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EDUCATION

1993 Ph.D.: Agricultural Economics, University of California, Davis.

1991 M.S.: Agricultural Economics, University of California, Davis.

1983 B.S.: Pomona College.

PROFESSIONAL EXPERIENCE

Head, Division of Applied Economics and Agricultural Education, University of Minnesota, February 2014-present

Interim Head, Division of Applied Economics and Agricultural Education, University of Minnesota, August 2013-January 2014

Professor, University of Minnesota, June 2009-present

Associate Professor, University of Minnesota, June 2001-June 2009

Assistant Professor, University of Minnesota, October 1993-June 2001

AWARDS AND HONORS

Publication of Enduring Quality Award, Association of Environmental and Resource Economists (AERE) 2011.

Little Red Oil Can Award, Saint Paul Board of Colleges, 2008.

Distinguished Teaching Award (non-tenured category), College of Agricultural, Food, and Environmental Sciences, 1997-98.

National Association of Colleges and Teachers of Agriculture Teaching Award of Merit, 1997-98.

Quality of Research Discovery Award, American Agricultural Economics Association (AAEA), 1998.

Outstanding Published Research Award: Honorable Mention, Western Agricultural Economics Association, 1998.

Outstanding Dissertation Award, American Agricultural Economics Association (AAEA), 1993.

Gordon A. King Dissertation Award, UC Davis, 1993.

UC Dissertation Year Fellowship 1991-92.

PUBLICATIONS

Journal Articles:

Nathan Paine, Frances R. Homans, Melisa Pollak, Jeffrey M. Bielicki, Elizabeth Wilson. "Why Market Rules Matter: Optimizing Pumped Hydroelectric Storage when Compensation Rules Matter." *Energy Economics*, 46:10-19 (2014).

Tetsuya Horie, Robert G. Haight, Frances R. Homans, Robert C. Venette. "Optimal Strategies for the Surveillance and Control of Forest Pathogens: A Case Study with Oak Wilt." *Ecological Economics*, Volume 86: 78-85 (2013).

Frances Homans and David Smith. "Evaluating Management Options for Aquatic Invasive Species: concepts and methods." *Biological Invasions*, Volume 15: 7-6 (2013).

Frances Homans and Tetsuya Horie. "Optimal Detection Strategies for an Established Invasive Pest." *Ecological Economics*, Volume 70: 1129-1138 (2011).

Robert Haight, Frances Homans, Tetsuya Horie, Shefali Mehta, David Smith, and Robert Venette. "Assessing the Cost of an Invasive Forest Pathogen: A Case Study with Oak Wilt." *Environmental Management* 47: 506-517 (2011).

Frances R. Homans and Elizabeth P. Marshall. "Modeling Recreational Amenities in an Urban Setting: Location, Congestion, and Substitution Effects." *Agricultural and Resource Economics Review*, Volume 37, Number 2: 257-272 (2008).

Shefali V. Mehta, Robert G. Haight, Frances R. Homans, Stephen Polasky, and Robert C. Venette. "Optimal Detection and Control Strategies for Invasive Species Management." *Ecological Economics*, Volume 61, Issues 2-3: 237-245 (2007).

Elizabeth P. Marshall and Frances R. Homans. "Juggling Land Retirement Objectives on an Agricultural Landscape: Coordination, Conflict, or Compromise?" *Environmental Management*, 38(1): 37-47 (2006).

Frances R. Homans and James E. Wilen. "Markets and Rent Dissipation in Regulated Open Access Fisheries." *Journal of Environmental Economics and Management*, 49(2):381-404 (2005).

Yongsung Cho, K. William Easter, Laura McCann, and Frances Homans. "Are Rural Residents Willing To Pay Enough To Improve Drinking Water Quality?" *Journal of the American Water Resources Association*, 41(3):729-740. (2005).

Elizabeth P. Marshall and Frances R. Homans. "A Spatial Analysis of the Economic

and Ecological Efficacy of Land Retirement.” *Environmental Modeling and Assessment*, 9:65-95 (2004).

Jane A. Ruliffson, Paul H. Gobster, Robert G. Haight, and Frances R. Homans. “Metropolitan Natural Area Protection to Maximize Public Access and Species Representation.” *Environmental Science and Policy* 6:291-299 (2003).

Leah Greden Mathews, Frances R. Homans, and K. William Easter. “Estimating the Benefits of Phosphorus Pollution Reductions: An Application in the Minnesota River.” *Journal of the American Water Resources Association* 38(5): 1217-1223, October (2002).

Jane Ruliffson, Paul Gobster, Robert. Haight, and Frances R. Homans. “Niches in the Urban Forest: Organizations and Their Role in Acquiring Metropolitan Open Space.” *Journal of Forestry* 100(9):16-23 (2002).

Elizabeth Marshall, Frances Homans, and Robert Haight. “Exploring Strategies for Improving the Cost-Effectiveness of Endangered Species Management: The Kirtland’s Warbler as a Case Study.” *Land Economics*, 76(3), 462-473 (2000).

Frances R. Homans and Jane A. Ruliffson. “The Effects of Minimum Size Limits on Recreational Fishing.” *Marine Resource Economics*, 14, 1-14 (1999).

Elizabeth P. Marshall, Robert G. Haight, and Frances R. Homans. “Incorporating Environmental Uncertainty into Management Decisions: Kirtland's Warbler Habitat Management as a Case Study.” *Conservation Biology*, 12, 975-985 (1998).

James E. Wilen and Frances R. Homans. “What Do Regulators Do? Dynamic Behavior of Resource Managers in the North Pacific Halibut Fishery.” *Ecological Economics* 24, 289-298 (1998).

Frances R. Homans and James E. Wilen. “A Model of Regulated Open Access Resource Use” *Journal of Environmental Economics and Management*, 32, 1-21 (1997).

Included in: Fisheries economics: Collected essays. Lee Anderson, editor. Volume 2. 2002, pp. 321-41. Ashgate.

Book Chapters:

Frances R. Homans and Raymond M. Newman, “Management of Invasive Aquatic Species.” in K. William Easter and Jim Perry (eds.) *Water Policy in Minnesota: Issues, Incentives, and Action*. RFF Press, 336 p (2011).

Shefali V. Mehta, Robert G. Haight, and Frances R. Homans, “Decision-making under risk in invasive species management: risk management theory and applications.” In John M. Pye, H. Michael Rauscher, Yasmeen Sands, Danny Lee, Jerome Beatty (eds.)

Advances in threat assessment and their application to forest and rangeland management, Volume 1. Gen. Tech. Rep. PNW-GTR-802. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest and Southern Research Stations. 246 p (2010).

James E. Wilen and Frances R. Homans, "Crutchfield and Zellner on Exvessel Price Determination in the Pacific Halibut Fishery" Written for the 40th Anniversary Republication of: James Crutchfield and Arnold Zellner, *Economics Aspects of the Pacific Halibut Fishery*, University of Chicago Press, (2002).

James E. Wilen and Frances R. Homans, "Measuring Factor Productivity Changes Under Regulated Open Access Resource Use" in Julian M. Alston and Philip G. Pardey, editors, *Agricultural Science Policy: Changing Global Agendas*, Johns Hopkins University Press, (2001).

James E. Wilen and Frances R. Homans. "Unraveling Rent Losses in Modern Fisheries: Production, Market, or Regulatory Inefficiencies" in: E. L. Pikitch, D. D. Huppert, and M. P. Sissenwine, editors. *Global trends: Fisheries Management*. American Fisheries Society Symposium 20, Bethesda, Maryland, (1997).

James E. Wilen and Frances R. Homans. "Marketing Losses in Regulated Open Access Fisheries" in J. Catanzano, editor. *Fisheries Economics and Trade: Proceedings of the Sixth Conference*, IFREMER-SEM, (1994).

Conference Presentations:

Derya Eryilmaz, Timothy Smith, Frances Homans. "Price Responsiveness in Retail and Wholesale Markets: Implications for Demand Response in Midwest Electricity Markets." Selected Paper, Fifth World Congress of Environmental and Resource Economists, Istanbul, Turkey (2014).

Frances Homans and James Wilen. "Can Fisheries Rationalization Improve Poverty in Developing Countries?" Selected Paper, Association of Environmental and Resource Economists (AERE) Summer Conference, Banff, Alberta (2013).

Derya Eryilmaz and Frances Homans. "How Do Renewable Energy Credit Prices and Production Tax Credits Affect Decisions to Invest in Renewable Energy?" Selected Paper, Agricultural and Applied Economics Association Annual Meetings, Washington D.C. (2013).

Frances Homans. "Designing Optimal Strategies for Surveillance and Control of Invasive Forest Pests." Invited, Pacific Northwest Economic Region Summit, Portland, OR (2011).

Stephen Aultman, Terrance Hurley, Frances Homans, and Robert Haight. "Valuing Monitoring Networks for Invasive Species: The Case of Soybean Rust." Selected Paper, Agricultural and Applied Economics Association Annual Meetings, Denver, CO (2010).

Frances Homans and David Smith. "Evaluating Market and Nonmarket Costs of

Invasive Fish." International Symposium on Genetic Biocontrol of Invasive Fish, Minneapolis, MN (June 2010).

Frances Homans. "Tried-and-True Versus Experimental Methods for Eurasian Watermilfoil Control: An Economic Analysis." Minnesota-Wisconsin Invasive Species Conference 2010: Working Together to Control Invasive Species.

Tetsuya Horie and Frances Homans. "Invasive Species Management on Private Lands" 66th annual meeting of the Japan Institute of Public Finance (October, 2009).

Tetsuya Horie, Frances Homans, Robert G. Haight and Robert Venette. "Optimal Strategies for Surveillance and Control of Invasive Forest Pathogens" 52nd Annual Conference on Great Lakes Research (Toledo, Ohio: May 2009) and the Annual Conference of the Society for Environmental Economics and Policy Studies (Japan, September 2009).

Stephen Aultman, Terry Hurley, Frances Homans, and Robert G. Haight. "Valuing Monitoring Networks for Invasive Species: The Case of Soybean Rust" 2009 National Soybean Rust Symposium in New Orleans, LA (December, 2009).

Shefali Mehta, Frances Homans, and Robert Haight. "Resolving uncertainty in invasive species management" Selected Paper, American Agricultural Economics Association Annual Meetings, Orlando, FL (2008).

Shefali V. Mehta, Tetsuya Horie, David J. Smith, Robert C. Venette, Robert G. Haight, Frances R. Homans, and Abigail J. Walter. "Economic impact assessment for oak wilt in Minnesota" Ecological Society of America Annual Meetings, Milwaukee, WI (2008).

Adam Zeilinger, David Smith, Leah Sharpe, Gina Quiram, Adam Kokotovich, Karrie Koch, Genya Dana, Robert Venette, Frances Homans, Robert Haight: "Integrating Biological and Social Science to Assess Management Success of an Exotic Invasive Tree Pathogen" National Science Foundation IGERT Symposium Poster, Washington DC (2008).

Tetsuya Horie and Frances Homans. Optimal Detection Strategies for an Established Invasive Forest Pest. Selected Paper, American Agricultural Economics Association Annual Meetings, Portland OR (2007).

Shefali Mehta, Frances Homans, and Robert Haight. The Value of Information in Invasive Species Management. Selected Poster. American Agricultural Economics Association Annual Meetings, Portland OR (2007).

Shefali Mehta, Robert Haight, and Frances Homans. "Detection Strategies in Invasive Species Management." Paper presented at the Heartland Environmental and Resource Economic Workshop (HERE) in Ames, Iowa, September 17-18 (2006).

Shefali Mehta, Robert Haight, and Frances Homans. "Optimal Management Strategies for Detecting Invasive Species." Contributed paper presented at the

International Association of Agricultural Economists (IAAE) in Queensland, Australia, August 12-18 (2006).

Shefali Mehta, Robert Haight, and Frances Homans. "Decision Making under Risk: Risk Management Theory and Applications." Scientific synthesis presented at the USDA Advances in Threat Assessment and Their Application to Forest and Rangeland Management in Boulder, Colorado, July 18-20 (2006).

Shefali Mehta, Robert Haight, and Frances Homans. "Optimal Detection and Control Strategies for Invasive Species Management." Presented at the Agricultural Economic Society (AES) 80th Annual Conference in Paris, France, March 30-31 (2006).

Shefali Mehta, Robert Haight, and Frances Homans. "Risk management in forests: optimal detection strategies for invasive species." Presented to the Spatial Ecology Laboratory at the University of Queensland in Australia, August 18 (2006).

Jane A. Ruliffson, Robert G. Haight, Paul H. Gobster, and Frances R. Homans, "Providing Equitable Spatial Distribution of Protected Natural Areas in a Metropolitan Setting: An Application of the Location Set Covering Problem" Paper presented at the American Agricultural Economics Association meetings, Long Beach California, (2002).

Elizabeth P. Marshall and Frances R. Homans, "Urban Planning and the Location of Environmental Amenities" Paper presented at the American Agricultural Economics Association meetings, Long Beach California, (2002).

Jane Ruliffson, Robert Haight, Paul Gobster, and Frances Homans, "Exploring Goal Tradeoffs in Metropolitan Natural Area Protection" Paper presented at the American Agricultural Economics Association meetings, Chicago Illinois, (2001).

Elizabeth P. Marshall and Frances R. Homans, "A Spatial Analysis of the Economic and Ecological Efficacy of Land Retirement." Paper presented at the American Agricultural Economics Association meetings, Chicago Illinois, (2001).

Elizabeth P. Marshall and Frances R. Homans, "Optimal Land Acquisition with Endogenous Prices." Paper presented at the Heartland Environmental and Resource Economics Conference, Ames Iowa, (2001).

Frances R. Homans and James E. Wilen. "Markets in Regulated Open Access Fisheries." Paper presented at the Heartland Environmental and Resource Economics Workshop, Ames, Iowa, (1999).

Frances R. Homans and Jane A. Ruliffson. "A Model of Minimum Size Limit Regulations." *In* Proceedings of the 6th Joint Conference on Food, Agriculture and the Environment, Minneapolis, MN, August 31-September 2, 1998. Edited by Tiziano Tempesta and Mara Thiene. Padova, Italy: University of Padova; St. Paul, MN: University of Minnesota, Center for International Food and Agricultural Policy, (1998).

Frances R. Homans and James E. Wilen. "Dynamic Behavior of Resource Managers: The North Pacific Halibut Fishery 1935-1978." Paper presented at the American Agricultural Economics Association annual meeting, (1997).

Elizabeth P. Marshall and Frances R. Homans. "Simulation Modeling, Sensitivity Analysis, and Cost-Effective Species Management." Paper presented at the American Agricultural Economics Association annual meeting, (1997).

Jane A. Ruliffson and Frances R. Homans. "The Effects of Minimum Size Limits on Recreational Fishing." Paper presented at the American Agricultural Economics Association annual meeting, (1997).

James E. Wilen and Frances R. Homans. "Modeling the Regulation of Renewable Resources: What Exactly Do Regulators Do?" Paper presented at the Workshop on Economics, Ethics, and the Environment, The Swedish Collegium for Advanced Study in the Social Sciences, Uppsala, Sweden, (1995).

Frances R. Homans and James E. Wilen. "The Dynamics of Regulated Open Access Resource Use," Paper presented at the American Agricultural Economics Association annual meeting, (1995).

Frances R. Homans and James E. Wilen. "Marketing Losses in Regulated Open Access Fisheries," Paper presented at the American Agricultural Economics Association annual meeting, (1992).

Quirino Paris, Sergio Ardila, and Frances R. Homans. "Slutsky Symmetries of Price Dependent Preferences," Paper presented at the Sixth Annual Congress of the European Economic Association annual meeting, (1991).

Other Publications:

Frances R. Homans "Invasive Species" entry in *Environmental and Natural Resource Economics: An Encyclopedia*. Timothy C. Haab and John C. Whitehead, Editors. pp. 194-196 (2014) Greenwood Press, Santa Barbara.

Books of Note review of *Degrees of Disaster* by Jeff Wheelwright, *Environment*, October (1997).

Frances R. Homans and Jane A. Ruliffson. "Limits on Walleye Fishing: How Will Anglers Respond?" *Minnesota Agricultural Economist*, (1995).

James E. Wilen, Tzy-Ning Chen, and Frances R. Homans. "Fishermen and Labor Markets: Participation, Earnings, and Alternatives in Pacific Coast Fisheries," Report to the National Marine Fisheries Service, 1991.

Frances R. Homans. "The Role of Mentoring in Education," Committee on Women in Agricultural Economics Newsletter, (1991).

GRANTS AWARDED

Environment and Natural Resources Trust Fund, State of Minnesota (ENRTF), 2014 (\$500,000): "Evaluation of Wastewater Nitrogen and Estrogen Treatment Options" Paige Novak, PI.

University of Minnesota Global Spotlight Seed Grant, 2012 (\$15,000): "Ecosystem Services and Vegetational Diversity: Valuation, Risk, and Uncertainty" (co-PI)

Minnesota Futures Grant from the Office of the Vice President for Research (OVPR), University of Minnesota, 2008-2009 (\$250,000): "Predicting and Managing Invasive Potential of Exotic Species" (Co-PI)

United States Department of Agriculture, 2008-2009 (\$42,000): "Cost-Effective Strategies to Detect and Manage Soybean Rust in the United States" (Co-PI)

Cooperative Agreement with USDA-ERS, 2006-2008 (\$106,000): "Spatial Decision-Making Tools For Efficient Allocation Strategies in Invasive Species Management"

Research Joint Venture Agreement with USDA-Forest Service, 2004-2008 (\$75,000): "Assessing the Value of Information in Invasive Species Management"

Land Stewardship Project Grant, 1999-2001 (\$88,400): "Modeling the Environmental Impacts of Farming Systems in Two Watersheds in Minnesota"

Research Joint Venture Agreement with USDA-Forest Service, 1999-2003 (\$75,000): "Exploring Goal Tradeoffs in Metropolitan Natural Area Protection"

Grant-in-Aid of Research, Artistry, and Scholarship, 1995 (\$13,936): "Modeling Angler Behavior in the Presence of a New Regulation"

PROFESSIONAL AFFILIATIONS

Agricultural and Applied Economics Association (AAEA)

Association of Environmental and Resource Economists (AERE)

PROFESSIONAL ACTIVITIES

Chair, Agricultural and Applied Economics Association Membership Committee (2012-2014)

Member, Agricultural and Applied Economics Association Membership Committee (2011-2012)

Member, American Agricultural Economics Association Awards Sub-Committee to select Quality of Research Discovery Award (2008-2009)

Chair, American Agricultural Economics Association Awards Sub-Committee to

select Quality of Research Discovery Award (2009-2010)

Member, National Center for Ecological Analysis and Synthesis Steering Committee for Invasive Forest Pests and Pathogens Research Project (2007-2008)

Member, American Agricultural Economics Association Awards Sub-Committee of Distinguished Teaching (2000-2002)

Co-Chair, American Agricultural Economics Association Selected Papers Committee, 1998.

Member, American Agricultural Economics Association Annual Meeting Program Committee, 1998.

Reviewer, *Resource and Energy Economics, Journal of Environmental Economics and Management, Land Economics, Natural Resource Modeling, Marine Resource Economics, American Journal of Agricultural Economics, Ecological Economics, Environmental and Resource Economics, Water Resources Research, Horticulture Technology, Journal of Theoretical Population Biology, Journal of Natural Resources Policy Research, Environment and Development Economics, North American Journal of Fisheries Management, Ecological Applications, Journal of Environmental Management, National Academy of Sciences, MIT Press, Canadian Journal of Agricultural Economics, Landscape and Urban Planning.*

Reviewer, United States Department of Agriculture National Needs Program, 2010.

Reviewer, United States Department of Agriculture-ERS PREISM grant proposals, 2008.

Reviewer, United States Department of Agriculture CSREES proposal, 2004.

Reviewer, National Science Foundation CAREER Program, 2002.

Reviewer, Sea Grant New York Grant Proposal, 1999.

Reviewer, Water Resources Center Grant Proposal, 1999.