

Curriculum Vita

Mohamed F. Dahab, Ph.D., P.E., F. WEF, F. ASCE

Biographical Summary:

Mohamed Dahab is Professor and Past Chair in the Department of Civil Engineering at the University of Nebraska. He is a graduate of the University of Iowa with a Bachelor of Science in Civil Engineering and Iowa State University with MS and Ph.D. degrees in Environmental Engineering. His research and practice interests are in sustainable systems for environmental and water quality management including biological treatment, nutrient removal, biosolids management, bio-energy recovery, and in the use of natural systems for wastewater treatment. Dr. Dahab is author and/or co-author of more than 250 articles in peer-reviewed venues and in the proceedings of national and international conferences and symposia, 36 engineering research reports, and supervisor of more than 30 dissertations/theses at the University of Nebraska. A Past Fulbright Research Scholar, he is engaged internationally with environmental engineering programs in Austria, Brazil, Egypt, Hungary, Korea, Libya, Malaysia, México, Saudi Arabia, and Spain. Dr. Dahab is a Fellow in both, the American Society of Civil Engineers (ASCE) and the Water Environment Federation (WEF), and a licensed professional engineer in Iowa and Nebraska.

In addition to being Past President of the Water Environment Federation, Dr. Dahab is Past Chair and member of the Selection Panel for the U.S. Stockholm Junior Water Prize, and past member the Scientific Program Committee of the Stockholm International Water Institute. He served as Chair of the USA National Committee (USANC) of the International Water Association (IWA); Trustee of the American Academy of Environmental Engineers, Trustee of the Water Environment Federation, and a member of the Board of Directors of the Water Environment Research Foundation; the Board of Directors of the Clean Water America Alliance; and the U.S. Army Corps of Engineers Environmental Advisory Board. Dr. Dahab was appointed by Nebraska Governor Dave Heinemann to the Nebraska Environmental Quality Council (2013-17) and reappointed by Governor Pete Ricketts (2018-21). Dr. Dahab is a life member of the Water Environment Federation, the American Society of Civil Engineers; and the American Water Works Association.

Education:

Ph.D. and MSCE (Major: Environmental Engineering), Iowa State University, Ames, Iowa.
BSCE, Civil Engineering, University of Iowa, Iowa City, Iowa.

Experience:

- **Professor**, University of Nebraska-Lincoln, Department of Civil Engineering and Department of Biological Systems Engineering, July, 1995-Present.
- **Professor and Department Chair**, Department of Civil Engineering, University of Nebraska-Lincoln, August, 1999-July 2009.
- **Visiting Fulbright Research Professor**, Institut für Wasserversorge, Gewässerökologie und Abfallwirtschaft (IWGA), Universität für Bodenkultur-Wien (the University of Natural Resources and Applied Life Sciences), Vienna, Austria (1997).
- **Assistant and Associate Professor**, University of Nebraska, Department of Civil Engineering (1983-94).
- **Special Consultant**, Various national and international industrial and environmental engineering firms, and federal, state, and local government, 1991- Present.

Selected Honors, Awards, and Appointments:

- Fellow in the Water Environment Federation (2015), and the American Society of Civil Engineers (2018).
- Appointed by Nebraska Governor Dave Heineman to the Nebraska Environmental Quality Council, 2013, and reappointed by Governor Pete Ricketts (2017).
- Past-President of the Water Environment Federation. Elected and served as President (2006-2007); President Elect (2005-2006) and Vice President (20004-2005).
- Elected Chair, USA National Committee of the International Water Association; June, 2008- 2012.
- People to People Citizen Ambassador Program Leader – Invited to lead a delegation of 58 Global Water Environment ambassadors to the Peoples Republic of China, (Nov. 2008).

- Fulbright Research Professor, J. William Fulbright Foreign Scholarship Board and the Austrian American Education Commission, at University of Natural Resources and Applied Life Sciences, Vienna, Austria.

Areas of Professional Expertise:

- Sustainable systems for environmental and water quality improvement including systems for water purification and wastewater treatment and nutrients (N and P) removal from water and wastewater;
- The use of natural treatment systems for wastewater treatment;
- Solid and hazardous waste management engineering. Areas of emphasis include pollution prevention, waste minimization, recycling, and energy recovery technologies;
- Use of biological treatment systems for water purification, municipal and industrial wastewater treatment, and the resources and renewable energy recovery from wastewater solids; and
- Risk management techniques for the prevention and control of surface and groundwater contamination.

Languages: Bilingual proficiency: English and Arabic

Summary of Professional Achievements:

- Author and/or co-author of more than 250 articles in peer-reviewed venues and in the proceedings of national/international conferences and symposia, 36 engineering research reports, and supervisor of more than 30 dissertations/theses at the University of Nebraska (lists available on request).
- Invited keynote speaker and presenter at numerous national and international conferences and symposia (list available on request).
- Principal Investigator or Co-Principal Investigator on engineering research and technology outreach projects of nearly \$6.0 million – funding from federal sources including the US EPA, USGS, and USDA.

Selected Publications:

Peer-Juried Publications:

- Hanna, S., Thompson, M., Williams, R., Dahab, M., and Dvorak, B., 2018, “ Benchmarking the electric intensity of small Nebraska wastewater treatment facilities,” *Water Environment Research*. In Press.
- Benzaghta, M.A., Al-Wadaey, A.M., Dahab, M.F., 2016, “Using GIS For Water Resources Management in Nebraska: A Case Study,” *Sirte University Allied Sciences Journal*, 6 (2), 41–54, December.
- Aslan, S., Miller, L. and Dahab, M., 2008, “Ammonium oxidation via nitrite accumulation under limited oxygen concentration in sequencing batch reactors,” *Bioresource Technology*, 100, 2, 559-664.
- Aslan, S. and Dahab, M., 2008, “Nitritation and denitritation of ammonium-rich wastewater using fluidized-bed biofilm reactors,” *Journal of Hazardous Materials*, 156, 56–63.
- Rabah, F.K.J., M.F. Dahab, and T.C. Zhang, 2007, “Estimation of the intrinsic maximum substrate utilization rate using biofilm batch reactors: a proposed methodology,” *Water Environment Research*, 79, 8, 887-892.
- Zhang, T. C., M.F. Dahab, G. Nunes, C. Hu, and R. Surampalli, 2007, “Phosphorus fate and transport in soil columns loaded intermittently with influent of high phosphorus concentrations,” *Water Environment Research*, 79, 11, 2343-2351.
- Hu, C., T.C. Zhang, D. Kendrick, Y.H. Huang, M.F. Dahab, and R. Surampalli, 2006, “Muskegon wastewater land treatment system: fate and transport of phosphorus in soils and life expectancy of the system,” *Engineering in Life Sciences*, 6, 1, 17-25.
- Hu, C., T.C. Zhang, Y.H. Huang, M.F. Dahab, and R. Surampalli, 2005, “Effects of long-term wastewater application on chemical properties and phosphorus adsorption capacity in soils of a wastewater land treatment system,” *Environmental Science and Technology*, 39, 18, 7240-7245.
- Rabah, F.K.J., M.F. Dahab and R.Y. Surampalli, 2005, “Biomass concentration and biofilm characteristics in high-performance fluidized-bed biofilm reactors,” *Water Science and Technology*, 52, 10-11, 579–586.
- Liu, W., M.F. Dahab, and R.Y. Surampalli, 2005, “Nitrogen transformations modeling in subsurface flow constructed wetlands,” *Water Environment Research*, 77, 3, 246-258.
- Rabah, F.K., M.F. Dahab, 2004, “Biofilm and biomass characteristics in high performance fluidized-bed biofilm reactors,” *Water Research*, 38, 19, 4262-4270.
- Fox, A.L., M.F. Dahab, R.Y. Surampalli, and J. E. Smith, Jr., 2004, “Effects of storage on stability and pathogen reduction in biosolids,” *Residuals Science and Technology*, Volume 1, No. 4, October.

- Rabah, F.K., M.F. Dahab, 2004, "Nitrate removal characteristics of high performance fluidized-bed biofilm reactors," *Water Research*, 38,17, 3719-3728.
- Botrous, A.E.F., M.F. Dahab, and P. Miháلتz, 2004, "Nitrification of high-strength ammonium wastewater by a fluidized-bed reactor," *Water Science and Technology*, 49, 5-6, 65-71.
- Dahab, M.F., R.Y. Surampalli, 2004, "Subsurface flow constructed wetlands wastewater treatment" in *Advances in Water and Wastewater Treatment*, R.Y Surampalli and R.D. Tyagi Editors, American Society of Civil Engineers, 209-231.
- Hanifa, A., Miháلتz, P., Csikor, Zs., Dahab, M.F., 2003, "Bio-kinetic characterizations study of autothermal thermophilic aerobic sludge digestion" *Egyptian Journal of Chemistry*, 46, 1, 43-56.
- Woldt, W.E. B.I. Dvorak, and M.F. Dahab, 2003, "Application of fuzzy set theory to industrial pollution prevention : Production system modeling and life cycle assessment," *Soft Computing*, 7, 6, 419-433.
- Dvorak, B.I, W.E. Woldt, J. Hygnstrom, M.F. Dahab and D. Schulte, 2003, "Nebraska pollution prevention project: engineering education through technical assistance," *Environmental Quality Management*, 12, 3, 43-67.
- Csikor, Zs., P. Miháلتz, A. Hanifa, R. Kovács, and M.F. Dahab, 2002, "Identification of factors contributing to degradation in autothermal thermophilic sludge digestion, , *Water Science and Technology*, 46, 10, 131-138.
- Dahab, M.F., R.Y. Surampalli, and W. Liu, 2001, "Performance modeling of subsurface-flow constructed wetlands systems." *Water Science and Technology*, 44, 11, 231-235.
- Dahab, M.F., and R.Y. Surampalli, 2001, "Subsurface-flow constructed wetlands treatment in the plains: five years of experience." *Water Science and Technology*, 44, 11, 375-380.
- Jillson, S.J., M.F. Dahab, W.E. Woldt, and R.Y. Surampalli, 2001, "Pathogen and pathogen indicator removal characteristics in treatment wetlands systems," *ASCE Practice Periodical of Hazardous, Toxic and Radioactive Waste Management*, 5, 3, 153-160.
- Vanier, S.M. and M.F. Dahab, 2001, "Start-up performance of a subsurface-flow constructed wetland for domestic wastewater treatment," *Environmental Technology*, 22, 5, 587-596.
- Woodbury, B.L. and M.F. Dahab, 2001, "Comparison of conventional and two-stage, reversible-flow, static-bed biodenitrification reactors," *Water Research*, 35, 1563-1571.
- Woodbury, B.L and M.F. Dahab, 2000, "Effect of retention time and flow reversal on effluent quality from reversible-flow biodenitrification reactors," *Water Environment Research*, 72, 5, 574-584.
- Dahab, M.F., 2000, "EPA/NSF ETV Equipment Verification Testing Plan - Heterotrophic biological denitrification for the removal of nitrate," in: *Protocol for Equipment Verification Testing for Physical Chemical and Biological Removal of Nitrate*, NSF International, Research and Engineering Services, Ann Arbor, MI.
- Goderya, F.S., M.F. Dahab, W.E. Woldt and I. Bogardi, 1998, "Environmental impact evaluation of spacial management practices using simulation with spacial data," *ASCE Journal of Water Resources Planning and Management*, 124, 4, 181-191.
- Gutiérrez-Martin, F. and M.F. Dahab, 1998, "Issues of sustainability and pollution prevention in environmental engineering and science education," *Water Science and Technology*, 38, 11, 271-278.
- Woldt, W. M. Dahab, and D. Crist, 1998, "Fuzzy-set based industrial decision support system for evaluation of pollution prevention methods," *EUFIT '98, The Sixth European Congress on Intelligent Techniques and Soft Computing, Volume II*, H.J. Zimmermann, Editor, Verlag-Mainz, Aachen, 1098-1102.
- Woodbury B.L., M.F. Dahab, P. Miháلتz, and Zs. Csikor, 1998, "Evaluation of reversible fixed-film static-bed Bio-denitrification reactors," *Water Science and Technology*, 38, 1, 311-318.
- Ponugoti, P., M.F. Dahab, and R. Surampalli, 1997, "Effects of different biosolids treatment systems on pathogen and pathogen indicator reduction," *Water Environment Research*, 69, 7, 1195-1206.
- Tannehill, C., M.F. Dahab, W.E. Woldt and I. Bogardi, 1997, "Evaluation of nitrate treatment methods under uncertainty," *Journal of Environmental Systems*, January, 25 (4), 421-444..
- Dou, C., W.E. Woldt, I. Bogardi, and M.F. Dahab, 1997, "Solute transport simulation using fuzzy sets approach," *Contaminant Hydrology*, 27 (1997), 107-126.
- Dou, C., W.E. Woldt, M.F. Dahab, and I. Bogardi, 1997, "Transient groundwater flow simulation using a fuzzy set approach," *Groundwater*, 35, 2, 205-215.
- Goderya, F.S., M.F. Dahab, W.E. Woldt and I. Bogardi, 1996, "Comparison of two transport models for predicting nitrates in percolating water," *Transactions of the (ASAE), American Society of Agricultural Engineers*, 39(6):2131-2137.

- Dou, C., W.E. Woldt, M.F. Dahab, and I. Bogardi, 1995, "Steady-state groundwater flow simulation with imprecise parameters," *Water Resources Research*, 31, 11, 2709-2719.
- Lee, Y.W., M.F. Dahab and I. Bogardi, 1995, "Nitrate risk assessment using a fuzzy-set approach," *ASCE Journal of Environmental Engineering*, 121, 3, 245-256.
- Lee, Y.W., M.F. Dahab, and I. Bogardi, 1994, "Fuzzy decision making in groundwater nitrate risk management," *Water Resources Bulletin*, 30, 1, 135-148.
- Lee, Y.W., M.F. Dahab, and I. Bogardi, 1992, "Nitrate risk management under uncertainty," *Journal of Water Resources Planning and Management*, American Society of Civil Engineers, 118, 2, 151-165.
- Dahab, M.F. and Y.W. Lee, 1991, "Risk management for nitrate contaminated groundwater under imprecise conditions," in: *Water Resources Engineering Risk Assessment*, NATO ASI Series G, Vol. 29, J. Ganoulis, Editor, Springer-Verlag Publishers.
- Dahab, M.F., 1991, "Nitrate treatment methods: an overview," in: *Nitrate Contamination: Exposure, Consequences and Control*, NATO ARW Series G, Vol. 30, I. Bogardi and R.D. Kuzelka, Editors, Springer-Verlag Publishers.

National/International Proceedings:

- Hanna S., Dvorak B. Dahab, M., and Thompson, M., 2017, " Benchmarking the electric intensity of small Nebraska wastewater treatment facilities, Proceedings of the Annual Conference and Exhibit of the Water Environment Federation, Chicago, IL. Sep. 30-Oct. 4.
- Aslan, S. and M. Dahab, 2011, "Nitrogen removal via nitrification-denitrification in a sequencing batch reactor," Proceedings of the 3rd International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2011), Skiathos Island, Greece, June 19-24.
- Liu, W. and M.F. Dahab, 2009, "Evaluation of first-order kinetics in subsurface flow constructed wetlands treatment," Proceedings of the third Wetland Pollutant Dynamics and Control Conference (WETPOL 2009), Barcelona, Spain, Sep. 20-24.
- Zhang, T. C., M.F. Dahab, G.S. Nunes, and R. Surampalli, 2006, "Column tests for simulation of phosphorus fate and transport and evaluation of life expectancy of a wastewater land treatment system, Proceeding of the ASCE-EWRI World Water and Environmental Resource Congress, Omaha, NE, May 21-25.
- Woldt, W., R. Marahatta, D. Schulte, and M. Dahab, 2006, "Modeling biofilm dynamics in a constructed wetland wastewater treatment systems," Proceedings of the ASCE-EWRI World Water and Environmental Resources Congress, Omaha, NE. May 21-25.
- Woldt, W., and M. Dahab, 2006, "Adaptive Infrastructure Management for Environmental and Water Resources: A Conceptual Approach," Proceedings of the ASCE EWRI World Water and Environmental Resources Congress, Omaha, NE, May 21-25.
- Woldt, W., and M. Dahab, 2006, "Adaptive management of community water and wastewater infrastructure: A conceptual approach," Proceedings of Adaptive Management of Water Resources, American Water Resources Association, Missoula, MT, June 26-28.
- Nunes, G. S., T.C. Zhang, C. Hu, M.F. Dahab, and R. Surampalli, 2006, "Phosphorus fate and transport in Muskegon's wastewater land treatment system," Proceedings of the IWA 5th Biennial International World Water Congress, Beijing, China, Sept. 10-14.
- Rabah, F.K.J., M.F. Dahab, and P. Miháľt, 2005, "A Simplified kinetic model for high performance fluidized-bed biofilm denitrification reactors," Proceedings of the International Water Association (IWA) Specialized Conference on Nutrient Management in Wastewater Treatment Processes and Recycle Streams, Krakow, Poland, September 19-21.
- Miháľt, P. Zs. Csikor, and M.F. Dahab, 2005, "Energetic comparison of examples of biological N destruction and physicochemical N recovery results," Proceedings of the IWA Specialized Conference on Nutrient Management in Wastewater Treatment Processes and Recycle Streams, Krakow, Poland, Sep. 19-21.
- Hu, C., D. Kendrick, T.C. Zhang, Y.H. Huang, M.F. Dahab, and R. Surampalli, 2005, "Performance and phosphorus removal in Muskegon's wastewater land treatment system," Proceedings of the 78th Annual Conference of the Water Environment Federation, Washington, D.C., Oct. 29-11.
- Botrous, A.E., M.F. Dahab, P. Miháľt, and R.Y. Surampalli, 2005, "Feasibility analysis of side stream nitrification of anaerobic sludge decant using fluidized-bed reactors," Proceedings of the IWA Asia Pacific Regional (ASPIRE) Conference, Singapore, July 10-15.

- Hu, C., T.C. Zhang, Y.H. Huang, M.F. Dahab, D. Kendrick, and R. Surampalli, 2005, "Life expectancy of Muskegon's wastewater land treatment system," Proceedings of the First International Conference on Environmental Science and Technology, New Orleans, LA, January 23-26.
- Liu, W. and M.F. Dahab, 2004, "Nitrogen transformations modeling in subsurface-flow constructed wetlands," Proceedings of the International Water Association Ninth International Conference on Wetland Systems for Water Pollution Control, Avignon, France, September 27-30.
- Rabah F.K. J., M.F. Dahab, and R.Y. Surampalli, 2004, "Biomass concentration and biofilm characteristics in high performance fluidized-bed biofilm reactors," Proceedings of the International Water Association Fourth World Water Congress, Marrakech, Morocco, September 19-24.
- Fox, A.L., M.F. Dahab, R.Y. Surampalli, and J. E. Smith, Jr., 2004, "Effects of Storage on stability and pathogen reduction in biosolids," Proceedings of the International Water Association International Conference on Resources from Sludge, Singapore, March 2-3
- Rabah F.K. J., M.F. Dahab, R.Y. Surampalli and P. Miháľtz, 2004, "Nitrate removal characteristics of high performance fluidized-bed biofilm reactors," Proceedings of the International Water Association International Conference on Wastewater Treatment for Nutrient Removal and Reuse, Asian Institute of Technology, Bangkok, Thailand, January 26-29.
- Botrous, A., M.F. Dahab, P. Miháľtz, and R.Y. Surampalli, 2003, "Pilot-scale fluidized-bed reactor for nitrification of biosolids decant," Proceedings of the 76th Annual Conference of the Water Environment Federation, Los Angeles, CA, Oct. 11-15.
- Botrous, A., M.F. Dahab, and P. Miháľtz, 2003, "Sidestream treatment of sludge dewatering decant: Pilot-Scale testing and feasibility analysis," Proceedings of the International Water Association 9th International Conference on Design, Operation, and Economics of Large Wastewater Treatment Plants, Prague, Czech Republic, September 1-4.
- Miháľtz, P., R. Kovács, Zs. Csikor, Zs., and M.F. Dahab, 2003, "Degradation rates in thermophilic sludge processing – the liquid and the solid way," Proceedings of the International Water Association Biosolids 03 – Wastewater Sludge as a Resource, Trondheim, Norway, June 23-25.
- Botrous, A., M.F. Dahab, and P. Miháľtz, 2003, "Nitrification of high-strength ammonium wastewater by a fluidized-bed reactor," Proceedings of the International Water Association's 6th International Symposium on Strong Nitrogenous and Agro-Wastewater, Seoul, Korea, June 11-13.
- Schulte, D.D., B.I. Dvorak, W.E. Woldt, J. Hygnstrom, and M.F. Dahab, 2002, "Assessment of student learning in an innovative educational partnership with business, industry and government agencies," Proceedings of the 2002 ASEE/SEFI/TUB Colloquium, Berlin, Germany, Oct. 1-4.
- Dahab, M.F. and R.Y. Surampalli, 2002, "Integration of treatment wetlands as sustainable wastewater treatment systems for small communities," Proceedings of the CSCE-EWRI International Conference on Environmental Engineering, Niagra Falls, Ontario, July 21-24.
- Surampalli, R.Y., R.D. Tyagi and M.F. Dahab, 2002, "Nutrient removal in a sequential batch reactor," Proceedings of the International Water Association International Conference on Environmental Biotechnology, Palmerston, New Zealand, April, 15-17.
- Woldt, W.E. M.F. Dahab, D.S. Schulte, Y. Wang, 2002, "Modeling wastewater treatment performance of a subsurface-flow constructed wetland using fuzzy logic," Proceedings of the World Congress of the International Water Association, Melbourne, Australia, April, 7-12.
- Dahab, M.F. and R.Y. Surampalli, 2001, "Effects of aerobic and anaerobic digestion systems on pathogen and pathogen indicator reduction in municipal sludge," Proceedings of the International Water Association Specialized Conference on Sludge Management: Regulation, Treatment, Utilization, and Disposal, Acapulco, Mexico, October 25-27.
- Liu, W., M.F. Dahab, W.E. Woldt, and R.Y. Surampalli, 2001, "Subsurface-flow treatment wetland and sand filter performance evaluation using multivariate statistical analysis," Proceedings of the 74th Annual Conference of the Water Environment Federation, Atlanta, GA, Oct. 13-17.
- Dvorak, B.I., W.E. Woldt, M.F. Dahab, and D. Schulte, 2001, "Partners in pollution prevention internship program: Combining research and education," Proceedings of the 2001 Conference of the American Society for Engineering Education, Albuquerque, NM, June.
- Miháľtz, P., A. Hanifa, R. Kovács, and M.F. Dahab, 2001, "Identification of factors contributing to degradation in autothermal thermophilic sludge digestion," Proceedings of the International Water Association Specialized

Conference on Sludge Management: Regulation, Treatment, Utilization, and Disposal, Acapulco, Mexico, October 25-27.

Dahab, M.F., R.Y. Surampalli, and W. Liu, 2000, "A comparison of prediction models for subsurface-flow constructed wetlands performance," Proceedings of the ASCE National Conference on Environmental and Pipeline Engineering, Kansas City, MO, July 23-26.

Dahab, M.F., and R.Y. Surampalli, 2000, "Experience with subsurface-flow constructed wetlands for municipal wastewater treatment in the Midwest," Proceedings of the ASCE National Conference on Environmental and Pipeline Engineering, Kansas City, MO, July 23-26.

Liu, W., and M.F. Dahab, 2000, "Subsurface flow constructed wetlands performance evaluation using area-based first-order kinetics," Proceedings of the 73rd Annual Conference of the Water Environment Federation, Anaheim, CA, Oct. 14-18.

Jillson, S.J., M.F. Dahab, and R.Y. Surampalli, 2000, "Pathogen Indicator Organism Removal in Subsurface-Flow Constructed Wetlands," Proceedings of the 73rd Annual Conference of the Water Environment Federation, Anaheim, CA, Oct. 14-18.

Dahab, M.F., W. Liu, and R.Y. Surampalli, 2000, "Performance modeling of subsurface-flow constructed wetlands systems," Proceedings of the IWA Seventh International Conference on Wetlands Systems for Water Pollution Control, Lake Buena Vista, FL, November 12-15.

Dahab, M.F., and R.Y. Surampalli, 2000, "Subsurface-flow constructed wetlands treatment in the plains: five years of experience," Proceedings of the IWA Seventh International Conference on Wetlands Systems for Water Pollution Control, Lake Buena Vista, FL, November 12-15.

Selected Engineering, Research, Outreach and Consulting Projects:

- "Energy assessment of small wastewater treatment plants," for the Nebraska Energy Office.
- "Phosphorus sorption capability and distribution in long-term wastewater land treatment systems," for the U.S. Environmental Protection Agency, Region 7, Kansas City, KS.
- "High performance side-stream nitrification and denitrification of municipal biosolids treatment decants," for the U.S. EPA National Risk Management Research Laboratory, Cincinnati, OH.
- "Advanced monitoring of constructed wetlands performance in Eastern Nebraska," U.S. Environmental Protection Agency, Risk Reduction Laboratory, Cincinnati, OH.
- "Integrated biodenitrification system for the treatment and remediation of nitrate-contaminated groundwater," A Cooperative project with the *Technical University of Budapest*, Funded (in Hungary) by the U.S.-Hungary Science and Technology Board.
- "Effects of treatment systems on pathogen reduction in wastewater/biosolids," U.S. EPA and the Nebraska Department of Environmental Quality, Lincoln, NE.
- "Modeling flow and yield in the Kearney Well Field," and "Modeling water quality in the Kearney Well Field," Department of Public Works, Kearney, NE.
- "Waste stream assessment in the metal electroplating and finishing industry," U.S. Environmental Protection Agency, Region VII, Kansas City, KS.
- "Municipal solid waste generation in the midwestern united states with emphasis on the commercial sector," U.S. Environmental Protection Agency, Region VII, Kansas City, KS.
- "Risk management for nitrate-contaminated groundwater supplies," U.S. Geological Survey, National Technical Information Service. Report No. PB91-192427/AS.
- "Treatability studies on hazardous waste cleanup and wastewater treatment at a wood products superfund site." EA Engineering Science and Technology, Lincoln, NE.
- Effects of media design on anaerobic filter performance (for energy recovery from alcohol biofuel stilling operations). Iowa State University - Engineering Research Institute, Ames, IA.
- Consultant: U.S. EPA Small Business Innovation (SBIR) Program numerous engagements: 1995-2012.
- Consultant: U.S. EPA National Center for Environmental Research and Quality Assurance and Peer Review Division – various engagements: 1995-2014.
- Consultant: Libyan Investment Authority (LIA) – Assessment of the environmental impacts of coal-fired power generation facility (due diligence assessment in Poland), 2010.

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