

# DARWIN C. HALL

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## EDUCATION

Ph.D. Economics, University of California, Berkeley, 1977.  
M.A. Statistics, University of California, Berkeley, 1973.  
M.S. Agricultural Economics, University of California, Berkeley, 1973.  
B.A. Economics, University of California, Santa Barbara, 1970.

## POSITIONS HELD

2017-present	Emeritus Executive Director, Western Economic Association International (WEAI).
2010-present	Professor, Economics (Emeritus), California State University Long Beach (CSULB).
2010-present	Founding Director and Professor (Emeritus), Environmental Science & Policy, CSULB.
2009-2017	Executive Director, Western Economic Association International (WEAI).
1989-2010	Professor, Economics, CSULB.
2003-2010	Professor, Environmental Science & Policy, CSULB.
1992-2004, 2009-2017	Member, Board of Directors, WEAI.
2003-2009	Co-Director, B.A. and B.S. Programs in Environmental Science & Policy, CSULB.
2006-2007	Consultant, Metropolitan Water District of Southern California.
1993-2006	Editor, <i>Advances in the Economics of Environmental Resources</i> , Elsevier Science BV.
2004-2006	Editor Emeritus and Co-Editor, <i>Contemporary Economic Policy</i> , Oxford University Press.
1991-2004	Editor, <i>Contemporary Economic Policy</i> , Oxford University Press.
1990-2004	Institute for Environmental and Economic Studies, California State University Fullerton.
1994, 2001	S.W. Brooks Visiting Professor, University of Queensland, Australia.
1998	Consultant, The World Bank.
1988-1991	Coeditor, <i>Contemporary Policy Issues</i> , WEAI.
1986-1989	Associate Professor of Economics, CSULB.
1985 - 1986	Assistant Dean, Humanities and Social Sciences, University of California, Riverside(UCR).
1979 - 1986	Assistant Professor of Economics, UCR.
1979	Advisor to the Secretary, Resources Agency, State of California, Sacramento.
1978-1979	Economist, Department of Water Resources, State of California, Sacramento.
1978	Economist, California Energy Commission, State of California, Sacramento.
1974 - 1977	Assistant Specialist, University of California, Berkeley.
1971 - 1974	Research Assistant, University of California, Berkeley.
1966 - 1970	Metal Tradesman, AFL-CIO Local 250

## **ADMINISTRATIVE EXPERIENCE**

Director, B.A. and B.S. degree programs in Environmental Science and Policy, 2003-2010. Responsible for helping to initiate, obtain approval, and implement these new degree programs, manage office staff, budget, advise students, and hire faculty.

Editor, *Contemporary Economic Policy*, 1991-2004. Coordinate team of 6 coeditors, office staff, and editorial board with Oxford University Press and Western Economic Association International. Responsible for budget planning, editorial policy, editorial decisions, procedures, and timely publication.

Principal Investigator, California State University Long Beach, 2005-06, 1995. Coordinate team of research assistants, and support staff.

Assistant Dean, University of California, Riverside, 1985-86. Responsible for undergraduate advising in the College of Humanities and Social Science.

Principal Investigator, University of California, Riverside, 1979-86. Responsible for directing full time professional staff, part time clerical staff, and research assistants, coordination with the Counsel for the Regents of the University of California, and negotiations with contracting agencies. Accomplishments include creation of software, preparation of various reports and presentations to granting agencies in fulfillment of contracts and grants.

Project Director, University of California, Berkeley, 1974-77. Responsible for directing full time and part time professional staff, and research assistants. Accomplishments include preparation of reports to granting agencies, sampling design, questionnaire development, interviewing and data collection, data format design and management. Six Ph.D. dissertations ultimately were completed, based upon the data collected.

## **OTHER PROFESSIONAL EXPERIENCE**

Advisor to the Secretary for Resources, State of California, 1979. Duties included advising the Secretary on toxic substances and the statewide pesticide regulatory program, representing the Agency at various meetings and reporting to the Secretary and the Deputies of the Secretary. Accomplishments included changes in legislation and regulations such as the California Environmental Quality Act, Pesticide Regulations promulgated by the State Department of Food and Agriculture, bills introduced in the Legislature, and line items in the Governor's Budget.

Member, Los Angeles Mayor's Blue Ribbon Committee (BRC) on Water Rates, 1991-1995, sole economist on the BRC. Appointed by Mayor Bradley. Chair of Finance Subcommittee. Member of Executive Committee. Drafted the Interim Report of the BRC. The BRC unanimously recommended to the City Council that the Los Angeles Department of Water and Power (DWP) revise the rate structure from embedded cost rate design to marginal cost rate design, leading the rest of the municipal water agencies in the United States in rate reform. In December, 1992, the City Council approved an ordinance adopting the recommendations of the BRC.

Appointed by Mayor Riordan to the reconstituted BRC in 1993. Since then, the BRC refined the rate structure at the request of the Mayor, and recommended changes to the rate structure for adoption by the Board of Commissioners of the DWP. In 1995, the Board of Commissioners recommended revisions to the City Council, based upon the recommendations of the BRC. The City Council approved an ordinance adopting the recommendations of the BRC.

Chair, Committee to Revise Personnel Standards, College Council, 1996-97. Drafted the College of Liberal Arts (CLA) Retention Tenure and Promotion (RTP) document and RTP evaluation form. The College Council, faculty, and Provost approved the revised personnel standards. Drafted the CLA College Council Letter of Interpretation of the RTP document, adopted 26 February 2003.

Co-Chair, CSULB Inter-College Committee to Create B.A. and B.S. Degree Programs in Environmental Science and Policy, 1997-2001. Advisor, BS program in Environmental Science and Resource Management, California State University Channel Islands (CSUCI). Led the design of the new program and helped hire faculty at CSUCI.

## HONORS

Outstanding Professor, 2003-2004, California State University Long Beach

S.W. Brooks Visiting Professor, 1994, 2001, University of Queensland, Australia.

Teaching, Energy Economics, 1994, California State University System Statewide Energy Consortium

Distinguished Faculty Scholarly Achievement, 1991, California State University Long Beach

## GRANTS AND AWARDS

Principal Investigator, 2005-06, Metropolitan Water District of Southern California

Enhancing Educational Effectiveness Teaching Award, 2004-05, California State University Long Beach

Principal Investigator, 1991-2004, Western Economic Association International, for the editorial office of *Contemporary Economic Policy*.

Co-Investigator, 1999-2000, USC Sea Grant, National Oceanic and Atmospheric Administration, CSU Fullerton.

Consultant, 1998, The World Bank.

Principal Investigator, 1995, City of Anaheim Department of Public Utilities.

Co-Principal Investigator, 1993-95, California Institute for Energy Efficiency, Lawrence Berkeley Laboratory, University of California Berkeley.

Investigator, 1992-93, City of Anaheim Public Utilities Department.

Editor, July 1990 Special Edition of *Contemporary Policy Issues*, 1989-1990, California Energy Commission.

Meritorious Performance Awards: 1988, 1989, California State University Long Beach.

Assigned Time Awards: 1987, 1988, 1989, 1991, 1993, 1994, 1997, 2003, 2005, CSU Long Beach.

Summer Research Awards: 1987, 1988, 1989, 2000, 2001, 2002, California State University Long Beach.

Principal Investigator, 1980-1986, United States Environmental Protection Agency and Department of Agriculture.

Principal Investigator, 1983-1985, Universitywide Energy Research Group, University of California Systemwide.

Principal Investigator, 1983-1984, Appropriate Technology Program, University of California Davis.

Regents Major Instructional Improvement Grant, 1982-1983, University of California.

Junior Faculty Fellowship, 1982-1983, University of California, Riverside.

Principal Investigator, 1981-1985, Department of Utilities, City of Riverside.

Principal Investigator, 1979-1981, United States Department of Agriculture.

Principal Investigator, 1980, City of Los Angeles.

Project Director, 1974-1976, United States Environmental Protection Agency.

## **I. TEACHING**

### **TEACHING AWARDS**

2004-2005, Enhancing Educational Effectiveness Award, Environmental Science and Policy 400 (Environmental Science and Policy Capstone Project), to be taught by an interdisciplinary team of instructors.

1994, California State University System Statewide Energy Consortium, College Curriculum Project Award

### **FIELDS OF SPECIAL COMPETENCE.**

California Water Issues  
Microeconomic Theory  
Applied Econometrics and Quantitative Methods  
Energy Economics  
Agricultural Economics  
Environmental Resource Economics  
Industrial Organization and Regulation  
Environmental Science and Policy

### **DEGREE PROGRAMS**

1. Founding Director, CSULB BA and BS degrees in Environmental Science and Policy.
2. CSU Channel Islands, BS degree in Environmental Science and Resource Management

### **ENVIRONMENTAL SCIENCE AND POLICY, PROGRAM DIRECTOR AND STUDENT ADVISOR**

- establishing a minor
- curriculum development
- Summer Orientation, Advising, and Registration (SOAR)
- communicating with high school principals and teachers in preparatory courses for the major, recruiting students
- communicating with community college instructors of courses preparatory for the major, recruiting students
- advising students in the major
- establishing student scholarship and awards fund

### **NEW COURSE PREPARATION**

Environmental Science and Policy 400	Environmental Science and Policy Capstone Project
Environmental Science and Policy 200	California Environmental Issues
Economics 463	Energy Economics

## COURSE MATERIALS

1. Evaluation of Alternative Electricity Systems, (with Jane V. Hall) 8 June 94, 35 pp. supported with an award from the California State University System Statewide Energy Consortium, College Curriculum Project
2. Electric Utility Cost Exercises, 7 June 94 revised 29 September 1998, 47pp. supported with an award from the California State University System Statewide Energy Consortium, College Curriculum Project
3. Editor, *Contemporary Policy Issues: Social and Private Costs of Alternative Energy Technologies*, V.8, N.3, 1990.
4. Outline of a Perspective on Econometrics, University of California, Riverside (1983) 190 pp.

## TEACHING ASSIGNMENTS AT CALIFORNIA STATE UNIVERSITY LONG BEACH

Environmental Science and Policy 200	California Environmental Issues
Environmental Science and Policy 400	Environmental Science and Policy Capstone Project
Environmental Science and Policy 490	Topics in Environmental Science and Policy
Economics 101	Introductory Microeconomics
Economics 300	Fundamentals of Economics
Economics 310	Intermediate Microeconomic Theory
Economics 333	Managerial Economics
Economics 355	Law and Economics
Economics 410H	Advanced Microeconomic Theory-Honors
Economics 434	Economics of Regulation
Economics 462	Environmental Economics
Economics 463	Energy Economics
Economics 464	Natural Resource Economics
Economics 490	Topics in Economics
Economics 510H	Graduate Microeconomic Theory-Honors
Economics 660	Graduate Natural Resources and the Environment
Economics 690	Graduate Seminar

## TEACHING ASSIGNMENTS AT UNIVERSITY OF CALIFORNIA RIVERSIDE

Economics 100A Intermediate Microeconomics	Economics 162 Managerial Economics
Economics 141 Intermediate Economic Statistics	Economics 177 Energy Economics
Economics 142 Environmental Economics	Economics 190 Internship
Economics 143 Natural Resource Economics	Economics 198I Independent Study
Economics 144 Intermediate Econometrics	Economics 208 Graduate Resource Economics
Economics 144A Intermediate Economic Statistics and Econometrics	Economics 256 Graduate Asymptotic Theory
Economics 144L Lab for Economics 144A	Economics 288A Graduate Seminar
Economics 144B Intermediate Economic Statistics and Econometrics	Economics 288B Graduate Seminar
Economics 144M Lab for Economics 144B	Economics 299 Ph.D. Independent Study
Economics 156 Agricultural Economics	Economics 290, 291, 292, 297 Special studies courses for Ph.D. graduates in Economics & Statistics
	Economics 302 Supervise T.A.'s

Graduate School of Administration 289N Graduate Project Analysis

## II. SCHOLARLY ACTIVITY

### JOURNAL ARTICLES AND BOOK CHAPTERS

1. Darwin C. Hall, 2009, "A Note from the Author," *Contemporary Economic Policy*, Published Online: Oct 23 2009 1:56AM, DOI: 10.1111/j.1465-7287.2009.00184.x Vol. 27, No. 4, October 2009, p. 538.
2. Darwin C. Hall, 2009, "Politically Feasible, Revenue Sufficient, and Economically Efficient Municipal Water Rates," *Contemporary Economic Policy*. Published Online: Jun 22 2009 9:42AM. DOI: 10.1111/j.1465-7287.2009.00164.x, Vol. 27, No. 4, October 2009, pp. 539-554.
3. Darwin C. Hall, 2009, "Prescriptive Public Choice: Application to Residential Water Rate Reform," *Contemporary Economic Policy*. Published Online: Jun 3 2009 10:34PM; DOI: 10.1111/j.1465-7287.2009.00163.x, Vol. 27, No. 4, October 2009, pp. 555-565.
4. Darwin C. Hall and Richard J. Behl, 25 May 2006, "Integrating Economic Analysis and the Science of Climate Instability," *Ecological Economics*, Vol. 57, Issue 3, pp. 442-465.
5. Darwin C. Hall, 2004, "External Costs of Energy," in *Encyclopedia of Energy*, Academic Press imprint of Elsevier Science, Volume 2: 651-667, <http://dx.doi.org/10.1016/B0-12-176480-X/00157-1>.
6. Darwin C. Hall, Jane V. Hall, Steven N. Murray, 2002, "Contingent Valuation of Marine Protected Areas: Southern California Rocky Intertidal Ecosystems," *Natural Resource Modeling*, Vol. 15, No. 3, Fall 2002, pp. 335-368.
7. Darwin C. Hall and L. Joe Moffitt, eds. 2002, Economics of Sustainable Food Markets, Pesticides, and Food Safety, Volume 4 in *Advances in the Economics of Environmental Resources*, JAI – An Imprint of Elsevier Science: Amsterdam, London, New York, Oxford, Paris, Shannon, Tokyo.
8. Darwin C. Hall and L. Joe Moffitt, 2002, "Adoption and Diffusion of Sustainable Food Technology and Policy," in Darwin C. Hall and L. Joe Moffitt, eds., Economics of Sustainable Food Markets, Pesticides, and Food Safety, Volume 4 in *Advances in the Economics of Environmental Resources*, JAI – An Imprint of Elsevier Science: Amsterdam, London, New York, Oxford, Paris, Shannon, Tokyo.
9. Darwin C. Hall and L. Joe Moffitt, 2002, "Modeling for Pesticide Productivity Measurement," in Darwin C. Hall and L. Joe Moffitt, eds., Economics of Sustainable Food Markets, Pesticides, and Food Safety, Volume 4 in *Advances in the Economics of Environmental Resources*, JAI – An Imprint of Elsevier Science: Amsterdam, London, New York, Oxford, Paris, Shannon, Tokyo.
10. Darwin C. Hall and Richard B. Howarth, eds., 2001, The Long-Term Economics of Climate Change: Beyond a Doubling of Greenhouse Gas Concentrations, Volume 3 in *Advances in the Economics of Environmental Resources*, JAI – An Imprint of Elsevier Science: Amsterdam, London, New York, Oxford, Paris, Shannon, Tokyo.
11. Richard B. Howarth and Darwin C. Hall, 2001, "Beyond a Doubling: Issues in the Long-Term Economics of Climate Change," in Darwin C. Hall and Richard B. Howarth, eds. The Long-Term Economics of Climate Change: Beyond a Doubling of Greenhouse Gas Concentrations, Volume 3 in *Advances in the Economics of Environmental Resources*, JAI – An Imprint of Elsevier Science: Amsterdam, London, New York, Oxford, Paris, Shannon, Tokyo.
12. Darwin C. Hall, 2001, "Ocean Thermal Lag and Comparative Dynamics of Damage to Agriculture from Global Warming," in Darwin C. Hall and Richard B. Howarth, eds, The Long-Term Economics of Climate Change: Beyond a Doubling of Greenhouse Gas Concentrations, Volume 3 in *Advances in the Economics of Environmental Resources*, JAI – An Imprint of Elsevier Science: Amsterdam, London, New York, Oxford, Paris, Shannon, Tokyo.

13. Darwin C. Hall, 2000, "Public Choice and Water Rate Design," in Ariel Dinar, ed., The Political Economy of Water Pricing Reforms, Oxford University Press, pp.189-212.
14. Darwin C. Hall, 1999, "Impacts of Global Warming on Agriculture" in G.H.Peters and J. von Braun, eds, Food Security, Diversification and Resource Management: Refocusing the Role of Agriculture, Proceedings of 23rd International Conference of Agricultural Economists, Ashgate Publishing Limited: Ashgate, Aldershot, United Kingdom, pp. 186-211, ISBN 1 84014 044 5.
15. Jane V. Hall and Darwin C. Hall, 1998, "Environmental Resource Scarcity and Violent Conflict in Developing Regions" in Murray Wolfson, ed., The Political Economy of War and Peace -- Recent Economic Thought: Development, Tensions, Prospects, pp.177-199, Kluwer Academic Press.
16. Darwin C. Hall, 1998, "Albedo and Vegetation Demand-Side Management Options for Warm Climates," *Ecological Economics*, V.24, N.1, pp.31-45.
17. Darwin C. Hall and Jane V. Hall, 1997, "Estimating the Benefits of Emissions Reductions in Complex Atmospheres," *The International Journal of Global Energy*, June/July, V.9, N.4-6, pp286-298.
18. Darwin C. Hall, 1996, "Goeconomic Time and Global Warming: Limits to Economic Analysis," *International Journal of Social Economics*, V.23, N.4/5/6, pp.4, 64-87.
19. Darwin C. Hall, editor, 1996, Advances in the Economics of Environmental Resources: Marginal Cost Rate Design and Wholesale Water Markets, Volume 1, JAI Press, Inc., Greenwich, Connecticut, 224pp. Reviewed by Gordon L. Carriker, *American Journal of Agricultural Economics*, Vol. 80, No. 4, Nov 1998.
20. Darwin C. Hall, 1996, "Economic Instruments to Mitigate Water Scarcity," in Advances in the Economics of Environmental Resources: Marginal Cost Rate Design and Wholesale Water Markets, Volume 1, JAI Press, Inc., Greenwich, Connecticut, pp. 3-9.
21. Darwin C. Hall, 1996, "Calculating Marginal Cost for Water Rates," in Advances in the Economics of Environmental Resources: Marginal Cost Rate Design and Wholesale Water Markets, Volume 1, JAI Press, Inc., Greenwich, Connecticut, pp. 77-94.
22. Darwin C Hall and W. Michael Hanemann, 1996, "Urban Water Rate Design based on Marginal Cost," in , Advances in the Economics of Environmental Resources: Marginal Cost Rate Design and Wholesale Water Markets, Volume 1, JAI Press, Inc., Greenwich, Connecticut, pp. 95-122.
23. Darwin C. Hall, M. Sandii Win, and Jane V. Hall, 1995, "Air Pollution Impacts from Demand Side Management," *Energy: the International Journal*, V.20, N.1, pp.27-35.
24. Darwin C. Hall, 1992, "Oil and National Security," *Energy Policy*, V.20, N.11, November, pp.1089-1096.
25. Darwin C. Hall, 1992, "Social Cost of CO<sub>2</sub> Abatement from Energy Efficiency and Solar Power in the United States," *Environmental and Resource Economics*, V.2, N.1, pp.21-42.
26. Brian G. Thomas and Darwin C. Hall, 1992, "Probabilistic Production Costing Under Integrated Operation Agreements and Joint Power Agency Financing," *Energy Economics*, V.14, N.3, July, pp.200-208.
27. Darwin C. Hall, 1991, "National Security, Environmental Damage, and Uncertainty: Fundamentals for Energy Policy," Chapter 10 in Energy, the Environment, and Public Policy, Praeger Publishers, pp.103-127.
28. Darwin C. Hall and Jane V. Hall, 1991, "Political Cliches and Economic Reality: What Have We Learned?" *Presidential Studies Quarterly*, V. 21, N.1, Winter, pp. 127-140.
29. Darwin C. Hall, Editor, 1990, *Contemporary Policy Issues* Special Edition, Social and Private Costs of Alternative Energy Technologies, V. VIII, N. 3, July. Reviewed in *Revue Generale de Thermique*, No. 350, fevrier 1991, pp.137.

30. Darwin C. Hall, 1990, "Preliminary Estimates of Cumulative Private and External Costs of Energy," *Contemporary Policy Issues*, V.8, N.3, July, pp. 283-307.
31. Amy L. Walton and Darwin C. Hall, 1990, "Solar Power," *Contemporary Policy Issues*, V.8, N.3, July, pp. 240-254.
32. Darwin C. Hall, 1990, "Introduction to Social and Private Costs of Alternative Energy Technologies," *Contemporary Policy Issues*, V.8, N.3, July, pp. 1-2.
33. Darwin C. Hall, Brian P. Baker, Jacques Franco, and Desmond A. Jolly, 1989, "Organic Food and Sustainable Agriculture," *Contemporary Policy Issues*, V.7, N.4, October, pp. 47-72.
34. Darwin C. Hall, Jane V. Hall and David X. Kolk, 1988, "Energy in the Unit Cost Index to Measure Scarcity," *Energy the International Journal*, V.13, N.3, pp. 281-286.
35. Darwin C. Hall, 1988, "The Regional Economic Threshold for Integrated Pest Management," *Natural Resource Modeling*, V.2, N.4, Spring, pp. 631-652.
36. Darwin C. Hall and L. Joe Moffitt, 1985, "Application of the Economic Threshold for Interseasonal Pest Control," *Western Journal of Agricultural Economics*, V.10, N.2, December, p.223-9.
37. L. Joe Moffitt, Darwin C. Hall, and Craig Osteen, 1984, "Economic Thresholds Under Uncertainty with Applications to Corn Nematode Management," *Southern Journal of Agricultural Economics* V.16, N.2, December, pp. 151-157.
38. Darwin C. Hall and Gregory M. Duncan, 1984, "Econometric Evaluation of New Technology with an Application to Integrated Pest Management," *American Journal of Agricultural Economics*, V.66, N.5, December, pp. 624-633. Reviewed by Gerald A Carlson, 1984, "Econometric Evaluation of New Technology with an Application to Integrated Pest Management: Discussion," *American Journal of Agricultural Economics*, 66:641-642.
39. Darwin C. Hall and Jane V. Hall, 1984, "Concepts and Measures of Natural Resource Scarcity with a Summary of Recent Trends," *Journal of Environmental Economics and Management*, V.11, N.4, December, pp. 363-379. (Ranked 4<sup>th</sup> in *JEEM's* Greatest Hits in Depletable Resources and Energy category – see p. 299, Table V in Kolstad, Charles D., 2000, *Journal of Environmental Economics and Management*, V.39, 282-305)<sup>1</sup>.
40. Darwin C. Hall and Brian G. Thomas, 1984, "A Financial Model for Publicly Owned Electric Utilities," *Energy: The International Journal*, V.9, N.4, pp. 333-340.
41. Darwin C. Hall and Brian G. Thomas, 1984, "Investment in Alternative Electricity Supply Plans by Publicly Owned Utilities," *Resources and Energy*, V.6, N.2, June, pp. 165-186.
42. Darwin C. Hall and Jane V. Hall, 1982, "Peregrinations in American Political Economy," *Presidential Studies Quarterly*, V.12, N.4, Fall, pp. 561-567.
43. Darwin C. Hall, 1978, "Kenneth Arrow's Example Considered," *Metroeconomica*, V.29, N.I-II-III, January-December, pp. 191-194. See also abstract in *Zentralblatt fur Mathematick*, v. 417, n. 90012, p. 479

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<sup>1</sup> Commented on by David Pearce, 1988, "Toward a New Iron Age? Quantitative Modeling of Resource Exhaustion," *The Economic Journal*, V.98, N.391, pp.552-553. Commented on by R. Kerry Turner, 1988, "Sustainability, Resource Conservation and Pollution Control: An Overview," in *Sustainable Environmental Management: Principles and Practice*, Westview Press, Boulder, Colorado, pp. 1-28. Commented on by D. Deadman and R. Kerry Turner, 1988, "Resource Conservation, Sustainability and Technical Change," in *Sustainable Environmental Management: Principles and Practice*, Westview Press, Boulder, Colorado, pp. 67-101. Commented on by Robert D. Cairns, "A Contribution to the Theory of Depletable Resource Scarcity and Its Measures," *Economic Inquiry*, V.28, N.3, pp.744-755.



44. Darwin C. Hall, 1978, "The Profitability of Integrated Pest Management," *California Agriculture*, V.32, N.2, February, p. 10, available at <http://californiaagriculture.ucanr.org/>.
45. Darwin C. Hall, 1977, "The Profitability of Integrated Pest Management: Case Studies for Cotton and Citrus in the San Joaquin Valley," *Bulletin of the Entomological Society of America*, V.23, N.4, December, pp. 267-274. See also abstract, 1981, The Economics of Agricultural Pest Control, by Craig D. Osteen, Edward B. Bradley and L. Joe Moffitt, United States Department of Agriculture, Economics and Statistics Service, Bibliographies and Literature of Agriculture No. 14, p. 19-20
46. Darwin C. Hall, 1977, "A Note on Natural Production Functions," *Journal of Environmental Economics and Management*, V.4, N.3, September, pp. 258-264.
47. Darwin C. Hall, Richard B. Norgaard, and Pamela K. True, 1975, "The Performance of Independent Pest Management Consultants in San Joaquin Cotton and Citrus," *California Agriculture*, V.29, N.10, October, pp. 12-14, available at <http://californiaagriculture.ucanr.org/>. See also abstract, 1981, The Economics of Agricultural Pest Control, by Craig D. Osteen, Edward B. Bradley and L. Joe Moffitt, United States Department of Agriculture, Economics and Statistics Service, Bibliographies and Literature of Agriculture No. 14, p. 20. Commented on by J. C. Headley, 1976, "Critics Criticized," *Agrichemical Age*, 19:36.
48. Darwin C. Hall and Richard B. Norgaard, 1974, "On the Timing and Application of Pesticides: Rejoinder," *American Journal of Agricultural Economics*, V.56, N.3, August, pp.644-645.
49. Richard B. Norgaard and Darwin C. Hall, 1974, "Environmental Amenity Rights, Transaction Costs, and Technological Change," *Journal of Environmental Economics and Management*, V.1, N.4, December, pp. 251-267. See also abstract, 1981, The Economics of Agricultural Pest Control, by Craig D. Osteen, Edward B. Bradley and L. Joe Moffitt, United States Department of Agriculture, Economics and Statistics Service, Bibliographies and Literature of Agriculture No. 14, p. 30
50. Darwin C. Hall and Richard B. Norgaard, 1973, "On the Timing and Application of Pesticides," *American Journal of Agricultural Economics*, V.55, N.2, May, pp. 198-201. See also abstract, 1981, The Economics of Agricultural Pest Control, by Craig D. Osteen, Edward B. Bradley and L. Joe Moffitt, United States Department of Agriculture, Economics and Statistics Service, Bibliographies and Literature of Agriculture No. 14, p. 20. Commented on by Itshak Borosh and Hovav Talpaz, 1974, "On the Timing and Application of Pesticides: Comment," *American Journal of Agricultural Economics*, 56:641-643.

#### **PUBLISHED SYMPOSIA, REPORTS, MICROFICHE, MISCELLANY**

1. John J. Boland, Thomas W. Chesnutt, Benedykt Dziegielewski, and Darwin C. Hall, The Application of Scenario Planning to Metropolitan's Integrated Area Studies, prepared for the Metropolitan Water District of Southern California, 12 December 2006, 37 pp.
2. Darwin C. Hall, Duncan MacEwan, Mayra Garcia, and Christy Norris, 2006, Integrating Marginal Cost Water Pricing and Best Management Practices, California State University Long Beach, prepared for the Metropolitan Water District of Southern California, 17 April 2006, 58 pp.
3. Darwin C. Hall, Jane V. Hall, and Steven N. Murray, 2001, "Contingent Valuation of Southern California Rocky Intertidal Ecosystems," *Fisheries Centre Research Reports*, University of British Columbia, Volume 9, Number 8, pp. 70-84.
4. Darwin C. Hall, Jane V. Hall, Steven N. Murray, July 2000, Abstract: Contingent Valuation of Southern California Rocky Intertidal Ecosystems, Conference on Marine Protected Areas, University of British Columbia, Vancouver, British Columbia, Canada.
5. Darwin C. Hall, Evaluation of Cal-Trans' Benefit-Cost Assessment of Alternatives to Control Pollution in Surface Water Run-off, October 1998, Natural Resources Defense Fund, Los Angeles, CA.

6. Darwin C. Hall, Summary of Analysis of Cal-Trans Freeway Retrofit Cost-Benefit Analysis Los Angeles Area District 7, July 1998, Natural Resources Defense Fund, Los Angeles, CA.
7. Darwin C. Hall and Anil Puri, with Xuemei Liu, Joanne I. Pipersky, and Paul Rivera, 1997, Critique of Brown and Caldwell, and Wilchfort et al., Natural Resources Defense Fund, Los Angeles, CA.
8. Darwin C. Hall, 1996, "Goeconomic Time and Global Warming: Limits to Economic Analysis," Working Paper Series, No. 188, Department of Economics, University of Queensland, Australia, January.
9. Darwin C. Hall, 1995, "Albedo and Vegetation Demand-Side Management Options for Warm Climates," Working Paper Series, Department of Economics, University of Queensland, Australia, No. 183, November.
10. H. Taha, S. Douglas, J. Haney, A. Winer, M. Benjamin, D. Hall, J. Hall, X. Liu, B. Fishman, 22 May 1995, Modeling the Ozone Air Quality Impacts of Increased Albedo and Urban Forest in the South Coast Air Basin (SoCAB), Project AQ-92-04A Final Report, Prepared for the California Institute for Energy Efficiency, Lawrence Berkeley Laboratories, University of California Berkeley.
11. Jane V. Hall and Darwin C. Hall, 1995, Comparative Static Effects of Albedo and Shade Demand Side Management Load Reductions on Air pollution Emissions by Electric Utilities in California's South Coast Air Basin, Institute for Economic and Environmental Studies, California State University Fullerton, Subcontract RE-4H from University of California Los Angeles, Final Report to California Institute for Energy Efficiency, Lawrence Berkeley Laboratory, Contract AQ-92-04A, January.
12. Darwin C. Hall, 14 March 1995, Estimated Savings from BRPU Winning Bidders, Final Report to Coalition for Energy Efficiency and Renewable Technology, Sacramento.
13. Mayor/s Blue Ribbon Committee, 1994, Recommendations for Revisions to Water Rates, City of Los Angeles.
14. Darwin C. Hall, 1993, "Blueprint for a Green Economy by Pearce, Markandya, and Barbier," book review in *Society and Natural Resources*, V.6, N.2, May/June.
15. Jane V. Hall, Darwin C. Hall, M. Sandii Win, 1993, Emission Reduction Credits for DSM Programs, prepared for the City of Anaheim Public Utility Department, prepared by California State University Institute for Economic and Environmental Studies, October.
16. Darwin C. Hall, 1993, "Global Warming Economics: Faulty Timing and Omission of Social Cost and Energy Alternatives," *AERE Newsletter*, V.13, No.1, May, pp. 17-22.
17. Mayor's Blue Ribbon Committee, 1992, Assuring Our Future Water Supply: A Consensus Approach to Water Rates, City of Los Angeles, June.
18. Los Angeles Mayor's Blue Ribbon Committee on Water Rates, Interim Report, April 23, 1992.
19. Darwin C. Hall, 1988, "The Decade of Energy Policy: Policy Analysis in Oil-Importing Countries," book review in *Presidential Studies Quarterly*, V.18, N.3, Summer, pp. 626-627.
20. Darwin C. Hall and Deborah A. Griffiths, 1985, An Application of UCMUNI to Riverside, City of Riverside, 201 pp. See also abstract, 1985, Energy Research at the University of California:1980-1985, edited by Richard J. Gilbert, C. Michael Lederer and Beverly Strisower, Universitywide Energy Research Group, University of California, Berkeley, p. 169.
21. Mark C. Jennings, Darwin C. Hall, Peter J. Baum, Wilfred A Elders, Benjamin C. Shen and Shu-Yuan Chu, 1985, "Riverside - UCR Alternative Energy Study," abstract in Energy Research at the University of California:1980-1985, edited by Richard J. Gilbert, C. Michael Lederer and Beverly Strisower, Universitywide Energy Research Group, University of California, Berkeley, p. 169.

22. Darwin C. Hall, 1985, "The Regional Economic Threshold," abstract in 1985 Program and Abstracts: Joint Statistical Meetings, American Statistical Association, Biometric Society, Institute of Mathematical Statistics, Las Vegas, Nevada p. 251.
23. Darwin C. Hall and Brian G. Thomas, 1984, Investment in Alternative Electricity Supply Plans by Publicly Owned Utilities, Universitywide Energy Research Group, University of California, Berkeley, 37 pp. (Also published in *Resources and Energy*, see above). See also abstract, 1985, Energy Research at the University of California:1980-1985, edited by Richard J. Gilbert, C. Michael Lederer, and Beverly Strisower, Universitywide Energy Research Group, University of California, Berkeley, p. 168-169.
24. Darwin C. Hall and Brian G. Thomas, 1984, A Financial Model for Publicly Owned Electric Utilities, Universitywide Energy Research Group Report, University of California, Berkeley, 18pp. (Also published in Energy the International Journal, see above)
25. Gregory M. Duncan and Darwin C. Hall, 1984, Joint Self Selection and Choice Based Sampling Bias, Working Paper No. 76, Dept. of Economics, University of California, Riverside, 32 pp.
26. Darwin C. Hall and L. Joe Moffitt, 1984, Stochastically Efficient Economic Thresholds for Discrete Choices, Working Paper No. 76, Department of Economics, University of California, Riverside, 27 pp.
27. Darwin C. Hall, 1980, 1981, 1983, "Productivity of Pesticides, Integrated Pest Management and Organic Farming," Invited Paper, Meetings of the Western Agricultural Economics Association, Las Cruces, New Mexico (July 1980), revised as Working Paper No. 48, Department of Economics, University of California, Riverside, 1981, 113 pp. Micropublished in Papers in the Policy Sciences, Library of the John F. Kennedy School of Government, Harvard University, 1983.
28. Darwin C. Hall and Brian G. Thomas, 1981, Financial Risk Analysis of Alternative Electric Energy Investments for the City of Riverside, City of Riverside, 118 pp.
29. Darwin C. Hall and Brian G. Thomas, 1981, Los Angeles Department of Water and Power: A Base Case Financial Forecast, Los Angeles City Council, 118 pp.
30. Darwin C. Hall, Jane V. Hall and David X. Kolk, 1981, Scarcity and Growth Revised, Working Paper No. 60, Department of Economics, University of California, Riverside, 94 pp.
31. Darwin C. Hall and Brian G. Thomas, 1981, Financial Analysis of Investment in Conservation and Alternative Electricity Supply Plans for Municipal Utilities, Working Paper No. 59, Department of Economics, University of California, Riverside, 65 pp.
32. Darwin C. Hall, 1979, "Socio-Economic Impacts," in South Geysers Geothermal Power Plant NOI/AFC, California Department of Water Resources, 64 pp.
33. Darwin C. Hall, 1979, "Socio-Economic Impacts," in Bottle Rock Geothermal Power Plant Notice of Intentions, California Department of Water Resources, 85 pp.
34. Darwin C. Hall, 1978, Interim Report Investigating Escalator Clauses in Fuel Procurement Contracts, California Department of Water Resources, 64 pp.
35. Chinbang Chung, John Flory, Richard Foley, Richard M. Hairston, Darwin C. Hall, Roger Levy, Margaret Morgan, Valerie Tamburri, John Wilson, 1978, Staff Report on Load Management Standards, California Energy Commission, 75 pp.
36. Darwin C. Hall, 1978, "Policy Evaluation," in Pesticide Regulation in California, Stanford University, pp. 108-132.
37. Darwin C. Hall, 1977, An Economic and Institutional Evaluation of Integrated Pest Management, Environmental Protection Agency, Contract No. 68-01-2982, 216 pp.

38. Darwin C. Hall, 1977, Inventory of Raw Data: Part I, Environmental Protection Agency, Contract No. 68-10-2982.
39. Darwin C. Hall, 1977, Inventory of Raw Data: Part II, Environmental Protection Agency, Contract No. 68-10-2982.
40. Darwin C. Hall and Richard L. Farnsworth, 1977, Data Format Manual, Environmental Protection Agency, Contract No. 68-10-2982.
41. Darwin C. Hall and Richard L. Farnsworth, 1977, Data Codebook, Environmental Protection Agency, Contract No. 68-10-2982.
42. Darwin C. Hall, 1977, "Economics and Regulatory Programs," in New Frontiers in Pest Management, published jointly by the California Legislature, University of California, California Resources Agency, California Department of Food and Agriculture, California Department of Education, State Water Resources Control Board, California Community College, California Engineering Foundation, United States Office of Education, Sacramento, pp. 90-96.
43. Darwin C. Hall, 1977, Soil Quality Indices as Explanatory Variables for Yield Differences, Working Paper No. 35, Department of Agricultural Economics, Berkeley, 15 pp.
44. Darwin C. Hall, 1977, Comments on Integrated Pest Management Insurance for Agricultural Crops, prepared on request for the Executive Office of the President of the United States, Council on Environmental Quality.
45. Darwin C. Hall, 1976, Natural Production Functions: Theory and Application, Working Paper No. 31, Department of Agricultural Economics, Berkeley, 21 pp.
46. Darwin C. Hall, 1976, Bibliography in Resource and Environmental Economics, Colorado State University, Department of Economics, 65 pp.
47. Darwin C. Hall and Richard L. Farnsworth, 1976, Consultant Questionnaire, Department of Agricultural Economics, University of California, Berkeley, 27 pp.
48. Darwin C. Hall, 1975, Cotton Questionnaire, Department of Agricultural Economics, University of California, Berkeley, 33 pp.
49. Darwin C. Hall, 1975, Citrus Questionnaire, Department of Agricultural Economics, University of California, Berkeley, 48 pp.
50. Darwin C. Hall, W. R. Z. Willey and Richard B. Norgaard, 1975, "Productivity and Profit of Pest Control Technology in California Citrus," Department of Agricultural Economics, University of California, Berkeley 33 pp. See also abstract in World Agricultural Economics and Rural Sociology Abstracts, v. 19, n. 5 (May 1977).
51. Darwin C. Hall, Richard B. Norgaard, and W. R. Z. Willey, 1975, "The Profitability of Integrated Pest Management Techniques Under the Advice of Independent Pest Management Consultants," Department of Agricultural Economics, University of California, Berkeley, 10 pp. See also abstract in World Agricultural Economics and Rural Sociology Abstracts, v. 19, n. 5 (May 1977).

## ADDRESSES, INVITED AND PRESENTED PAPERS

1. "Application of Prescriptive Public Choice to Urban Water Rate Design," 9<sup>th</sup> Biennial Pacific Rim Conference, Western Economic Association International, Queensland University of Technology, Brisbane, Australia, 26-29 April 2011.
2. "Los Angeles Urban Water Rate Design," 9<sup>th</sup> Biennial Pacific Rim Conference, Western Economic Association International, Queensland University of Technology, Brisbane, Australia, 26-29 April 2011.
3. "Theoretical and Practical Aspects of Water Rates," Department of Economics, University of California San Diego, La Jolla, 24 May 2010.
4. Environmental Science and Policy at CSU Long Beach, League of Women Voters, Irvine Valley Water District, 2 Dec 2006.
5. "Integrated Area Study," Metropolitan Water District of Southern California, 14 Sept 2006.
6. "Implications of the Science of Climate Instability for Economic Analysis," 80<sup>th</sup> annual conference of the Western Economic Association International, San Francisco, July 4-8, 2005.
7. "Environmental Science and Policy at the Beach," Senior University, CSU Long Beach, 17 May 2005.
8. "Economics and Climate Surprises" Faculty Supper Club, CSU Long Beach, 7 April 2005.
9. "Climate Instability" 79<sup>th</sup> annual conference of the Western Economic Association International, Vancouver, June 29-July 3, 2004.
10. "Climate Instability: Agricultural Adaptation or Aversion?" Invited Symposium, American Agricultural Economics Association, Montreal, Canada, 28 July 2003.
11. "Contingent Valuation of Marine Protected Areas," Chico State University Conference: The Economic Value of Environmental Resources, 25 April 2003.
12. "How to Incorporate Economic Analysis into Water Quality Policies," State Water Resource Control Board Coastal Economics Workshop, University of Southern California, 24 February 2003.
13. "Contingent Valuation of Marine Protected Areas: Southern California Rocky Intertidal Ecosystems," 6<sup>th</sup> Occasional California Workshop on Environmental and Resource Economics, University of California Santa Barbara, October 26&27, 2001.
14. "Electricity Restructuring," 76<sup>th</sup> annual conference of the Western Economic Association International, San Francisco, July 4-8, 2001.
15. "Contingent Valuation of Marine Protected Areas: Southern California Rocky Intertidal Ecosystems," 76<sup>th</sup> annual conference of the Western Economic Association International, San Francisco, July 4-8, 2001.
16. "Contingent Valuation of Marine Protected Areas," University of Queensland, Brisbane, Australia, 24 April 2001.
17. "Political Feasibility of Water Rate Reform," Law and Economics Society of New Zealand, Victoria University, Wellington, New Zealand, 6 March 2001.
18. "Econometric Estimation of the Value of Preserving Ecosystems," Massey University, Palmerston North, New Zealand, 5 March 2001.
19. "Contingent Valuation of Southern California Rocky Intertidal Ecosystems," Economics of Marine Protected Areas Conference, University of British Columbia, Vancouver, British Columbia, Canada, July 7-8, 2000.

20. "Ocean Thermal Lag and Comparative Dynamics of Damage to Agriculture from Global Warming," 75<sup>th</sup> annual conference of Western Economic Association International, Vancouver, June 29 – July 3, 2000.
21. "Politically Feasible Marginal Cost Water Rate Design," 75<sup>th</sup> annual conference of Western Economic Association International, Vancouver, June 29 – July 3, 2000.
22. "Ocean Thermal Lag and Comparative Dynamics of Damage to Agriculture from Global Warming," Department of Economics Seminar Series, California State University Fullerton, May 22, 2000.
23. "Politically Feasible Marginal Cost Water Rate Design for Municipal Utilities," Conference on Environmental and Resource Economics, University of California Santa Barbara, May 5-6, 2000.
24. "Politically Feasible Marginal Cost Water Rate Design," 4<sup>th</sup> Biennial Conference, Pacific Rim Allied Economic Organizations, Sydney, January 11-16, 2000.
25. "Public Choice and Water Rate Design," 74<sup>th</sup> annual conference of Western Economic Association International, San Diego, July 6 – July 10, 1999.
26. "Public Choice and Water Rate Design," The World Bank, November 7-9, 1998.
27. "Environmental Resource Scarcity and Violent Regional Conflict," with Jane Hall, 73<sup>rd</sup> Annual Conference of the Western Economic Association International, Tahoe, June 28 - July 2, 1998.
28. "Global Warming Beyond a Doubling of Ambient CO<sub>2</sub>," 3<sup>rd</sup> Biennial Conference, Pacific Rim Allied Economic Organizations, Bangkok, January 13-18, 1998.
29. "Environmental Resource Scarcity and Violent Conflict in Developing Regions," 73<sup>rd</sup> Annual Conference of the Western Economic Association International, Tahoe, June 28 - July 2, 1998.
30. "Epistemological Foundations of Global Warming Science," University of Nevada on November 7, 1997.
31. Participant, White House Conference on Climate Change, October 6, 1997.
32. Plenary Session, "Impacts of Global Warming on Agriculture," 23<sup>rd</sup> International Conference of Agricultural Economists, Sacramento, August 10-16, 1997.
33. "Damage to Agriculture from Global Warming in Geoeconomic Time," 72<sup>nd</sup> Annual Conference of the Western Economic Association International, Seattle, July 9-13, 1997.
34. "Geoeconomic Time," 71<sup>st</sup> Annual Conference of the Western Economic Association International, San Francisco, 28 June - 2 July 1996.
35. "Los Angeles Marginal Cost Water Rates," 71<sup>st</sup> Annual Conference of the Western Economic Association International, San Francisco, 28 June - 2 July 1996.
36. "Calculating Marginal Cost for Water Rates," Third Occasional California Workshop on Environmental and Resource Economics, University of California Santa Barbara, May 17 - 18, 1996.
37. with W. Michael Hanemann, UC Berkeley, "Urban Water Rate Design Based on Marginal Cost," Third Occasional California Workshop on Environmental and Resource Economics, University of California Santa Barbara, May 17 - 18, 1996.
38. "Defining the Global Warming Problem," CSULB Conference on Environmental Destruction, Pollution, and Health Issues: A Global Challenge, 22 April 1996.
39. "Marginal Cost Water Rates for Los Angeles," 2<sup>nd</sup> Biennial Conference, Pacific Rim Allied Economic Organizations, Hong Kong, 10-15 January 1996.
40. "Marginal Cost Water Rate Design," Portland State University, 13 October 1995.

41. "Demand-Side Management Options for Warm Climates," 70<sup>th</sup> Annual Conference of the Western Economic Association International, San Diego, July 5-9, 1995.
42. "Evaluation of Alternative Electricity Systems," with Jane V. Hall, Curriculum Workshop for College & University Professors in the Greater Los Angeles Region, Cosponsored by the Los Angeles Department of Water and Power and the Statewide Energy Consortium of the California State University, held at Occidental College, Los Angeles, December 3, 1994
43. "Interdisciplinary Assessment of Demand-Side-Management," California Workshop on Environmental and Resource Economics, University of California Santa Barbara, October 21-22, 1994.
44. "Pesticide Productivity and Problems," University of Queensland, Australia, August, 1994.
45. "Albedo and Shade DSM Impact on Air Pollution," 69<sup>th</sup> Annual Conference of the Western Economic Association International, Vancouver, Canada, June 29 - July 3, 1994.
46. "Limits to Economic Analysis for Specifying Global Warming Policy," 69<sup>th</sup> Annual Conference of the Western Economic Association International, Vancouver, Canada, June 29 - July 3, 1994.
47. "Extensions of the L-Z Specification for Pesticide Productivity," Carolyn Harper Conference on Pesticides, University of Amherst, Massachusetts, March 1994.
48. "Tradable Emission Permits for Demand-Side Management," Pacific Rim Conference of the Western Economic Association International, Hong Kong, January 8-13, 1994.
49. Testimony on National Security before the California Energy Commission, 2 November 1993, Sacramento, California.
50. "Rate Design Based on Marginal Cost," 68<sup>th</sup> Annual Conference of the Western Economic Association International, Lake Tahoe, June 20-24, 1993.
51. "Block Rates with Revenue stability, Efficiency and Fairness," 68<sup>th</sup> Annual Conference of the Western Economic Association International, Lake Tahoe, June 20-24, 1993.
52. "Water Rate Reform," Luncheon Address to the Energy Exchange of Greater Los Angeles Inc, Montebello, May 14, 1993.
53. "Regulation of Polluting and Resource-Using Industries," California Workshop on Environmental and Resource Economics and Policy, University of California, Santa Barbara, May 7-8, 1993.
54. "More than You Ever Wanted to Know About Water," Department of Economics, California State University at Long Beach, March 23, 1993.
55. Jointly with J. V. Hall and V. Brajer, "Damage Functions: Applications and Limitations," Department of Economics Seminar Series, California State University, Fullerton, March 17, 1993.
56. "Least Cost Planning for Water," Conference of the Local Government Commission on California Water Policy: Resolving Critical Controversies, November 20-21, 1992, Los Angeles Biltmore Hotel.
57. Testimony before the Los Angeles City Council Ad Hoc Committee on Water Rates, "Water Rate Design," September 23, 1992.
58. Jointly with members of the Executive Committee of the Mayor's Blue Ribbon Committee before the Board of Commissioners of the Los Angeles Board of Water and Power, "The BRC's Rate Design Proposal," July 21 and 23, 1992.
59. "Annual Report, 1991-1992, Contemporary Policy Issues," Business Luncheon at the 67<sup>th</sup> Annual Conference of the Western Economic Association International, San Francisco, July 11, 1992.

60. "Damage Functions: Applications and Limitations," 67<sup>th</sup> Annual Conference of the Western Economic Association International, San Francisco, July 9-13, 1992.
61. "The Economics of Pest Management," Department of Entomology, University of California, Riverside, November, 1991.
62. "Pesticide Policy and Regulation," 66<sup>th</sup> Annual Conference of the Western Economic Association International, Seattle, June 29 - July 3, 1991.
63. "Oil and National Security," 66<sup>th</sup> Annual Conference of the Western Economic Association International, Seattle, June 29 - July 3, 1991.
64. "CO2 Abatement Cost," 66<sup>th</sup> Annual Conference of the Western Economic Association International, Seattle, June 29 - July 3, 1991.
65. "Energy and National Security," Department of Economics, California State University, Long Beach, April 3, 1991.
66. "National Security Risks and Subsidies for Oil and Nuclear Power," 65<sup>th</sup> Annual Conference of the Western Economic Association International, San Diego, June 29 - July 3, 1990.
67. "National Security, Environmental Damage and Uncertainty: Fundamentals for Energy Policy," Kent Economic Policy Conference IV, Energy and the Environment in the 1990's, Kent State University, April 5, 1990.
68. Testimony before the Assembly Ways and Means Subcommittee, Hearing on Medfly Spraying, Van Nuys, California, February 28, 1990.
69. "Private and Social Costs of Energy Technologies," 64<sup>th</sup> Annual Conference of the Western Economic Association International, Lake Tahoe, June 18-22, 1989.
70. "Republicans vs. Democrats: An Antidote to the Midnight Economist," Department of Economics, California State University, Long Beach, October 1988.
71. "Probabilistic Production Costing under Integrated Operation Agreements and Joint Powers Agency Financing," Western Economics Association Meetings, Los Angeles, California, July 1988 (with Brian G. Thomas).
72. "Policy Issues and Directions for Future Research on Sustainable Agriculture," 63<sup>rd</sup> Annual Conference of the Western Economics Association, Los Angeles, California, July 1988 (with Jill S. Auburn, Brian P. Baker, Roberta Cook, Jacques Franco, Desmond A. Jolly, and Patrick Madden).
73. "Energy in the Unit Cost Index to Measure Scarcity," California State University, Fullerton, November 1987 (with Jane V. Hall).
74. "Measuring Natural Resource Scarcity: Progress and Conundrums," Contemporary Policy Studies Session, Western Economics Association Meetings, San Francisco, California, July 1-5, 1986.
75. "Introduction to Choice Based Sampling bias and Self Selection bias: Adoption of New Technology," Department of Economics, California State University, Long Beach, February 26, 1986.
76. "Regional Economic Thresholds," Joint Statistics Meetings: American Statistical Association, Biometric Society, and Institute for Mathematical Statistics, Las Vegas, Nevada, August 1985. (Invited Paper)
77. "Utility Interface Issues," University of California, Universitywide Energy Research Group, Los Angeles, California, May 9, 1985.
78. "Probabilistic Production Costing Models for Electric Utilities," Department of Economics, Iowa State University, Ames, Iowa, March 25, 1985.



79. "Financial Analysis for the City of Riverside Electric Utility," Public Utility Board, City of Riverside, California, January 1985.
80. "Econometric Evaluation of New Technology with an Application to Integrated Pest Management," Department of Economics Seminar Series, California State University, Fullerton, December 6, 1984.
81. "Empirical Production and Cost Data," Econometrics Society, Allied Social Science Association Annual Meeting, Dallas, Texas, December 28-30, 1984.
82. "Econometric Evaluation of Integrated Pest Management," Invited Papers Session, Joint Meetings of the American Agricultural Economics Association, Association of Environmental and Resource Economists and the Northeast Agricultural Economics Council, Cornell University, New York, August 5-8, 1984. (Invited Paper)
83. "Investment in Alternative Supply Plans by Publicly Owned Utilities," Department of Economics Seminar Series, California State University, Fullerton, November 3, 1983.
84. "Law and Economics: A Look at Pesticide Legislation," Department of Economics, University of California, Riverside, April 28, 1983.
85. Jointly with Jane V. Hall, "Explaining Public Utility Roles," Department of Economics, California State University, Fullerton, April 15, 1983.
86. "Supply Planning and Investment Strategies for Municipal Utilities," University of California, Universitywide Energy Research Group, University of California, Berkeley, January 24, 1983.
87. "Redefining the Economic Threshold for Pest Control Decisionmaking," Consortium for Integrated Pest Management Economics Workshop, Las Vegas, October 29, 1982 (with L. Joe Moffitt) 17 pp. manuscript.
88. "Aggregate Analysis," Consortium for Integrated Pest Management Economics Workshop, Las Vegas, October 29, 1982.
89. "Economic Threshold for Adult Control of the Egyptian Alfalfa Weevil," Annual Meetings of the Consortium for Integrated Pest Management, Las Vegas, Spring 1982 and Working Paper No. 69, Department of Economics, University of California, Riverside, 17 pp.
90. "Financing and Electric Utility Supply Planning," Department of Economics Colloquium, University of California, Riverside, April 1, 1982.
91. "Problems in Estimating the Economic Impact of IPM," Statistics Department Colloquium, University of California, Riverside, October 27, 1981.
92. Testimony: Energy Sub Committee, Los Angeles City Council, August 20, 1980.
93. "Agricultural Chemicals, A Dilemma: Who Decides, Who Controls, Who Benefits, Who Loses?" Concerns on Rural Problems Advisory Committee Debate, Kellogg Program, University of California, Davis, February 15, 1979.
94. "Issues in California Agricultural Policy," University of California, Davis, February 7, 1979.
95. "Issues in Environmental Policy," Stanford University, May 9, 1978.
96. "Electricity Load Management Standards," Airport Rodeway Inn, San Francisco, April 12, 1978 and Sheraton Inn, Los Angeles, April 13, 1978.
97. "Agricultural Consulting: Substitution of Knowledge and Information for Traditional Inputs," presented at the Meetings of the Entomological Society of America, Washington D.C., 1977. (Invited Paper)
98. "Economics and Regulatory Programs," Conference on New Frontiers in Pest Management, sponsored jointly by the California Legislature, University of California, California Resources Agency, California

Department of Food and Agriculture, California Department of Education, State Water Resources Control Board, California Community College, California Engineering Foundation, United States Office of Education, Sacramento, December 1977. (Invited Paper)

99. "The Profitability of Integrated Pest Management: Case Studies for Cotton and Citrus in the San Joaquin Valley," Annual Meeting of the American Agricultural Economic Association, San Diego, July 31 - August 3 1977.
100. "Feasibility and Implementation of Integrated Pest Management in California Agriculture," Eleventh Annual Meeting of the Association of Applied Ecologists, Berkeley, February 1977. (Invited Luncheon Address)
101. "Adoption of Improving Information Technologies," University of Oregon, Eugene, March 1976.
102. "Generalized Theory of Decisionmaking Under Uncertainty," University of Santa Clara, February 1976.
103. "Economic and Legal Aspects of Integrated Control," Tenth Annual Meeting of the Association of Applied Ecologists, Balboa, California, January 29, 1976.
104. "Decisionmaking Under Uncertainty: The Adoption of New Information Technology—A Binary Choice Optimization Theory of Individual Market Behavior,," Imperial College of Science and Technology, London University, Fall 1975.
105. "Natural Production Functions," Department of Agricultural and Resource Economics, University of California, Berkeley, Spring 1975.
106. "The Assignment of Property Rights and Resulting Allocation Given Transaction Costs and Technological Change," Department of Agricultural and Resource Economics, University of California, Berkeley, Fall 1974 (with Richard B. Norgaard).

### III. UNIVERSITY AND COMMUNITY SERVICE

#### COMMUNITY AND PROFESSIONAL SERVICE

2009-2017	Executive Director, Western Economic Association International
2006-2007	Technical Review Committee, Integrated Area Study, Metropolitan Water District of Southern California
1993-2006	Editor, Advances in the Economics of Environmental Resources, Elsevier (JAI Press).
2005-2006	Co-Editor, Contemporary Economic Policy, Oxford University Press.
1991-2004	Editor, Contemporary Economic Policy, Oxford University Press.
1993-2004	Member, Board of Directors, Western Economic Association International.
1989-2004	Program Committee, Annual Conferences, Western Economic Association International
1990-2004	External Member, Institute for Environmental and Economic Studies, California State University Fullerton.
1994-2000	Program Committee, Biennial Allied Economic Organization Pacific Rim Conferences
1999	Consultant, Hagler Bailly
1998	Consultant, The World Bank
1997-1998	Consultant, Environmental Defense Fund ELFIN Program
1997-1998	Consultant, Natural Resources Defense Council
1995	Consultant, Coalition for Energy Efficiency and Renewable Technology - CEERT
1991-1995	Mayor's Blue Ribbon Committee for Water Rates, City of Los Angeles; Chair, Finance Subcommittee; Member, Executive Committee; Chair, Technical Advisory Panel.
1988-1991	Coeditor, Contemporary Policy Issues, Western Economic Association International.
1985	Session Organizer for the Association of Environmental and Resource Economics Association Session at the Annual Meetings of the American Agricultural Economics Association Conference, New York, August 5-8.
1978-79	Statewide Marginal Pricing Task Force: California Energy Commission, California Public Utilities Commission, Southern California Edison, Pacific Gas and Electric, San Diego Gas and Electric, Los Angeles Department of Water and Power, Sacramento Municipal Utility District, California Department of Water Resources, California Manufacturing Association, the Rand Corporation, Non-profit organizations.
1978-79	State Government Integrated Pest Management Committee, California Department of Food and Agriculture
1978-79	Environmental Health Hazards Assessment Committee, California Department of Food and Agriculture
1978-79	Inter Agency Advisory Committee, California Department of Food and Agriculture
1978-79	Environmental Health Hazards Interdepartmental Coordinating Committee, California Department of Health
1977	Consultant, Office of the President of the United States, Council on Environmental Quality
Reviewer:	External Evaluator, Metropolitan Water District of So. California personnel case, 2001 External Evaluator, SUNY – Binghamton personnel case, 2000, 2003 National Science Foundation, 1998, 1999, 2003, 2004 Intergovernmental Panel on Climate Change, 1994 - 1997 University of Nevada Agricultural Experiment Station, 1997 American Agricultural Economics Association Selected Papers Committee, 1996 External Evaluator, Ben-Gurion University of the Negev personnel case, 1998 External Evaluator, UC Berkeley personnel cases, 1989, 1990, 1991, 1997 External Evaluator, Lewis and Clark College personnel case, 1997 Review Panel, U. S. Department of Energy Innovative Rates Grant Program, 1980 Environmental Assessment Team, California Department of Food and Agriculture, 1979

Referee:

Science  
Contemporary Economic Policy  
Climatic Change  
Coastal Management  
Journal of Agricultural and Natural Resource Economics  
Ecological Economics  
Water Resources Research  
Journal of the American Water Resources Association  
The Energy Journal  
The American Journal of Agricultural Economics  
The Journal of Environmental Economics and Management  
American Journal of Alternative Agriculture  
Natural Resource Modeling  
Resources and Energy  
Quarterly Journal of Business and Economics  
Land Economics  
Economic Entomology

## UNIVERSITY SERVICE

### Departmental

2003-2009 Co-Director, B.A. and B.S. programs in Environmental Science & Policy  
2009-10 Professor, Environmental Science and Policy  
90-94, 95-98, 1-2, 5-6, 9-10 Member, Economics Department RTP (Personnel) Committee  
2004-2005, 2008-2009 Chair, Economics Department RTP (Personnel) Committee  
1980-1983, 2008-2009 Chair, Economics Department Library Committee  
2004-2007 Faculty Advisor, Environmental Science and Policy BA and BS degree programs  
2004-2007 Faculty Advisor, Environmental Science and Policy Student Club  
88-89, 01-2, 04-5, 06-7 Economics Department Recruiting Committee  
2006-07 Chair, Elections Committee  
2006-07 Graduate Admissions Committee  
2005-2006 Chair, Economics Department Grade Appeals Committee  
1988-2002, 04-5 Economics Department Masters Micro Comprehensive Exam Committee  
1990-92, 94-2005 Economics Department Graduate Committee  
1988-2005 Economics Department Post-Tenure Review Committees  
1995-2000 Chair, Economics Department Advisory Committee  
1992-1993 Economics Department Curriculum Committee  
1988-1990 Economics Department Computer Resource Committee  
1986-1987 Economics Department Grade Appeals Committee  
1985-1986 Personnel Search Committee, Graduate Program in Economics  
1980-1985 Economics Department Working Papers Committee  
1980-1985 Economics Department Graduate Exam Committee  
1983-1984 Economics Department Subcommittee on the Economics Program  
1980-1982 Chair, Economics Department Speakers Committee  
1981-1982 Economics Department Personnel Search Committee  
1971-1972 Faculty-Student Relations Committee

### College

2003-2004 Chair, College of Liberal Arts Retention, Tenure, and Promotion Committee  
2002-2003 College of Liberal Arts Retention, Tenure, and Promotion Committee  
2002-2003 College of Liberal Arts RTP Procedures Review Committee

2002-2003	Faculty Council, College of Liberal Arts
1998-1999	College of Liberal Arts Retention, Tenure, and Promotion Committee
1998-1999	Executive Committee, College of Liberal Arts
1998-1999	Secretary, College of Liberal Arts
1996-1999	Faculty Council, College of Liberal Arts
1996-1997	Chair, Ad Hoc Committee for Retention, Tenure, Promotion Standards
1988-1990	School of Social and Behavioral Sciences Faculty Council
1988-1990	School of Social and Behavioral Sciences Committee on Committees
1988-1990	School of Social and Behavioral Sciences Election Committee
1981-1983	College Budget Advisory Committee

### **Campus**

2003-2009	Director, BA and BS degree programs in Environmental Science & Policy, College of Liberal Arts & College of Natural Sciences and Mathematics
2004-2009	Advisor, Associated Students Inc. Conservation Commission
2006-2007	Chair, Scholarly and Creative Activity Committee
2004-2006	member, Scholarly and Creative Activity Committee
2004-2005	Chair, University Awards Committee
1996-2002	Co-Chair, Inter-college Committee to create BA and BS degree programs in Environmental Science and Policy
2000	Chair, Faculty Merit Increase Appeals Committee
1994-1996	Academic Senate Academic Integrity Committee
1985-1986	Senate Committee on Courses
1983-1984	Vice Chancellor Student Fee Advisory Committee
1981-1984	Committee on Graduate Training in Applied Statistics

### **Intercampus/System**

2007	Program Reviewer, Environmental Studies, California State University Fullerton
2005	Faculty consultant, Committee to form BA in Environmental Studies, California State University San Marcos
2001-2002	Advisor/Consultant, Committee to form BS program in Environmental Science and Resource Management (ESRM), California State University Channel Islands
2001-2002	Hiring Committee for ESRM, California State University Channel Islands
1993-1995	Thesis Committee, California State University Fullerton
1989-1990	Ph.D. Thesis Committee, University of California Riverside