of the Western Rural Development Center, June 2011.
- Rashford, B.S. and *J.M. Grant. 2010. *Economic Analysis of Predator Control: A Literature Review*. Cooperative Extension Service, College of Agriculture, University of Wyoming Bulletin, B-1208. September 2010.
- Rashford, B.S., M. Geiger and *N. Macsalka. 2010. *The Effect of Altitude on Small Wind Turbine Production*. Cooperative Extension Service, College of Agriculture, University of Wyoming Bulletin, B-1207. August 2010.
- Rashford, B.S. 2010. *Economic Feasibility: How to Evaluate Renewable Energy Investments*. Barnyards and Backyards, Summer 2010: 7-9.
- Cagney, J., T. Apa, E. Bainter, B. Budd, M. Holloran, B.S. Rashford, M. Smith and J. Williams. 2010. *Grazing Influence, Management and Objective Development in Wyoming's Greater Sage-Grouse Habitat: With Emphasis on Nesting and Early Brood Rearing*. Wyoming Department of Agriculture & Wyoming Game and Fish, 62 pp. [Also available as Wyoming Cooperative Extension Service Bulletin, B-1203]
- Rashford, B.S., *J.M. Grant and J.P. Hewlett. 2009. *Agricultural Risk Management: The Case of Wildlife Risks*. Cooperative Extension Service, College of Agriculture, University of Wyoming, Bulletin B-1199. November 2009.
- Taylor, D.T. and B.S. Rashford. 2009. *Estimating the Value of Term Conservation Easements in Wyoming*. White paper prepared for the Wyoming Wildlife and Natural Resources Trust Fund and Wyoming Stock Growers Agricultural Land Trust, September 2009, 12 pp.
- Rashford, B.S. and D.E. Peck. 2009. *University of Wyoming Research Examines Economics of Wildlife-Livestock Diseases*. Wyoming Livestock Roundup 20(8): 2-3, July 18, 2009.

Taylor, D.T., B.S. Rashford, R.H. Coupal and T. Foulke. 2009. *An Economic Analysis of Predator Management in Wyoming*. Report prepared for the Wyoming Animal Damage Management Board, 69 pp.

Taylor, D.T., R.H. Coupal, T. Foulke, B.S. Rashford and D. Olson. 2007. *An Economic Profile of the Bridger-Teton National Forest*. Report prepared in support of the Bridger-Teton National Forest plan revision process, 132 pp.

Reports & Other Works

Rashford, B.S. and G.C. Reese. 2015. *Methods for Modeling and Projecting Agricultural Land-Use Change in the Northern Plains using High-Resolution Satellite Imagery Data*. Department of Agricultural and Applied Economics, University of Wyoming, Working Paper #AGEC 2015-1, Laramie, WY, 18 pp.

Rashford, B.S., A.M. Schrag and J. Walker. 2013. *Targeting Grassland Conservation: An Estimate of Land-Use Conversion Risk in the Northern Great Plains*. Report prepared for USFWS, Plains and Prairie Pothole Landscape Conservation Cooperative, September 2013, 69 pp.

Rashford, B.S., M. Al Amin, and C.T. Bastian. 2013. *Integrating Economics and Ecology to Model Land-Use Change Impacts on Waterfowl Habitat in Prairie Canada*. Report prepared for Ducks Unlimited Canada, Institute for Wetland and Waterfowl Research, July 2013, 43 pp.

Diaz, D., B.S. Rashford, S. De Gryze, S. Sakreski, R. Dell, and M. Niles. 2012. *Evaluation of Avoided Grassland Conversion and Cropland Conversion to Grassland as Potential Carbon Offset Project Types – An Issue Paper for the Climate Action Reserve*. Climate Action Reserve, December 2012, pp 189. Available at <http://www.climateactionreserve.org/wp-content/uploads/2012/12/Grasslands-Issue-Paper.pdf>.

Ritten, J.P., B.S. Rashford and C.T. Bastian. 2011. *Can Rangeland Carbon Sequestration Help Ranchers and Rural Communities Adapt to Climate Change?* Rural Connections – A Publication of the Western Rural Development Center, June 2011.

Rashford, B.S., *E. Cropper and *A. Stiltner. 2010. *Agricultural Land Use in the Northern Great Plains*. Report prepared for the World Wildlife Fund, 52pp.

Rashford, B.S. 2009. *Targeting Waterfowl Conservation: An Estimate of Land-Use Conversion Risk in the Prairie Pothole Region*. Report prepared for Ducks Unlimited, Inc. and Ducks Unlimited Canada, 153 pp.

Rashford, B.S. 2005. “Getting more Ducks for your Bucks: Managing the Duck Factory.” *Delta Waterfowl*, Winter 2005.

Rashford, B.S., D.J. Lewis, R.M. Evonuk and B.A. Weber. 2003. *Economic Interrelationships in a Small Farming Area: Towards an Estimate of the Threshold of*

GRANTS & CONTRACTS

Total funding as PI/Co-PI: \$7,848,961 (\$3,014,753 to AGEC)

Total funding (includes sub-contracts and consulting): \$11,359,941

Unfunded proposals: 27 totaling \$16,955,256

Beyond the General Signup: Modeling the Grasslands and Continuous Signups in the Conservation Reserve Program Project (Sept 2022 – Sept 2024). PI: Rashford. Sponsor: USDA – Economic Research Service. Amount: \$240,000. [Research]

Understanding county-level economic impacts in Wyoming (Aug 2022 – Aug 2023). PI: R. Coupal; Rashford (Co-PI). Sponsor: University of Wyoming, Agricultural Experiment Station. Amount: \$62,500. [Extension]

Estimating development risk for agricultural lands in Wyoming (Jun 2021 – Mar 2023). PI: Rashford. Sponsor: The Nature Conservancy. Amount: \$29,000. [Research and Extension]¹

Landowner Economics – Red Desert to Hoback Mule Deer Migration Corridor (Dec 2020 – Mar 2021). PI: Rashford. Sponsor: Wyoming Wildlife Federation. Amount: \$5,000. [Research and Extension]

Estimating the economic net benefits of adult-booster vaccination against brucellosis in cow-calf operations of northwest Wyoming and central Argentina (Jun. 2019 – Aug. 2019). PI: Rashford. Sponsor: UW COANR – Global Perspectives. Amount: \$6,000. [Research and Extension]

Quantifying ranch-level economic benefits and costs of RB51 adult-booster vaccination in Wyoming cow-calf herds (Oct 2018 – July 2018). PI: Rashford. Sponsor: UW COANR – Brucellosis Grant Program. Amount: \$6,615. [Research and Extension]

Integrating sustainable socio-economic, ecological and technological innovation for achieving global climate stabilization through negative CO₂ emission policies (Aug. 2016 – Jul. 2022). PI: P. Stoy (Montana State University); Rashford (UW-PI). Sponsor: NSF EPSCoR. Amount: \$6,000,000 (\$1,821,365)². [Research and Extension]

Conservation Easements Research Program (Jun. 2016 – Jun. 2018). PI: Rashford. Sponsor: The Nature Conservancy. Amount: \$35,000. [Research and Extension]

Hunting Capacity Analysis and Outfitter-Guide Allocation for the Medicine Bow-Routt National Forest (Sept. 2015 – Aug. 2017). PI: S. Smutko; Rashford (Co-PI). Sponsor: US Forest Service. Amount: \$29,476. [Research and Extension]

¹ Brackets indicate primary grant focus.

² Parenthetical grant dollars indicate funding for Rashford, AGEC or UW when different from total grant award.

Climbing Capacity Analysis and Outfitter-Guide Allocation for the Vedauwoo Recreation Area (Sept. 2015 – Aug. 2017). PI: S. Smutko; Rashford (Co-PI). Sponsor: US Forest Service. Amount: \$30,000. [Research and Extension]

Understanding the Dynamics of Land Use Switching with Satellite and Field Level Data in the Context of Climate Variability. PI: D. Hennessy (Iowa State); Rashford (Cooperator). Sponsor: North Central Climate Science Center. [Research]

Ecological-Economic Modeling of Land-Use Change and Waterfowl Production in Prairie Canada (Oct. 2014 – May 2016). PI: B.S. Rashford. Sponsor: Institute for Wetlands and Waterfowl Research. Amount: \$49,895. [Research]

Mitigation by Design in Wyoming: Making the Connection between Habitat, Disturbance, Restoration, and Resource Economics (July 2013 – Sept. 2015). PI: D. Manier (USGS); B.S. Rashford (Co-PI). Sponsor: U.S. Geological Survey. Amount: \$64,231. [Research and Extension]

Surrogate Species for Wetland-Dependent Birds in the Prairie Pothole Region: Selection, Evaluation, and Management in the Face of Climate Change (July 2013 – Dec. 2015). PI: Susan Skagen and Barry Noon (Colorado State University); Rashford (Investigator). Sponsor: Department of Interior, North Central Climate Science Center. Amount: \$383,453 (\$17,600). [Research]

Greater Sage-Grouse and Wind Energy: An Innovative Approach to Establishing Potential Effects of Development On Populations (Mar. 2011 – Dec. 2014). PI: Matt Holloran; Rashford (Investigator). Sponsor: National Wind Coordinating Collaborative. Amount: \$1,583,673 (\$0). [Research and Extension]

Economic and Environmental Sustainability of Conventional, Reduced-Input, and Organic Approaches on Western Crop-Range-Livestock Farms (Jan. 2009 – Dec. 2013). PI: J.B. Norton (University of Wyoming); Rashford (Co-PI). Sponsor: USDA NRI – Agricultural Prosperity for Small and Medium-sized Farms Program. Amount: \$500,000 (\$40,000). [Research and Extension]

Targeting Grassland Conservation: An Estimate of Land Use Conversion Risk in the Northern Great Plains (Oct. 15, 2010 – Sept. 30, 2013). PI: B.S. Rashford. Sponsor: US Fish and Wildlife Service, Landscape Conservation Cooperative. Amount: \$158,000. [Research and Extension]

Cost-Benefit Analysis of a Reduction in Elk Brucellosis Seroprevalence in the Southern Greater Yellowstone Area (Aug. 2011 – Aug. 2013). PI: B. Schumaker; Rashford (Co-PI). Sponsor: WY Wildlife/Livestock Disease Research Partnership, and USDA-APHIS-Veterinary Services. Amount: \$260,929 (\$65,356). [Research & Extension]

Addressing Cost and Uncertainty: Opportunities through Energy Efficiency and Renewable Energy (Jan. 2011 – Aug. 2013). PI: M. Geiger; Rashford (Investigator). Sponsor: USDA Rural Development. Amount: \$100,000. [Extension]

Integrating Economics and Ecology to Model Land Use Impacts on Waterfowl Habitat in Prairie Canada (Apr. 2010 – Jun. 2013). PI: B.S. Rashford. Sponsor: Institute for Wetland and Waterfowl Research, Ducks Unlimited Canada. Amount: \$49,000. [Research]

An Economic Analysis of the Comprehensive Uses of Western Rangelands (Sept. 2011 – Mar. 2012). PI: A. Latchininsky; Rashford (Collaborator). Sponsor: USDA Animal Plant Health Inspection Service. Amount: \$63,644 (\$15,000). [Research & Extension]

Exploring Cost Effective Renewable Energy in Wyoming (Aug. 2011 – Sept. 2012). PI: Milton Geiger; Rashford (Investigator). Sponsor: UW Cooperative Extension Service, Internal Grants Program. Amount: \$42,000. [Extension]

Issue Paper for Land Use Change Activities (May 2012 – Dec. 2012). PI: D. Diaz, The Climate Trust; Rashford (Consultant). Sponsor: Climate Action Reserve. Amount: \$68,396 (\$10,250). [Research]

Economic Impacts of Brucellosis, and Benefits of an Improved Vaccine, under Current vs. Split-State Regulatory Frameworks (Sept. 2009 – Aug. 2011). Co-PI's: D.E. Peck, B.S. Rashford and R.H. Coupal. Sponsor: UW Agricultural Experiment Station Special Grants Program. Amount: \$21,400. [Research and Extension]

Costs to Cattle Producers and Outfitters of Brucellosis Management Alternatives (Apr. 2009 – Jun. 2011). Co-PI's: D.E. Peck, B.S. Rashford and J. Ritten. Sponsor: Office of the Governor of Wyoming, Federal Natural Resources Policy Account. Amount: \$139,250. [Research and Extension]

Agricultural Land Use Change in the Northern Great Plains: Summer Intern Project (May 2010 – Aug. 2010). PI: B.S. Rashford. Sponsor: World Wildlife Fund. Amount: \$5,000. [Research]

Renewable Energy in Wyoming – Education for Individual Action (Oct. 2008 – Jun. 2010). PI: B.S. Rashford. Sponsor: UW Cooperative Extension Service – Competitive Grants Program. Amount: \$59,000. [Extension]

Non-Linear Response of Prairie Pothole Landscapes to Climate Change and Land Management (Jun. 2006 – Dec. 2010). PI: W. C. Johnson (South Dakota State University); Rashford (Investigator). Sponsor: US EPA STAR Grant. Amount: \$856,574 (\$48,000). [Research]

IPM Strategy for Sustainable Black Grass Bug Management in Wyoming Grasslands Enrolled in Conservation Reserve Program (Jan. 2007 – Sept. 2009). PI: A. Latchininsky; Rashford (Investigator). Sponsor: UW Cooperative Extension Service – Competitive Grants Program. Amount: \$40,000 (\$15,500). [Research and Extension]

An Economic Analysis of Predator Management in Wyoming (Aug. 2007 – Aug. 2009). PI: D.T. Taylor; Rashford (Investigator). Sponsor: Wyoming Animal Damage Management Board. Amount: \$78,240. [Extension]

Targeting Waterfowl Conservation: An Estimate of Land-Use Conversion Risk in the Prairie Pothole Region (Apr. 2007 – Sept. 2008). PI: B.S. Rashford. Sponsor: Ducks Unlimited Inc. and Ducks Unlimited Canada. Amount: \$30,000. [Research]

Crop Insurance Education for Agricultural Producers in Wyoming (Oct. 2007 – Aug. 2008). PI: J. Hewlett; Rashford (Sub-contractor). Sponsor: USDA, Risk Management Education Program. Amount: \$293,000 (\$9,000). [Extension]

An Analysis of the Economic Sustainability of the Bridger-Teton National Forest on the Economics of Neighboring Counties in Wyoming (Dec. 2006 – Feb. 2008). PI: R.H. Coupal; Rashford (Investigator). Sponsor: State of Wyoming Office of the Governor, BTNF Governmental Cooperators Group. Amount: \$50,000. [Extension]

An Economic Analysis of Waterfowl Production using the Mallard Productivity Model (Oct. 2004 – Aug. 2006). Co-PI's: R.M. Adams and B.S. Rashford. Sponsor: Delta Waterfowl Foundation. Amount: \$40,000. [Research]

An Economic Analysis of Alternative Management Practices for Waterfowl Production in the Prairie Pothole Region (Jan. 2003 – May 2004). Co-PI's: R.M. Adams and B.S. Rashford. Sponsor: Delta Waterfowl Foundation. Amount: \$28,665. [Research]

PRESENTATIONS (* indicates graduate student)

Research (Invited Papers/Posters)

Rashford, B.S. *Agricultural Economics at the University of Wyoming: Shared Research Interests and Collaborative Opportunities*. Instituto Nacional Tecnológico Agropecuario – Cento de Investigacion en Economia y Prospectiva, Buenos Aires, Argentina, July 30, 2019.

Ahmed, S. et al. *Track II: Sustainable socio-economic, ecological and technical scenarios for achieving global climate stabilization through negative CO₂ emission policies*. Institute on Ecosystems Summit, Montana State University, Bozeman, MT, April 6, 2017.

Rashford, B.S. *Spatial data in applied economics: from wildlife conservation to wildfire costs*. Spatial Sciences Discussion Group, Office of Research and Economic Development, University of Wyoming, Laramie, WY, March 29, 2017.

Ahmed, S. et al. *Sustainable socio-economic, ecological and technical scenarios for achieving global climate stabilization through negative CO₂ emission policies*. INFEWS Meeting, Washington D.C., March 23, 2017.

McLeod, D.M., * A. Scofield, B.S. Rashford, R. Coupal, S. Lieske, and S.E. Albeke. *The Impact of Residential Development Pattern on Wildland Fire Suppression Expenditures*. W3133: Benefits and Costs of Natural Resource Policies Affecting Ecosystem Services and Private Lands. Pensacola, FL, February 26, 2015.

- Rashford, B.S., A.M. Schrag and J. Walker. *Targeting Grassland Conversion: Land-Use Conversion Risk in the Northern Great Plains*. Plains and Prairie Pothole Landscape Conservation Cooperative, Connections II Workshop, Billings, MT, July 9, 2014.
- Rashford, B.S., T. Foulke, *J. Steele and D.T. Taylor. *Wolf Re-Introduction in the Northern Rockies, USA: From Population and Predation Trends to Policy and Economics*. Invited Seminar, Université de Lyon, Lyon, France, June 5, 2014.
- Rashford, B.S., T. Foulke, *J. Steele and D.T. Taylor. *Wolf Re-Introduction in the Northern Rockies, USA: From Population and Predation Trends to Policy and Economics*. Invited Seminar, Centre d'Ecologie Fonctionnelle et Evolutive, Montpellier, France, June 10, 2014.
- Rashford, B.S., S.E. Albeke and D.J. Lewis. *Modeling Grassland Conversion: Challenges of Using Satellite Imagery Data*. Department Agricultural and Applied Economics, University of Wyoming, Laramie, WY, February 8, 2013.
- Rashford, B.S. *Grassland Conversion in the US and Canada: The Role of Land Use Models in Conservation Planning*. Workshop on Grassland Conversion and Land Use Change in the Prairies, Ducks Unlimited, Bismarck, ND, November 2, 2011.
- Rashford, B.S. *Agriculture, Wetland and Wildlife: The Role of Land Use Models in Conservation Planning*. Department Agricultural and Applied Economics, University of Wyoming, Laramie, WY, October 21, 2011.
- Rashford, B.S., *E. Cropper, R. Voldseth, B. Werner, J. Wu, R.M. Adams, W.C. Johnson, G. Guntenspergen. *Climate Change, Agriculture and Wetlands: Implications for Waterfowl Conservation in the Prairie Pothole Region*. Association of Field Ornithologists, Cooper Ornithological Society and Wilson Ornithological Society Conference, Kearney, NE, March 10, 2011.
- Rashford, B.S., *M. Kauffman and D. Peck. *Predicted Impacts of Elk Feedground Closure on Demand for Hunting*. Department of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO, February 23, 2011.
- Peck, D., *M. Kauffman, *T. Roberts, *B. Wilson, B.S. Rashford, J. Ritten and R. Coupal. *Costs of Brucellosis Prevention and Outbreaks in Greater Yellowstone Area Cattle*. Animal Science Seminar Series, University of Wyoming, Laramie, WY, February 11, 2011.
- Johnson, C., B. Millett, G. Guntenspergen, R. Voldseth, B.S. Rashford, B. Werner, R.M. Adams, M. Tulbure, J. Olker, D. Naugle and P. Fay. *Prairie Pothole Landscapes, Climate Change and Land Management*. Plight of Ecosystems in a Changing Climate: Impact on Services, Interactions and Response Workshop, Seattle, WA, May 27-28, 2009.
- Rashford, B.S., C.T. Bastian and *J.G. Cole. *Agricultural Land Use Change in the Prairie Pothole Region: Implications for Habitat Conservation*. Institute for Wetland

and Waterfowl Research, 7th Student and Staff Symposium, Winnipeg, MB, March 3 – 5, 2009.

Rashford, B.S. *Managing the Duck Factory: An Economic Analysis of Waterfowl Production*. Delta Waterfowl Student Seminars, Portage la Prairie, Manitoba, July 5 – 8, 2005.

Rashford, B.S. *Economic Analysis of Management Techniques for Waterfowl Production*. Delta Waterfowl Student Seminars, Portage la Prairie, Manitoba, July 8 – 11, 2004.

Rashford, B.S. *An Economic Analysis of Waterfowl Management and Land Conservation in the Prairie Pothole Region*. Delta Waterfowl Student Seminars, Portage la Prairie, Manitoba, July 10 – 13, 2003.

Research (Refereed Papers/Posters)

Faucett, K.M., J.P. Hewlett, and B.S. Rashford. *Growing Beginning Farmers and Ranchers in Wyoming*. 2022 BFRDP Project Directors Meeting, Virtual, October 20, 2022.

*Omojoso, V., B. Rashford, J. Ritten, S. Albeke, and A. Nagler. *Economics of Switchgrass in the Great Plains: Adding Economic Feasibility to Biophysical Potential*. Pacific Northwest Regional Economics Conference, Virtual, May 24, 2021.

Bastian, C.T., *B. Beaman. *M. Al Amin, D.W. Howerter, J.H. Devries, and B.S. Rashford. *Cost-Effective Conservation Targeting in the Face of Climate Change: Integrating Land-Use Change and Biological Response to Target Waterfowl Conservation*. Western Agricultural Economics Association Annual Meeting, Lake Tahoe, NV, July 9-11, 2017.

*Clark, A.M., B.S. Rashford, D.M. McLeod, R.H. Coupal, S.N. Lieske, and S.E. Albeke. *The Impact of Residential Development Pattern on Wildland Fire Suppression Expenditures*. 87th Meeting of the Northwest Scientific Association and Central Oregon Fire Science Symposium, Bend, OR, March 25, 2016.

*Beaman, B.C., B.S. Rashford, D.W. Howerter, C.T. Bastian, and T.J. Robinson. *Implications of Climate Change for Land Use and Waterfowl Productivity in Prairie Canada*. 7th North American Duck Symposium, Annapolis, MD, February 2, 2016.

Howerter, D.W., B.S. Rashford, K. Fleming, and P.K. Devers. *Using Science to Inform Waterfowl Habitat Acquisition and Management Decisions*. Organized Symposium – Strengthening the Links Between Waterfowl Research and Management. 7th North American Duck Symposium, Annapolis, MD, February 3, 2016.

Rashford, B.S. *Agricultural Land-Use Change in the Great Plains: Trends, Drivers and Implications for Wetlands*. Organized Symposium – Wetlands of the Great Plains: Science Supporting Program and Policy Initiatives. The Wildlife Society Annual Conference, Winnipeg, Manitoba, October 18, 2015

*Maurer, G., B.S. Rashford, J.D. Lebreton, B. Mulot, and O. Gimenez. *Elephas Maximus Economicus: Modeling the Population Dynamics of Lao Captive Elephants using a Bio-Economic Approach*. Poster Presentation, 27th International Congress for Conservation Biology, Montpellier, France, Aug. 3, 2015.

*Harlan, M., J.P. Ritten, B.S. Rashford and K. Cammack. *Valuation of Residual Feed Intake as a Selection Tool of Northeastern Wyoming Range Sheep Producers*. Northeastern Agricultural and resource Economics Association/Canadian Agricultural Economics Association Joint Annual Meeting, Newport, RI, June 28-30, 2015.

*Varelas, L.A., J.A. Tanaka, B.S. Rashford and J. Ritten. *Using Multi-Criteria Analysis to Microsite Wind Turbines*. Society for Range Management Annual Meeting, Sacramento, CA, February 6, 2015.

Rashford, B.S., *A. Mellinger Scott and S. Lieske. *Estimating the Residential Development Value of Agricultural Land – A Propensity Score Approach for Limited Data*. Western Agricultural Economics Association Annual Meeting, Colorado Springs, CO, June 22-24, 2014.

Rashford, B.S., A.M. Schrag and J. Walker. *Climate, Grassland Conversion, and Conservation in the Northern Great Plains*. 2014 Symposium: Drought, Center for Great Plains Studies, Lincoln, NE, April 3, 2014.

*Varelas, L.A., J.A. Tanaka and B.S. Rashford. *Using the Human Footprint to Measure Ecological and Socio-Economic Impacts of Wind Energy Development*. Poster Presentation, Society for Range Management Annual Meeting, Orlando, FL, February 8, 2014.

Schrag, A.M., B.S. Rashford and J. Walker. *Using Predictive Models to Understand the Changing Landscape of the Northern Great Plains and Potential Implications for Wildlife and Human Communities*. America's Grasslands Conference, Manhattan, KS, August 13, 2013.

*Al Amin, M., B.S. Rashford and C.T. Bastian. *Agricultural Land-Use in a Changing Climate: Implications for Waterfowl Habitat in Prairie Canada*. Western Agricultural Economics Association Annual Meeting, Monterey, CA, June 26-28, 2013.

Rashford, B.S. *Socio-Economic Drivers of Land-Use Change: Implications for Habitat Loss and Conservation Targeting*. North American Duck Symposium – Ecology and Conservation of North American Waterfowl, Memphis, TN, January 29, 2013.

Rashford, B.S., S.E. Albeke and D.J. Lewis. *Modeling Grassland Conversion: Challenges of Using Satellite Imagery Data*. Agricultural and Applied Economic Association Annual Meeting, Seattle, WA, August 12, 2012.

Attanavich, W., B.S. Rashford, R.M. Adams and B.A. McCarl. *Land Use, Climate Change and Ecosystem Services*. Agricultural and Applied Economic Association Annual Meeting, Seattle, WA, August 12, 2012.

- Langpap, C. and B.S. Rashford. *Wetland Rotations: Implications of a New Conservation Approach for Wildlife Habitat and Farm Prosperity*. AERE Session, Agricultural and Applied Economics Association Annual Meeting, Pittsburgh, PA, July 24-26, 2011.
- Rashford, B.S., J. Wu, R.M. Adams, R. Voldseth, B. Werner, W.C. Johnson. *Targeting Wetland Protection in a Changing Climate: An Integrated Model of Land-Use Change and Ecosystem Function*. Western Agricultural Economics Association Annual Meeting, Banff, AB, June 29-July 1, 2011.
- *Macsalka, N.C. and B.S. Rashford, *Assessing the Economic Tradeoffs between Wind Energy and Sage-Grouse Conservation*. Western Agricultural Economics Association Annual Meeting, Banff, AB, June 29-July 1, 2011.
- *Kauffman, M., D.E. Peck and B.S. Rashford, *Unintended Consequences of Bovine Brucellosis Management for Elk Hunter Demand in Northwest Wyoming*. Western Agricultural Economics Association Annual Meeting, Banff, AB, June 29-July 1, 2011.
- *Wasson, J., D.M. McLeod, C.T. Bastian and B.S. Rashford. *The Effect of Scenic and Environmental Amenities on Agricultural Land Values*. Agricultural and Applied Economics Association Annual Meeting, Denver, CO, July 25, 2010.
- Ritten, J., C.T. Bastian and B.S. Rashford. *Will Carbon Find a Home on the Range? A Monte Carlo Simulation*. Poster Presentation, Agricultural and Applied Economics Association Annual Meeting, Denver, CO, July 27, 2010.
- *Gardiner, L., B.S. Rashford, J.P. Hewlett, and B.M. Alexander. *Economic Impacts of Ram Mating Behavior*. American Society of Animal Science Annual Meeting, Denver, CO, July 12, 2010.
- Rashford, B.S., C.T. Bastian and *J.G. Cole. *Agricultural Land Use Change in Prairie Canada: Implications for Waterfowl Habitat Conservation on Private Lands*. International Workshop on Wetlands Management, Economics and Policy, Victoria, British Columbia, January 13 – 15, 2010.
- Peck, D.E., B.S. Rashford, *P. Frankowski and A. Reeves. *Using NAADSM to model foot-and-mouth disease in a rangeland setting: challenges and insights*. 12th International Symposium on Veterinary Epidemiology and Economics, Durban, South Africa, August 10 – 14, 2009.
- Rashford, B.S. and C.T. Bastian. *Agricultural Land Use Change in Prairie Canada: Implications for Habitat Conservation*. Western Agricultural Economics Association Annual Meeting, Kauai, HI, June 24-26, 2009.
- *Uthlaut, V. A., J. P. Hewlett, P. Jain, B.S. Rashford, B. M. Alexander. 2009. *Ram management practices: Results of a 2008 Wyoming Sheep Producer Survey*. Western Section of the American Society of Animal Science Meeting, Ft. Collins, CO, June 16-18, 2009.

*Kneeland A., Latchininsky A. and Rashford B. 2009. *Detection and IPM for Black Grass Bugs*. 93rd Annual Meeting of the Pacific Branch of the Entomological Society of America, San Diego, CA, April 2009.

Rashford, B.S. and A.J. Plantinga. *Towards a Portfolio Theory of Renewable Resource Management*. Selected Paper. 4th Biennial Conference of the US Society for Ecological Economics, New York, NY, June 23 – 27, 2007.

Rashford, B.S., Bruce Dugger, and R.M. Adams. *Of Ducks and Dollars: Improving the Cost-Effectiveness of Waterfowl Management in the Prairie Pothole Region*. 4th North American Duck Symposium, Bismarck, ND, August 24 – 26, 2006.

Rashford, B.S., and R.M. Adams. *Improving the Efficiency of Wildlife Management: An Application to Waterfowl Production in the Prairie Pothole Region*. American Agricultural Economics Association Annual Meeting, Providence, RI, July 24 – 27, 2005.

Rashford, B.S. *Conservation Portfolios: Applying Financial Portfolio Theory to Wildlife Conservation Design*. 11th Annual Conference of The Wildlife Society, Calgary, Alberta, September 21, 2004.

Rashford, B.S. and B.A. Weber. *How Viable is Oregon Agriculture? A Preliminary Examination of Changes in Performance and Structure of Agriculture, 1969-1999*. Pacific Northwest Regional Economic Conference, Portland, OR, May 17, 2002.

Extension/Outreach

Rashford, B.S., and A. Nagler. *Estimating Residential Development Risk to Agricultural Land in Wyoming*. Board Meeting, The Nature Conservancy Wyoming, Cody, WY, June 1, 2023.

Rashford, B.S. *Economics and Conservation Easements*. Meeting of the American Society of Farm Managers and Rural Appraisers, Lander, WY, October 17, 2019.

Gerace, S., A. Nagler, and B.S. Rashford. *The Water, Agriculture, Food, Energy Nexus*. Poster Presentation – Connecting Extension & Research Conference, Laramie, WY, December 13, 2017.

Gerace, S., and B.S. Rashford. *The Water, Agriculture, Food, Energy Nexus*. Poster Presentation – Wyoming Weed & Pest Conference, Sheridan, WY, November 13, 2017.

Poulter, B, and B.S. Rashford. *Future Land Use Scenarios for the Upper Missouri River Basin*. WAFERx Stakeholder Workshop, Bozeman, MT, October 11, 2017.

Rashford, B.S. *Research and Extension Overview*. Annual Meeting, UW Extension Ag & Hort Team, Laramie, WY, March 10, 2017.

- Ritten, J., *K. Harlan, B.S. Rashford and K. Cammack. *Using RFI as a Selection Tool for Ewes in Range Flocks*. Fremont County Farm and Ranch Days, Riverton, WY, February 10, 2016.
- Smutko, L.S., *A. Mellinger-Scott, and B.S. Rashford. *University of Wyoming Research Update: Tradeoffs of Conservation Easements for Habitat*. Meeting of the American Society of Farm Managers and Rural Appraisers, Laramie, WY, October 9, 2015.
- B.S. Rashford, *A. Scofield, D.M. McLeod, R. Coupal, S.E. Albeke, and S. Lieske. *University of Wyoming Research Update: Impact of Residential Development on Wildfire Suppression*. Meeting of the American Society of Farm Managers and Rural Appraisers, Laramie, WY, October 9, 2015.
- Rashford, B.S., A.M. Schrag and J. Walker. *Targeting Grassland Conservation: An Estimate of Land-Use Conversion Risk in the Northern Great Plains*. Webinar hosted by the Sage Steppe Partner Forum, March 4, 2014 (Available at: <https://www.youtube.com/watch?v=LU0N36lHuOI&list=PLR-QITAN6Ld4kX7yhCJQmKyrPUF1-Cm79>).
- Rashford, B.S., A.M. Schrag and J. Walker. *Land Conversion in the Plains and Prairie Potholes: Past Lessons and Next Steps*. Webinar hosted by the Plains and Prairie Pothole Landscape Conservation Cooperative, February 6, 2014.
- Rashford, B.S. *The Future of Waterfowl Management, Conservation and Hunting*. Saturday University, Sheridan, WY, February 8, 2014.
- Rashford, B.S., A.M. Schrag and J. Walker. *Land Conversion in the Northern Great Plains: Past, Present and Future*. Webinar hosted by the Plains and Prairie Pothole Landscape Conservation Cooperative, January 8, 2014.
- *Steele, J.R., B.S. Rashford, J.A. Tanaka, T.K. Foulke and D.T. Taylor. *Direct and Indirect Costs of Wolves on Livestock Producers*. Fremont County Farm and Ranch Days, Riverton, WY, January 30, 2013.
- *Steele, J.R., B.S. Rashford, J.A. Tanaka, T.K. Foulke and D.T. Taylor. *Direct and Indirect Costs of Wolves on Livestock Producers*. Southeast Wyoming Beef Production Convention, Torrington, WY, November 20, 2012.
- Rashford, B.S. *The Future of Waterfowl Management, Conservation and Hunting*. Saturday University, Jackson Hole, WY, June 2, 2012.
- Rashford, B.S. *Economics of Predator Control*. Wyoming Master Woolgrower Program, Evanston, WY, March 20, 2012.
- Rashford, B.S. *Economics of Predator Control*. Wyoming Master Woolgrower Program, Casper, WY, January 31, 2012.
- Rashford, B.S. *Estimating the Comprehensive Values of Western Rangelands*. National Grasshopper Management Board Meeting, Aurora, CO, January 25, 2012.

- Rashford, B.S. *Understanding the Economics of Renewable Energy*. Wyoming Soil and Water Conservation Society, Agriculture and Energy Conference, Laramie, WY, September 29, 2011.
- Rashford, B.S. and *N. Macsalka. *Economic Feasibility: How to Evaluate Energy Investments*. Panel Presentation. Wyoming Sustainability Summit 2010, Laramie, WY, April 12, 2010.
- *Kauffman, M., D.E. Peck and B.S. Rashford. *Understanding Demand for Guided Hunts in the Greater Yellowstone Area*. Wyoming Outfitters & Guides Association Winter Convention, Lander, WY, January 10, 2009.
- Peck, D.E. and B.S. Rashford. *Animal Disease: Using Economic Principles to Increase Profitability*. Joint Winter Conference of the Wyoming Stock Growers Association and Wyoming Wool Growers Association, Casper, WY, December 7, 2008.
- Rashford, B.S. *Agricultural Land Use and Ecosystem Services in the Canadian Prairies*. Keynote Address. Forage Industry Stakeholder Forum, Saskatoon, Saskatchewan, November 20, 2008.
- Rashford, B.S. *Economics 101: How to Measure Indirect Values*. Forage Industry Stakeholder Forum, Saskatoon, Saskatchewan, November 21, 2008.
- Peck, D.E. and B.S. Rashford. *Throwing Money at Animal Disease: What Does Economics Say About Bovine Viral Diarrhea and Wildlife/Livestock Disease*. Pfizer Research Workshop, Laramie, WY, August 16, 2008.
- Rashford, B.S., D.E. Peck and R.H. Coupal. *Economic Tools to Assess Animal Disease*. Wyoming Veterinary Medical Association Summer Meeting, Laramie, WY, June 15-17, 2008.

TEACHING

- Instructor: *AGEC 5650 – Communicating Research*, University of Wyoming, Spring 2024 (7), 2023(7), 2022(5), 2021(5), 2020(6), 2019(6) 2018(8), 2017(5), 2016(6), 2015(10), 2014(6), 2013(7)
- Instructor: *AGEC 5310 – Theory of Producer Behavior*, University of Wyoming, Fall 2023(3), 2022(7), 2021(4), 2019(6).
- Instructor: *AGEC 4930/5990 – AGEC Internship*, University of Wyoming, 2024(10), 2023(8), 2022(6), 2021(3), 2020(2), 2019(6), 2018(3)
- Instructor: *AGEC 4910 – Probs: Ag Economics*, University of Wyoming, 2024(2), 2022(1), 2019(1), 2018(1), 2018 (1)
- Instructor: *AGEC/ENR 5890 – GIS Methods and Applications*, University of Wyoming, Summer 2018(3), 2017(1), 2016(2); Fall 2016(3), 2015(2); Spring 2013(1)

Guest Panelist: *AECL 4990 – Agroecology Seminar*, University of Wyoming, Spring 2018, 2017, 2015, 2014, 2013.

Mentor: *ERS 4990 – Wind Energy Special Topics*, University of Wyoming, Spring 2016

Guest Panelist: *ENR 4990 – Environmental Assessment*, University of Wyoming, Spring 2015.

Co-Instructor: *AGEC 5320 – Quantitative Methods in Agricultural Economics*, University of Wyoming, Fall 2011, 2010, 2009, 2008.

Mentor: *SENR 4900/5900 – Environment and Natural Resources Assessment Practice*, University of Wyoming, Spring 2009, 2008, 2007.

Co-Instructor: *AGEC 5310 – Firm Behavior and Production Economics*, University of Wyoming, Fall 2007.

Instructor: *AREC 300 – Applied Economic Analysis*, Oregon State University, Fall 2005.

Guest Lecturer: *Z348 – Human Ecology*, “Why ‘Environmental Economics’ Is Not An Oxymoron,” Oregon State University, August 31, 2005.

Instructor: *ECON 202 – Introduction to Macroeconomics*, Oregon State University, Summer 2004.

Instructor: *ECON 1010 – Macroeconomics*, Laramie County Community College, Fall 2001.

UNDERGRADUATE ADVISING (Academic Year – # Advisees)

2021 – 1; 2020 – 6; 2019 – 21; 2018 – 38

GRADUATE ADVISING

Supported with extramural funds: 45 student-semesters

Publications with student co-authors: refereed (9), reviewed (14)

Presentations with student co-authors: 30

Chair/Co-Chair (parentheses indicate graduation year)

18. Brooke Shaw, M.S., Agricultural and Applied Economics (2022) – “A comparative analysis of a propensity score matching approach for valuing conservation easements across distinct land markets”
17. Jessica Gordon, M.S., Agricultural and Applied Economics (2020) – “Economic net benefits of vaccination against brucellosis in cattle of Argentina and Wyoming”
16. Victoria Omojoso, M.S., Agricultural and Applied Economics (2020) – “The implications of bioenergy with carbon capture and storage for land-use change in the Upper Missouri River Basin”

15. Josef (Eli) Lindsey, M.S. (Plan B), Agricultural and Applied Economics (2019) – “Developing an Organizational Leadership Program for the University of Wyoming”
14. Hunter Bruce, M.S., Agricultural and Applied Economics (2018) – “Capacity for Outfitted Rock Climbing in the Medicine Bow National Forest”
13. Holly Kirkpatrick, M.S. (Plan B), Agricultural and Applied Economics (2017) – “Developing an Organizational Leadership Curriculum for the University of Wyoming”
12. Raymond Tupling, M.S., Agricultural and Applied Economics (2016) – “Resource Development and Mitigation: How Mitigation Policies Influence the Ecological Effectiveness and Economic Efficiency of Public Lands”
11. Benjamin Beaman, M.S., Agricultural and Applied Economics (2016) – “Implications of Climate Change for Land Use and Waterfowl Productivity in Prairie Canada”
10. Eric Swanson, M.S., Agricultural and Applied Economics (2016) – “Modeling the Behavior of Fishing Villages in Marine Protected Areas”
9. Khadija Rouchdi, Agricultural and Applied Economics (2015) – “The Impact of Slow Steaming on the Quantity and Composition of U.S. Imports”
8. Austin Sandler, M.S., Agricultural and Applied Economics (2014) – “On Land-Use Change Modeling: A Treatise of Satellite Imagery Data and Misclassification Error”
7. Muhammad Al Amin, M.S., Agricultural and Applied Economics (2013) – “Agricultural Land-Use in a Changing Climate: Implications for Waterfowl Habitat in Prairie Canada”
6. Abby Mellinger-Scott, M.S., Agricultural and Applied Economics (2012) – “Economic and Ecological Tradeoffs of Targeting Conservation Easements: A Case study of Sublette County, Wyoming”
5. Jordan Steele, M.S., Agricultural and Applied Economics (2012) – “Wolf Reintroduction: Direct and Indirect Effects for Western Wyoming Cattle Producers”
4. Lane Gardiner, M.S., Agricultural and Applied Economics (2011) – “Economics of Ram Mating Behavior”
3. Natalie Macsalka, M.S., Agricultural and Applied Economics (2011) – “Assessing the Conflicts Between Wind Energy Development and Sage-Grouse Conservation in Wyoming: An Application using a Spatially Explicit Wind Development Model”
2. Mandy Kaufmann, M.S., Agricultural and Applied Economics (2010) – “Effects of Elk Feedground Closure on Demand for Elk Hunting in Northwest Wyoming”
1. Jeffrey Cole, M.S., Agricultural and Applied Economics (2009) – “Determinants of Agricultural Land Use in the Canadian Prairies: Implications for Wildlife Habitat”

Committee Member (**external reviewer*)

28. Bryana Funk, PhD Hydrological Sciences, University of Wyoming (2026)

27. Md Fokhrul Islam, International Studies, University of Wyoming (2025)
26. Steven Millward, JD/MA, University of Wyoming (2024)
25. Matthew Maloney, Economics, University of Wyoming (2023)
24. George Montag, Economics, University of Wyoming (2023)
23. Nicholas Espenan, JD/MA, University of Wyoming (2023)
22. Devini Wettimuny, Food Sci. and Human Nutrition, University of Wyoming (2023)
21. Travis Brammer, JD/MA, University of Wyoming (2022)
20. Korina Ike, M.A., History, University of Wyoming (2022)
19. Justin Bolak, M.S., Food Sci. and Human Nutrition, University of Wyoming (2021)
18. Victoria Anderson, M.S., Agricultural and Applied Economics (2021)
17. Michael Curran, PhD, Program in Ecology, University of Wyoming (2020)
16. Stephanie Brockman, PhD, Economics, University of Wyoming (2019)
15. Eilish Hanson, M.S., Agricultural and Applied Economics (2019)
14. Jaycey Lindsey, M.S. (Plan B), Agricultural and Applied Economics (2019)
13. Alfredo Pineda, PhD, Economics and Finance, University of Wyoming (2019)
12. Matthew Maloney, PhD, Economics, University of Wyoming (2018)
11. Sichao Wei, PhD, Economics and Finance, University of Wyoming (2017)
10. Chad LaFever, M.S., Economics and Finance, University of Wyoming (2015)
9. Spencer Blevins, M.S., Agricultural and Applied Economics (2015)
8. Shaikh Eskander, PhD, Economics and Finance, University of Wyoming (2015)
7. Dale Novotny, M.S., Agricultural and Applied Economics (2015)
6. Anna Scofield, M.S., Agricultural and Applied Economics (2014) [2015 Top MS Thesis, Agricultural and Applied Economics Association]
5. Katryn Pasaribu, M.S., Agricultural and Applied Economics (2014)
4. Fawn Hornsby, M.S., Statistics, University of Wyoming (2012)
3. *Patrick Withey, PhD, Economics, University of Victoria (2012)
2. Orlando Diaz, M.S. Plan B Agribusiness, Agricultural and Applied Economics (2011)
1. Valerie Uthlaut, M.S., Animal Science – Reproductive Biology (2010)

SERVICE

Professional

Manuscript Referee (#articles/year)

- American Journal of Agricultural Economics (1/2015, 2/2012, 1/2010)
- Applied Economic Policy and Perspectives (1/2016)
- Canadian Journal of Agricultural Economics (1/2010)
- Conservation Biology (1/2016)
- Ecological Applications (1/2011)
- Ecological Economics (1/2015, 1/2009)
- Ecosystem Services (1/2014)
- Environmental Conservation (1/2017)
- Environmental Management (1/2010)

Environmental and Resource Economics (1/2011)
Human Dimensions of Wildlife (1/2021)
ICID Journal of Irrigation and Drainage (1/2005)
Journal of Agricultural and Resource Economics (1/2009)
Journal of Environmental Economics and Management (1/2011)
Journal of Wildlife Management (1/2017)
Land (1/2014)
Land Economics (1/2020, 1/2017, 1/2016, 1/2015, 1/2013, 1/2011)
Land Use Policy (1/2019, 1/2018)
PLOS ONE (1/2017)
Population and Environment (1/2014)
Regional Environmental Change (1/2015)
Rural Connections (1/2013)
Sustainability (1/2010)
UW Cooperative Extension Service (2/2021, 1/2015, 1/2014, 1/2013, 7/2010, 1/2007,
1/2006)
Western Economics Forum (1/2021, 1/2015, 1/2014, 1/2012, 1/2010)
Western Rural Development Center (1/2016)
Wildlife Biology in Practice (1/2012)
Wildlife Society Bulletin (2/2012)

Expert Reviewer, Environmental Impact Statement for the Proposed Nonessential
Experimental Population of the Mexican Wolf, EMPSi and US Fish and Wildlife
Service, 2021-2022

Expert Reviewer, K•COE ISOM, Blackfeet Water Settlement Financial Analysis, 2015

External Reviewer, Research Council of Norway, Norwegian Research Program on
Climate Change, 2014

Reviewer, Selected Papers, Agricultural and Applied Economics Association Annual
Meeting, 2014, 2013, 2007

Moderator, Selected Paper Session 8: The Management and Consequences of Animal
Disease, Western Agricultural Economics Association Annual Meeting, 2011

Reviewer, Selected Papers, Western Agricultural Economics Association Annual
Meeting, 2011, 2009

Reviewer, Selected Papers, International Symposium on Veterinary Economics and
Epidemiology, 2009

Reviewer, Western SARE Research and Education Grant Program, 2009

Policy Committee Member, U.S. Society for Ecological Economics, 2008 – 2010

Session Chair, Ecological Economics of Renewable Resources I: Conceptual Issues, 4th
Biennial Conference of the US Society for Ecological Economics, New York, NY,
June 25, 2007

State

Board Member, Plank Stewardship Initiative, May 2024 – present

Steering Committee Member, Wyoming Stock Growers Agricultural Land Trust –
Ranchland Succession Program Feasibility Study, Nov 2010 – May 2011

Appointed Member, Wyoming Sage Grouse Technical Committee, Mar 2007 – Jan 2010

University/College

Member (Appointed), Next Generation USP – Digital Literacy Committee, Academic
Affairs, Spring 2024

Member, Search Committee – Assistant/Associate Professor, Collaborative Practices in
Natural Resources, Haub School of Environment and Natural Resources, Spring 2024

Member, Search Committee – Computational Social Scientist, School of Computing,
Spring 2024

Chair, Search Committee – Extension Educator, Agricultural and Applied Economics,
Spring 2023

Member, Search Committee – COANR Academic Advisor, Spring 2023

Member, Search Committee – Lecturer, UW Casper, Fall 2023

Member (appointed), Ranch Management and Agricultural Leadership Curriculum
Committee, COANR, Summer/Fall 2022

Chair, Search Committee – Associate Director/Lecturer, Ranch Management and
Agricultural Leadership, COANR, Spring 2022

Chair, Search Committee – GrowinG Internship Program Coordinator, COANR,
February 2022

Member, Honors College Council, University of Wyoming, Jan. 2020 – present

Senior Advisor, Ruckelshaus Institute for the Environment and Natural Resources, 2010
– present

Member, Advising Assessment Working Group, UW Academic Affairs, April 2018 –
present

Reviewer, UW Biodiversity Institute, Graduate Student Grant Program, 2020

Member, Wyoming Open Spaces Initiative Committee, Ruckelshaus Institute for the
Environment and Natural Resources, Jan. 2016 – 2019

Member, Academic Experiences Advisory Group, Subcommittee of Careers Everywhere
Committee, UW Academic Affairs, May 2019 – October 2019

Member, Post-Tenure Review Working Group, UW Academic Affairs, Oct 2019 – Nov
2019

Member, Search Committee – COANR Academic Advisors, Summer 2018

Member (Appointed), Strategic Planning Advisory Committee, College of Agriculture and Natural Resources, AY 2016-17

Member, Outstanding Educator Award Selection Committee, UW Extension, Fall 2017

Chair (Appointed), Search Committee – UW Associate Vice Provost for Graduate Education, April 2017 – August 2017

Chair (elected), Graduate Council, UW Faculty Senate, AY 2015-16 and AY 2016-17

College of Agriculture and Natural Resources Representative, Graduate Council, UW Faculty Senate, Sept. 2014 – 2017

College of Agriculture and Natural Resources Representative, UW Faculty Senate, Research Advisory Committee, 2011 – 2016

Panelist, “Graduate Admissions”, University of Wyoming, McNair Scholars Program, June 2016

Member (Appointed), Search Committee – UW Provost and Vice President for Academic Affairs, Spring 2016

Panelist, “Tips for Launching a Successful Career”, University of Wyoming, New Faculty and Academic Professional Orientation, Aug. 2015

Panelist, “Role of the Major Advisor and Committee in Graduate School”, University of Wyoming, McNair Scholars Program, July 2015

Member, Review Committee for Dean Frank Galey, UW Office of Academic Affairs, Spring 2015

College of Agriculture and Natural Resources, Agricultural Experiment Station, AES Grant Review Panel, Fall 2014

Member, Saturday University Task Force, UW President’s Office, Oct. 2013 – Mar. 2014.

Member, UW CES Energy Working Group, 2009

Reviewer, UW CES Internal Grants Program, 2009

Member, Search Committee, Department of Plant Sciences, Dec 2007 – 2009

Member, Ruckelshaus Institute of Environment and Natural Resources, Open Spaces Advisory Committee, 2006 – 2009

Department of Agricultural and Applied Economics

Graduate Program Coordinator, Aug 2008 – present

Student Recruiting (academic year-total enrollment)
2024-5; 2023-8; 2022-7; 2021-8; 2020-12; 2019-13; 2018-13; 2017-11; 2016-13;
2015-20; 2014-20; 2013-16; 2012-19; 2011-16; 2010-17; 2009-14; 2008-12; 2007-6

Programmatic Funding Secured (\$577,546)
UW Graduate Tuition and Fee Awards, 2024 – \$30,975
AES Graduate Assistantship Awards, 2024 – \$51,300

AES Graduate Assistantship Awards, 2023 – \$41,300
Y-Cross Ranch Tuition and Fee Awards, 2022 – \$10,325
AES Graduate Assistantship Awards, 2022 – \$25,660
UW Graduate Tuition and Fee Awards, 2021 – \$5,163
UW Graduate Tuition and Fee Awards, 2020 – \$20,650
Lynch Graduate Fellowship, 2020 – \$25,706
UW Graduate Tuition and Fee Awards, 2019 – \$12,578
Y-Cross Graduate Tuition and Fee Awards, 2018 – \$18,830
UW Graduate Tuition and Fee Awards, 2018 – \$6,289
UW Graduate Tuition and Fee Awards, 2017 – \$9,415
UW Graduate Tuition and Fee Awards, 2016 – \$17,292
UW Under-Represented and Domestic Minority Award, 2016 – \$41,448
UW Graduate Tuition and Fee Awards, 2015 – \$16,992
UW Graduate Recruiting Initiative, 2014 – \$8,900
UW Mentoring Initiative, 2014 – \$39,774
UW Graduate Tuition and Fee Awards, 2014 – \$32,624
UW Mentoring Initiative, 2013 – \$37,785
UW Women and Minority Scholarships, 2013 – \$29,337
UW Graduate Tuition and Fee Awards, 2013 – \$20,012
UW Mentoring Initiative, 2012 – \$36,275
UW Graduate Tuition and Fee Awards, 2012 – \$23,450
UW Graduate Tuition and Fee Awards, 2011 – \$7,816
UW Graduate Tuition and Fee Awards, 2009 – \$7,650

Graduate Committee Member, Sept 2007 – present

PROFESSIONAL DEVELOPMENT

Participant, *Thriving in Times of Uncertainty: A Workshop on Building Resilience*, AEA
Webinar, Oct 6, 2021

Participant, *Magna Publications - Developing an Effective Faculty Evaluation System*,
Webinar, March 7, 2018.

Participant, *Impact Writing Workshop*, Laramie, WY, Oct 6, 2014.

Participant, *Conservation Finance – Creative Approaches to Sustain Land and Water*.
Casper, WY, April 2, 2013.

Participant, *Faculty and Academic Professionals Development Workshop*. Laramie, WY,
April 5, 2011.

Participant, *Workshop on Epidemiology and Economics of Brucellosis in the GYA*.
Laramie, WY, March 30-31, 2011

Participant, *Wind Energy and Scenic Considerations in Wyoming*. Laramie, WY, Jun 17,
2009

Invited Participant, *Wind Powering America: Extension Wind Training & Collaboration
Planning Meeting*. Golden, CO, Nov 4 – 5, 2008

Participant, *Small Wind Energy Seminar*. Cheyenne, WY, Oct 30, 2008

Invited Participant, *Wildlife/Livestock Disease: State of the Knowledge, Research Priorities, and Potential Partnerships to Inform Policy*. Organized session, Pathways to Success: Integrating Human Dimension into Fisheries and Wildlife Management, Sept 29, 2008

Participant, *Western Agricultural Economics Association Annual Meeting*. Big Sky, MT, June 25 – 27, 2008

Participant, *Epidemiologic Simulation Modeling*. Fort Collins, CO, Jan 14 – 16, 2008

Participant, *Writing Winning Grants*. Laramie, WY, Jun 29, 2007

Participant, *Wildlife Heritage Summit*. Casper, WY, May 11 – 12, 2007

PROFESSIONAL AFFILIATIONS

Agricultural and Applied Economics Association
Western Agricultural Economics Association