

**Kristiana M. Hansen**  
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**EDUCATION/TRAINING**

**B.A.** Economics, Reed College, Portland, OR, 1996

**M.S.** Agricultural and Resource Economics, University of California, Davis, 2003

**Ph.D.** Agricultural and Resource Economics, University of California, Davis, January 2008

**Post-Doctoral Researcher** Université catholique de Louvain, Belgium, January 2008-July 2009

**PROFESSIONAL APPOINTMENTS**

2016-present Associate Professor and Extension Water Resource Economist

Dept of Agricultural and Applied Economics, University of Wyoming

Current appointment: 35% research, 35% extension, 25% teaching, 5% service

2009-2016 Assistant Professor and Extension Water Resource Economist

Dept of Agricultural and Applied Economics, University of Wyoming

**RESEARCH, TEACHING, AND EXTENSION INTERESTS**

Water resource economics, environmental and natural resource economics, hydro-economic modeling and policy simulations, farm modeling and policy simulations, “payment for ecosystem services” markets, wildlife habitat conservation policy, experimental economics

**PUBLICATIONS**

**Refereed Journal Articles** (\* indicates co-author is a former graduate student.)

20. Mooney, D. and **K.M. Hansen**. “Agricultural Producer Decision-Making around Water Conservation in the Upper Colorado River Basin.” Accepted. *Choices*.
19. Asgari, M. and **K.M. Hansen**. Threading the Needle: Upper Colorado River Basin Responses to Reduced Water Supply Availability.” Accepted. *Choices*.
18. Blevins, S.\*, **K.M. Hansen**, G. Paige, A. MacKinnon, and C. Bastian. 2024. “Economic Evaluation of Water Management Alternatives in the Upper Green River Basin of Wyoming.” *Water* 16(1685) <https://www.mdpi.com/2073-4441/16/12/1685>
17. Mattke, A.\*, **K. Hansen**, V. Sharma, D. Peck, S. Miller, C. Bastian. 2024. “Potential Benefits of Water Use Efficiency Technologies in Southeastern Wyoming.” *Journal of the American Society of Farm Managers and Rural Appraisers* 87:30-36. [https://higherlogicdownload.s3.amazonaws.com/ASFMR/AEB240ec-5d8f-447f-80ff-3c90f13db621/UploadedImages/Journal/2024/Benefits\\_of\\_Water-Use\\_Efficiency.pdf](https://higherlogicdownload.s3.amazonaws.com/ASFMR/AEB240ec-5d8f-447f-80ff-3c90f13db621/UploadedImages/Journal/2024/Benefits_of_Water-Use_Efficiency.pdf)
16. **Hansen, K.**, S. Brodnax, R. Coupal, J. Lamb, A. MacKinnon, G. Paige, E. Peterson, M. Purcell. 2024. Wyoming Conservation Exchange: A Case Study in Grassroots Conservation Program Design. *Journal of Extension* 61(4) <https://doi.org/10.34068/joe.61.04.02>

15. Warziniack, T., R. Heinse, A. Fernald, M. Gaffney, **K. Hansen**, B. Hess, L. Houglum, G. Paige, and Q. Zhang. 2023. “Western Water Network: A Case Study in Water Network Formation.” *Journal of Contemporary Water Research and Education* 178: 47-56.  
<https://doi.org/10.1111/j.1936-704X.2023.3391.x>
14. Conte, M., **K. Hansen**, K. Horton, C. Jones Ritten, L. Palm-Forster, J. Shogren, F. Wätzold and T. Wyckoff. 2023. “A Framework to Evaluate Mechanisms to Support Seasonal Migratory Species.” *Review of Environmental Economics and Policy* 17(1):132-151.  
<https://www.journals.uchicago.edu/doi/pdf/10.1086/724032>
13. Jones Ritten, C., A. Nagler, **K. Hansen**, D. Bennett and B. Rashford. 2022. “Incorporating Landowner Preferences into Successful Migratory Species Conservation Policy.” *Western Economic Forum* 20(1):83-94.  
<https://ageconsearch.umn.edu/record/320619/files/Incorporating%20Landowner%20Preferences%20into%20Successful%20Migratory%20Species%20Conservation%20Policy.pdf>
12. Ibragimov, T.\*, C.T. Bastian, K.M. Hansen, S.I. Paisley and N.S. Ballenger. 2020. “Potential for Genomics to Improve Feed Efficiency and Ranch Profitability. *Journal of American Society of Farm Management & Rural Appraisers*. 83: 88-98.  
[https://higherlogicdownload.s3.amazonaws.com/ASFMRA/aeb240ec-5d8f-447f-80ff-3c90f13db621/UploadedImages/Journal/ASFMRAJournal\\_2020\\_Final.pdf](https://higherlogicdownload.s3.amazonaws.com/ASFMRA/aeb240ec-5d8f-447f-80ff-3c90f13db621/UploadedImages/Journal/ASFMRAJournal_2020_Final.pdf)
11. Lamb, K.\*, **K. Hansen**, C. Bastian, A. Nagler, and C. Jones Ritten. 2019. “Investigating Potential Impacts of Non-Attainment Risk Mitigation on Habitat Exchange Outcomes.” *Environmental and Resource Economics* 73(3): 815-842. [DOI:10.1007/s10640-019-00332-z](https://doi.org/10.1007/s10640-019-00332-z)
10. Khadem, M, C. Rougé, J.J. Harou, **K.M. Hansen**, J. Medellin-Azuara and J.R. Lund. 2018. Estimating the economic value of inter-annual reservoir storage in water resource systems. *Water Resources Research*. [DOI:10.1029/2017WR022336](https://doi.org/10.1029/2017WR022336)
9. **Hansen, K.**, E. Duke, C. Bond, M. Purcell and G. Paige. 2018. “Landowner Preferences for a Payment-for-Ecosystem Services Program in Southwestern Wyoming.” *Ecological Economics* 146: 240-9. <http://dx.doi.org/10.1016/j.ecolecon.2017.10.013>
8. Mock, B.\*, **K. Hansen**, D. Menkhous and R. Coupal. 2016. “Policy Experiments for the U.S. Intermountain West Native Seed Industry.” *Canadian Journal of Agricultural Economics*. <https://doi.org/10.1111/cjag.12111>
7. **Hansen, K.**, R. Howitt, and J. Williams. 2015. “An Econometric Test of Water Market Institutions.” *Natural Resources Journal* 55(1): 127-152.  
<https://www.jstor.org/stable/24889752>
6. Hodges, A.\*, K. Hansen and D. McLeod. 2014. “The Economics of Bulk Water Transport in Southern California.” *Resources* 3(4):703-720. <https://doi.org/10.3390/resources3040703>
5. **Hansen, K.**, J. Kaplan, and S. Kroll. 2014. “Valuing Options in Water Markets: A Laboratory Investigation.” *Environmental and Resource Economics* 57(1):59-80.  
<https://doi.org/10.1007/s10640-013-9659-6>

4. Bastian, C.T., S.T. Gray, D.E. Peck, J.P. Ritten, K.M. Hansen, J.M. Krall and S.I. Paisley. 2012. The Nature of Climate Science for the Rocky Mountain West: Implications for Economists Trying to Help Agriculture Adapt. *Western Economics Forum* 10(2):23-32. [https://ageconsearch.umn.edu/record/176458/files/WEF-Vol.10-No.2-Fall2011\\_Bastian.pdf](https://ageconsearch.umn.edu/record/176458/files/WEF-Vol.10-No.2-Fall2011_Bastian.pdf)
3. **Hansen, K.** 2011. “Western Water Markets.” *Western Economics Forum* 9(2):33-42. [https://ageconsearch.umn.edu/record/176402/files/WEF-Vol.9-No.2-Fall2010R\\_Hansen.pdf](https://ageconsearch.umn.edu/record/176402/files/WEF-Vol.9-No.2-Fall2010R_Hansen.pdf)
2. **Hansen, K.**, R. Howitt, and J. Williams. 2008. “Valuing Risk: Options in California Water Markets.” *American Journal of Agricultural Economics* 90(5):1336-1342. <https://www.jstor.org/stable/20492395>
1. Howitt, R. and **K. Hansen**. 2005. “The Evolving Western Water Markets.” *American Agricultural Economics Association Choices* 20(1):59-63. <https://ageconsearch.umn.edu/record/93330/files/The%20Evolving%20Western%20Water%20Markets.pdf>

### Book Chapters and Book Reviews

5. **Hansen, K.** 2019. Book Review of Towards Tradable Water Rights: Water Law and Policy Reform in China. *Water Economics and Policy* 5(3): 1-3. [DOI: 10.1142/S2382624X1980002X](https://doi.org/10.1142/S2382624X1980002X).
4. **Hansen, K.** 2016. “Meeting the Challenge of Water Scarcity in the Western U.S.” In *Competition for Water Resources: Experiences and Management Approaches in the US and Europe* (J. Ziolkowska. and J. Peterson, editors). Elsevier: Cambridge, MA.
3. **Hansen, K.** 2016. Book Review of *Golden Rules: The Origins of California Water Law in the Gold Rush*. *Water Economics and Policy* 2(3): 1-4. <https://doi.org/10.1142/S2382624X16800047>.
2. **Hansen, K.** 2015. “Water Markets from Theory to Practice (with Focus on the USA).” In *Handbook of Water Economics*, eds. A. Dinar and K. Schwabe. Edward Elgar Publishing, pp. 355-371.
1. **Hansen, K.**, R. Howitt, and J. Williams. 2013. “Water Trades in the Western United States: Risk, Speculation, and Property Rights.” In *Water Trading and Global Water Scarcity: International Perspectives*, ed. J. Maestu. New York: RFF Press Water Policy Series, pp. 55-67.

### Extension Publications, Reports, and Materials

22. Lamb, K.\*, **K. Hansen**, C. Bastian, A. Nagler, and C. Jones Ritten. Forthcoming. “Credit Failure Risk in Market-Based Conservation Programs.” University of Wyoming Extension Bulletin.
21. **Hansen, K.**, S. Buck, D. Godwin, A. Fernald, G. Paige, B. Gaolach, R. Heinse, H. Braithwaite, T. Warziniack. 2024. The Western Water Network: A Vision for the Future

- of Water Management in the West. 17 pages. [https://www.waaesd.org/wp-content/uploads/2024/01/WesternWaterNetwork\\_VisionPaper\\_15Jan2024-Final.pdf](https://www.waaesd.org/wp-content/uploads/2024/01/WesternWaterNetwork_VisionPaper_15Jan2024-Final.pdf).
20. Bennett, D.E., M. Lewis, H. Mahowald, M. Collins, T. Brammer, H. Byerly Flint, L. Thorsness, W. Eaton, **K. Hansen**, M. Burbach, and E. Koebele. 2023. Agricultural Water Users' Preferences for Addressing Water Shortages in the Colorado River Basin. September, 2023. 40 pages. <https://www.uwyo.edu/haub/files/docs/co-river-basin-ag-water-users-survey.pdf>
  19. **Hansen, K.** and R. Heinse. 2023. Water Resilience in Agriculture. In: Zhang, Q. (eds) Encyclopedia of Smart Agriculture Technologies. Springer, Cham. [https://doi.org/10.1007/978-3-030-89123-7\\_192-3](https://doi.org/10.1007/978-3-030-89123-7_192-3).
  18. Paige, G., **K. Hansen**, A. MacKinnon. 2022. Wyoming Demand Management Feasibility Investigation: Stakeholder Engagement Process, July 2019-December 2020." Bulletin B-1384. Laramie, WY: University of Wyoming Extension. <https://www.wyoextension.org/agpubs/pubs/B-1384-demand-management-web.pdf>.
  17. **Hansen, K.**, R. Coupal, E. Yeatman, and D. Bennett. 2021. "Economic Assessment of a Water Demand Management Program in Wyoming's Portion of the Colorado River Basin: Summary" Bulletin B-1373. Laramie, WY: University of Wyoming Extension. Available at <https://www.wyoextension.org/agpubs/pubs/B-1373-1-web.pdf>.
  16. **Hansen, K.**, R. Coupal, E. Yeatman, and D. Bennett. 2021. "What Would the Economic Impacts of a Water Demand Management Program Be, if the Consumptive Use Savings Came from Agriculture?" Bulletin B-1373.2. Laramie, WY: University of Wyoming Extension. Available at <https://www.wyoextension.org/agpubs/pubs/B-1373-2-web.pdf>.
  15. Hansen, K., R. Coupal, E. Yeatman, and D. Bennett. 2021. "Economic Assessment of a Water Demand Management Program in Wyoming's Portion of the Colorado River Basin." Final Report to The Nature Conservancy. March 15, 2021. 112 pages. <https://www.uwyo.edu/uwe/wy-dm-ucrb/econ-report.html>
  14. Hewlett, J.P., S. Cotton, **K. Hansen**, D. Keto, and J. Thompson. "Agriculture & Horticulture Online Convention 2021." UW Extension - Agriculture & Horticulture Initiative Team Planning Committee event report. February 2021.
  13. **Hansen, K.**, D. Peck, S. Miller and K. Willis. 2019. "Economic Assessment of Alternative Groundwater Management Strategies in Laramie County." Final report to the UW Water Research Program.
  12. Carter, C., **K. Hansen**, W. Kelley and L. Pauley. 2017. "Irrigation Handbook for Small-Acreage Landowners in Wyoming." Ed: J. Thompson. Bulletin B-1306. Laramie, WY: University of Wyoming Extension. [https://www.wyoextension.org/agpubs/pubs/B-1306\\_irrigation\\_guide-web.pdf](https://www.wyoextension.org/agpubs/pubs/B-1306_irrigation_guide-web.pdf).
  11. **Hansen, K.**, C. Bastian, A. Nagler and C. Jones Ritten. 2017. "Designing Markets for Habitat Conservation: Lessons Learned from Agricultural Markets Research." Bulletin B-1297. Laramie, WY: University of Wyoming Extension. [https://www.wyoextension.org/agpubs/pubs/b-1297\\_designing\\_markets\\_web.pdf](https://www.wyoextension.org/agpubs/pubs/b-1297_designing_markets_web.pdf).

10. **Hansen, K.** and E. Peterson. 2016. "Implementing a Market-Based Conservation Exchange in Wyoming." Final Report for CIG Grant 68-8E49-14-014. Submitted to NRCS-Wyoming in November 2016.
9. **Hansen, K.**, C. Nicholson and G. Paige. 2015. "Wyoming's Water: Resources and Management." Bulletin B-1272. Laramie, WY: University of Wyoming Extension. <https://www.wyoextension.org/agpubs/pubs/B-1272.pdf>.
8. **Hansen, K.**, M. Purcell, G. Paige, A. MacKinnon, J. Lamb and R. Coupal. 2015. "Development of a Market-Based Conservation Program in the Upper Green River Basin of Wyoming: Feasibility Study." Bulletin B-1267. Laramie, WY: University of Wyoming Extension. <https://www.wyoextension.org/agpubs/pubs/b-1267-market-based-conservation.pdf>.
7. **Hansen, K.** 2014. "Development of a Market for Ecosystem Services in the Wyoming Green River Basin." Final Report for CIG Grant 69-8E49-1-108. Submitted to NRCS-Wyoming in August 2014.
6. **Hansen, K.**, J. Kaplan and S. Kroll. 2014. "Testing the Efficiency of Dry-Year Water Options with Market Experiments." Global Water Forum, Policy Paper Series. Available at <http://www.globalwaterforum.org/2014/02/10/testing-the-efficiency-of-dry-year-water-options-with-market-experiments-2/>.
5. **Hansen, K.**, A. Jakle, and M. Hogarty. 2013. "Market-Based Wildlife Mitigation in Wyoming: A Primer." Laramie, Wyoming: University of Wyoming Ruckelshaus Institute. <https://www.uwyo.edu/haub/files/docs/ruckelshaus/pubs/2013-market-based-mitigation.pdf>.
4. Carter, C.,\* A. Garcia y Garcia, A. Islam, and **K. Hansen**. 2013. "Effect of Deficit Irrigation on Water Use and Water Use Efficiency of Alfalfa." American Society of Agricultural and Biological Engineers Technical Paper Number 1603513. St. Joseph, MI: ASABE.
3. Harou, J.J., Pinte, D., Tilmant, A., Rosenberg, D.E., Rheinheimer, D.E., **Hansen, K.**, Reed, P.M., Reynaud, A., Medellin-Azuara, J., Pulido-Velazquez, M., Matrosov, E., Padula, S., and Zhu, T. 2010. "An open-source model platform for water management that links models to a generic user-interface and data-manager." 2010 International Congress on Environmental Modelling and Software: 'Modelling for Environment's Sake', Fifth Biennial Meeting, Ottawa, Canada.
2. Baudry, A., R. de Blander, C. Delaunoy, **K. Hansen**, B. Henry de Frahan, A. le Roi S. Paque, P. Polomé, G. van Impe and T. Walot. 2009. "Système Intégré d'Aide à la Décision Publique Agricole et Environnementale en Région wallonne ADAGE-RW." Université catholique de Louvain, Groupe Interuniversitaire de Recherches en Ecologie Appliquée (GIREA-ECOL) and Unité d'économie rurale (ECRU).
1. Harou, J., Pinte, D., **Hansen, K.**, Rosenberg, D., Tilmant, A., Medelin-Azuara, J., Pulido-Velazquez, M., Rheinheimer, D., Matrosov, E., Reynaud, A., Kock, B., and Vicuna, S. 2009. HydroPlatform.org: an open-source generic software interface and web repository for water management models. In: International Symposium on Environmental Software Systems, ISESS 2009, Venice, Italy.

## Manuscripts in Review and Preparation

7. **Hansen, K.M.**, R. Coupal, E. Yeatman, and D. Bennett. “Economic Impacts of Water Conservation in a Colorado River Basin Headwaters.” Revise and Resubmit at *Journal of Regional Analysis & Policy* (**Resubmitted** August 2024).
6. Keller, M., **K.M. Hansen**, K.E. Cooper, K.E., E. Donaldson, M. Kim, K.D. Landreville, G.B. Paige, J.J. Shinker, A. Van Sandt. “Unwinding the Spiral of Silence in Rural America: Looking Backward with Stories to Plan Forward.” Revise and Resubmit at *Frontiers in Climate* (**Resubmitted** June 2024).
5. Willis, K.\*, **K.M. Hansen**, D. Peck, S. Miller and V. Sharma. Estimating the Farm-Level Economic Impacts of Alternative Groundwater Management Strategies over the Ogallala Aquifer in Southeastern Wyoming. In preparation.
4. Van Sandt, A., **K.M. Hansen**, M. Ehmke, K. Cooper, K. Landreville, M. Keller, G. Paige, J. Shinker. “A Choice Experiment of Wyoming Residents’ Preferences Toward Water Resilience Improvement Programs.” In preparation.
3. **Hansen, K.M.**, V. Hovhannisyan and C. Grant.\* “An Empirical Analysis of Demand for Water Rights Transfers and Leases in Western Water Markets: A Simultaneous Approach.” In preparation.
2. Jones Ritten, C., C. Bastian, A. Nagler, **K.M. Hansen** and O. Philips. “Can Prospect Theory Help Explain Agricultural Producers’ Disadvantage During Privately Negotiated Trading?” In preparation.
1. Jones Ritten, C., **K.M. Hansen**, A. Nagler and C. Bastian. “A Laboratory Comparison of Risk Mitigation Strategies in Conservation Markets.” In preparation.

## Other Publications and Outreach Efforts

Kenney, D., K. Chief, B. Colby, J. Fleck, K. Flessa, **K. Hansen**, O. Hinojosa-Huerta, E. Kuhn, M. McKinney, J. Overpeck, J. Robison, J. Schmidt, K. Sorensen and B. Udall. 2024. “Imagining the River We Deserve: How the post-2026 Rulemaking Is Only One Step Towards Sustainability.” A Publication of the [Colorado River Research Group](https://www.colorado.edu/center/gwc/sites/default/files/attached-files/imagining_the_river_we_deserve_crrg_publication.pdf). Available at [https://www.colorado.edu/center/gwc/sites/default/files/attached-files/imagining\\_the\\_river\\_we\\_deserve\\_crrg\\_publication.pdf](https://www.colorado.edu/center/gwc/sites/default/files/attached-files/imagining_the_river_we_deserve_crrg_publication.pdf) accessed 15 May 2024.

**Hansen, K.**, A. Van Sandt, J. Hewlett. 2023. “Calculation of Appropriate Risk Premiums for SCPP Enrollment in Southwestern Wyoming.” Prepared for Wyoming State Engineer’s Office, April 8, 2023.

Willis, K.\*, **K. Hansen**, D. Peck, S. Miller and V. Sharma. 2019. Farm-Level Economic Assessment of Alternative Groundwater Management Strategies over the High Plains Aquifer in Southeastern Wyoming. University of Wyoming 2019 Field Days Bulletin.

Lamb, K.\*, **K. Hansen**, C. Bastian, A. Nagler, and C. Jones Ritten. 2019. “Managing Landowner Risk in Environmental Markets.” University of Wyoming 2019 Field Days Bulletin.

Ibragimov, T.\*, C. Bastian, **K. Hansen**, S. Paisley, and N. Ballenger. 2019. “Potential for Genomics to Improve Feed Efficiency and Ranch Profitability.” University of Wyoming 2019 Field Days Bulletin.

Willis, K.\* and **K. Hansen**. 2019. “Eastern Laramie County wrestles with water use today versus conserving for future.” *Wyoming Livestock Roundup*. April 2019.

Blevins, S.\*, **K. Hansen**, G. Paige, and A. MacKinnon. 2016. “The True Value of Flood Irrigation: What’s Seen as Wasteful Water Use Has Hidden Benefits.” *Western Confluence: Natural Resource Science and Management in the West*. UW Ruckelshaus Institute publication, Laramie, WY, pp. 38-40.

Blevins, S.\*, **K. Hansen**, G. Paige, and A. MacKinnon. 2016. “Valuing the Non-Agricultural Benefits of Flood Irrigation in the Upper Green River Basin.” University of Wyoming 2016 Field Days Bulletin.

**Hansen, K.** 2015. “Wyoming Conservation Innovation Grant Update: Implementing a Conservation Exchange for Wyoming.” In the June NRCS-Wyoming Monthly Update (June 30, 2015).

Mock, B.\*, **K. Hansen**, and R. Coupal. 2015. “Policy Experiments for the Intermountain West Native Seed Industry.” University of Wyoming 2015 Field Days Bulletin.

A. Perry\*, **K. Hansen**, R. Coupal, and B.A. Meador. 2015. “Analysis for Reclamation Costs in Wyoming’s Powder River Basin.” University of Wyoming 2015 Field Days Bulletin.

V.R. Joshi\*, A. Samet, J.J. Heitholt, **K. Hansen**, and A. Garcia y Garcia. 2015. “Yield Response of Confection Sunflower to Delaying the Onset of Irrigation. University of Wyoming 2015 Field Days Bulletin.

S. Brodnax, **K. Hansen**, J. Lamb, and M. Purcell. 2015. “Wyoming Conservation Exchange: New Marketplace Will Provide Incentives to Wyoming Ranchers and Landowners for Conserving Sage Grouse Habitat.” *Western Confluence* (UW Ruckelshaus Institute publication) Winter 2015, Issue 3, pp.26-27.

**Hansen, K.**, E. Duke, and G. Paige. 2014. “Landowner Preferences for Conservation Markets in Sublette County.” University of Wyoming 2014 Field Days Bulletin.

Joshi, V.\*, Garcia y Garcia, and **K. Hansen**. 2014. “Deficit Irrigation of Confection Sunflowers.” University of Wyoming 2014 Field Days Bulletin.

**Hansen, K.**, G. Paige, and R. Coupal. 2014. “A Conservation Exchange in the Upper Green River Basin.” *Reflections*. University of Wyoming College of Agriculture and Natural Resources Magazine.

**Hansen, K.**, G. Paige, and R. Coupal. 2013. “Payment for Ecosystem Services Market in the Upper Green River Basin.” University of Wyoming 2013 Field Days Bulletin.

Carter, C.\*, A. Islam, **K. Hansen**, and A. Garcia y Garcia. 2013. “Effects of Limiting Water on the Yield, Water Productivity, and Forage Quality of Alfalfa.” University of Wyoming 2013 Field Days Bulletin.

**Hansen, K.** and A. MacKinnon. 2013. “The Upper Green River Conservation Exchange—Creating Opportunities for Ranchers, the Environment, and Economic Development.” *Cow Country*. Wyoming Stock Growers Association Magazine. (April 2013).

**Hansen, K.** and A. Schroeder. 2012. “Montana v. Wyoming Before the U.S. Supreme Court.” *Barnyards & Backyards* newspaper insert (March 2012). University of Wyoming Extension.

**Hansen, K.** “Faculty Profile: Kristi Hansen.” *In the Margins* (Winter 2011). Newsletter for friends and alumni of the UW Department of Agricultural & Applied Economics.

**Hansen, K.** 2011. “Wyoming’s Role in the Colorado River Compact.” *Barnyards & Backyards* newspaper insert (March 2011). University of Wyoming Extension.

## GRANTS

### Proposals Funded

*Total Funding Awarded Since UW Appointment: \$2,258,975<sup>1</sup>*

**USDA-NIFA 2023.** Increase Weather And Climate Awareness, Preparedness, And Responses On Working Lands And In Rural Communities Of Wyoming. PI: K. Hansen. Co-PIs: W. Kelley, R. Witinok-Huber, R. Coupal, J. Daniels, B. Lee, M. Most, J. Shinker, B. Stam. \$1 million.

**University of Wyoming Water Research Program. 2021.** Economic Impacts of Curtailment and Demand Management in the Wyoming Colorado River Basin. PIs: K. Hansen, R. Coupal, and G. Paige. (2022-2025) \$215,000.

**NSF EPSCoR RII Track-1. 2021.** WyACT: Anticipating the Climate-Water Transition and Cascading Challenges to Socio-Environmental Systems in America's Headwaters. PI: B. Ewers. Hansen is one of 27 collaborator-team members. (2022-2027) \$20 million.

**UW Provost Strategic Initiative. 2021.** Cultivating Community Preparedness: Assessing Drought-Risk Perception in Wyoming Communities PI: K. Hansen. Co-PIs: K. Cooper, M. Ehmke, M. Keller, K. Landreville, G. Paige, J. Shinker, A. Van Sandt (2021-2024) \$32,593.

**Walton Foundation/Western Land Owners Alliance. 2022.** Agricultural Water User Perspectives on Water Conservation in the Colorado River Basin. PI: D. Bennett. Hansen is one of several co-PIs from multiple institutions. (2022-2023) \$49,500.

**The Nature Conservancy. 2019.** Economic Assessment of a Water Demand Management Program in the Upper Green River Basin. PI: Hansen. CoPIs: Roger Coupal and Drew Bennett. (2019-2021). \$32,796.

**Wyoming State Engineer’s Office. 2019.** Stakeholder Engagement in Assessment of Demand Management Plan Options for the Upper Colorado River Basin in Wyoming. PI: Ginger Paige. CoPIs: Kristi Hansen and Anne MacKinnon. (2019-2021). \$100,000.

**USDA Northern Plains Climate Hub. 2018.** Real-Time Energy Monitoring Pilot Program to Improve Producer Understanding of Irrigation Costs and Water Use. PI: Hansen. CoPIs: Caleb

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<sup>1</sup> This total excludes two \$20 million NSF EPSCoR Track I grants on which Dr. Hansen was a team member and one \$5 million NSF EPSCoR Track II grant on which Dr. Hansen was a co-PI.



Carter, Vivek Sharma (UW); Nick Brozovic, Daran Rudnick, Kate Gibson (UNL). (2018-2019) \$14,913.

**University of Wyoming Haub School. Quantifying the Recreational Value of Flood Irrigation in the Upper Green River Basin. 2017.** PIs: K. Hansen, G. Paige, A. MacKinnon. (2018-2019). \$50,000.

**University of Wyoming Water Research Program. Economic Assessment of Alternative Groundwater Management Strategies in Laramie County. 2016.** PIs: K. Hansen, D. Peck, and S. Miller. (2016-2019) \$128,396.

**Center for Behavioral and Experimental Agri-Environmental Research. Investigating Potential Impacts of Non-attainment Risk Mitigation on Conservation Exchange Outcomes. 2015.** PI: K. Hansen. Co-PIs: C. Jones-Ritten, C. Bastian, A. Nagler. (2016-2018) \$74,317.

**EPSCoR Wyoming Women in Science and Engineering Program Travel Grant.** Travel to Western Agricultural Economics Association to present an invited paper. (2016). \$1,000.

**USDA—NRCS Competitive Innovation Grants (Wyoming). 2014.** Implementing a Market-Based Conservation Exchange in Wyoming. PI: K. Hansen; coPIs: R. Coupal, G. Paige, A. MacKinnon (UW), J. Lamb, G. McGaffin (TNC Lander), M. Purcell, E. Peterson (Sublette County Conservation District), S. Brodnax, T. Toombs (EDF), S. Brause, E. Anderson (Environmental Incentives), E. Duke (Colorado State University). (2014-2016) \$150,000.

**USDA—AFRI Western Conference on Water Management Strategies for Addressing Long-Term Drought and Climate Uncertainty. 2014.** PI: N. Mesner (USU). Co-PIs: A. Benson (Texas A&M), K. Hansen (UWY), G. Paige (UWY), K. Schoengold (UN Lincoln), B. Stringam (NMSU). (2014-2015) \$49,534.

**Ruckelshaus Institute of Environment and Natural Resources. 2014.** Quantifying the Non-Agricultural Value of Flood Irrigation. PIs: K.M. Hansen and G. Paige (2014-2015) \$27,000.

**Powell Research and Extension Center (PREC) Competitive Graduate Student Assistantship. 2013.** Effects of Deficit Irrigation on Growth, Yield, and Quality of Confection Sunflower. PI: A. Garcia y Garcia. coPIs: A. Mesbah and K. Hansen. (2013-2015) \$40,000.

**Wyoming Agricultural Experiment Station Competitive Grants Program. 2012.** Landowner Survey for a “Payments for Ecosystem Services” Program in the Green River Basin. PIs: K.M. Hansen, G. Paige, E. Duke, and T. Willson. (2012-2013) \$51,392.

**US National Science Foundation. 2012.** Water in a Changing West: The Wyoming Center for Environmental Hydrology and Geophysics. PI: A. Sylvester; co-PIs: W. Holbrook, S. Miller. K. Hansen is a collaborator on the grant (2012 –2017) \$20,000,000.

**USDA—NRCS Competitive Innovation Grants (Wyoming). 2011.** Development of a Market for Ecosystem Services in the Wyoming Green River Basin. PIs: K.M. Hansen, R.D. Coupal, G.B. Paige, T.M. Willson, A. Pocerwicz (TNC Lander), M. Purcell (Sublette County Conservation District), A. MacKinnon, A. Chalfoun. (2011-2013) \$139,660.

**US National Science Foundation. 2011.** Collaborative Research: CI-Water, Cyberinfrastructure to Advance High-Performance Water Resource Modeling. Multiple PIs at BYU, University of

Utah, Utah State University. PI(Wyoming): F. Ogden; co-PIs: C. Douglas, K. Hansen, S. Miller, Y. Zhang. (2011-2014) \$5,000,000.

**USDA Risk Management Agency: Education and Outreach Partnerships Program. 2011.** Developing the Risk Resilience of Underserved Agricultural Operators in the RMA Billings Region. PI: C. Ehmke; co-PIs: J. Hewlett, S. Frost, K. Hansen, T. Jenson, & T. Russell. (2011-2012) \$41,095.

**NOAA Western Water Assessment/University of Colorado-Boulder. 2011.** Climate Assessment in Wyoming. PIs: S. Miller, K. Hansen (2011-2012) \$49,887.

**Wyoming Reclamation and Restoration Center. 2011.** Economics of Native Seed Production for Reclamation: A Laboratory Experiment. PIs: R. Coupal and K. Hansen (2011) \$5,000.

**UW Office of Academic Affairs Energy Graduate Assistantship Award. 2011.** Exploring the Potential for Tradable Permits Program for Coalbed Methane Produced Water in the Powder River Basin (2011-2012) \$41,000.

**UW Global Perspectives Grant Program. 2011.** Study-Tour to Ecole Supérieure d'Agriculture in Angers, France PI: K. Hansen (2011) \$2,892.

**Wyoming Reclamation and Restoration Center. 2010.** Economics of Native Seed Production for Reclamation and Restoration. PI: R.D. Coupal, co-PI: K.M. Hansen. (2010-2011) \$12,000.

**UW Elbogen Teaching and Learning Center. 2010.** Course Redesign Workshop. \$1,000.

### **Proposals in Review**

**National Science Foundation. 2024.** SRS-RN Collaborative Research: Comprehensive Aquifer and Surface water Coordination to Aid Decision-making for Equity and Efficiency (CASCADE2). Collaborative proposal led by UNL. UW PI: K.M. Hansen. UW Co-PIs: Albeke, Houseal, Inouye, Nippgen, Parsekian. (2025-2029). UW budget: \$2.4 million.

### **Proposals Not Funded**

**Extension Foundation 2023.** Western Water Network Extension Component Launch. PI: K. Hansen. Co-PIs: A. Fernald, D. Godwin, J. Ekins. \$40,000.

**USDA-NIFA 2022.** Increasing Capacity and Awareness to Address Weather and Climate Variability in Western Semi-Arid Agricultural Systems. PI: K. Hansen. Co-PIs: W. Kelley, A. Tomasek, M. Zamora Re, J. Powell, J. Vardiman, C. Youngquist, J. Shinker. \$1.5 million.

**USDA-NIFA 2021.** Protecting migration on working lands: Landowner preferences for conservation incentives given coordination and environmental risks. PI: C. Jones Ritten. Co-PIs: K. Hansen, C. Bastian, J. Shogren. \$650,000.

**UW Grand Challenges Planning Grant 2021.** Grassroots Water Risk Assessment Survey in the Headwaters of the Green, Snake, and Wind Rivers. PI: K. Landreville. Co-PIs: K. Cooper, M. Ehmke, K. Hansen, M. Keller, G. Paige, J. Shinker (2021) \$19,780.

**UW COANR Multistate Call. 2021.** Grassroots Water Risk Assessment Survey in the Headwaters of the Green, Snake, and Wind Rivers. PI: K. Hansen. Co-PIs: K. Cooper, M. Ehmke, M. Keller, K. Landreville, G. Paige, J. Shinker (2021) \$19,780.

**University of Wyoming Water Research Program. 2020.** Economic Impacts of Curtailment and Demand Management in the Wyoming Colorado River Basin. PIs: K. Hansen, R. Coupal, and G. Paige. (2021-2024) \$215,000.

**USDA-AFRI. 2018.** Policy Center on Agri-Environmental and Risk Research (PCARR). PIs: S. Banerjee and K. Giannakas (UNL). Hansen is a coPI. (2019-2022). Subaward to UW (PI: Hansen): \$180,079.

**4R Nutrient Stewardship Research Funds. 2018.** Identifying Irrigation and Phosphate Management Practices that Improve Nitrogen Use Efficiency for a Common Crop Rotation Used in the Intermountain West. PIs: J. Heitholt and V. Sharma. Collaborators: J. Norton, G. Andrews, K. Hansen, and J. Sloan. Pre-proposal submitted: \$425,000.

**USDA-AFRI. 2017.** Incentives, Markets, and Water Management to Enhance Agricultural Production in the Upper Colorado River Basin. PI: K. Kopp (USU). Hansen is a coPI. (2018-2022). Subaward to UW (PI: Hansen): \$701,216.

**USDA-AFRI. 2016.** Incentives, Markets, and Management to Sustain Water for Agriculture in the Upper Colorado River Basin. PI: K. Kopp (USU). Hansen is a coPI. (2017-2021). Subaward to UW (PI: Hansen): \$353,143.

**USDA—NRCS Conservation Innovation Grant (National). 2016.** Establishment of the Wyoming Conservation Exchange. PI: K. Hansen (UW); coPIs: E. Peterson (Wyoming Conservation Exchange), M. Purcell (Sublette County Conservation District), J. Lamb (TNC Lander), S. Brodnax (EDF), J. Magagna (WSGA), R. Coupal, G. Paige, A. MacKinnon (UW). (2016-2019) \$558,363.

**USDA—AFRI Competitive Grants Program, Foundational Program. Improving Ecosystem Service Provision Through Development of a Conservation Exchange in the Upper Green River Basin of Southwestern Wyoming. 2015 (resubmittal).** PI: K. Hansen. Co-PIs: R. Coupal (UW), M. Holloran (Audubon Society), N. Korfanta (UW), J. Lamb (TNC), A. MacKinnon (UW), G. Paige (UW), A. Poczewicz (TNC), M. Purcell (Sublette County Conservation District), T. Toombs (EDF). (2016-2018) \$499,365.

**Western SARE, Research and Education Grants Program. Development of a Conservation Exchange in the Wyoming Green River Basin (pre-proposal not accepted). 2015.** PI: K. Hansen. Team members from University of Wyoming, Sublette County Conservation District, The Nature Conservancy, Environmental Defense Fund, and the local landowner community. (2016-2018) \$250,000.

**NSF EPSCoR Outside-the-Box RFP. Conservation Exchange Pilot Program to Assess the Downstream Hydrologic Effects of Small Storage in the Upper Green River Basin. 2015.** PI: K. Hansen. Co-PIs: G. Paige and A. MacKinnon. (June 2015-May 2016) \$50,000.

**USDA-NIFA Small Business Innovation Research Program, Phase I. Innovative Lease Arrangements for Agricultural Groundwater Management. 2014.** PI: R. Young. Co-PIs: N.

Brozovic (UNL), K. Hansen, Y. Kuwayama (RFF), C. Linville (UNL), K. Schoengold (UNL). (July 2015-March 2016) \$98,671.

**Western SARE, Research and Education Grants Program. Development of a Conservation Exchange in the Wyoming Green River Basin (pre-proposal accepted August 2014). 2014.** PI: K. Hansen. Team members from University of Wyoming, Sublette County Conservation District, The Nature Conservancy, Environmental Defense Fund, and the local landowner community. (2015-2017) \$250,000.

**USDA—AFRI Competitive Grants Program, Foundational Program. Improving Ecosystem Service Provision Through Development of a Conservation Exchange in the Green River Basin of Southwestern Wyoming. 2014.** PI: K. Hansen. Co-PIs: R. Coupal (UW), M. Holloran (Audubon Society), N. Korfanta (UW), J. Lamb (TNC), A. MacKinnon (UW), G. Paige (UW), A. Pocewicz (TNC), M. Purcell (Sublette County Conservation District), T. Toombs (EDF). (2015-2017) \$499,890.

**University of Wyoming Planning Grant Proposal 2014.** “Agent-Based Modeling for Upper Colorado River Basin Management.” PI: N. Nelson. Co-PIs: K. Hansen, F. Ogden, B. Hall, G. Paige. (2014-15) \$25,000.

**Western SARE, Research and Education Grants Program. Development of a Payment for Ecosystem Services Market in the Wyoming Green River Basin. 2013.** PI: K. Hansen. Team members from University of Wyoming, Sublette County Conservation District, The Nature Conservancy, Environmental Defense Fund, and the local landowner community. (2014-2017) \$248,678.

**Wyoming Department of Agriculture, Agriculture Producer Research Grant Program (Round 2). 2013.** “Development of a Payment for Ecosystem Services Market in the Upper Green River Basin.” Proposal submitted by Sublette County Conservation District. Research Advisors: K. Hansen and G. Paige. \$40,000.

**Wyoming Department of Agriculture, Agriculture Producer Research Grant Program (Round 1). 2013.** “Development of a Payment for Ecosystem Services Market in the Upper Green River Basin.” Proposal submitted by Sublette County Conservation District. Research Advisors: K. Hansen and G. Paige. \$33,010.

**Wyoming Community Foundation. 2013.** “Payment for Ecosystem Services Market Development.” Proposal submitted by Sublette County Conservation District. Research Advisor: K. Hansen. \$15,000.

**USDA NIFA, AFRI Foundational Competitive Grants Program. 2011.** Evaluating the Economic Viability and Sustainability of Livestock and Cropping Systems in the Face of Climate Change. PI: C.T. Bastian; co-PIs: K.M. Hansen, J.P. Ritten, D.E. Peck, S.T. Gray, J.M. Krall, and S.I. Paisley. (2012 –2016) \$408,476.

**University of Wyoming Water Research Program. 2010.** Payments for Ecosystem Services in the Green River Basin. PI: K. Hansen; co-PIs: R. Coupal, G. Paige, T. Willson, and S. Jester (2011–2013) \$209,800.

**Wyoming Agricultural Experiment Station Competitive Grants Program. 2010.** Evaluating the Economic Viability and Sustainability of Wyoming Cropping Systems in the Face of Climate

Change. PI: C.T. Bastian; co-PIs: J.P. Ritten, K.M. Hansen, D.E. Peck, S.T. Gray, J.M. Krall (2011–2013) \$54,670.

**UW Global Perspectives Grant Program. 2010.** Hydro-Economic Collaboration and Cultural Exchange. PI: K. Hansen (2011) \$3,200.

**USDA NIFA, AFRI Foundational Competitive Grants Program. 2010.** Evaluating the Economic Viability and Sustainability of Livestock and Cropping Systems in the Face of Climate Change. PI: C.T. Bastian; co-PIs: K.M. Hansen, D.E. Peck, J.P. Ritten, S.T. Gray, J.M. Krall, and S.I. Paisley (2010–2015) \$322,541.

**USDA NIFA, AFRI Climate Change Program. 2010.** Trajectories of Restoration: Climate Change and Seed Sourcing in the Intermountain West. PI: K.M. Hufford; co-PIs: P.D. Stahl, K.M. Hansen, R.H. Coupal (2010-11) \$26,000.

**University of Wyoming Water Research Program. 2009.** Using Experimental Economics to Test Whether a Simplified Priority Date System Could Improve Water Market Outcomes. PI: C. Bastian; co-PIs: D. Peck, A. Nagler, K. Hansen, and D. Menkhaus. (2010–2013) \$291,959.

## **PRESENTATIONS**

### Research

Hansen, K.M. “Economic Considerations and Potential Impacts of Reduced Water Availability in the Upper Colorado River Basin.” Selected presentation at the American Water Resources Association/Universities Council on Water Resources joint annual meeting, St. Louis, MO (September 30, 2024, prospective).

Hofstedt, P., K.M. Hansen and C.T. Bastian. “Angler Preference Under Alternative Climate Scenarios in Northwestern Wyoming.” Selected presentation at the 2024 Western Agricultural Economics Association annual meeting, San Francisco, CA (June 23-25, 2024). Presentation by Hofstedt.

Herath, H.P., K.M. Hansen and C.T. Bastian. “Response of Agricultural Producers to a Water Conservation Program in the Wyoming Colorado River Basin.” Selected presentation at the 2024 Western Agricultural Economics Association annual meeting, San Francisco, CA (June 23-25, 2024). Presentation by Herath.

Loss, P., K. Hansen, Surber, C. and C. Knapp. “Wyoming Anticipating Climate Transitions (Wy-ACT): Socio-Ecological Tipping Points, Thresholds, and Baseline Response Functions to Changing Water Availability.” Invited presentation at South Dakota Water Conference. Sioux Falls, SD (November, 2023). Poster presentation by Loss.

Hansen, K. and D. Mooney. “Economic Contributions to Stakeholder Decision-Making in the Upper Colorado River Basin.” Panel presentation at the 2023 Agricultural & Applied Economics Association annual meeting, Washington DC (July 23-25, 2023).

Van Sandt, A., K. Hansen, M. Ehmke, K. Cooper, K. Landreville, M. Keller, G. Paige, J. Shinker. “A Choice Experiment of Wyoming Residents’ Preferences Toward Water Resilience Improvement Programs.” Selected presentation at the 2023 Agricultural & Applied Economics Association annual meeting, Washington DC (July 23-25, 2023). Presentation by Van Sandt.

Hansen, K. A. Van Sandt, M. Ehmke, K. Cooper, K. Landreville, M. Keller, G. Paige, J. Shinker. “Public Preferences for Community Programs to Address Water-Related Natural Hazards.” Selected presentation at the 2023 Western Agricultural Economics Association annual meeting, Whistler, BC, Canada (July 17-20, 2023).

Jones Ritten, C., R. Coupal, K. Hansen. “Incorporating Ecological, Landowner, and Public Finance Benefits into Conservation Program Design for Migratory Species.” Selected presentation at the 2023 Western Agricultural Economics Association annual meeting, Whistler, BC, Canada (July 17-20, 2023). Presentation by Coupal.

Hansen, K. “Collaborative Modeling as a Mechanism for Addressing Water Uncertainty.” Selected presentation at the 2023 Universities Council on Water Resources annual meeting, Fort Collins, CO (June 12-15, 2023).

Hansen, K. “Water Conservation in the Colorado River Basin: An Upper Basin Perspective.” Department of Agricultural and Applied Economics Seminar Series, Laramie, WY (February 17, 2023).

Hansen, K. “Demand Management in the Upper Colorado River Basin: Economic Considerations.” Selected presentation at 2022 Universities Council on Water Resources annual meeting, Greenville, SC (June 14-16, 2022).

Jones Ritten, C., K. Hansen, and R. Coupal. “Incorporating Ecological, Landowner, and Public Finance Benefits into Conservation Program Design for Migratory Species.” Invited presentation at 2022 Pacific Northwest Regional Economic Conference, Hood River, OR (May 23-25, 2022). Presentation by Jones Ritten.

Conte, M., K. Hansen, K. Horton, C. Jones Ritten, L. Palm-Forster, J. Shogren, F. Wätzold and T. Wyckoff. “A Framework to Evaluate Mechanisms to Support Seasonal Migratory Species.” Invited Presentation at BIOdiversity and Economics for Conservation (BIOECON) XXII annual meeting, Jackson, WY (September 17-19, 2021). Presentation by Conte.

Hansen, K., R. Coupal, E. Yeatman, and D. Bennett. “Economic Assessment of a Potential Water Demand Management Program in the Wyoming Colorado River Basin” Selected presentation at the Universities Council on Water Resources Annual Meeting, virtual (June 8-10, 2021).

Hansen, K., R. Coupal, E. Yeatman, and D. Bennett. “Economic Assessment of a Potential Water Demand Management Program in the Wyoming Colorado River Basin” Invited presentation at the Upper Colorado River Basin Water Forum, virtual (November 4-5, 2020).

Hansen, K., R. Coupal, E. Yeatman, and D. Bennett. “Economic Assessment of a Potential Water Demand Management Program in the Wyoming Colorado River Basin” AGECD Departmental Seminar (November 2, 2020).

Yeatman, E., K. Hansen, G. Paige, A. MacKinnon, and J. Albers. “Economic and Ecological Tradeoffs of Water Conservation in the Upper Green River Basin” Selected presentation at the

Western Agricultural Economics Association Annual Meeting, virtual (June 29-July 1, 2020).  
Presentation by Yeatman.

Hansen, K. “Wyoming Conservation Exchange.” Invited presentation to the Alberta Grasslands Conservation Markets Symposium. Calgary, Alberta, Canada (November 19-20, 2019).

Yeatman, E., K. Hansen, G. Paige, A. MacKinnon, and J. Albers. “The Economic and Ecological Tradeoffs of Agricultural Water Use Demand Management in the Upper Green River Basin of Wyoming.” Invited presentation at the American Water Resources Association Annual Meeting, Salt Lake City, UT (November 3-6, 2019); and the Upper Colorado River Basin Water Forum, Grand Junction, CO (November 13-14, 2019). Presentations by Yeatman.

Hansen, K., C. Jones Ritten, A. Nagler, and C. Bastian. “A Laboratory Comparison of Risk Mitigation Strategies in Conservation Markets.” Western Agricultural Economics Association Annual Meeting. Coeur d’Alene, ID (June 30-July 2, 2019).

Guerrero, B., K. Willis, K. Hansen, D. Peck. “Regional Economic Analysis of Crop Production in Laramie County, Wyoming.” Presidential Symposium on understanding the role of water in farm-dependent communities at the Mid-Continent Regional Science Association. Madison, WI (June 4-6, 2019). Presentation by B. Guerrero.

Hansen, K. and V. Hovhannisyanyan. “Determinants of Price in Western Water Markets: A Systems Approach.” Selected Paper Presentation at the Agricultural & Applied Economics Association Annual Meeting. Washington DC (August 5-7, 2018).

Willis, K., K. Hansen and D. Peck. “Direct Community-Level Impacts of Alternative Groundwater Management Strategies over the Ogallala Aquifer in Southeastern Wyoming.” Selected Poster Presentation at the Agricultural & Applied Economics Association Annual Meeting. Washington DC (August 5-7, 2018).

Jones Ritten, C., C. Bastian, A. Nagler, K. Hansen and O. Philips. “Can Prospect Theory Help Explain Agricultural Producers’ Disadvantage During Privately Negotiated Trading?” Selected Paper Presentation at the Western Agricultural Economics Association Annual Meeting. Anchorage, AK (June 24-26, 2018). Presentation by C. Jones Ritten.

Willis, K., K. Hansen and D. Peck. “Farm-Level Impacts of Alternative Groundwater Management Strategies over the Ogallala Aquifer in Southeastern Wyoming.” Selected Paper Presentation at the Western Agricultural Economics Association Annual Meeting. Anchorage, AK (June 24-26, 2018). Presentation by K. Willis.

Lamb, K.\*, K. Hansen, C. Bastian and C. Jones Ritten. “Investigating Potential Impacts of Non-Attainment Risk Mitigation on Habitat Exchange Outcomes.” Invited presentation to the Conference on Behavioral & Experimental Agri-Environmental Research: Methodological Advancements & Applications to Policy (CBEAR-MAAP). Shepherdstown, WV (October 14-15, 2017). Presentation by K. Lamb.

Blevins, S.\*, K. Hansen, G. Paige and A. MacKinnon. “Valuing the Non-Agricultural Benefits of Flood Irrigation in Southwestern Wyoming.” Invited presentation in the University of Wyoming Plant Sciences Weekly Seminar. Laramie, WY (October 6, 2017).

Hansen, K., D. Peck, and K. Willis. "Alternative Groundwater Management Strategies over the Ogallala Aquifer in Southeastern Wyoming. Invited presentation at the Universities Council on Water Resources Annual Meeting. Fort Collins, CO (June 2017). Presentation by D. Peck.

Hansen, K. "Obstacles to Moving Water Around in the Colorado River Basin: A Headwaters Perspective." Invited presentation at the 2017 Water for Food Global Conference. Lincoln, NE (April 11, 2017).

Hansen, K. "Habitat Conservation Market Design" Brown Bag Seminar Presentation, University of Wyoming Department of Economics. Laramie, WY (March 3, 2017).

Perry, A., K. Hansen, R. Coupal and R. Godby. "Economic Impacts of Reclamation in the PRB under the Clean Power Plan: Rate-based vs Mass-based Scenarios." Presented to the American Society of Mining Reclamation. Spokane, Washington (June 2016). Presentation by R. Coupal.

Eiswerth, M., G. van Kooten and K. Hansen. "Maximizing Returns from Payments for Ecosystem Services: Incorporating Cross-Land Manager External Effects." Invited Presentation at the Western Agricultural Economics Association Annual Meeting. Victoria, BC, Canada (June 2016). Presentation by M. Eiswerth.

Igarashi, Y. and K. Hansen. "Modeling Reservoir Management in the Upper Green River Basin of Southwestern Wyoming." Invited Presentation at the Western Agricultural Economics Association Annual Meeting. Victoria, BC, Canada (June 2016).

Perry, A., K. Hansen and R. Coupal. "Managing the Transition from Coal to Gas and Renewables, Reclamation and Community Perspective." Invited Presentation at the Brookings Institution. Washington, DC (November 2015). Presentation by R. Coupal.

S. Blevins\*, K. Hansen, G. Paige, and A. MacKinnon. "Valuing the Non-Agricultural Benefits of Flood Irrigation Return Flows in the Upper Green River Basin. Invited Presentation at the American Water Resources Association Annual Meeting. Denver, CO (November 2015). Presentation by S. Blevins.

M. Eiswerth, K. Hansen, M. Laituri, and G. Paige. "Water-Based Payments for Ecosystem Services: Old Lessons for New Programs in Colorado and Wyoming." Invited Presentation at the American Water Resources Association Annual Meeting. Denver, CO (November 2015). Presentation by M. Eiswerth.

Igarashi, Y., K. Hansen, R. Steinke, N. Frazier, F. Ogden. "Management Layer for the ADHydro Model (CI-WATER Project)." Invited Poster Presentation, 3<sup>rd</sup> CUAHSI (Consortium of Universities for the Advancement of Hydrologic Science, Inc.) Conference on Hydroinformatics. Tuscaloosa, AL (July 2015). Presentation by Y. Igarashi.

Duke, E., K. Hansen, and C. Bond. "Market Supply Analysis: Landowner Preferences for Ecosystem Service Provision in the Green River Basin." Invited Paper Presentation, Western Agricultural Economics Association Annual Meeting. Colorado Springs, CO (June 2014).

Mock, B.\*, K. Hansen, and R. Coupal. "Economics of the Native Seed Industry: An Economics Experiment." Invited Paper Presentation, Western Agricultural Economics Association Annual Meeting. Colorado Springs, CO (June 2014).



Joshi, V.\*, K. Hansen, and A. Garcia y Garcia. “Effects of Planting Date and Early Termination of Irrigation on Yield and Yield Quality of Confection Sunflower.” Invited Poster Presentation, Agronomy Society of America, San Diego, CA (November 2014). Presentation by Joshi.

Hansen, K., E. Duke, and C. Bond. “Market Supply Analysis: Landowner Preferences for Ecosystem Service Provision in the Green River Basin.” Department of Agricultural & Applied Economics Seminar. University of Wyoming, Laramie, WY (November 2013).

Duke, E., K. Hansen, and C. Bond. “Market Supply Analysis: Landowner Preferences for Ecosystem Service Provision in Wyoming.” Agricultural & Applied Economics Association, Selected Poster Presentation. Washington DC (August 2013).

Carter, C.\*, Garcia y Garcia, A., A. Islam, and K. Hansen. “Effect of Deficit Irrigation on Water Use and Water Use Efficiency of Alfalfa” 2013 ASABE Annual International Meeting, Selected Poster Presentation. Kansas City, MO (July 2013). Presentation by C. Carter.

Carter, C.\*, Garcia y Garcia, A., A. Islam, and K. Hansen. “Irrigation Practices in Alfalfa: Irrigation Methods, Water Use, and Economics.” Wyoming Forage Field Day, University of Wyoming SAREC, Lingle, WY (June 2013). Presentation by C. Carter.

Hansen, K. “A Payment for Ecosystem Services Market in the Upper Green River Basin” The Cutting Edge in Conservation Financing or Post-Mortem?” University of Wyoming Department of Agricultural & Applied Economics Departmental Seminar (March 2013).

Duke, E. and K. Hansen. “Rancher Preferences for PES Program Design in Southwestern Wyoming.” Invited Presentation, ACES (A Community on Ecosystem Services) and Ecosystem Markets 2012 Annual Conference. Fort Lauderdale, FL (December 2012). Presentation by E. Duke.

Hansen, K. “Water Market Institutions and Water Transfers in the Western United States.” Research Across Disciplines Seminar Series, Department of Renewable Resources, University of Wyoming (January 2012).

Hansen, K., R. Howitt, and J. Williams. “An Econometric Test of Water Market Structure in the Western United States.” Invited Presentation, American Economics Association/Allied Social Sciences Association joint annual meeting, Chicago, IL (January 2012). Presentation by K. Cobourn.

Hansen, K. and B. Henry de Frahan. “Evaluation of Agro-Environmental Policy Through a Calibrated Simulation Farm Model.” European Association of Agricultural Economics 2011 Congress. Selected Paper Presentation. Zurich, Switzerland. Presented by Henry de Frahan (August 2011).

Hansen, K., D. Peck, and S. Smutko. “Tradable Permits for CBM Produced Water: A Potential Tool for Managing Quantity and Quality Issues in the Powder River Basin.” Western Agricultural Economics Association, Selected Paper Presentation. Banff Canada (June 2011).

Strauss, S., M. Ehmke, and K. Hansen. “Social-Ecological Research in Wyoming.” Presentation at the Alaska NSF-EPSCoR Living on Earth Workshop. Presented by Strauss, Ehmke, and Hansen (February 2011).

Hansen, K., R. Howitt, and J. Williams. "Short-Term Leases or Long-Term Transfers? An Econometric Test of Water Market Structure in the Western United States." Masters Seminar Presentation, UW Dept. of Agricultural and Applied Economics (November 2010).

Hansen, K. and B. Henry de Frahan. "Risk in Agriculture: Modeling Revenue Insurance for Crop Farms in Belgium." Agricultural & Applied Economics Association, Selected Poster Presentation. Denver CO (July 2010).

Hansen, K., D. Peck, and S. Smutko. "Tradable Permits for CBM Produced Water: A Potential Tool for Managing Quantity and Quality Issues in the Powder River Basin." Energy Resources and Produced Water Conference, Laramie, WY (May 2010).

Howitt, R. and K. Hansen. "Modeling Dynamic Network Systems with State-Contingent Penalty Functions." International Water Resource Economics Consortium, UC Berkeley. Presented by Howitt (November 2009).

Hansen, K., A. Baudry, R. DeBlander, B. Henry de Frahan, and P. Polomé. "Estimating an Ex-Ante Cost Function for Belgian Arable Crop Farms." Selected Paper (invited) at the Agricultural & Applied Economics Association Annual Meeting, Milwaukee, WI (July 2009).

A. Baudry, R. de Blander, C. Delaunoy, K. Hansen, B. Henry de Frahan, A. le Roi S. Paque, P. Polomé, G. van Impe and T. Walot. "ADAGE: An Integrated Agricultural and Environmental Decision-Making Model for the Walloon Region." Presentation to the Ministry of Agriculture, Walloon Region of Belgium. Presented by A. Baudry and K. Hansen (June 2009).

Hansen, K., R. Howitt, and J. Williams. "Short-Term Leases or Long-Term Transfers? An Econometric Test of Water Market Structure in the Western United States." Invited Seminars: Lafayette College, Rochester Institute of Technology, University of Wyoming, USDA Economic Research Service, Utah State University (Winter 2009).

Hansen, K., R. Howitt, and J. Williams. "Self-Calibrating Hydro-Economic Models." American Geophysical Union. Presentation by R. Howitt (December 2008).

Harou, J., D. Pinte, K. Hansen, D. Rosenberg, A. Tilmant, J. Medellin-Azuara, M. Pulido-Velazquez, D. Rheinheimer, E. Matrosov, T. Zhu, A. Reynaud, B. Kock, and S. Vicuna. "www.HydroPlatform.org: An Open-Source Interface for Water Management Models." American Geophysical Union (December 2008).

Hansen, K., R. Howitt, and J. Williams. "Short-Term Leases or Long-Term Transfers? An Econometric Test of Water Market Structure in the Western United States." Invited Seminar, Université catholique de Louvain (May 2008).

Hansen, K., J. Kaplan, and S. Kroll. "An Experimental Evaluation of Water Options in California." American Agricultural Economics Association Annual Meeting, Selected Paper Presentation (July 2007).

Hansen, K., J. Kaplan, and S. Kroll. "An Experimental Evaluation of Water Options in California." Sacramento State University Department of Economics Brown Bag Seminar (May 2007).

Hansen, K., R. Howitt, and J. Williams. “Implementing Options Markets in California to Manage Water Supply Uncertainty.” Selected Paper Presentation, American Agricultural Economics Association Annual Meeting (July 2006).

Hansen, K., R. Howitt, and J. Williams. “Implementing Options Markets in California to Manage Water Supply Uncertainty.” Universities Council on Water Resources, Selected Paper Presentation (July 2006).

### **Extension**

McNamara, J. and K. Hansen. “Coordination and Collaboration Across the Land-Grant System: The Western Water Network. National Coalition for Food and Agricultural Research Lunch-N-Learn Series. Capitol Hill. Washington DC (July 23, 2024).

Hansen, K. and D. Godwin. “Western Water Network.” Invited presentation to the Western Extension Directors Association. Boise, ID (remote presentation).(December 13, 2023).

Hansen, K. “The WyACT Project.” Invited presentation to the Wyoming Water Association Annual Meeting. Remote meeting (December 6, 2023).

Hansen, K., R. Coupal, G. Paige, A. MacKinnon. “Economic Impacts of Curtailment and Demand Management in the Wyoming Colorado River Basin: STUDY UPDATES.” Invited presentation to the Wyoming Stock Growers Association Annual Meeting. Casper, WY (December 4, 2023).

Hansen, K., R. Coupal, G. Paige, A. MacKinnon. “Economic Impacts of Curtailment and Demand Management in the Wyoming Colorado River Basin.” Invited presentation to the Wyoming Water Association Annual Meeting. Casper, WY (October 24-26, 2023).

Hansen, K. , R. Coupal, G. Paige, A. MacKinnon. “Economic Impact Study for the Wyoming Portion for the Colorado River Basin.” Invited presentation to the Wyoming Association of Rural Water Systems Spring Meeting. Casper, WY (April 18, 2023).

Hansen, K. “What Do We Think About Drought? Wyoming Community Perspectives on Water-Related Natural Hazards.” Invited presentation to the Wyoming Association of Rural Water Systems Spring Meeting. Casper, WY (April 18, 2023).

Hansen, K. “Water Conservation in the Colorado River Basin: An Upper Basin Perspective.” Invited presentation to the UC Riverside School of Public Policy Water Seminar Series. Riverside, CA (February 22, 2023).

Hansen, K. “Potential Demand Management in the WY-CRB: Results of Rancher Survey and Economics Study.” Invited presentation to the Wyoming Farm Bureau Young Ranchers and Farmers Committee. Pinedale, WY (January 21, 2023).

Williams, D., J. Hammerlink, and K. Hansen. “Overview of WyACT: Anticipating the Climate Transitions.” Wyoming Local Planners Meeting. Laramie, WY (September 16, 2022).

Hansen, K., R. Coupal, E. Yeatman, and D. Bennett. “Economic Assessment of a Demand Management Program in the Wyoming Colorado River Basin” Invited presentation at Wyoming Association of Conservation Districts, Riverton, WY (June 30, 2022).

Hansen, K., R. Coupal, E. Yeatman, and D. Bennett. “Economic Assessment of a Potential Water Demand Management Program in the Wyoming Colorado River Basin” Invited presentation to the Wyoming Governor’s Colorado River Basin Working Group, Farson, WY (December 8, 2021).

Hansen, K., R. Coupal, E. Yeatman, and D. Bennett. “Economic Impacts of Demand Management versus Status Quo on the Green/Little Snake Rivers” Invited presentation at Wyoming Water Association Annual Meeting, Lander, WY (October 20, 2021).

Paige, G., Hansen, K., and A. MacKinnon. 2021. “Wyoming Demand Management Feasibility Investigation: Stakeholder Engagement.” Selected presentation at the Universities Council on Water Resources Annual Meeting, virtual (June 8-10, 2021). Presentation by Paige.

Hansen, K. 2021. ”Examples of Economic Impacts of Water Reductions to Agriculture in the Wyoming Colorado River Basin.” Invited presentation in Ag in Uncertain Times webinar series (February 3, 2021).

Hansen, K. 2021. Economic Impacts of a Demand Management Program in Wyoming’s Colorado River Basin. University of Wyoming Extension 2021 Agriculture & Horticulture Online Convention, virtual (January 2021).

Paige, G., Hansen, K., and A. MacKinnon. 2021. “Wyoming Demand Management Feasibility Investigation: Stakeholder Engagement.” University of Wyoming Extension 2021 Agriculture & Horticulture Online Convention, virtual (January 2021).

Hansen, K. 2020. Economic Impacts of a Demand Management Program in Wyoming’s Colorado River Basin. Invited presentations at the Wyoming Stock Growers Association Summer Meeting, Rock Springs, WY (August 25, 2020) and at Wyoming State Engineer’s Office Stakeholder Engagement focus groups, virtual (September 2020).

Hansen, K. R. Coupal, G. Paige, and A. MacKinnon. 2020. “Wyoming Conservation Exchange: A Grassroots Conservation Program.” Selected presentation at the Western Agricultural Economics Association Annual Meeting, virtual (June 29-July 1, 2020).

MacKinnon, A., G. Paige, and K. Hansen. 2020. “Wyoming Stakeholder Engagement.” Invited Presentation at the State Water Forum, hosted by Wyoming State Engineer’s Office. Cheyenne, WY (January 15, 2020).

Hansen, K. and R. Coupal. 2020. “Economic Assessment of a Potential Demand Management Program in the Wyoming Portion of the Colorado River Basin.” Invited Presentation at the State Water Forum, hosted by Wyoming State Engineer’s Office. Cheyenne, WY (January 15, 2020).

Hansen, K. 2019. “Adapting to a Changing Customer Base: Small-Acreage Landowners and Irrigation Districts.” Wyoming Water Association Annual Meeting. Casper, WY (October 17, 2019).

Hansen, K. 2019. “Water Leasing Across the Western United States.” Wyoming Water Association Annual Meeting. Casper, WY (October 16, 2019).

Grahmann, A., K. Hansen, D. Peck, S. Miller, and V. Sharma. “A Farm-Level Economic Analysis of Implementing Water Use Efficiency Technology in Southeastern Wyoming.” Selected presentation at Water Smart Innovations, Las Vegas, NV (October 2-3, 2019). Presentation by Grahmann.

Hansen, K. 2019. “Wyoming Water Rights and Small-Acreages.” University of Wyoming Extension, Small-Acreage Irrigation Seminar. Riverton, WY (September 5, 2019), Lander, WY (September 12, 2019).

Grahmann, A., B. Lee, C. Carter, V. Sharma, and K. Hansen. “Real-Time Energy Monitoring Pilot Program to Improve Understanding of Irrigation Costs and Water Use.” Poster presentation at UW SAREC Field Day. Lingle, WY (August 21, 2019). Presentation by Grahmann.

Willis, K., K. Hansen, D. Peck, S. Miller, and V. Sharma. 2019. “Farm-Level Impacts of Alternative Groundwater Management Strategies over the Ogallala Aquifer in Southeastern Wyoming.” Presentation at UW Extension Groundwater Management Workshop. Cheyenne, WY (May 7, 2019). Presentation by Willis.

Hansen, K. 2019. “Groundwater Management in Laramie County: Next Steps.” Presentation at UW Extension Groundwater Management Workshop. Cheyenne, WY (May 7, 2019).

Willis, K., K. Hansen, D. Peck, S. Miller and V. Sharma. 2019. “Farm-Level Impacts of Alternative Groundwater Management Strategies over the Ogallala Aquifer in Southeastern Wyoming.” Poster Presentation at Organic Farming Conference. Cheyenne, WY (February 27-8, 2019). Presentation by Willis.

Hansen, K. 2018. “Wyoming Water Rights and Small-Acreages.” University of Wyoming Extension, Small-Acreage Irrigation Seminar. Torrington, WY (April 26, 2018), Sheridan, WY (May 3, 2018), and Pinedale, WY (September 6, 2018).

Willis, K., K. Hansen, D. Peck, S. Miller and V. Sharma. 2018. “Farm-Level Impacts of Alternative Groundwater Management Strategies over the Ogallala Aquifer in Southeastern Wyoming.” Poster Presentation at SAREC Field Day. Lingle, WY (August 22, 2018). Presentation by K. Willis.

Hansen, K. 2018. “Real-Time Energy Monitoring Pilot Program to Improve Producers Understanding of Irrigation Costs and Water Use.” SAREC Field Day. Lingle, WY (August 22, 2018).

Hansen, K. 2018. “Who Gets to Drink?” University of Wyoming Saturday University Seminar. Pinedale, WY (March 1, 2018) and Jackson, WY (March 3, 2018).

Hansen, K. 2018. “Adapting to a Changing Customer Base: Irrigation Districts and Small-Acreage Landowners.” UW Extension Agriculture and Horticulture Team Train-the-Trainer Session. Casper, WY (January 19, 2018).

Hansen, K. 2017. “Monitoring Energy Use to Reduce Irrigation Costs.” UW Extension High Plains Crop Convention. Torrington, WY (November 21, 2017).

Willis, K., K. Hansen, D. Peck and S. Glendenning. 2017. "Water Use and Management in Laramie County, WY." Invited poster presentation at the UW Extension 2017 Organic Farming Conference. Cheyenne, WY (February 2017). Presentation by K. Willis.

Hansen, K. and J. Lamb. 2016. "Wyoming Conservation Exchange: A Market for Conservation Value." Invited presentation to the Wyoming Natural Resource Foundation Board of Directors. Green River, WY (July 2016). Presentation by K. Hansen and J. Lamb.

Hansen, K. 2016. "Wyoming Conservation Exchange." Wyoming Women in Range 2016 Workshop Series. University of Wyoming Extension, Converse County Office. Douglas, Wyoming (May 12, 2016).

Hansen, K. 2016. "Compensatory Mitigation for Ecosystem Services in Wyoming." Invited presentation to the BLM Field Office in Rawlins, WY (March 10, 2016).

Peterson, E., K. Hansen, A. MacKinnon, J. Lamb. 2016. "Update on the Wyoming Conservation Exchange." Invited presentation to the Sublette County Conservation District Board. Pinedale, WY (January 12, 2016).

Peterson, E., K. Hansen, G. Paige, and R. Coupal. 2015. "Wyoming Conservation Exchange." Invited Poster Presentation at the Wyoming Association of Conservation Districts/Society for Range Management/Wyoming Weed and Pest Council Joint Conference. Laramie, Wyoming (November 2015). Presentation by E. Peterson.

Hansen, K. 2015. University of Wyoming Extension Carbon County Open House. Rawlins, WY (October 9, 2015).

E. Anderson, S. Brodnax, K. Hansen, and J. Lamb. 2015. "Wyoming Conservation Exchange." Presentation before the USFWS Conservation Bank Review Team convened to evaluate the WCE proposal to establish a conservation exchange for the protection of greater sage-grouse habitat (follow-on to August 2014 meeting). Casper, WY (March 2015).

K. Hansen. 2015. "Wyoming Conservation Exchange." Invited presentation at the Wyoming Sage-Grouse Habitat Reclamation Workshop sponsored by the Wyoming Reclamation and Restoration Center. Casper, WY (March 2015).

K. Hansen. 2015. "Groundwater Management Institutions and Controls in Other States Overlying the Ogallala Aquifer." Presentation to the Laramie County Control Area Groundwater Steering Committee. Cheyenne, WY (February 2015).

K. Hansen. 2015. "Wyoming Conservation Exchange." Invited presentation to the Wyoming Resource Advisory Committee (committee convened by the State Office of the Bureau of Land Management to provide stakeholder input on land use and resource development and protection). Laramie, WY (February 2015).

K. Hansen. 2014. "Wyoming Conservation Exchange." Oral and poster presentations at Converse County Weed & Pest Annual Meeting. Douglas, WY (December 2014).

Blevins, S.\*, K. Hansen, G. Paige and R. Coupal. 2014. "Non-Agricultural Benefits of Flood Irrigation." Poster presentation at Petroleum Association of Wyoming Winter Meeting. Casper, WY (December 2014). Presentation by S. Blevins.

Perry, A.\*, K. Hansen and R. Coupal. 2014. "The Economics of Reclamation in Wyoming." Poster presentation at Petroleum Association of Wyoming Winter Meeting. Casper, WY (December 2014).

Hansen, K. 2014. "Wyoming Conservation Exchange." Briefing on the Wyoming Conservation Exchange to representatives of the Petroleum Association of Wyoming. Casper, WY (December 2014).

Hansen, K. 2014. "Wyoming Conservation Exchange." Presentation at the UW Extension In-Depth Training Workshop to Sustainable Management of Rangeland Resources Initiative Team. Laramie, WY (November 2014).

Brodnax, S., K. Hansen, J. Lamb, and M. Purcell. 2014. "Upper Green River Conservation Exchange." Presentation before the USFWS Conservation Bank Review Team convened to evaluate the UGRCE proposal to establish a conservation exchange for the protection of greater sage-grouse habitat. Lander, WY (August 2014).

Hansen, K. 2014. "Development of a Conservation Exchange in the Upper Green River Basin of Wyoming." Invited presentation to the NRCS Wyoming State Technical Committee Meeting. Casper, WY (May 2014).

Hansen, K. 2014. "Upper Green River Conservation Exchange." Presentation at the Sage-Grouse Workshop co-sponsored by Wyoming Stock Growers Association and UW Extension. Pinedale, WY (March 2014).

Duke, E. and K. Hansen. 2014. "Landowner Preferences for Ecosystem Service Provision in the Upper Green River Basin." Presentation at the Sage-Grouse Workshop co-sponsored by Wyoming Stockgrowers Association and UW Extension. Pinedale, WY (March 2014).

A. Perry\*, K. Hansen, and R. Coupal. 2014. "The Economic Impacts of Reclamation in the Powder River Basin." Presentation at the Campbell County Community Development. Gillette, WY (February 2014). Presentation by R. Coupal.

Hansen, K. 2014. "Developing Pilot Transactions for the Upper Green River Conservation Exchange." Grant proposal presentation to the Wyoming Board of Agriculture. Cheyenne, WY (February 2014).

Hansen, K. 2014. "Upper Green River Conservation Exchange." Presentation at the Wyoming Sage Grouse Implementation Team Bi-Monthly Meeting. Cheyenne, WY (February 2014).

Hansen, K. and G. Paige. 2014. "Ecosystem Service Transactions for Water." Presentation at Cattleman's Update, UW Extension, Albany County. Laramie, WY (February 2014). Presentation by G. Paige.

Paige, G. and K. Hansen. 2013. "Ecosystem Service Transactions and Assessment for Water." State Engineer's Office State Water Forum. Cheyenne, WY (November 2013).

Hansen, K. and R. Coupal. 2013. "Payment for Ecosystem Service Markets." Western Rural Development Center Extension Sustainability Summit. Park City, UT (October 2013).

Hansen, K. 2013. "Upper Green River Conservation Exchange: Market-Based Conservation Mechanism." Conservation Finance Forum sponsored by UW Ruckelshaus Institute, The Strook Forum on Wyoming Lands and People, and The Nature Conservancy (April 2013).

Hansen, K. 2013. "Economic Issues Related to Water Resources and Drought." UW Extension Drought Workshop. Gillette, WY and Upton, WY (March 2013).

Carter, C.\*, A. Garcia, A. Islam, and K. Hansen. 2012. "Making the Switch: Surface vs. Sprinkler Irrigation. What's Right for You?" Wyoming Forage Field Days. Riverton, WY (June 2012). Presentation by C. Carter.

Hansen, K. "Examples of Water Banking in the Western United States" Panelist with L. MacDonnell, S. Miller, and G. Paige for Leadership Wyoming. (November 2012).

Hansen, K., R. Coupal, T. Willson, M. Purcell, A. MacKinnon, E. Duke, A. Pocewicz, G. Paige, and A. Chalfoun. "Overview of the Upper Green River Basin Payment for Ecosystem Services Initiative & The Little Sandy Watershed." Presentation to Little Sandy Grazing Association. Sublette County, Wyoming. Presentation by Purcell (November 2012).

Hansen, K. "Overview of Two Payment for Ecosystem Services Programs in the Upper Green River Basin." Presentation to basin stakeholders and state policymakers. Sublette County Conservation District, Pinedale, WY. (October 3, 2012).

Hansen, K. "Overview of the Upper Green River Basin PES Initiative." UW Extension Specialist Meeting. Laramie, WY (September 2012).

Hansen, K. "Overview of a Payment for Ecosystem Services Program in the Upper Green River Basin." Presentation to basin stakeholders in Pinedale, Wyoming (August 2012).

Mock, B.\*, K. Hansen, and R. Coupal. "Economics of Native Seed Production." Wyoming Native Seed Issues Workshop. Casper, WY (April 2012). Presentation by B. Mock.

Hansen, K. "Overview of the Upper Green River Basin PES Pilot Program." Presentation to Representatives of Proposed/Incipient Habitat Exchanges in Colorado and Texas. Laramie, WY (September 2012).

Hansen, K. "Scoping the Potential for an Ecosystem Services Market in the Green River Basin of Wyoming." Presentation to Bureau of Land Management officials at the BLM State Office. Cheyenne, WY (December 2011).

Mock, B.\*, K. Hansen, and R. Coupal. "Economics of Native Seed Production for Reclamation of Disturbed Lands in Wyoming." Western Agricultural Economics Association, Selected Paper Presentation. Banff Canada. Presented by Mock (June 2011).

Coupal, R., K. Hansen, and M. Andersen. "Economics of Reclamation." Reclamation 101 Workshop at various Wyoming locations (Cheyenne, Kemmerer, Lander, Laramie, and Worland). Presented by Coupal and Hansen (Winter and Spring of 2011).

Willson, T.M., K.M. Hansen, and R. Coupal. "Valuing Wetlands Where Water is Scarce." Poster presentation. CNREP 2010. Challenges of Natural Resource Economics and Policy, 3<sup>rd</sup> National



Forum on Socioeconomic Research in Coastal Systems, New Orleans, Louisiana. Presented by Willson (May 2010).

Hansen, K. “Challenges to Affordable Irrigation in Wyoming.” Profitability Conference at the Wyoming Stock Growers’ Association Annual Meeting, Casper Wyoming (December 2009).

## **POPULAR PRESS QUOTES, INTERVIEWS, AND OUTREACH**

Bardeen, S. Public Policy Institute of California. “Saving Precious Water in the Colorado River’s Upper Basin.” Public Policy Institute of California. March 28, 2023.

[https://www.ppic.org/blog/saving-precious-water-in-the-colorado-rivers-upper-basin/?utm\\_source=rss&utm\\_medium=rss&utm\\_campaign=saving-precious-water-in-the-colorado-rivers-upper-basin?utm\\_source=ppic&utm\\_medium=email&utm\\_campaign=blog\\_subscriber](https://www.ppic.org/blog/saving-precious-water-in-the-colorado-rivers-upper-basin/?utm_source=rss&utm_medium=rss&utm_campaign=saving-precious-water-in-the-colorado-rivers-upper-basin?utm_source=ppic&utm_medium=email&utm_campaign=blog_subscriber)

Bugas, H. 2021. “Curtailed versus Demand Management in the Colorado River Basin Discussed.” *Wyoming Livestock Roundup* 32(41): A14. (February 6, 2021).

Wyoming’s water: save a little or shut it off? *Wyoming Livestock Roundup* 31(29):14 (November 16, 2019).

UW Recognizes Employees. *Wyoming Livestock Roundup* 28(29): A3. (November 19, 2016).

Kelly, C. 2016. “Wyoming Conservation Exchange to Put Sage-grouse on the Market—for Good.” *University of Wyoming Connect* 6(1): 24-27.

Wheeler, N. 2016. “University Study Assesses Conservation Exchange, Finds Potential Benefits.” *Wyoming Livestock Roundup* January 23, 2016. Vol. 27 No. 38, page 2.

Ogburn, Stephanie. 2015. “Supercomputer-Powered Model Improves Water Planning: A Hi-Resolution Hydrologic Model Peers into the Future of Western Water.” *Western Confluence* (UW Ruckelshaus Institute publication) Winter 2015 Issue 3, pp. 10-13. Interview and quotes.

Reed, A., and Scarlett. 2014. “An Ecosystem Services Approach to Sage-Grouse Conservation: Upper Green River Conservation Exchange Program.” In *Federal Resource Management and Ecosystem Services guidebook*. Durham: National Ecosystem Services Partnership, Duke University, [www.nespguidebook.com](http://www.nespguidebook.com). Hansen contributed text and significant feedback to the case study writeup.

Background interview with Mark Darjem of Bloomberg News regarding the Wyoming Conservation Exchange. October 2014.

Ufford, Joy. 2014. “Sublette County Sage-Grouse Update Explores New Conservation Tools.” *Wyoming Livestock Roundup* 25(47):B6. (March 29, 2014).

Background interview with Willow Belden of Wyoming Public Media (and D. Peck, UW A&AE) regarding the USDA-NRCS Agricultural Water Enhancement Program in Laramie County. March 2013.

Albert, Saige. 2013. "Conservation Exchange: Upper Green River Basin Groups Address Conservation Concerns." *Wyoming Livestock Roundup* 24(36):1-2. (January 12, 2013). Interview and quotes.

Shelles, D. 2011. "Surging Towards Solutions." *UWYO* (Fall 2011). Article on water research at UW, with interview/quotes from Hansen. *University of Wyoming Magazine*.

*Pinedale Roundup* article. (Fall 2011).

Gray, S., C. Andersen. 2009. "Assessing the Future of Wyoming's Water Resources: Adding Climate Change to the Equation." Interview/quote from Hansen. William D. Ruckelshaus Institute of Environment and Natural Resources. University of Wyoming, Laramie. Interview and quotes.

## **TEACHING**

### **Instructor**

*International Food & Farm Cultures*. University of Wyoming AGEC 4280. International study-abroad course (2017, 2018, 2019).

*Quantitative Methods for Agricultural Economics*. University of Wyoming AGEC 5320. Graduate required course (2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2021, 2022, 2023).

*Advanced Problems in Agricultural Economics*. University of Wyoming AGEC 5890. Graduate required course (2020).

*Small Enterprise Management*. University of Wyoming AGEC 3000. Undergraduate special topics course (2010, 2011).

*Quantitative Methods in Agricultural Economics* (Econometrics). UC Davis ARE 106. Undergraduate required course (2008).

### **Guest Lectures**

"Water is Life...and Money." UW GEOL 1101: The Anthropocene: Human's Control of Nature: (November 2021, 2022).

"Economics of Irrigation in Wyoming." UW PLNT/SOIL 3000/5790: Irrigated Agriculture (April, 2017, 2019).

Member, Panelist on Interdisciplinary Writing. UW ENR 5750: ENR Law & Policy (October 2, 2018).

"Wine Production and Marketing: A U.S. Perspective." UW AGEC 4890: Study Abroad Preparation (April 18, 2018).

"Using Market Approaches for Conservation." UW ENR 5900: Environmental Assessment: Domestic (April 17, 2018).

"Water Use and Management in the Western United States." UW AGEC 4890: Study Abroad Preparation (March 28, 2018).

“Overview of Agriculture in the United States and European Union.” UW AGEC 4890: Study Abroad Preparation (March 7, 2018).

Member, Panelist on Interdisciplinary Writing. UW ENR 5750: ENR Law & Policy (October 2, 2017).

“Wine Production and Marketing: A U.S. Perspective.” UW AGEC 4890: Study Abroad Preparation (April 26, 2017).

“Water Use and Management in the Western United States.” UW AGEC 4890: Study Abroad Preparation (April 19, 2017).

“Efficiency 101.” UW ENR 1300: Foundations of Sustainability (Fall 2016).

“Wyoming Conservation Exchange.” UW ENR 4900-03: Capstone Course (Spring 2015).

“A Payment for Ecosystem Services Market in the Green River Basin.” UW REWM 4750/5750: Wildlife Habitat Restoration Ecology (Spring 2014).

“Upper Green River Conservation Exchange.” UW ENR 4900-03: Capstone Course (Spring 2014).

“The Economics of Irrigation in Wyoming.” UW PLNT 3000: Irrigated Agriculture (Spring 2011, 2012, 2013, 2014).

“Determining the Value of Wyoming’s Water Resources.” UW LAW 6910-04: Western Water Resources (Spring 2012).

“Additional Issues in the Economics of Water: Interactions Across Water Users and/or Sectors of the Economy.” UW LAW 6910-04: Western Water Resources (Spring 2012).

“The Costs and Benefits of Reclamation in Wyoming.” UW AGEC 4700: Economics of Range Resources (Spring 2012).

“Markets and Common Property Management Institutions as Methods to Address Increasing Demands on a Finite Natural Resource Base.” UW SOC 4600: Global Population Issues (Fall 2010).

“Water Markets in the Western United States.” UW AGEC 4720: Water Resource Economics (Spring 2010).

“Water Markets in the Western United States.” UW AGEC 3400: Agricultural Law (Fall 2009).

### **Graduate Students**

Chair/co-chair (Dept. of Agricultural & Applied Economics unless otherwise indicated):

Funk, B. “Optimal Jackson Lake Dam Releases under Alternative Climate Scenarios” (anticipated completion Spring 2026).

Loss, P. “Ranch-Level Responses to Alternative Climate Scenarios in the Wind River Basin” (anticipated completion Spring 2025).

Grant, C. “Municipal Demand for Water in the Wyoming Colorado River Basin” (August 2024). Received third place in the 2024 WAEA Graduate Student Paper Competition (San Francisco, CA, June 2024).

Herath, P. “Response of Agricultural Producers to a Water Conservation Program in the Wyoming Colorado River Basin” (anticipated completion August 2024).

Hofstedt, P. “Angler Preferences under Alternate Climate Scenarios in the Snake River Headwaters of Wyoming” (anticipated completion August 2024).

Grahmann, A. “Profitability of Water-Saving Irrigation and Conservation Technologies in Wyoming” (Summer 2020). Recipient of the 2021 University of Wyoming College of Agriculture and Natural Resources *Reflections* Magazine Student Article Competition (article title: “Is mid-season decision-making important to calculating economic impacts of groundwater management in southeastern Wyoming?”)

Yeatman, E. “Economic Value of Water-Based Ecosystem Service Provision in the Upper Colorado River Basin” (Spring 2020). Recipient of the 2020 Western Agricultural Economics Association Outstanding Masters Thesis or Graduate Paper Award.

Willis, K. “Economic Impacts of Alternative Groundwater Management Strategies in Laramie County, Wyoming” (Spring 2019).

Lamb, K. “Investigating Potential Impacts of Non-attainment Risk Mitigation on Conservation Exchange Outcomes” (Summer 2018).

Blevins, S. “Valuing the Non-Agricultural Benefits of Flood Irrigation in the Upper Green River Basin” (Fall 2015).

Mock, B. “The Native Seed Industry: Experimental Market Observations of Big Buyer Influences” (Fall 2015).

Wells, S. “An Economic Analysis of Different Water Supply Policies Under Altered North Platte River Hydrology Profiles for Goshen Irrigation District” (Spring 2015).

Annes, B. “Interstate Water Banking in the Upper Colorado River Basin: Flexibility and Efficiency for a Dynamic Landscape” (J.D./ENR Plan B Thesis; Spring 2015).

Hodges, A. “The Economics of Bulk Water Transport in Southern California” (Fall 2014).

Perry, A. “Analysis of Reclamation Costs after Energy Extraction in the Powder River Basin” (Fall 2014).

Burgess, P. “A Market-Based Alternative to CBNG Surface Discharge Permitting in the Powder River Basin” (Fall 2013).

Committee member (in progress):

M. Burque (M.S. Environment and Natural Resources)

S. Dhakal (M.S. Plant Sciences)

M. Loya (M.S. Geology)

A. Miller (PhD Geology)

C. Surber (M.S. Environment and Natural Resources)

Committee member (completed):

S. Cloud (M.S. Ecosystem Science & Management, Spring 2024)  
M. Lewis (M.S. Environment and Natural Resources, Spring 2024)  
L. Thorsness (M.S. Environment and Natural Resources, Spring 2024)  
M. Munkaila (M.S. Plant Sciences, Spring 2023)  
E. Donaldson (M.S. Ecosystem Science & Management, Spring 2023)  
M. Mortimer (J.D./ENR Plan B; Spring 2021)  
R. Thapa (M.S. Agricultural/Applied Economics; Summer 2020)  
S. Warwick (M.S. Ecosystem Science & Management; Summer 2020)  
K. Balint (M.S. Agricultural/Applied Economics; Winter 2019)  
V. Kreinbrink (M.S. Economics; Fall 2019)  
C. Magnuson (M.S. Economics; Fall 2019)  
A. Sakib (M.S. Economics; Fall 2019)  
T. Ibragimov (M.S. Agricultural/Applied Economics; Winter 2018)  
M. Kollker (J.D./ENR Plan B; Spr 2017)  
Y. Feferholtz (PhD Economics; Summer 2016)  
J. Fluckiger (J.D./ENR Plan B; Spr 2016)  
R. Tupling (M.S. Agricultural & Applied Economics; Summer 2016)  
V. Joshi (M.S. Plant Sciences; Summer 2015)  
D. Novotny (M.S. Agricultural/Applied Economics; Summer 2015)  
B. Schreiber (J.D./ENR Plan B; Spring 2015)  
C. Carter (M.S. Plant Sciences; Fall 2013)

**AWARDS**

Recipient, University of Wyoming Extension Creative Excellence Award (2021)  
Recipient partner, University of Wyoming Marvin Millgate Excellence in Community Partnership Award (2018)  
Recipient, University of Wyoming Extension Creative Excellence Award (2016)  
Nominee, Western Agricultural Economics Association Outstanding Extension Program Award (2016)  
Nominee, University of Wyoming Outstanding Graduate Mentor Award (2016)  
Recipient, Agricultural & Applied Economics Association Outstanding Dissertation Award (2008)  
Recipient, Gordon A. King Award for Outstanding Dissertation, Department of Agricultural & Resource Economics, University of California, Davis (2008)

**ADDITIONAL PROFESSIONAL EXPERIENCE**

Bureau of Reclamation Student Economist, Bureau of Reclamation Lower Colorado Region, Boulder City, NV, April 2006-December 2007

Research Assistant, Department of Agricultural and Resource Economics, UC Davis, October 2001 - March 2006

Economic Research Consultant, Davis, CA, July 2005-December 2007  
Econometric analysis of the effect water purchases for maintaining environmental in-stream flows on wholesale water prices in California; Analysis of water market price determinants in Colorado

Economic Research Consultant, Portland, OR, April 2000-December 2000

Research/quantitative analysis for rural utilities on high-voltage transmission pricing related to electricity deregulation

Assistant Economist, Public Power Council, Portland, OR (August 1996-April 2000) Economic analysis and expert witness testimony on regional wholesale power issues, fish/wildlife mitigation, conservation, Bonneville Power Administration exposure to financial/hydrologic risk

### **PROFESSIONAL SERVICE**

Member, [Colorado River Research Group](#) (multi-disciplinary research group focused on Colorado River system), 2021-present.

Leadership Team Member, [Western Water Network](#) (Western Association of Agricultural Experiment Station Directors and the Western Extension Directors Association initiative to provide effective rapid response to water challenges in the Western U.S.), 2020-present.

Member, UW Dept. of Agricultural & Applied Economics Graduate Committee. 2011 – present.

Member, UW Dept. of Agricultural & Applied Economics Seminar Committee, 2017 – present.

Panel Member, “Showcasing UW’s Work on Wyoming Water Issues,” at the UW Ranching in the West Symposium, “Navigating Western Waters: Addressing Water Challenges in Wyoming and the West.” Laramie, WY (April 22, 2024).

Member, Search Committee, UW Dept. of Agricultural & Applied Economics Post-Doctoral Scholar (Spring 2024).

Chair, Search Committee, UW Dept. of Agricultural & Applied Economics Post-Doctoral Scholar (Summer 2023).

Chair, Planning Committee, Western Water Network Workshop (Fort Collins, CO; June 2023).

Director (one of six), Western Agricultural Economics Association, 2020-2023. Co-chair of paper selections for 2022 WAEA annual meeting; co-chair of award committees for 2023 WAEA annual meeting; developed DEI statement for WAEA Executive Council consideration.

Co-organizer, hybrid panel/presentation session at the Universities Council on Water Resources 2023 Annual Meeting comprised of Colorado River Research Group members to discuss Colorado River management.

Co-organizer, paper session at the Universities Council on Water Resources 2023 Annual Meeting focused on water planning under climate uncertainty. Submitted in conjunction with WWN one-day workshop.

Invited Reviewer, USDA-NIFA Proposal Panel, 2023.

Invited Reviewer, Western SARE Graduate Assistantship Proposal Panel, 2022.

Member, UW 2.13 Review Committee for the Consolidation of the Departments of Economics and Agricultural and Applied Economics, 2021.

Invited Reviewer, UW-National Park Service Small Grants Program, 2021.

Invited Reviewer, USDA-NIFA Research Proposal Panel, 2021.

Invited Reviewer, Western SARE Research/Extension Proposal Panel, 2021.

Technical webinar assistance for three panel discussions on Wyoming water issues (related to book *Public Waters* by Anne MacKinnon) (May 12, May 20, June 3, 2021).

Co-moderator/panelist for panel entitled, “Climate Change and Water Scarcity in the West.” Western Extension Committee annual meeting, San Diego, CA/virtual (December 17, 2021).

Guest moderator, Ag in Uncertain Times webinar, “Timely Issues for Western Agriculture.” (April 8, 2021).

Moderator, UW Extension 2021 Agriculture & Horticulture Online Convention Panel Discussions on Weather, Climate, Drought, and USDA Resources; and Water Demand Management (January 12 and 13, 2021).

Member, Agriculture & Horticulture Online Convention 2021 Planning Committee, 2020-2021.

Member, UW College of Agriculture & Natural Resources Tenure & Promotion Committee, 2018-2021.

Chair, WAEA Outstanding Masters Paper/Graduate Thesis Award Selection Committee, 2020.

Member, AGECE search committee for a Regional Economist, 2020.

Member, UW Dept. of Agricultural & Applied Economics Strategic Planning Committee, 2017 – 2018.

Member, AAEE Outstanding Doctoral Dissertation Award Subcommittee, 2017, 2018.

Member, WAEA Outstanding M.S. Thesis Award Committee, 2018.

Member, University of Wyoming Cheney Scholarship Committee. 2017-2018.

Co-organizer for a special session at Universities Council on Water Resources 2017 Annual Meeting. “Groundwater Management in a Changing Environment.” Fort Collins, CO (prospective, June 2017). Co-organizers: Dannele Peck and Greg Kerr.

Guest co-editor for special issue of *Water* (2017 Vol. 9 Issue 3; ISSN 2073-4441). “Water Management Strategies for Addressing Long-Term Drought and Climate Uncertainty.” Special issue based on October 2015 Salt Lake City conference.

Conference planning committee member. “Water Management Strategies for Addressing Long-Term Drought and Climate Uncertainty.” Conference funded by a USDA conference grant. Invited speakers and audience included academics; federal, state and local agency personnel; and water users, water district managers and other practitioners. Salt Lake City, UT (October 2015).

Member of committee convened by Laramie County Commissioners (at the request of the State Engineer) to explore alternative groundwater management options. Hansen was invited to participate by the Wyoming Governor’s Office. 2014-2016.

Member, Search Committee for UW Extension Specialist and Regional Extension Program Coordinator for the USDA Northern Plains Regional Climate Hub. Spring 2015.

Chair, Search Committee for Pilot Exchange Administrator for the Wyoming Conservation Exchange/UW Extension. Fall 2014/Spring 2015.

Member, Search Committee for Economic Modeler for the UW Track II EPSCoR Grant. Fall 2014/Spring 2015.

Co-Organizer, Panel on Water-Based Ecosystem Service Pilots in Wyoming, Wyoming Water Association Annual Meeting. Casper, WY. October 30, 2014.

Invited reviewer for the USDA-NIFA National Integrated Water Quality Program. August 2014.

Judge for the Wyoming State Science Fair (Laramie, WY). March 2014.

Invited Reviewer, Selected Papers, Western Agricultural Economics Association Annual Meetings. January 2014.

Invited participant at "Tea with Mathematicians," UW Sonia Kovalevsky Math Day. Sponsored by UW Math Dept. to encourage/inspire female high school students in Wyoming to pursue careers that use mathematics. Laramie, WY. May 21, 2013.

Moderator for the panel entitled, “Public-Private Partnerships: Lessons from Wyoming” at the Conservation Finance Forum sponsored by UW Ruckelshaus Institute, The Strook Forum on Lands and People, and The Nature Conservancy (Casper, WY). April 2013.

Invited Reviewer, Barnyards and Backyards Small Acreages Handbook. March 2012.

Member, Search Committee for Project (Outreach) Coordinator for the UW Track II EPSCoR grant. February 2012.

Member, Search Committee for a Post-Doctoral Researcher Geospatial Specialist in Local Government Planning (Dual appointment in UW Department of Agricultural & Applied Economics and Wyoming Geographical Information Systems). January 2011.

Invited Reviewer, Grant Proposals, Wisconsin Water Resources Institute. January 2011.  
Invited Reviewer, FY2011 Independent Peer Review Panel for the NOAA Climate Program  
Office Climate and Societal Interactions Program. December 2010.  
Member, Search Committee for the Lane Mentorship Scholarship. Scholarship administered  
through the Agricultural and Applied Economics Association, Committee on Women in  
Agricultural Economics. November 2010.  
Invited Participant, University of Wyoming focus group on the role of full professors in the  
university. February 2010.  
Invited Reviewer, Selected Papers, Agricultural and Applied Economics Association Annual  
Meetings. January 2010, 2011, 2012.

### **Manuscript Refereeing**

*Agricultural Economics* (1)  
*American Journal of Agricultural Economics* (1)  
*Applied Economics Teaching Resources* (1)  
*Australian Journal of Agricultural and Resource Economics* (1)  
*Climate Research* (1)  
*Eastern Journal of Economics* (1)  
*Environmental and Resource Economics* (3)  
*Environmental Modeling & Software* (1)  
*Hydrogeology* (1)  
*Journal of Agricultural and Applied Economics* (1)  
*Journal of Agricultural and Resource Economics* (1)  
*Journal of Environmental Management* (1)  
*Journal of Hydrology* (2)  
*Journal of the American Water Resources Association* (5)  
*Journal of Water Resources Planning and Management* (4)  
*Land Economics* (3)  
*Proceedings of the National Academy of Sciences* (1)  
*Resources* (1)  
*Strategic Behavior and the Environment* (1)  
*Water Economics and Policy* (4)  
*Water Resources and Economics* (3)  
*Water Resources Research* (7)  
*Western Economics Forum* (3)  
*Water International* (1)

### **PROFESSIONAL AFFILIATIONS**

Agricultural and Applied Economics Association  
Association of Environmental and Resource Economists  
Western Agricultural Economics Association  
Wyoming Water Association