

**Kurt Anthony Schwabe**

Professor of Environmental Economics and Policy, School of Public Policy  
Adjunct Fellow, Water Policy Center, Public Policy Institute of California (PPIC)  
Adjunct Professor, Center for Global Food and Resources, University of Adelaide, Australia

**ACADEMIC ADDRESS**

School of Public Policy  
University of California  
Riverside, CA 92501  
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**EDUCATION**

Ph.D., North Carolina State University, Economics, Statistics Minor, 1996  
M.A., Duke University, Economics, 1992  
B.A., Macalester College, Mathematics/Economics, 1988

**Ph.D THESIS**

"Source Heterogeneity, Resource Characteristics, and the Performance of Marketable Permits"  
(Advisors: Dr. V. Kerry Smith and Dr. J. Easley)

**RESEARCH AREAS**

Water Economics; Market-based Instruments for Pollution Control; Salinity and Drainage Management; Wildlife and Fisheries Management; Valuing Ecosystem and Forest Services; Revealed and Stated Preference Valuation Methods.

**HONORS/AWARDS**

Visiting Flagship Fellowship. 2007-2008. CSIRO, Australia.  
Outstanding Journal Article Award. 2002. *Journal of Agricultural and Resource Economics*.  
Editor's Citation for Excellence in Manuscript Review 2002. *Journal of Environmental Quality*  
Best Teaching Practices Award Recipient. Center for Teaching Excellence, Ohio University. 1998.  
Kenneth R. Keller Research Award for Excellence in Doctoral Research. NCSU. 1996.

**RECENT GRANTS**

**Robert Wood Johnson Foundation** (7/16 – 4/19). **\$284,680**. Project Director. "Overlooked Health Implications of Water Policy during Drought and Extreme Temperature Events."  
**National Institute of Health** (4/20-3/22). **\$408,573**. Co-Principal Investigator. "Human Exposure and Vulnerability to Manganese Contaminated Groundwater."  
**EVMWD, EMWD, JCSD** (7/20-6/21). **\$75,000**. Co-Principal Investigator. "Determinants of Water Bill Delinquency and Service Disconnections"  
**National Science Foundation** (10/1/17-9/31/20). **\$2,431,217 (\$527,762 UCR)**. Principle Investigator UCR (w/ B. McCarl Texas A&M, Project Director). "Decision Support for Water Stressed FEW Nexus Regions (NexDSM)."  
**Eastern Municipal Water District** (11/18-7/20). **\$60,000**. Principal Investigator. "Affordability of Water Services in the Inland Empire-Phase I"  
**USDA-NIFA** (9/20-8/25). **\$10,000,000**. Co-Principal Investigator. "Artificial Intelligence for Sustainable Water, Nutrient, Salinity, and Pest Management in the Western U.S."

**COURSES TAUGHT****(u~undergraduate; m~masters; p~Ph.D.)**

Environmental Economics (u,m,p), Econometrics (u,m), Natural Resource Economics (u,m), Environmental and Natural Resource Valuation (u,m,p), Microeconomics (u), Managerial Economics (m), Policy Analysis (m), Southeast Asian Economics (u,m), Climate Policy (m,p), Local-Global Policy (m), Professional Development (u, m, p)

**APPOINTMENTS**

**Associate Dean** (2018-present). School of Public Policy, University of California

**Full Professor** (2015-present). School of Public Policy, University of California

**Adjunct Professor** (2016-present). Center for Global Food and Resources. University of Adelaide

**Adjunct Policy Fellow** (2015-present). Water Policy Center. Public Policy Institute of California.

**Visiting Scholar** (2015-2016). Commonwealth Scientific and Industrial Research Organization, Adelaide (CSIRO), South Australia

**Visiting Professor** (2015-2016). Center for Global Food and Resources. University of Adelaide

**Research Associate** (2009-2016). Australian Centre for Biosecurity and Environmental Economics, Crawford School of Economics and Government, Australian National University

**Associate Professor** (2014-2015). School of Public Policy, University of California.

**Associate Professor** (2007-2014). Department of Environmental Sciences, UC Riverside

**Cooperating Faculty Member** (2014-present). Department of Environmental Sciences, UCR

**Cooperating Faculty Member** (1999-present). Department of Economics, UC Riverside

**Associate Director** (2012-2014). Water Science and Policy Center. UC-Riverside.

**Vice-Chair** (2008-2011). Department of Environmental Sciences, University of California.

**Visiting Fellow** (2007-2008). CSIRO, Adelaide, South Australia

**Assistant Professor** (1999 – 2006). Department of Environmental Sciences, UC-Riverside

**Assistant Professor** (1996 - 1999). Department of Economics, Ohio University.

**Consultant** (1997-1998). North Carolina Agricultural Foundation. NC Division of Environmental Management.

**Visiting Professor** (Spring, 1997). MARA Institute of Technology (Malaysia).

**Adjunct Graduate Fellow** (1994-96). Center for Environmental and Resource Economics, Duke University.

**Graduate Research Assistant** (1992-94). North Carolina State University. Dept. of Economics.

**Graduate Teaching Assistant** (1990 - 92). Duke University. Department of Economics.

**EDITORIAL/REVIEWER ACTIVITY**

**Associate Editor** (2015-present). *California Agriculture*

**Editorial Board** (2013-present). *Water Economics and Policy*

**Associate Editor** (2007-2010). *Australian Journal of Agricultural and Resource Economics*.

**Sample of Reviewer Activity**

**Journals.** AWM, AJAE, Australian Journal of Agricultural and Resource Economics, British Journal of Environment and Climate Change, California Agriculture, CJARE, Climate Change, Choices, CEP, Empirical Economics, EDE, Environmental Science and Technology, Forest Science, Irrigation Science, JED, JARE, JEEM, JEQ, Journal of Management Mathematics, JWRP&M, Journal of Water Supply, Lake and Reservoir Management, Marine Resource Economics, WRR, Water Resource Economics.

**Books/Chapters.** Measuring the Economic Benefits of Water Quality Improvement with Benefit Transfer. American Fisheries Society; Global Climate Change: Convergence of Disciplines. Sinauer Associates; Economics of the Environment. WW Norton; Microeconomics for Today. West Publishing, New York; Economics and the Environment. J. Wiley and Sons, New York; Human Wildlife Conflicts: Economic Considerations. Animal and Plant Health Inspection Service. Economic Analyses at EPA: Assessing Regulatory Impact. RFF, Washington, DC.

**Grant Panels/Agencies.** USDA-AFRI; NSF; Delta Science Program; UC Water Resources Center; Israel Binational Agricultural Research & Development Fund (BARD); Nevada Hatch Proposals (University of Nevada-Reno); Social Sciences and Humanities Research Council of Canada; Prosser Trust (Irrigation Management); Conservation Trust / National Geographic; Natural Resources Defense Council; SANDEE; National Water Research Institute (NWRI); Natural Environment Research Council.

## LIST OF PUBLICATIONS AND CREATIVE ACTIVITY

### Journal Articles – Published

1. Smith, V.K., Epp, D., Schwabe, K.A. 1994. Cross-Country Analyses Don't Estimate Health-Health Responses. *Journal of Risk and Uncertainty*. Vol. 8: p.67-84.
2. Schwabe, K.A. 1999. The Effects of Separability on Incentive-Based Instrument Performance. *Economics Letters*. Vol. 63: 3 p.377-380.
3. Schwabe, K.A. 2000. Modeling State-level Water Quality Management: The Case of the Neuse River Basin. *Resource and Energy Economics*. Vol. 22: p.37-62.
4. Schwabe, K.A., Schuhmann, P., Boyd, R., Doorodian, K. 2001. The Value of Changes in Deer Season Length: An Application of the Nested Multinomial Logit Model. *Environmental and Resource Economics*. Vol. 19: p.131-147.
5. Schwabe, K.A. 2001. Nonpoint Source Pollution, Uniform Control Strategies and the Neuse River Basin. *Review of Agricultural Economics*. Vol. 23: 2 p.352-369.
6. Schwabe, K.A., Schuhmann, P. 2002. Deer-Vehicle Collisions and Deer Value: An Analysis of Competing Literatures. *Wildlife Society Bulletin*. Vol. 30: 2 p.609-615.
7. Kan, I., Schwabe, K.A., and Knapp, K.C. 2002. Microeconomics of Irrigation with Saline Water. *Journal of Agricultural and Resource Economics*. Vol. 27: 1 p.16-39.
8. Schwabe, K.A., Schuhmann, P., Tonkovich, M. 2002. A Dynamic Exercise in Reducing Deer-Vehicle Collisions: Management through Vehicle Mitigation Techniques and Hunting. *Journal of Agricultural and Resource Economics*. Vol. 27: 1 p.261-280.
9. Schuhmann, P., Schwabe, K.A. 2004. An Analysis of Congestion Measures and Heterogeneous Angler Preferences in a Random Utility Model of Recreational Fishing. *Environmental and Resource Economics*. Vol. 27: p.429-450.
10. Schuhmann, P., Schwabe, K.A. 2004. Modeling the Dynamics of Fishery Stock Recovery: Implications for the Assessment of Natural Resource Damages. *Natural Resource Modeling*. Vol. 17: 2 p.191-212.
11. Howell, C., Schwabe, K.A., Samah, A., Graham, R., Taib, I. 2005. Assessment of Aboriginal Smallholder Soils for Rubber Growth in Peninsular Malaysia. *Soil Science*. Vol. 170: 12 p.1034-1049.
12. Patrick, W.S., Bin, O., Schwabe, K.A., Schuhmann, P.W. 2006. Hatchery Programs, Stock Enhancement, and Cost Effectiveness: A Case Study of the Albermarle Sound/Roanoke River Stocking Program 1981-1996. *Marine Policy*. Vol. 30: 4 p.299-307.

## LIST OF PUBLICATIONS AND CREATIVE ACTIVITY

### Journal Articles – Published

13. Howell, C.J., Howell, R.T., Schwabe, K.A. 2006. Is Income Related to Happiness for the Materially Deprived? Examining the Association between Wealth and Life Satisfaction among Indigenous Malaysian Farmers. *Social Indicators Research*. Vol. 76: p.499-524.
14. Schwabe, K.A., Kan, I., Knapp, K.C. 2006. Drainwater Management to Reduce Salinity Problems in Irrigated Agriculture. *American Journal of Agricultural Economics*. Vol. 88:133-149.
15. Schwabe, K.A., Schuhmann, P., Baerenklau, K., Nergis, N. 2008. Fundamentals of Estimating the Net Benefits of Ecosystem Preservation: The Case of the Salton Sea. *Hydrobiologia* 604(1):181-195.
16. Knapp, K.C., Schwabe, K.A. 2008. Spatial Dynamics of Water and Nitrogen Management in Irrigated Agriculture. *American Journal of Agricultural Economics*. 90(2): 524-539.
17. Baerenklau, K., Nergis, N., Schwabe, K.A. 2008. Effects of Nutrient Restrictions on confined Animal Facilities: Insights from a Structural Model. *Canadian Journal of Agricultural Economics* 56 (2): 219-241.
18. Connor, J., Schwabe, K.A., Kirby, M., Kaczan, M., King, D. 2009. Impacts of reduced Water Availability on Lower Murray Irrigation, Australia. *Australian Journal of Agricultural and Resource Economics* 53(3): 437-456.
19. Howell, C., Schwabe, K.A., Samah, A. 2010. Non-Timber Forest Product Dependence among the Jah Hut Subgroup of Peninsular Malaysia's Orang Asli. *Environment, Development, and Sustainability*. 12:1-18.
20. Qureshi, E., Schwabe, K.A., Conner, J., Kirby, M. 2010. Environmental Water Incentive Policy and Return Flows. *Water Resources Research*. p.46: 1-12.
21. Connor, J., Schwabe, K.A., King, D., Knapp, K. 2012. Irrigated Agriculture and Climate Change: The Influence of Water Supply Variability and Salinity on Adaptation. *Ecological Economics*. Vol. 77: p.149-157.
22. Schwabe, K.A., Connor, J.D. 2012. Drought Issues in Semi-arid and Arid Environments. *Choices*. Vol. 27: 3 5p.
23. Mukherjee, M., Schwabe, K.A. 2014. Where's the Salt? A Spatial Hedonic Analysis of the Value of Groundwater to Irrigated Agriculture. *Agricultural Water Management*. Vol. 145: Special Issue: Exploring some of the socio-economic realities of sustainable water management in irrigation. 110-122.
24. Baerenklau, K., Schwabe, K.A., Dinar, A. 2014. The Residential Water Demand Effect of Increasing Block Rate Water Budgets. *Land Economics*. Vol. 90: 4 p.683-699.
25. Baerenklau, K., Schwabe, K.A., Dinar, A. 2014. Allocation-Based Water Pricing Promotes Conservation While Keeping User Costs Low. *Agricultural and Resource Economics Update*. Vol. 17: 6 p.4.
26. Schwabe, K.A., Baerenklau, K., and Dinar, A. 2014. "Coping with Water Scarcity: The Effectiveness of Allocation-Based Pricing and Conservation Rebate Programs in California's Urban Sector." *Policy Matters* 6(1):1-8.
27. Vincent, J., Carson, R., DeShazo, J., Schwabe, K.A., Ahmad, I., Chong, S., Chang, Y., Potts, M.D. 2014. Tropical countries may be willing to pay more to protect their forests. *Proceedings of the National Academy of Sciences*. Vol. 111: 28 p.10113-10118.

**LIST OF PUBLICATIONS AND CREATIVE ACTIVITY (continued)**

28. Mukherjee, M., Schwabe, K.A. 2015. Irrigated Agricultural Adaptation to Water and Climate Variability: The Economic Value of a Water Portfolio. *American Journal of Agricultural Economics* 97(3):809-832.
29. Schwabe, K.A., Carson, R., DeShazo, J., Potts, M.D., Reese, A., Vincent, J. 2015. Creation of Malaysia's Royal Belum State Park: A Case Study of Conservation in a Developing Country. *Journal of Environment and Development* 24(1):54-81.
30. DeShazo, J., Carson, R., Schwabe, K.A., Vincent, J., Ahmad, I., Chong, S., Chang, Y. 2015. Designing and Implementing Surveys to Value Tropical Forests: A Malaysian Application. *Journal of Tropical Forest Science* 27(1): 92-114.
31. Carson, R.T., DeShazo, J.R., Schwabe, K.A., Vincent, J.R., and Ahmad, I. 2015. Incorporating Local Visitor Valuation Information into the Design of New Recreation Sites in Tropical Forests. *Ecological Economics* 120:338-349.
32. Tran, Q., Schwabe, K., Jassby, D. 2016. Wastewater Reuse for Agriculture: Development of a Regional Water Reuse Decision-Support Model (RWRM) for Cost-Effective Irrigation Sources. *Environmental Science and Technology*, DOI: 10.1021/acs.est.6b02073, 2016
33. Franklin, B., Knapp, K.C., and Schwabe, K.A. 2017. A Dynamic Regional Model of Perennial Crop Production. *Water Economics and Policy* 3(1), 1650036, 30 pages.
34. Levers, L. and Schwabe, K.A. 2017. Biofuel as an Integrated Farm Drainage Management Crop: A Bio-Economic Analysis." *Water Resources Research* 53, doi: 10.1002/2016WR019773, 15 pages.
35. Adamson, D., Loch, A., and Schwabe, K.A. 2017. Adaptation responses to increasing drought frequency. *Australian J. of Agricultural and Resource Economics* doi: 10.1111/1467-8489.12214. 19 pages.
36. McCarl, B.A., Y.Q. Yang, K. Schwabe, B.A. Engel, A.H. Mondal, C. Ringler, and E.N. Pistikopoulos. 2017. Model Use in FEW Nexus Analysis: A Review of Issues. *Current Sustainable/Renewable Energy Reports*, Issue 4, 9 pages.
37. Tran, Q., Jassby, D. and Schwabe, K.A. 2017. The Implications of Drought and Water Conservation on the Reuse of Municipal Wastewater: Recognizing Impacts and Identifying Mitigation Possibilities. *Water Research* 124, 472-481.
38. Marcos-Martinez, R., Bryan, B.A., Schwabe, K.A., Connor, J.D, and Law, E.A. 2017. Forest transition in developed agricultural regions needs efficient regulatory policy. *Forest Policy and Economics* 86, 67-75.
39. Levers, L., T. Skaggs, and K. Schwabe. 2019. Buying water for the Environment: A hydro-economic analysis of Salton Sea inflows. *Agricultural Water Management* 213, 554-567.
40. Marcos-Martinez, R., Bryan, B.A., Schwabe, K.A., Connor, J.D, Law, E.A., Nolan, M., and Sánchez José J. 2019. Projected social costs of CO2 emissions from forest losses far exceed the sequestration benefits of forest gains under global change. *Ecosystem Services*, Accepted 4/28/19. 33 ms pages.
41. Levers, L., Story, D., and Schwabe, K. 2020. Boons or Boondoggles: An Assessment of Salton Sea Water Importation Proposals. *California Agriculture* 74(2): 73-79.
42. Schwabe, K., Nemati, M., Landry, C., Zimmerman, G. 2020. Water Markets in the Western United States: Trends and Opportunities. *Water* 12, 233; doi:10.3390/w12010233
43. Schwabe, K.A., Nemati, M., Amin, R., Tran, Q. and Jassby, D. 2020. Unintended consequences of water conservation on treated municipal wastewater use. *Nature Sustainability* <https://doi.org/10.1038/s41893-020-0529-2>.

**LIST OF PUBLICATIONS AND CREATIVE ACTIVITY (continued)****Edited Books**

1. Schwabe, K., J. Albiac, J. Connor, R. Hassan, L. Meza-Gonzalez. 2013. Drought in Arid and Semi-arid Regions: A Multi-disciplinary and Cross-Country Perspective. Springer Publishing. Dordrecht.
2. Dinar, A. and K. Schwabe. 2015. Handbook of Water Economics. Edward Elgar. MA.

**Book Chapters – Published/In-Press**

1. Smith, V.K., Epp, D., Schwabe, K. 1994. Cross Country Analyses Don't Estimate Health-Health Responses. The Mortality Costs of Regulatory Expenditures. (Ed) K. Viscusi. Kluwer. p. 67-84.
2. Smith, V.K., K.A. Schwabe and C. Mansfield. 1999. "Does Nature Limit Environmental Federalism," in Environmental and Public Economics: Essays in Honor of Wallace E. Oates. Edward Elgar Publishing LTD., Cheltenham, UK. pp: 126-148.
3. Schwabe, K.A., Schuhmann, P., Tonkovich, M., Wu, E. 2002. An Analysis of Deer-Vehicle Collisions: The Case of Ohio. Human Conflicts with Wildlife: Economic Considerations. Editors: L. Clark. USDA, Animal and Plant Health Inspection Service, National Wildlife Research Center. Fort Collins, CO. p.91-103.
4. Schuhmann, P., Schwabe, K.A. 2002. Fundamentals of Economic Principles and Wildlife Management. Human Conflicts with Wildlife: Economic Considerations. Editors: L. Clark. USDA, National Wildlife Research Center. Fort Collins, CO. p.1-16.
5. Connor, J., Schwabe, K., King, D. 2008. Irrigation to meet growing food demand with climate change, salinity and water trade. Sustainable irrigation: management, technologies and policies II. Editors: Esteve, Brebbia, Rico. WIT Press. Southampton, UK. p. 43-52.
6. Howell, R.T., Chong, W., Howell, C., Schwabe, K.A. 2012. Happiness and Life Satisfaction in Malaysia. Editors: H. Selin, G. Davey. Happiness across cultures: Views of happiness and quality of life in non-western cultures. Springer Publishers. Netherlands. p. 43-55.
7. Schwabe, K.A., Albiac, J., Connor, J., Hassan, R., Meza Gonzalez, L. 2013. Chapter 1: Introduction. Drought in Arid and Semi-Arid Regions: A Multi-disciplinary and Cross-country Perspective. Editors: K. Schwabe, J. Albiac, J. Connor, R. Hassan, L. Meza-Gonzalez. Springer Publishing. Dordrecht. p. 1-21.
8. Schwabe, K.A., Albiac, J., Andreu, J., Ayers, J., Caiola, N., Hayman, P., Ibanez, C. 2013. Chapter 27: Summaries and Conclusions. Drought in Arid and Semi-arid Regions: A Multi-disciplinary and Cross-country Perspective. Editors: K. Schwabe, J. Albiac, J. Connor, R. Hassan, L. Meza Gonzalez. Springer Publishing. Dordrecht. pp. 471-507.
9. Knapp, K., Schwabe, K., Baerenklau, K. 2014. Regional Economics and Management in Closed Drainage Basins. Salinity/Drainage Management in the San Joaquin Valley: Science Technology and Policy. Editors: A. Change, D. Silva. Springer Publishing. pp. 353-379.
10. Schwabe, K.A. 2014. Drought. Environmental and Natural Resource Economics: An Encyclopedia. Editors: J. Whitehead, T. Haab. Greenwood Press. pp. 109-112.
11. Knapp, K., Schwabe, K. 2015. Groundwater Use and Irrigated Agriculture in California: Dynamics, Uncertainty, and Conjunctive Use. The Handbook of Water Economics and Institutions. (Eds) K. Burnett, R. Howitt, J. Rousmasset, C. Wada. Routledge. pp. 134-162.
12. Schwabe, K., Knapp, K. 2015. Salinity and Groundwater Management: A Hydro-Economic Analysis. The Handbook of Water Economics (Dinar & Schwabe). Edward Elgar., 328-354.
13. Dinar, A. and Schwabe, K. 2015. Introduction (Chapter 1). In The Handbook of Water Economics. Editors: A. Dinar, K. Schwabe. Edward Elgar. pp. 1-9.

**LIST OF PUBLICATIONS AND CREATIVE ACTIVITY (continued)****Book Chapters – Published/In-Press (continued)**

14. Baerenklau, K.A., Tomich, T.P., Daroub, S., Haden, V.R., Kling, C., Lang, T., Lin, C-Y., Mitterhofer, C., Parker, D., Rosenstock, T., Schwabe, K.A., and Wang, J. 2016. “Responses: Policies and Institutions.” Chapter 8 in The California Nitrogen Assessment, T.P. Tomich, S.B. Brodt, R.A. Dahlgren and K.M. Scow (eds.). University of California Press.
15. Schwabe, K.A., Knapp, K.C., Luviano, I. 2016. The Water-Energy Nexus and Irrigated Agriculture in the US: Trends and Analyses. Competition for Water Resources: Experience and Management Approaches in the U.S. and Europe. Editors: J.R. Ziolkowska, J.M. Peterson. Elsevier. pp. 80-103.

**Technical Reports / Proceedings Papers**

1. Schwabe, K., and L. Xu. 1999. “Chapter 6: Agricultural Nutrient Control Strategy,” in Fiscal Analysis: Nonpoint Source Nutrient Rules for the Tar-Pamlico River Basin. Nutrient Sensitive Waters Management Strategy. NC Department of Water Quality (July), 94-124.
2. Schwabe, K. 1999. "The Costs of Nutrient Reduction: The Neuse River Basin Experience," in *The Economics of Policy Options for Nutrient Management and Dinoflagellates*, Center for Agricultural and Natural Resource Policy, University of Maryland. pp. 67-73.
3. Schwabe, K.A., K. Knapp, and I. Kan. 2001. “The Economics of Integrated Drain Water Management in the Central Valley,” in Salinity and Drainage Annual Report 2000-2001, UC Center for Water Resources, Riverside, California. pp. 97-104.
4. Schwabe, K.A., K. Knapp, and I. Kan. 2002. “The Economic Analysis of Alternative Methods to Control Salinity in the Western San Joaquin Valley,” in Salinity and Drainage Annual Report 2001-2002, UC Center for Water Resources, Riverside, CA. pp. 239-244.
5. Schwabe, K. and K. Knapp. 2003. “Integrated Drainwater Management in the Central Valley,” in Salinity and Drainage Annual Report 2002-2003, UC Center for Water Resources, Riverside, California. pp. 163-172.
6. Schwabe, K.A. and K. Knapp. 2004. “Integrated Drainwater Management in the Central Valley: A Regional Analysis of Irrigated Agriculture,” in Salinity and Drainage Annual Report 2003-2004, UC Center for Water Resources, Riverside, California. Pgs. 33-44.
7. Lents, J., and K. Schwabe (*Co-Principal Investigators*) 2006. “A Post Regulatory Evaluation of the Cost and Economic Impact Estimates of Air Pollution Control Regulations.” Report prepared for the California Air Resources Board and the California Environmental Protection Agency (Contract 01-335). April, 2006. 1-133.
8. Schwabe, K.A., Howell, C., and A.H.A. Samah. 2006. “The Degree, Design, and Determinates of Forest Dependence in Malaysia: A case of the Jah Hut in Peninsular Malaysia.” International Conference on Forestry and Forest Products Research, Forest Research Institute of Malaysia, Kepong, Malaysia, pp. 259-269.
9. Schwabe, K. (*Principal Investigator*). “An Economic Analysis of Solar Evaporators and Evaporation Ponds.” Report submitted 2/27/07 to the Department of Water Resources, San Joaquin District (TO No. 14 / Agreement 4600000567), Fresno, CA 93726, 9 pgs.
10. Schwabe, K.A. and K.A. Baerenklau. 2007. “A Preliminary Investigation of the Potential Non-Market Benefits Provided by the Salton Sea.” Report submitted to the Salton Sea Authority under K2 Economics. 42 pgs.

**LIST OF PUBLICATIONS AND CREATIVE ACTIVITY (continued)****Technical Reports / Proceedings Papers (continued)**

11. Connor, J., Kirby, M., Schwabe, K., Lukasiewicz, A., Kaczan, D. 2008. Impacts of reduced water availability on lower Murray irrigation, Australia. AARES. 27p. Proceedings from the 52nd Annual Conference of the Australian Agricultural and Resource Economics Society. Canberra, Australia.
12. Connor, J., Kirby, M., Schwabe, K., Lukasiewicz, A., and Kaczan, D. 2008. Impacts of reduced water availability on lower Murray irrigation, Australia. Socio-Economics and the Environment in Discussion (SEED). CSIRO Working Paper Series Number 2008-02.
13. Schwabe, K.A., Knapp, K.C., Baerenklau, K. 2008. Groundwater Management in California's Central Valley: A Common Property Evaluation. Conference Logistics, Australia. 4p. Proceedings of the 2nd International Salinity Forum. Adelaide, Australia.
14. Vincent, J., Ahmad, I., Schwabe, K.A., Weidner, E., Hashim, R., Lion, M., Tan-Soo, J. 2009. Measuring tropical forests' impacts on watershed services: spatial variation in quantity and costs. Food and Agricultural Organization. 28p. Forests in Development: A Vital Balance. Buenos Aires, Argentina. 10/18/2009. XIII World Forestry Congress (*refereed*)
15. Vincent, J., Carson, R., DeShazo, J., and K. Schwabe. 2012. Final Report: Economic Component of the Conservation of Biological Diversity through Improved Forest Planning Tools. Submitted to the Forest Research Institute of Malaysia (FRIM). June, 2012.
16. Sanchez, J., Baerenklau, K., Gonzalez-Caban, A., Schwabe, K.A. 2013. Economics of Forest Fire Management: Spatial Accounting of Costs and Benefits. González-Cabán, Armando, tech. coord. 2013. Proceedings of the fourth international symposium on fire economics, planning, and policy: climate change and wildfires. Gen. Tech. Rep. PSW-GTR-245 (English). Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 405 pages. pp. 81-97. Fourth Symposium on Fire Economics, Planning, and Policy: Climate Change and Wildfires. Mexico City, Mexico.
17. Baerenklau, K., Schwabe, K., and A. Dinar. 2013. Water Pricing Study-Final Report. Submitted to the Eastern Municipal Water District. April 23, 2013. Moreno Valley, CA.
18. Baerenklau, K.A., D. Jenerette and K. Schwabe. 2015. "Assessing the Effects of Local Water District Policies on Urban Forests and their Implications Across Socioeconomic Groups." Report to U.S. Forest Service Pacific Southwest Research Station. September. School of Public Policy, University of California – Riverside.
19. Schwabe, K., Franklin, B., and Levers, L. 2015. "Modeling the Economics Impacts of Deficit Irrigation on Grape Production." Final Report. USDA-NIFA-SCRI. 11/9/15
20. Schwabe, K. and K. Baerenklau. 2016. Water Conservation Study: Phase I Summary Report. Submitted to Moulton Niguel Water District. March 30<sup>th</sup>, 2016. 28 pages.
21. Hanak, E., Gray, B., Mount, J., Schwabe, K.A., Bradley, T., Colby, B., Kenney, D., Medellin-Azuara, J., Saphores, J.D. 2016. "The Colorado River." In California's Water. Water Policy Center. Public Policy Institute of California. San Francisco, CA.
22. Hanak, E., Lund, J., Ajamil, N., Baerenklau, K., DeShazo, J.R., Saphores, J.D., Schwabe, K.A., and Sedlak, D. 2016. "Water for Cities." In California's Water. Water Policy Center. Public Policy Institute of California. San Francisco, CA.
23. Schwabe, K. and K. Baerenklau. 2017. Water Conservation Study: Phase II Summary Report. Submitted to Moulton Niguel Water District. February 20<sup>th</sup>, 2017. 30 pages.



**LIST OF PUBLICATIONS AND CREATIVE ACTIVITY (continued)****Technical Reports / Proceedings Papers (continued)**

24. Mitchell, D., Hanak, E., Baerenklau, K., Escriva-Bou, A., McCann, H., Perez-Urdiales, M. and Schwabe, K.A. 2017. Building Drought Resilience in California's Cities and Suburbs. PPIC Water Policy Center Report. Public Policy Institute of California. June. 58 pages.
25. Perez-Urdiales, M., Baerenklau, K., Schwabe, K., and Mitchell, D. 2017. Technical Appendix C: Water Use Patterns and Trends within the Service Areas of California Water Service. Water Policy Center Report. Public Policy Institute of California. June. 59 pgs
26. Mount, J., Hanak, E.,..., Schwabe, K.... 2018. Managing Drought in a Changing Climate: Four Essential Reforms. Water Policy Center Report. PPICalifornia. 30 pgs.
27. Hanak, E. J. Mount, J. Lund,...K. Schwabe..2018. California's Water. Water Policy Center. Public Policy Institute of California. 54 pages.
28. Hanak, E,...K. Schwabe..2018. California's Water: Water for Cities. Water Policy Center. Public Policy Institute of California. 4 pages.
29. Hanak, E,...K. Schwabe..2018. California's Water: The Colorado. Water Policy Center. Public Policy Institute of California. 4 pages.
30. Schwabe, K., Perez-Urdiales, M., and Xiong, Y. 2018. "The role of preferences, perceptions, and language on the adoption of water conservation practices." WMWD-UCR Water Conservation Study – Final Report. Submitted to Western Municipal Water District, 11/2018. 64 pages.
31. Hopkins, F. M. V. Carrana, H. Ajami, J. Emmons Allison, R.G. Anderson, C.W. Barrows, M. Barth, D.R. Jenerette, W.C. Porter, T. Rolinski, K. Schwabe, C. Yáñez, N. Yu. 2018. Inland Deserts Summary Report. California's Fourth Climate Change Assessment. California Natural Resources Agency and California Energy Commission. Publication Number SUM-CCCA4-2018-008.
32. Schwabe, K. and M. Nemadi. 2019. Affordability of Water Services in the Inland Empire-Phase I. Report Submitted to Eastern Municipal Water District. 09/2029. 42 pages.

**Other**

1. Schwabe, K.A. 2003. Ayres, Kneese, and d'Arge: Lessons from Mass Balance within Residuals Management. Editors: R.T. Carson, W.M. Hanemann, V.K. Smith (invited).
2. McCann, H., Escriva-Bou, A., Schwabe, K. 2018. Alternative Water Supplies. Just the Facts. Report. Water Policy Center. Public Policy Institute of California.
3. Blog. Pottinger, L. 2018. A Path to Progress for the Salton Sea. Water Policy Center. Public Policy Institute of California. June 26, 2018. Available at: <http://www.ppic.org/blog/a-path-to-progress-for-the-salton-sea/>
4. Blog. Pottinger, L. 2018. The Unintended Consequences of Indoor Water Conservation. Water Policy Center. Public Policy Institute of California. November 29, 2018. Available at: <http://www.ppic.org/blog/unintended-consequences-indoor-water-conservation/>
5. Schwabe, K.A. 2020. Is a gallon conserved a gallon saved: The unintended consequences of water conservation on the reuse of treated municipal wastewater. Behind the Paper Series/Sustainability Community. Nature. Springer. Available at: <https://sustainabilitycommunity.springernature.com/channels/1385-behind-the-paper/posts/is-a-gallon-conserved-a-gallon-save-the-unintended-consequences-of-water-conservation-on-the-reuse-of-treated-municipal-wastewater>. May, 15, 2020.

## LIST OF PUBLICATIONS AND CREATIVE ACTIVITY

### Presentations

1. “Nonpoint Source Pollution, Coastal Resources, and Marketable Permits.” Paper presented at Camp Resources Environmental Economics Conference III, Wilmington, N.C., August, 1995.
2. “Efficiency Gains from Institutional Change: The Role of Heterogeneity.” Paper presented at the Duke University Public Finance Workshop Series, November 16, 1995, and at the North Carolina State University Environmental and Resource Economics Seminar Series, January 24, 1996.
3. “Source Heterogeneity, Nutrient Loadings, and Marketable Permits: News from the Neuse.” Paper presented at Camp Resources Environmental Economics Conference IV, Wilmington, N.C., August 20-21, 1996.
4. “Efficiency in Pollution Control.” Presentation to the North Carolina State Extension Service and the North Carolina Agricultural Research Service, Raleigh, N.C., August 28, 1996.
5. “Estimating the Costs of Nutrient Reduction.” Presentation to the North Carolina Department of Water Quality, Raleigh, N.C., September 27, 1996.
6. (*Invited talk*) “Nutrient Management: Policy Considerations and Modeling Strategies.” Presentation to the Institute of Technology - MARA – Kuala Lumpur, Malaysia, April 21, 1997. Invited talk
7. (*Invited talk*) “The Unchartered Waters of State-level Water Quality Management: The Case of the Neuse River Basin.” University of Akron Economics Seminar Series, Akron, Ohio. February 6, 1998.
8. “The Effects of Output Specification and Heterogeneity in Modeling Nonpoint Source Pollution Regulations.” Ohio State University Department of Agricultural Economics Seminar Series. February 26, 1998.
9. (*Invited talk*) “Growth and the Environment.” Ohio University Southeast Asian Studies Program, April 29, 1998.
10. “Have Real World Incentive-based Pollution Policies Been Over Sold?” Paper presented at the American Agricultural Economics Association Annual Meetings, Salt Lake City, UT, August, 1998
11. “*Bambi, Bumpers, and Benefits: A Random Utility Model Analysis of Ohio Wildlife Areas,*” (with Pete Schuhmann). Paper presented at Camp Resources Environmental Economics Conference III, Wilmington, N.C., August, 1998.
12. (*Invited talk*) “The Costs of Nutrient Reduction: The Neuse River Basin Experience,” presented paper at the Economics of Policy Options for Nutrient Management and Dinoflagellates Conference, sponsored by the University of Maryland's Center for Agricultural and Natural Resource Policy, Laurel, Maryland, November 16, 1998.
13. “Deriving the value of changes in deer season length: An application to wildlife areas in Ohio.” Presented at the annual meeting of the Southern Agricultural Economics Association, Memphis, TN February, 1999.
14. (*Invited talk*) “Outlining the Issues Associated with Development, Human Rights, and the Environment: The Case of Freeport in Irian Jaya, Indonesia.” Global Human Rights Conference, Ohio University, March 6, 1999.

## LIST OF PUBLICATIONS AND CREATIVE ACTIVITY

### Presentations (continued)

15. *(Invited talk)* “Mining, Amungme, and Market Failure: The Case of Freeport in Indonesia,” The Seventh Tun Abdul Razak Conference: Business and Management in Southeast Asia (Part 1), Ohio University, April 16-17, 1999
16. Given by K. Schwabe and P. Schuhmann. “Deriving the value of changes in deer season length: an application to wildlife Areas in Ohio.” American Agricultural Economics Association Annual Meetings, Nashville, TN, August 8-11, 1999.
17. Given by K. Schwabe and P. Schuhmann. “Using A Random Utility Model to Value Alternative Deer Management Options.” Camp Resources Environmental Economics Conference VII, Wilmington, NC, August 12-14, 1999.
18. Given by P. Schuhmann. “The Values of Consumptive Recreational Fishing and Catch-and-Release: An Analysis of the Roanoke River Striped Bass Fishery.” P. Schuhmann, J. Easley, and K. Schwabe. Southern Economics Association Annual Meetings. New Orleans, LA, November, 1999.
19. *(Invited talk)* “Deriving the Value of Changes in Deer Season Length and Bag limit: An Application of the Nested Multinomial Logit Model.” K. Schwabe and P. Schuhmann. Statistics Seminar. University of California Riverside Statistics Department, February 1<sup>st</sup>, 2000.
20. *(Invited talk)* “Deriving the Value of Changes in Deer Season Length and Bag limit: An Application of the Nested Multinomial Logit Model.” K. Schwabe and P. Schuhmann. Economics Theory Seminar. University of California Riverside Economics Department, February 2<sup>nd</sup>, 2000.
21. “The Value of Consumptive Recreational Fishing and Catch-and-release: An Analysis of the Roanoke River Striped Bass Fishery.” (w/ P. Schuhmann and J. Easley). The Fifth Occasional California Workshop on Environmental and Resource Economics, May 5-6, 2000.
22. *(Invited talk)* Given by K. Schwabe and P. Schuhmann. “The Welfare Implications of Alternative Deer Management Strategies: A Dynamic Exercise.” The 75<sup>th</sup> Annual Conference of the Western Economic Association, Vancouver, Canada, July 1, 2000.
23. *(Invited talk)* Given by P. Schuhmann and K. Schwabe. “Fundamentals of Economic Principles and Wildlife Management.” Human Conflicts and Wildlife: Economic Considerations. National Wildlife Resources Center, USDA, Fort Collins, Colorado, August 1, 2000.
24. *(Invited talk)* Given by K. Schwabe and P. Schuhmann. “Analysis of Deer-Vehicle Collisions: The Case of Ohio.” Human Conflicts and Wildlife: Economic Considerations. National Wildlife Resources Center, USDA, Fort Collins, Colorado, August 3, 2000.
25. *(Invited talk)* Given by P. Schuhmann. “The Values of Consumptive Recreational Fishing and Catch-and-Release: An Analysis of the Roanoke River Striped Bass Fishery.” (w/ J. Easley). American Fisheries Society, St. Louis, MO, Aug. 20-24, 2000.
26. *(Invited talk)* Given by P. Schuhmann. “Stock Dynamics and Recreational Fishing Welfare Estimation: Implications for Natural Resource Damage Assessment.” Southern Economic Association Annual Meetings. Washington, DC, November, 2000.

## LIST OF PUBLICATIONS AND CREATIVE ACTIVITY

### Presentations (continued)

27. "Economics of Integrated Drainwater Management in the Western San Joaquin Valley." (w/ K. Knapp and I. Kan). UC Annual Salinity/Drainage Conference. Sacramento, CA. March 28, 2001.
28. "A Multinomial Logit Model of Recreational Fishing with Congestion Effects." (w/ P. Schuhmann and J.E. Easley). American Agricultural Economics Association Annual Meeting Chicago, IL., August 5-8, 2001
29. ***(Invited talk)*** Given by P. Schuhmann. "An Analysis of Congestion Measures and Heterogeneous Angler Preferences in a Random Utility Model of Recreational Fishing." Camp Resources Environmental Economics Conference VIII, Wilmington, NC, Aug.,16-17, 2001.
30. "Economics of Integrated Drainwater Management in the Western San Joaquin Valley." (w/ K. Knapp and I. Kan). The Sixth Occasional California Workshop on Environmental and Resource Economics, Oct. 26-27<sup>th</sup>, 2001.
31. Given by M. Ramos. "Economics of Land Use Changes in the Orang-Asli Communities." The Sixth Occasional California Workshop on Environmental and Resource Economics, October 26-27<sup>th</sup>, 2001.
32. Given by I. Kan. "New Drainage Disposal Strategies at the Regional Scale: A Preliminary Economic Analysis." (w/ I. Kan and K. Knapp). UC Annual Salinity/Drainage Conference. Sacramento, CA. March 26-27, 2002.
33. "Economics of Integrated Drainwater Management." (w/ K. Knapp and I. Kan). 2<sup>nd</sup> World Congress of Environmental and Natural Resource Economists. Monterey, California. June 24-27<sup>th</sup>, 2002.
34. "Economics of Integrated Drainwater Management." K. Knapp, I. Kan, K. Schwabe. American Agricultural Economics Association Annual Meetings, Long Beach, California, July 28<sup>th</sup> – 31<sup>st</sup>, 2002.
35. ***(Invited Talk)*** "Riverside Conservation Plan: The Usefulness of Nonmarket Valuation to Informing Policy," Biodiversity and Ecological Sustainability in an Urbanizing Region, University of California, Riverside, November 8<sup>th</sup>, 2002.
36. ***(Invited Talk)*** "Nonmarket Valuation, Ecosystem Benefits, and the Salton Sea." Public Meeting for the Technical Advisory Committee, Salton Sea Authority. Salton City, California, November 14, 2002.
37. ***(Invited Talk)*** "Economics of Nonmarket Valuation: The Value of Ecosystem Services Provided by the Salton Sea." Salton Sea Research Meeting – Invited Principal Investigators, Salton Sea Science Office, Salton Sea Authority and the U.S. Bureau of Reclamation. UC Extension. January 15<sup>th</sup>, 2003.
38. ***(Invited talk)*** Given by P. Schuhmann. "An Analysis of Congestion Measures and Heterogeneous Angler Preferences in a Random Utility Model of Recreational Fishing," P. Schuhmann and K. Schwabe. Presented at the annual meetings of the American Fisheries Society (Southern Division), Wilmington, NC February 16, 2003.
39. "Integrated drainwater management in Irrigated Agriculture." K. Schwabe, K.C. Knapp, and I. Kan. Presented at The Seventh Occasional California Workshop on Environmental and Resource Economics, Oct. 17-18<sup>th</sup>, 2003.

## LIST OF PUBLICATIONS AND CREATIVE ACTIVITY

### Presentations (continued)

40. "Income-generating activities and well-being among forest-fringe households in Malaysia: Investigating the role of land quality." K. Schwabe and C. Howell. Presented at The Seventh Occasional California Workshop on Environmental and Resource Economics, October 17-18<sup>th</sup>, 2003.
41. *(Invited talk)* "Income Diversity, Resource Availability, and Alternative Measures of Well-being: The Case of Indigenous Forest Fringe Communities in Malaysia." K. Schwabe and C. Howell. Center for Southeast Asian Studies, University of Wisconsin, December 3, 2004. Madison, Wisconsin.
42. *(Invited talk)* Given by K. Knapp. "Nitrogen Economics in Irrigated Agriculture: Integration across Spatial and Time Scales." K. Knapp and K. Schwabe. Symposium on Nitrogen Eutrophication in Xeric Wildland and Agricultural Systems. University of California at Riverside. Riverside, CA. January 19, 2005.
43. *(Invited talk)* "Forest Fringe Communities in Malaysia: Seasonal Aspects of Income Generating Activities and Resource Draw." UCSD Environmental Resources Group. La Jolla, CA. January 31, 2005.
44. *(Invited talk)* "Forest Dependence and Resource Draw: NTFP Collection by Forest Fringe Communities in Peninsular Malaysia." (w/ C. Howell and A. Samah). Forest Research Institute of Malaysia, Malaysia. March 11, 2005.
45. *(Invited talk)* "Fundamentals of Estimating the Net Benefits of Ecosystem Preservation: The Case of the Salton Sea," w/ N. Nergis. Presented at the Salton Sea Centennial Symposium - A Salton Sea for the 21st Century: Science, Rehabilitation, and Management." San Diego, California. April 1, 2005.
46. "Nitrogen as a Stock Pollutant and Capital Input: A Dynamic Model of Corn Production with Non-Uniform Irrigation," w/ K. Knapp. Presented at the Western Agricultural Economic Association Annual Meetings, SF, CA. July 7, 2005.
47. "Nitrogen as a Stock Pollutant and Capital Input: A Dynamic Model of Corn Production with Non-Uniform Irrigation," w/ K. Knapp. Presented at the American Agricultural Economic Association Annual Meetings, Providence, Rhode Island. July 25, 2005.
48. "The Degree, Design, and Determinates of Forest Dependence in Malaysia: A case of the Jah Hut in Peninsular Malaysia," w/ C. Howell and A.S.A Samah. Presented at the Conference on Forestry and Forest Product Research (CFFPR), Kepong, Malaysia. November 23, 2005.
49. "Forest Dependence, Forest Fringe Communities, and the Importance of Heterogeneous Non-Timber Forest Products," w/ C. Howell and A.S.A Samah. American Agricultural Economics Association Annual Meetings, Long Beach, CA. July 24, 2006.
50. Given by P. Schuhmann. "A Localized RUM: Rethinking Travel Costs." Southern Economic Association Annual Meetings. Charleston, SC. November, 2006.
51. *(Invited talk)* "A Localized RUM: Rethinking Travel Costs," with P. Schuhmann. Presented at the UC-San Diego Environmental Resources Group. La Jolla, CA. April 23, 2007.
52. Given by K. Baerenklau. "Effects of Restrictions on Confined Animal Feeding Operations: Insights from a Structural Model." (w/ N. Nergis). American Agricultural Economics Association Annual Meetings, Portland, OR. July, 2007.

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### Presentations (continued)

53. ***(Invited talk)*** “Economics of Salinity and Drainage Management in Irrigated Agriculture,” w/ K. Knapp and K. Baerenklau. Presented at the CSIRO Markets and Incentives Seminar Week, CSIRO Sustainable Ecosystems, Gungahlin, Australia. December 4, 2007.
54. ***Given by J. Connor.*** “Impacts of Reduced Water Allocation on Lower Murray Irrigation,” w/ M. Kirby and D. Kaczan. Presented at the Australian Agricultural and Resource Economics Society Annual Conference, Canberra, Australia. February 8, 2008.
55. ***(Invited talk)*** “Bringing the Environment into Environmental Economics.” Presented to the Australian Agricultural and Resource Economics Society-South Australia Branch. Adelaide, South Australia, Australia. February 27, 2008.
56. “Groundwater Salinity Management in California’s Central Valley: A Common Property Evaluation.” (w/ K. Knapp and K. Baerenklau). Presented at the 2<sup>nd</sup> International Salinity Forum, Adelaide, Australia, April 1<sup>st</sup>, 2008.
57. ***Given by J. Connor.*** “Irrigation to meet growing food demand with climate change, salinity and water trade,” (w/ D. King). Presented at Sustainable Irrigation Conference in Alicante, Spain, June 12<sup>th</sup>, 2008,
58. ***Given by J. Connor.*** “The Economics of Sourcing Water for Environmental Flows,” (w/ E. Qureshi and M. Kirby). Presented at the European Association for Environmental and Resource Economists 16<sup>th</sup> Annual Meeting, June 26<sup>th</sup>, 2008.
59. ***(Invited talk)*** ***Given by J. Connor.*** “Water scarcity and salinity impacts of climate change on irrigated food supply in arid and semi-arid climates.” (w/ D. King). Presented at “Drought: Past and Future,” held at the Australian National University. Canberra, Australia. November 14<sup>th</sup>, 2008.
60. ***(Invited talk)*** “Surface and Groundwater Management for Irrigated Agriculture under Alternative Climate Change Scenarios,” presented at “Linking Climate Change Impacts on Evapotranspiration and Agricultural Production to Water Resources Decision Making.” California Department of Water Resources. Sacramento, California. 1/16/2009
61. ***Given by I. Ahmad.*** “Measuring tropical forests' impacts on watershed services: spatial variation in quantity, quality and costs,” (w/ J. Vincent). Presented at the XIII World Conference, Buenos Aires, Argentina, October 19<sup>th</sup>, 2009.
62. “An Analysis of Factors that Influence Farmland Values in the San Joaquin Valley: A Ricardian Approach.” Presented at the California Department of Water Resources, Fresno, CA. March, 2010.
63. ***(Plenary Speaker/Invited)*** “Valuing Poaching and Logging Protection Policies for Tropical Forest Ecosystems,” (w/ J. Vincent, R. Carson, and JR DeShazo). Presented at the Frontiers in Economics of Biosecurity and Environmental Economics. Canberra, Australia. March, 2011.
64. ***(Invited)*** ***Given by J. Connor.*** “Impacts of Climate Change on the Irrigation Sector of the Southern Murray-Darling Basin, Australia,” (w/ E. Qureshi, and M. Kirby). Presented at the Emerging Policy Issues in Water Conference, Canberra, Australia, March 2011.
65. ***Given by JR. DeShazo.*** “Valuing Poaching and Logging Protection Policies for Tropical Forest Ecosystems,” (w/ J. Vincent and R. Carson). Presented at the AERE Summer Conference, Seattle, WA. June, 2011.

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### Presentations (continued)

66. *(Plenary Speaker/Invited)* “Managing California’s Water.” Presented at the Sustainable Food Systems Conference, UC. Davis. October, 2011.
67. *(Invited talk)* “Adoption of Outdoor Water Conservation Technologies,” (w/ K. Baerenklau and A. Dinar). Presented at the Water Science and Policy Center Advisory Board Meeting. UC Riverside, Riverside, CA. January, 2012.
68. Given by M. Mukherjee. “Valuing Access to Multiple Sources of Water Supply in Irrigated Agriculture with a Hedonic Pricing Model.” Presented at the 13<sup>th</sup> Occasional California Workshop on Environmental and Resource Economics. Santa Barbara, CA February, 2012.
69. Given by B. Franklin. “A Dynamic Regional Model of Perennial Crop Production,” (w/ K. Knapp). Presented at the 13<sup>th</sup> Occasional California Workshop on Environmental and Resource Economics. Santa Barbara, CA, February, 2012.
70. *(Invited talk)* “Quantification of the Economic Sustainability of Implementing the Strategies to Address Water Scarcity in Grape Production.” Presented at the Sustainable Vineyard Management Working Group. USDA Salinity Lab, Riverside, CA. 03/2012.
71. Given by M. Mukherjee. “Valuing Access to Multiple Sources of Water Supply in Irrigated Agriculture with a Hedonic Pricing Model.” Presented at the AERE Summer Conference, Asheville, NC. June, 2012.
72. Given by B. Franklin. “A Dynamic Regional Model of Perennial Crop Production.” (w/ K. Knapp). Presented at the AERE Summer Conference, Asheville, NC. June, 2012.
73. Given by J. Vincent. “Valuing the Protection of Belum-Temenggor to the Malaysian Public,” (w/ R. Carson and J.R DeShazo). Presented at the European Association of Environmental and Resource Economists. Prague, Czech Republic, June, 2012.
74. “Irrigated Agricultural and Water Supply Portfolios” A Hedonic Approach to Valuing Access to Alternative Water Supply Sources,” (w/ M. Mukherjee). Presented at the WEAI Annual Meetings, San Francisco, CA. July, 2012.
75. “Climate Change and Irrigated Agriculture: A Decomposition of the Water Supply Impacts,” (w/ K. Knapp, J. Connor, and D. King). Presented at Presented at the Managing Water, Energy, and Food in an Uncertain World. UCOWR/National Institute for Water Research. Sante Fe, NM. July, 2012.
76. Given by B. Franklin. “A Dynamic Regional Model of Perennial Crop Production.” (w/ K. Knapp). Presented at Presented at the Managing Water, Energy, and Food in an Uncertain World. UCOWR/National Institute for Water Research. Sante Fe, NM. 07/12.
77. Given by M. Mukherjee. “Valuing Access to Multiple Water Supply Sources in Irrigated Agriculture with a Hedonic Pricing Model.” Presented at the Managing Water, Energy, and Food in an Uncertain World. UCOWR/National Institute for Water Research. Sante Fe, NM. July, 2012.
78. Given by M. Mukherjee. “Valuing Access to Multiple Water Supply Sources in Irrigated Agriculture with a Hedonic Pricing Model.” Presented at the AAEE Annual meetings, Seattle, WA. October, 2012.
79. “Irrigated Agricultural Adaptation to Water Supply Variability and the Salinity Impacts of Climate Change.” (w/ J. Connor, D. King, and K. Knapp). Presented at the World Water Forum, International Water Resource Economics Consortium Annual Meeting, Stockholm, Sweden. October, 2012.

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### Presentations (continued)

80. *(Invited talk)* “How Effective are Water Conservation Strategies?” Southern California World Water Forum College Grant Program, Kick-off event. October 7, 2012, Los Angeles, CA.
81. *Given by M. Mukherjee.* “Irrigated Agricultural Adaptation to Water and Climate Variability: The Economic Value of a Water Portfolio.” Invited presentation to the Climate Change Adaptation Consortium, California Department of Food and Agriculture. Seaside, California. January 22, 2013.
82. *(Invited talk)* Discussant of three papers evaluating how North-Africa and the Middle East Regions should address water scarcity and food security. Rosenberg International Forum on Water Policy. March 24, 2013, Aqaba, Jordan.
83. *(Invited talk)* “Meeting Future Urban Water Demand: Some Considerations as to Agriculture’s Role and the Larger Issues of Water Scarcity.” Presented at Urban Water Roundtable: Bringing Together the Best in Current Research and Applications. Arizona State University, April 24, 2013, Tempe, Arizona.
84. *(Invited talk)* *Given by K. Baerenklau.* “Block Rate Water Budgets and Water Use Efficiency” (w/ A. Dinar). Hemet/San Jacinto Watermaster. 12/4/13. Hemet, CA.
85. *(Invited talk)* *Given by K. Baerenklau.* “Block Rate Water Budgets and Water Use Efficiency,” (w/ A. Dinar). Santa Ana Watershed Protection Agency Board Meeting, January 7, 2014. Riverside, CA.
86. *(Invited talk)* “The Mean isn’t the message: the implications of accounting for other water supply characteristics on irrigated agricultural sustainability.” Presented at the *Economic Modeling of Agricultural Water Use and Production: Technical Workshop*, California Water and Environmental Modeling Forum, University of California-Davis, January 31, 2014.
87. *(Invited talk)* “The role of demand-side measures and flexible incentive-based instruments for addressing drought.” Presented at the Santa Ana Watershed Project Authority’s Board Meeting, Santa Ana Project Authority, Riverside, CA., February 4, 2014.
88. *(Invited talk)* “State Policy for Future Drought.” Presented at the UC-Governor’s Office Drought Summit. Sacramento, CA, April 25, 2014.
89. *(Invited talk)* “Demand-side Management for Addressing Water Scarcity and Drought: What Do We Know?” Presented at the *Urban Water Workshop*, Water Science and Policy Center, UC-Riverside, Riverside, CA June 4, 2014.
90. “The Economics of Salinity Management in Irrigated Agriculture: Drainage, Aquifer, and Climate Change Considerations,” (w/ K. Knapp). Presented at the 3<sup>rd</sup> International Salinity Forum, Riverside, CA. June 17, 2014.
91. “A Bio-economic model of perennial production with deficit irrigation in the presence of salinity,” (w/ B. Franklin and K. Knapp). Presented at the 3<sup>rd</sup> International Salinity Forum, Riverside, CA. June 17, 2014.
92. *(Invited talk)* “The mean isn’t the only message: the implications of accounting for other water supply characteristics on irrigated agricultural sustainability.” Presented at *Water Use Efficiency Symposium: Water Policy and Politics*. American Society of Enology and Viticulture National Conference, Austin, Texas, June 24, 2014.



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**Presentations (continued)**

93. ***(Invited talk)*** “Demand-side Management for Addressing Water Scarcity and Drought: What Do We Know?” Presented at the *Southern California Water Dialogue*. Metropolitan Water District, Los Angeles, CA, July 23, 2014.
94. ***Given by K. Baerenklau.*** “Residential Water Demand Effect of Increasing Block Rate Water Budgets,” (w/ A. Dinar). Presented at the Agricultural and Applied Economics Association Annual Meetings, Minneapolis, MN, July 29<sup>th</sup>, 2014.
95. “Climate Change in Conjunctive Use Basins: Water Quantity, Variability, and Salinity Considerations.” Presented at the International Water Resource Economics Consortium (IWREC) Annual Meetings, World Bank Headquarters, Washington, DC, September 9, 2014.
96. ***(Invited talk)*** “Demand-side Measures for Addressing Water Scarcity and Drought: What Do We Know?” Presented at the San Gabriel Valley Water Forum, Pomona, CA., October 2<sup>nd</sup>, 2014.
97. ***(Invited talk)*** “How Can Climate Science Influence Policy in an Era of Drought?” Presented at the 8<sup>th</sup> Biennial Bay-Delta Science Conference: Making Connections. Sacramento, CA. October 8, 2014.
98. ***(Invited talk)*** “Increasing Water Supply Reliability and Watershed Resilience through Portfolios, Prices, and Partnerships.” Presented at the Santa Ana Watershed Conference, Riverside Convention Center, Riverside, CA., October 14, 2014.
99. ***(Invited talk)*** “Price and Non-price Approaches for Reducing Residential Water Demand.” Presented at the Association of California Water Agencies (ACWA). San Diego, CA., October 27<sup>th</sup>, 2014.
100. ***(Invited talk)*** “Price and Non-price Approaches for Reducing Residential Water Demand.” (w/ K. Baerenklau, A. Dinar). Presented at the California Water Association Annual Meetings: Baking Bad/ Sustaining Good. Monterey, CA. November 13, 2014.
101. ***(Invited talk)*** “The median isn’t the only message: the implications of accounting for other water supply characteristics on irrigated agricultural sustainability,” presented at the *Integrative Graduate Education and Research Traineeship Seminar Series*, University of California Riverside, February 18<sup>th</sup>, 2015.
102. ***(Invited talk)*** “Water Conservation During Drought: Price and Nonprice Approaches,” (w/ K. Baerenklau and A. Dinar). California State University-Chico, Chico, California, March, 2015.
103. “Environmental Policy: The Role of Economics.” School of Public Policy, University of California Riverside, March, 2015.
104. “Comments on Education and Workforce Training in a Digital Age.” School of Public Policy Forum. UC Riverside, April, 2015.
105. ***(Invited talk)*** “Drought Impacts on Agriculture, Energy, and the Economy: Water Markets and the Environment.” AGU Chapman Conference on *Drought: Causes, Impacts and Policies*. American Geophysical Union / University of California Irvine, Irvine, CA., April, 2015.
106. ***(Invited talk)*** “Price and nonprice approaches to reducing residential water demand.” Environmental Sciences Club, University of California Riverside, May, 2015.

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**Presentations (continued)**

107. ***(Invited talk)*** “The Mean isn’t the message: The Role of Water Supply Variability and Quality on Irrigated Agricultural Sustainability.” Water UCI, University of California Irvine, June, 2015.
108. “Groundwater Use and Irrigated Agriculture in California: Dynamics, Uncertainty, and Conjunctive Use.” WEAI Annual Meetings, Hawaii, June, 2015.
109. “Comparing the Economic Impacts of Deficit Irrigation on Grape Production: Four Experiments.” (w/ B. Franklin and L. Levers). Presented at the *Sustainable Vineyard Management Final Fall Meeting*, NIFA-SCRI Project. Parlier, CA. October 21, 2015.
110. ***(Invited talk)*** “Price and nonprice approaches for reducing residential water demand: Evidence from California,” (w/ K. Baerenklau). Presented at the South Australia Agricultural and Environmental and Resource Economics Society (SAAERES), University of Adelaide, Adelaide, South Australia, November 18<sup>th</sup>, 2015.
111. Given by A. Loch. “Crazy Talk during Drought,” (w/ D. Adamson). 8<sup>th</sup> Annual Water Forum. Center for Water Policy and Management. La Trobe University. Aldonga, NSW, Australia. November 12<sup>th</sup>, 2015.
112. Given by A. Zuo. “Modelling the drivers of farm exit in the Murray-Darling Basin” (w/ S. Wheeler). Global Food Studies Seminar Series. University of Adelaide, Adelaide, South Australia, November 30<sup>th</sup>, 2015.
113. Given by Q. Tran. “Wastewater Reuse for Agriculture” (w/ D. Jassby). Presented at, Towards Food, Energy, and Water (FEW) Security in California Under Changing Conditions: The Nexus Perspective.” UCLA. December 4-5, 2015.
114. ***(Invited talk)*** “Performing Research: The Scientific Method, Quantitative and Qualitative Approaches, and Conducting Surveys.” Presented at the Bandung Baptist Theological Seminary, Bandung, Indonesia. January 4, 2016.
115. ***(Invited talk)*** “Scientific Writing: Articles and Abstracts.” Presented at the Bandung Baptist Theological Seminary, Bandung, Indonesia. January 5, 2016.
116. ***(Invited talk)*** “The Big Dry and reasons for optimism during drought: Turning challenges into opportunities to increase drought resilience in the Western U.S.” Presented at the Drought, Drought Policy and Drought Readiness Workshop, Australian Agricultural and Resource Economics Society 60<sup>th</sup> Annual Conference, Australian National University, Canberra, ACT, and Australia. February 2<sup>nd</sup>, 2016.
117. Given by A. Loch. “Crazy Talk during Drought,” (w/ D. Adamson). Presented at the Drought, Drought Policy and Drought Readiness Workshop, Australian Agricultural and Resource Economics Society 60<sup>th</sup> Annual Conference, Australian National University, Canberra, ACT, Australia. February 2<sup>nd</sup>, 2016.
118. Given by S. Wheeler. “Modelling the drivers of farm exit in the Murray-Darling Basin from 1991 to 2011,” (w/ A. Zuo). Presented at the Drought, Drought Policy and Drought Readiness Workshop, Australian Agricultural and Resource Economics Society 60<sup>th</sup> Annual Conference, Australian National University, Canberra, ACT, Australia. February 2<sup>nd</sup>, 2016.
119. Given by Q. Tran. “Wastewater Reuse: A Study of Wastewater Treatment Technologies and Their Impacts on Wastewater Effluents for Agriculture” (w/ D. Jassby). Presented at the 251<sup>st</sup> ACS National Meeting & Exposition. San Diego, CA. March 13-17<sup>th</sup>, 2016.

## LIST OF PUBLICATIONS AND CREATIVE ACTIVITY

Presentations (continued)

120. (*Invited talk*). “Price and nonprice approaches for reducing residential water demand: A tale of two water districts.” Presented at South Australian (SA) Water, SA Water Building, Adelaide, SA, Australia. April 12<sup>th</sup>, 2016.
121. (*Invited talk*). “Price and nonprice approaches for reducing residential water demand: A tale of two water districts.” Presented to Department of Economics, University of Sydney, Sydney, NSW, Australia. June 29, 2016.
122. “The Water-Energy Nexus and Irrigated Agriculture: A Dynamic Analysis of Conjunctive Groundwater Use in the San Joaquin Valley,” (w/ K. Knapp and I. Luviano). Presented at the IWREC Annual Meetings. Washington DC, September 12, 2016.
123. Given by L. Levers. “Bio-Economic Farm-Level Analysis of Growing Brassica as a Biodiesel crop in the West-side of the San Joaquin Valley of California.” Presented at the IWREC Annual Meetings. Washington DC, September 13, 2016.
124. (*Invited talk*). “Introduction to Water Resource Economics,” (w/ J. Janmaat). Staff Learning Days. World Bank. Washington DC, September 14, 2016.
125. (*Invited talk*). “Water Supply and Sanitation Economics.” Staff Learning Days. World Bank. Washington DC, September 14, 2016.
126. Given by Q. Tran. “Wastewater Reuse for Agriculture: Development of a Regional Water Reuse Decision-support model for Cost-effective Irrigation.”(w/ D. Jassby) Presented at WaterSmart Innovation Conference and Exposition. Las Vegas, NV., October 5-7, 2016.
127. “Sustainable Water Resources in Urban Environments: Challenges and Opportunities.” Presented at *Drought Vulnerability and Tools for Improving Water Resilience*. National Water Resource Institute. Long Beach, CA. October 20<sup>th</sup>, 2016.
128. (*Invited plenary session*). “Streamlining data sharing to improve water conservation.” *Second Annual Water Data Summit. California Data Collaborative/WaterNOW Alliance/Stanford Graduate School of Business*. Stanford University, Palo Alto, CA. August 24, 2017.
129. (*Invited Panelist*). “Implications of the Sustainable Groundwater Management Act (SGMA) beyond Groundwater.” Panel discussion. *UC Water Annual Retreat*. UC Davis. Davis, CA. September 22<sup>nd</sup>, 2017.
130. (*Invited talk*). “Markets, Market Failures, and the Role of Environmental Economics on Informing Policy.” Presented at the *Building Sustainable Communities: Innovation through Collaboration*, Kelowna, BC, Canada. November 21, 2017.
131. (*Invited speaker*). “Water Conservation and Gallons per Capita per Day: Some unresolved issues.” Presented to the *Metropolitan Water District of Southern California Board*. Los Angeles, CA. November 14<sup>th</sup>, 2017.
132. Given by M. Ramachandran. “Health Effects of Extreme Weather in California” (w/ B. Link, M. Marks). Presented at the *University of California ANR Statewide Conference*. Rancho Cucamonga, CA. April 10, 2018.
133. (*Invited talk*). “The role of information, water markets, and externalities on the efficient allocation of water in California: Two Case Studies.” Presented at *UC Merced Environmental Systems Seminar Series*. May 2, 2018, Merced, CA

## LIST OF PUBLICATIONS AND CREATIVE ACTIVITY

**Presentations (continued)**

134. ***(Invited talk)***. “Evaluating the Resilience of Irrigated Agriculture and Groundwater Systems under Climate Change: What Role Does Crop Diversity Play?” Presented at the *California Water Security Collaborative*, UC Water, Sacramento, CA. May 25, 2018.
135. ***(Invited talk)***. “Drought, Water Conservation, and Wastewater Reuse: Identification of Some Unintended Consequences.” Presented at the *11<sup>th</sup> Annual Orange County Water Summit*, Anaheim, CA. June 1, 2018.
136. Given by M. Ramachandran. “Climate Change, Health, and Water Policy in California.” (w/ B. Link, M. Marks). Presented at the *One Water Summit*, Minneapolis, MN. 7/2018.
137. ***(Invited talk)*** “Impacts of Extreme Weather Events and Water Policy on Birthweights and Psychological Distress in California” (w/ M. Ramachandran, M. Marks, B. Link). Presented at the *Preparing for the Health Effects of Drought: A Workshop for Public Health Professionals and Partners*. California Department of Public Health. Sacramento, CA. February 4, 2019
138. ***(Invited talk)*** “Municipal Water Pricing: Issues and Roles in California.” Presented at the *Water Counts Academy*, Coachella Valley Water District. Palm Desert, CA 2/2019.
139. ***(Invited talk)*** “Is a gallon conserved a gallon saved? The impacts of (uninformed) conservation on effluent generation and quality.” Presented at the Urban Water Institute’s Spring Conference, *Changing Times – Tools to Balance in the Wild Water World*, Urban Water Institute. Palm Springs, CA, February 27<sup>th</sup>, 2019
140. (Panel Moderator) *Managing Wastewater in a Changing Climate*. Water Policy Center, Public Policy Institute of California, Sacramento, CA, April 22, 2019.
141. “Drought, Water Conservation, Wastewater Reuse, and Health: Identification of Some Unintended Consequences.” Presented to the *Economics Student Association*, California State University Long Beach, Long Beach, April 23, 2019.
142. ***(Invited talk)*** “Reuse of treated municipal wastewater for local food production: opportunities, conflicts, and cost-effective irrigation.” Presented at the *Water for a Hungry World: Innovations in Water and Food Security Conference*, Daugherty Global Institute, University of Nebraska, Lincoln, NE., April 29, 2019.
143. ***(Invited talk)*** “AgWater: Utilization and Efficiency: Insights and Market Trends.” Panelist, California Agricultural Summit, UC Riverside, May 23<sup>rd</sup>, 2019.
144. ***(Invited talk)*** “Is a gallon conserved a gallon saved? The impacts of (uninformed) conservation on effluent generation and quality.” (w/ M. Nemati) Presented at the Chino Basin Watermaster, Chino, CA 7/25/2019.
145. ***(Invited talk)*** “Affordability of Water Services in the Inland Empire.” (w/ M. Nemati). Presented at Riverside County Water Taskforce, WMWD, Riverside, CA 10/25/2019
146. ***(Invited Panelist)*** “Hotter, Drier, and on Fire: Will the IE Still be livable in 2100?” Presented at the KPCC Climate Conversations, U. of Redlands, 11/11/2019.
147. ***(Invited talk)*** “Affordability of Water Services in the Inland Empire.” (w/ M. Nemati). Presented at Jurupa Community Services District *Lunch and Learn Series*. Jurupa Community Services District, Jurupa Valley, CA. 1/9/2020.
148. ***(Invited talk)*** “Affordability of Water Services in the Inland Empire.” (w/ M. Nemati). Presented at the *Southern CA Affordability Symposium: What role does water play?* UCR Blum Initiative. UC Riverside. 2/7/2020.

149. **(Invited talk)** “Affordability of Water Services in the Inland Empire.” (w/ M. Nemati). Presented at the Coachella Valley Water Counts Academy. UCR Palm Desert Campus. 2/11/2020.
150. **(Invited talk)** “The future of California agriculture: Challenges and Opportunities.” Presented at the 2020 Vision: The Future of California Agriculture. UCR, 3/6/2020.

**PROFESSIONAL SERVICE AND ACTIVITIES (since 2001)*****Conference / Association Services (incomplete)***

1. Selected Papers Committee. AAEA Annual Meetings. 1998.
2. Second World Congress of Environmental and Natural Resource Economists (Monterey, California. June 24-27<sup>th</sup>, 2002.)
  - a. *Discussant*. “Biological Limits on Agricultural Intensification: An Example from Resistant Management,”
  - b. *Chair*. “Forests III Session”
  - c. *Rapporteur*. “Imaging Externalities: Materials Balance and the Environmental Economics Literature.”
3. Selected Papers Committee. WAEA Annual Meetings. 2005.
4. Session Moderator. Resource and Environmental Economics. Western Agricultural Economics Association Annual Meetings. San Francisco, CA. July 8, 2005.
5. Discussant. Organized Papers Session. American Agricultural Economics Association Annual Meeting. Providence, Rhode Island. July 26, 2005.
6. Selected Papers Committee. WAEA Annual Meetings. 2006.
7. Nominating Committee (for Vice-President, Academic Board, and Non-Academic Board), Western Economic Association International. 2012.
8. Selected Papers Committee. AAEA Annual Meetings. 2012.
9. Discussant. WEAI Annual Meetings. San Francisco, CA. July, 2012.
10. Selected Papers Committee. AAEA Annual Meetings. 2013.
11. Discussant. Rosenberg International Forum on Water Policy. Aqaba, Jordan, March, 2013.
12. Adhoc Review Committee. Rosenberg International Forum on Water Policy. April, 2014.
13. Selected Papers Committee. AAEA Annual Meetings. 2014.
14. Research Advisory Meeting. Public Policy Institute of California. May, 2014.
15. Moderator. 3<sup>rd</sup> International Salinity Forum. University of California Riverside, June, 2014.
16. Selected Papers Committee. IWREC Annual Meetings. Washington DC, September, 2014.
17. Moderator. IWREC Annual Meetings. Washington DC, September, 2014.
18. Discussant. WEAI Annual Meetings Oahu, Hawaii, July, 2015.
19. Selected Papers Committee. AAEA Annual Meetings. 2015.
20. Selected Papers Committee. AAEA Annual Meetings. 2016.
21. Selected Papers Committee. IWREC Annual Meetings. Washington DC, September, 2016.
22. Moderator/Chair. “Addressing the Urban and Agricultural Water–Energy Nexus.” IWREC Annual Meetings. Washington DC, September 12, 2016.
23. Moderator/Chair. “**Strategic Conversations** in the Water Sector: Leakage and the Costs and Benefits of Repair Considerations.” IWREC Annual Meetings. Washington DC, Sept. 12, 2016.
24. Invited Panelist. “State of Water Resource Economics and Future Directions.” IWREC Annual Meetings. Washington DC, September 13, 2016.
25. Panelist. “Outdoor Urban Water Demand Research Workshop.” Organized by Decision Center in Desert City, Arizona State University, Denver, CO. September 21, 2016.
26. Selected Papers Reviewer, *California Agriculture* Special Edition. Global Food Initiative. 2016.
27. Agricultural Reuse Research Planning Subcommittee. Water Research Foundation. Jan., 2018.
28. Chair, Organizing/Advisory Committee. Shrinking Shorelines and the Salton Sea: Consideration of the Community Impacts, Recent Research, and Possible Solutions. UCR Palm Desert. 2018.
29. Project Advisory Committee. *Identifying the Amount of Wastewater that is Available and Feasible to Recycled in California*. Water Research Foundation. September, 2018.

**PROFESSIONAL SERVICE AND ACTIVITIES (since 2001)****University and Public Service (incomplete)**

09/2014 - 09/2014	Campus. Invited Attendee. Chancellor and Board of Trustees Conversation with Community and Education Leaders.
03/2014 - 06/2014	Campus. Co-Chair. Graduate Review Task Force for Environmental Sciences Graduate Program.
01/2014 - 08/2014	Systemwide. Member. UC-DC Committee-in-Charge.
10/2013 - 10/2014	Systemwide. Member. California Institute for Water Resources Ad-hoc Advisory Committee.
10/2013 - 07/2016	Campus. Member. Center for Sustainable Suburban Development (Advisory Board).
10/2013 - 06/2014	Systemwide. Member. Ad Hoc Committee to review the Rosenberg International Forum on Water Policy.
09/2013 - 06/2014	Department. Affirmative Action Officer. Watershed Hydrologist Search Committee.
10/2012 - 01/2013	College. Member. CNAS Redesign Committee.
07/2012 - 06/2014	Department. Member. Budget Committee.
03/2012 - 03/2012	Campus. Invited Talk. Chancellors "Conversations".
10/2010 - 09/2013	Campus. Participant. UCR Discovery Day.
01/2010 - 08/2010	Department. Chair. Search Committee.
08/2009 - 06/2014	College. Member. Center Advisory Committee, Water Science and Policy Center.
07/2009 - 12/2009	Department. Chair. Search Committee.
08/2008 - 06/2011	Department. Vice-Chair. Environmental Sciences.
07/2008 - 12/2008	Department. Chair. Search Committee.
07/2008 - Present	Campus. Member. Global Studies Steering Committee.
07/2008 - Present	Department. Member. Environmental Sciences Graduate Admissions Committee.
07/2008 - Present	Department. Acting Chair. Environmental Sciences.
07/2008 - 05/2009	Department. Chair. Search Committee, CE Water Economist/Management Specialist.
08/2007 - Present	Department. Ad Hoc. Service to Chair on Merit Files.
07/2007 - 07/2007	Systemwide. Member. UC Center for Water Resources Proposal Review.
07/2007 - 06/2008	Campus. Member. University of California Tenure Academy.
07/2007 - 07/2007	Systemwide. Member. UC-MEXUS Grants Review Committee.
01/2007 - 09/2007	Department. Member. Steering Committee, Environmental Sciences Graduate Program.
10/2006 - 09/2007	Campus. Member. Search Committee, University of California Global Studies Program.
10/2006 - 09/2007	Systemwide. Member. UC Center for Water Resources.

07/2006 - 05/2007	College. Member. Search Committee, Economics Department.
07/2006 - 09/2010	College. Member. Affiliated Faculty Member, Center for Conservation Biology.
07/2006 - Present	College. Affiliated Faculty Member. Center for Conservation Biology.
10/2005 - 09/2014	Campus. Member. Transportation and Parking Committee.
10/2005 - 09/2007	Department. Chair. Environmental Sciences Scholarship Committee.
10/2005 - Present	Department. Member. Undergraduate Curriculum Committee.
10/2005 - Present	Campus. Member. Academic Advisory Board. University of California Global Studies Program.
06/2005 - 06/2005	Systemwide. Member. UC-MEXUS Grants Review Committee.
01/2005 - 12/2005	Campus. Member. University of California Riverside Pacific Rim Research Proposal Review Committee.
10/2004 - 09/2005	Department. Member. Environmental Sciences Graduate Program Development Committee.
01/2004 - 12/2004	College. Member. Planning Committee, Symposium on Nitrogen Eutrophication.
<b>University Service</b>	
9/2014-6/2018	Executive Council
9/2016-6/2018	Graduate Academic Integrity Committee
10/2014 – present	Campus. Member. Academic Advisory Board, Center for Sustainable Suburban Development.
8/2017-present	Advisory Council. R’Garden. University of California.
<b>College Service</b>	
9/2014 – present	Cooperating Faculty Member. Department of Environmental Sciences
08/2002 - Present	Cooperating Faculty Member. Economics Department.
10/2003 - 09/2005	Member. Water Issues Ad hoc Committee.
<b>Departmental Service</b>	
9/2015-present	Chair, School of Public Policy Executive Committee
9/2014-8/2015	Chair, Search Committee Health Economist
9/2014-8/2015	Chair, School of Public Policy Executive Committee
10/2000 - 09/2006	Member. Space Committee.
10/2001 – 8/2014	Advisor. Undergraduate Student Advisor.
10/2002 - 09/2005	Member. Program Advisory Committee, Environmental Science Undergraduate Program.
<b>Public Service</b>	
05/2014 - present	Public Policy Institute of California. Research Advisory Committee for Water Policy Center.
05/2008 - 09/2010	American Cancer Society. Serve on annual collection drive.
10/2006 - 09/2010	Central Valley Salinity Policy Group. CV Salts.
05/2006 - 09/2010	Big Brothers/Big Sisters of the Inland Empire. Mentor/Friend.



**EXTRAMURAL GRANT ACTIVITY (beginning 2000):**

<b>AGENCY</b>	<b>TITLE</b>	<b>DATES</b>	<b>AMOUNT</b>	<b>PI STATUS</b>
University of California Pacific Rim Research Program	“The Social and Environmental Impacts of Deforestation in Malaysia and Indonesia” Other investigators: None	7/1/00-6/30/01	\$3,000 – Planning Grant	PI
University of California Salinity and Drainage Program	“An Economic Analysis of Alternative Methods to Control Salinity in the Western San Joaquin Valley” Other investigators: None	7/1/00-6/30/02	\$41,000	PI
University of California Pacific Rim Research Program	“The Impacts of Land Use Change on Forest Fringe Communities” Other investigators: None	7/1/01-6/30/02	\$3,000 – Planning Grant	PI
University of California Center for Social and Behavioral Responsibility	“The Impacts of Land Use Change on Forest Fringe Communities” Other investigators: None	7/1/01-6/30/02	\$1,000	PI
University of California Academic Senate	Academic Senate Research Funds Other investigators: None	7/1/02 – 6/30/03	\$1,200	PI
University of California Salinity and Drainage Program	“Integrated Drain Water Management in the Central Valley” Other investigators: Keith Knapp	7/1/02 – 6/30/04	\$26,648	Co-PI
University of California Pacific Rim Research Program	“The Impacts of Land Use Change on Forest Fringe Communities” Other investigators: Robert Graham	7/1/02-6/30/03	\$45,802 – Research Grant	PI
California Air Resources Board	“A Post Regulatory Evaluation of the Cost and Economic Impact Estimates of Air Pollution Control Regulations” Other investigators: Jim Lents	4/15/02-12/15/03	\$149,997	Co-PI
UCR AES/CE RACP <sup>SP</sup>	“An Economic Analysis of Preserving the Salton Sea” Other investigators: None	7/1/03-6/30/04	\$30,000	PI
UCR AES/CE RACP <sup>SP</sup>	“An Economic Analysis of Preserving the Salton Sea” Other investigators: None	7/1/04-6/30/05	\$27,500	PI
UC Center for Water Resources	“Imperial Valley Agriculture and Water: A Regional Economic Analysis” Other Investigators: None	7/1/04 – 6/30/06	\$59,000	PI
California Department of Water Resources	“Economic Analysis of Implementing an Evaporation Pond vs. Solar Evaporator” Other Investigators: None.	7/1/03-9/30/05	\$36,196	PI
UCR AES/CE RACP <sup>SP</sup>	“An Economic Analysis of Preserving the Salton Sea” Other investigators: None	3/1/05-2/28/06	\$20,000	PI

<b>AGENCY</b>	<b>TITLE</b>	<b>DATES</b>	<b>AMOUNT</b>	<b>PI STATUS</b>
UCR Academic Senate	Academic Senate Travel Funds Other investigators: None	7/1/05 – 6/30/06	\$2,300	PI
UCR AES/CE RACP <sup>PP</sup>	“An Economic Analysis of Preserving the Salton Sea” Other investigators: None	7/1/06- 6/30/07	\$30,000	PI
CSIRO Australia	“Salinity and Drainage Management: From Crop Response to Regional Permit Markets.” Other Investigators: None	9/3/07- 2/28/08	\$27,198	PI
UCR AES/CE RACP <sup>PP</sup>	“An Economic Analysis of Preserving the Salton Sea” Other investigators: None	7/1/06- 6/30/07	\$35,000	PI
United Nations Development Program/Duke University	“Conservation of Biological Diversity Through Improved Forest Planning Tools”	4/1/08- 3/31/11	\$62,201	PI
UCR AES/CE RACP <sup>PP</sup>	“An Economic Analysis of Preserving the Salton Sea” Other investigators: None	7/1/07- 6/30/08	\$15,000	PI
UCR AES/CE RACP <sup>PP</sup>	“Agricultural Sustainability and the Central Valley: An Economic Analysis of the Impacts from Changes in California's Water Supply” Other investigators: None	7/1/09- 6/30/10	\$15,000	PI
Giannini Foundation	“The Impacts of Salinity and Drainage Problems on Irrigated Agriculture: A Ricardian Approach” Other investigators: None	7/1/09- 6/30/10	\$15,000	PI
UCR AES/CE RSAP*	“Agricultural Sustainability and the Central Valley: An Economic Analysis of the Impacts from Changes in California's Water Supply” Other investigators: None	07/01/10- 06/30/11	\$15,000	PI
Eastern Municipal Water District	“An Analysis of Alternative Water Pricing Structures”	8/2011- 7/2012	\$28,000	Co-PI
USDA SCI	“Developing sustainable vineyard water management strategies for limited and impaired water supplies” Other investigators: J. Ayers (USDA), A. McElrone (USDA), G. Banuelos (USDA), M. Battany (UCCE), J. Davenport (Washington St), C. Grieve (USDA), J. Lambert (UCD), D. Suarez (USDA), D. Walker (UCD), D. Wang (USDA)	09/01/10- 08/31/15	\$2,641,480	Co-PI
US Forest Service	Assessing the Effects of Local Water District Policies on Urban Forests and Their Implications across Socioeconomic Groups	7/2011- 6/2012	\$34,000	Co-PI

<b>AGENCY</b>	<b>TITLE</b>	<b>DATES</b>	<b>AMOUNT</b>	<b>PI STATUS</b>
UCR AES/CE RSAP*	“Agricultural Sustainability and the Central Valley: An Economic Analysis of the Impacts from Changes in California’s Water Supply”	7/2012- 6/2013	\$24,500	PI
Giannini Foundation	Adoption of Outdoor Water Conservation Technologies	7/2011- 6/2012	\$15,000	Co-PI
UC Riverside CHASS	Agricultural Productivity and Child Nutrition in Developing Countries	9/2011- 6/2012	\$11,000	Co-PI
USDA	Estimating the Economic Impacts of Growing Biofuels in the Central Valley	7/2012- 9/2013	\$30,000	PI
Western Municipal Water District	Impact of the High Efficiency Nozzle Program on Residential Water Use and Water Expenditures	9/2012- 7/2013	\$30,000	Co-PI
Metropolitan Water District	Are Water Conservation Strategies Effective?	9/2012- 6/2013	\$10,000	Co-PI
UCR AES/CE RSAP*	“Agricultural Sustainability and the Central Valley: An Economic Analysis of the Impacts from Changes in California’s Water Supply”	7/2013- 6/2014	\$27,500	PI
Giannini Foundation	Distributional Effects of Increasing Block Rate Water Budgets	7/2013- 6/2014	\$27,000	Co-PI
UCR AES/CE RSAP*	“Agricultural Sustainability and the Central Valley: An Economic Analysis of the Impacts from Changes in California’s Water Supply”	7/2014- 6/2015	\$24,500	PI
USDA ARS	Long-term Agro-ecosystems Research for California	9/2014- 9/2019	\$87,500	PI
USDA-NIFA/Israel BARD	Enhanced Resilience Of Local Agricultural Water Supplies Through The Reuse Of Municipal And Agricultural Wastewater: Options And Outcomes	3/2015- 2/2017	\$149,900 USDA / \$140,000 BARD	Project Director
Moulton Niguel Water District	Conservation Drivers for Effective Water Management	7/2015- 6/2017	\$184,000	Co-PI
UCR AES/CE AES Mission Funding*	Agricultural Sustainability and the Central Valley: An Economic Analysis of the Impacts from Changes in California’s Water Supply	7/2016- 6/2019	\$52,500	PI
Robert Wood Johnson Foundation	Overlooked Health Implications of Water Policy during Drought and Extreme Temperature Events	7/2016- 6/2018	\$284,680	Project Director
Giannini Foundation	Evaluating the Resilience of Irrigated Agriculture and Groundwater Systems under Climate Change: What Role Does Crop Diversity Play?	7/2016- 6/2017	\$27,000	PI
Public Policy Institute of California	Quantitative Analysis of Drought Response across California Water Districts	10/2016- 4/2017	\$22,527	PI

<b>AGENCY</b>	<b>TITLE</b>	<b>DATES</b>	<b>AMOUNT</b>	<b>PI STATUS</b>
UC Water	Evaluating the Resilience of Irrigated Agriculture and Groundwater Systems under Climate Change: What Roles Do Crop Diversity and Groundwater Play?	7/17-6/18	\$26,762	PI
Western Municipal Water District	The role of preferences, perceptions, and language on the adoption of water conservation practices.	8/17-6/19	\$80,000	PI
National Science Foundation	Decision Support for Water Stressed FEW Nexus Regions (NexDSM)	10/2017-9/2022	\$2.4 million (\$547,726 UCR's portion)	UCR PI (B. McCarl, Project Director, Texas A&M)
Eastern Municipal Water District	Affordability of Water Services in the Inland Empire-Phase I	11/2018-7/2019	\$60,000	PI (Co-PI Nemati)
Giannini Foundation	The Impacts of Extreme Temperatures and Drought on Mental Health in California's Agricultural Community	7/2019-6/2020	\$30,000	PI
Eastern Municipal Water District	Determinants of Water Bill Delinquency and Service Disconnections in EMWD Service Area	7/2020-4/2021	\$20,000	Co-PI
Elsinore Valley Municipal Water District	Determinants of Water Bill Delinquency and Service Disconnections in EVMWD Service Area	7/2020-6/2021	\$25,000	Co-PI
Jurupa Community Services District	Determinants of Water Bill Delinquency and Service Disconnections in JCSD Service Area	9/2020-7/2021	\$25,000	Co-PI
National Institutes of Health	Human Exposure and Vulnerability to Manganese Contaminated Groundwater	4/2020-3/2022	\$408,573	Co-PI
Western Municipal Water District	Behavioral Response to information campaigns among new customers: Evidence from the single-family residential water customers and water conservation and messaging programs	7/2020-6/2021	\$30,000	Co-PI
USDA-NIFA	Artificial Intelligence For Sustainable Water, Nutrient, Salinity, And Pest Management In The Western U.S.	9/2020-8/2025	\$10 million	Co-PI

\* University of California, Riverside, Agricultural Experiment Station/Cooperative Extension, Resource Support Allocation Program.