

PERMISSION TO PHOTOCOPY JOURNAL PAPERS

Permission to photocopy for personal or internal reference beyond the limits in Sections 107 and 108 of the U.S. Copyright Law is granted by the American Society of Civil Engineers for libraries and other users registered with the Copyright Clearance Center, 21 Congress Street, Salem, Mass. 01970, provided the appropriate fee is paid to the CCC for all articles bearing the CCC code. Requests for special permission or bulk copying should be addressed to the Manager of Technical and Professional Publications, American Society of Civil Engineers.

CONTENTS

Models of Landfill Leaching: Moisture Flow and Inorganic Strength
by William A. Straub and Daniel R. Lynch . . . . . 231
Models of Landfill Leaching: Organic Strength
by William A. Straub and Daniel R. Lynch . . . . . 251
Role of Surface Active Media in Anaerobic Filters
by Khaliq A. Khan, Makram T. Suidan, and Wendall H. Cross . . . . 269
Hydraulic Regime and Activated Sludge Performance
by Robert M. Sykes . . . . . 286
Pharmaceutical Waste Treatment by Anaerobic Filter
by Elliot F. Sachs, J. Charles Jennett, and Myrton C. Rand . . . . . 297
1980 Needs Survey: Combined Sewer Site Studies
by James E. Scholl and Ronald L. Wycoff . . . . . 315
Sewers and Cities: France and the United States Compared
by Gabriel Dupuy and Joel A. Tarr . . . . . 327

The Journal of the Environmental Engineering Division (ISSN 0090-3914) is published bimonthly by the American Society of Civil Engineers. Publications office is at 345 East 47th Street, New York, N.Y. 10017. Address all ASCE correspondence to the Editorial and General Offices at 345 East 47th Street, New York, N.Y. 10017. Allow six weeks for change of address to become effective. Subscription price to members is \$14.00. Nonmember subscriptions available; prices obtainable on request. Second-class postage paid at New York, N.Y. and at additional mailing offices. EE.

POSTMASTER: Send address changes to American Society of Civil Engineers, 345 East 47th Street, New York, NY 10017.

The Society is not responsible for any statement made or opinion expressed in its publications.

<b>Rotating Biodisks Recarbonate Alkaline Wastewater</b> <i>by Charles I. Noss, Roy D. Miller, and Edgar D. Smith . . . . .</i>	339
<b>Algorithm for Optimal Activated Sludge Operation</b> <i>by Patrick W. Hughey, Dale D. Meredith, and Andrew C. Middleton . . . . .</i>	349
<b>Anaerobic Treatment in Novel Contact Digester</b> <i>by Jan A. Oleszkiewicz and Szymon Koziarski . . . . .</i>	367
<b>Improvement of Swirl Concentrator</b> <i>by Michel Alquier, Daniel Delmas, and Michel Pellerej . . . . .</i>	379
<b>Total Suspended Solids in Highway Runoff in Washington State</b> <i>by Randy Asplund, Brian W. Mar, and John F. Ferguson . . . . .</i>	391
<b>Microbial Activity in Activated Carbon Filters</b> <i>by John G. den Blanken . . . . .</i>	405

---

DISCUSSION

Proc. Paper 16959

---

<b>Simulation Modeling of Primary Clarifiers</b> , by Raymond L. Alarie, Edward A. McBean, and Grahame J. Farquhar (Apr., 1980. Prior Discussions: Dec., 1980, Feb., 1981). <i>closure . . . . .</i>	427
<b>Calibration of Nonsteady-DO Measurement</b> , by Sadataka Shiba (Feb., 1981). <i>errata . . . . .</i>	428
<b>Heat and Gas Flow Analysis in Semiaerobic Landfill</b> , by Masataka Hanashima, Koreyoshi Yamasaki, Takemi Kuroki, and Kazuei Onishi (Feb., 1981). <i>errata . . . . .</i>	429
<b>Sludge Management Systems: Optimal Planning</b> , by Yakir Hasit, R. Rajagopal, and P. Aarne Vesilind (June, 1981). <i>errata . . . . .</i>	429

**Integral Analysis of Water Plant Performance,**<sup>a</sup> by Brian L. Ramaley, Desmond F. Lawler, William C. Wright, and Charles R. O'Melia (June 1981).  
*by Richard I. Dick* . . . . . 430

**Predicting Fluidization and Expansion of Filter Media,**<sup>a</sup> by John L. Cleasby and Kuo-shuh Fan (June, 1981).  
*by B. A. Quayle* . . . . . 433

**Regional Solid Waste Planning with WRAP,** by Yakir Hasit and Dennis B. Warner (June, 1981).  
*errata* . . . . . 436

---

<sup>a</sup>Discussion period closed for this paper. Any other discussion received during this discussion period will be published in subsequent Journals.