

Richard W. Baldauf, Physical Scientist/Engineer in EPA's National Risk Management Research Laboratory

Air and Energy Management Division

[Mailing Address](#)

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Area of Expertise:

Development of policies and practices to mitigate transportation-related air pollution emissions and air quality impacts at local, urban, and global scales. His research has led to national emissions standards and best practices to mitigate air pollution impacts using air pollution control and urban development strategies including built and green infrastructure.

Selected Publications

Yang, B., Zhang, K.M., Xu, W.D., Zhang, S., Batterman, S., **Baldauf, R.W.** 2018. [On-Road Chemical Transformation as an Important Mechanism of NO₂ Formation](#). Environmental Science & Technology 52(8), 4574-4582.

Kimbrough, E.S., Hanley, T., Hagler, G.E., **Baldauf, R.W.**, Snyder, M., Brantley, H. 2018. [Influential factors affecting black carbon trends at four sites of differing distance from a major highway in Las Vegas](#). Air Quality, Atmosphere & Health 11 (2), 181-196

Steffens, J., Kimbrough, E.S., **Baldauf, R.W.**, Isakov, V., Brown, R., Powell, A. 2018. [Near-port air quality assessment utilizing a mobile measurement approach](#). Atmospheric Pollution Research 8(6), 1023-1030.

Baldauf, R., 2017. [Roadside vegetation design characteristics that can improve local, near-road air quality](#). Transportation Research Part D: Transport and Environment, 52, pp.354-361.

Abhijith, K.V., Kumar, P., Gallagher, J., McNabola, A., **Baldauf, R.**, Pilla, F., Broderick, B., Di Sabatino, S. and Pulvirenti, B., 2017. [Air pollution abatement performances of green infrastructure in open road and built-up street canyon environments—A review](#). Atmospheric Environment.

Fuller, C.H., Carter, D.R., Hayat, M.J., **Baldauf, R.**, Watts Hull, R., 2017. [Phenology of a Vegetation Barrier and Resulting Impacts on Near-Highway Particle Number and Black Carbon Concentrations on a School Campus](#). International Journal of Environmental Research and Public Health, 14(2), p.160.

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Education:

- Ph.D., University of Kansas, Lawrence, KS; Civil & Environmental Engineering 2000
- M.S., University of North Carolina, Chapel Hill, NC; Environmental Science & Engineering, 1993

- B.S., Virginia Tech, Blacksburg, VA; Civil & Environmental Engineering 1991

Professional Experience

- Joint affiliation with the EPA Office of Research & Development and the EPA Office of Transportation & Air Quality, leading cross-disciplinary research teams focusing on air quality measurements, air dispersion modeling, and sustainable transportation and urban development issues.
- North Carolina State University, Dept. of Mechanical and Aerospace Engineering, Adjunct Professor
- Texas A&M University, Dept. of Civil & Environmental Engineering, Adjunct Professor

Professional Registration and Societies

- Licensed Professional Engineer, State of Kansas, No 15573
- Member, National Academy of Sciences Transportation Research Board
- American Society of Civil Engineers
- Air & Waste Management Association

Awards and Honors

- Science and Technology Achievement Awards, 2008, 2009
- EPA Bronze Medal, Near Road Research Team (2008); PEMS Development Team (2002)
- EPA-NRMRL Honor Award for Teamwork, 2007

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