

BONNIE G. COLBY, Ph.D.
Professor of Agricultural & Resource Economics
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AREAS OF PROFESSIONAL EXPERTISE

Water, Energy, Agricultural and Natural Resource Economics
Incentive-Based Agreements to Address Natural Resource Conflicts
Neuroeconomics of Collaborative Problem-Solving Processes
Climate Change Adaptation & Water Management
Resource Economics Trainings for Attorneys, Engineers, Public Officials, Stakeholders

EDUCATION AND EMPLOYMENT

B.S. Agricultural Economics, University of California-Davis, 1978

Ph.D. Agricultural Economics, University of Wisconsin-Madison, 1983

1983 - present Professor, Department of Agricultural Economics, The University of Arizona.

HONORS, AWARDS AND DISTINGUISHED OUTREACH (selected examples)

Warren Hall Medal awarded for distinguished water research, public service and enduring contribution to knowledge and the public good. Universities Council on Water Resources

Colorado River Research Group Expert Panel

Invited testimony on water trading, state legislatures Colorado, New Mexico, Arizona, Montana, Washington, Oregon & US Congress, Western Governors Association

Distinguished Scholar Award, Western Agricultural Economics Association

Lead Economics Faculty, Kinship Conservation Executive Training Program

Faculty, Kennedy School of Government, Executive Training Program in Environmental Economics, Harvard University

Faculty, Dividing the Waters; specialized training for judges and water masters.

Outstanding Research Scientist Award, University of Arizona College of Agriculture, 1990

ECONOMICS TRAININGS PROVIDED FOR PROFESSIONAL GROUPS (examples)

Water and Energy Economics, foundation-supported, for economics teachers

Water Banking & Regional Economies, for public officials & stakeholders, sponsored by state, county and municipal governments

Effective Economic Incentives for Conservation, foundation-supported, for international conservation professionals

Harvard University Kennedy School of Government, *Executive Training in Environmental Economics*

Dividing the Waters, foundation-supported, for judges

PUBLICATIONS (selected examples, peer-reviewed publications)

Colby, B., Acquiring Environmental Flows: Ecological Economics of Policy Development in Western U.S. *Ecological Economics*, 173, 2020.

Isaaks, R., & Colby, B. Empirical Application of Rubinstein Bargaining Model In Western U.S. Water Transactions. *Water Economics and Policy*, 6(1), 2020.

R. Young, B. Colby and G. Thompson “Tribal Water Rights, Community Economies, and Adaptive Water Institutions in the Western United States” *Journal of Natural Resources Policy Research*, Vol. 9, No. 1, 2019.

Colby, B. and R. Isaaks, Water Trading: Adaptation, Innovations and Modeling, *Journal of Contemporary Water Research and Education*, Volume165, Issue1, 2019.

E. Kendy, B. Aylward, L. Ziemer, B. Richter, B Colby et al. “Water Transactions for Streamflow Restoration, Water Supply Reliability, and Rural Economic Vitality in the Western United States” *Journal of the American Water Resources Association*, 2018.

Deol, S. and B.G. Colby, Economies of Tribal Nations: Water Rights, Agriculture and Gaming, *Journal of Contemporary Water Research and Education*, April, 2018.

Andrew Clarke, Bonnie Colby and Gary Thompson, Seasonal Elasticities of Household Water Demand: Application of the Stone-Geary Model Under an Increasing Block Rate Structure, *Land Economics*, Vol 93: 603-630, November, 2017.

Bonnie Colby, Water Linkages beyond the Farm Gate: Implications for Agriculture, *Federal Reserve Bank Economic Review*, November, 2016.

Bonnie Colby, “Water Trading Innovations: Reducing Agricultural Consumptive Use to Improve Adaptation to Scarcity,” chapter in *Competition for Water Resources: Experiences and Management Approaches in the US and Europe*, edited by Jadwiga Ziolkowska and Jeffrey Peterson, Elsevier Publishing, 2016

Dari Duval and Bonnie Colby, “Colorado River Flows and the Fisheries Economy of the Upper Gulf of California”, *Ecological Engineering*, 2016.

Ashley Kerna, Bonnie Colby, and Francisco Zamora, Valuing Environmental Flows in Mexico’s Colorado River Delta, *Water Economics and Policy*, December, 2016.

Bonnie Colby, George Frisvold and Matthew Mealy, “Reallocating Climate Risks Through Water Trading”, Chapter 16 in *Handbook of Water Economics*, James Roumasset, editor, Springer-Verlag Co 2015.

Bonnie Colby, "Innovative Water Transactions to Meet Urban and Environmental Demands in the Face of Climate Change" Chapter 10 in *Innovations in Water Markets*, William Easter, editor, Springer book series on Global Issues in Water Policy, 2014.

Elizabeth Schuster and Bonnie Colby, "Farm & Ecological Resilience to Water Supply Variability," *Journal of Contemporary Water Research and Education*, Issue 151, August, 2013 pages 70-83.

Bhagyam Chandrasekharan and Bonnie Colby, "Electricity Load Forecasting Improvements as a Climate Change Adaptation", *Journal of Natural Resources Policy Research*, 2013.

Rosalind H. Bark, Daniel E. Osgood, Bonnie G. Colby, and Eve B. Halper, "How Do Homebuyers Value Different Types of Green Space?" *Journal of Agricultural and Resource Economics* 36(2):395-415, 2011

Colby, B. and G. Frisvold, *Risk and Resilience: The Economics Of Climate-Water-Energy Challenges In The Arid Southwest*, Resources for the Future Press, 2011.

Jones L & BG Colby. Farmer Participation in Temporary Irrigation Forbearance: Portfolio Risk Management. *Rural Connections*: 43-48, 2010.

Basta, E and B Colby, "Water Market Trends: Transactions, Quantities, and Prices," *The Appraisal Journal*, Winter 2010, volume 78, number 1, p 50-66.

Bark R.H., Colby B.G. and Dominguez F. Snow Days? Snowmaking adaptation and the future of low latitude, high elevation skiing in Arizona, USA. *Climatic Change*, 2009.

Colby, Bonnie, "Water Management in Urbanizing, Arid Regions: Innovative Voluntary Transactions As a Response to Competing Water Claims ", Chapter 4 in *Policy and Strategic Behaviour in Water Resource Management*, Ariel Dinar and Jose Albiac, editors, Ashgate Publishing, 2009.

Bark-Hodgins, D Osgood, b. Colby et al. "Habitat Preservation and Restoration: Preferences for Habitat Quality", *Ecological Economics*, 2008.

Colby, Bonnie and J Pullen, "Influence of Climate Variability on the Market Price of Water in the Gila-San Francisco Basin." *Journal of Agricultural and Resource Economics*, December, 2008.

Colby, B.G. and Kathy Jacobs, *Water Policy for Urbanizing Arid Regions*, Resources for the Future Press, 2006.

Thorson, J., S. Britton and B. Colby, *Tribal Water Conflicts: Essays in Law, Economics and Policy*, University of Arizona Press, 2006.

Colby, B.G., John Thorson and Sarah Britton. *Negotiations Over Tribal Water Rights*. University of Arizona Press, 2005.

Colby, B.G. and P. Orr, "Economic Tradeoffs in Preserving Riparian Habitat", *Natural Resources Journal*, 2005.

Colby, B.G. and E. Smith-Incer, "Visitors Values of Local Economic Impacts of Riparian Habitat Preservation", *Journal of American Water Resources Assoc.*, 41:709-717, 2005.

McCann, L. and Colby, B.G "Transaction Cost Measurement Related to Environmental and Natural Resource Policies", *Ecological Economics*, 2005.

Colby, B.G. "Cap-and-Trade Policy Challenges: A Tale of Three Markets", Source: *Land Economics*, Vol. 76, No. 4 (Nov., 2000), pp. 638-658