

## **Randall J.F. Bruins, Biologist, in EPA's National Exposure Research Laboratory**

Systems Exposure Division

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**Area of Expertise:** My work integrates ecological and economic analyses to support effective decision-making. I examine the respective bases for ecological analysis (i.e., ecological risk assessment methods, ecological models) and economic analysis (ecological valuation methods) to explain their correspondence and contribute to decision tools. Currently I am developing the EcoService Models Library, a website and database for selection of models to estimate production of “ecosystem services,” or ecosystems’ contributions to human well-being.

Prior to 1994, I developed methods for analyzing human exposures and risks from disposal of wastes, including sewage sludge disposal and municipal waste combustion.

### **Select Publications:**

FIKSEL, J., R. BRUINS, A. GATCHETT, A. GILLILAND, AND M. TENBRINK. [The Triple Value Model: A Systems Approach to Sustainable Solutions](#). CLEAN TECHNOLOGIES AND ENVIRONMENTAL POLICY. Springer Berlin-Heidelberg, , Germany, 16(4):691-702, (2014).

Tran, L. T., R. V. O'Neill, E. R. SMITH, R. J. BRUINS, AND C. Harden. [Application of Hierarchy Theory to Cross-Scale Hydrologic Modeling of Nutrient Loads](#). WATER RESOURCES MANAGEMENT. Springer, New York, NY, 1:1-17, (2013).

COOTER, E., A. W. REA, R. J. BRUINS, D. B. SCHWEDE, AND R. L. DENNIS. [The Role of the Atmosphere in the Provision of Ecosystem Services](#). SCIENCE OF THE TOTAL ENVIRONMENT. Elsevier BV, AMSTERDAM, Netherlands, 448(3):1-208, (2013).

View more research publications by [Randall Bruins](#).

### **Education:**

- Ph.D. in Environmental Science, 1997, Ohio State University
- M.A. in Zoology, 1980, Miami University (of Ohio)
- B.A. in Zoology, 1978, Miami University (of Ohio)

### **Professional Experience:**

- Environmental Scientist (Biologist), USEPA, ORD/NERL/EERD, 2007 to Present
- Acting Chief, USEPA, ORD/NERL/EERD, ERB, 2005 to 2007
- Environmental Scientist, USEPA, ORD/NCEA, 1994 to 2005
- Regional Scientist, USEPA, ORD/OSP and Region 10, 1991 to 1993
- Environmental Scientist, USEPA, ECAO, 1980 to 1990