



# **Solid Waste Education Recycling *Directory***

**Teresa B. Jones  
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**CRC Press**  
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**Northeast Regional Environmental Public Health Center  
School of Public Health  
University of Massachusetts**



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## Preface

United States citizens dispose 133 million tons of solid waste each year. Unfortunately we bury 80 to 90% of our refuse, recycle 5%, and incinerate 5 to 10%. During the quest for rational environmental waste disposal techniques, concern and debate have focused on the health issues associated with present and proposed waste management practices. Landfills may contaminate water supplies, incinerators emit acidic gases, organic contaminants such as dioxins, and heavy metals such as lead. Even waste management practices considered environmentally acceptable such as composting and recycling are not without their occupational and environmental risks.

The nation is in the midst of a solid waste crisis demanding our immediate attention. Solutions to our refuse emergency will occur only through creative ideas and effective execution of these ideas. Success in solid waste management practices that protect the public health and the environment depends upon effective public education and participation. Elementary education provides a unique opportunity to offer waste information to children that will enable them to start a life-long learning process leading toward responsible solid waste practices. Secondary school and high school curricula will provide students with the scientific knowledge base to enhance their capacity to make informed waste management decisions. Comprehensive education programs stimulate open discussion between students, teachers, and families, thereby contributing to an increase in a much needed community understanding of waste management problems.

It is the endemic waste management crisis and the importance of waste management education that has prompted the authors to compile a comprehensive list of waste management curricula available in the U.S. The research project started with a data base search to identify existing programs. State and Federal government officials, environmental organizations, academic institutions, and private curriculum development firms were contacted to obtain descriptions and evaluation of their particular programs. A short description and evaluation was developed for each curriculum and these were compiled into a bibliography.

The text summarizes waste management curricula for each state according to categories and features specific to each program. Areas discussed in the program summaries include: the availability of materials to in-state and out-of-state residents; whether permission for duplication is required; the existence of state regulations concerning mandatory recycling; and the existence of state regulations on bottle deposits. The educational infrastructure is discussed with respect to specific curriculum requirements and any requirement of classroom implementation of the program. A project history and description is presented for each program including its status as a state sponsored program, involvement of the Department of Education, the Department of Environmental Protection, and other Departments, and cooperation between departments. In addition, the involvement of environmental groups and academic institutions in program de-

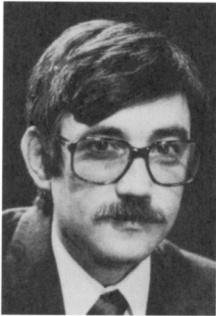
velopment is noted. Other questions addressed by the states during curriculum development include the following: were other state education materials evaluated, were teachers involved in development, was pilot field testing incorporated into development, is a formal continuing review process of the materials included, and are future revisions to the curricula planned. The distribution of the program is also discussed; this includes the availability of teacher training and in-service credit offerings. The curriculum description section describes whether the program has been validated by the Department of Education, topics in the program, the target age group for the program, the availability of different programs for different education levels (i.e., kindergarten, primary grades, secondary grades, and high school), the inclusion of a teachers guide, and the inclusion of student projects and evaluations. The book also describes those programs containing an outline for a model school waste management program, and references to additional curriculum materials not reported in this text that may be available.

Theresa B. Jones  
Edward J. Calabrese  
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August 1990  
Amherst MA



**Teresa B. Jones** is a research assistant at the Northeast Regional Environmental Public Health Center at the University of Massachusetts. She received a double-major B.A. in History and Environmental Studies from Yale University. As an undergraduate, she directed and expanded a campus residential recycling program and student educational efforts. In her work for the Northeast Center, she designed and conducted primary research concerning national solid waste management strategies and state public education curricula. She then synthesized these data into a comprehensive bibliography of recycling education programs, with suggestions for effective and efficient program development and implementation. Her independent research efforts have addressed the relationship between effective environmental policy and educational programs. Her academic work has focused on the historical, environmental, and economic components of sustainable agriculture.



**Edward J. Calabrese** is a board-certified toxicologist who is professor of toxicology at the University of Massachusetts School of Public Health, Amherst. Dr. Calabrese has researched extensively in the area of host factors affecting susceptibility to pollutants. He is the author of more than 240 papers in refereed journals and 10 books, including *Principles of Animal Extrapolation, Nutrition and Environmental Health Vols. I and II, Ecogenetics*, and others. He has been a member of the U.S. National Academy of Sciences and NATO Countries Safe Drinking Water committees and, most recently, has been appointed to the Board of Scientific Counselors for the Agency for Toxic Substances and Disease Registry (ATSDR).

Dr. Calabrese was instrumental in the conceptualization and development of the Northeast Regional Environmental Public Health Center and was appointed its first director. The center's mission includes communication, education, and research.

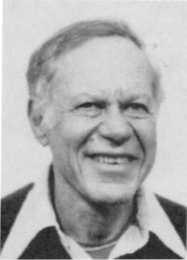


**Charles E. Gilbert** is a research associate in toxicology at the University of Massachusetts School of Public Health, Amherst. Dr. Gilbert received his BS, MSc, and PhD degrees from the University of Massachusetts.

He was the assistant director for the Childhood Lead Poisoning Prevention Program, Massachusetts Department of Public Health, where he directed improvements in environmental management, case management, and education programs. His research interests are in the area of factors that affect human susceptibility to biological, chemical, and physical agents and how these affect health.

Charles Gilbert worked in the development of the Northeast Regional Environmental Public Health Center and was appointed its first assistant director. This center is a cooperative organization of the New England Public Health Departments and the University of Massachusetts School of Public Health.





**Alvin Winder** is a Professor of Health Education at the University of Massachusetts School of Public Health, Amherst. He was awarded a B.A. degree in Psychology from Brooklyn College, an M.S. degree in Psychology from the University of Illinois, and a Ph.D. degree in Human Development from the University of Chicago, as well as an M.P.H. degree in Health Education from the University of California at Berkeley.

Dr. Winder has been on the Public Health faculty of the University of Massachusetts since 1978 and a faculty member of the Northeast Regional Environmental Public Health Center since its inception. He has edited and written several books; a text on health education, on adolescence and on group process in education and mental health. He has also authored a number of articles concerned with educating the public about environmental issues. He has additionally produced several video films dealing with environmental pollution. His recent research has focused on educational efforts toward smoking reduction.

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**This book is dedicated to our families  
with love**

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