

## **Dwayne Moore, Ph.D.**

Dr. Dwayne Moore has a B.Sc. in Biology from the University of Western Ontario, a M.Sc. and Ph.D. in wetland community ecology from the University of Ottawa. After graduating, he worked for six years at Environment Canada, the first two years developing environmental quality guidelines for industrial chemicals, and the last four years conducting ecological risk assessments for priority substances in Canada. He has been with the Cadmus Group for the last five years, first as a Senior Associate and then as a Principal.

Dr. Moore has considerable expertise in ecological risk assessment, the development of environmental quality guidelines and criteria, community ecology, multivariate statistics, uncertainty analysis, and analysis of toxicity data. He is currently leading the ecological risk assessment for the PCBs-contaminated Housatonic River in Massachusetts on behalf of the U.S. EPA, and is co-leading the ecological risk assessment of the Calcasieu Estuary in Louisiana also on behalf of the U.S. EPA. Dr. Moore has conducted numerous reviews of site-specific assessments including those for the PCBs-contaminated Hudson River on behalf of the U.S. EPA, potential spills of Orimulsion and Fuel Oil #6 in Tampa Bay on behalf of the U.S. EPA, and the Darlington nuclear facility on behalf of Ontario Power Corporation. Dr. Moore has led projects to assess the ecological risks of a variety of chemicals including hexachlorobenzene, chloroform, chlorinated wastewater effluents, waste crankcase oils, mercury, PCBs, and hexachlorobutadiene.

Dr. Moore has also been involved in the Environment Canada probabilistic risk assessments of ammonia and chloramines. He led the effort to update and considerably expand Environment Canada's guidelines for the conduct of ecological risk assessments of priority substances under the *Canadian Environmental Protection Act*. Dr. Moore authored the chapter on probabilistic risk assessment in *Ecological Risk Assessment and Prioritization Process* for the Department of Energy (DOE). The chapter includes state-of-the-art statistical and modeling techniques for use in higher tier assessments including: first and second order Monte Carlo analysis, variance propagation, probability bounds analysis, interval analysis and cost-benefits analysis. To illustrate these and other techniques, Dr. Moore prepared a case study that estimated the effects of methylmercury and PCBs to mink and kingfishers at a CERCLA/RCRA site near Oak Ridge, Tennessee and compared these effects to the costs and benefits of several remediation alternatives.

Dr. Moore is currently involved in projects to prepare guidance, training, and case studies for probabilistic risk assessments for several agencies including the ACC, CEFIC, pesticide companies, and the U.S. EPA Office of Pesticide Products. He recently completed a detailed evaluation of a large spatially-explicit population model (PATCH) for the U.S. EPA Office of Research and Development, and is leading the development of ambient water quality criteria for mercury for the Water Environment Research Foundation.

Dr. Moore co-chaired the Society of Environmental Toxicology and Chemistry (SETAC) Pellston conference on the use of uncertainty analysis in ecological risk assessment and co-edited the book that followed from the conference. He is currently serving on the

SETAC Pellston steering committee for Probabilistic Risk Assessments of Pesticides, and has served on a past steering committee to develop an ecological risk assessment decision support system. Dr. Moore has participated in several other Pellston workshops (e.g., assessing multiple stressors, re-evaluation of environmental quality criteria), and has participated in numerous EPA Science Advisory Panels and other EPA peer review workshops. He is a charter member of the SETAC Ecological Risk Assessment Advisory Group. Dr. Moore has been a member of the editorial board for *Human and Ecological Risk Assessment* journal since its inception and is a member of the editorial board for *Environmental Toxicology and Chemistry*.