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KELLY MICHELE COBOURN
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EDUCATION

Ph.D. Agricultural and Resource Economics, University of California, Davis, 2009
M.S. Resource Economics and Policy, University of Maine, 2004
B.A. with High Distinction Economics, University of Virginia, 2001

PROFESSIONAL EXPERIENCE

Assistant Professor, Virginia Tech, Forest Resources and Environmental Conservation, 2013-present
Assistant Professor, Boise State University, Economics, 2009-2013
Research Associate, University of Maine, Resource Economics and Policy, 2005
Legislative Intern, Maine State Office of Policy and Legal Analysis, 2003-2004

HONORS AND AWARDS

Outstanding Doctoral Dissertation Award, Agricultural and Applied Economics Association, 2010
Gordon A. King Outstanding Dissertation Award, University of California, Davis, 2009
Outstanding Master's Thesis Award, Agricultural and Applied Economics Association, 2005
Master's Thesis Award of Merit, Northeastern Agricultural and Resource Economics Association, 2005
Provost's Fellowship, University of Maine, 2002
Phi Beta Kappa, University of Virginia, 2000

CURRENT TEACHING

FREC 4434 Natural Resource Policy (spring)
FREC 4464 Water Resources Policy & Economics (fall)
FREC 5014 Research Ethics & Integrity in Forest Resources & Environmental Conservation (fall)
FREC 5984 Advanced Natural Resource Economics (spring, even years)

REFEREED PUBLICATIONS (* denotes student or postdoc advisee)

Refereed Journal Articles

Ward, N.K., L. Fitchett, J.A. Hart, L. Shu, J. Stachelek, W. Weng*, Y. Zhang, H. Dugan, A. Hetherington*, K.J. Boyle, C.C. Carey, K.M. Cobourn, P.C. Hanson, A.R. Kemanian, M.G. Sorice, and K.C. Weathers. 2018. "Integrating economic and socio-cultural processes into coupled human-freshwater models facilitates representation of short and long-term feedbacks," *Ambio*, forthcoming.

Wade, C.M.*, K.M. Cobourn, G.S. Amacher, and E. Hester. 2018. "Groundwater pumping decisions and land subsidence in the southern Chesapeake Bay region of Virginia," *Water Resources Research*, doi: 10.1029/2017WR022133.

Elbakidze, L., H.D. Vinson[†], K.M. Cobourn, G. Taylor. 2018. "Efficient water allocation and binding hydrologic externalities," *Resource and Energy Economics* 53: 147-161.

Siriwardena, S.*, K.M. Cobourn, and G.S. Amacher. 2018. "Potential for cooperative bargaining to manage the spread of emerald ash borer with mixed public and private land ownership," *Journal of Forest Economics* 32C: 72-83.

Cobourn, K.M., C.C. Carey, K.J. Boyle, C. Duffy, H.A. Dugan, K.J. Farrell, L. Fitchett, P.C. Hanson, J.A. Hart, V.R. Henson, A.L. Hetherington[%], A.R. Kemanian, L.G. Rudstam, L. Shu, P.A. Soranno, M.G. Sorice, J. Stachelek, N.K. Ward, K.C. Weathers, W. Weng*, and Y. Zhang. 2018. "From concept to practice to policy: modeling coupled natural and human systems in lake catchments," *Ecosphere* 9(5): e02209.

Cobourn, K.M., G.S. Amacher, and R.G. Haight. 2018. "Cooperative management of invasive species: a dynamic Nash bargaining approach," *Environmental and Resource Economics*, doi: 10.1007/s10640-018-0238-8.

Chance, E.W.*, K.M. Cobourn, and V.A. Thomas. 2018. "Trend detection for the extent of irrigated agriculture in Idaho's Snake River Plain, 1984-2016," *Remote Sensing*, 10(1): 145.

Ji, X.*, and K.M. Cobourn. 2018. "The economic benefits of irrigation districts under prior appropriation doctrine: an econometric analysis of agricultural land-allocation decisions," *Canadian Journal of Agricultural Economics*, doi:10.1111/cjag.12165.

Chance, E.W.*, K.M. Cobourn, V.A. Thomas, B. Dawson*, A.N. Flores. "Normalized Difference Moisture Index Method for Identifying Irrigated Areas in the Snake River Plain, Idaho," *Remote Sensing*, 9: 546.

Cobourn, K.M. 2015. "Externalities and Simultaneity in Surface Water-Groundwater Systems: Challenges for Water Rights Institutions," *American Journal of Agricultural Economics*, 97(3): 786-808.

Ghosh, S.*, K.M. Cobourn, and L. Elbakidze. 2014. "Water Banking, Conjunctive Administration, and Drought: The Interaction of Water Markets and Prior Appropriation in Southeastern Idaho," *Water Resources Research*, 50(8): 6927-6949.

Cobourn, K.M., E.R. Landa, G.E. Wagner. 2014. "Of Silt and Ancient Voices: Water and the Zuni Land and People," *National Center for Case Study Teaching in Science*.

Elbakidze, L., and K.M. Cobourn. 2013. "Economic Foundations for Interdisciplinary Modeling in Water Resources Management," *Journal of Contemporary Water Research and Education*, 152: 32-41.

Cobourn, K.M., R.E. Goodhue, and J.C. Williams. 2013. "Managing a Pest with Harvest Timing: Implications for Crop Quality and Price," *European Review of Agricultural Economics*, 40(5): 761-84.

Mooney, S., D.L. Young, K.M. Cobourn, and S. Islam. 2013. "Multidisciplinary Research: Implications for Agricultural and Applied Economists," *Journal of Agricultural and Applied Economics*, 45(2): 187-202.

Cobourn, K.M., H.J. Burrack, R.E. Goodhue, J.C. Williams, and F.G. Zalom. 2011. "Implications of Simultaneity in a Physical Damage Function," *Journal of Environmental Economics and Management*, 62(2): 278-289.

Cobourn, K.M., and N.F. Crescenti. 2011. "The Implications of Surface-Ground Water Hydrology for Optimal Conjunctive Management," *Western Economics Forum*, 10(2): 50-63.

Cobourn, K.M. 2011. "Incentives for Individual and Cooperative Management of a Mobile Pest: An Application to the Olive Fruit Fly in California," *American Journal of Agricultural Economics* (proceedings), 93(2): 652.

Cobourn, K.M. 2005. "Environmental Conservation on Agricultural Working Land: Assessing Policy Alternatives Using a Spatially Heterogeneous Land Allocation Model," *American Journal of Agricultural Economics* (proceedings), 87(5): 1337-1338.

Cobourn, K.M. 2005. "Environmental Conservation on Agricultural Working Land: Assessing Policy Alternatives Using a Spatially Heterogeneous Land Allocation Model," *Agricultural and Resource Economics Review* (proceedings), 34(2): 289-290.

<u>Book Chapters</u>

Cobourn, K.M., L. Elbakidze, and S. Ghosh*. 2016. "Conjunctive Water Management in Hydraulically Connected Regions in the Western U.S." in *Competition for Water Resources: Experiences and Management Approaches in the U.S. and Europe*, eds. J. Ziolkowska and J. Peterson.

<u>Other Publications</u>

Henson, V.R., K.M. Cobourn, C.C. Carey, K.J. Boyle, M.G. Sorice, N.K. Ward, and K.C. Weathers. 2018. "Closing the human-nature feedback loop: understanding people's responses to changing lakes," *LakeLine Magazine*, North American Lake Management Society, in press.

Gil, Y., K. Cobourn, E. Deelman, C. Duffy, R.F. da Silva, A. Kemanian, C. Knoblock, V. Kumar, S. Peckham, L. Carvalho, Y.Y. Chiang, D. Garijo, D. Khider, A. Khandelwal, M. Pahm, J. Pujara, V. Ratnakar, M. Stoica, and B. Vu. "MINT: model integration trough knowledge-powered data and process composition," in 9th International Congress on Environmental Modelling and Software, eds. M. Arabi, O. David, J. Carlson, and D.P. Ames, Fort Collins, CO, June 24-28, 2018.

Cobourn, K.M., G.S. Amacher, and R.G. Haight. "Cooperative management of invasive species: a dynamic Nash bargaining approach," in Forest Economics and Policy in a Changing Environment: How Market, Policy, and Climate Transformations Affect Forests, Proceedings of the 2016 Meeting of the International Society of Forest Resource Economics, Raleigh, NC, April 3-5, 2016.

Cobourn, K.M., E.C. Knoesen, H.J. Burrack, R.E. Goodhue, J.C. Williams, and F.G. Zalom. 2014. "Olive Fruit Fly: Timing the Harvest to Manage the Pest," *ARE Update*, 17(6): 5-8. University of California Giannini Foundation of Agricultural Economics.

Cobourn, K.M. 2012. Book Review of *The Economics and Politics of Climate Change*, eds. D. Helm and C. Hepburn, *Journal of Natural Resources Policy Research*, 4(4): 293-294.

SELECTED RESEARCH FUNDING

Gil, Y., K.M. Cobourn, E. Deelman, C. Duffy, A. Kemanian, C. Knoblock, V. Kumar, S. Peckham. DARPA World Modelers Program. "MINT: Model INTegration through Knowledge-rich Data and Process Composition."

Wynne, R., V. Thomas, G.S. Amacher, K.M. Cobourn. NASA ROSES Land-Cover Land-Use Change Program. "Spatiotemporal Drivers of Fine-scale Forest Plantation Establishment in Village-based Economies of Andhra Pradesh."

Cobourn, K.M., K. Boyle, C. Carey, C. Duffy, and P. Hanson. National Science Foundation, Dynamics of Coupled Natural and Human Systems, "CNH-L: Linking Land-Use Decision Making, Water Quality, and Lake Associations to Understand Human-Natural Feedbacks in Lake Catchments."

Maneta, M., K.M. Cobourn, S. Ewing, W.P. Gardner, K. Jencso, J. Kimball, B. Maxwell. USDA National Institute of Food and Agriculture. "Understanding the Hydrologic and Socioeconomic Impacts of Water Use and Resource Allocation in Agricultural Regions under Different Climate and Policy Scenarios."

Cobourn, K.M., and V. Thomas. Institute of Critical Technology and Applied Science, Virginia Tech, "Identifying the Effects of Climate Change on Irrigated Agriculture using Remote Sensing and Geospatial Water Rights Data."

Haight, R., G. Amacher, K.M. Cobourn. USDA Forest Service, "Biological Invasions in a Management Mosaic: The Cost of Coordination Failure and the Value of Information."

Cobourn, K.M., and A. Flores. NASA ROSES Land-Cover Land-Use Change Program for Early Career Scientists. "Water Institutions and Agricultural Land-Use Change across the Western US."

SELECTED INVITED PRESENTATIONS

American Geophysical Union (2018); Lake Sunapee Protective Association (2018); National Academy of Sciences (2018); Virginia Tech Department of Geography (2018); Arizona State University (2018); University of Southern California (2018); Michigan State University (2017); Economics of Water and Energy Workshop (2017); Western Agricultural Economics Association (2016); University of Tennessee (2015); Western Water Consortium (2015); Allied Social Science Association (2016); Agricultural and Applied Economic Association (2014-2015); NASA Land-Use/Land-Cover Change (2013-2015); Virginia Tech Civil and Environmental Engineering (2015); University of Florida (2015); Resources for the Future (2014); University of Nebraska, Lincoln (2013); NASA Ames Research Center (2012); Montana State University (2012); American Geophysical Union (2011); Idaho Senate Agricultural Affairs Committee (2011)

CURRENT GRADUATE/POSTGRADUATE MENTORING (as chair/co-chair only)
Adam Beck, M.S. Forest Resources and Environmental Conservation, Virginia Tech
V. Reilly Henson, Postgraduate, Forest Resources and Environmental Conservation, Virginia Tech
Xinde (James) Ji, Postdoc, Forest Resources and Environmental Conservation, Virginia Tech
Samuel Scott, M.S. Forest Resources and Environmental Conservation, Virginia Tech
Weizhe Weng, Ph.D. Agricultural and Applied Economics, Virginia Tech
Zeya Zhang, Ph.D. Agricultural and Applied Economics, Virginia Tech

PAST GRADUATE/POSTGRADUATE MENTORING (as chair/co-chair only)
Xinde (James) Ji, Ph.D. Forest Resources and Environmental Conservation, Virginia Tech, 2018
Eric Chance, M.S. Forest Resources and Environmental Conservation, Virginia Tech, 2017
Amy Hetherington, Postdoc Forest Resources and Environmental Conservation/Biology, 2017
Shyamani Siriwardena, Ph.D. Forest Resources and Environmental Conservation, Virginia Tech, 2017
Christopher Wade, M.S. Forest Resources and Environmental Conservation, Virginia Tech, 2016
Erin Murray, M.S. Geosciences, Boise State University, 2015
Sanchari Ghosh, Postdoc Economics, Boise State University, 2013
Gretchen Beebe, M.S. Mathematics, Boise State University, 2012

SELECTED PROFESSIONAL SERVICE
Leadership
Editorial Council, Journal of Agricultural and Resource Economics, 2018-present
Board of Directors, Universities Council on Water Resources, 2016-present
Chair-Elect, Environmental Section, Agricultural and Applied Economics Association, 2018-present
Chair, Outstanding Dissertation Award Committee, Agricultural and Applied Economics Association, 2016-2018
External Evaluator, American Association for the Advancement of Science, 2016-2018
Officer, Committee on Women in Agricultural Economics, 2010-2015

Journal Referee
American Journal of Agricultural Economics; Applied Economic Perspectives and Policy; Canadian Journal of Agricultural Economics; Ecological Economics; Environmental and Resource Economics; European Economic Review; European Review of Agricultural Economics; Hydrology and Earth Systems Science; Journal of Agricultural and Resource Economics; Journal of the American Water Resources Association; Journal of Contemporary Water Research and Education; Journal of Environmental Economics and Management; Journal of Forest Economics; Journal of Hydrology; Journal of Natural Resources Policy Research; National Center for Case Study Teaching in Science; Nature Climate Change; Water Resource Economics; Water Resources Research

Grant Reviewer
AAAS Second Century Stewardship; California Department of Food and Agriculture; NSF Big Data Regional Innovation Hubs; NSF Dynamics of Coupled Natural and Human Systems; NSF Interdisciplinary Research in Hazards and Disasters; NSF EPSCoR; New York Sea Grant; North Carolina Water Resources Research Institute; USDA AFRI National Integrated Water Quality Program; USDA Methyl Bromide Transition Program; USDA AFRI Water for Food Production Systems; Virginia Agricultural Experiment Station