

## **JAMES BOYD**

Resources for the Future  
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### **POSITIONS:**

Senior Fellow, Resources for the Future

2007-2008, Lokey Business Wire Visiting Professor, Stanford University

2002-2007 Director, Energy and Natural Resources Division, and Senior Fellow, Resources for the Future, Washington, DC

1997, Visiting Professor, Olin School of Business, Washington University, St. Louis

1992-2000, Fellow, Resources for the Future

### **EDUCATION:**

Ph.D., Applied Microeconomics, Wharton Business School, University of Pennsylvania, 1993

B.A., History, the University of Michigan, 1986

### **PRIMARY RESEARCH INTERESTS:**

Ecological Benefit Assessment, Environmental Performance Metrics, Law and Economics, Environmental Policy, Regulatory Economics.

### **JOURNAL PUBLICATIONS:**

“Counting Non-Market, Ecological Public Goods: The Elements of a Welfare Significant Ecological Quantity Index,” *International Economic Association Series*, Palgrave Macmillan, forthcoming.

“What are Ecosystem Services?” *Ecological Economics*, with Spencer Banzhaf, 2007.

“The Nonmarket Benefits of Nature: What Should Be Counted in Green GDP?” *Ecological Economics*, 2006.

“Taxing Nutrient Loads,” 61 *Journal of Soil and Water Conservation*, with Sandra Hoffman and Eleanor McCormick, 2006.

“Political Economy and the Efficiency of Compensation for Takings,” 24 *Contemporary Economic Policy*, with Timothy Brennan, 2006.

- “Water Pollution Taxes: A Good Idea Doomed to Failure?” 3 *Public Finance and Management*, 2003.
- “Trading Cases: Protecting the Environment and Natural Resources with Market-Based Policies,” 37 *Environmental Science and Technology*, 2003, with Dallas Burtraw, Alan Krupnick, Virginia McConnell, Richard G. Newell, Karen Palmer, James N. Sanchirico, and Margaret Walls.
- “Fly By Night or Face the Music? Premature Dissolution and the Desirability of Extended Liability,” 5 *American Law and Economics Review*, 2003, with Dan Ingberman.
- “Landscape Indicators of Ecosystem Service Benefits,” 84 *American Journal of Agricultural Economics*, 2002, with Lisa Wainger.
- “Financial Responsibility for Environmental Obligations: Are Bonding and Assurance Rules Fulfilling Their Promise?” 20 *Research in Law and Economics*, 2002.
- “The Economics of Tailored Regulation: Will Voluntary Site-Specific Performance Standards Necessarily Improve Welfare?,” 69 *Southern Economic Journal*, 2002, with Allen Blackman.
- “Compensation for Lost Ecosystem Services: The Need for Benefit-Based Transfer Ratios and Restoration Criteria,” 20 *Stanford Environmental Law Journal*, 2001, with Dennis King and Lisa Wainger.
- “Wetland Value Indicators for Scoring Mitigation Trades,” 20 *Stanford Environmental Law Journal*, 2001, with Lisa Wainger, Dennis King, and James Salzman.
- “The New Face of the Clean Water Act: A Critical Review of the EPA’s New TMDL Rules,” *The Duke Environmental Law and Policy Forum*, Fall 2000.
- “The Law and Economics of Habitat Conservation: Lessons From an Analysis of Easement Acquisitions,” 19 *Stanford Environmental Law Journal*, 2000, with Kathryn Caballero and R. David Simpson.
- “Economics and Biodiversity Conservation Options: An Argument for Continued Experimentation and Measured Expectations,” 240 *Science of the Total Environment* 1999, with R. David Simpson.
- “Do Punitive Damages Promote Deterrence?,” 19 *International Review of Law and Economics*, 1999, with Daniel Ingberman.
- “The ‘Regulatory Compact’ and Implicit Contracts: Should Stranded Costs be Recoverable?,” 19 *The Energy Journal*, 1998.
- “‘Green Money’ In the Bank: Firm Responses to Environmental Financial Responsibility Rules”, 18 *Managerial and Decision Economics*, 1997.
- “The Search for Deep Pockets: Is ‘Extended Liability’ Expensive Liability?,” 13 *Journal of Law, Economics, and Organization*, 1997, with Daniel Ingberman.

- “Should ‘Relative Safety’ be a Test of Product Liability?,” 26 *Journal of Legal Studies*, 1997, with Daniel Ingberman.
- “Retroactive Liability or the Public Purse?,” 11 *Journal of Regulatory Economics*, 1997, with Howard Kunreuther.
- “Stranded Costs, Takings, and the Law and Economics of Implicit Contracts,” 11 *Journal of Regulatory Economics*, 1997, with Timothy Brennan.
- “Environmental Liability Reform and Privatization in Central and Eastern Europe,” 3 *European Journal of Law and Economics*, 1996.
- “The Polluter Pays Principle: Should Liability Be Extended When the Polluter Cannot Pay?,” 21 *The Geneva Papers on Risk and Insurance*, 1996, with Daniel Ingberman.
- “The Effects of Environmental Liability on Industrial Real Estate Development,” 12 *Journal of Real Estate Finance and Economics*, 1996, with Winston Harrington and Molly Macauley.
- “Non-Compensatory Damages and Potential Insolvency,” 23 *Journal of Legal Studies*, 1994, with Daniel Ingberman.
- “Risk, Liability, and Monopoly,” 1 *International Journal of the Economics of Business* 3, 1994.
- “Optimal New-Product Pricing in Regulated Industries,” *Journal of Regulatory Economics*, 1:4, 1989, with Gerald Faulhaber.

#### **BOOK CHAPTERS:**

- “Insights from Economics for Ecosystem-Based Management,” with Lisa Wainger, in *Ecosystem-Based Management for the Oceans*, Editors: Karen L. McLeod and Heather M. Leslie, Island Press, forthcoming.
- “Trading as a U.S. Water Quality Management Tool: Prospects for a Market Alternative,” with Leonard Shabman and Kurt Stephenson, in *Ecological Economics of Sustainable Watershed Management*, Jon Erickson, Frank Messner, and Irene Ring eds., Elsevier, 2007.
- “Taxonomy of Trading Programs: Concepts and Applications to TMDLs.” In *TMDLs: Approaches and Challenges*, Tamim Younos, ed., PennPress, 2005, with Kurt Stephenson and Leonard Shabman.
- “Bonding Requirements for Coal and Hardrock Mines in The U.S.,” in *International and Comparative Mineral Law and Policy: Trends and Prospects*, Elizabeth Bastida, Thomas Wälde and Janeth Warden eds., Kluwer Law, 2005.
- “Combating Ignorance About U.S. Water Quality,” in *New Approaches on Energy and the Environment*, Richard Morgenstern and Paul Portney, eds., Resources for the Future, 2004, with Leonard Shabman.

“A Market-Based Analysis of Financial Assurance Issues Associated with U.S. Natural Resource Damage Liability,” in *Tort and Insurance Law, vol. 5, Deterrence, Insurability and Compensation in Environmental Liability, Future Developments in the European Union*, Michael Faure ed., Springer 2003.

“The Effects of Environmental Liability on Industrial Real Estate Development” (reprinted from the *Journal of Real Estate Finance and Economics*, 1996, with Winston Harrington and Molly Macauley) and “Environmental Liability Reform and Privatization in Central and Eastern Europe” (reprinted from the *European Journal of Law and Economics*, 1996) in *Economics and Liability for Environmental Problems*, Kathleen Segerson ed., Ashgate, 2002.

“The Vertical Extension of Liability Through Chains of Ownership, Contract, and Supply,” in Anthony Heyes ed., *The Law and Economics of the Environment*, Edward Elgar, 2001, with Daniel Ingberman.

“The Barriers to Corporate Pollution Prevention: An Analysis of Three Cases,” in Scott Farrow and Paul Fischbeck, eds., *Improving Regulation: Cases in Environment, Health, and Safety*, Resources for the Future, 2001.

“Corporate Evaluation of Pollution Prevention Opportunities,” in Jurgen von Hagen and John Maxwell eds., *Empirical Studies of Environmental Policies in Europe*, Kluwer, 2000.

“The Competitive Implications of Facility-Specific Environmental Agreements: The Intel Corporation and Project XL,” in E. Petrakis, et al, eds., *Environmental Regulation and Market Power: Competition, Time Consistency, and International Trade*, Edward Elgar, 2000, with Janice Mazurek, Alan Krupnick, and Allen Blackman.

“The Allocation of Environmental Liabilities in Central and Eastern Europe,” in Michael Toman, *Pollution Abatement Strategies in Central and Eastern Europe*, Resources for the Future, 1994.

#### **OTHER PUBLICATIONS:**

“Box Cars and Breadlines Are No Way to Measure an Economy: A Plea for Environmental Accounts,” *Resources for the Future Policy Commentary*, January 19, 2009.

“Location, Location, Location: The Geography of Ecosystem Services,” *Resources*, Fall 2008.

“Don’t Measure, Don’t Manage: GDP and the Missing Economy of Nature,” RFF Issue Brief, May 2008.

“The Endpoint Problem,” *Resources*, 2007.

*CLEANER and NSF’s Environmental Observatories*, multiple authors, National Research Council, 2006.

“Ecosystem Services and Government Accountability: The Need for a New Way of Judging Nature's Value,” *Resources*, 2005, with Spencer Banzhaf.

“What’s Nature Worth? Using Indicators to Open the Black Box of Ecological Valuation,” *Resources*, 2004.

“Pushing the Political System for Change: An Interview with Bill McKibben,” *Resources*, 2003.

“Measuring Ecosystem Service Benefits for Wetland Mitigation,” *National Wetlands Newsletter*, November-December 2002, with Lisa Wainger.

Book review, Compensating for Wetland Losses Under the Clean Water Act, *Environment*, November 2002.

“Show Me the Money: Environmental Regulation Demands More, Not Less, Financial Assurance,” *Resources*, 2001.

“A Market-Based Analysis of Financial Assurance Issues Associated with U.S. Natural Resource Damage Liability,” annex to European Commission White Paper on Environmental Liability, 2000.

“Unleashing the Clean Water Act: The Promise and Challenge of the TMDL Approach to Water Quality,” *Resources*, 2000.

“Carving Out Some Space: A Guide to Land Preservation Strategies,” *Resources*, 1999, with Kathryn Caballero and R. David Simpson.

*Searching for the Profit in Pollution Prevention: Case Studies in the Corporate Evaluation of Environmental Opportunities*, U.S. Environmental Protection Agency: Washington, DC, EPA 742-R-98-005, April 1998.

“Intel's Project XL Agreement: Who Benefits?” *Semiconductor Fabtech*, Eighth Edition, 1998, with Alan Krupnick and Janice Mazurek.

“The Pollution Prevention Puzzle: Which Policies Will Unlock the Profits?,” *Resources*, 1998.

“La Ripartizione Delle Responsabilita Ambientali Nell'Europa Centrorientale,” *Energia*, 2, 1994, p. 42-47.

“The Impact of Environmental Liability on Industrial Real Estate Development,” *Resources*, 1994, with Molly Macauley.

## **WORKING PAPERS:**

“The Definition and Choice of Environmental Commodities for NonMarket Valuation,” *Resources for the Future Discussion Paper*, 2009, with Alan Krupnick.

“Counting Ecosystem Services: Ecological Endpoints and their Application: A Report to the U.S. Forest Service,” 2007.

- “Counting Non-Market, Ecological Public Goods: The Elements of a Welfare Significant Ecological Quantity Index,” Resources for the Future Discussion Paper, 2008.
- “The Architecture and Measurement of an Ecosystem Services Index,” with Spencer Banzhaf, Resources for the Future Discussion Paper 05-22, September 2005.
- “Habitat Benefits Assessment and Decisionmaking: A Report to the National Marine Fisheries Service,” with James Sanchirico and Leonard Shabman, Resources for the Future Discussion Paper 04-09, October 2004.
- “Global Compensation for Oil Pollution Damages: The Innovations of the American Oil Pollution Act,” Resources for the Future Discussion Paper 04-36, September 2004.
- “Measuring Ecosystem Service Benefits: The Use of Landscape Analysis to Evaluate Environmental Trades and Compensation,” with Lisa Wainger, Resources for the Future Discussion Paper 02-63, April 2003.
- “Financial Assurance Rules and Natural Resource Damage Liability: A Working Marriage?” Resources for the Future Discussion Paper 01-11.
- “Expanding Wetland Assessment Procedures: Landscape Indicators of Relative Wetland Value, with Illustrations for Scoring Mitigation Trades,” with Lisa Wainger and Dennis King.
- “Environmental Remediation Law and Economies in Transition,” Resources for the Future Discussion Paper 99-21.
- “Intel's XL Permit: A Framework for Evaluation,” Resources for the Future Discussion Paper 98-11, with Alan Krupnick and Janice Mazurek.

#### **HONORS, AWARDS, PUBLIC SERVICE:**

- Research Associate, Environment for Development Program, University of Gothenburg, 2008.
- Member, Scientific and Technical Advisory Committee, American Rivers, 2008.
- Tahoe Water Quality Crediting and Trading Project Advisory Committee, 2008.
- Member, U.S. EPA Science Advisory Board, Pollution Prevention Program Measures panel, Environmental Engineering Committee, 2008.
- Member, U.S. EPA Science Advisory Board, Ecological Processes and Effects Committee, Ecological Research Program Multi-Year Plan Review, 2008.
- Member, U.S. EPA Science Advisory Board, Committee on Valuing the Protection of Ecological Systems and Services, 2003-2009.

Member, Program Committee, Wildlife Habitat Policy Research Program, Doris Duke Charitable Foundation, 2006-2007.

Member, National Research Council, Committee on the Collaborative Large-Scale Engineering Analysis Network for Environmental Research (CLEANER), 2005.

Member, U.S. EPA Superfund Benefits Analysis Advisory Panel, 2005.

Member, U.S. Fish & Wildlife Service, Fisheries Program Evaluation Team, 2004.

Member, U.S. EPA Science Advisory Board, Panel to Examine Benefits, Costs, & Impacts to the Underground Storage Tanks (UST) and Resource Conservation Recovery Act (RCRA) Subtitle C Program, 2002.

MBA “Teacher of the Year,” the Reid Award, Olin Business School, Washington University, St. Louis, 1997.

Paul Harris Fellow, Rotary International, 2003.

#### **SAMPLE CONSULTING ACTIVITIES:**

“Assessing the Market Impacts and Benefits of RCRA Financial Assurance,” Office of Solid Waste and Emergency Response (Industrial Economics Inc.), 2005.

“Indicators of Environmental Benefits,” U.S. Air Force (Booz-Allen-Hamilton), 2005.

“A Market-Based Analysis of the Financial Assurance Issues of Environmental Liability,” European Commission, Brussels, 2000.

“Environmental Liability, Regulation, and Management: Selected Topics,” United States Information Agency, India, 1999.

“Collaborative Public-Private Approaches to Improved Environmental Management,” The World Bank, Economic Development Institute, 1998.

“A Proposed Remediation Framework for Romanian Environmental Cleanup Law,” The Harvard Institute for International Development, Romania, 1998.

“Privatization and Environmental Liability: A Training Program for Southern Latin America,” The World Bank, Economic Development Institute, 1995.

“Privatization and Environmental Liability Reform,” The Harvard Institute for International Development, Kazakhstan, 1995.

#### **TEACHING POSITIONS:**

Lokey Visiting Professorship of Human Biology, Stanford University, 2007-2008.

Visiting Professor, Business Strategy in the Legal and Regulatory Environment, John M. Olin School of Business, Washington University, St. Louis, 1997.

Duke University, Washington Summer Program, Environmental Policy Seminar, 1994, 1995.

Lecturer in Managerial Economics and Public Policy, the Wharton Business School, Business in the Political Environment (Business and Regulatory Economics) University of Pennsylvania, Spring 1991, Spring 1992.

Math and Microeconomics, Dept. of City and Regional Planning, Univ. of Pennsylvania, Summers 1990, 1991.

**REFeree:**

The Journal of Law, Economics, and Organization; The Journal of Legal Studies, The Journal of Environmental Economics and Management; Environmental Science and Technology; Journal of Public Economics; Journal of Regulatory Economics, International Review of Law and Economics; Choices; The Energy Journal; Environment and Resource Economics; Journal of Policy Analysis and Management; Journal of Industrial Ecology; Law and Policy; American Journal of Agricultural Economics, Ecological Economics, Bioscience.