

CURRICULUM VITAE

November 2014

VIRGINIA D. MCCONNELL

EDUCATION

Ph.D. 1978 University of Maryland, Economics
Fields in urban and environmental economics
B.A. 1969 Smith College, Economics

EXPERIENCE IN HIGHER EDUCATION

1995- 2014 UMBC, Professor, Economics Department
1989-1995 UMBC, Associate Professor, Economics Department
1982-1989 UMBC, Assistant Professor, Economics Department
1979-1982 University of Maryland College Park, Research Associate and Lecturer, Bureau
of Business and Economic Research
1975-1979 University of Rhode Island, Instructor, Department of Economics,

EXPERIENCE IN OTHER THEN HIGHER EDUCATION

Senior Fellow, Resources for the Future, Washington, D.C.
Resources for the Future, Washington, D.C.
Senior Fellow,
Gilbert White Research Fellowship, 1991-1992

HONORS RECEIVED

Gilbert White Research Fellowship, 1991-1992

RESEARCH SUPPORT

2013–2016	\$4 million	NSF Hazards SEESype2: In Hot Water and Harm's Way: Modeling to Promote Regional Resilience to Repeated Heat Waves and Hurricane (I am on one part of this effort through Resources for the Future)
2006-2011	\$5 million	Water and the Urban Environment, NSF IGERT grant. I was one of 5 co-PIs on this grant that brought in money for graduate students.
2008-2010	\$199,944	Virginia McConnell, PI; Elena Safirova and Margaret Walls, Co-P.I.s. <i>Can Markets for Development Rights Improve Land Use and Environmental Outcomes?</i> EPA STAR Grant, Market Mechanisms and Incentives: Case Studies and Experimental Testbeds for New Environmental Trading Programs, Part 1-Case Studies, USEPA-G2006-STAR-P1. \$199,944. Approved, April 2007.
2007-2008	\$10,000	Virginia McConnell, Robert Neff, Faculty advisors for student project, <i>Economic and Societal Feasibility of Efficiency Retrofits and Educational Campaigns for Increasing Sustainability of Pre-existing College Residence Halls</i> , funded under EPA grant, People, Prosperity and the Planet.

2004-2006 \$86,279 *Markets for Preserving Land in Maryland: Making TDR Programs Work Better*, Harry R. Hughes Center for Agroecology, University of Maryland.

Ph. D. Students, Chair of Committee and Major Advisor

Danielle Schwarzmann	2013	Measuring the Economic Benefits of Stream Restoration, UMBC Public Policy
Daniel Miles	2011	Essays on the Link Between Land Use, Development Density and Water Quality UMBC Public Policy
Keith Wiley	2009	The Effect of Infill Development on Property Values Infill Development, UMBC Public Policy
Francis Kelly, III	2006	Transferable Development Rights, and the Effects on Urban Jurisdictions and Land Preservation, UMBC Public Policy
Brenda Ortiz Bateman	2002	The Effect of Industrial Areas for Economic Development in the Phillipines

Ph.D. Students, Member of Committee

Nicholas Magliocca	2012	The Use of Agent-Based Models for Exploring Human-Environment Interactions in Land-Use Systems (Department of Geography and Environmental Systems)
Navid Gourdarzi	2014	Wind Resource Assessment Analysis Variable Electromotive-force Generators in Hybrid Vehciles and Wind Turbines, and Wind Tower Technologies (Department of Mechanical Engineering)

Master's Students, Major Advisor

Richard Bowers	2014	Accounting for Productivity and Spillover Effects in Emerging Energy Technologies: The Case of Wind Power
Amy Rayburn	2012	The Effect of Development on Chesapeake Bay Water Quality
Stephen Ross	2011	The Costs of Meeting Maryland's Renewable Energy Portfolio Standards through Wind
Shelley Stegman	2010	Consumer Valuation of Fuel Economy
Jeremy McKim	2006	Cluster Zoning: An Answer to Sprawl
Amanda Otis	2004	The Costs of Nitorgen Removal from Point Sources in the Ches Bay
Rob Rehrmann	2003	Towards an Understanding of the Effect of Racinos on Crime
Nick Kelly	2005	Valuing Recreation Benefits through the Travel Cost Method
Thane Harrison	2002	Subdivision Open Land Policy in Calvert, County Maryland

UNDERGRADUATE STUDENTS

Advisor to students on paper: *Measuring Energy Use: An Application to UMBC Apartments*, published in *UMBC Review*, Danielle Schwarzmann, Lee Roman, Danielle Lipinski, and Ashley Burton

Martina Kristianova The European Emissions Trading System, INDS, Major adivosr, 2010

PUBLICATIONS, PRESENTATIONS AND CREATIVE ACHIEVEMENTS**Peer-Reviewed Works***Journal Articles:*

- Nicholas R. Magliocca, Daniel G. Brown, Virginia D. McConnell, Joan I. Nassauer, Elizabeth Westbrook. 2013. Effects of alternative developer decision-making models on the production of ecological subdivision designs: Experimental results from an agent-based model. *Environment and Planning B* 41: 907 – 927.
- Matthias Cinyabuguma and Virginia McConnell, 2013. Urban Growth Externalities and Neighborhood Incentives: Another Cause of Urban Sprawl? With Matthias Cinyabuguma, *Journal of Regional Science*.
- Nicholas Magliocca, Virginia McConnell, Margaret Walls, and Elena Safirova. 2012. Zoning on the Urban Fringe: Impacts on Land Prices, House Prices, and Spatial Patterns of Development, *Regional Science and Urban Economics*, vol. 42. Pgs. 198-210. January.
- Elizabeth Kopits, Virginia McConnell and Daniel Miles. 2012. Lot size, Zoning and Household Preferences: Impediments to Smart Growth? *Housing Policy Debate* 22:2, pgs. 153-174.
- Nicholas Magliocca, Elena Safirova, Virginia McConnell and Margaret Walls. 2011. An Agent-Based Model of Coupled Housing and Land Markets, *Computers, Environment and Urban Systems*, 35(3): 183-191, May.
- Virginia McConnell and Margaret Walls, “Policy Monitor: U.S. Experience with Transferable Development Rights,” *Review of Environmental Economics and Policy*, Summer 2009.
- Elizabeth Kopits, Virginia McConnell, and Margaret Walls. 2008. “The Tradeoff Between Private Lots and Public Open Space in Subdivisions at the Urban-Rural Fringe,” *Regulation*, CATO Institute, Washington, D.C. May 2008.
- Elizabeth Kopits, Virginia McConnell and Margaret Walls, 2008. “Making Markets for Development Rights Work: What Determines Demand?” *Land Economics*, February 84(1): 1-16.
- Elizabeth Kopits, Virginia McConnell, and Margaret Walls. 2007. “The Tradeoff Between Private Lots and Public Open Space in Subdivisions at the Urban-Rural Fringe,” with. Published in Proceedings of the Annual meeting of the AAEA, *American Journal of Agricultural Economics*, 2007 89(5): 1191-1197.
- Virginia McConnell, Elizabeth Kopits and Margaret Walls, 2006. “How Well Can Markets for Development Rights Work? Evaluating a Farmland Preservation Program”, *Journal of Environment and Planning*, 49(5):631-652.
- Virginia McConnell, Margaret Walls, and Elizabeth Kopits, 2006. “Zoning, TDRs, and the Density of Development,” *Journal of Urban Economics* 59: 440-457.

- Virginia McConnell, Elizabeth Kopits, and Margaret Walls. 2005. "Farmland Preservation and Residential Density: Can Development Rights Markets Effect Land Use Change?" *Agricultural and Resource Economics Review*, 34/2 October: 131-144.
- Harrington, Winston and Virginia McConnell. 2003. Options for a Lighter Tread: Policy and Technology Options for Motor Vehicles. *Environment*. 45 (9), November: 21-38.
- Boyd, James, Dallas Burtraw, Alan Krupnick, Virginia McConnell, Richard G. Newell, Karen Palmer, James Sanchirico, and Margaret Walls. 2003. Trading Cases: Is trading credits in created markets a better way to reduce pollution and protect natural and protect natural resources? *Environmental Science and Technology* vol. 37 (11) June:217-223.
- Ando, Amy, Virginia McConnell and Winston Harrington. 2000. "Costs, Emission Reductions and Vehicle Repair: Evidence from Arizona," *Journal of Air and Waste Management* 50 April: 509-521.
- Amy Ando, Winston Harrington and Virginia McConnell, "Estimating Full IM240 Emissions from Partial Test Results: Evidence from Arizona," *Journal of the Air and Waste Management Association*, v 49, 1999 (1153-1167).
- Harrington, Winston, Virginia McConnell, and Amy Ando. 2000. "Are Vehicle Emission Inspection Programs Living Up to Expectations?" *Transportation Research Part D* 5.
- Anna Alberini, Winston Harrington and Virginia McConnell. 1996. "Estimating an Emissions Supply Function from Accelerated Vehicle Retirement Programs," *Review of Economics and Statistics*, v. 78 No.2: 251-265.
- Anna Alberini, Winston Harrington, and Virginia McConnell. 1995. "Determinants of Participation in Accelerated Vehicle Retirement Programs," *The Rand Journal of Economics*, Vol. 26, No. 1, Spring.
- Winston Harrington, Margaret Walls and Virginia D. McConnell. 1995. "Driving Our Way to Cleaner Air," *Issues in Science and Technology*, Winter.
- Winston Harrington and Virginia McConnell. 1994. "Modeling In-Use Vehicle Emissions and the Effects of Inspection and Maintenance Programs," *Journal of Air and Waste Management Association*, Vol. 44, No.6, June: 794-799.
- Gregory E. Schwarz and Virginia D. McConnell. 1993. "Local Choice and Wastewater Treatment Plant Performance," *Water Resources Research.*, Vol. 29, No. 6, June: 1589-1600.
- Virginia McConnell and Gregory Schwarz. 1992. "The Supply and Demand for Pollution Control: Evidence from Wastewater Treatment," *Journal of Environmental Economics and Management*, Vol. 23, June: 54-77.
- Virginia McConnell and Robert Schwab. 1990. "The Impact of Environmental Regulations on Industry Location Decisions: The Motor Vehicle Industry," *Land Economics*, Vol. 66, No. 1, February: 67-81.

- Anthony Barbera and Virginia McConnell. 1990. "The Impact of Environmental Regulations on Industry Productivity: Direct and Indirect Effects," *Journal of Environmental Economics and Management*, Vol. 18, January: 50-65.
- Virginia D. McConnell, "Costs and Benefits of Vehicle Emission Inspection: A Case Study of the Maryland Region." 1990. *Journal of Environmental Management*, Vol. 30, Winter: 1-15.
- Virginia D. McConnell, John H. Cumberland and Patrice Gordon. 1988. "Regional Marginal Costs and Economies of Scale in Municipal Waste Treatment: An Application to the Chesapeake Bay, *Growth and Change*, Vol. 19, No. 4, Fall: 1-13.
- Anthony J. Barbera and Virginia D. McConnell. 1987. "Effects of Pollution Control on Industry Productivity," *Journal of Industrial Economics*, Vol. 35, No. 2, January: 161-172.
- Virginia McConnell. 1986. "Automobile Use and Locational Interdependencies." *Journal of Regional Science*, Vol.26, No.3: 475-498.
- Virginia D. McConnell and Mahlon Straszheim. 1982. "Auto Pollution and Congestion in an Urban Model: An Analysis of Alternative Strategies", *Journal of Urban Economics*, Volume 11, January: 11-31.

Peer Reviewed Books:

- Transitions to Alternative Vehicles and Fuels*. 2013. Report of the Committee on Transitions to Alternative Vehicles and Fuels, Board on Energy and Environmental Systems, National Research Council. National Academies Press, Washington, D.C. Member of Committee and Co-author.
- Policy Options for Reducing Energy Use and Greenhouse Gas Emissions from U.S. Transportation, 2011*. Committee for a Study of Potential Energy Savings and Greenhouse Gas Reductions from Transportation. Transportation Research Board, Special Report 307. Member of Committee and co-author of study.
- Edited book, *Controlling Automobile Air Pollution*, co-editors Winston Harrington and Virginia McConnell. Volume is part of the series *The International Library of Environmental Economics and Policy*, Thomas Tietenberg, editor. Ashgate Publishers. 2007.
- State Practices for Setting Environmental Standards*. National Academy of Sciences, National Research Council, Board on Environmental Studies and Toxicology, Co-author and member of Review Panel State Practices for Setting Environmental Standards. April 2006.
- Evaluating Vehicle Emissions Inspection and Maintenance Programs*, co-author as member of National Research Council, National Academy of Sciences, 2001.

Peer Reviewed Book Chapters:

- V. McConnell and K. Wiley. 2011. Infill Development: Perspectives and Evidence from Economics and Planning, in the *Oxford Handbook of Urban Economics and Planning*, Gerrit Knaap, Kieran Donaghy, and Nancy Brooks, editors. Oxford University Press.
- Winston Harrington and Virginia McConnell, "Vehicles and the Environment", Chapter 5 of *The International Yearbook of Environmental and Resource Economics, 2003/2004: A Survey of Current Issues*, edited by Henk Folmer and Tom Tietenberg, Edward Elgar, 2003.
- Winston Harrington and Virginia McConnell, "Coase and Car Repair: Who Should Be Responsible for Emissions Of Vehicles In Use?" in *Property Rights, Economics and the Environment*, edited by Michael D. Kaplowitz, JAI Press, Stamford, Connecticut, 2000.
- Anna Alberini, David Edelstein and Virginia McConnell, "Will Speeding the Retirement of Old Cars Improve Air Quality?" Wallace E. Oates, editor, *The RFF Reader in Environmental and Resource Management*, Resources for the Future, Washington, D.C. 1999.
- David Austin, Alan Krupnick, Virginia McConnell, "Trans-Boundary Airshed Management as an Approach to Trans-Boundary Water Cooperation: The Case of the Chesapeake Bay," Richard Just and Sinaia Netanyahu, eds. *Conflict and Cooperation on Trans-Boundary Water Resources*, (Kluwer Academic Publishers) 1998.
- Winston Harrington, Virginia McConnell and Anna Alberini, "Economic Incentive Policies under Uncertainty: The Case of Vehicle Emission Fees," in Kenneth Small and Roberto Roson, eds. *Environment and Transport in Economic Modeling* (Kluwer Academic Publishing, Amsterdam) 1998.
- Winston Harrington, Virginia McConnell and Margaret Walls, "Who's in the Driver's Seat? Mobile Source Policy in the Federal System," John Braden and Stef Proost, eds., *Climate Change, Transport and Environmental Policy: Empirical Applications in a Federal System*, (Edward Elgar Publishing: London). 1998.
- Winston Harrington and Virginia D. McConnell, "Cost Effectiveness of Remote Sensing of Vehicle Emissions," in *Cost Effective Control of Urban Smog* (Federal Reserve Bank of Chicago: Chicago, Illinois), November 1993.

Conference Proceedings

- Nicholas Magliocca, Elena Safirova, Virginia McConnell, and Margaret Walls, An Agent-Based Model with Coupled Housing and Land Markets, *Proceedings of the International Congress on Modelling and Software*, Ottawa, Canada, July 5-8, 2010.

Non-Peer-Reviewed Works:**Articles in Magazines and Journals**

- Alan Krupnick, Josh Linn and Virginia McConnell, "Preparing for the Midterm Review of the Fuel Economy and Greenhouse Gas Emissions Rate Standards for Light Duty Vehicles", *Resources*, Fall 2014.
- Josh Linn and Virginia McConnell, "How Electric Cars can Increase Greenhouse Gases". *Resources* 2013 (184).
- Virginia McConnell. 2006. "Should States be Allowed to Set Emissions Standards for Mobile Sources of Pollution?" *Resources*, Washington, D.C. Fall: 4.
- Virginia McConnell, Margaret Walls and Elizabeth Kopits. 2006. "Explaining Sprawl: How Much Does Zoning Matter?" *Resources*, Resources for the Future, Washington D.C. Spring: 16-19.
- Elizabeth Kopits, Virginia McConnell and Margaret Walls. 2003. "Using Markets to Preserve Farms and Open Space," *Resources*, Resources for the Future, Washington, D.C. June.
- Winston Harrington, Margaret Walls and Virginia D. McConnell, "Use Market Forces to Reduce Auto Pollution," *Chemtech*, Vol. 25, No. 5, May, 1995.
- Anna Alberini and Virginia D. McConnell, "Will Speeding the Retirement of Old Cars Improve Air Quality," *Resources*, No. 115 (Resources for the Future: Washington, D.C.), Spring 1994.
- Winston Harrington and Virginia D. McConnell, "Vehicle Emissions Inspection and Maintenance: Where Do We Go From Here?" *Resources*, No. 110 (Resources for the Future: Washington, D.C.), Winter 1993.

Discussion Papers

- "The New CAFE Standards: Are they Enough on Their Own?" RFF Discussion paper 13-14. Washington, D.C. May 2013.
<http://www.rff.org/Publications/Pages/PublicationDetails.aspx?PublicationID=22180>
- Matthias Cinyabuguma and Virginia McConnell, Urban Growth Externalities and Neighborhood Incentives, 2012. Resources for the Future Discussion Paper, 12 – 21, April.
<http://www.rff.org/RFF/Documents/RFF-DP-12-21.pdf>
- Nicholas Magliocca, Virginia McConnell, Margaret Walls, and Elena Safirova. Explaining Sprawl with an Economic Agent-Based Model of Land and Housing Markets. RFF Discussion Paper, 11-32. <http://www.rff.org/RFF/Documents/RFF-DP-11-32.pdf>
- Nicholas Magliocca, Virginia McConnell, and Margaret Walls. Zoning on the Urban Fringe: Impacts on Land Prices, House Prices, and Spatial Patterns of Development, 2012. RFF Discussion Paper, 11-32. <http://www.rff.org/RFF/Documents/RFF-DP-11-32.pdf>
- Virginia McCoell and Tom Turrentine. *Should Hybrid Vehicles be Subsidized?* 2010. Background paper for RFF-NEPI Project: *Toward a National Energy Project: Assessing the Options*. Resources for the Future.

Elizabeth Kopits, Virginia McConnell, and Daniel Miles. *Lot Size, Zoning and Household Preferences: Impediments to Smart Growth?* Resources for the Future Discussion Paper, 09-15, April 2009. <http://www.rff.org/RFF/Documents/RFF-DP-09-15.pdf>

Elizabeth Kopits, Virginia McConnell, and Margaret Walls. "Making Markets for Development Rights Work: What Determines Demand?" Resources for the Future Discussion Paper, RFF, Washington, D.C. October 2005. DP05-45.

Virginia McConnell, Margaret Walls, and Elizabeth Kopits. "Zoning, TDRs and the Density of Development" Resources for the Future Discussion paper, Washington, D.C. July 2005. DP05-32-rev.

Virginia McConnell and Margaret Walls. 2005. "The Value of Open Space: Evidence from Studies of Non-Market Benefits", Working paper, Lincoln Institute for Land Policy, <http://www.rff.org/rff/Documents/RFF-REPORT-Open%20Spaces.pdf> and RFF Report, January 2005. <http://www.rff.org/rff/Documents/RFF-REPORT-Open%20Spaces.pdf>

Margaret Walls and Virginia McConnell. 2003. "Incentive Based Land Use Policies and Water Quality in the Chesapeake Bay," Issue Paper for National Oceanographic and Atmospheric Administration and RFF Discussion Paper, December.

Virginia McConnell, Margaret Walls, and Elizabeth Kopits. How Well Can Markets for Development Rights Work? Evaluating a Farmland Preservation Program, RFF Discussion Paper, March 2003. <http://www.rff.org/rff/Documents/RFF-DP-03-08.pdf>

Reports

Plug-In Electric Vehicles: Hype or Reality? Report of an Expert Panel. January 2011. Member, Transportation Electrification Panel.

Margaret Walls and Virginia McConnell. 2007. *Transfer of Development Rights in U.S. Communities: Evaluating Program Design, Implementation and Outcomes*, Bound Report, Resources for the Future. Also available on the http://www.farmlandinfo.org/farmland_preservation_literature/

Virginia McConnell, Margaret Walls, Francis Kelly. 2007. *Markets for Preserving Farmland in Maryland: Making TDR Programs Work Better.* Report Prepared for the Maryland Center for Agroecology. February. Queenstown, Maryland.

Review of the Colorado AIR program, with Alison Pollack of Environ Corporation, Tom Wenzel of Lawrence Berkeley Labs, and Joel Schwartz, of the Reason Foundation. May 2003.

Winston Harrington and Virginia McConnell, 2003. *Vehicles and the Environment*, Resources for the Future Report, Washington, D.C.

Winston Harrington, Virginia McConnell, and Matt Cannon, "A Behavioral Analysis of EPA's Mobile Emission Factor Model," U.S. Department of Transportation, Federal Highway Administration Report, June 1998.

Other Manuscripts

Measuring Residential Energy Consumption: Engineering versus Actual Energy Savings. With Rob Neff and Danielle Schwartzmann, UMBC draft manuscript, October 2009.

Other Communications**Blogs**

Alan Krupnick, Josh Linn, Virginia McConnell. Four part blog series on *Common Resources*, title: Preparing for the Midterm Review of the Fuel Economy and Greenhouse Gas Emissions Rate Standards for Light Duty Vehicles. Spring 2014.

Josh Linn and Virginia McConnell. Five part blog series on *Common Resources*, title: Myths, Realities and Policy: Electric Vehicles. July to September, 2013.

Heard on National Public Radio, Marketplace. Commentary: We'd all benefit from higher gas prices. December 8, 2008.

Commentary for Resources for the Future Website. *Preservation and Development: Can TDRs Improve Land Markets*. With Margaret Walls. June 16, 2008.

Finding the Right Drivers for Cleaner Cars: Controlling Automobile Air Pollution. RFF web page that describes book by Harrington and McConnell. December 3, 2007.

Telephone interview with Seth Feaster of the New York Times business section, on vehicles fuel use, and vehicle fleet turnover, May 29, 2008.

Television interview with WSB-TV Atlanta, Georgia on vehicle emissions inspection programs and air quality. Interview in Washington, D.C. on October 9, 2007.

Works Submitted or In Preparation

Nicholas Magliocca, Virginia McConnell, and Margaret Walls. Explaining Sprawl with an Economic Agent-Based Model of Land and Housing Markets. Revised and resubmitted to *Ecological Economics*, February 2014

Presentations and Other Professional Activities

Session Chair and discussant: Regional Science Association International meetings, Washington, D.C. November 14, 2014. Session title: *Disasters, Resilience and Risk*.

Invited Presentation, Conference on the Future of Electric Vehicles in the Southeast, University of Tennessee. 2012

- Chair of section: Urban Land Use Regulation and Policy. APPAM 34th Fall Research Conference, Baltimore Maryland, November 9, 2012.
- Zoning on the Urban Fringe: Impacts on Land Prices, House Prices, and Spatial Patterns of Development, with Nicholas Magliocca, Elena Safirova, and Margaret Walls, paper presented at the World Congress of Environmental and Resource Economists, Montreal Canada, July 2, 2010.
- Nicholas Magliocca, Virginia McConnell, Elena Safirova, and Margaret Walls, "An Economic Urban Growth Model with Agent-based Housing and Land Markets," Seminar at Resources for the Future, March 2010.
- Nicholas Magliocca, Virginia McConnell, Elena Safirova, and Margaret Walls, "An Economic Urban Growth Model with Agent-based Housing and Land Markets," Paper presented at 56th Meetings of the North American Regional Science Association International, November 2009.
- Paper Presentation, Urban Growth Externalities and Neighborhood Incentives: Another Cause of Urban Sprawl? American Economic Association meetings. San Francisco, California January 2009.
- Paper Presentation, Urban Growth Externalities and Neighborhood Incentives: Another Cause of Urban Sprawl? Regional Science Association International, Brooklyn, New York, November 2008.
- Invited speaker, 7th Annual New Partners for Smart Growth: Building Safe, Healthy and Livable Communities, February 9, 2008, Washington, D.C. Presentation: Do TDRs Really Help Smart Growth? What Works and What Doesn't.
- Paper presentation for Smart Growth @ 10 Conference, sponsored by University of Maryland Center for Smart Growth and Resources for the Future. University of Maryland University College, October 4 and 5, 2007. Paper title: Lot size, Zoning and Household Preferences: Impediments to Smart Growth? With Elizabeth Kopits and Daniel Miles.
- Elizabeth Kopits, Virginia McConnell, and Margaret Walls. "The Tradeoff between Private Lots and Public Open Space in Subdivisions at the Urban-Rural Fringe." Presentation at the American Association of Agricultural Economics, Portland, Oregon, July 2007.
- Presentation for conference Land Use Forum for Local Governments. June 13, 2007, Linthicum, Maryland. Presentation: "Markets for Preserving Farmland in Maryland: Making TDR Programs Work Better."
- Paper Presentation, "Private Lots and Public Open Space in Subdivisions at the Urban Fringe," Semi-Annual Meetings of the American Real Estate and Urban Economics Association May 2007.
- Moderator for Panel, *Regulation, Markets and Choice in Metropolitan Land Use*. First Wednesday Seminar Series, Resources for the Future. March 1 2006.

Invited expert, Workshop on Financing Land Conservation in Talbot County, Environmental Finance Center, University of Maryland, Chesapeake College Amphitheater, June 22, 2005.

Seminar speaker, "TDRs, Density of Development and Land Preservation," given at the Center for Urban Environmental Research and Education, UMBC, Baltimore Maryland, February 11, 2005.

Presented paper on analysis of Calvert County TDR program to experts from around the State of Maryland about the use and design of TDR programs. June 26, 2003 at Maryland Department of Natural Resources.

Seminar presentation "Is there a Role for TDRs in Land Use Preservation?" Resources for the Future, seminar series, May 7, 2003.

One of three speakers from different disciplines for Mosaic Panel, University-wide forum on Air Pollution in the Baltimore Region, UMBC April 2003.

Presentation of the Recommendations of the Workgroup on Innovative and Incentive Policies to the Clean Air Advisory Committee, Mobile Sources Technical Advisory Subcommittee of USEPA, Washington, D.C. January 2001.

Discussant, Meetings of the American Economic Association, Session title "Responses of Firm and Agencies to Environmental Regulation," New Orleans, January 2001.

Presentation to the Meeting of the National Academy of Sciences, NAS, Research on Vehicle Emissions: Costs and Effectiveness of I/M Programs," Washington, D.C., fall 2000.

Testimony before the Environmental Matters Committee of the Maryland House of Delegates, "The Role of Vehicle Emission Inspection and Maintenance in Maryland Under the Clean Air Act," July 11, 1995.

"Shifting Gears: New Directions for Cars and Clean Air," meeting of urban transportation policy makers and academics, Atlanta, Georgia, October 1994.

Moderator for Focus Groups, on "Public Perception and Acceptance of Emission Fees in Southern California," Los Angeles, October 1994.

Testimony before the Environmental Matters Committee of the Maryland House of Delegates, "Economic Issues in Recycling Solid Waste," September 1991.

Public Service

To the Profession and the Community

National Academy Panels

National Research Council, Board on Energy and Environmental Systems, *Committee to Evaluate CAFE II*, 2012 – 2015.

National Research Council, Board on Energy and Environmental Systems, *Committee on Transitions to Alternative Vehicles and Fuels*, 2010 – 2012.

Member, Transportation Research Board of the National Academies, *Committee for the Study of Potential Energy Savings and Greenhouse Gas Reductions from Transportation*, 2008-2009. This committee is looking the possible ways to reduce and costs of reduction from transportation sources over the next 30 years in the U.S.

National Academy of Sciences, Board on Environmental Studies and Toxicology, Commission on Life Sciences, *Committee to Review State Practices for Setting Environmental Standards*. 2004 – 2006.

National Academy of Sciences, Board on Environmental Studies and Toxicology, Commission on Life Sciences, *Committee to Review the Effectiveness of Vehicle Emission Inspection and Maintenance Programs*, 2000-2001. Evaluating Vehicle Emission Inspection and Maintenance Programs

Member, *The Transport Electrification Panel*, School of Public and Environmental Affairs, Indiana University, John Graham, chair. May 2010- December 2010.

Review Panel, National Cooperative Highway Research Program. Review proposals for grant: *Effects of Changing Transportation Energy Supplies and Alternative Fuel Sources on State Departments of Transportation*, Project 20-83(04). Transportation Research Board, National Academy of Sciences, 2009.

Member, EPA Science Advisory Board, Advisory Council on Clean Air Compliance Analysis. 2004-2008. Reviewed EPA's *Benefits and Costs of the Clean Air Act 1990-2020: Revised Analytical Plan for EPA's Second Prospective Analysis*, and *Estimating the Public Health Benefits of Proposed Air Pollution Regulations*.

Co-Chair of the President's Climate Commitment Task Force, with Lynne Schaefer, Provost, UMBC, Baltimore, Maryland. Appointed December 2007. Part of the Association of Colleges and Universities commitment to reduce greenhouse gas emissions on college campuses, and provide education, training and innovation on global climate issues.

Member of EPA Review Committee, Review of Procedures for Grant Review, Science Advisory Board, EPA. October 14-15, 2006.

Member of the EPA Science Advisory Board, Advisory Council on Clean Air Compliance Analysis. 2003 – 2007.

Member of the Adhoc Air Workgroup to Examine Voluntary Controls to Limit Ozone in the Maryland Region, Spring 2003.

Clean Air Advisory Committee, Mobile Sources Technical Advisory Subcommittee, U.S. Environmental Protection Agency, 1994-2002. Co-Chair of Mobile Source Innovative and Incentive Policies Workgroup, 1997-1999. Member of the Non-Road Diesel Vehicle Workgroup,

Clean Air Advisory Committee, Mobile Sources Technical Advisory Subcommittee, USEPA, 2001.

Air Quality Subcommittee, Scientific and Technical Advisory Committee on the Chesapeake Bay, U.S. Environmental Protection Agency, Chesapeake Bay Program, 1993-2002.

Association of Environmental and Resource Economics, Contributed Papers Selection Committee for Annual Meetings, 1993-1995.

Referee/Reviewer for:

Review Panel, National Cooperative Highway Research Program, Review Proposals for *Effects of Changing Transportation Energy Supplies and Alternative Fuel Sources on State Departments of Transportation*, Project 20-83(04). Transportation Research Board, National Academy of Sciences, 2009.

Reviewer for National Academy of Science. *Review of Models in Environmental Regulatory Decision-Making*. January 2007.

Referee for Journals: *Energy Policy*, *Journal of Regional Science*, *Regional Science and Urban Economics*, *Brookings Institution*, *Environmental Science and Technology*, *Journal of Urban Economics*, *Journal of the Air & Waste Management Association*, *Journal of Policy Analysis and Management*, *Journal of Environmental Economics and Management*, *Review of Regional Studies*, *Land Economics*, *Marine Resource Economics*, *Water Resources Research*, *International Economic Review*, *Environment and Planning*, *Contemporary Economic Policy*.

Review Panel, University of California Santa Barbara, project title: "The Petroleum Extraction Industry in Ventura, Santa Barbara, and San Luis Obispo Counties California: Economic, Fiscal, Institutional, Social and Historic Considerations 1997-98.

Editorial Board , *Journal of Environmental Economics and Management*, 1996-97.

Project Reviewer for National Science Foundation, Sea Grant.