

**The Illusion of Certainty:
Health Benefits and Risks**

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**Tuesday, March 22 - 1:45 pm to 2:45 pm
335 Shillman Hall, Northeastern University**

ABSTRACT: The goal of this talk is to peel away the "veneer of certainty" which many of us attach to health risk and benefit information given to us in our daily lives. My talk is designed primarily to assist the public in comprehending and interpreting the uncertainty associated with the overwhelming amount of information on environmental and medical health risks. The process of determining risks from environmental contaminants and the associated key uncertainties will be described. Similar approaches are used to determine health benefits and risks in public health and medicine. The communication of risk information to the public is a challenge. I will use unique, visual presentations and case studies to explain the risks associated with exposure to environmental contaminants (e.g., smoking, drinking water, radon, and H1N1 virus) and the benefits of medical screening tests (e.g., mammography, prostate and colorectal cancer screening, cholesterol screening) and drugs (e.g., statins, Vioxx™). The concepts discussed in this lecture will help citizens face critical questions about the environment and help patients and their families get more involved in making medical decisions. By putting the complexities of risk analysis in terms the general public can relate to, the speaker is empowering people to make well-informed decisions. This talk is based on my recent book with co-author Dr. Erik Rifkin (*The Illusion of Certainty: Health Benefits and Risks*, Springer, 2007).

BIOGRAPHY: Dr. Edward J. Bouwer earned his Ph.D. in environmental engineering and science from Stanford University, Stanford, CA in 1982. He is a Professor in the Department of Geography and Environmental Engineering at the Johns Hopkins University and has extensive experience with microbial process engineering and bioremediation processes. Dr. Bouwer's research interests encompasses factors that influence biotransformation of contaminants, bioremediation for control of contaminated soils and groundwaters, biofilm kinetics, biological processes design in wastewater, industrial, and drinking water treatment, and transport and fate of microorganisms in porous media. He has (co) authored over 150 refereed journal articles, conference proceedings, book chapters, and technical reports and serves on the managing editorial board for Biodegradation and on the editorial boards for J. Contaminant Hydrology and Environmental Engineering Science. Dr. Bouwer is Director of a Hazardous Substances Research Center (HSRC) that covers EPA Regions I, II, and III. Dr. Bouwer is also Director of the Center for Contaminant Transport, Fate, and Remediation with initial funding from Honeywell International and the Maryland Department of the Environment.

(Reception will follow)