

Charles Griffiths, Economist for EPA's [National Center for Environmental Economics](#)

Research Interests: Benefit-cost analysis; water quality valuation; climate change damage estimation; compliance and enforcement; voluntary programs

Biography: Charles Griffiths has been an economist at the National Center for Environmental Economics at the U.S. EPA since 1997. He provides economic analysis and expertise to support a wide range of policy actions, including water quality regulations and efforts to quantify the economic benefits of water quality changes; regulations addressing air pollutants, including controls of criteria pollutants and greenhouse gas emissions; reporting on the economic costs of Agency regulatory actions as required under Executive Order 13771; and economic issues arising in the context of the Agency's enforcement and compliance assistance programs (e.g., relationship of enforcement penalties to the avoided costs from noncompliance with regulations). Charles was the senior economist for environmental and natural resource issues at the Council of Economic Advisers in 2007-2008. He was a Visiting Assistant Professor in the economics department at Gettysburg College (2000-2001) and continues to serve as a Lecturer for the economics department at the University of Maryland-College Park (2013-present) and the Advanced Academic Programs at Johns Hopkins University (2007-present). Prior to joining NCEE, Charles was a consultant for The World Bank (1993-1996), and a research assistant for the Interindustry Forecasting Project at the University of Maryland-College Park (1990-1993). Charles has a BA in economics (1986) from Gettysburg College, a MS in economics at the University of Zimbabwe (1988) and completed his PhD in economics (1997) from the University of Maryland-College Park.

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Recent [NCEE Working Paper Series](#)

"[Modeling the Property Price Impacts of Water Quality in 14 Chesapeake Bay Counties](#)," (with Dennis Guignet, Patrick Walsh and Heather Klemick), NCEE Working Paper, 2015-07.

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"[The Implicit Price of Aquatic Grasses](#)," (with Heather Klemick, Dennis Guignet, Patrick J. Walsh), NCEE Working Paper, 2014-06.

"[The 'Social Cost of Carbon' Made Simple](#)," (with Chris Moore, Steve Newbold, Ann Wolverton and Elizabeth Kopits), NCEE Working Paper, 2010-07.

"[Asthma Medication Use and Air Pollution in California: A Cross-Sectional Analysis](#)," (with Nathalie Simon and Tracey Woodruff), NCEE Working Paper, 2009-06.

["Evaluating the Effectiveness of EPA Voluntary Programs: An Examination of the Strategic Goals Program for Metal Finishers,"](#) (with Keith Brouhle and Ann Wolverton), NCEE Working Paper, 2007-06.

["A Note on Transde et al., "Public Health and Economics Consequences of Methylmercury Toxicity to the Developing Brain,"](#) (with Al McGartland and Maggie Miller), 2006-04.

["The Use of Voluntary Approaches for Environmental Policymaking in the U.S.,"](#) (with Keith Brouhle and Ann Wolverton), NCEE Working Paper, 2004-05.

Peer-Reviewed Publications:

["Adaptation, Sea Level Rise, and Property Prices in the Chesapeake Bay Watershed."](#) (with Patrick Walsh, Dennis Guignet, and Heather Klemick). *Land Economics*, 95(1): 19-34. 2019

["The Implicit Price of Aquatic Grasses,"](#) (with Dennis Guignet and Patrick Walsh). *Marine Resource Economics*, 32(1), 2017.

["Improving Water Clarity in an Iconic Estuary: An Internal Meta-analysis of Property Value Impacts around the Chesapeake Bay,"](#) (with Dennis Guignet and Patrick Walsh). *Environmental and Resource Economics*, 2016.

["Incremental CH₄ and N₂O Mitigation Benefits Consistent with the US Government's SC-CO₂ Estimates,"](#) (with Alex Marten, Elizabeth Kopits and Ann Wolverton), *Climate Policy*, 15(2), pp. 272-298, May 2014

["Further comment on "A Rapid Assessment Model for Understanding the Social Cost of Carbon,"](#) (with Steve Newbold, Chris Moore, Ann Wolverton and Elizabeth Kopits), *Climate Change Economics*, 5(2), 2014.

["Improving the assessment and valuation of climate change impacts for policy and regulatory analysis"](#) (with Alex L. Marten & Robert E. Kopp, Kate C. Shouse, Elke L. Hodson, Bryan K. Mignone, Chris Moore, Steve C. Newbold, Stephanie Waldhoff and Ann Wolverton). *Climatic Change* 117(3), pp. 433-438, April 2013.

["A Rapid Assessment Model for Understanding the Social Cost of Carbon,"](#) (with S. Newbold, C. Moore, A. Wolverton and E. Kopits), *Climate Change Economics*, 4(1), pp. 1-40, February 2013.

["U.S. Environmental Protection Agency Valuation of Surface Water Quality Improvements,"](#) (with Heather Klemick, Matt Massey, Chris Moore, Steve Newbold, David Simpson, Patrick Walsh and William Wheeler), *Review of Environmental Economics and Policy*, 6(1), pp 130-146, 2012.

["Evaluating the Effectiveness of EPA Voluntary Programs: An Examination of the Strategic Goals Program for Metal Finishers"](#) (with Keith Brouhle and Ann Wolverton), *Journal of Environmental Economics and Management*, 57(2), pp. 166-18, March 2009.

["A Comparison of the Monetized Impact of IQ Decrements from Mercury Emissions,"](#) (with Al McGartland and Maggie Miller), *Environmental Health Perspectives*; 115(6), pp. 841-847, June 2007.

["Clean Water, Ecological Benefits, and Benefits Transfer: A Work in Progress at the U.S. EPA,"](#) (with Rich Iovanna). *Ecological Economics*, 60(20), pp. 473-482, December 2006.

["Risk Assessment for Benefits Analysis: Framework for Analysis of a Thyroid-Disrupting Chemical,"](#) (with Daniel Axelrad, Karl Baetcke, Chris Dockins, Richard Hill, Patricia Murphy, Nicole Owens, Nathalie Simon, and Linda Teuschler). *Journal of Toxicology and Environmental Health, Part A*, 68, pp. 1–19, June 2005.

["Economic Implications of Hormesis in Policy Making,"](#) *Human and Experimental Toxicology*. 23(6): pp. 281-283, 2004.

["Linking Economics and Risk Assessment"](#) (with Nicole Owens, Nathalie B. Simon, and Daniel Axelrad), *Journal of Toxicology and Environmental Health*, 67(8-10), pp. 611-620, 2004.

["What to Do at Low Doses: A Bounding Approach for Economic Analysis"](#) (with Nicole Owens, Nathalie B. Simon and Daniel A. Axelrad), *Risk Analysis: An International Journal*, 22(4), pp. 679-688, 2002.

["An Economic Analysis and Simulation of Woodfuel Management in the Sahel"](#) (with Ken Chomitz), *Environmental & Resource Economics*, 19(3), pp. 285-304, July 2001.

["Predicting the Location of Deforestation: The Role of Roads and Protected Areas in North Thailand,"](#) (with Maureen Cropper and Jyotsna Puri), *Land Economics*, 77(2), pp. 172-186, May 2001.

["Roads, Population Pressures and Deforestation in Thailand, 1976-1989,"](#) (with Maureen Cropper and Muthukumara Mani), *Land Economics*, 75(1), pp. 58-73, February 1999.

["The Interaction of Population Growth and Environmental Quality,"](#) (with Maureen Cropper), *The American Economic Review*, 84(2), pp. 250-254, May 1994

Select EPA and Other Publications:

"The Social Cost of Carbon: Valuing Carbon Reductions in Policy Analysis,." (with Elizabeth Kopits, Alex Marten, Chris Moore and Ann Wolverton), In [Fiscal Policy to Mitigate Climate Change: A Guide for Policymakers](#), I.W.H. Parry, R. de Mooij, and M. Keen, eds. International Monetary Fund, 2012.

"The Clean Water Act," In [*Environmental and Natural Resource Economics: An Encyclopedia*](#), John C. Whitehead and Timothy C Haab, editors, 2014.

"[Estimating the 'Social Cost of Carbon' for Regulatory Impact Analysis](#)," (with Elizabeth Kopits, Alex Marten, Chris Moore, Steve Newbold, and Ann Wolverton) Resources for the Future: Weekly Policy Commentary. November 5, 2010.

"The Use of Voluntary Approaches for Environmental Policymaking in the U.S." (with Keith Brouhle and Ann Wolverton), [*The Handbook of Environmental Voluntary Agreements*](#), E. Croci, ed. Kluwer Academic Publisher. 2005.

"Benefit-Cost Analysis of U.S. Regulations Affecting Surface Water Quality," (with William Wheeler), [*Cost-Benefit Analysis and Water Resources Management*](#), Roy Brouwer and David Pearce, eds. Edward Elgar Publishing, 2005.