



Project Summary

Storm Water Management Model (SWMM) Bibliography

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Literature sources were reviewed to collect references to the theory, documentation, use, or other activities related to the EPA Storm Water Management Model (SWMM). Listed in this annotated bibliography are 237 such citations, along with keywords and brief abstracts. The references also are indexed by an alphabetical listing of keywords. The bibliography represents the best source of information on case studies and model documentation available to the SWMM user.

This Project Summary was developed by EPA's Environmental Research Laboratory, Athens, GA, to announce key findings of the research project that is fully documented in a separate report of the same title (see Project Report ordering information at back).

Introduction

The EPA Storm Water Management Model (SWMM), developed in 1971, was one of the first sophisticated models for analyzing stormwater quality and quantity problems. The program is not only important in its own right but also has served as an example for developers of other models. It is, in fact, the standard against which most newer models are compared. There are many examples in the literature (and in recent advertisements for microcomputer programs) in which a new model is validated against SWMM.

The original model was prepared during 1969-71 by a joint venture of three EPA contractors: Metcalf and Eddy, Inc. (Palo Alto CA), the University of Florida (Gainesville), and Water Resources Engineers, Inc. (Walnut Creek CA). Since 1972, SWMM has been maintained and updated through efforts of all three original contractors, but especially through

EPA-sponsored work at the University of Florida. This activity has benefitted greatly from feedback from a large number of model users. In this manner, errors have been corrected and needed improvements provided that might otherwise not have been recognized.

This report focuses on literature related only to SWMM in the form of reports, journal articles, conference proceedings, etc. In the process of compiling this bibliography, a number of other models are mentioned, but this bibliography does not attempt to document the use of other models.

SWMM Users Group

The EPA Stormwater and Water Quality Model Users Group plays a key role in the dissemination of information about SWMM and several other models and modeling topics. It is operated by the EPA Center for Water Quality Modeling in Athens, GA, which is generally in charge of water quality model development, dissemination and support within the agency.

The Center publishes a newsletter and is responsible for dissemination of several water quality models, including SWMM, HSPF, QUAL-II, ARM, WASP, and EXAMS. The Center also sponsors workshops and seminars on the various models.

The Center's most important function has perhaps been to sponsor meetings of the Users Group, at which papers on any topic related to hydrologic modeling are presented and later published in the form of proceedings. The meetings are cosponsored by Environment Canada and the Ontario Ministry of the Environment and are usually held semi-annually. The papers often represent the most useful kind of modeling aid

because of their informal nature and unrestricted content. This bibliography contains many citations from the proceedings of SWMM meetings. The other valuable function of the meetings is direct contact among model users. It is primarily through the Users Group that invaluable feedback has been provided for the maintenance and improvement of SWMM.

Bibliography Format

The bibliography, developed early in 1985, consists of 237 listings along with associated keywords. A small number of additional SWMM-related references that were identified late in the search procedure are included in the listing, but keywords for these references are not included in the index.

Entries to the bibliography were obtained from several sources: computer searches, individual review of journal indexes, review of EPA reports and those from other agencies, review of Florida Water Resources Research Center library holdings, review of conference proceedings, etc. It is recognized that the bibliography may overlook some citations. It is especially difficult to be cognizant of all the relevant foreign literature.

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The complete report, entitled "Storm Water Management Model (SWMM) Bibliography," (Order No. PB 86-136 041 /AS; Cost: \$11.95, subject to change) will be available only from:

*National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
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*The EPA Project Officer can be contacted at:
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