

CIVIL ENGINEERING
OREGON STATE UNIVERSITY
College of Engineering

WILLIAMSON, Kenneth J. BIRTH DATE

Professor April 27, 1946

DEGREES

B.S., Civil Engineering, Oregon State University, 1968

M.S., Environmental Engineering, Oregon State University, 1970

Ph.D., Environmental Engineering, Stanford University, 1973

ACADEMIC POSITIONS

Instructor, Oregon State University, 1969-1970

Instructor, San Jose State University, 1971-1972

Assistant Professor, Oregon State University, 1973-1978

Associate Professor, Oregon State University, 1978-1985

Professor, Oregon State University, 1985-present

Associate Director, Western Region Hazardous Substance Research Center, Oregon State University, 1989-present

Director, Training and Technology Transfer, Western Region Hazardous Substance Research Center, Oregon State University, 1989-present

Director, Technical Outreach Service to Communities Program, Western Region Hazardous Substance Research Center, Oregon State University, 1994-present

Director, Oregon Water Resources Research Institute, 1993-1999

President, Oregon State University Faculty Senate, 1999.

Head, Department of Civil, Construction, and Environmental Engineering, 2000-present.

Co-director, Center for Water and Environmental Sustainability, 2000-present.

Head, Department of Chemical Engineering, 2003-present.

FIELDS OF SPECIALIZATION

Biological and Chemical Waste Treatment

Environmental Impact Assessment

Hazardous Waste Treatment and Management

Bioremediation

Technology Transfer and Technical Outreach

PROFESSIONAL ACTIVITIES

Registration

Professional Engineer, State of Oregon

Professional Societies

American Society of Civil Engineers

American Water Works Association

Water Environment Federation

Association of Environmental Engineering Professors

American Society of Engineering Education

Patents

- “Method and Apparatus for Separating Suspended Solids from Liquids,” U.S. Patent 4,743,382.
“Support Aerated Biofilm Reactor,” U.S. Patent 5,116,506.
“Bioremediation of Xenobiotics Including Methyl Tert-butyl Ether” U.S. Patent 6,194,197

Professional Recognition

Tau Beta Pi

Harrison P. Eddy Award for Most Significant Contribution to Environmental Engineering Research - 1977

NSF Postdoctoral Fellowship, 1978-1979

Austin-Paul University Faculty Award for excellence in student/teacher relationship-1986

Dar Reese All-University Advising Award for excellence in academic advising-1987

Founders Award (outstanding paper in *Water Research* for 1989), USA National Committee, International Association of Water Pollution Research and Control, 1990

Alumni Award, Oregon State University, 1997.

D. Curtis Mumford Faculty Service Award, 2000.

PUBLICATIONS

Books and Book Chapters

“Fish and Shellfish Wastes,” (with M.R. Soderquist), In: *Solid Wastes* (C.L. Mantell, ed.) John Wiley and Sons, New York, NY, 1975.

“The Use of Fish and Shellfish Waste in Fertilizers and Feedstuffs,” (with G.R. Swanson and E.G. Dudley), In: *Handbook of Organic Waste Conversion* (M.W.M. Bewick, ed.), Van Nostrand Reinhold, New York, NY 1979.

“Water Treatment and Distribution,” In: *Civil Engineering License Review, 12th Edition*, Engineering Press, San Jose, California, 1995.

“Water Treatment and Distribution: Problems and Solutions,” In: *Civil Engineering License Problems and Solutions*, 12th Edition, Engineering Press, San Jose, California, 1995.

“Wastewater Treatment,” In: *Civil Engineering License Review, 12th Edition*, Engineering Press, San Jose, California, 1995.

“Wastewater Treatment: Problems and Solutions,” In: *Civil Engineering License Problems and Solutions*, 12th Edition, Engineering Press, San Jose, California, 1995.

“Waste Water and Solid Waste Treatment,” In: *EIT Civil Review*, Engineering Press, San Jose, California, 1997.

“Water Purification and Treatment,” In: *EIT Civil Review*, Engineering Press, San Jose, California, 1997.

“Environmental Impact Assessment: Principles, Planning and Management.” (with T. Abdoul-Kassim) In Environmental Impact Assessment of Recycled Hazardous Waste Materials on Surface and Groundwaters: Chemodynamics, Toxicology, Modeling and Information Systems. The Handbook of Environmental Chemistry, Water Pollution Series, Vol. 5/Part F (TAT Aboul-Kassim and K.J. Williamson, editors), Springer-Verlag, Berlin-Heidelberg (in press).

“Environmental Chemodynamics of Recycled Hazardous Wastes,” (with T. Abdoul-Kassim and B. Simoneit) In Environmental Impact Assessment of Recycled Hazardous Waste Materials on Surface and Groundwaters: Chemodynamics, Toxicology, Modeling and Information Systems. The Handbook of Environmental Chemistry, Water Pollution Series, Vol. 5/Part F (TAT Aboul-Kassim and K.J. Williamson, editors), Springer-Verlag, Berlin-Heidelberg (in press).

Refereed Technical Journals and Proceedings

- “Rapid Measurement of Monod Half-Velocity Coefficients for Bacterial Kinetics,” (with P.L. McCarty), *Bioengineering and Biotechnology*, XVII, 915, 1975.
- “A Model of Substrate Utilization by Bacterial Films,” (with P.L. McCarty), *J. of Water Poll. Control Federation*, 48, 1, 1976.
- “Verification Studies of the Biofilm Model for Bacterial Substrate Utilization,” (with P.L. McCarty), *J. of Water Pollution Control Federation*, 48, 1, 1976.
- “Conflicts in Interdisciplinary Research,” (with D.A. Bella), *J. of Environmental Systems*, 6, 2, 105, 1976-1977.
- “Influence of Interdisciplinary Research on Environmental Management,” (with D.A. Bella), *Engineering Issues, ASCE*, 105, EI3, 193, 1978.
- “Input/Output Energy Analyses of Regional Water Pollution Control,” (with R.J. Heggen), *J. of Water Pollution Control Federation*, 51, 4, 759, 1979.
- “Diagnosis of Chronic Impacts of Estuarine Dredging,” (with D.A. Bella), *J. Environmental Systems*, 9, 4, 1979-80
- “Setting Rates of Algae from Wastewater Lagoons,” (with S.E. Stutz McDonald), *J. Environmental Engineering, ASCE*, 105, 2, 273, 1978.
- “Kinetics of Trace Metal Partitioning in Model Anoxic Marine Sediments,” (with S. Oakley, C. Delphey and P.O. Nelson), *Water Research*, 14, 1067, 1980.
- “Upgrading Lagoon Effluents with Rock Filters,” (with G.R. Swanson), *J. of Environmental Engineering, ASCE*, 106, 6, 1111, 1980.
- “Influence of Dissolved Oxygen on Activated Sludge Viability,” (with P.O. Nelson), *J. Water Pollution Control Federation*, 53, 1541 (1981).
- “A Bacterial Bioassay for Assessment of Wastewater Toxicity,” (with A. Ankerberg), *Water Research*, 15, 3, 383, 1981.
- “Estuarine Sediments: Successional Model,” (with D.A. Bella) *J. of Environmental Engineering, ASCE*, 106, 4, 695, 1980.
- “Simulation of Sulfur Cycle in Estuarine Sediments,” (with D.A. Bella), *J. of Environmental Engineering, ASCE*, 106, 1, 125, 1980.
- “Packed Bed Biofilm Reactors: Simplified Model,” (with A.D. Meunier), *J. Environmental Engineering Division, ASME*, 107, 307, 1981.
- “Packed Bed Biofilm Reactors: Design,” (with A.D. Meunier), *J. Environmental Engineering Division, ASCE*, 107, 319, 1981.
- “Influence of Dissolved Oxygen on Substrate Utilization Kinetics of Activated Sludge,” (with M.F. Knudson and P.O. Nelson), *J. Water Pollution Control Federation*, 54, 52, 1981.
- “Model of Trace Metal Partitioning on Marine Sediments,” (with S.N. Oakley and P.O. Nelson), *Environmental Science and Technology*, 15, 4, 474, 1981
- “Partitioning of Trace Organics in Sediments,” (with D.P. Pierce and P.O. Nelson), *J. of Environmental Engineering Division, ASCE*, 107, 1100, 1981.
- “Teaching Holistic Thought Through Engineering Design,” (with R.T. Hudspeth), *Engineering Education*, 698, April, 1982.
- “Bacterial Toxicity and Metabolism of Hydrazine Fuels,” (with D.A. Kane), *Archives of Environmental Contamination and Toxicology*, 12, 447, 1983.
- “Accumulation of Cadmium by *Abarenicola Pacifica*,” (with S.N. Oakley, P.O. Nelson), *J. of Science of the Total Environment*, 28, 105, 1983.
- “Dissolved Oxygen Limitations in Activated Sludge: Laboratory Studies,” (with G.R. Swanson and P.O. Nelson) Accepted by *J. Water Pollution Control Federation*, 1983.

- “Sulfide Control of Cadmium and Copper Concentration in Anaerobic Estuarine Sediments,” (with R.J. Davies-Colley and P.O. Nelson), *Marine Chemistry*, 16, 173-186, 1985.
- “Adsorption of Cadmium and Copper by Estuarine Sediments,” (with R.J. Davies-Colley and P.O. Nelson), *Environmental Science and Technology*, 18, 7, 491, 1983.
- “Conflicts in Interdisciplinary Research,” (with D.A. Bella), *Interdisciplinary Analysis and Research*, 1986.
- “Combined Aerobic Heterotrophic Oxidation, Nitrification, and Denitrification in a Permeable Supported Biofilm,” (with D. Timberlake and S.E. Strand), *Water Research*, 22, 12, 1513, 1988.
- “Evidence for Off-Site Transport of Dioxin and Furan Residues in Oregon Sawmills using Chlorophenol Wood Preservatives,” Murray Hackett, Kenneth Williamson, Sandra Woods, American Chemical Society, Division of Environmental Chemistry, 191st National Meeting, Vol. 26, No. 1, New York, NY, April 13-18, 1986.
- “Polychlorinated Bibenzo-p-Dioxins and Dibenzofurans in Selected Estuarine Sediments,” (with M.Hackett and S. Woods). *Chemosphere*, 1989.
- “Implementation of the Kolb Learning Style Theory in a Faculty Development Program at Brigham Young University,” (with R.E. Terry, S.O. Durrant, and P.K. Hurt), *Proceedings of 1991 ASEE Annual Conference*, 1991.
- “Remediation of Kuwait's Oil Contaminated Soils,” (with N. M. Al-Awadhi, and J.D. Istok) Chapter 2 in *Hydrocarbon Contaminated Soils*, Vol. III, Lewis Publishers, 1993.
- “Clean-up of Kuwait's Soils,” (with N. M. Al-Awadhi), *Soils*, March, 1993.
- “Cometabolic Degradation of Chlorinated Solvents: Bacterial Inhibition, Inactivation, and Recovery),” (with R.L. Ely, M.R. Hyman, and D.J. Arp), *Proceedings of Third International Conference on Bioremediation*, 1995.
- “A Cometabolic Kinetics Model Incorporating Enzyme Inhibition, Inactivation, and Recovery. 1. Model Development, Analysis, and Testing,” (with R.L. Ely, R.B. Guenther, M.R. Hyman, and D.J. Arp), *Bioengineering and Biotechnology*, 46, 3, 218-231, 1995.
- “A Cometabolic Kinetics Model Incorporating Enzyme Inhibition, Inactivation, and Recovery. 2. Trichloroethylene Degradation Experiments,” (with R.L. Ely, R.B. Guenther, M.R. Hyman, and D.J. Arp), *Bioengineering and Biotechnology*, 46, 3, 232-245, 1995.
- “Cometabolism of Trichloroethylene by *Nitrosomonas europaea*: Inhibition, Inactivation and Recovery of Ammonia-Oxidizing Activity,” (with M.R. Hyman, S.A. Russell, R.L. Ely, and D.J. Arp), *Journal of Applied Microbiology*, 1995.
- “Trinitrotoluene (TNT) Transformation Pathways under Denitrification Conditions by Ruminant Microorganisms G.8,” (with T.J. Lee, A.M. Craig, and S.L. Woods), *Applied and Environmental Microbiology*, 1995.
- “Dioxin and Furan Emissions from Municipal Refuse Derived Fuel Combustion,” (with T.J. Lee, and Y. Lee), *J. of Korean Environmental Engineering Association*, 1995.
- “Metal Emission from RDH Combustion,” (with T.J. Lee and Y. Lee), *J. of Air Pollution Conservation*, 1995.
- “Inhibition, Inactivation, and Recovery of Ammonia-oxidizing Activity in Cometabolism of Trichloroethylene by *Nitrosomonas europaea*.” (with M.R. Hyman, S.A. Russell, and R.L. Ely) *Applied and Environmental Microbiology*. 61, 1480, 1995.
- “Cometabolic Degradation of Chlorinated Solvents: Bacterial Inhibition, Inactivation and Recovery.” (with R.L. Ely, M. R. Hyman and D.J. Arp) In: *Bioremediation of Chlorinated Solvents* (Hinchee, R.E., A. Leeson and L. Semprini eds.), 187, 1995.
- “Cometabolism of Chlorinated Solvents by Nitrifying Bacteria: Kinetics, Substrate Interactions, and Toxicity Effects and Bacterial Response.” (with R.L. Ely, M. R. Hyman and D.J. Arp) *Biotechnology and Bioengineering*, 54:520-534, 1997.

- “Cometabolism of MTBE by Alkane-Utilizing Microorganisms” (with M.R. Hyman, P.Kwon, and K.T. O-Reilly) In: Proc. 1st International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Battelle Press, Columbus, OH, 1998.
- “The Anaerobic Transformation of TNT and other Nitroaromatic Compounds,” (with J.B. Lotrario, S.L Woods, and A.M. Craig) In: *Situ and On-Site Bioremediation: Volume 2, Fourth International In-Situ and On-Site Bioremediation Symposium*, Battelle Press, 41, 1997.
- “Bioremediation of Pentachlorophenol-Contaminated Soil in Laboratory and Full-Scale Processes,” (with M.B. Havighorst, S.L. Woods) In: *Situ and On-Site Bioremediation: Volume 2, Fourth International In-Situ and On-Site Bioremediation Symposium*, Battelle Press, 455, 1997.
- “Bioremediation of Soils Contaminated with 2,4-D, 2,4,5-T, Dichloroprop, and Silvex,” (with A.B. Degher, K.G. Wang, S.L. Woods, and R. Strauss,” In: *Situ and On-Site Bioremediation: Volume 2, Fourth International In-Situ and On-Site Bioremediation Symposium*, Battelle Press, 279, 1997.
- “Bioremediation of Pentachlorophenol-Contaminated Groundwater: A Permeable Barrier Technology,” (with J.D. Cole, S.L. Woods, P.J. Kaslik, and D.B. Roberts) In: *Situ and On-Site Bioremediation: Volume 2, Fourth International In-Situ and On-Site Bioremediation Symposium*, Battelle Press, 239, 1997.
- “Demonstration of a Permeable Barrier Technology for Pentachlorophenol-Contaminated Groundwater,” (with J.D. Cole, S.L. Woods, and D. Roberts), *Designing and Applying Treatment Technologies*, First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 18-21, 1998, Godage B. Wickramanayake and Robert E. Hincee, eds., pp. 121-126, 1998.
- “Anaerobic Treatment of a Pentachlorophenol-Contaminated Aquifer using a Borehole Reactor,” (with J. Cole, S.L. Woods, and D. Roberts), 1998 Joint Conference on the Environment, WERC-WRHSRC-NMHWMS, Crowne Plaza Pyramid, Albuquerque, NM, pp. 57-62, March 31-April 1, 1998.
- “Co-metabolic Degradation of PAHs using Phenol-Oxidizing Bacteria,” (with S. Chang and M.R. Hyman), 1998 Joint Conference on the Environment, WERC-WRHSRC-NMHWMS, Crowne Plaza Pyramid, Albuquerque, NM, pp. 57-62, March 31-April 1, 1998.
- “Cometabolism of MTBE by Alkane Utilizing Organisms,” (with M.R. Hyman, T. Musafika-Jeknic, P. Kwon, and K. Reilly), 1998 Joint Conference on the Environment, WERC-WRHSRC-NMHWMS, Crowne Plaza Pyramid, Albuquerque, NM, pp. 57-62, March 31-April 1, 1998.
- “Cometabolism of MTBE by Alkane-Utilizing Microorganisms,” (with M.R. Hyman, P. Kwon, and K. Reilly), First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 18-21, 1998, Godage B. Wickramanayake and Robert E. Hincee, eds., 1(3):121,1998.
- “Nitrifying Bacteria as “Priming” Catalysts for the Biodegradation of Xenobiotics,” (with S. Chang, and M.R. Hyman) First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 18-21, 1998, Godage B. Wickramanayake and Robert E. Hincee, eds., 1(3):51, 1998.
- “Transformation of TCE Driven by Organo-Silicon Compounds,” (with S. Vancheeswaran, L. Semprini, G. Pon and J.D. Ingle)) First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 18-21, 1998, Godage B. Wickramanayake and Robert E. Hincee, eds., 1, 3, 57, 1998.
- “Bioremediation of Soils containing 2,4-C, 2,4,5-T, Dichloroprop, and Silvex,” (with J.T. Spadar, E.L. Webb, H. Schmid, and A. Degher)) First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA, May 18-21, 1998, Godage B. Wickramanayake and Robert E. Hincee, eds., 1, 3, 183, 1998.
- “Abiotic and Biological Transformation of Tetraalkoxysilanes and Trichlorethene/cis-1,2-Dichloroethen Cometabolism Driven by Tetrabutoxysilane-Degrading Microorganisms,”

- (with S. Vancheeswaran, R.U. Haldne, J.D. Ingle, and L. Semprini,) *Environmental Science and Technology*, 33, 1077-1085, 1999.
- “Environmental Fate and Toxicity of Creosote Pressure Treated Wood Leachates. Part I. Molecular Marker Identification and Chemodynamics (with Aboul-Kassim T. Thayumanavan P, and Simoneit B.). The Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC) - Environmental Assessment in California: Common Challenges for the 21st Century, April 25-27, Concord, California, pp. 35, 1999.
- “Environmental Fate and Toxicity of Creosote Pressure Treated Wood Leachates. Part II. Ecological Risk and Human Health Assessments (with Aboul-Kassim T. Thayumanavan P, and Simoneit B.). The Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC) - Environmental Assessment in California: Common Challenges for the 21st Century, April 25-27, Concord, California, pp. 35, 1999.
- “Environmental “Fate-Transport-Toxicity” Modeling of Highway Construction and Repair Materials on Surface and Ground Water,” (with T. Aboul-Kassim). In Proceedings of “New Trends in Water and Environmental Engineering for Safety and Life: Eco-Commptible Solution for Aquatic Environments” (U. Maione, B.M. Lehto, and R. Monti, eds.) Balkema Publishing Co, Torrerdam/Brookfield, Capri-Italy, 678-691, 2000.
- “Environmental Input of Runoff from Highway Construction and Repair Materials: Project Overview,” (with W.C. Huber, P.O. Nelson, N.N. Eldin, and J.R. Lundy) *Transportation Research Record*, 2001.
- “Transfer and Commercialization of Contaminated Groundwater Remediation Technologies” (with M.N. Goltz) *International Journal of Technology Transfer and Commercialization*, Vol. 1, No. 4, 2002.
- “Environmental Impact of Construction and Repair Materials on Surface and Ground Waters, Summary of Methodology, Laboratory Results and Model Development,” (with P.O.Nelson W.C. Huber, N.N. Eldin, M.F. Azizian, P. Thayumanavan, , M.M. Quigley, E.T. Hesse, J.R. Lundy, K.M. Frey, R.B. and Leahy, *NCHRP Report 448*, Transportation Research Board, National Research Council, National Academy Press, Washington, D.C., 2001.
- “Environmental Impact of Construction and Repair Materials on Surface and Ground Waters: Screening and Evaluation Methodology,” (with P.O. Nelson, M.F. Azizian, P. Thayumanavan, W.C. Huber, and N.N.Eldin), *Transportation Research Record No 1743*, pp. 16-24, Transportation Research Board, National Research Council, Washington, D.C., 2001.
- “Environmental Impact of Construction and Repair Materials on Surface and Ground Waters: Detailed Evaluation of Waste Amended Highway Materials,” (with P. Thayumanavan, P.O. Nelson, M.F. Azizian, and J.R. Lundy), *Transportation Research Record No. 1743*, pp. 25-32, Transportation Research Board, National Research Council, Washington, D.C. (2001).
- “Environmental Impact of Runoff form Highway Construction and Repair Materials: Project Overview,” (with W.C. Huber, P.O. Nelson, P.O., N.N. Eldin, and J.R. Lundy). *Transportation Research Record No. 1743*, pp. 1-10, Transportation Research Board, National Research Council, Washington, D.C. (2001)
- “A Novel Methodology for Assessing Environmental Impacts of Recycled and Waste Materials Used in Highway Construction,” (with P.O.Nelson, P. Thayumanavan, and M. F. Azizian) First International Conference on Beneficial Use of Recycled Materials Transportation Applications, Washington, DC, November 13-15, 2001 (accepted for publication-June 2002).
- “Evaluation of environmental impact of Crumb Rubber-asphalt concrete leachate from highway construction and repair,” *Technologies for Contaminant Remediation Under Heterogeneous Subsurface Conditions*, as part of the symposium *Emerging Technologies: Waste Management in the 21st Century*,” (with M.F. Azizian, P.O. Nelson, P. Thayumanavan)

American Chemical Society, Environmental Chemistry Division, Vol. 40, No. 1, March, 2000.

- "Environmental Impact of Crumb Rubber Asphalt Concrete Leachate Contaminants from Highway Construction and Repair Materials on Surface and Ground Waters," (with M.F. Azizian, P.O. Nelson, and P. Thayumanavan), American Chemical Society, Environmental Chemistry Division, Vol. 41, No. 1, pp. 409-413, 2001.
- "Intrinsic Remediation of Trichloroethene Driven by Tetraalkoxysilanes as Co-contaminants: Results of Microcosm and Field Studies," (with S. Vancheeswaran, S. Yu, P. Daley, R. Halden, J. Ingle Jr., and L. Semprini), Remediation, Spring, p. 7-25, Spring, 2003.
- "Forensic Analysis and Genetic Source Partitioning Model for Portland Harbor Contaminated Sediments," (with Aboul-Kassim TAT), Journal of Environmental Informatics, in press.
- "Environmental Analysis and Impact Assessment of Solid Wastes as Road Construction Materials. Part I. Types, properties, uses and project approaches," (with T. Aboul-Kassim and B. Simoneit), RC-Critical Reviews in Environmental Science and Technology, (submitted for publication).
- Aboul-Kassim TAT, Simoneit BRT and Williamson KJ (2003). "Environmental Analysis and Impact Assessment of Solid Wastes as Road Construction Materials. Part II. Forensic investigation and genetic source partitioning modeling," (with T. Aboul-Kassim and B. Simoneit), RC-Critical Reviews in Environmental Science and Technology, (submitted for publication).
- "Molecular Marker Characterization and Source Partitioning Model of Organic Leachates from Complex Mixtures," (with T. Aboul-Kassim and B. Simoneit), Environmental Science and Technology, (submitted for publication).

Non-referred Conference Proceedings

- "Seafood Processing: Pollution Problems and Guidelines for Improvement," (with M.R. Soderquist and G.I Blanton), Proceedings of the National Symposium of Food Processing Wastes, Portland, OR, April 1970.
- "Monitoring Dredge Spoils," (with L.S. Slotta), Proceedings of EPA Workshop of Monitoring the Marine Environments, 1974.
- "Oxidation of Ferrous Sulfides in Estuarine Sediments," (with A. Todd), Proceedings of 1976 Technical Conference on the Estuaries of the Pacific Northwest, March 1976.
- "Oxygen Limitation in Heterotrophic Biofilms," (with D. Owen), 31st Purdue Industrial Waste Conference, May 1976.
- "Environmental Trade-offs of Land vs Water Storage of Logs," (with F.D. Schaumburg), Log Sort Yards Conference, Oregon State University, 1977.
- "Environmental Impacts of Dredging in Estuaries," (with D.A. Bella), Proceedings of Shorelines Management '77: Performance & Prospects, Seattle, WA, September 1977.
- "A Diagnostic Methodology for Assessment of Environmental Impacts in Estuaries," Proceedings of Coastal Zone '78, March 1978.
- "Field Evaluation of Rock Filters for Removal of Algae from Lagoon Effluents," (with G. Swanson) Proceedings of Conference on Upgrading Lagoon Effluents, Logan, UT, August 1978.
- "Influence of Dissolved Oxygen Concentrations on Viability and Kinetics of Activated Sludge," (with P.O. Nelson and G. Swanson) Research Symposia Proceedings of Water Pollution Control Federation Conference, Las Vegas, NV, October 1980.
- "Development of a Novel Support Aerated Biofilm Reactor for the Biodegradation of Toxic Organic Compounds," (with S. Woods, S. Strand, K. Ryan, J. Polonsky, R. Ely, K.Gardner, and P. Defarges), Fourteenth Annual Research Symposium, Land Disposal, Remedial Action,

- Incineration and Treatment of Hazardous Waste, US Environmental Protection Agency, EPA/600/9-88/021, USEPA Risk Reduction Engineering Laboratory, Cincinnati, OH, July, 1988.
- “Degradation of Chlorinated Low Molecular Weight Solvents by an Enrichment Culture of Methanotrophs,” (with S. Strand, S. Woods, and K. Ryan), Fifteenth Annual Research Symposium, Land Disposal, Remedial Action, Incineration and Treatment of Hazardous Wastes, Environmental Protection Agency, Cincinnati, OH, 1989.
- “Use of Aerated Support Biofilm for Treatment of Municipal Wastewaters,” Annual Conference of the Environmental Engineering Division, ASCE, 1987.
- “Wood Waste,” Handbook on Puget Sound Sediments, A Briefing on Puget Sound Sediments, June 9, 1989.
- “Program to Improve Teaching and Learning in the College of Engineering and Technology at Brigham Young University,” 1990 Frontiers in Education Meeting, Vienna, Austria, July, 1990.

Reports and Others

- “A Study of the Quantity and Distribution of Bark Debris Resulting from Log Rafting,” M.S. Thesis, Oregon State University, 1970.
- “Water Pollution Abatement in the U.S. Seafoods Industry,” (with M.R. Soderquist, G.I. Blanton, D.C. Phillips, D.L. Crawford and D.K. Law), Pacific Northwest Water Laboratories, FWQA, USDI, Corvallis, OR, 1971.
- “The Kinetics of Substrate Utilization by Bacterial Films,” Ph.D. Thesis, Stanford University, 1973.
- “Effects of Shoal Removal by Propeller Wash, December 1973, Tillamook Bay, OR,” (with L.S. Slotta, D.R. Hancock and C.K. Sollitt), U.S. Army Corps of Engineers, 1974.
- “Dredging Problems and Complications,” (with L.S. Slotta), Coastal Zone Management Problems, SEMN WR 018-74, Water Resources Research Institute, Oregon State University, pp. 39-52, March 1974.
- “Estuarine Impacts Related to Dredge Spoiling,” (with L.S. Slotta), Proceedings of the Sixth Dredging Seminar at Texas A & M University, College Station, TX, 1974.
- “An Examination of Some Physical and Biological Impacts of Dredging in Estuaries,” (with L.S. Slotta, D.A. Bella, D.R. Hancock, J.E. McCauley, C.K. Sollitt, and J.M. Stander), Interim Progress Report Submitted to NSF-RANN, 1974.
- “Monitoring Methods for Estuarine Benthic Systems,” (with D.A. Bella), Bulletin No. 52, Engineering Experiment Station, Oregon State University, Corvallis, OR, September 1975.
- “Mutual Influence of Interdisciplinary Research and Environmental Management,” (with D.A. Bella), EPA Conference on Interdisciplinary Research, Spokane, WA, February 1975.
- “A Bioassay to Assess Wastewater Toxicity of Aerobic Biological Treatment,” Water Resources Institute, Oregon State University, 1976.
- “Review of Environmental Impact Statements for Dredging in Estuaries: A Guides Manual,” (with others), Oregon State University, 1977.
- “Review of Environmental Impact Statements for Dredging in Estuaries: A Technical Manual,” (with others), Oregon State University, 1977.
- “Environmental Impacts of Dredging in Estuaries,” (with others), Final Project Report Submitted to NSF-RANN, 1977.
- “Input/Output Energy Analyses of Regional Water Pollution Control,” (with R.J. Heggen), Final Project Report Submitted to Environmental Protection Agency, 1978.
- “Rock Filters for Upgrading Lagoon Effluents,” (with G.R. Swanson), Final Project Report Submitted to Environmental Protection Agency, 1979.
- “Uptake of Metals by Benthic Influence,” (with S. Oakley and P.O. Nelson), Final Report Submitted to WRRI, Oregon State University, 1981.

- “A Bacterial Bioassay for Level I Assessment of Wastewaters,” Final Report Submitted to EPA, CERL, Corvallis, OR, 1982.
- “Intragastric Administration of Dibromomethane to Rats,” Final Report, Air Force Office of Scientific Research, 1983.
- “Environmental Assessment of Wood Fuel Storage for a Biomass Powered, Combined Cycle Generation Facility,” USDA, Final Report, 1986.
- “Health and Safety Considerations for a Biomass Powered, Combined Cycle Power Generation Facility,” USDA, Final Report, 1986.
- “Water Requirements and Wastewater Generation for a Biomass Powered, Combined-Cycle Power Generation Facility, USDA, Final Report, 1986.
- “Teaching Through the Cycle,” Chemical Engineering Department, Brigham Young University,” 1990.
- “Degradation of Chlorinated Aliphatic Compounds by Nitrifying Bacteria,” Final Report to the WRHSRC, 1994.
- “Gravel Disturbance Impacts on Salmon Habitat and Stream Health, Volume I: Summary”, OWRRI, April , 1995.
- “Gravel Disturbance Impacts on Salmon Habitat and Stream Health,” Volume II: Technical Background,” April, 1995.
- “Enhancing Biodegradation with Sorption and Alternating Aerobic/Anaerobic Environments,” Final Report to the WRHSRC, 1997.
- “Inhibition, Inactivation and Recovery: A Universal Model for Aerobic Cometabolic Degradation of Aliphatic Compounds.” Final Report to the WRHSRC, 1997.
- “Demonstration of Interceptor Trench for the Bioremediation of Pentachlorophenol-Contaminated Groundwater,” Final Report to WRHSRC, 1997.
- “Annual Report for the Oregon Water Resources Research Institute,” Submitted to USGS, 1993.
- “Annual Report for the Oregon Water Resources Research Institute,” Submitted to USGS, 1994.
- “Annual Report for the Oregon Water Resources Research Institute,” Submitted to USGS, 1995.
- “Annual Report for the Oregon Water Resources Research Institute,” Submitted to USGS, 1996.
- “Annual Report for the Oregon Water Resources Research Institute,” Submitted to USGS, 1997.
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