

BOOK REVIEW

VERFAHREN ZUR PLANUNG KOSTENMINIMALER REGIONALER ABWASSERENTSORGUNGSSYSTEME (PLANNING OF REGIONAL WASTEWATER DISPOSAL WITH MINIMAL COST)

by H. Orth, Vol. 9 [in:] Wasser und Abwasser in Forschung und Praxis, 1975, pp. 177, ISBN 3 503 00997 3, Erich Schmidt Verlag Bielefeld, FRG (in German).

The author describes the application of operations research to economical optimization of regional wastewater disposal systems.

The paper contains clear examples taken from practice. For the separate elements of the system, as for instance, sewer systems, pumping stations, wastewater treatment plants, etc., mathematical descriptions are suggested. From these descriptions optimization models can be constructed for real localization conditions.

Starting with the analysis of two models, the author shows various possibilities of solutions and having in mind practical applications, he presents the methods leading to the reduction of computation range.

The paper is less concerned with theoretical aspects, giving more attention to the applications. According to such an approach, the algorithms are not described in details, and the appropriate standard methods only mentioned.

The book contains the following chapters:

- Mathematical formulation of the problem,
- Analysis of the mathematical model structures,
- Suggested solutions of the optimization model,
- Decomposition methods for the reduction of computation time,
- Application aspects.

The book should be easily understood also by those environmental engineers to whom operations research seems to be a new domain. Like other books in this field and series, prepared by a young scientific team of the University in Karlsruhe, this volume should be found in the libraries of design offices which either apply or intend to apply operations research in their activities.

Edward S. Kempa