

# EXHIBIT B

BERKELEY ECONOMIC CONSULTING, INC.  
2550 NINTH STREET, SUITE 102  
BERKELEY, CA 94710

March 2, 2009

Ralph Kalfayan  
Krause, Kalfayan, Benink & Slavens  
625 Broadway, Suite 635  
San Diego, CA 92101

Dear Mr. Kalfayan,

I am pleased to present a scope of work relating to an economic assessment of the value of groundwater rights in the Antelope Valley. I have attached a current copy of my curriculum vitae to this letter.

Currently, I am a professor of agricultural and resource economics at UC Berkeley, and am also the co-director of the Berkeley Water Center, a research center supported by the Colleges of Engineering and Natural Resources and the Lawrence Berkeley National Laboratory. I teach courses in environmental and natural resource economics, including the economics of water resources. I am the author of over 100 publications and technical reports, many in the area of water resource economics.

I have extensive experience in the valuation of groundwater resources, and in the economics of water resources in Southern California. I have served as an expert for several agencies on the value of groundwater resources in the region. For example, I have worked for the Chino Basin Watermaster on matters relating to groundwater management and valuation, and for the Water Replenishment District of Southern California on the economic benefits of proposed amendments to the Central Basin and West Coast Basin judgments.

I propose to use several techniques to value groundwater resources in the Antelope Valley. First, I will examine the sales of comparable water resources to ascertain market price. I have employed this technique in several recent assignments, and have compiled a data set of ground and surface water sales in Southern California. I plan to use such market data to complete this task, together with a statistical analysis to ensure comparability.

Second, I will estimate the value of groundwater resources in the Antelope Valley by constructing a model of groundwater management in the region. The modeling approach proceeds from the notion that to determine the value of a groundwater resource, it is necessary to determine how it will be used. In this instance, I will show how Antelope Valley groundwater can be used conjunctively with imported water supplies to optimize

its value. In practical terms, optimizing value implies both lowering the cost of water service and improving the reliability of water supplies by reducing the incidence of shortage.

I have used this modeling approach recently in the Chino Basin, Central Basin and West Coast Basin cases. In all three instances, I developed a baseline level of water demand, modeled the reliability of imported water supplies, and determined how groundwater fits into the regional portfolio of water supplies. I propose a similar approach in this case and am confident that the results of the modeling analysis will prove interesting to a number of participants in this litigation.

One implication of the modeling approach is that it will also shed light on the value of the storage space underlying the Antelope Valley. Because imported water supplies in Southern California have become destabilized due to environmental restrictions in the Delta, several years of below-normal precipitation in Northern California, and continuing dry conditions in the Colorado River Basin, the economic value of water storage in the region may be large, depending on the site in question. I propose to place a value on the storage space separate from the value of the native groundwater that can be withdrawn at any point in time.

Based on the information you have provided, and some investigation I have done on my own, I anticipate that the project described here can be completed for a cost of \$115,000. My consulting work is done through Berkeley Economic Consulting, Inc., an independent economic research firm located in Berkeley, CA. BEC employs a number of analysts with different types of training who will be able to assist me in completing this project. In particular, I expect that I will need help from a consultant with graduate training in economics and/or engineering who can assist me with the dynamic optimization required to complete the management model. I will also need the assistance of a research analyst to collect data, conduct basic data analysis, and help with the drafting of the report. I will be responsible for directing all research relating to the project, and will give any testimony required.

Recognizing that your clients are private landowners, and that many of the other parties to the litigation are public entities, I am prepared to offer you my public sector rates to carry out the research described here. These rates are a substantial discount from the rates we offer to our private sector clients.

Following is an estimate of the time required to complete the project, together with hourly rates and estimated direct expenses:

*Labor*

<u>Category</u>	<u>Hours</u>	<u>Rate</u>	<u>Amount</u>
Principal	160	\$325	\$52,000
Consultant	180	\$225	\$40,500
Research Analyst	120	\$125	\$15,000
Subtotal Labor			\$107,500
<i>Travel</i>			\$2,500
<i>Data and Software</i>			\$5,000
<i>Total Budget</i>			\$115,000

Direct expenses are billed at cost, and BEC charges no overhead beyond its hourly rates. Work is conducted on a time and materials basis and billed monthly, in this instance with a not to exceed amount of \$115,000.

Please let me know if you would like any additional information concerning this proposal. It was a pleasure speaking with you last week, and I look forward to hearing from you again.

Sincerely,

David Sunding  
Professor, UC Berkeley  
Principal, Berkeley Economic Consulting, Inc.



## CURRICULUM VITAE

**DAVID L. SUNDING**

March, 2008

### Mailing Address:

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### CURRENT EMPLOYMENT

Professor, Department of Agricultural and Resource Economics, UC Berkeley, 2003 – Present.

Co-Director, Berkeley Water Center, UC Berkeley, 2005 – Present.

Principal, Berkeley Economic Consulting, Inc., Berkeley, CA, 2007 – Present.

### PAST EMPLOYMENT

Senior Consultant, Litigation & Energy/Environment Practices,  
Charles River Associates, Boston, MA, 2003 – 2007.

Associate Professor and Specialist,  
University of California at Berkeley, 1997 – 2003.

Special Consultant,  
National Economic Research Associates, 1997 – 2003.

Senior Economist,  
President's Council of Economic Advisers,  
Washington, DC, 1996–1997.

Assistant Adjunct Professor,  
University of California at Berkeley, 1992–1996.

Senior Economist,  
Law & Economics Consulting Group,  
Emeryville, CA, 1991–1992.

Assistant Professor,  
Department of Economics and School of Law,  
Boston College, 1989–1992.

## **EDUCATION**

Ph.D., UC Berkeley, 1989.  
M.A., UCLA, 1986.  
B.A., Claremont McKenna College, 1983.

## **COURSES TAUGHT**

Risk, Technology and the Environment (Graduate)  
Environmental Economics (Graduate)  
Natural Resource Economics (Graduate and Undergraduate)  
Economics of Public Law (Boalt Hall School of Law)  
Environmental Policy (Undergraduate)  
Public Finance (Graduate)  
Microeconomic Theory (Graduate and Undergraduate)  
Law and Economics (Boston College School of Law)

## **UNIVERSITY SERVICE**

Co-Director, Berkeley Water Center, 2005 – Present.

Reviewer, California Policy Research Center, UC Office of the President, 2006.

Member, Forestry Search Committee, Ecosystem Sciences Division, Department of Environmental Science, Policy and Management, 2005-2006.

Member, Giannini Hall Seismic Retrofit Design Committee, 2005 – 2006.

Member, Academic Senate Committee on American Cultures Requirements, 2004-2005.

Member, CNR Executive Committee, 2003-2005.

Member, CNR Committee on Directions, Opportunities and Initiatives, 2003.

Co-Director, Center for Sustainable Resource Development, College of Natural Resources, UC Berkeley, 1997 – 2004.

Faculty, Beahrs Environmental Leadership Program, 2001-2005.

Member, CNR Dean Search Committee, 2001-2002.

Chair, Specialist Search Committee, Department of Agricultural and Resource Economics, 2001-2002.

Member, CNR Advisory Board Development Committee, 2001-2002.

Member, Faculty Search Committee (International Trade), Department of Agricultural and Resource Economics, 1999-2000.

Member, CNR Dean Search Committee, 1999–2000.

Member, Workgroup Review Committee, University of California Division of Agriculture and Natural Resources, 1999–2002.

UC Berkeley Representative, Academic Assembly Council, University of California Division of Agriculture and Natural Resources, 1999–2001.

Departmental Affirmative Action Representative, 1999–2000.

Member, Faculty Search Committee (Environmental Health), Department of Agricultural and Resource Economics, 1998–2000.

## **PROFESSIONAL SERVICE**

Reviewer, Delta Risk Management Study (DRMS), California Department of Water Resources, 2007.

Member, Economic Advisory Committee on North of Delta Offstream Storage, California Department of Water Resources, 2006-2007.

Member, Panel on Illegal Competitive Advantage Economic Benefit, Science Advisory Board, U.S. Environmental Protection Agency, 2004-2005.

Mentor, American Economic Association Pipeline Project for Minority Graduate Students, 2004 – 2005.

Member, Science Advisory Board, National Center for Housing and the Environment. 2003 – 2005.

President, International Water Resource Economics Consortium, 2002-2005.

Member, Expert Panel on Cost Allocation, CalFed Bay-Delta Program, 2001-2002.

Member, National Academy of Sciences Panel on Water Conservation and Reuse, 2001-2002.

Member, Technical Advisory Committee on Water Use Efficiency, CalFed Bay-Delta Program, 1997-1998.

Referee: *Agricultural Economics*, *American Journal of Agricultural Economics*, *California Agriculture*, *Contemporary Economic Policy*, *Environmental and Resource Economics*, *Journal of Agricultural and Resource Economics*, *Journal of Business and Economic Strategy*, *Journal of Environmental Economics and Management*, *Journal of Political Economy*, *Journal of Public Economics*, *Journal of Regulatory Economics*, *Land Economics*, *Natural Resources Modeling*, *Resource and Energy Economics*, *Review of Economics and Statistics*, *Social Choice and Welfare*, *Water Resources Research*.

## AWARDS

Energy Biosciences Institute. "Development of Biofuel Productivity Potentials for Economic Analysis Under Changing Climate, Land Use, and Societal Demands." \$154,000. 2007-2009.

U.S. Bureau of Reclamation, "Independent Review of Fisheries Restoration Programs." \$380,000. 2007-2008.

U.S. Department of Energy, "Joint Modeling of the Water and Energy Sectors." \$200,000. 2006-2009.

Participant, Rosenberg International Forum in Water Policy, 2006.

Giannini Foundation. "Multimarket Impacts of Water Transfers in Areas of Origin." \$18,000. 2005 - 2006.

Giannini Foundation. "Land Use Regulation and Housing Market Dynamics." \$20,000. 2004-2005.

United States - Israel Binational Agricultural Research and Development Fund. "Dynamic Intraseasonal Irrigation Management Under Water Scarcity, Water Quality, Irrigation Technology and Environmental Constraints." \$200,000. 2003-2004.

Giannini Foundation. "Economics of Water Conservation in Agriculture." \$20,000. 2003-2004.

U.S. Environmental Protection Agency. STAR Grant. "Mechanisms for Risk Trading." \$206,000. 2002-2003.

Food Systems Research Group. "Optimal Commodity Promotion in Markets with Imperfect Competition and Differentiated Products." \$40,000. 2002-2003.

Outstanding Journal Article Award, AAEEA, 2001.

Giannini Foundation. "Economic Benefits of Joint Management of Surface and Ground Water Storage Facilities." \$17,000. 2001-2002.

Best Published Research Award Finalist, WAEA, 1998.

California Department of Food and Agriculture. "Economic Impacts of Pesticide Regulation." \$1,150,000. 1994-2002.

California Department of Water Resources and U.S. Department of the Interior (CALFED Program). "Economic Valuation of Increased Water Supply Reliability and Trading Opportunities by Westside Agriculture." \$80,000. 1998-2000.

California Department of Food and Agriculture. "Economic Importance of Compound 1080 in California Agriculture." \$60,000. 1998-1999.

U.S. Department of Interior, Bureau of Reclamation. "Financial Incentives to Encourage Agricultural Water Conservation." \$1,500,000. 1994-2000.

U.S. Environmental Protection Agency. "Economic Incentives to Reduce Nonpoint Source Loads in Nevada's Truckee River Basin." \$98,500. 1995-1997.

## PUBLICATIONS

- A96 "The Effect of Water Resource Management on Hydrologic Uncertainty." With Newsha Ajami and George Hornberger. *Water Resources Research* (2008): in press.
- F95 *Management of Saline Wastewater Discharges from the Food Processing Industry in the San Joaquin Valley*. Central Valley Regional Water Quality Control Board. September 2007.
- F94 *Strategies to Reduce the Economic Impacts of Drought-Induced Water Shortage in the San Francisco Bay Area*. San Francisco Public Utilities Commission. April 2007.
- A93 "Estimating Business and Residential Water Supply Interruption Losses from Catastrophic Events." With Nicholas Brozovic and David Zilberman. *Water Resources Research* (2007): in press.

- B92 "Water Markets and Trading." With Howard Chong. *Annual Review of Environment and Resources* 31(2006): 239-264.
- A91 "Price Elasticity Reconsidered: Panel Estimation of an Agricultural Water Demand Function." With Karina Schoengold and Georgina Moreno. *Water Resources Research* 42(2006): 411-421.
- A90 "Consideration of Economics Under the California Porter-Cologne Act." *Hastings West-Northwest Journal of Environmental Law & Policy* (2006): in press.
- A89 "Fat Taxes and Thin Subsidies: Prices, Diet and Health Outcomes." With Sean Cash and David Zilberman. *Acta Agriculturae Scand. C* 2(2006): 167-174.
- F88 *A Guide to Consideration of Economics Under the California Porter-Cologne Act.* With David Zilberman. California Resource Management Institute. March 2005.
- A87 "The Economics of Environmental Regulation of Housing Development." *Housing and Society* 32(2005): 23-38.
- A86 "Joint Estimation of Technology Adoption and Land Allocation with Implications for the Design of Conservation Policy." With Georgina Moreno. *American Journal of Agricultural Economics* 87(2005): 1009-1019.
- B85 "Response to 'Environmental Regulation and the Housing Market: A Review of the Literature' by Katherine Kiel." *Cityscapes* 8(2005): 277-282.
- B84 "Water Allocation and Water Market Activity in California." With Richard Howitt. *California Agriculture: Dimensions and Trends.* Jerome Siebert, ed. Giannini Foundation, 2004.
- A83 "The Economics of Climate Change in Agriculture." With Xuemei Liu, David Roland-Holst and David Zilberman. *Mitigation and Adaptation Strategies for Global Change* 9(2004): 365-382.
- B82 "Economic Impacts." *The Endangered Species Act at Thirty.* M. Scott, D. Goble and F. Davis, eds. Washington, DC: Island Press, 2006.
- F81 *Fiscal Costs and Economic Impacts of Recovering the Coho Salmon in California.* With Alix Peterson Zwane. California Department of Fish and Game. October 2003.
- A80 "Indirect Effects of Pesticide Regulation and the Food Quality Protection Act." With Sean B. Cash, Aaron Swoboda, and David Zilberman. *Current Agriculture, Food, and Resource Issues* 4 (2003): 73-79.
- A79 "Wetlands Regulation ... An Opening for Meaningful Reform?" *Regulation* 26(2003): 30-35.

- F78 *Economic Impacts of Critical Habitat Designation for the Coastal California Gnatcatcher*. California Resource Management Institute. July 2003.
- B77 "Factor Price Risk and the Adoption of Conservation Technology." With Georgina Moreno. *Frontiers in Water Resource Economics*. D. Berga and R. Goetz, eds. New York: Springer-Verlag, 2005.
- B76 "Optimal Management of Groundwater over Space and Time." With Nicholas Brozovic and David Zilberman. *Frontiers in Water Resource Economics*. D. Berga and R. Goetz, eds. New York: Springer-Verlag, 2005.
- A75 "Government Regulation of Product Quality in Markets with Differentiated Products: Looking to Economic Theory." *American Journal of Agricultural Economics* 85(2003): 720-724.
- F74 *The Economic Impacts of Critical Habitat Designation: Framework and Application to the Case of California Vernal Pools*. With Aaron Swoboda and David Zilberman. California Resource Management Institute. January 2003.
- A73 "Public Goods and the Value of Product Quality Regulations: The Case of Food Safety." With Stephen Hamilton and David Zilberman. *Journal of Public Economics* 87(2003): 799-817.
- A72 "The Economics of Environmental Regulation by Licensing: Observations on Recent Changes to the Federal Wetland Permitting Program." With David Zilberman. *Natural Resources Journal* 42(Winter 2002): 59-90.
- \* Cited in U.S. Supreme Court plurality and dissenting opinions in the consolidated cases of *Rapanos v. United States* and *Carabell v. United States*.
- F71 *Non-Federal and Non-Regulatory Approaches to Wetland Conservation: A Post-SWANCC Evaluation of Conservation Alternatives*. National Center for Housing and the Environment. December 2002.
- A70 "Trading Patterns in an Agricultural Water Market." With Nicholas Brozovic and Janis Carey. *Water Resources Update* (2002): 3-16.
- F69 *Economic Impacts of Earthquake-Induced Water Supply Shortages in the San Francisco Bay Area*. With Nicholas Brozovic and David Zilberman. Bay Area Economic Forum. October 2002.
- A68 "Regulating Pollution with Endogenous Monitoring." With Katrin Millock and David Zilberman. *Journal of Environmental Economics and Management* 44(2002): 221-241.

- A67 "Transactions Costs and Trading Behavior in an Immature Water Market." With Janis Carey and David Zilberman. *Environment and Development Economics* 7(2002): 733-750.
- A66 "Measuring the Costs of Reallocating Water from Agriculture: A Multi-Model Approach." With David Zilberman, Richard Howitt, Ariel Dinar and Neal MacDougall. *Natural Resource Modeling* 15(Summer 2002): 201-225.
- F65 Economic Impacts of Organophosphate Use in California Agriculture, Parts 1 and 2. With Mark Metcalfe, Bruce McWilliams, Brent Hueth, Robert Van Steenwyk and David Zilberman. California Department of Food and Agriculture. February 2002.
- A64 "Voluntary Development Restrictions and the Cost of Habitat Preservation." With Sabrina Lovell. *Real Estate Economics* 29(March 2001): 191-206.
- A63 "Emerging Markets in Water: A Comparative Institutional Analysis of the Central Valley and Colorado-Big Thompson Projects." With Janis Carey. *Natural Resources Journal* 41(2001): 283-328.
- B62 "Risk Management and the Environment." With Mark Metcalfe and David Zilberman. In Richard Just and Rulon Pope (eds.). *A Comprehensive Assessment of the Role of Risk in U.S. Agriculture*. Norwell, MA: Kluwer Academic Publishers, 2002.
- B61 "A Comparison of Policies to Reduce Pesticide Poisoning Combining Economic and Toxicological Data." With Joshua Zivin. In: Joe Moffitt (ed.). *Advances in the Economics of Environmental Resources: Volume 4*. Greenwich: JAI Press, 2001.
- B60 "The Impact of Climate Change on Agriculture: A Global Perspective." With David Zilberman and Xuemei Liu. In: Charles Moss, Gordon Rausser, Andrew Schmitz, Tim Taylor and David Zilberman (eds.), *Agricultural Globalization, Trade, and the Environment*. New York: Kluwer, 2001.
- F59 *Water Pricing and Water Use Efficiency*. U.S. Department of the Interior, Bureau of Reclamation. January 2001.
- B58 "The Agricultural Innovation Process: Research and Technology Adoption in a Changing Agricultural Sector." With David Zilberman. In: Bruce Gardner and Gordon Rausser (eds.), *Handbook of Agricultural and Resource Economics*. Amsterdam: North Holland, 2001, 207-261.
- F57 *Economic Impacts of Critical Habitat Designation for the California Red-Legged Frog*. Home Builders Association of Northern California. With David Zilberman. January 2001.



- A56 "Insect Population Dynamics, Pesticide Use and Farmworker Health." With Joshua Zivin. *American Journal of Agricultural Economics* 82(August 2000): 527–540.
- \* Winner of the AAEA's Outstanding Journal Article Award in 2001.
- A55 "Product Liability, Entry Incentives and Market Structure." With Stephen Hamilton. *International Review of Law and Economics* 20(September 2000): 269–283.
- B54 "Climate Change Policy and the Agricultural Sector." With David Zilberman. In: R. Lal, J.M. Kimble, R.F. Follett and B.A. Stewart (eds.), *Assessment Methods for Soil Carbon*. Boca Raton, FL: CRC Press, 2000, 629–643.
- F53 *A Proposal for Management of the Confined Aquifer in the Western San Joaquin Valley*. With David Purkey. Natural Heritage Institute. July 2000.
- A52 "Methyl Iodide as an Alternative to Methyl Bromide." With Brent Hueth, Bruce McWilliams and David Zilberman. *Review of Agricultural Economics* (Spring/Summer 2000): 43–54.
- F51 *Analysis of the Army Corps of Engineers' NWP 26 Replacement Permit Proposal*. Foundation for Economic and Environmental Progress. With David Zilberman. February 2000.
- A50 "Using Water Markets to Improve Environmental Quality: Two Innovative Programs in Nevada." With Sabrina Ise Lovell and Katrin Millock. *Journal of Soil and Water Conservation* 55(First Quarter 2000): 19–26.
- A49 "The Price of Water...Market-Based Strategies are Needed to Cope with Scarcity." *California Agriculture* 54(March-April 2000): 56–63.
- A48 "Designing Environmental Regulations with Empirical Microparameter Distributions: The Case of Seawater Intrusion." With Gareth Green. *Resource and Energy Economics* 22(January 2000): 63–78.
- F47 *Economic Valuation of Increased Water Supply Reliability and Trading Opportunities in Westside Agriculture*. With Georgina Moreno, Daniel Osgood and David Zilberman. CalFed Bay-Delta Program. December 1999.
- F46 *Costs of Implementing the Food Quality Protection Act of 1996 on California Agriculture*. With Bruce McWilliams, Yuria Tanimichi and David Zilberman. September 1999.
- B45 "The Economics of Inter-District Water Transfers in California." In *Proceedings of the American Society of Civil Engineers*. New York: ASCE, 1999.

- F44 *Economic Impact of Restricting Use of Compound 1080 in California's Intermountain Region.* With Brent Hueth and Michelle McGregor. California Department of Pesticide Regulation. April 1999.
- A43 "Returns to Public Investment in Agriculture with Imperfect Downstream Competition." With Stephen Hamilton. *American Journal of Agricultural Economics* 80(November 1998): 830–838.
- F42 *Downstream Economic Impacts of Reducing Federal Water Subsidies: The Case of Alfalfa and Dairy.* With Gergina Moreno. Natural Resources Defense Council. August 1998.
- F41 *Economic Importance of Organophosphates in California Agriculture.* With Brent Hueth, Grazyna Michalska, and David Zilberman. California Department of Food and Agriculture. August 1998.
- A40 "Reallocating Water from Agriculture to the Environment under a Voluntary Purchase Program." With Sabrina Ise. *Review of Agricultural Economics* 20(Summer 1998): 214–226.
- E39 *An Environmentally Optimal Alternative for the San Francisco Bay-Delta.* With John Cain, David Fullerton, David Purkey and Greg Thomas. Natural Heritage Institute. July 1998.
- F38 *Water Trading and Environmental Quality in the Western United States.* With David Zilberman. U.S. Environmental; Protection Agency. April 1998.
- A37 "Allocating Product Liability in a Multimarket Setting." With David Zilberman. *International Review of Law and Economics* 18(March 1998): 1–11.
- B36 "Resolving Trans-Boundary Water Disputes: Economists' Influence on Policy Choices in the United States." In: Richard Just and Sinaia Netanyahu (eds.), *Conflict and Cooperation on Trans-Boundary Water Resources.* Norwell: Kluwer, 1998.
- F35 *Impact of Endangered Species Legislation on California Agriculture.* With David Zilberman, Jerome B. Siebert, Joshua Zivin, Sabrina Isé and Brent Hueth. California Resources Agency. January 1998.
- F34 *Economics Impacts on California Agriculture of Banning Methyl Bromide Use.* With Bruce McWilliams, Brent Hueth, Lori Lynch, David Zilberman and Jerome Siebert. California Department of Food and Agriculture. January 1998.
- A33 "Economics and Pesticide Regulation." With Erik Lichtenberg, Douglas Parker and David Zilberman. *Choices* (Fourth Quarter 1997): 26–29.

- A32 "The Effect of Farm Supply Shifts on Concentration and Market Power in the Food Processing Sector." With Stephen Hamilton. *American Journal of Agricultural Economics* 79(May 1997): 524–531.
- A31 "Land Allocation, Soil Quality and the Demand for Irrigation Technology." With Gareth Green. *Journal of Agricultural and Resource Economics* 22(November 1997): 367–375.
- A30 "Water Marketing in the '90s: Entering the Electronic Age." With Janis Carey, David Zilberman and Douglas Parker. *Choices* (Third Quarter 1997): 15–19.
- B29 "Modeling the Impacts of Reducing Agricultural Water Supplies: Lessons from California's Bay/Delta Problem." With David Zilberman, Neal MacDougall, Richard Howitt and Ariel Dinar. In: Doug Parker and Yacov Tsur (eds.), *Decentralization and Coordination of Water Resource Management*. New York: Kluwer, 1997.
- B28 "The Changing Nature of Agricultural Markets: Implications for Privatization of Technology, Information Transfer and Land Grant Research and Extension." With David Zilberman and Madhu Khanna. In: Stephen Wolf (ed.), *Privatization of Information and Agricultural Industrialization*. Boca Raton: CRC Press, 1997.
- B27 "Changes in Irrigation Technology and the Impact of Reducing Agricultural Water Supplies." With Ariel Dinar and David Zilberman. In: Darwin Hall (ed.), *Advances in the Economics of Environmental Resources: Volume 1*. Greenwich: JAI Press, 1996.
- A26 "Measuring the Marginal Cost of Nonuniform Environmental Regulations." *American Journal of Agricultural Economics* 78(November 1996): 1098–1107.
- A25 "Explaining Irrigation Technology Choices: A Microparameter Approach." With Gareth Green, David Zilberman and Douglas Parker. *American Journal of Agricultural Economics* 78(November 1996): 1064–1072.
- A24 "How Does Water Price Affect Irrigation Technology Adoption?" With Gareth Green, David Zilberman, Douglas Parker, Cliff Trotter and Steve Collup. *California Agriculture* 50(March-April 1996): 36–40.
- A23 "Strategic Participation and the Median Voter Result." *Economic Design* 1(April 1996): 355–363.
- F22 *Economic Incentives for Improving Water Quality in Nevada's Truckee River Basin*. With Sabrina Ise and Katrin Millock. U.S. Environmental Protection Agency. October 1996.

- A21 "Social Choice by Majority Rule with Rational Participation." *Social Choice and Welfare* 12(December 1995): 3-12.
- A20 "Water Markets and the Cost of Improving Water Quality in the San Francisco Bay/Delta Estuary." With David Zilberman and Neal MacDougall. *Hastings West-Northwest Journal of Environmental Law & Policy* 2(Spring 1995): 159-165.
- F19 *Managing Seawater Intrusion in Monterey County through Agricultural Water Conservation*. With Gareth Green and Larry Dale. Monterey County Water Resources Agency. May 1995.
- A18 "Flexible Technology and the Cost of Improving Groundwater Quality." With David Zilberman, Gordon Rausser and Alan Marco. *Natural Resource Modeling* 9(April 1995): 177-192.
- F17 *Conclusions and Recommendations on a Framework for Comparative Cost Effectiveness Assessment of CVP Yield Augmentation Alternatives*. With Greg Thomas. U.S. Department of the Interior, Bureau of Reclamation. December 1994.
- A16 "Water for California Agriculture: Lessons from the Drought and New Water Market Reform." With David Zilberman, Richard Howitt, Ariel Dinar and Neal MacDougall. *Choices* (Fourth Quarter 1994): 25-28.
- F15 *Economic Impacts of USFWS' Water Rights Acquisition Program for Lahontan Valley Wetlands*. U.S. Department of the Interior, Fish and Wildlife Service. June 1994.
- A14 "Methyl Bromide Regulation...All Crops Should Not Be Treated Equally." With Cherisa Yarkin, David Zilberman and Jerry Siebert. *California Agriculture* 48(May-June 1994): 10-15.
- A13 "Cancelling Methyl Bromide for Postharvest Use to Trigger Mixed Economic Results." With Cherisa Yarkin, David Zilberman and Jerry Siebert. *California Agriculture* 48(May-June 1994): 16-21.
- F12 *Market Implementation of Bay/Delta Water Quality Standards*. U.S. Environmental Protection Agency. March 1994.
- F11 *Economic Impacts of Mevinphos Cancellation in California*. California Department of Pesticide Regulation. March 1994.
- B10 "Who Makes Pesticide Use Decisions? Implications for Policymakers." With David Zilberman, Michael Dobler, Mark Campbell and Andrew Manale. In: Walter Armbruster (ed.), *Pesticide Use and Product Quality*. Glenbrook: Farm Foundation, 1994.

- B9 "Managing Groundwater Quality under Uncertainty." With David Zilberman and Gordon Rausser. In: Michelle Marra (ed.), *Quantifying Long-Run Agricultural Risks*. Orono: University of Maine, 1993.
- F8 *Economic Impacts of Federal Worker Protection Standards*. With Cheryl Brown, Valerie Brown and Bob Chavez. California Department of Food and Agriculture. October 1993.
- F7 *Water Quality Regulation in the San Francisco Bay and Delta*. With David Zilberman, Richard Howitt, Neal MacDougall and Linda Fernandez. U.S. Environmental Protection Agency. May 1993.
- F6 *The Economic Consequences of Enforcing the Delaney Clause*. With Alan Marco. U.S. Environmental Protection Agency. March 1993.
- B5 "Natural Resource Cartels." With David Teece and Elaine Mosakowski. In: Allen Kneese and James Sweeney (eds.), *Handbook of Natural Resource and Energy Economics*, Volume III. Amsterdam: Elsevier, 1993.
- F4 *Economic Impacts of Cancelling Methyl Bromide in California*. With Cherisa Yarkin, David Zilberman, Jerome Siebert and Alan Marco. California Department of Food and Agriculture. February 1993.
- F3 *Economic Impact of the Silverleaf Whitefly*. With Jerome Siebert, David Zilberman and Michael Roberts. California Department of Food and Agriculture. January 1993.
- B2 "Joan Robinson as a Development Economist." With Irma Adelman. In: George Feiwel (ed.), *Joan Robinson and Modern Economic Theory*. London: Basil Blackwell, 1988.
- A1 "Economic Policy and Income Distribution in China." With Irma Adelman. *Journal of Comparative Economics* 11(September 1987): 444-461. Reprinted in Bruce Reynolds (ed.), *China's Economic Development: How Far, How Fast?* New York: Academic Press, 1989. Reprinted in Joseph C. H. Chai (ed.), *The Economic Development of Modern China*. London: Edward Elgar, 1999.

#### UNDER REVIEW

"The Value of Investments in Water Supply Reliability." With Georgina Moreno, Daniel Osgood and David Zilberman. Revision requested by *American Journal of Agricultural Economics*.

"The Nature of the Groundwater Pumping Externality." With Nicholas Brozovic and David Zilberman.

"Prices Vs. Quantities Revisited." With Nicholas Brozovic and David Zilberman.

"Habitat Conservation and the Planning Anticommons." With Aaron Swoboda and Jonathan ter Horst.

#### **WORKING PAPERS**

"Regulation and the Price of Housing." With Aaron Swoboda.

"Housing and Habitat: Regional Strategies for Implementing the Endangered Species Act in Urbanizing Areas." With Haley Jones and Jonathan ter Horst.

"Federal Land Use Controls and the Cost of the Endangered Species Act."

"The Value of a Groundwater Storage Project."

"Management of Liquid Wastes: A Comparison of Centralized and Decentralized Alternatives."

"Environmental Regulation by Licensing." With Aaron Swoboda and David Zilberman.

"Water Savings from Adoption of Precision Technology." With Karina Schoengold and Georgina Moreno.

"Managing a Coastal Aquifer under Multiple Uncertainty." With David Zilberman.

"Relicensing and the Cost of Minimum Streamflow Requirements." With Karina Schoengold.

"Environmental Regulation of the Food Processing Industry." With Steve Hamilton.

#### **INVITED PRESENTATIONS**

"Assessing Risks to California's Water Systems." Discover Cal. Redwood City, CA. November 2007.

"New Settings for HCPs and New Approaches to ESA Compliance." CLE International. San Francisco, CA. November 2007.

"Policies to Control Point Source Discharges of Salts in the San Joaquin Valley." Regional Water Quality Control Board. Modesto, CA. October 2007.

"Federal Land Use Controls." Pacific Rivers Council. San Francisco, CA. October 2007.

"The Economic Implications of Conjunctive Use and Groundwater Banking." Theis Conference, National Groundwater Association. Park City, UT. September 2007.

"Evaluating Investments in Groundwater: Hard Science or Black Art?" Groundwater Resource Association. San Francisco, CA. June 2007.

"Delta Futures and California's Water Economy." Public Policy Institute of California. San Francisco, CA. February 2007.

"California's Water Infrastructure Needs." Bay Area Economic Forum. San Francisco, CA. February 2007.

"Management of a Coastal Aquifer under Multiple Uncertainty." Association of Environmental and Resource Economists. Chicago, IL. January 2007.

"Growth, Environment & Efficiency: California's Water Future." UC Berkeley Homecoming. Berkeley, CA. October 2006.

"Water Supply and the Bay Area Economy." League of Women Voters Know Your Bay Area Day. San Francisco, CA. September 2006.

"Economics of Water Quality Regulation." Interational Agricultural Economics Association Pre-Conference Workshop on Water Resources. Brisbane, Australia. August 2006.

"Measuring the Groundwater Pumping Externality." American Agricultural Economics Association. Long Beach, CA. July 2006.

"Costs and Benefits of Wetland Regulation." American Law Institute – American Bar Association Wetlands Conference. Washington, DC. June 2006.

"Economics of Water Resource Management in California." University-Industry Consortium. Oakland, CA. May 2006.

"Regulating Water Quality in California." University of California Water Resources Center Continuing Conference. Davis, CA. May 2006.

"Natural Disasters and the Resilience of the Urban Economy." Symposium on Real Estate, Catastrophic Risk and Public Policy. Berkeley, CA. March 2006.

"Economics and the Endangered Species Act: The Role of Critical Habitat." Annual Conference on the Endangered Species Act and Habitat Conservation Planning. San Francisco, CA. December 2005.

"Economics of Groundwater Management." Groundwater Resources Association. Pasadena, CA. September 2005.

"The Economics of Water Quality Regulation." Central Valley Clean Water Association. Sacramento, CA. May 2005.

"Economics of Technology Adoption and Diffusion." Conference on Sustainable Energy Futures. Berkeley, CA. April 2005.

"Consideration of Economics Under Porter-Cologne." Urban Water Institute. Newport Beach, CA. April 2005.

"Tools for a New Era of Sustainable Water Management." Barcelona, Spain. March 2005.

"Bad Neighbors: The Economics of Conflict Over New Housing." Conference on Urban Policy. Berkeley, CA. January 2005.

"Economic Analysis of Water Quality Regulations: When is It Worth the Trouble?" Industrial Environmental Association. San Diego, CA. November, 2004.

"Measuring the Cost of Conservation by Permitting." Association of Environmental and Resource Economists. Denver, CO. August 2004.

"Panel Estimation of Agricultural Water Demand Based on an Episode of Rate Reform." American Agricultural Economics Association. Denver, CO. August 2004.

"Local Public Goods and Ethnic Diversity." American Agricultural Economics Association. Denver, CO. August 2004.

"Prices vs. Quantities Revisited." American Agricultural Economics Association. Denver, CO. August 2004.

"Managing Groundwater with Localized Externalities." American Agricultural Economics Association. Denver, CO. August 2004.

"Fat Taxes and Thin Subsidies." American Agricultural Economics Association. Denver, CO. August 2004.

"Environmental Regulation and California Agriculture: Focus on ESA and the Clean Water Act." Western Growers' Association. Sacramento, CA. June 2004.

"Endangered Species Regulation and California Agriculture." Giannini Foundation Conference on the Future of California Agriculture. Sacramento, CA. May 2004.



"Environmental Regulation and Housing Affordability." U.S. Department of Housing and Urban Development Conference on Regulatory Barriers to Housing Affordability. Washington, DC. April 2004.

"Economic Analysis of Environmental Regulation." Clean Water Act Summit Meeting. Irvine, CA. March 2004.

"Economic Impacts of Endangered Species Regulation: A Project-Level Perspective Focusing on the Housing Industry." Conference on the Endangered Species Act at 30. Santa Barbara, CA. November 2003.

"Whither Reclamation Reform? Looking to the Next 100 Years of Reclamation Law." Berkeley Conference on Water Policy Reform. San Francisco, CA. September 2003.

"Simultaneous Estimation of Technology Choice and Land Allocation." American Agricultural Economics Association. Montreal, Canada. July 2003.

"Advertising in Markets with Product Differentiation and Imperfect Competition." Food Systems Research Group, University of Wisconsin. June 2003.

"Wetlands Protection Beyond Section 404." American Law Institute – American Bar Association Wetlands Conference. Washington, DC. May 2003.

"Prioritizing Habitat Conservation." Conference on the Endangered Species Act. Land Use Research Foundation of Hawaii and the Hawaii State Bar Association Section on Real Property and Finance. May 2003.

"Government Regulation of Product Quality in Markets with Differentiated Products: Looking to Economic Theory." Allied Social Science Association. Washington, DC. January 2003.

"Non-Regulatory and Non-Federal Approaches to Wetland Protection." National Association of Home Builders. Las Vegas, NV. January 2003.

"Agricultural Water Use and the Role of Prices." Joint Meeting of the U.S. and Iranian Academies of Sciences. Tunis, Tunisia. December 2002.

"Economic Megatrends and Water Use in the United States." National Academy of Sciences. Washington, DC. September 2002.

"Pesticide Regulation and Changes in Human Health." World Congress of Environmental Economics. Monterey, CA. June 2002.

"Mechanisms for Risk Trading." World Congress of Environmental Economics. Monterey, CA. June 2002.

"Economic Damage from Water Supply Disruptions Following an Earthquake in the San Francisco Bay Area." Bay Area Water Users' Association. Foster City, CA. June 2002.

"Economic Perspectives on Federal Wetland Regulation." American Law Institute – American Bar Association. Washington, DC. May 2002.

"Reconciling Competing Interests in the West Side." CSRD Conference on the Future of the West Side. Parlier, CA. March 2002.

"Protecting Public Interests on Private Land." Center for Sustainable Resource Development, UC Berkeley. February 2002.

"Cost-Shifting and Environmental Quality." POWER Annual Conference. Los Angeles, CA. December 2001.

"Factor Price Risk and the Diffusion of Conservation Technology." California Conference on Environmental and Resource Economics. UC Santa Barbara. November 2001.

"Valuation of Water Supply Reliability." American Agricultural Economics Association. Chicago, IL. August 2001.

"Allocating Water by Markets." American Society of Horticultural Sciences. Sacramento, CA. July 2001.

"The Farm Bill and Resource Conservation: Success Stories." CSRD Conference on Agriculture and the Environment. Washington, DC. June 2001.

"Does Factor Price Risk Encourage Conservation?" International Water Resource Economics Consortium. Girona, Spain. June 2001.

"Optimal Control of Groundwater Over Space and Time." International Water Resource Economics Consortium. Girona, Spain. June 2001.

"Trading Behavior in an Informal Market." International Water Resource Economics Consortium. Girona, Spain. June 2001.

"Economics of Pesticide Cancellation: The Food Quality Protection Act of 1986." University of California Agricultural Economics and Management Workgroup. UC Davis. May 2001.

"Economic Aspects of Biological Control." University of California Conference on Urban Pest Management. UC Riverside. October 2000.

"Price Volatility and Resource Conservation." American Agricultural Economics Association. Tampa, FL. July 2000.

"Economics of Water Trading in California." UC Berkeley Water Working Group. Berkeley, CA. March 2000.

"Reforming Public Lands Policy." *Painting the White House Green: Economics and Environmental Policy-Making in the Clinton Administration*. Laramie, WY. September 1999.

"Transaction Costs and Trading Behavior in a Permit Market." American Agricultural Economics Association. Nashville, TN. August 1999.

"Facilitating Water Transfers with the *WaterLink* System." American Society of Civil Engineers. Seattle, WA. August 1999.

"Valuing Agricultural Water Supply Reliability." International Water Resource Economics Consortium. Waikoloa, HI. July 1999.

"Economics of Inter-District Water Transfers." Western Economics Association. San Diego, CA. June 1999.

"The Value of Water Supply Reliability in Westside Agriculture." CalFed Economics Workgroup. Sacramento, CA. June 1999.

"Economic Impacts of Pesticide Regulation." Center for Sustainable Resource Development Conference on Pest Management. UC Berkeley. May 1999.

"Water Marketing within Irrigated Agriculture." American Agricultural Economics Association. Salt Lake City, UT. August 1998.

"Welfare Impacts of Climate Change: Focus on Pest Problems and Water Resources." American Agricultural Economics Association. Salt Lake City, UT. August 1998.

"Water Trading and the Costs of Bay/Delta Protection." Water Education Foundation. San Diego, CA. July 1998.

"Federal Public Land Policy: Litmus Test Issues." Berkeley Commons Club. Berkeley, CA. June 1998.

"Recent Developments in American Agricultural Policy." Commonwealth Club. San Francisco, CA. October 1997.

"Performance of a Voluntary Water Purchase Program." Western Regional Water Economics Conference. Lihue, HI. October 1997.

"Water Marketing for the Environment: The Clinton Administration's Perspective." Conference on Regional Water Markets. Berkeley, CA. July 1997.

"Returns to Public Investment in Agriculture with Imperfect Downstream Competition." American Agricultural Economics Association. Toronto, Canada. July 1997.

"Markets for Crop Germplasm." Invited Paper, American Agricultural Economics Association. Toronto, Canada. July 1997.

"Land Allocation, Soil Quality and Irrigation Technology Choice." Western Agricultural Economics Association. Reno, NV. July 1997.

"Product Liability and Entry Incentives." Western Agricultural Economics Association. Reno, NV. July 1997.

"Agricultural Policy in the Post-1996 Farm Act World." Signature Lecture, USDA Economic Research Service. Washington, DC. May 1997.

"Federal Water Policy in the United States." International Conference on Coordination and Decentralization in Water Resources Management. Annapolis, MD. April 1997.

"Non-Uniform Regulation of Groundwater Quality." American Agricultural Economics Association. San Antonio, TX. July 1996.

"The Effect of Farm Supply Shifts on Concentration and Market Power in the Food Processing Industry." American Agricultural Economics Association. San Antonio, TX. July 1996.

"Differential Property Tax Assessment, Land Allocation and Land Values at the Urban Fringe." American Agricultural Economics Association. San Antonio, TX. July 1996.

"Efficient Strategies for Acquiring Agricultural Water Rights." Invited Paper, Australian Agricultural and Resource Economics Society. Melbourne, Australia. February 1996.

"Strategies for Agricultural Water Conservation." U.S. Bureau of Reclamation Water Users Conference. Concord, CA. January 1996.

"Voting on Environmental Health Risks." American Agricultural Economics Association. Indianapolis, IN. August 1995.

"Explaining Irrigation Technology Choice: A Microparameter Approach." American Agricultural Economics Association. Indianapolis, IN. August 1995.

"The Economics of United States Environmental Laws." Symposium at Far Eastern State University. Vladivostok, Russia. March-April 1995.

“The Endangered Species Act: Impact on California Agriculture and Policy Options.” University of California Executive Seminar on Agricultural Issues. Sacramento, CA. December 1994.

“Economics of Tort Liability Rules for Pesticide Damage.” Second Occasional California Conference on Environmental and Resource Economics. Santa Barbara, CA. October 1994.

“Water Law as a Regulating Mechanism.” International Conference on Coordination and Decentralization in Water Resources Management. Rehovot, Israel. September 1994.

“Contaminant Dynamics and the Cost of Groundwater Quality Regulations.” Conference on Pesticide Economics and Policy in Memory of Carolyn Harper. Amherst, MA. April 1994.

“Water Markets and Water Quality.” University of California Conference on Regional Water Constraints. Berkeley, CA. October 1993.

“Irreversibility, Contaminant Dynamics and the Cost of Groundwater Quality Regulations.” American Agricultural Economics Association. Orlando, FL. August 1993.

“Methodological Issues in Pesticide Regulation.” First Occasional California Conference on Environmental and Resource Economics. Santa Barbara, CA. May 1993.

“Economic Impacts of the Central Valley Project Improvement Act.” First Occasional California Conference on Environmental and Resource Economics. Santa Barbara, CA. May 1993.

“Majority Rule with Rational Abstention is Globally Transitive.” Sixth World Congress of the Econometric Society. Barcelona, Spain. August 1990.

## **GOVERNMENT BRIEFINGS**

“System Integration and California Water Management.” California Assembly and Senate Members and Staff. Sacramento, CA. August 2006.

“The Endangered Species Act at 30: Lessons for Reform.” Organized with U.S. Senate Committee on Energy and Natural Resources. Washington, DC. December 2004.

“Non-Federal and Non-Regulatory Approaches to Wetland Conservation.” House Transportation and Infrastructure Committee Staff. Washington, DC. February 2003.

“Removing Barriers to Water Marketing.” California Senate Committee on Agriculture and Water and the California Foundation for Environment and Economy. Berkeley, CA. January 2003.

"Agricultural Water Pricing and Water Use Efficiency." U.S. Bureau of Reclamation. Sacramento, CA. May 2002.

"Assessing Recent Changes to the Wetlands Permitting Process." Congressional Real Estate Caucus. Washington, DC. September 2000.

"Water Markets in California." California Assembly and Senate Staff. Sacramento, CA. May 2000.

"Economic Analysis of Proposed Changes in Wetlands Permitting Policies." U.S. House of Representatives and Senate Staff. Washington, DC. March 2000.

"Groundwater Implications of Water Trading." California Assembly Water Parks and Wildlife Committee and Senate Agriculture and Water Committee. Sacramento, CA. November 1999.

"Economic Aspects of the 1996 Food Quality Protection Act." Office of Policy, U.S. Environmental Protection Agency. Washington, DC. October 1998.

"Innovative Approaches to Water Conservation: The Westside Case." Joint U.S. Bureau of Reclamation and the California Department of Water Resources Water Conservation Information Committee. San Diego, CA. August 1998.

"Climate Variability and U.S. Agriculture: Mitigating the Impacts." U.S. Environmental Protection Agency. Washington, DC. May 1998.

"New Approaches to Agricultural Water Conservation." Congressional Water Caucus. Washington, DC. February 1996.

## LEGISLATIVE AND ADMINISTRATIVE TESTIMONY

"Consideration of Economic Impacts of TMDL for PCBs in the San Francisco Bay." San Francisco Regional Water Quality Control Board. February 2008.

"Economic Impacts of Sediment Quality Objectives for Enclosed Bays and Estuaries." State of California Water Resources Control Board. February 2008.

"Economic Aspects of the Proposed TMDL for PCBs in the San Francisco Bay." San Francisco Regional Water Quality Control Board. September 2007.

"Economic Impacts of Drought-Induced Water Shortage in the San Francisco Bay Area." San Francisco Public Utilities Commission. June 2007.

"Economic Considerations Relating to the Designation of Critical Habitat." Committee on Resources, U.S. House of Representatives, April 2004.

"Fiscal and Socioeconomic Impacts of Implementing the California Coho Salmon Recovery Plan." California Fish and Game Commission, February 2004.

"Economic Impacts of Critical Habitat Designation." Subcommittee on Fisheries, Wildlife and Water, Committee on Environment and Public Works, U.S. Senate, April 2003.

"Performance of the Federal Wetlands Permitting Program." Subcommittee on Water and Wetlands, Committee on Transportation and Infrastructure, U.S. House of Representatives. September 2001.

"Economic Observations on Water Infrastructure Investment in California." Subcommittee on Water and Power, Committee on Transportation and Infrastructure, U.S. House of Representatives. July 2001.

"Economic Impacts of Reduced Water Supplies on Westside Agriculture." Bay-Delta Advisory Committee. June 1998.

"Economic Impacts of the Central Valley Project Improvement Act." Subcommittee on Water and Power, Committee on Transportation and Infrastructure, U.S. House of Representatives. April 1998.

"Forest Service Losses on Below-Cost Timber Sales." Committee on Energy and Natural Resources, U.S. Senate. February 1997.

"Benefits and Costs of Enhanced Flood Protection in the American River Valley." Committee on Transportation and Infrastructure, U.S. House of Representatives. February 1996.

"Economic Impacts of Banning Methyl Bromide Use in California Agriculture." Committee on Appropriations, California Senate. February 1996.

"Economic Impacts on Leeward Agriculture of Eliminating Waiahole Ditch Diversions." Hawaii Water Commission. January 1996.

"Least-Cost Implementation of Bay/Delta Water Quality Standards." State of California Water Resources Control Board. July 1994.

"The Potential for Agricultural Water Conservation." State of California Water Resources Control Board. June 1992.

"Economic Impacts of the Central Valley Project Improvement Act." Committee on Energy and Natural Resources, U.S. Senate. April 1992.

## **MAJOR CONFERENCES ORGANIZED**

“Assessing Investments in Clean Water and Hygiene in Developing Countries.” Sponsored by the Bill & Melinda Gates Foundation. Berkeley, CA. November 2006.

“The Endangered Species Act at 30: Lessons for Reform.” Washington, DC. December 2004.

“A Decade of Water Policy Reform: The Central Valley Project Improvement Act in 2003.” San Francisco, CA. September 2003.

“The Future of the San Joaquin Valley.” Parlier, CA. March 2002.

“Pest Management Strategies and Policies.” Berkeley, CA. May 2001.

## **SEMINARS**

University of Arizona, Boston College, Boston University, UC Berkeley, UC Davis, UC Irvine, UCLA, UC Riverside, UC Santa Barbara, University of Colorado, Harvard University, Hebrew University, Kansas State University, University of Maryland, University of Massachusetts, Montana State University, Ohio State University, Purdue University, Stanford University, U.S. Department of Agriculture, U.S. Department of the Interior, U.S. Environmental Protection Agency, University of Wisconsin, University of Wyoming.

## **GRADUATE STUDENTS SUPERVISED**

Prof. Karina Schoengold.

Assistant Professor, School of Natural Resources, University of Nebraska at Lincoln.

Prof. Aaron Swoboda

Assistant Professor, Graduate School of Public and International Affairs, University of Pittsburgh.

Prof. Nicholas Brozovic

Assistant Professor, Department of Agricultural and Consumer Economics, University of Illinois.

Prof. Sean Cash

Assistant Professor, Department of Agricultural and Resource Economics, University of Alberta.



Prof. Georgina Moreno  
Assistant Professor, Department of Economics, Scripps College.

Dr. Daniel Osgood  
Research Scientist, Earth Institute, Columbia University.

Dr. Janis Carey  
Senior Economist, The Analysis Group, Denver, CO.

Prof. Joshua Zivin  
Associate Professor, School of Public Health, Columbia University.

Prof. Katrin Millock  
Associate Professor, EUREQua, CNRS and Université Paris I.

Dr. Sabrina Ise  
Economist, National Center for Environmental Economics, U.S. Environmental  
Protection Agency, Washington, D.C.

Prof. Steven Hamilton  
Professor, Department of Agricultural and Resource Economics, University of Arizona.

Prof. Gareth Green  
Professor, Department of Agricultural and Resource Economics, Washington State  
University.

## **SELECTED CONSULTING**

Aetna Insurance, New York, NY.  
American Petroleum Institute, Washington, DC.  
Bay Area Economic Forum, San Francisco, CA.  
Berrenda Mesa Water Storage District, Bakersfield, CA.  
J.G. Boswell Company, Los Angeles, CA.  
Cadiz, Inc., Los Angeles, CA.  
California Building Industry Association, Diamond Bar, CA.  
California Chamber of Commerce, Sacramento, CA.  
Chino Basin Watermaster, Ontario, CA.  
City of Bakersfield, CA.  
Dow Chemical, Midland, MI.  
El Dorado County Water Agency, Shingle Springs, CA.  
Enron, Houston, TX.  
Environmental Defense, Oakland, CA.  
Fairplex, Los Angeles, CA.  
Fannie Mae, Washington, DC.  
General Electric, New York, NY.

Hilmar Cheese, Hilmar, CA.  
Home Builders Association of Northern California, San Leandro, CA.  
Hughes Aircraft, Los Angeles, CA.  
Idaho Power, Boise, ID.  
Intel, Santa Clara, CA.  
Intercontinental Hotels, New York, NY.  
The Irvine Company, Irvine, CA.  
Kern County Water Agency, Bakersfield, CA.  
Los Angeles International Airport, Los Angeles, CA.  
The Maple Companies, Dallas, TX.  
Metropolitan Water District of Southern California, Los Angeles, CA.  
Monterey Peninsula Water Management District, Monterey, CA.  
Montrose Chemical, Los Angeles, CA.  
National Association of Counties, Washington, DC.  
National Association of Home Builders, Washington, DC.  
Natural Resources Defense Council, San Francisco, CA.  
The Nature Conservancy, Boulder, CO.  
Occidental Chemical, Dallas, TX.  
PacifiCorp, Portland, OR.  
Pacific Gas & Electric, San Francisco, CA.  
Phelps Dodge, Phoenix, AZ.  
Plum Creeek Timber, Seattle, WA.  
Prudential Insurance, New York, NY.  
San Diego County Water Authority, San Diego, CA.  
San Francisco Public Utilities Commission, San Francisco, CA.  
Semitropic Water Storage District, Bakersfield, CA.  
Shell Chemical, Houston, TX.  
Shell Oil, New York, NY.  
Sierra Club Legal Defense Fund, Honolulu, HI.  
Suez/ONDEO, Paris, France.  
SunCal Companies, Irvine, CA.  
Teledyne, Los Angeles, CA.  
Toro, Minneapolis, MN.  
Transportation Corridor Agencies, Irvine, CA.  
U.S. Department of the Interior, Washington, DC.  
U.S. Department of Justice, Washington, DC.  
U.S. Environmental Protection Agency, Washington, DC.  
Western States Petroleum Association, Sacramento, CA.  
Wheeler Ridge – Maricopa Water Storage District, Bakersfield, CA.

## **PROFESSIONAL ASSOCIATIONS**

American Agricultural Economics Association  
American Economic Association  
American Law and Economics Association

Association of Environmental and Resource Economists  
Econometric Society