

## William Scott Breffle, PhD

Associate Professor of Economics  
College of Business  
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### Education:

- PhD in Economics, University of Colorado at Boulder, 1999. Major Fields: environmental and natural resource economics, econometrics.
- MA in Economics, University of Colorado at Boulder, 1992. Major Fields: international finance and trade, quantitative economics, econometrics.
- BA in Economics, University of Colorado at Boulder, 1990, *summa cum laude*, valedictorian of the School of Arts and Sciences.

### Peer-reviewed journal articles:

21. Miller, M.E., W.S. Breffle, M. Battaglia, D.B., P.R. Robichaud, W.J. Elliot, R. McClusky, I.S. Miller, M. Billmire. 2022. Socio-economic impact of the rapid response erosion database (RRED). *Journal of Geoscience and Environment Protection* 10(10):1-23.
20. Vonsikeo, V., W.S. Breffle, J. Apriesnig, and B. Barkdoll. 2020. The economic value of carbon sequestration through tree planting in Laos. *Asian Development Policy Review* 8(2):102-111.
19. Dillingham, R., W.S. Breffle, and M.C. Kelly. 2018. A latent-class discrete-choice model of demand for economics electives: A case study on the challenge to increase enrollment. *Journal of Marketing for Higher Education* 28(1):113-127.
18. Bhattu, B., B. D. Barkdoll, and W.S. Breffle. 2018. A sustainability-based socio-technical-environmental project selection. *Sustainable Water Resources Management* 4(1):117-128.
17. Jin, Y., R.P. Donovan, and W.S. Breffle. 2016. A dynamic model to assess the carrying capacity of a defined system. *Journal of Sustainable Development* 9(4):151-164.
16. Breffle, W.S., M. Eiswerth, D. Muralidharan, and J. Thornton. 2015. Understanding how income influences willingness to pay for joint programs: A more equitable value measure for the less wealthy. *Ecological Economics* 109:17-25.
15. Wright, S., D. Muraliharan, A. Mayer, and W.S. Breffle. 2014. Using contingent valuation to estimate the willingness to pay for improved water supplies in rural Ugandan villages. *Journal of Water, Sanitation, and Hygiene for Development* 4(3):490-498.

14. Breffle, W.S., D. Muralidharan, R.P. Donovan, F. Liu, A. Mukherjee, and Y. Jin. 2013. Socioeconomic evaluation of the impact of natural resource stressors on human-use services in the Great Lakes Environment: A Lake Michigan case study. *Resources Policy* 38(2):152-161.
13. Chestnut, L.C., R.D. Rowe, and W.S. Breffle. 2012. Economic valuation of mortality-risk reduction: stated preference estimates from the U.S. and Canada. *Contemporary Economic Policy* 30(3):399-416.
12. Breffle W.S., E.R. Morey, and J.A. Thacher. 2011. A joint latent-class model: combining Likert-scale preference statements with choice data to harvest preference heterogeneity. *Environmental and Resource Economics* 50:83-110.
11. Breffle, W.S. and K.K. Maroney. 2009. The restoration of fishing services and conveyance of risk information in the Southern California Bight. *Marine Policy* 33:561-570.
10. Breffle, W.S. 2009. In pursuit of the optimal design: a guide for choice experiment practitioners. *International Journal of Ecological Economics and Statistics* 14(S09):3-14.
9. Morey, E.R., J. Thacher, and W.S. Breffle. 2006. Using angler characteristics and attitudinal data to identify environmental preference classes: a latent-class model. *Environmental and Resource Economics* 34(1):91-115.
8. Morey, E.R. and W.S. Breffle. 2006. Valuing a change in a fishing site without collecting characteristics data on all fishing sites: a complete but minimal approach. *The American Journal of Agricultural Economics* 88(1):150-161.
7. Breffle, W.S. and R.D. Rowe. 2002. Comparing choice question formats for evaluating natural resource tradeoffs. *Land Economics* 78(2):298-314.
6. Morey, E.R., W.S. Breffle, R.D. Rowe, and D.M. Waldman. 2002. Estimating recreational trout fishing damages in Montana's Clark Fork River basin: Summary of a natural resource damage assessment. *Journal of Environmental Management* 66(2):159-70.
5. Morey, E.R., W.S. Breffle, and P.A. Greene. 2001. Two nested constant-elasticity-of-substitution models of recreational participation and site choice: an "alternatives" model and an "expenditures" model. *The American Journal of Agricultural Economics* 83(2):414-27.
4. Breffle, W.S. and E.R. Morey. 2000. Investigating heterogeneity of preferences in a repeated discrete-choice recreation demand model of Atlantic salmon fishing. *Marine Resource Economics* 15:1-20.
3. Chestnut, L.G., W.S. Breffle, J.B. Smith, and L.S. Kalkstein. 1998. Analysis of differences in hot-weather-related mortality across 44 U.S. metropolitan areas. *Environmental Science and Policy* 1(1):59-70.
2. Breffle, W.S., E.R. Morey, and T.S. Lodder. 1998. Using contingent valuation to estimate a neighborhood's willingness to pay to preserve undeveloped urban land. *Urban Studies* 35(4):715-28.
1. Rowe, R.D., W.D. Schulze, and W.S. Breffle. 1996. A test for payment card biases. *Journal of Environmental Economics and Management* 31:178-85.

### **Books and book chapters:**

7. Jin, Y., R.P. Donovan, and W.S. Breffle. 2020. Applying a Dynamic Model to Assess the Carrying Capacity of Natural Resources in the Great Lakes Environment, in *Current Research in Education and Social Studies Volume 2* (R. Bag, ed.), Book Publisher International, London UK.
6. Morey, E.R., W.S. Breffle, and P.A. Greene. 2008. Two Nested Constant-Elasticity-of-Substitution Models of Recreational Participation and Site Choice: An “Alternatives” Model and an “Expenditures” Model, in *Revealed Preference Approaches to Environmental Valuation Volume I* (J. Herriges and C. Kling, eds.), Ashgate Publishing Limited, U.K. Reprinted with permission by the International Library of Environmental Economics and Policy as an “important and influential essay”.
5. Breffle, W.S., E.R. Morey, and T.S. Lodder. 2007. Using Contingent Valuation to Estimate a Neighborhood’s Willingness to Pay to Preserve Undeveloped Urban Land, in *The Stated Preference Approach to Environmental Valuation Volume III: Applications: Benefit-Cost Analysis and Natural Resource Damage Assessment* (R. Carson and T. Tietenberg, eds.), Ashgate Publishing Limited, U.K. Reprinted with permission by the International Library of Environmental Economics and Policy as an “important and influential essay”.
4. Breffle, W.S., E.R. Morey, R.D. Rowe, and D.M. Waldman. 2005. Combining Stated-Choice and Stated-Frequency Data with Observed Behavior to Value NRDA Compensable Damages: Green Bay, PCBs and Fish Consumption Advisories, in *The Handbook on Contingent Valuation* (D. Bjornstad, J. Kahn, and A. Alberini, eds.), Edward Elgar Publishing.
3. Breffle, W.S., E.R. Morey, and D.M. Waldman. 2005. Gaussian quadrature versus simulation for the estimation of random parameters: some evidence from stated-preference choice data. In *Applications of Simulation Methods in Environmental and Resource Economics*. R. Scarpa and A. Alberini, eds. Kluwer Academic Publishers, Boston.
2. Morey, E.R., W.S. Breffle, R.D. Rowe, and D.M. Waldman. 2003. Estimating recreational trout fishing damages in Montana’s Clark Fork River basin: Summary of a natural resource damage assessment. Reprinted by permission as Chapter 15 in *The New Economics of Outdoor Recreation*. N. Hanley, W.D. Shaw, and R.E. Wright eds. Edward Elgar Publishing.
1. Raucher, R., J. Drago, E. Castillo, A. Dixon, W.S. Breffle, and D. Waldman. 1995. *Estimating the Cost of Compliance with Drinking Water Standards: A User’s Guide*. American Water Works Association Research Foundation, Denver, CO.

### **Thesis committees:**

- Maroney, K.K., 2008, Master’s of Applied Natural Resource Economics. Committee: W.S. Breffle (Chair), M. Roberts, K. Halvorsen. Thesis Title: The Restoration of Fishing Services and Conveyance of Risk Information: Ongoing Efforts Following the Montrose Natural Resource Damage Assessment.
- Gagnon, V., 2011, Master’s of Environmental Policy. Committee: H. Gorman, C. MacLennan, W.S. Breffle (external reviewer). Thesis title: Fish Contaminants through the Tribal Perspective: An Ethnography of the Keweenaw Bay Indian Community’s Tribal Fish Harvest. *Midwestern Association of Graduate Schools Distinguished Thesis Award nomination*.

Liu, F. 2011. Master's of Applied Natural Resource Economics. Committee: W.S. Breffle (Chair), R. Donovan, D. Muralidharan. Thesis Title: Assessing Public Preferences about the Great Lakes Environmental Carrying Capacity.

Dillingham, R. 2016. Master's of Applied Natural Resource Economics. Committee: W.S. Breffle (Chair), L. Gupta, M. Kelly. Thesis Title: A Latent-class Discrete-choice Model to Demonstrate How College Course Attributes and Student Characteristics Influence Demand for Economics Electives: The Challenge to Increase Enrollment.

Bhattu, B. 2016. Master's of Environmental Engineering. Committee: B. Barkdoll, Z. Liu, W.S. Breffle (external reviewer). Thesis Title: A Sustainability-based Project Selection Algorithm: Socio-technical-economic Project Selection Algorithm.

Kromah, K.A. 2017. Master's of Applied Natural Resource Economics. Committee: G. Campbell, B. Orr, W.S. Breffle (co-Advisor). Thesis Title: Avoiding the Resource Curse: Identifying an Efficient Use of Liberia's Natural Resources.

Vonsikeo, V., 2020. Master's of Applied Natural Resource Economics. Committee: W.S. Breffle (Chair), J. Aspriesnig, B. Barkdoll. Thesis Title: The Economic Benefits and Costs of Carbon Control in Laos.

**Reviewer for academic journals:**

*Agricultural and Resource Economics Review*  
*American Journal of Agricultural Economics*  
*Asian Journal of Agricultural Extension, Economics, and Sociology*  
*Asian Journal of Economics, Business, and Accounting*  
*Contemporary Economic Policy*  
*Ecological Economics*  
*Environmental and Resource Economics*  
*Human Dimensions of Wildlife*  
*International Journal of Ecological Economics and Statistics*  
*Journal of Economics, Management, and Technology*  
*Journal of Environmental Economics and Management*  
*Journal of Environmental Management*  
*Journal of Environmental Planning and Management*  
*Journal of Leisure Research*  
*Journal of Policy Analysis and Management*  
*Land Economics*  
*Population and Environment*  
*Resource and Energy Economics*  
*Resources Policy*  
*SAGE Open*  
*Southern Economics Journal*  
*Urban Studies*  
*Water Resources Research*

**Selected invited conference and seminar presentations:**

Miller, M.E., M.J. Battaglia, M.G. Billmire, W.S. Breffle, W.J. Elliot, P.R. Robichaud, and R. McClusky. 2017. Socioeconomic impact analysis of linking remote sensing and process-based hydrological models

to improve post-fire remediation efforts. Presented at the NASA Wildland Fire Applications 2017 Team Meeting, Boulder, CO, March 1.

Breffle, W.S., M. Eiswerth, D. Muralidharan, and J. Thornton. 2014. Understanding how income influences willingness to pay for joint programs: A more equitable value measure for the less wealthy. Presented at the Western Economic Association International 89th Annual Conference, Denver, Colorado, June 30.

Muralidharan, D., W.S. Breffle, M. Eiswerth, and J. Thornton. 2012. Economic Values for Lake Improvement Using a Method to Better Reflect the Preferences of Less Wealthy Residents. Presented at the North American Lake Management Symposium. Madison, Wisconsin. November 7-9.

Breffle, W.S., D. Muralidharan, R.P. Donovan, F. Liu, A. Mukherjee, and Yongliang Jin. 2012. Socioeconomic Evaluation of the Impact of Natural Resource Stressors on Human-Use Services in the Great Lakes Environment: A Lake Michigan Case Study. Presented at "Pathways to Success: Integrating Human Dimensions into Fisheries and Wildlife," Colorado State University, Breckenridge, Colorado, September 25.

Eiswerth, M., W.S. Breffle, and A. Banerjee. 2010. Measuring Human Preferences for Restoring a Community's Lakes and Fishery. Presented at "Pathways to Success: Increasing Human Capacity for Global Human-Wildlife Coexistence," Colorado State University, Estes Park, Colorado, October 1.

Chestnut, L.C., R.D. Rowe, and W.S. Breffle. 2010. Economic valuation of mortality risk reduction: stated preference estimates for the U.S. and Canada comparing payment vehicles and elicitation methods. Presented at the 3<sup>rd</sup> biennial American Society of Health Economists meeting, Cornell University, Ithaca, New York, June 22.

Breffle, W.S. and K.K. Maroney. 2008. The restoration of fishing services and conveyance of risk information: ongoing efforts following the Montrose Natural Resource Damage Assessment. Presented at "Pathways to Success: Increasing Human Capacity for Global Human-Wildlife Coexistence," Colorado State University, Estes Park, Colorado, October 1.

Breffle, W.S. 2008. The optimal design: a guide for choice experiment practitioners. Presented at "Benefits and Costs of Natural Resources Policies Affecting Public and Private Lands," Western Regional Science Association Annual W-2133 Meeting, Waikoloa Village, Kona, Hawaii, February 18.

Chestnut, L.G., R.D. Rowe, and W.S. Breffle. 2007. Economic valuation of mortality risk reduction: stated preference estimates for the U.S. and Canada: comparing payment vehicles and elicitation methods. Presented at "Conjoint Analysis in Health: A Stated Preferences Conference," University of North Carolina – Chapel Hill, August 2.

Breffle, W.S., E.R. Morey, and J. Thacher. 2007. Combining attitudinal and choice data to estimate preferences and preference heterogeneity: a discrete-choice, random-utility, latent-class model. One of four invited papers presented at a special AERE session of the AEA meetings, "Joint Estimation and Environmental Valuation: Ten Years Later," Chicago, January 6.

Thacher, J., E. Morey, and W. Breffle. 2005. A latent-class model of angler preferences for Green Bay: Estimated jointly with attitudinal data and stated-preference data. Presented at the Conference on the Multifunctional Role of Forests, Padova, Italy. April 28-30.

Breffle, W.S. 2004. Combining stated-choice and stated-frequency data with observable behavior to value NRDA compensable damages: Green Bay, PCBs, and fish consumption advisories. Presented at the American Fisheries Society annual meeting, Madison WI, August 25.

Morey, E.R., J. Thacher, and W.S. Breffle. 2003. Using angler characteristics and attitudinal data to identify environmental preference classes: a latent-class model. Presented at the Fifth Annual Heartland Environmental and Resource Economics Workshop, Iowa State University, September 22. Presented at the 13<sup>th</sup> Annual Meeting of the Canadian Resource and Environmental Economics Study Group, Victoria, BC, October 4.

Bishop, R.C., W.S. Breffle, J.K. Lazo, R.D. Rowe, S.M. Wytinck. 2001-2002. Restoration scaling based on total value equivalency: Green Bay natural resource damage assessment. Presented to U.S. Environmental Protection Agency and Department of the Interior. April 17, 2001. Presented at the W-133 Regional Research meetings, Monterey CA, February 20, 2002. Presented to the Colorado State University Dept. of Agricultural and Resource Economics and the U.S. Forest Service. April 15, 2002.

Lazo, J.K., W.S. Breffle, and L.G. Chestnut. 2000. Households' willingness to pay for improved weather forecasts: a conditional probit analysis using stated choice data. Presented at the University of Colorado Environmental and Resource Economics Workshop, Boulder CO, July 17.

Breffle, W.S. and R.D. Rowe. 2001. Comparing choice question formats for evaluating natural resource tradeoffs. Presented at the AERE sessions of the AEA meetings, New Orleans, January 5.

Breffle, W.S., E.R. Morey, and D.M. Waldman. 2000. Combining sources of data in the estimation of consumer preferences: estimating damages to anglers from environmental injuries. Presented at the W-133 Regional Research meetings, Kauai HI, March 1.

Breffle, W.S. and E.R. Morey. 1999. Investigating heterogeneity of preferences in a repeated logit recreation demand model using RP data. Presented at the W-133 Regional Research meetings, Tucson AZ, February 25.

Morey, E.R., W.S. Breffle, and P.A. Greene. 1999. Two share models of recreational participation and site choice. Presented at the AERE sessions of the AEA meetings, New York City, January 3.

#### **Selected funded technical reports:**

Assessing the Carrying Capacity of the Great Lakes Environment: A Lake Michigan Pilot Study. W.S. Breffle, A. Mukherjee, R.P. Donovan, F. Liu, and Y. Jin. Funded by the Colcom Foundation. 2010.

Assessment of Damages to Anglers and Other Recreators from Injuries to the Upper Clark Fork River Basin. E.R. Morey, R.D. Rowe, W.S. Breffle, and W.D. Shaw. Prepared for the State of Montana Natural Resource Damage Litigation Program. 1995.

Benefit-Cost Analysis of Establishing a Dedicated Rescue/Salvage Tug to Serve Canada's Southern West Coast. E. Castillo, W.S. Breffle, L. Bird, R.D. Rowe, R. Allan, and D. Dickens. Prepared for the B.C. Ministry of the Environment. 1995.

Contingent Valuation of Natural Resource Damages due to Injuries to the Upper Clark Fork River Basin. R.D. Rowe, W.D. Schulze, W.S. Breffle, R. Boyce, and G. McClelland. Prepared for the State of Montana Natural Resource Damage Litigation Program. 1995.

Critique of the Canadian Coast Guard/CCME Benefit-Cost Analysis of Expediting the Schedule for Double Hulling in Canada. E. Castillo, W.S. Breffle, and R.S. Raucher. Prepared for the B.C. Ministry of the Environment. 1995.

Differences in Summer Mortality Due to Climate in U.S. Cities. L. Chestnut, W.S. Breffle, E. Castillo, and J.B. Smith. Prepared for the Center for Climatic Research, Department of Geography, University of Delaware. 1995.

Economic Evaluation of Proposed Cosmetics Ingredient Labeling Regulation. R. Rowe, W. Breffle, D. Mills, D. Chapman, P. DeCivita, and A. MacDonald. Prepared for Health Canada. 2003.

Economic Valuation of Mortality Risk Reduction: Stated Preference Approach. L.G. Chestnut, R.D. Rowe, J.K. Lazo, and W.S. Breffle. Prepared for Cornell University. 2002.

Estimates of Willingness to Pay for Potential Changes in Risks of Mortality Due to Climate Change. L. Chestnut, W.S. Breffle, and J.B. Smith. Prepared for the Center for Climatic Research, Department of Geography, University of Delaware. 1995.

Estimation of Human Health Monetary Damages as a Result of Increases in Temperature. J.B. Smith and W.S. Breffle. Draft report prepared for the Electric Power Research Institute. 1994.

Evaluation of Type A Oil Spill Model. W.S. Breffle, R.D. Rowe, and M.P. Welsh. Prepared for Applied Science Associates, Inc. 1996.

Examination of Potential Impacts of Climate Change on Drinking Water Treatment Requirements for Giardia and Cryptosporidium. J. Cromwell, M. Harrod, B. Breffle, D. Atkins, and J. Smith. Prepared for the USEPA. 2004.

The Impact of Climate Change on Thermoelectric Power Use in Egypt and Poland. J.B. Smith, F.D. Stern, C.A. Yermoli, and W.S. Breffle. Prepared for the International Institute for Applied Systems Analysis, Laxenburg, Austria. 1994.

An Introduction to the Resources and Services Equivalency Approach and its Application to the Guadalupe NRDA. R.D. Rowe, M.P. Welsh, and W.S. Breffle. Prepared for the California Department of Fish & Game Office of Oil Spill Prevention and Response. 1996.

Preliminary Evaluation of Recreational Value Provided by Cherry Creek State Park. W.S. Breffle, M. Hagenstad, and R. Raucher. Prepared for The City of Greenwood Village, Colorado. 2000.

Recreational Fishing Damages from Fish Consumption Advisories in the Waters of Green Bay. W.S. Breffle, E.R. Morey, R.D. Rowe, D.M. Waldman, and S. Wytinck. Prepared for the U.S. Fish and Wildlife Service, the U.S. Department of Interior, and the U.S. Department of Justice. 1999.

Regulatory Impact Analysis of the Final Great Lakes Water Quality Guidance. E. Castillo, R.S. Raucher, M. Barron, W.S. Breffle, S. Keefe, and A. Patterson. Prepared for the U.S. Environmental Protection Agency, Contract #68-C4-0060, WA#04. 1995.

Restoration Scaling Based on Total Value Equivalency: Green Bay Natural Resource Damage Assessment. R.C. Bishop, W.S. Breffle, J.K. Lazo, R.D. Rowe, and S.M. Wytinck. Prepared for the U.S. Fish and Wildlife Service, the U.S. Department of Interior, and the U.S. Department of Justice. 2000.

Socioeconomic Impact Analysis of the NASA BAER Program: Post-fire Economic Benefits from MTRI's Database Including the Incorporation of Non-market Values. Prepared for the National Aeronautics and Space Administration on behalf of the Michigan Tech Research Institute. 2017. Report was used in testimony for the U.S. Senate Full Committee Hearing on enhancing firefighting safety and effectiveness 2017, and was mandated for use by the "John D. Dingell, Jr. Conservation, Management, and Recreation Act."

Stage 1 Economic Assessment for PCB-Caused Injuries to the Natural Resources in the Kalamazoo River Environment. Prepared by Stratus Consulting Inc. for the Michigan Department of Environmental Quality, the Michigan Department of Attorney General, the U.S. Fish & Wildlife Service, and the National Oceanic and Atmospheric Administration. 2004.

Valuing Environmental Damages from Oil Spills on the Pacific Coast Phase 1A: Literature and Scenarios. W.S. Breffle and R.D. Rowe. Prepared for Environment Canada. 1995.

### **Michigan Technological University winning grants:**

2022 – 2023, Primary Investigator, Michigan Tech College of Business Dean's Advisory Council and Michigan Tech Research Excellence Fund, Variation in the Number of Referees Influences Game Outcomes in Goal-based Sports: Empirical Evidence from Low-stakes Intramurals, \$625 and \$1,000.

2017 –2018, co-Primary Investigator, National Aeronautics and Space Administration, Socioeconomic Impact Analysis of Linking Remote Sensing and Process-based Hydrological Models to Improve Post-fire Remediation Efforts, \$10,554.

2010 – 2011, co-Primary Investigator, National Science Foundation 10-524, Water Sustainability and Climate, Humans, Hydrology, Climate Change, and Ecosystems - An Integrated Analysis of Water Resources and Ecosystem Services in the Great Lakes Basin, \$150,000.

2008 – 2010, Primary Investigator, Colcom Foundation, Pittsburgh PA, The Great Lakes Carrying Capacity, \$115,088.

### **Courses taught at Michigan Tech:**

- Principles of Economics (undergraduate)
- Environmental Economics (graduate and undergraduate)
- International Economics (undergraduate)
- Mathematical Economics (undergraduate/graduate)
- Center for Water and Society Water Colloquium – Value of Water

Mean teaching evaluation over 63 courses taught (unweighted average): 4.57 out of 5.00

### **Professional affiliations and honors:**

- 2022 MTU College of Business Research Award
- 2021 MTU College of Business Teacher of the Year
- Primary Advisor for Fulbright Scholar graduate student winning Outstanding Scholarship Award in College of Business, 2020



- Finalist, School of Business and Economics Distinguished Lecture Series, 2018
- Honorary faculty member of business academic honor society, *Beta Gamma Sigma*, 2018
- Finalist, campus-wide Distinguished Teaching Award, 2015
- Member of Michigan Tech Academy of Teaching Excellence, 2015
- First-ever recipient of “Props for Profs” award, Jackson Center for Teaching and Learning, 2014
- Interviewed by CBS-Detroit, Aug 14, 2012 as part of the Great Lakes Technology and Innovation Report
- Finalist, Wells Fargo Teacher of the Year, School of Business and Economics, Michigan Tech, 2011
- Graduate Student Research and Creative Work Award, nominee, 1999
- Reuben A. Zubrow Graduate Fellowship Award for the Teaching of Economics, 1998-1999
- Graduate School University Fellowship, 1996-1997
- CU-Boulder Homecoming Royalty, 1990 (National Champion Colorado Buffaloes Football)
- University of Colorado Dean’s Scholar, 1988-1990, and Regent Scholar, 1987-1988
- American Economics Association (AEA)
- Association of Environmental and Resource Economists (AERE)
- *Phi Beta Kappa*
- *Omicron Delta Epsilon*
- Mensa

**Service activities:**

- University Goal 8 Social Responsibility and Ethical Reasoning AOL committee (2018-2021)
- Certified for online teaching by Educational Technology Organization of Michigan (ETOM), 2020
- Interschool Tenure, Promotion, and Reappointment committee (2017-2019, 2022-2023)
- Faculty Advocate: MTU Early Career Management Program (2016)
- Chair, MS/BS economics committee (2014-2015, 2017-2019, 2020-2021)
- Tenure, promotion and reappointment committee (2012-2013, 2021-2022)
- University Senate, Senate finance sub-committee, and academic policy subcommittee (2010-2014)
- School of Business and Economics representative for Center for Water and Society Advisory Committee (2007-2010)
- Faculty research committee 2007-2010
- Cognate reviewer for campus-wide Sustainable Futures Hiring Initiative 2008-2010
- MTU faculty representative for Omicron Delta Epsilon (national economics honor society)
- Economics faculty job search committee 2009-2010

**Past work experience – research and consulting:**

- Consultant, Fox River/Green Bay Natural Resource Damage Assessment, USDOJ, 2013-2015
- Transportation Analyst, Denver Regional Council of Governments, 2007
- Managing Economist, Stratus Consulting Inc., Boulder, CO, 1999-2006.
- Associate, Hagler Bailly, Inc., Boulder, CO, 1992-1996
- Research Assistant, Economics Dept., Center for Economic Analysis, University of Colorado, 1992.

**Past work experience – teaching:**

- Instructor, Natural Resource Economics, University of Colorado at Boulder, Fall 2006
- Instructor, Principles of Macroeconomics, Red Rocks Community College, Spring 2006.
- Teaching assistant, Principles of Economics, University of Colorado at Boulder, 1996-1999
- Teaching assistant, graduate Econometrics, University of Colorado at Boulder, 1992.