

~~Display~~
~~Copy~~

~~Don't~~
~~Remove~~

Research Results:

Recent Publications
of the Environmental
Research Laboratory,
Athens GA

EPA
600/
1986.11

EPAX EPA
86072 600
0163 1986.11

Lassiter, R. R., R. S. Parrish, and L. A. Burns. 1986. Decomposition by Planktonic and Attached Microorganisms Improves Chemical Fate Models. Environmental Toxicology and Chemistry. 5(1):29-39.

Lewis, D. L., H. P. Kollig, and R. E. Hodson. 1986. Nutrient Limitation and Adaptation of Microbial Populations to Chemical Transformations. Applied and Environmental Microbiology. 51(3):598-603, March.

Paris, D. F., and J. E. Rogers. 1986. Kinetic Concepts for Measuring Microbial Rate Constants: Effects of Nutrients on Rate Constants. Applied and Environmental Microbiology. 51(2):221-225.

Smith, C. N., and R. F. Carsel. 1986. A Stainless-Steel Soil Sampler for Monitoring Pesticides in the Vadose Zone. Soil Science Society of America Journal. 51(1):263-265.

Tsai, C. P., A. Sahil, J. M. McGuire, B. L. Karger, and P. Vourros. 1986. High-Performance Liquid Chromatographic/Mass Spectrometric Determination of Volatile Carboxylic Acids Using Ion-Pair Extraction and Thermally Induced Alkylation. Analytical Chemistry. 58(1):2-6.

G
U.S. Environmental Protection Agency
Library, Room 2904 PM-211-A
401 M Street, S.W.
Washington, DC 20460

Anon., . 1985. Proceedings of Stormwater and Water Quality Model Users Group Meeting, April 12-13, 1984. U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA/600/9-85/003.

Anon., . 1985. Proceedings of Stormwater and Water Quality Model Users Group Meeting, January 31 - February 1, 1985. T.O. Barnwell, Jr. (Ed.). U.S. Environmental Protection Agency, Athens, GA. EPA/600/9-85/016..

Anon., . 1985. Literature Review for Development of the Master Analytical Scheme for Organic Compounds in Water. Research Triangle Institute, Research Triangle Park, NC. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA/600/4-85/006.

Bailey, G. W., L. A. Mulkey, and R. R. Swank. 1985. Environmental Implications of Conservation Tillage: A System Approach. Chap. 19 in: A System Approach to Conservation Tillage. F.M. D'Itri (ed.). Chelsea(MI), Lewis Publishers, Inc. p. 239-265.

Barnwell, T. O., and D. K. Boynton. 1985. EPA Supported Wasteload Allocation Models. In: Computer Applications in Water Resources. H.C. Torno (Ed.). American Society of Civil Engineers, New York, NY. p. 934-943..

Bicknell, B. R., S. H. Boutwell, and D. B. Watson. 1985. Testing and Evaluation of TOX-SCREEN Model. Anderson-Nichols & Co., Inc., Palo Alto, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA/600/3-85/001.

Bicknell, B. R., A. S. Donigian, and T. O. Barnwell. 1985. Modeling Water Quality and the Effects of Agricultural Best Management Practices in the Iowa River Basin. Water Science and Technology. 17(6/7):1141-1153.

Boutwell, S. H., S. M. Brown, B. R. Roberts, and D. F. Atwood. 1985. Modeling Remedial Actions at Uncontrolled Hazardous Waste Sites. Anderson-Nichols & Co., Inc., Palo Alto, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA/540/2-85/001.

Bowie, G. L. et al. 1985. Rates, Constants, and Kinetics Formulations in Surface Water Quality Modeling (Second Edition). Tetra Tech., Inc., Lafayette CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA/600/3-85/040.

Brown, D. S., and G. Combs. 1985. A Modified Langmuir Equation for Predicting Sorption of Methylacridinium Ion in Soils and Sediments. *J. Environmental Quality*. 14(2):195-199.

Brown, L. C., and T. O. Barnwell. 1985. Computer Program Documentation for the Enhanced Stream Water Quality Model QUAL2E. U.S. Environmental Protection Agency, Athens GA. EPA/600/3-85/065.

Burns, L. A., and G. L. Baughman. 1985. Fate Modeling. Chap. 19. In: *Fundamentals of Aquatic Toxicology*. G.M. Rand and S.R. Petrocelli (Eds.). Washington, Hemisphere Publishing Corporation. p. 558-584.

Burns, L. A. 1985. Models for Predicting the Fate of Synthetic Chemicals in Aquatic Ecosystems. In: *Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems*. T.P. Boyle (Ed.). American Society for Testing and Materials, Philadelphia, PA. ASTM STP 865. p. 176-190.

Burns, L. A., and D. M. Cline. 1985. Exposure Analysis Modeling System: Reference Manual for EXAMS II. U.S. Environmental Protection Agency, Athens, GA. EPA/600/3-85/038.

Carsel, R. F., L. A. Mulkey, M. N. Lorber, and L. B. Baskin. 1985. The Pesticide Root Zone Model (PRZM): A Procedure for Evaluating Pesticide Leaching Threats to Groundwater. *Ecological Modelling*. 30(1/2):49-69.

Cox, J. A., and N. Nobuyki. 1985. Determination of Anionic Impurities in Selected Concentrated Electrolytes by Ion Chromatography. *Analytical Chemistry*. 57(1):383-385.

Cox, J. A., and N. Nobuyki. 1985. Dual Ion-Exchange Method for the Controlled Addition of a Prescribed Ionic Species to a Solution. *Analytical Chemistry*. 57(1):385-387.

Fu, J. K., and R. G. Luthy. 1985. Pollutant Sorption to Soils and Sediments in Organic/Aqueous Solvent Systems. Carnegie-Mellon University, Pittsburgh, PA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA/600/3-85/050.

Hamala, J. A., and H. P. Kollig. 1985. The Effects of Atrazine on Periphyton Communities in Controlled Laboratory Ecosystems. *Chemosphere*. 14(9):1391-1408.

Huber, W. C., J. P. Heaney, and A. A. Cunningham. 1985. Storm Water Management Model (SWMM) Bibliography. University of Florida, Gainesville, FL. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA/600/3-85/077.

Karger, B. L., and P. Vouros. 1985. A Chromatographic Perspective of High-Performance Liquid Chromatography-Mass Spectrometry. *Journal of Chromatography*. 323(1):13-32, April.

Karickhoff, S. W., and K. R. Morris. 1985. Impact of Tubificid Oligochaetes on Pollutant Transport in Bottom Sediments. *Environ. Science and Technol.* 19(1):51-56.

Karickhoff, S. W., and K. R. Morris. 1985. Sorption Dynamics of Hydrophobic Pollutants in Sediment Suspensions. *Environmental Toxicology and Chemistry*. 4(4):469-479.

Karickhoff, S. W. 1985. Pollutant Sorption in Environmental Systems. Chap. 3 in *Environmental Exposure from Chemicals*. Volume 1. W.B. Neely and G.E. Blau (Eds.). Boca Raton, CRC Press, Inc. p. 49-64.

Lewis, D. L., R. B. Kellogg, and H. W. Holm. 1985. Comparison of Microbial Transformation Rate Coefficients of Xenobiotic Chemicals between Field-Collected and Microcosm Microbiota. In: *Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems*. T.P. Boyle (Ed.). American Society for Testing and Materials, Philadelphia, PA. ASTM STP 865. p. 3-13.

Lewis, D. L., R. E. Hodson, and L. F. Freeman. 1985. Multiphasic Kinetics of Methyl Parathion by Flavobacterium Species. *Applied and Environmental Microbiology*. 50(3):553-557.

Macalady, D., and N. L. Wolfe. 1985. Effects of Sediment Sorption and Abiotic Hydrolyses. I. Organophosphorothioate Esters. *J. Agric. Food Chem.* 33(2):167-173, March-April.

Malanchuk, J. L., and H. P. Kollig. 1985. Integrated Use of Physical and Mathematical Models to Evaluate Ecological Effects. Water, Air, and Soil Pollution. 24(3):267-281.

Malanchuk, J. L., and H. P. Kollig. 1985. Effects of Atrazine on Aquatic Ecosystems: A Physical and Mathematical Modeling Assessment. In: Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems. T.P. Boyle (Ed.). American Society for Testing and Materials, Philadelphia, PA. ASTM STP 865. p. 212-224.

Michaels, G. E., and D. L. Lewis. 1985. Sorption and Toxicity of Azo and Triphenylmethane Dyes to Aquatic Microbial Populations. Environmental Science and Technology. 4(1):45-50.

Ou, L. T., K. S. V. Edvardsson, and P. S. C. Rao. 1985. Aerobic and Anaerobic Degradation of Aldicarb in Soils. J. Agric. Food Chem. 33(1):72-78.

Ou, L. T., K. S. V. Edvardsson, J. E. Thomas, and P. S. C. Rao. 1985. Aerobic and Anaerobic Degradation of Aldicarb Sulfone in Soils. J. Agric. Food Chem. 33(3):545-548.

Overton, W. S., and R. R. Lassiter. 1985. The Concept of Prognostic Model Assessment of Toxic Chemical Fate. In: Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems. T.P. Boyle (Ed.). American Society for Testing and Materials, Philadelphia, PA. ASTM STP 865. p. 191-203.

Pellizzari, E. D. 1985. Experimental Development of the Master Analytical Scheme for Organic Compounds in Water. Research Triangle Institute, Research Triangle Park, NC. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA/600/4-85/007 a and b.

Russo, R. C. 1985. Ammonia, Nitrite, and Nitrate. Chap. 15. In: Fundamentals of Aquatic Toxicology. G.M. Rand and S. R. Petrocelli (Eds.). Washington, Hemisphere Publishing Corporation. p. 455-471.

Sanders, W. M., III. 1985. Field Validation. Chap. 21. In: Fundamentals of Aquatic Toxicology. G.M. Rand and S.R. Petrocelli (Eds.). Washington, Hemisphere Publishing Corporation. p. 601-618.

Smith, C. N., D. S. Brown, J. D. Dean, R. S. Parrish, R. F. Carsel, and A. S. Donigian. 1985. Field Agricultural Runoff Monitoring (FARM) Manual. U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA/600/3-85/043.

Thomas, M. B., H. Msimanga, and P. E. Sturrock. 1985. Application of a Swept-Potential Electrochemical Detector in the Liquid-Chromatographic Determination of Nitrosamines. *Analytica Chimica Acta.* 174:287-291, August.

Zepp, R. G., P. F. Schlotzhauer, and M. Sink. 1985. Photosensitized Transformations Involving Electronic Energy Transfer in Natural Waters: Role of Humic Substances. *Environ. Science and Technol.* 19(1):74-81.

Adams, V. D., L. A. Carreira, and L. V. Azarraga. 1984. Multichannel Coherent Anti-Stokes Raman Spectroscopy in Liquids. *Applied Spectroscopy*. 38(6):861-867.

Anon., . 1984. Prediction of Pesticide Behavior in the Environment. *Proceedings of U.S.A.-U.S.S.R. Symposium, October 1981, Yerevan, U.S.S.R.* U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/9-84-026.

Azarraga, L. V., J. M. Brackett, M. A. Castles, and L. B. Rogers. 1984. Observations of the Energy Spectrum in the Mid-Infrared Region at Ambient Temperatures. *Applied Spectroscopy*. 38(5):674-677.

Barnwell, T. O. 1984. EPA's Center for Water Quality Modeling. In: *Modeling of Storm Sewer Systems, Vol. 2. Proceedings of 3rd International Conference on Urban Storm Drainage.* Goteborg, Sweden, June 4-8, 1984. P. Balmer, P. Malmqvist, and A. Sjoberg (Eds.). Goteborg, Chalmers University of Technology. p. 463-466.

Barnwell, T. O., and J. L. Kittle. 1984. Hydrologic Simulation Program--FORTRAN: Development, Maintenance and Applications. In: *Modeling of Storm Sewer Systems, Vol. 2. Proceedings of 3rd International Conference on Urban Storm Drainage.* Goteborg, Sweden, June 4-8, 1984. P. Balmer, P. Malmqvist, and A. Sjoberg (Eds.). Goteborg, Chalmers University of Technology. p. 493-502.

Barnwell, T. O., and H. C. Torno. 1984. Computer Model Technology Transfer in the United States. In: *Modeling of Storm Sewer Systems, Vol. 2. Proceedings of 3rd International Conference on Urban Storm Drainage.* Goteborg, Sweden, June 4-8, 1984. P. Balmer, P. Malmqvist, and A. Sjoberg (Eds.). Goteborg, Chalmers University of Technology. p. 723-731.

Baughman, G. L., S. W. Karickhoff, D. F. Paris, N. L. Wolfe, and W. C. Steen. 1984. Progress in Predicting the Processes that Determine Pesticide Concentrations in Aquatic System. In: *Prediction of Pesticide Behavior in the Environment: Proceedings of USA-USSR Symposium, October 1981, Yerevan, USSR.* U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/9-84-026. p. 198-209.

Bowling, J. W., J. D. Haddock, and P. M. Allred. 1984. Disposition of Anthracene in the Water and Aufwuchs Matrices of a Large Outdoor Channel Microcosm: A Data Set for Mathematical Simulation Models. Savannah River Ecology Laboratory, Aiken, SC. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-84-036.

Brackett, J. M., L. V. Azarraga, M. A. Castles, and L. B. Rogers. 1984. Matrix Materials for Diffuse Reflectance Fourier Transform Infrared Spectrometry of Substances in Polar Solvents. *Analytical Chemistry* 56(12):2007-2010.

Brockway, D. L., P. D. Smith, and F. E. Stancil. 1984. Fate and Effects of Atrazine in Small Aquatic Microcosms. *Bulletin of Environmental Contamination and Toxicology*. 32(3):345-353.

Brockway, D. L., P. D. Smith, and F. E. Stancil. 1984. Fate and Effects of Pentachlorophenol in Hard- and Soft-Water Microcosms. *Chemosphere*. 13(12):1363-1377.

Bursey, J. T. 1984. Application of an Analysis Protocol to Identify Organic Compounds Not Identified by Spectrum Matching. Research Triangle Institute, Research Triangle Park, NC. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/4-84-072.

Carsel, R. F., C. N. Smith, L. A. Mulkey, J. D. Dean, and P. P. Jowise. 1984. Users Manual for the Pesticide Root Zone Model (PRZM), Release 1. U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-84-109.

Chatfield, E. J., M. J. Dillon, and W. R. Stott. 1984. Evaluation of Turbidimetric Methods for Monitoring of Asbestos Fibers in Water. Ontario Research Foundation, Mississauga, Ont. Canada. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/4-84-071.

Cohen, S. Z., S. M. Creeger, R. F. Carsel, and C. G. Enfield. 1984. Potential Pesticide Contamination of Groundwater from Agricultural Uses. In: Treatment and Disposal of Pesticide Wastes. R.F. Kruger and J.N. Seiber (Eds.). American Chemical Society, Washington DC. ACS Symposium Series No. 259. p. 297-325.

Conroy, C.M., P. R. Griffiths, P.J. Duff, and L. V. Azarraga. 1984. Interface of a Reverse-Phase High-Performance Liquid Chromatograph with a Diffuse Reflectance Fourier Transform Infrared Spectrometer. *Analytical Chemistry* 56(14):2636-2642.

Dean, J. D., P. P. Jowise, and A. S. Donigian. 1984. Leaching Evaluation of Agricultural Chemicals (LEACH) Handbook. Anderson-Nichols and Co., Inc., Palo Alto, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-84-068.

Donigian, A. S., J. C. Imhoff, B. R. Bicknell, and J. L. Kittle. 1984. Application Guide for Hydrological Simulation Program--FORTRAN (HSPF). Anderson-Nichols and Co., Palo Alto, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-84-065.

Felmy, A. R., S. M. Brown, Y. Onishi, S. B. Yabusaki, and R. S. Argo. 1984. MEXAMS--The Metals Exposure Analysis Modeling System. Battelle, Pacific Northwest Laboratories, Richland, WA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-84-031.

Felmy, A. R., D. C. Girvin, and E. A. Jenne. 1984. MINTEQ--A Computer Program for Calculating Aqueous Geochemical Equilibria. Battelle, Pacific Northwest Laboratories, Richland, WA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-84-032.

Gambrell, R. P., B. A. Taylor, K. S. Reddy, and W. H. Patrick, Jr. 1984. Fate of Selected Toxic Compounds Under Controlled Redox Potential and pH Conditions in Soil and Sediment-Water Systems. Louisiana State University, Baton Rouge, LA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication Number EPA-600/3-84-018.

Gard, T. C. 1984. Analysis of Persistence in Model Ecosystems: Deterministic and Stochastic Food Web Models. University of Georgia, Athens, GA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-84-081.

Hedden, K. F. 1984. Water Treatment Model for Pollutant Exposure Assessment: System Documentation and Users Manual. U.S. Environmental Protection Agency, Athens, GA. EPA-600/4-84-034.

Hedden, K. F. 1984. Multimedia Fate and Transport Models: An Overview. Journal of Toxicology-Clinical Toxicology. 21(1&2):65-95.

Hoover, T. B., and G. D. Yager. 1984. Determination of Trace Anions in Water by Multidimensional Ion Chromatography. Analytical Chemistry. 56(2):221-225.

Hoover, T. B., and G. D. Yager. 1984. Comparison of Collection Procedures for the Reinjection Ion Chromatography of Water. Journal of Chromatographic Science. 22(10):435-437.

Huber, W. C., D. F. MacIntyre, and J. P. Heaney. 1984. Receiving Water Quality Database for Testing of Mathematical Models. University of Florida, Gainesville, FL. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-84-078.

Johanson, R. C., J. C. Imhoff, J. L. Kittle, and A. S. Donigian. 1984. Hydrological Simulation Program--FORTRAN (HSPF): Users Manual for Release 8.0. Anderson-Nichols & Co., Palo Alto, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-84-066.

Johanson, R. C., A. S. Donigian, and T. O. Barnwell. 1984. Modeling Transport and Degradation of Pesticides in the Soil and Surface Water Environments. In: Prediction of Pesticide Behavior in the Environment: Proceedings of USA-USSR Symposium, October 1981, Yerevan, USSR. U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/9-84-026. p. 124-156.

Johnson, H. P., and J. L. Baker. 1984. Field-to-Stream Transport of Agricultural Chemicals and Sediment in an Iowa Watershed: Part II. Data Base for Model Testing (1979-1980). Iowa State University, Ames, IA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication Number EPA-600/3-84-055.

Karickhoff, S. W. 1984. Organic Pollutant Sorption in Aquatic Systems. Journal of Hydraulic Engineering. 110(6):707-735.

Lassiter, R. R. 1984. Rationale and Results of Testing a Chemical Fate Model in an Experimental Ecosystem. In: Prediction of Pesticide Behavior in the Environment: Proceedings of USA-USSR Symposium, October 1981, Yerevan, USSR. U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/9-84-026. p. 291-303.

Lewis, D. L., R. E. Hodson, and L. F. Freeman. 1984. Effects of Microbial Community Interactions on Transformation Rates of Xenobiotic Chemicals. Applied and Environ. Microbiology. 48(3):561-565.

Lewis, D. L., H. W. Holm, and R. E. Hodson. 1984. Application of Single- and Multiphasic Michaelis-Menten Kinetics to Predictive Modeling for Aquatic Ecosystems. Environ. Toxicology and Chemistry. 3(4):563-574.

Lewis, D. L., H. W. Holm, H. P. Kollig, and T. L. Hall. 1984. Transport and Fate of Diethyl Phthalate in Aquatic Ecosystems. *Environ. Toxicology and Chemistry*. 3(2):223-231.

Mabey, W. R., T. Mill, and R. T. Podoll. 1984. Estimation Methods for Process Constants and Properties Used in Fate Assessments. SRI International, Menlo Park, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-84-035.

Macalady, D., and N. L. Wolfe. 1984. Abiotic Hydrolysis of Sorbed Pesticides. In: Treatment and Disposal of Pesticide Wastes. R.F. Krueger and J.N. Seiber (Eds.). American Chemical Society, Washington, DC. ACS Symposium Series No. 259. p. 221-244.

Morton, R. E., and D. M. Evans. 1984. Modified Valve Seat for the Static Mercury Drop Electrode. *Analytical Chemistry*. 56(2):319-320.

Nowak, P. J., P. F. Korschning, D. G. Wagener, and T. J. Hoban. 1984. Sociological Factors in the Adoption of Agricultural Best Management Practices. Iowa State University, Ames, IA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/5-84-001.

Paris, D. F., N. L. Wolfe, and W. C. Steen. 1984. Microbial Transformation of Esters of Chlorinated Carboxylic Acids. *Applied and Environmental Microbiology*. 47(1):7-11.

Pellizzari, E. D. 1984. Master Analytical Scheme for Organic Compounds in Water. Research Triangle Institute, Research Triangle Park, NC. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA/600/4-84/010a and b.

Rao, P. S. C., V. E. Berkheiser, and L. T. Du. 1984. Estimation of Parameters for Modeling the Behavior of Selected Pesticides and Orthophosphate. University of Florida, Gainesville, FL. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-84-019.

Reardon, P. A., G. E. O'Brien, and P. E. Sturrock. 1984. A Swept-Potential Detector for Flow Streams. *Analytica Chimica Acta*, 162:175-187, August.

Rogers, J. E., S. W. Li, and L. J. Felice. 1984. Microbial Transformation Kinetics of Xenobiotics in Aquatic Environment. Battelle, Pacific Northwest Laboratories, Richland, WA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-84-043.

Scanlon, J. C., P. A. Flauger, G. W. Robinson, G. E. O'Brien, and P. E. Sturrock. 1984. High-Performance Liquid Chromatography of Nitrophenols with a Swept-Potential Electrochemical Detector. *Analytica Chimica Acta.* 158(2):169-177, April.

Shackelford, W. M., and D. M. Cline. 1984. Enhanced Spectrum Matching of Mixed Mass Spectra by Means of Quality Factors. *Analytica Chimica Acta.* 164:251-256, October.

Simons, D. B., R. M. Li, K. G. Eggert, J. N. Ho, W. T. Fullerton, V. M. Ponce, and N. Duong. 1984. Simulation Model for Watershed Management Planning. Volume I: Model Theory and Formulation (EPA-600/3-84-028a) and Volume II: Model User Manual (EPA-600/3-84-028b). Colorado State University, Fort Collins, CO. Prepared for U.S. Environmental Protection Agency, Athens, GA.

Smith, C. N., and R. F. Carsel. 1984. Foliar Washoff of Pesticides (FWOP) Model: Development and Evaluation. *J. Environmental Science and Health.* B19(3):323-342.

Thibodeaux, L. J., D. C. Wolf, and M. J. Davis. 1984. Impact of High Chemical Contaminant Concentrations on Terrestrial and Aquatic Ecosystems: A State-of-the-Art Review. University of Arkansas, Fayetteville, AR. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-84-075.

Thruston, Jr., A. D. 1984. Application of a Spray Deposition Method for Reversed Phase Liquid Chromatography-Mass Spectrometry. U.S. Environmental Protection Agency, Athens GA. Publication No. EPA-600/4-84-011.

Tucker, W. A., A. Q. Eschenroeder, and G. C. Magill. 1984. Air Land Water Analysis System (ALWAS): A Multi-Media Model for Toxic Substances. Arthur D. Little, Inc., Cambridge, MA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication Number EPA-600/3-84-052.

Van Hare, D. R., L. A. Carreira, L. B. Rogers, and L. V. Azarraga. 1984. Coherent Anti-Stokes Raman Spectroscopy of Polycyclic Aromatic Hydrocarbons. *Applied Spectroscopy*. 38(4):543-552.

Zafiriou, O. C., J. Joussot-Dubien, R. G. Zepp, and R. G. Zilka. 1984. Photochemistry of Natural Waters. *Environmental Science and Technology*. 18(12):358A-371A.

Zepp, R. G., P. F. Schlotzhauer, M. S. Simmons, G. C. Miller, G. L. Baughman, and N. L. Wolfe. 1984. Dynamics of Pollutant Photoreactions in the Hydrosphere. *Fresenius Z. Anal. Chem.* 319(2):119-125.

Zepp, R. G., P. F. Schlotzhauer, and G. C. Miller. 1984. Influence of Natural Substances on the Photoreactivity of Pesticides in the Aquatic Environment. In: Prediction of Pesticide Behavior in the Environment: Proceedings of USA-USSR Symposium, October 1981, Yerevan, USSR. U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/9-84-026, p. 230-250.

Ambrose, R. B., Sam I. Hill, and L. A. Mulkey. 1983. User's Manual for the Chemical Transport and Fate Model TOXIWASP, Version 1. U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-83-005.

Ambrose, R. B. 1983. Kinetic Complexity in Estuary Eutrophication Models. In: Environmental Engineering, Proceedings of ASCE Specialty Conference, July 6-8, 1983. A. Medine and M. Anderson (Eds.). New York, American Society of Civil Engineers. p. 182-189.

Anon., . 1983. Proceedings of Stormwater and Water Quality Model Users Group Meeting. T. O. Barnwell (Ed.). U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/9-83-015.

Bailey, G. W., and R. R. Swank. 1983. Modeling Agricultural Nonpoint Source Pollution: A Research Prospective. In: Agricultural Management and Water Quality. F. W. Schaller and G. W. Bailey (Eds.). Ames, Iowa State University Press. p. 27-47.

Baker, D. B. 1983. Fluvial Transport and Processing of Sediments and Nutrients in Large Agricultural River Basins. Heidelberg College, Tiffin, OH. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-83-054.

Basta, D. J., and B. T. Bower. 1983. Analyzing Natural Systems: Analysis for Regional Residuals-Environmental Quality Management: Resources for the Future, Washington, DC. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-83-046.

Boutilier, G. D., R. M. Irwin, R. R. Antcliff, L. B. Rogers, L. A. Carreira, and L. V. Azarraga. 1983. Computer-Controlled Absorption, Fluorescence, and Coherent Anti-Stokes Raman Spectrometry for Liquid Chromatographic Detection. Applied Spectroscopy. 35(6):576-581.

Burns, L. A. 1983. Fate of Chemicals in Aquatic Systems: Process Models and Computer Codes. Chap. 2 in Fate of Chemicals in the Environment. R. L. Swann and A. Eschenroeder (Eds.). American Chemical Society, Washington, D.C. ACS Symposium Series 225. p. 25-40.

Burns, L. A. 1983. Validation of Exposure Models: The Role of Conceptual Verification, Sensitivity Analysis, and Alternative Hypotheses. In: Aquatic Toxicology and Hazard Assessment: Sixth Symposium. W. E. Bishop, R. D. Cardwell, and B. B. Heidolph (Eds.). American Society for Testing and Materials, Philadelphia, PA. STP 802. p. 255-281.

Bursey, J. T., and E. D. Pellizzari. 1983. Analysis of Industrial Wastewater for Organic Pollutants in Consent Decree Survey Samples. Research Triangle Institute, Research Triangle Park, NC. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/4-83-028.

Chatfield, E. J., and P. Riis. 1983. Rapid Screening Technique for Detection of Asbestos Fibers in Water Samples. Ontario Research Foundation, Mississauga, Ontario. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/4-83-041.

Chatfield, E. J., M. J. Dillon, and W. R. Stott. 1983. Development of Improved Analytical Techniques for Determination of Asbestos in Water Samples. Ontario Research Foundation, Mississauga, Ontario. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/4-83-042.

Chatfield, E. J., and M. J. Dillon. 1983. Analytical Method for Determination of Asbestos Fibers in Water. Ontario Research Foundation, Mississauga, Ontario. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/4-83-043.

Crittenden, J. L., R. J. Mulholland, J. Hill, IV., and Eduardo F. Martinez. 1983. Sampling and Data Analysis Properties of Prony's Method Applied to Model Identification. Int. J. Systems Science. 14(5):571-584..

Donigian, A. S., J. L. Baker, D. A. Haith, and M. F. Walter. 1983. HSPF Parameter Adjustments to Evaluate the Effects of Agricultural Best Management Practices. Anderson-Nichols and Co., Palo Alto, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-83-066.

Donigian, A. S., J. C. Imhoff, and B. R. Bicknell. 1983. Modeling Water Quality and the Effects of Agricultural Best Management Practices in Four Mile Creek, Iowa. Anderson-Nichols and Co., Palo Alto, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-83-067.

Duttweiler, D. W., and H. P. Nicholson. 1983. Environmental Problems and Issues of Agricultural Nonpoint Source Pollution. In: Agricultural Management and Water Quality. F.W. Schaller and G.W. Bailey (Eds.). Ames, Iowa State University Press. p. 3-16.

Duttweiler, D. W. 1983. Conference Conclusion. In: Agricultural Management and Water Quality. F. W. Schaller and G. W. Bailey (Eds.). Ames, Iowa State University Press. p. 464-465.

Elliott, E. T., L. G. Castañares, D. Perlmutter, and K. G. Porter. 1983. Trophic-level Control of Production and Nutrient Dynamics in an Experimental Planktonic Community. *Oikos*. 41(1):7-16.

Falco, J. W., L. A. Mulkey, and J. Schaum. 1983. Multimedia Modeling of Transport and Transformation of Contaminants. Chap. 18 in Environment and Solid Wastes: Characterization, Treatment and Disposal. C. W. Francis and S. I. Auerbach (Eds.). Woburn, Butterworth Publishers. p. 223-238.

Giesy, J. P., S. M. Bartell, P. F. Landrum, G. J. Leversee, and J. W. Bowling. 1983. Fates and Biological Effects of Polycyclic Aromatic Hydrocarbons in Aquatic Systems. University of Georgia, Athens, Ga. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-83-053.

Griffiths, P. R., J. deHaseth, and L. V. Azarraga. 1983. Capillary GC/FT-IR. Analytical Chemistry. 55(15):1361A-1387A.

Hallam, T. G., C. E. Clark, and R. R. Lassiter. 1983. Effects of Toxicants on Populations: A Qualitative Approach. I. Equilibrium Environmental Exposure. Ecological Modelling. 18(3,4):291-304.

Hayes, M. J., E. P. Lankmayer, P. Vouros, B. L. Karger, and J. M. McGuire. 1983. Moving Belt Interface with Spray Deposition for Liquid Chromatography/Mass Spectrometry. Analytical Chemistry. 55(11):1745-1752.

Hayter, E. J., and A. J. Mehta. 1983. Modeling Fine Sediment Transport in Estuaries. University of Florida, Gainesville, FL. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-83-045.

Hendrix, P. F., J. A. Hamala, C. L. Langner, and H. P. Kollig. 1983. Effects of Chlorendic Acid, a Priority Toxic Substance, on Laboratory Aquatic Ecosystems. *Chemosphere*. 12(7/8):1083-1099.

Holm, H. W., H. P. Kollig, W. R. Payne, Jr., and L. M. Proctor. 1983. Fate of Methyl Parathion in Aquatic Channel Microcosms. *Environmental Toxicology and Chemistry*. 2(2):169-176.

Imhoff, J. C., B. R. Bicknell, and A. S. Donigian. 1983. Preliminary Application of HSPF to the Iowa River Basin to Model Water Quality and the Effects of Agricultural Best Management Practices. Anderson-Nichols and Co., Palo Alto, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-83-068.

Kollig, H. P. 1983. Derivation of Fluorometric Chlorophyll and Pheophytin Equations. *J. Assoc. Off. Anal. Chem.* 66(3):592-593.

Lane, D. C., and J. M. McGuire. 1983. Gas Phase Electrophilic Aromatic Reactions with Methylene Chloride Positive Ions. *Organic Mass Spectrometry*. 18(11):494-495.

Lankmayer, E. P., M. J. Hayes, B. L. Karger, P. Vouros, and J. M. McGuire. 1983. Band Broadening Phenomena with the Moving Belt LC-MS Interface. *Int. Journal of Mass Spectrometry and Ion Physics*. 46(1):177-180.

Lassiter, R. R. 1983. Prognostic Assessment of Aquatic Contaminants: Optimal Use of Transport, Transformation, and Partitioning Information. In: *Chemicals in the Environment 1982--International Symposium, October 18-20, Lyngby-Copenhagen, Denmark*. K. Christiansen, B. Koch, and F. Bro-Rasmussen (Eds.). The Technical University of Denmark, Lyngby, Denmark. p. 63-76.

Lassiter, R. R. 1983. Prediction of Ecological Effects of Toxic Chemicals: Overall Strategy and Theoretical Basis for the Ecosystem Model. U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-83-084.

Lewis, D. L., H. P. Kollig, and T. L. Hall. 1983. Predicting 2,4-Dichlorophenoxyacetic Acid Ester Transformation Rates in Periphyton-Dominated Ecosystems. *Appl. and Environ. Microbiol.* 46(1):146-151.

Leyden, D. E. 1983. Preconcentration Methods for Trace Element Determination. University of Denver, Denver, CO. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/4-83-006.

Macalady, D., and N. L. Wolfe. 1983. New Perspectives on the Hydrolytic Degradation of the Organophosphorothioate Insecticide Chlorpyrifos. Journal of Agricultural and Food Chemistry. 31(6):1139-1147.

Miller, G. C., and R. G. Zepp. 1983. Extrapolating Photolysis Rates from the Laboratory to the Environment. Residue Reviews, Volume 85. New York, Springer-Verlag. p89-110.

Miranowski, J. A., M. J. Monson, J. S. Shortle, and L. D. Zinser. 1983. Effect of Agricultural Land Use Practices on Stream Water Quality: Economic Analysis. Iowa State University, Ames, IA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/5-83-001.

Muikey, L. A., and J. W. Falco. 1983. Methodology for Predicting Exposure and Fate of Pesticides in Aquatic Environments. In: Agricultural Management and Water Quality. F. W. Schaller and G. W. Bailey (Eds.). Ames, Iowa State University Press. p. 250-266.

O'Leary, D. T., K. M. Richter, P. A. Hillis, P. H. Wood, and S. E. Campbell. 1983. Methodology for Estimating Environmental Loadings from Manufacture of Synthetic Organic Chemicals. Versar, Inc., Springfield, VA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-83-064.

Paris, D. F., N. L. Wolfe, W. C. Steen, and G. L. Baughman. 1983. Effect of Phenol Molecular Structure on Bacterial Rate Constants in Pond and River Samples. Applied and Environmental Microbiology. 45(3):1153-1155.

Perdue, E. M., and N. L. Wolfe. 1983. Prediction of Buffer Catalysis in Field and Laboratory Studies of Pollutant Hydrolysis Reactions. Environmental Science and Technology. 17(11):635-642.

Schnoor, J. L., N. Rao, K. J. Cartwright, R. M. Noll, and C. E. Ruiz-Calzada. 1983. Verification of a Toxic Organic Substance Transport and Bioaccumulation Model. University of Iowa, Iowa City, IA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-83-007.

Shackelford, W. M., D. M. Cline, L. Faas, and G. R. Kurth. 1983. An Evaluation of Automated Spectrum Matching for Survey Identification of Wastewater Components by Gas Chromatography-Mass Spectrometry. *Analytical Chimica Acta.* 146(1):15-27.

Shackelford, W. M., D. M. Cline, L. Burchfield, L. Faas, G. R. Kurth, and A. D. Sauter. 1983. A Computer Survey of GC/MS Data Acquired in EPA's Priority Pollutant Screening Analysis: System and Results. U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/4-83-029.

Skurlatov, Y. I., R. G. Zepp, and G. L. Baughman. 1983. Photoysis Rates of (2,4,5-Trichlorophenoxy) acetic Acid and 4-Amino-3,5,6-trichloropicolinic Acid in Natural Waters. *J. Agricultural and Food Chemistry.* 31(5):1065-1071.

Smith, R. C., K. S. Baker, and J. B. Fahy. 1983. Effects of Suspended Sediments on Penetration of Solar Radiation into Natural Waters. University of California, La Jolla, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-83-060.

Zepp, R. G., and P. F. Schlotzhauer. 1983. Influence of Algae on Photolysis Rates of Chemicals in Water. *Environmental Science and Technology.* 17(8):462-468.

Ambrose, R. B., and S. E. Roesch. 1982. Dynamic Estuary Model Performance. Journal of the Environmental Engineering Division, Proceedings of the American Society of Civil Engineers. 108(EEI):51-71.

Ames, W. F. 1982. Analysis of Mathematical Models for Pollutant Transport and Dissipation. Georgia Institute of Technology, Atlanta, GA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-049.

Anon., . 1982. Proceedings of Stormwater and Water Quality Management Modeling Users Group Meeting, 25-26 March 1982. U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/9-82-015.

Anon., . 1982. Retention and Transformations of Selected Pesticides and Phosphorus in Soil-Water Systems: A Critical Review. P.S.C. Rao and J.M. Davidson (Eds.). University of Florida, Gainesville, FL. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-060.

Barnwell, T. O., and P. A. Krenkel. 1982. The Use of Water Quality Models in Management Decision Making. Water Science and Technology. 14(9/11):1095-1107.

Burns, L. A., D. M. Cline, and R. R. Lassiter. 1982. Exposure Analysis Modeling System (EXAMS): User Manual and System Documentation. U.S. Environmental Protection Agency, Athens, GA. EPA-600/3-82-023.

Burns, L. A. 1982. Identification and Evaluation of Fundamental Transport and Transformation Process Models. Chap. 7. In: Modeling the Fate of Chemicals in the Aquatic Environment. K.L. Dickson, A.W. Maki, and J. Cairns, Jr. (Eds.), Ann Arbor, Ann Arbor Science Publishers. p. 101-126.

Crosson, P. 1982. Conservation Tillage and Conventional Tillage: A Comparative Assessment. Resources for the Future, Washington, DC. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-027.

Crosson, P., and S. Brubaker. 1982. Resource and Environmental Impacts of Trends in U.S. Agriculture. Resources for the Future, Washington, DC. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-031.

Davis, M. J., M. K. Snyder, and J. W. Nebgen. 1982. River Basin Validation of the Water Quality Assessment Methodology for Screening Nondesignated 208 Areas: Volumes I and II. Midwest Research Institute, Kansas City, MO. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-057.

Evans, O. M. 1982. Voltammetric Determination of the Decomposition Rates of Combined Chlorine in Aqueous Solution. *Analytical Chemistry*. 54(9):1579-1582.

Falco, J. W., L. A. Mulkey, R. R. Swank, R. E. Lipcsei, and S. M. Brown. 1982. A Screening Procedure for Assessing the Transport and Degradation of Solid Waste Constituents in Subsurface and Surface Waters. *Environmental Toxicology and Chemistry*. 1(1):121-134.

Frederick, K. D. et al. 1982. Trends in U.S. Irrigation: Three Regional Studies. Resources for the Future, Washington, D.C. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-069.

Futrell, J. H., A. L. Wahrhaftig, and L. G. Randall. 1982. Mass Spectrometric Analysis of Involatile Samples. University of Utah, Salt Lake City, UT. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-061.

Gard, T. C. 1982. Persistence in Model Ecosystems. University of Georgia, Athens, GA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-030.

Garrison, A. W., and E. D. Pellizzari. 1982. The Master Analytical Scheme: An Overview of Revised Procedures. In: *Preprints of Extended Abstracts of the 185th National Meeting of the American Chemical Society*, Las Vegas, NV, 28-March - 2-April.

Garrison, A. W., and E. D. Pellizzari. 1982. A Master Analytical Scheme for Organics in Water. In: *Analytical Techniques in Environmental Chemistry*. 2. J. Albaiges (Ed.), Oxford New York, Pergamon Press. p. 87-99.

Gebhart, J. E., and M. M. McKown. 1982. Components Identified in Energy-Related Wastes and Effluents. Gulf South Research Institute, New Orleans, LA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-058.

Glaze, W. H., J. L. Burleson, J. E. Henderson IV, P. C. Jones, W. Kinstley, G. R. Peyton, R. Rawley, F. Y. Saleh, and G. Smith. 1982. Analysis of Chlorinated Organic Compounds Formed During Chlorination of Wastewater Products. North Texas State University, Denton, TX. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/4-82-072.

Grimsrud, G. P., D. D. Franz, R. C. Johanson, and N. H. Crawford. 1982. Executive Summary for the Hydrological Simulation Program-FORTRAN (HSPF). Hydrocomp, Inc., Mountain View, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-046.

Hall, T. L., J. A. Hamala, P. F. Hendrix, H. P. Kollig, J. A. Kremer, C. L. Langner, and W. R. Payne, Jr. 1982. Community Structure, Nutrient Dynamics, and the Degradation of Diethyl Phthalate in Aquatic Laboratory Microcosms. U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-093.

Hedden, K. F., L. A. Mulkey, and W. A. Tucker. 1982. Application of Multimedia Exposure Assessment to Drinking Water. Environmental Monitoring and Assessment. 2(1 & 2):057-069.

Hesson, J., and J. K. Robertson. 1982. Application of Water Quality Models to a Small Forested Watershed: I. The Nondesignated 208 Area Screening Model. U.S. Military Academy, West Point, NY. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-029.

Holm, H. W., H. P. Kollig, L. M. Proctor, and W. R. Payne, Jr. 1982. Laboratory Ecosystems for Studying Chemical Fate: An Evaluation Using Methyl Parathion. U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-020.

Hoover, T. B. 1982. Multiple Eluent and pH Effects on Ion Chromatography of Phosphate and Arsenate. Separation Science and Technology. 17(2):295-305.

Johanson, R. C., and D. Kliewer. 1982. Maintenance and Testing of Hydrological Simulation Program--FORTRAN (HSPF). Hydrocomp, Inc., Mountain View, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-059.

Johnson, H. P., and J. L. Baker. 1982. Field-to-Stream Transport of Agricultural Chemicals and Sediment in an Iowa Watershed: Part 1. Data Base for Model Testing (1976-1978). Iowa State University, Ames, IA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-032.

Knight, R. L. 1982. Energy Model of a Cadmium Stream with Correlation of Embodied Energy and Toxicity. University of Florida, Gainesville, FL. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-048.

Kollig, H. P., and T. L. Hall. 1982. The Effects of Acid Perturbation on a Controlled Ecosystem. Water, Air, and Soil Pollution. 17:225-233, February.

Krewer, J. A., and H. W. Holm. 1982. The Phosphorus-Chlorophylla Relationship in Periphytic Communities in a Controlled Ecosystem. Hydrobiologia. 94(2):173-176.

Lassiter, R. R. 1982. Testing Models of the Fate of Chemicals in Aquatic Environments. Chap. 16. In: Modeling the Fate of Chemicals in the Aquatic Environment. K.L. Dickson, A.W. Maki, and J. Carins, Jr. (Eds.). Ann Arbor, Ann Arbor Science Publishers. p. 287-301.

Lether, F. G., D. M. Cline, and O. M. Evans. 1982. Numerical Approximation of Semi-Integrals and Semiderivatives by Product Quadrature Rules. Jour. Math. Phy. Sci. 16(2):111-121.

Lorber, M. N., and L. A. Mulkey. 1982. An Evaluation of Three Pesticide Runoff Loading Models. Journal of Environmental Quality. 11(3):519-529.

Mackay, D., W. Y. Shiu, A. Bobra, J. Billington, E. Chau, A. Yeun, C. Ng, and F. Szeto. 1982. Volatilization of Organic Pollutants from Water. University of Toronto, Toronto, Canada. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-019.

Mill, T., et al. 1982. Laboratory Protocols for Evaluating the Fate of Organic Chemicals in Air and Water. SRI International, Menlo Park, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-022.

Mills, W. B. et al. 1982. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants. Tetra Tech, Inc., Lafayette CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/6-82-004 a,b.

Moore, R. V. 1982. Dibenzylammonium and Sodium Dibenzylthiocarbamates as Precipitants for Preconcentration of Trace Elements in Water for Analysis by Energy Dispersive X-ray Fluorescence. Analytical Chemistry. 54(6):895-897.

Olsen, A. R., and S. E. Wise. 1982. Frequency Analysis of Pesticide Concentrations for Risk Assessment (FRANCÖ Model). Battelle Pacific Northwest Laboratories, Richland, WA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-044.

Onishi, Y., S. M. Brown, A. R. Olsen, M. A. Parkhurst, S. E. Wise, and W. H. Walters. 1982. Methodology for Overland and Instream Migration and Risk Assessment of Pesticides. Battelle Pacific Northwest Laboratories, Richland, WA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-024.

Onishi, Y., and S. E. Wise. 1982. User's Manual for the Instream Sediment-Contaminant Transport Model SERATRA. Battelle Pacific Northwest Laboratories, Richland, WA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-055.

Onishi, Y., and S. E. Wise. 1982. Mathematical Models, SERATRA, for Sediment-Contaminant Transport in Rivers and It's Application to Pesticide Transport in Four Mile and Wolfe Creeks in Iowa. Battelle Pacific Northwest Laboratories, Richland, WA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-045.

Onishi, Y. 1982. User's Manual for EXPLORE-I: A River Basin Water Quality Model (Hydraulic Model Only). Battelle Pacific Northwest Laboratories, Richland, WA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-054.

Osteen, C., W. D. Seitz, and J. B. Stall. 1982. Toward Instream Water Quality Management. University of Illinois at Urbana-Champaign, Urbana, IL. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/5-82-003.

Osteen, C., and W. D. Seitz. 1982. Economic Impacts of Selected Erosion-Control Policies: Distribution Among Corn-Belt States. University of Illinois at Urbana-Champaign, Urbana, IL. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/5-82-006.

Paris, D. F., W. C. Steen, and L. A. Burns. 1982. Microbial Transformation Kinetics of Organic Compounds. In: The Handbook of Environmental Chemistry, Volume 2/Part B. D. Hützinger (Ed.). Berlin Heidelberg, Springer-Verlag. p. 73-81.

Paris, D. F., N. L. Wolfe, and W. C. Steen. 1982. Structure-Activity Relationships in Microbial Transformation of Phenols. Applied and Environmental Microbiology. 44(1):153-158.

Park, R. A. et al. 1982. Modeling the Fate of Toxic Organic Materials in Aquatic Environments. Rensselaer Polytechnic Institute, Troy, NY. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-028.

Perdue, E. M., and N. L. Wolfe. 1982. Modification of Pollutant Hydrolysis Kinetics in the Presence of Humic Substances. Environ. Sci. and Technol. 16(12): 847-852.

Robillard, P. D., W. H. Walters, and L. M. Bruckner. 1982. Planning Guide for Evaluating Agricultural Nonpoint Source Water Quality Controls. Cornell University, Ithaca, NY. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-021.

Seitz, W. D., and R. Hewett. 1982. Equity Analysis in Public Policy Formation. University of Illinois at Urbana-Champaign, Urbana, IL. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/5-82-005.

Seitz, W. D., D. M. Gardner, and J. C. Von Es. 1982. Recognizing Farmer's Attitudes and Implementing Nonpoint Source Pollution Control Policies. University of Illinois at Urbana-Champaign, Urbana, IL. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/5-82-004.

Vouros, P., E. P. Lankmayer, M. J. Hayes, B. L. Karger, and J. M. McGuire. 1982. New Approaches to On-line Ion-Pair Extraction and Derivatization for High Performance Liquid Chromatography-Mass Spectrometry. Journal of Chromatography. 251(2):175-188.

Wechsler, A. E., A. Q. Eschenroeder, D. Gilber, K. Loos, P. Poston, and J. M. Stevens. 1982. Feasibility of Developing a Comprehensive Methodology for Source Identification and Environmental Loading (Materials Balance). Arthur D. Little, Inc., Cambridge, MA. Prepared for U.S. Environmental Protection Agency, Athens, GA. Publication No. EPA-600/3-82-047.

Wolfe, N. L., R. G. Zepp, P. F. Schlotzhauer, and M. Sink. 1982. Transformation Pathways of Hexachlorocyclopentadiene in the Aquatic Environment. Chemosphere. 11(2):91-101.

Zepp, R. G. 1982. Experimental Approaches to Environmental Photochemistry. In: The Handbook of Environmental Chemistry, Volume 2/Part B. O. Hutzinger (Ed.). Berlin Heidelberg, Springer-Verlag. p. 19-41.

Azarraga, L. V., and C. A. Potter. 1981. An Integrated GC/FT-IR System for the Analysis of Environmental Pollutants. *Journal of High Resolution Chromatography and Chromatography Communications.* 4(2):60-69, 1981.

Azarraga, L. V., R. R. Williams, and J. deHaseth. 1981. Fourier Encoded Data Searching of Infrared Spectra (FEDS/IRS). *Journal of Applied Spectroscopy.* 35(5):466-469.

Barnwell, T. O., and R. C. Johanson. 1981. HSPP: A Comprehensive Package for Simulation of Watershed Hydrology and Water Quality. In: Nonpoint Pollution Control: Tools and Techniques for the Future. K. C. Flynn (Ed.). Interstate Commission on the Potomac River Basin, Rockville MD. Technical Publication 81-1.

Baughman, G. L., and D. F. Paris. 1981. Microbial Bioconcentration of Organic Pollutants from Aquatic Systems - A Critical Review. *Critical Reviews in Microbiology.* 8(3):205-228, 1981.

Bostater, C. R. Jr., R. B. Ambrose, and B. Bell. 1981. Modeling the Fate and Transport of Chemicals in Estuaries: Current Approaches and Future Needs. American Society for Testing and Materials, Philadelphia PA. Spec. Tech. Pub. No. 737. p. 72-90.

Brown, D. S., and E. W. Flagg. 1981. Empirical Prediction of Organic Pollutant Sorption in Natural Sediments. *Journal of Environmental Quality.* 10(3):382-386.

Carter, M. H., A. W. Garrison, L. H. Keith, J. M. McGuire, and J. D. Pope, Jr. 1981. GC/MS Analysis of New Orleans Drinking Water. In: Abstracts of the 29th Annual Conference on Mass Spectrometry and Allied Topics. Minneapolis, MN. 24-29 May.

deHaseth, J., and L. V. Azarraga. 1981. Interferogram-Based Infrared Search System. *Analytical Chemistry.* 53(14):2292-2296.

Duttweiler, D. W. 1981. Closing--Overview and Future Prospects. In: Test Protocols for Environmental Fate and Movement of Toxicants, Proceedings of a Symposium. Association of Official Analytical Chemists, Arlington, VA. ISBN 0-935584-20-X. p. 329-330.

Ellington, J. J. 1981. Analysis of Volatile Organics on Sediments and in Associated Water. Chap. 40 in Advances in the Identification and Analysis of Organic Pollutants in Water, Volume 2. L. H. Keith (Ed.). Ann Arbor, Ann Arbor Science Publishers, Inc. p. 729-746.

Franz, D. D., and S. M. Lieu. 1981. Evaluation of Remote Sensing Data for Input into Hydrological Simulation Program-FORTRAN (HSPP). Hyrocomp, Inc., Mountain View, CA. Prepared for U.S. Environmental Protection Agency, Athens, GA. EPA-600/3-81-037.

Gambrell, R. P. et al. 1981. Behavior of DDT, Kepone, and Permethrin in Sediment-Water Systems Under Different Oxidation-Reduction and pH Conditions. Louisiana State University, Baton Rouge, LA. Prepared for U.S. Environmental Protection Agency, Athens, GA. EPA-600/3-81-038.

Garrison, A. W., A. L. Alford, J. S. Craig, J. J. Ellington, A. F. Haeberer, J. M. McGuire, J. D. Pope, Jr., W. M. Shackelford, E. D. Pellizzari, and J. E. Gebhart. 1981. The Master Analytical Scheme: An Overview of Interim Procedures. Chap. 2 in Advances in the Identification and Analysis of Organic Pollutants in Water, Volume 1. L. H. Keith (Ed.). Ann Arbor, Ann Arbor Science Publishers, Inc. p. 17-30.

Graham, J. A., and A. W. Garrison. 1981. Evaluation of Trace Enrichment Methodology in Conjunction with Reverse-Phase High Performance Liquid Chromatography for Preconcentration, Separation, and Quantification of Trace Nonvolatile Organic Compounds in Aqueous Environmental Samples. Chap. 26 in Advances in the Identification and Analysis of Organic Pollutants in Water, Volume 1. L. H. Keith (Ed.). Ann Arbor, Ann Arbor Science Publishers, Inc. p. 399-432.

Haeberer, A. F., and T. A. Scott. 1981. High Performance Liquid Chromatographic Analysis of Nitrophénols. Chap. 23 in Advances in the Identification and Analysis of Organic Pollutants in Water, Volume 1. L. H. Keith (Ed.). Ann Arbor, Ann Arbor Science Publishers, Inc. p. 359-370.

Haeberer, A. F., and T. A. Scott. 1981. High Performance Liquid Chromatographic Determination of Nitrosamines in Water and Wastewater. Chap. 27 in Advances in the Identification and Analysis of Organic Pollutants in Water, Volume 1. L. H. Keith (Ed.). Ann Arbor, Ann Arbor Science Publishers, Inc. p. 433-445.

Hedden, K. F. 1981. Multimedia Exposure Assessment Model Data Needs. In: 1981 National Conference on Environmental Engineering. F. M. Saunders (Ed.). New York, American Society of Civil Engineers. P. 150-158.

Hendrix, P. F., C. L. Langner, E. P. Odum, and C. L. Thomas. 1981. Microcosms as Test Systems for the Ecological Effects of Toxic Substances: An Appraisal with Cadmium. University of Georgia, Athens, GA. Prepared for U.S. Environmental Protection Agency, Athens, GA. EPA-600/3-81-036.

Karickhoff, S. W. 1981. Semi-Empirical Estimation of Sorption of Hydrophobic Pollutants on Natural Sediments and Soils. Chemosphere. 10(8):833-846.

Lewis, D. L., and H. W. Holm. 1981. Rates of Transformation of Methyl Parathion and Diethyl Phthalate by Aufwuchs Microorganisms. Applied and Environmental Microbiology. 42(4):698-703.

McDuffie, B. 1981. Estimation of Octanol/Water Partition Coefficients for Organic Pollutants Using Reverse-Phase HPLC. Chemosphere. 10(1):73-83.

McGuire, J. M., and R. G. Webb. 1981. Organic Water Pollutant Analysis by Gas Chromatography-Mass Spectrometry. Chap. 1. in Water Quality Measurement: The Modern Analytical Techniques. H. B. Mark, Jr. and J. S. Mattson (Eds.). New York, Marcel Dekker, Inc. p. 1-31.

Michael, L. C., R. Wiseman, L. S. Sheldon, J. T. Bursey, K. B. Tomer, E. D. Pellizzari, T. A. Scott, R. Cone, A. W. Garrison, and J. E. Gebhart. 1981. Quality of Master Analytical Scheme Data: Purgeable and Volatile Organic Acids. Chap. 6 in Advances in the Identification and Analysis of Organic Pollutants in Water, Volume 1. L. H. Keith (Ed.). Ann Arbor, Ann Arbor Science Publishers, Inc. p. 87-114.

Paris, D. F., W. C. Steen, G. L. Baughman, and J. T. Barnett, Jr. 1981. Second-Order Model to Predict Microbial Degradation of Organic Compounds in Natural Waters. Applied and Environmental Microbiology. 41(3):603-609.

Payne, Jr., W. R., and J. E. Benner. 1981. Gas and Liquid Chromatographic Analysis of Diethyl Phthalate in Water and Sediment. *J. Assoc. Off. Anal. Chem.* 64(6):1403-1407.

Sauter, A. D., L. Faas, G. R. Kurth, W. M. Shackelford, and D. M. Cline. 1981. Applications of a Data-Adaptive Background Subtraction Technique to the Gas Chromatographic/Mass Spectrometric Analysis of Wastewater Supplies. Chap. 35 in *Advances in the Identification and Analysis of Organic Pollutants in Water*, Volume 2. L. H. Keith (Ed.). Ann Arbor, Ann Arbor Science Publishers, Inc. p. 571-593.

Shackelford, W. M., D. M. Cline, L. Burchfield, L. Faas, G. R. Kurth, and A. D. Sauter. 1981. Computer Survey of Gas Chromatography/Mass Spectrometry Data Acquired in the U.S. Environmental Protection Agency Screening Analysis System and Results. Chap. 33 in *Advances in the Identification and Analysis of Organic Pollutants in Water*, Volume 2. L. H. Keith (Ed.). Ann Arbor, Ann Arbor Science Publishers, Inc. p. 527-554.

Smith, C. N., W. R. Payne, Jr., L. A. Mulkey, J. E. Benner, R. S. Parrish, and M. C. Smith. 1981. The Persistence and Disappearance by Washoff and Dryfall of Methoxychlor from Soybean Foliage -- A Preliminary Study. *J. Environ. Sci. Health*, B16(6):777-794, 1981.

Steen, W. C., and S. W. Karickhoff. 1981. Biosorption of Hydrophobic Organic Pollutants by Mixed Microbial Populations. *Chemosphere*, 10(1):27-32.

Taylor, C. E., and T. L. Floyd. 1981. Inductively Coupled Plasma Atomic Emission Spectrometric Analysis of Environmental Samples Using Ultrasonic Nebulization. *Applied Spectroscopy*, 35(4):408-413.

Thruston, Jr., A. D., and J. M. McGuire. 1981. Characterization of Organics in Tannery Effluents by Liquid Chromatography-Mass Spectrometry. *Biomedical Mass Spectrometry*, 8(2):47-50.

Tomer, K. B., J. T. Bursey, L. C. Michael, L. S. Sheldon, E. D. Pellizzari, A. L. Alford, J. D. Pope, Jr., and A. W. Garrison. 1981. Quantitative Aspects of the Master Analytical Scheme for Organics in Water. Chap. 5 in *Advances in the Identification and Analysis of Organic Pollutants in Water*, Volume 1. L. H. Keith (Ed.). Ann Arbor, Ann Arbor Science Publishers, Inc. p. 67-85.

Zepp, R. G., G. L. Baughman, and P. F. Schlotzhauer. 1981. Comparison of Photochemical Behavior of Various Humic Substances in Water. I. Sunlight Induced Reactions of Aquatic Pollutants Photosensitized by Humic Substances. Chemosphere. 10(1):109-117.

Zepp, R. G., G. L. Baughman, and P. F. Schlotzhauer. 1981. Comparison of Photochemical Behavior of Various Humic Substances in Water. II. Photosensitized Oxygenations. Chemosphere. 10(1):119-126.

Zepp, R. G., and P. F. Schlotzhauer. 1981. Comparison of Photochemical Behavior of Various Humic Substances in Water: III. Spectroscopic Properties of Humic Substances. Chemosphere. 10(5):479-486.

Zepp, R. G., and P. F. Schlotzhauer. 1981. Effects of Equilibration Time on Photoreactivity of the Pollutant DDE Sorbed on Natural Sediments. Chemosphere. 10(5):453-460.

U.S. Environmental Protection Agency
Library, Room 2404 PM-211-A
401 M Street, S.W.
Washington, DC 20460