## Acknowledgments

The New York State Stormwater Management Design Manual was prepared under a joint effort between the New York State Department of Environmental Conservation (DEC), the Soil and Water Conservation Committee, and the Central New York Regional Planning and Development Board. Several individuals at these organizations were instrumental in the process of completing this Manual. Don Lake provided the vision to initiate the process, and has been an integral part of its development. Shohreh Karimipour was also indispensable, providing detailed guidance throughout the process and acting as a liaison between the Center for Watershed Protection, the DEC, and several other agencies that commented on the manual. Thanks also to Mike Rafferty, Ken Stevens and Phil DeGaetano who shaped the final outcome of the manual, and provided valuable insight on its potential role in shaping the way stormwater management is conducted in the State of New York.

Additionally, several organizations and other individuals also took the time to review earlier versions of the manual and contributed to the production of this Manual.

Bob Alpern, New York City Dept. of Environmental Protection Pete Bartell Toni Cioffi, NYS DEC, DOW, Bureau of Water Permits Doreen Clemens, Saratoga County SWCD Thom Engel, NYS DEC, DEP Pat Ferracane, NYS DEC, Region 3 Eugena Flatlow, NYC SWCD Matt Gillette, NYS DEC, Region 8 Dave Graves, NYS DOT, Environmental Analysis Bureau Chad Kehoe, NYS DEC, Region 6 Paul Kieda, NYS DOT Thilliayambur Manickam, NYS DEC, Region 9 Paul Mankiewicz, Ph.D., GAIA Institute Robin Marx, Natural Resources Defense Council Tom McMahon, Suffolk County SWCD Mindy Moore, Westchester County SWCD Bill Morton, NYS DEC, DOW, Bureau of Watershed Management Bill Nechamen, NYS DEC, DOW, Bureau of Flood Protection Michael Patterson, Environment 21 Paula Smith, Monroe County SWCD Thomas Snow, NYS DEC Don Stribick, Erie County SWCD Don Sweezy, NYS DOT, Region 6 William Wegner, the Riverkeeper

And: the Urban Runoff Workgroup of the Non Point Source Coordinating Committee

## **Preface**

The New York State Stormwater Design Manual is prepared to provide standards for the design of the Stormwater Management Practices (SMPs) to protect the waters of the State of New York from the adverse impacts of urban stormwater runoff. This manual is intended to establish specifications and uniform criteria for the practices that are part of a Stormwater Pollution Prevention Plan (SWPPP).

This manual is intended primarily for engineers and other professionals who are engaged in the design of stormwater treatment facilities for new developments. Users are assumed to have a background in hydrology, hydraulics, and runoff and pollutant load computation. It is not intended to be a primer on any of these subjects. The manual may also be used by reviewing authorities to assess the adequacy of SWPPPs.

The manual is limited to the design of structures. It does not address the temporary control of sedimentation and erosion from construction activities, nor the development of Stormwater Pollution Prevention Plans. The reader is referred to the "New York State Guidelines for Urban Erosion and Sediment Control" for erosion and sediment control standards and the "NOI Instruction Manual" for guidance on the development of Stormwater Pollution Prevention Plans.

The Technical Standards, consisting of proven technology, are intended to serve as design criteria for the preparation of plans and specifications for Stormwater Management Practices, to suggest limiting values for items upon which an evaluation of such plans and specifications may be made by the reviewing authority, and to establish, as far as practicable, uniformity of practice. The technical standards constitute discharge technology requirements of the Clean Water Act. As statutory requirements and legal authority pertaining to stormwater management are not uniform across the State, and since conditions and administrative procedures and policies also differ, the use of these Standards must be adjusted to these variations.

The terms "shall" and "must" are used where the practice is sufficiently standardized to permit specific delineation of requirements or where safeguarding of the public health justifies such definite action. Other terms, such as "should," "recommend," and "preferred," indicate desirable procedures or methods, with deviations subject to individual consideration.