

## Timothy M. Barzyk, Research Physical Scientist, in EPA's National Exposure Research Laboratory

Computational Exposure Division

[Mailing Address](#)

[barzyk.timothy@epa.gov](mailto:barzyk.timothy@epa.gov)

**Area of Expertise:** Tim researches, designs, and applies local scale air quality models, portable sensor technologies and citizen science, and decision analysis techniques to inform environmental health assessments and support evidence-based decision making. His research leverages both regulatory and non-regulatory approaches to improving environmental conditions and engaging a broad range of stakeholders, including public residents, local and federal agencies, community organizations, and academic institutions. Tim's work on environmental health assessments acknowledges that local social and economic considerations are also important to develop cross-cutting approaches and evidence-based decisions to improve environmental health.

### Select Publications:

Huang H, Barzyk TM (2016). Connecting conventional and cumulative risk assessment methods to evaluate effects of environmental justice indicators on exposure and dose. *International Journal of Environmental Research and Public Health*, 14 (24).

Barzyk TM, Williams R, Kaufman A, Greenberg M, O'Shea M, Sheridan P, Hoang A, Teitz A, Ash C, Mustafa M, Garvey S (2016). Citizen Science Air Monitoring in the Ironbound Community. EPA Report. EPA/600/R-16/049.

Arunachalam S, Brantley H, Barzyk TM, Hagler G, Isakov V, Kimbrough ES, Naess B, Rice N, Snyder MG, Talgo K (2015). Assessment of port-related air quality impacts: geographic analysis of population. *International Journal of Environmental Research and Public Health*, 58(4), 231-250.

Barzyk TM, Wilson S, Wilson A (2015). Community, State, and Federal Approaches to Cumulative Risk Assessment: Challenges and Opportunities for Integration. *International Journal of Environmental Research and Public Health*, 12(5), 4546-4571.

Barzyk TM, Isakov V, Arunachalam S, Venkatram A, Cook R, Naess B (2015). A Near-Road Modeling System for Community-Scale Assessments of Traffic-Related Air Pollution in the United States. *Environmental Modelling & Software*, 66, 46-56.

Barzyk TM, Ciesielski A, Shores RC, Thoma ED, Seila RL, Isakov V, Baldauf RW (2012). Near-Road Multipollutant Profiles: Associations between Volatile Organic Compounds and a Tracer Gas Surrogate Near a Busy Highway. *Journal of the Air and Waste Management Association*, 62, 594-603.

View more research publications by [Timothy Barzyk](#).

**Education:**

- Ph.D. Geophysical Sciences, The University of Chicago, 2006
- M.S. Environmental Science & Public Policy, Irving B. Harris Graduate School of Public Policy Studies, The University of Chicago, 2002
- B.S. Geology with Mathematics minor, Indiana State University, 1998

**Professional Experience:**

- 2007-Present: Research Physical Scientist, EPA Office of Research and Development, National Exposure Research Laboratory, Computational Exposure Division, Research Triangle Park, NC
- 2006-2007: EPA Post-Doctoral Researcher, ORD/NERL Human Exposure and Atmospheric Sciences Division, Research Triangle Park, NC
- 2002-2006: Graduate Teaching Assistant, The University of Chicago, Department of Geophysical Sciences, including Atmospheric Chemistry and Air Quality, Climate Dynamics of Earth and Other Planets, Global Warming: Understanding the Forecast
- 2004: Lab Demonstrator, Geophysical and Environmental Fluid Dynamics Summer School, University of Cambridge, UK
- 2000-2001: Environmental Policy Internship, Carlson Environmental, Chicago, IL
- 1999-2000: Groundwater Remediation Technician, Handex Consulting and Remediation, LaPorte, IN