

GUY W. SEWELL, Ph.D., BCES

Professor and Robert S. Kerr Endowed Chair
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Education and Certifications:

B.S. Microbiology, minor in Chemistry, May 1980, Oklahoma State University.

Ph.D. Microbiology, with emphasis in Biochemistry/Bacterial Physiology, July 1987, Oklahoma State University. Dissertation Title: Interactions of Polyacrylamides used for Enhanced Oil Recovery and Reservoir Isolates of the Sulfate-Reducing Bacterium *Desulfovibrio*.

Economics and the Environment Program (Certificate) May 2000, John F. Kennedy School of Government, Harvard University.

Board Certified Environmental Scientist, (BCES) 2016. Specialty: Groundwater and the Subsurface Environment. American Academy Environmental Engineers and Scientists.

Research Interests:

Water Resources, Fate and Transport of Contaminants in Subsurface Environments, Bioremediation (Soil, Sediments, Surface Water and Ground Water), Ground Water-Surface Water Interactions, Environmental Economics, Environmental Microbe-Metal Interactions, Aquatic Microbial Ecology, Subsurface Ecology, Remediation of Hazardous Waste, Anaerobic Biotransformations, Monitored Natural Attenuation.

Professional Experience:

Technical Subject Matter Expert. ERG Support contract, US-EPA. 2020-2022.
Provide technical support, oversight and program review for on-going contaminant characterization and remedial efforts for USEPA.

Director for Research, The Oka' Institute. 2016-2019, 2022-2023.
East Central University, Ada, OK. Duties include directing efforts in water related research and education, policy development and economic development programs at the University.

Technical Subject Matter Expert, Los Alamos National Laboratory. 2014-2018. Provided technical support, oversight and program review for on-going contaminant characterization and remedial efforts for the Department of Energy.

Executive Director, Institute for Environmental Science Education and Research (IESER). 2007-2016. East Central University, Ada, OK. Duties include leading the development of extramural research programs at the University and cooperative linkages to industry and regional communities to address environmental and natural resource issues.

Professor and Robert S. Kerr Endowed Chair in Environmental Health Science. 2002-Present. East Central University, Ada, OK. Duties include development of environmental research program, EHS program development and advancement, instruction and recruitment, undergraduate research, instruction.

President, Sewell Environmental Associates, LLC. January 2002-Present. Owner/President of Environmental Services Company. Duties include design and management of advanced biotreatment processes for soil and ground water, technical review of remedial operations, expert witness, site assessment (Phase I & II, NEPA) and cleanup.

Visiting Researcher (sabbatical), University of Oklahoma, April 2001-December 2001. Duties included development and design of gene arrays for *Desulfovibrio vulgaris*.

Research Microbiologist, U.S.-Environmental Protection Agency, Robert S. Kerr Environmental Research Laboratory, Ada, Ok. 1988-2002. Duties included conducting research on microbial processes in the subsurface, subsurface ecology, and the development of innovative technologies for the treatment of hazardous waste. Also involved in providing technical support for government (EPA, DoD, DOE, USGS, States) and industry remedial actions for contaminated soils and ground water.

Acting Branch Chief, Subsurface Processes Branch, U.S.-Environmental Protection Agency, Robert S. Kerr Environmental Research Laboratory, Ada, OK. July 1991-Oct 1991. Duties included managing personnel and resources for Subsurface Processes Branch.

Assistant Branch Chief, Subsurface Processes Branch, 1995-1997. Duties included managing personnel and resources for Subsurface Processes Branch.

Research Team Leader- Duties included managing personnel and resources for Biotransformation Research Team, 1995. Subsurface Ecology Research Team, 1996. Ecosystems Restoration Research Team, 1997-1998, Lake Texoma Research Group, 1998-2001.

Gas Research Institute Postdoctoral Research Fellowship, University of Florida, 1986-1988. Subject: Cloning of Xylanase and Xylosidase genes in anaerobic bacteria. Research Advisor: Dr. Lonnie O. Ingram.

Graduate Research Assistant, Department of Microbiology, Oklahoma State University, 1984-1986. Conducted research in the areas of petroleum microbiology, microbially enhanced oil recovery and efficacy and mechanisms of biocide activity. Research Advisor: Dr. Mary Grula.

Publications:

Sewell, G.W. 2016. Screening Analysis to Determine Potential Remedies for Contaminated Intermediate and Regional Groundwater at TA-16. *Technical Report*. Los Alamos National Laboratory. April 2016.

Looney, B., M. Denham, Jr., J. Myers, and G. W. Sewell. Chromium Workshop II, 2015. *Consensus Report of the Subject Matter Expert Panel*. ed. G.W. Sewell. University House, Los Alamos National Laboratory. June 23-24, 2015.

Sewell, G.W. 2014. Evaluation of Remedial Approaches for Cr(VI) Contamination at LANL. *Technical Report*. Los Alamos National Laboratory. July 31, 2014.

Scalf, D. and G.W. Sewell. 2013. Ada's Water Supply – A Path Forward. *Strategic Water Resources Plan, Ada Water Resources Board*. City of Ada. OK. April 2013.

Steffan, R. J. and G.W. Sewell. 2012. Chapter 11: Advances in Bioremediation of Aquifers. *In* F.F Quercia and D. Vidojevic (eds) *Clean Soil and Safe Water* NATO Science for Peace and Security Series: C. DOI 10.1007/978-94-2240-8_11. Springer, NY.

Sewell, G.W. 2010. *The Implications of Surface and Ground Water Interactions on the Economics and Management of Water*. Proceeding of the 2010 Oklahoma Academy: A Town Hall Meeting About Water. Norman, OK. May 23-26. pp 152-153.

Sewell, G.W. 2009. System and Apparatus for Contaminant Remediation. Patent Application Publication No. US-2009-0308808-A. United States Patent and Trademark Office.

Kean, J. A., J. Doyon, K. M. Vangelas, R. Lewis, G. Sewell, and K. Wilson. 2008. Decision Flowchart for the Use of Enhanced Attenuation and Monitored Natural Attenuation of Chlorinated Organics. Proceedings of the Sixth International Conference on Remediation of Chlorinated and Recalcitrant Compounds. Monterey, CA, May 19-22. Battelle Memorial Institute. ISBN 1-57477-163-9.

Wilson, K., G. W. Sewell, J. Kean. And K. M. Vangelas. 2007. Enhanced Attenuation of Chlorinated Organics. Remediation, 17(2):39-49.

Sewell, G.W. 2006. Cleanup of a Small Dry Cleaner Using Multiple Technologies: Sages Dry Cleaners. *In* Report on the Pilot Study Meeting: Prevention and Remediation in Selected Industrial Sectors, Small Sites in Urban Areas. NATO/CCMS Athens, Greece, June 5-7, 2006. EPA 542-R-06-003.

Sewell, G.W. 2006. Evaluation of Chemical and Biological Loading to Blue River. Oklahoma Water Resources Research Institute FY2004 Annual Report.

Shen, H., and Sewell, G.W. 2005. Reductive Biotransformation of Tetrachloroethene to Ethene During Anaerobic Oxidation of Toluene. Environ. Sci. Technol. 39:9286-9294.

Sewell, G.W. et al. 2005. Chlorinated Solvent Contaminated Soil and Ground Water: Field Application of the Solvent Extraction Residual Biotreatment Technology, Chapter 5. *In* Bioremediation of Recalcitrant Compounds. Taylor & Francis Publishers, Boca Raton. Pp 59-149.

Sewell, G.W. 2004. Human Behavior and Water Use. Proceeding of the 2004 Oklahoma Academy Town Hall Meeting. Oklahoma's Environment: Pursuing a Responsible Balance. Norman, OK. October 10-13.

Mravik, S.C., A.L. Wood, H. Shen, R.K. Sillan and G.W. Sewell. 2004. Impact of Co-Solvent Flushing on Subsurface Microbial Ecology at a Former Dry Cleaner Site. *In* Proceeding of the Fourth International Conference on Remediation of Chlorinated and Recalcitrant Compounds. Monterey, CA. Battelle Press.

Borden, R.C., G.W. Sewell and H.S. Rifai. 2003. Monitored Natural Attenuation Forum: A Panel Discussion. Remediation, Winter 2003: 109-116.

Mravik, S., R.K. Sillan, A.L. Wood, and G.W. Sewell. 2003. Field Evaluation of the Solvent Extraction Residual Biotreatment (SERB) Technology. Environ. Sci. Technol. 37: 5040-5049.

Wilkin, R.T, R.W. Puls, and G.W. Sewell. 2003. Long-term Performance of Permeable Reactive Barriers Using Zero-valent Iron: Geochemical and Microbiological Effects. Ground Water. 41(4):493-503.

Shen, H., S.C. Mravik, and G.W. Sewell. 2003. Mass Balance Analysis for Microbial Dechlorination of Tetrachloroethene. Extended Abstracts of the Meeting of the American Chemical Society. September 7-11, New York, NY. 42(2): 189-192.

Wilkin, R., R. Puls, and G.Sewell.2002. Long-term performance of permeable reactive barriers using zero-valent iron: An evaluation at two sites. US-EPA Research Brief. EPA/600/S-02/001, March 2002

Shen, H., R. Powell, and G.W. Sewell. 2002. Bioattenuation Of Redox Sensitive Metals. US-EPA Issue Paper. (In External Review)

Gido, K.B., Chad W. Hargrave, William J. Matthews, Gary D. Schnell, Darrell W. Pogue, and Guy Sewell. 2002. Structure of littoral-zone fish communities in relation to habitat, physical, and chemical gradients in a southern reservoir. Environmental Biology of Fishes 63:253-263.

An, Y-J, D.H. Kampbell, G.W. Sewell, 2002. Water Quality at five marinas in Lake Texoma as related to methyl tert-butyl ether (MTBE). Environmental Pollution. 118(3):331-336.

Azadpour-Keeley, A., J. Keeley, H.H. Russell, and G.W. Sewell. 2001. Monitored Natural Attenuation of Contaminants in the Subsurface: Applications. Ground Water Monitor and Review. Summer 2001:136-143.

Zhang, XH; Sewell, GW; Cui, SY. 2001. An Improved Method of Hydrogen Production as Electron Donor for Anaerobic Bioremediation. Journal of Environmental Science and Health Part A Toxic Hazardous Substances and Environmental Engineering. 36(9): 1661-1670.

Xiaohong L. and G.W. Sewell. 2001. Combination Of Iron And Mixed Anaerobic Culture For Perchloroethene Degradation. Proceedings of the 6th International In Situ and On-Site Bioremediation Symposium, June 4-7, 2001, San Diego CA. Battelle Press, Columbus OH. 6(8):167-173.

Shen, H., S.C. Mravik, J.T. Wilson and G.W. Sewell. 2001. Impact of Ethanol on Benzene Migration. Proceedings of the 6th International In Situ and On-Site Bioremediation Symposium, June 4-7, 2001, San Diego CA. Battelle Press, Columbus OH. 6(1):167-174.

Tally, J.W., D.R. Felt, L.D. Hansen, J.C. Spain, H.P. Pritchard, G.W. Sewell and J.M. Tiedje. 2001. The Federal Integrated Biotreatment Research Consortium (Flask to Field). Proceedings of the 6th International In Situ and On-Site Bioremediation Symposium, June 4-7, 2001, San Diego CA. Battelle Press, Columbus OH. 6(7):125-132.

Sewell, G.W., S.C. Mravik and A.L. Wood. 2000. Field Evaluation of Solvent Extraction Residual Biotreatment (SERB). In Conference Proceedings ConSoil 2000. Sept. 18-21, Leipzig, Germany. Thomas Telford LTD, London. 2:981-988.

Mravik, S.C., G.W. Sewell and A.L. Wood. 2000. Co-solvent-based Source Remediation Approaches. In Proceeding of the Second International Conference on Remediation of Chlorinated and Recalcitrant Compounds. May 22-25. Monterey, CA. Battelle Press.

Hong, J., and G.W. Sewell. 1999. In Situ Bioremediation of Cr(VI) Contaminated Sites with the Addition of Organic Electron Donors for Microbial Reduction. In Proceeding of the Battelle conference on In-Situ and On-site Bioremediation. Battelle Press. 5(4):135-140.

Azadpour-Keeley, A., H.H. Russell, and G.W. Sewell. 1999. Microbial Processes Affecting Monitored Natural Attenuation of Contaminants in the Subsurface. EPA Issue Paper. EPA/540/S-99/001.

Morse, J.J., B.C. Alleman, J.M. Gosset, S.H. Zinder, G.W. Sewell and C. M. Vogel. 1998. A Treatability Test for Evaluating the Potential Applicability of the Reductive Anaerobic Biological In-Situ Treatment Technology (RABITT) to Remediate Chloroethenes. US-Air Force Protocol. (In Review/Testing)

Russell, H.H. And G.W. Sewell. 1998. Anaerobic Bioremediation of Chlorinated Ethenes. In Encyclopedia of Analysis and Remediation. John Wiley and Sons. New York, NY. 2:1035-1055.

Sewell, G.W., M.F. DeFlaun, N.H. Baek, E. Lutz, B. Weesner and B. Mahaffey. 1998. Performance Evaluation of an In Situ Anaerobic Biotreatment System for Chlorinated Solvents. In Proceeding of the Battelle conference on Remediation of Chlorinated and Recalcitrant Compounds. May 18-21. Monterey, CA. Battelle Press. C1-6:15-20.

Becvar, E., A. Fisher, G. Sewell, V. Magar, J. Gossett, and C. Vogel. 1998. Enhanced In Situ Reductive Dechlorination. In Proceeding of the Battelle conference on Remediation of Chlorinated and Recalcitrant Compounds. May 18-21. Monterey, CA. Battelle Press. C1-4:121-127.

Hong, J., and G.W. Sewell. 1998. Cr (VI)-Bioreduction in the Cr-Contaminated Subsurface Environment. *In* Proceeding of 216th American Chemical Society National Meeting. 38(2):7-9.

Sewell, G.W., and M. Hightower. 1998. Cost and Performance Report-In Situ Anaerobic Bioremediation Pinellas Northeast Site, Largo Florida. US-Department of Energy. April 1998. EPA/600/R-98/115.

Shi, Y., M.D. Zwolinski, M.E. Schreiber, J.M. Bahr, G.W. Sewell, and W.J. Hickey. 1998. Molecular analysis of microbial community structure in pristine and contaminated aquifers: Field and Laboratory microcosm studies. Appl. Environ. Microbiol. 65(5):2143-2150.

Xu, N., S. Vandegrift, D.D. Fine, J.T. Wilson and G.W. Sewell. 1997. Ion-Exclusion Chromatographic Determination of Carboxylic Acids Used to Support the Microbially Mediated Reductive Dechlorination of Tetrachloroethene. Environ. Toxicol. Chem. 16(11):2242-2248.

Xu, N., H. Shen and G.W. Sewell. 1997. Simultaneous determination of Chromate and Aromatic Hydrocarbons in Environmental Samples by Capillary Electrophoresis. Int. J. Environ. Anal. Chem. 66:175-189.

Jorgensen, E. E. and G. W. Sewell. 1997. "Risk Management Research Plan for Ecosystem Restoration in Watersheds." EPA Published Report. EPA-600/R-97/078.

Becvar , E., C. Vogel, G. Sewell, J. Gossett, S. Zinder, and V. Magar. 1997. In-situ dechlorination of solvents in saturated soils. *In* Proceeding of the Battelle conference on In-Situ and On-site Bioremediation. April 27-May 1. New Orleans, LA. Battelle Press. 3:39-44.

Acree S.D., M. Hightower, R.R. Ross, G.W. Sewell, and B. Weesner. 1997. Site Characterization Methods for the Design of In-Situ Electron Donor Delivery Systems. *In* Proceeding of the Battelle conference on In-Situ and On-site Bioremediation. April 27-May 1. New Orleans, LA. Battelle Press. 4:261-266.

Sewell, G.W. and S.A. Gibson. 1996. Microbial Ecology of Adaptation and Response in the Subsurface. Pp. 14-16. Symposium on Natural Attenuation of Chlorinated Organics in Ground Water. EPA/540/R-96/509.

Xu, N. And G.W. Sewell. 1996. Solid Phase Micro Extraction- A New Technique Coupled with Gas Chromatography for the Analysis of Chloroethenes in Aqueous Samples. *In* Proceedings of the Twenty-Eighth Mid-Atlantic Industrial Waste Conference. Technomic Pub. Co., Lancaster, PA.

Shen, H., H.P. Pritchard and G.W. Sewell. 1996. Microbial Treatment of Contaminant Mixture of Chlorinated Solvents, Aromatic Compounds and Chromate Under Anaerobic Environments. 212Th ACS National Meeting. August 25-25, Orlando FL. 36(2): 16-17.

Xu, N. And G.W. Sewell. 1996. Microbial Dechlorination of Tetrachloroethene Under Anaerobic Environment. 212Th ACS National Meeting. August 25-25, Orlando FL. 36(2):17-18.

Shen, H., H.P. Pritchard and G.W. Sewell. 1996. Kinetics of Chromate Reduction During Naphthalene Degradation in Mixed Culture. Biotech. Bioeng. 52:357-363.

Xu, N., S. Vandegrift and G.W. Sewell. 1996. Determination of Chloroethenes in Environmental Biological Samples Using Gas Chromatography Coupled with Solid Phase Micro Extraction. Chromatographia. 42(5/6): 313-315.

Shen, H., H.P. Pritchard and G.W. Sewell. 1996. Microbial Reduction of Cr(VI) During Anaerobic Degradation of Benzoate. Environ. Sci. Technol. 30(5):1667-1674.

Lyon, W. G., C.A. West, M.L. Osborn and G.W. Sewell, 1995. Characterization of Microbially Available Organic Carbon Native to the Vadose Zone of an Aquifer. Journal of Environmental Chemistry and Quality. A30(7):1627-1639.

Wilson, J.T., G.W. Sewell, D. Caron, G. Doyle, and R.N. Miller. 1995. Intrinsic Bioremediation of Jet Fuel Contamination at George Air Force Base. Pp. 91-100. In R.E. Hinchey, J.T. Wilson and D.C. Downey (eds) Third International *In Situ* and On-Site Bioreclamation Symposium; 3(1) Intrinsic Bioremediation. Battelle Press, Columbus OH.

Gula, M.M., M.L. Huang, and G.W. Sewell. 1994. Interactions of Polyacrylamides with Soil Bacteria. Soil Science. 158(4):291-300.

Gibson, S.A., D.S. Robinson, H.H. Russell and G.W. Sewell. 1994. Effects of Addition of Different Concentrations of Mixed Fatty Acids on Dechlorination of Tetrachloroethene in Aquifer Microcosms". Environ. Toxicol. Chem. 13(3): 453-460.

Russell, H.H., and G.W. Sewell, 1994. Application of Reductive Anaerobic Biological In-Situ Treatment (RABITT) to Subsurface Contamination, pp. 289-301. In Proceedings of the Innovative Solutions for Contaminated Site Management. Water Environment Federation. March 6-9, Miami FL.

Russell, H.H., J.E. Matthews and G.W. Sewell. 1992. TCE Removal from Contaminated Soil and Ground Water. U.S.-Environmental Protection Agency, Ground Water Issue Paper. EPA/540/ S-92/002.

Gibson, S.A., and G.W. Sewell. 1992. "Stimulation of Reductive Dechlorination of Tetrachloroethene in Anaerobic Aquifer Microcosms by Addition of Short-Chain Organic Acids or Alcohols." Appl. Environ. Microbiol. 58(4) 1392-1393.

Russell, H.H., J.E. Matthews, and G.W. Sewell. 1991. "Remediation of Sites Contaminated with Trichloroethylene." Remediation. 1: (2) 167-183.

Chamkasem, N., K.D. Hill and G.W. Sewell. 1991. "High-performance Liquid Chromatographic Column Switching Technique in the Determination of Intermediates of Anaerobic Degradation of Toluene in Ground Water Microcosms." J. Chromatography. 587:185-191.

Sewell, G.W., and S.A. Gibson. 1991. "Stimulation of the Reductive Dechlorination of Tetrachloroethene in Anaerobic Aquifer Microcosms by the Addition of Toluene." Environ. Sci. Technol. 25: (5) 982-984.

Hutchins, S.R., G.W. Sewell, D.A. Kovacs, and G.A. Smith. 1991. "Biodegradation of Aromatic Hydrocarbons by Aquifer Microcosms Under Denitrifying Conditions." Environ. Sci. Technol. 25:68-76.

Chamkasem, N., K.D. Hill, and G.W. Sewell. 1991. "Use of ion-exclusion for monitoring fatty acids produced by anaerobic Degradation of Priority Pollutants in Ground Water." J. Chromatography. 536:193-201.

Suflita, J.M., and G.W. Sewell. 1991. Anaerobic Biotransformation of Contaminants in the Subsurface. U.S.- Environmental Protection Agency. Environmental Research Brief. EPA/600/M-90/024 February 1991.

Sewell, G.W., S.A. Gibson, and H.H. Russell. 1990. Anaerobic In-Situ Treatment of Chlorinated Ethenes, pp 67-79. *In* In-Situ Bioremediation of Groundwater and Contaminated Soils. Water Pollution Control Federation.

Grula, M.M., R. Pennington and G.W. Sewell. 1989. Biodegradation of Chemicals Used in Enhanced Oil Recovery, pp. 181-207. In E.C. Donaldson, G.V. Chilingarian and T.F. Yen (eds), Developments in Petroleum Science, 22: Microbial Enhanced Oil Recovery. Elsevier, New York.

Sewell, G.W., E.A. Utt, R.B. Hespell, K.F. Mackenzie, and L.O. Ingram. 1989. "Identification of the *Butyrivibrio fibrisolvens* Xylosidase Gene (xylB) Coding Region and Its Expression in *Escherichia coli*." Appl. Environ. Microbiol. 55: (2) 306-311.

Sewell, G.W., H.C. Aldrich, D. Williams, B. Mannarelli, A. Wilkie, R.B. Hespell, P.H. Smith, and L.O. Ingram. 1988. "Isolation and Characterization of Xylan-Degrading Strains of *Butyrivibrio fibrisolvens* from a Napier Grass-Fed Anaerobic Digester." Appl. Environ. Microbiol. 54: (5)1085-1090.

Grula, M., J. McManus, G. Sewell, and M. Williams. 1984. Interactions of Aerobic Oil Reservoir Bacteria with *Desulfovibrio*. Developments in Industrial Microbiology. 25:575-579.

Grula, M.M., and G.W. Sewell. 1982. Microbial Interactions with Polyacrylamide Polymers, pp. 129-143. In E.C. Donaldson and J.B. Clark (ed), Proceedings of 1982 International Conference on Microbial Enhancement of Oil Recovery. United States Department of Energy, Bartlesville, Oklahoma.

Grula, M., and G. Sewell. 1982. Polyacrylamide Stimulation of *Desulfovibrio* Growth and Sulfate Reduction. Developments in Industrial Microbiology. 23: 419-424.

Presentations (selected):

Sewell, G.W. 2021. BIA/CN Grant Tracer Study. US-EPA Enhanced Aquifer Recharge Stakeholder Update. June 9th, Robert S Kerr Environmental Research Center, Ada, OK.

Sewell, G.W. 2019. Enhanced Aquifer Recharge: A Novel Approach to ASR. Oklahoma Ground Water Association: 2019 Conference and Trade Show. January 8-9th, 2019. Norman OK. (invited)

Sewell, G.W. 2018. Enhanced Aquifer Recharge Demonstration Project. 2018 Governor's Water Conference and Research Symposium. December 6th, 2018. Oklahoma City, OK.

Sewell, G.W. 2018. Enhanced Aquifer Recharge: management and markets. The Science, Management and Governance of Trans-boundary Groundwater, American Water Resources Association. July 9th, 2018. Fort Worth TX.

Sewell, G.W. 2018. City of Ada LS-ASR Project. Ground Water Protection Council. February 12th, 2018, Tulsa OK. (invited)

Sewell, G.W. 2017. Enhanced Aquifer Recharge: Managing Rural Landscapes To Enhance Base-flow And Provide Marketable Water Credits. Oklahoma Groundwater & Wells. American Groundwater Trust. November 14th, 2017, Oklahoma City, OK. (invited)

Sewell, G.W. 2017. Water Farming: A Rural Landscape Management Proposal. Oklahoma Grows Conference. November 9th, 2017, WinStar Convention Center, Thackerville, OK. (invited)

Sewell, G.W. 2017. Role of University Water Centers & Institutes: The Oka' Institute. 38th Annual Oklahoma Governor's Water Conference and Research Symposium. October 31-November 1, 2017, Norman Oklahoma. (invited)

Sewell, G.W. 2017. Water and Sanitation Panel Discussion. Rotary District 5770 Roundup. May 19, East Central University, Ada, OK. (presenter and moderator)

Sewell, G.W. 2017. Water Week LTAW Water Sustainability Panel. April 20th, East Central University, Ada, OK. (presenter and organizer)

Sewell, G.W., W. Kellogg, R. Ross. 2017. Aquifer Storage and Recovery, Enhanced Aquifer Recharge, and The Oka' Institute. Oklahoma Ground Water Association. January 10th, Norman OK (invited)

Ross, R., G.W. Sewell* and W. Kellogg. 2016. Enhanced Aquifer Recharge (EAR). Oka' Institute Water Sustainability Conference, October 26-27, 2016. East Central University, Ada, OK. (invited)

Sewell, G.W. 2016. Environmental Economics: The Unifying Theory of Everything, *or How I Learned to Stop Worrying and Love the Dismal Science*. GWERD SEMINAR SERIES, US-EPA. September 26, 2016. (invited)

Sewell, G.W. 2016. Enhanced Aquifer Recharge: A landscape management proposal. ASA-Drought Contingency Task Force meeting. August 23, 2016. Joint Bureau of Reclamation, Chickasaw Nation, Choctaw Nation Project. CN-Headquarters, Ada, OK. (invited)

Sewell, G.W. 2014. Cr(IV) Remedial Technologies. August 12, 2014. Los Alamos National Laboratory, Los Alamos, New Mexico. (invited)

Sewell, G.W. 2012. Applications for Infrared Cameras. Oklahoma Green Expo. April 20-21, 2012. Ada Oklahoma.

Sewell, G.W. 2011. Beyond OCWP 2012: Future Allocation Strategies for Oklahoma's Water Resources. OWRRI Water Research Symposium, Governors Water Conference, October 18-19, 2011. Norman Oklahoma. (invited)

Sewell, G.W. 2011. Building Thermography: Using the Infrared Camera. Oklahoma Green Expo. June 24-25, 2011. Ada Oklahoma.

Sewell, G.W. 2011. Advances in Bioremediation of Aquifers. NATO Advanced Research Workshop: Drinking Water Protection by Integrated Management of Contaminated Land. 21-23 March 2011, Belgrade, Serbia. (invited, *presented by R.J. Stefan*)

Wilson, K., R. Lewis, and G.W. Sewell. Enhanced Attenuation of Chlorinated Organics: A Site Management Tool. 2009. The Tenth International In Situ and On-Site Bioremediation Symposium. May 5-8, Baltimore, MD.

Sewell, G.W. 2008. Biological Mechanisms & Activation to Remediation of Chlorinated Solvents. State Coalition for Remediation of Dry Cleaners, 2008 Annual Meeting. October 20-23, New Orleans, LA. (invited)

Sewell, G.W., R. Lewis, and J. Doyon, 2008. Enhanced Attenuation of Chlorinated Organics – A New Decision Strategy. State Coalition for Remediation of Dry Cleaners, 2008 Annual Meeting. October 20-23, New Orleans, LA. (Invited)

Sewell, G.W. 2008. A Bio-Electric Approach for the Treatment of Recalcitrant Contaminants. i2E-Innovator & Entrepreneur Luncheon series (i&E), produced by the Oklahoma Technology Commercialization Center (OTCC). October 10, Oklahoma City, OK. (invited)

Looney, B. B., D. Kaback, C. Newell, M. Truex, J. Kean, R. Lewis, and G.W. Sewell. 2008. Natural Attenuation of Chlorinated Solvents: Recent Developments and Practical Tools, Technical & Regulatory Guidance for Enhanced Attenuation of Chlorinated Organics. May 18. Monterey, CA.

Sewell, G.W., J. Kean, and R. Lewis. 2008. Technical & Regulatory Guidance for Enhanced Attenuation of Chlorinated Organics, A New Decision Process, ITRC Training Program, Savannah River National Laboratory. April 2. Aiken, SC.

Sewell, G.W. 2007. Bioelectrical Approach for the Treatment of Nitrate and Perchlorate Contaminated Water. 2007 Bricktown Capital Conference. September 4-6. Oklahoma City, OK.

Sewell, G.W. 2007. Reductive Bio-Modification of Sediment Contaminants: An *In Situ*, Molecular Hydrogen Formation Approach. NATO/CCMS Pilot Study. Prevention and Remediation in Selected Industrial Sectors: Sediments. June 17– 22. Ljubljana, Slovenija. (invited)

Sewell, G.W. 2007. Water Resource Management and Conflict: Global Implications and Historical Lessons. 2007 Oklahoma Sustainability Network Conference. April 15-16. Norman, OK,

Sewell, G.W. 2006. Biological Mechanisms and Activation to Remediate Chlorinated Solvents. NATO Advanced Research Workshop Environmental Security Threats in Urban Settings. June 8-9, Athens, Greece. (invited)

Sewell, G.W. 2006. Cleanup of Small Dry Cleaners Using Multiple Technologies: Sages Dry Cleaner Site. NATO/CCMS Pilot Study. Prevention and Remediation in Selected Industrial Sectors: Small Urban Areas. June 4-7. Athens, Greece. (invited)

Sewell, G.W., and R. Ross. 2005. Arbuckle-Simpson Aquifer Field Trip: Hydrogeology and Water Resources. American Institute of Professional Geologists, Oklahoma Section. Annual State Meeting, May 20-22. Ardmore, OK.

Sewell, G.W. 2003. Challenges for the Appropriate Use of Molecular Methods for the Characterization of Subsurface Microbial Communities. 59th Southwest Regional Meeting of the American Chemical Society. October 26-28, Oklahoma City, OK. (invited)

Sewell, G.W. 2002. The Role of Bioremediation in Source Zone Treatment. AFCEE Cleanup Technology Transfer Workshop 2002. March 4-7, San Antonio, TX. (invited)

Sewell, G.W. 2002. Bio-augmentation: Where, When, How. AFCEE Cleanup Technology Transfer Workshop 2002. March 4-7, San Antonio, TX. (invited)

Sewell, G.W., S.C. Mravik, R.K. Sillan, K. Warner and A.L. Wood. 2001. Performance Data from the Solvent Extraction Residual Biotreatment Technology Demonstration. In Situ and On-Site Bioreclamation, 6th International Symposium. June 4-7. San Diego, CA. (invited)

Sewell, G.W., S.C. Mravik and A.L. Wood. 2000. Field Evaluation of Solvent Extraction Residual Biotreatment (SERB). ConSoil 2000, Sept. 18-22, Leipzig, Germany. (invited)

Sewell, G.W. 1999. MNA: EPA Case Study, Sages Dry Cleaning Site. Federal Remediation Technologies Roundtable, Technical Session: Monitored Natural Attenuation of Chlorinated Solvents "How MNA is Used and Where We Are Going". Nov. 18, Arlington, VA. (invited)

Sewell, G.W. 1999. Development of Protocols and Decision Support Tools for Assessing Watershed System Assimilative Capacity in Support of Risk Based Ecosystem Management/Restoration Practices. Lake Texoma Advisory Committee Meeting, Nov. 10. Cedar Mills, TX. (invited)

Sewell, G.W., and H. Shen. 1999. Biotransformation Of Tetrachloroethene to Ethene During Anaerobic Degradation of Toluene. 1999 International Symposium on Subsurface Microbiology. August 22-27, 1999. Vail Colorado.

Sewell, G.W. 1998. Development and Testing of the Solvent Extraction Residual Biotreatment (SERB) Comprehensive Site remediation Approach. Partners in Environmental Technology 98 Technical Symposium & Workshop. Dec 1- Dec 3. Arlington, VA. (invited)

Sewell, G.W. 1998. Performance Evaluation of an In Situ Anaerobic Biotreatment System for Chlorinated Solvents. 1st International Battelle Conference on Remediation of Chlorinated and Recalcitrant Compounds. May 18-21. Monterey, CA.

Acree, S., R. W. Puls and G. W. Sewell. 1997. The Use of Three Dimensional Characterization Methods to Evaluate Subsurface Ecology and Biotransformation Potential. National Ground Water Association. Sept. 6, Las Vegas NV.

Sewell, G.W. 1997. Site Characterization Methods for the Design of In-Situ Electron Donor Delivery Systems. In Situ and On-Site Bioreclamation, 4th International Symposium. April 28-May 1. New Orleans, LA. (invited)

Sewell, G.W. 1997. Special Lecture on Borehole Flow-Meter Measurement of Hydraulic Conductivity and Bioremediation Case Studies. May 14, University of Technology Sydney, NSW, Australia. (Invited)

Sewell, G.W. 1996. Microbial Ecology of Adaptation and Response in the Subsurface. Symposium on Natural Attenuation of Chlorinated Organics in Ground Water. September 11-13, Dallas, TX. (invited)

Sewell, G.W. 1996. Natural Bioremediation of Chloroethene Contaminated Subsurface Soils and Ground Water. *In* Bioremediation in the Saturated Subsurface. University of New Hampshire. February 5, Durham, NH. (invited)

Sewell, G.W., and S.A. Gibson. 1995. Laboratory and Field Studies on the Reductive Dechlorination of PCE linked to Anaerobic Toluene Oxidation. In Situ and On-Site Bioreclamation, 3rd International Symposium. April 28-May 1. San Diego, CA. (invited)

Sewell, G.W., and H. H. Russell. 1994. Evaluation of Natural Attenuation of Organic Contaminants in the Subsurface: Laboratory and Field Studies. GASReP Annual Symposium on Groundwater and Soil Remediation. September 21-23, Calgary, Alberta, Canada. (invited)

Sewell, G.W., S.A. Gibson, S.C. Mravik and R.W. Puls. 1994. Development of Techniques for *In situ* Biotreatment of Chromium Contaminated Soil and Groundwater. I&EC Special Symposium, American Chemical Society, September 19-21, Atlanta GA. (invited)

Sewell, G.W. 1994. Biotransformation of Chloroethenes. Bioremediation Case Studies: Chlorinated Solvents. Short Course, Gulf Coast Hazardous Substance Research Center. November 15, 1994. University Houston, Houston, TX

Sewell, G.W. 1994. Natural Attenuation of Chloroethenes. Bioremediation Case Studies: Chlorinated Solvents. Short Course, Gulf Coast Hazardous Substance Research Center. November 15, 1994. University Houston, Houston, TX

Sewell, G.W. 1994. Reductive Dechlorination in Subsurface Environments: Laboratory Results and Field Relevance. National Center for Groundwater Management Special Lecture on Bioremediation Research for Contaminated Land and Groundwater. August 11, University of Technology Sydney, NSW, Australia. (invited)

Sewell, G.W. and S.A. Gibson. 1993. Reduction of Cr VI to Cr III in Anaerobic Aquifer Microcosms.

Annual Meeting of American Society for Microbiology, May 16-20, Atlanta, GA.

Sewell, G. W., and J.W. Anderson. 1994. Development of Microbial Community Based Biomarkers for Subsurface Contamination and Assimilative Capacity. Second International Conference on Ground Water Ecology. March 27-30, Atlanta GA. *presented by Mike Jawson.*

Sewell, G. W., *et al.* 1993. Natural Attenuation of Chloroethenes in Subsurface Environments. I&EC Special Symposium, American Chemical Society, Sep. 27-29, Atlanta GA. (invited)

W. G. Lyon, C.A. West, M.L. Osborn and G.W. Sewell*, 1993. Characterization of Microbially Available Organic Carbon Native to the Vadose Zone of an Aquifer. I&EC Special Symposium, American Chemical Society, Sep. 27-29, Atlanta GA. (invited)

Osborn, M.L. and G.W. Sewell*. 1993. Interactions of Mobilized Soil Organics, Chloroethenes and Subsurface Microorganisms. Annual Meeting of American Society for Microbiology, Missouri Valley Branch. March 4-6. Kansas City, MO.

Sewell, G.W., *et al.* 1992. Factors Affecting PCE Dechlorination in the Subsurface. First International Conference on Anaerobic Dehalogenation and its Environmental Implications. Athens, Georgia. (invited)

Sewell, G.W., *et al.* 1992. Adaptation and Response of Subsurface Microbial Populations to Organic Contaminants Under Anaerobic Conditions. The First International Conference on Ground Water Ecology. Tampa, Florida.

Sewell, G.W. 1992. Anaerobic Degradation in the Subsurface; Mechanisms of Adaptation. Annual Meeting of American Society for Microbiology, New Orleans, Louisiana. (invited)

Poster Presentations (selected):

Sewell, G.W., W. Kellogge and M. Bruner. 2008. Management of Wastewater Nitrogen Species Through the Use of BioCharge Technologies. Governor's Water Conference & Water Research Symposium. October 28-30, Midwest City, OK.

Sewell, G.W. 2007. Bioelectrical Approach for the Treatment of Nitrate and Perchlorate Contaminated Water. 2007 Bricktown Capital Conference. September 4-6. Oklahoma City, OK.

Sewell, G.W., S. Mravik, F. D. Chattopadhyay, R.K. Sillan and L. Wood. 2001. Biodegradation of Ethanol in Subsurface Environments. In Situ and On-Site Bioreclamation, 6th International Symposium. June 4-7. San Diego, CA.

Sewell, G.W., S. Mravik, F. Beck and L. Wood. 2000. Design and testing of second-generation bioremediation technologies for chlorinated solvent contaminated sites. Society for Industrial Microbiology Annual Meeting, July 23-27. San Diego, CA.

Helton, R.R., S.J. Flynn, F.E. Loeffler, G.W. Sewell, and J.M. Tiedje. 1999. Feasibility of Residual Bioremediation Strategy for a Chlorinated Solvent Contaminated Aquifer Following Solvent Extraction Remediation Biotreatment 1999 International Symposium on Subsurface Microbiology. August 22-27, Vail Colorado.

Duran, N.L. and Guy W. Sewell. 1999. Use of 16S rRNA-Targeted Oligonucleotide Probes and FAME Analysis for Community Structure Identification 1999 International Symposium on Subsurface Microbiology. August 22-27, Vail Colorado.

Shen, H., H.P. Pritchard and G.W. Sewell*. 1996. Evaluation of Substrate-Stimulated Chromate Biotransformation in Aquifer Microcosm. Annual Meeting of the American Society for Microbiology, May 19-23, New Orleans, LA.

Sewell, G.W., J.W. Anderson and H.H. Russell. 1995. Response of Subsurface Microbial Populations to Organic Ground Water Contaminants and Sulfate. Annual Meeting of the American Society for Microbiology, May 21-25, Washington, D.C.

Sewell, G.W., S.A. Gibson and H.H. Russell. 1994. Natural Attenuation of Organic Ground Water Contaminants by Subsurface Microbial Populations. Annual Meeting of American Society for Microbiology, May 23-27, Las Vegas, NV.

Sewell, G.W., and S.A. Gibson. 1993. Reduction of Cr VI to Cr III in Anaerobic Aquifer Microcosms. Annual Meeting of American Society for Microbiology, Atlanta, GA.

Clark, D., S.A. Gibson, S. C. Mravik, C. Paul, R. Powell, R.S. Puls and G.W. Sewell. 1992. Development of Techniques for In-Situ Remediation of Chromium Contaminated Soil and Groundwater. Third International Conference on Ground Water Quality Research, Dallas, TX.

Sewell, G.W., H.H. Russell and S.A. Gibson. 1991. Anaerobic Biotransformation of Toluene Under Sulfate-Reducing Conditions. Gordon Research Conference on Applied and Environmental Microbiology, New London, N. H.

Sewell, G.W., and S.A. Gibson. 1991. Effects of Alternate Electron Acceptors and Specific Metabolic Inhibitors on the Reductive Dechlorination of Tetrachloroethene (PCE) in Aquifer Microcosms. Annual Meeting of American Society for Microbiology, Dallas, TX.

Sewell, G.W., and S.A. Gibson. 1990. Reductive Dechlorination of Tetrachloroethene and Trichloroethene Linked to Anaerobic Degradation of Toluene in Fuel and Solvent Contaminated Aquifer Material. Annual Meeting of American Society for Microbiology, Anaheim, CA.

Sewell, G.W., G. Smith and S. Gibson. 1989. Biodegradation of Jet Fuel Under Anaerobic Conditions. Annual Meeting of American Society for Microbiology, New Orleans, LA.

Sewell, G.W., S. Hutchins, W. Downs and J Wilson. 1989. Field Demonstration of a Nitrate-Reduction Based Bioremediation Process. Annual Meeting of the Society for Industrial Microbiology, Seattle WA

Sewell, G.W., and L.O. Ingram. 1988. Genetic Elements in *Butyrivibrio fibrisolvens* and Cloning of a Xylosidase Gene. Annual Meeting of American Society for Microbiology, Miami Beach, FL.

Conway, T., G.W. Sewell, and L.O. Ingram. 1987. "Glyceraldehyde phosphate dehydrogenase from *Zymomonas mobilis*: Cloning, sequencing and identification of promoter region." J. Bacteriol. 169: (12) 5653-5662.

Ingram, L.O., T. Conway, D.P. Clark, G.W. Sewell, and J.F. Preston. 1987. "Genetic engineering of ethanol production in *E. coli*." Appl. Environ. Microbial. 53: (10) 2420-2425.

Conway, T., G.W. Sewell, Y.A. Osman, and L.O. Ingram. 1987. "Cloning and sequencing of alcohol dehydrogenase II from *Zymomonas mobilis*." J. Bacteriol. 169: 2591-2597.

Teaching/Mentoring Experience:

Principal Developer of Master of Science in Water Resources and Policy Management program and degree at East Central University. 2015-2016.

Professor Environmental Health Sciences Department East Central University, 2002-Present. Courses: Hydrogeology & Water Resources, Environmental Chemistry, Toxicology, HAZWOPER, Environmental Economics, Biostatistics, Hazardous and Solid Waste Management, Ground Water Remediation, Introduction to Environmental Health Sciences, Watershed Management.

Thesis Reviewer/Thesis Advisor, East Central University, 2013-Present

Thesis Reviewer, University of Sydney 2001, University of Oklahoma, 1992

Graduate Committee, University of Technology Sydney 2000

Advisor, National Research Council and US-EPA Postdoctoral Fellows: 1995-2001 (6) Drs. Shen, Xu, Hong, X. Zhang, H. Zhang, Duran, Luo.

Advisor, International Interns: 1995-1999 (3 International Graduate Students)

Mentor, McNair Scholars: 1994-1999 (9 Summer Research Interns)

Instructor, East Central State University, Ada, Oklahoma. 1992-1995. Immunology for undergraduate and graduate students during spring semesters.

Instructor, Superfund University Training Institute, US-EPA. "Fate and Transport of Contaminants in the Subsurface." 1992-1993.

Technical Mentor, 1988-2002, Federal Stay-in School/Environmental Apprenticeship Research Program: 20+ Undergraduate ECU students.

Graduate Teaching Assistant, Department of Microbiology, Oklahoma State University, 1980-1983. Laboratory courses taught: Microbiology, Industrial Microbiology, Cellular-Molecular Biology, Immunology, Advanced Immunology, Advanced Virology.

Workshops, Round Tables, Work Groups and Training Courses:

Arbuckle Simpson Aquifer Characterization, Phase II. US-EPA, USGS, U.S. Bureau of Reclamation, Oklahoma Department of Environmental Quality, Oklahoma Water Resources Board, Choctaw Nation, Chickasaw Nation, The Oka' Institute. 2016-18.

Lake Arbuckle Watershed Task Force. 2016-2017.

Arbuckle Simpson Aquifer Drought Contingency Plan Task Force. U.S. Bureau of Reclamation, Choctaw Nation, Chickasaw Nation. 2015-17.

A Holistic Approach to Groundwater Resource Development and Management: Groundwater Stakeholder Workshop. March 18, 2015. Oklahoma State University, Stillwater, Oklahoma.

Round Table on Hydraulic Fracturing. ECU Honors Program Symposium. Ada, Oklahoma. November 19th, 2014.

Introduction to Dynamic Modeling with STELLA and *iThink*. The Mining Exchange, Colorado Springs, CO. June 24 – 25, 2013.

Oklahoma Comprehensive Water Planning Process. 2009-2011.

2010 Oklahoma Academy: A Town Hall Meeting About Water. Norman, OK. May 23-26.

State of Oklahoma Zebra Mussels Task Force. 2009-2010.

Interstate Technology & Regulatory Council: PRB Technology Up-Date Team. 2009-10.

Interstate Technology & Regulatory Council: Environmental Impacts of Ethanol & Bio-Based Fuels Team. 2009.

Enhanced Attenuation of Chlorinated Organics: A Site Management Tool. ITRC Internet-Based Training Course. Co-Designer and Instructor. 2008: 7/15, 8/13, 9/11, 11/5. 2009: 2/19, 6/4, 8/13, 11/5.

FEMA Multi-Hazard Mitigation Planning Team, City of Ada, Oklahoma. 2008.

Absentee Shawnee Tribe-Brownfield Technicians Training Academy. US-EPA Region 6, Brownfields Training Grant. 2006-10. Course Designer and Instructor.

Interstate Technology & Regulatory Council: Enhanced Attenuation of Chlorinated Organics Team (Joint ITRC-DOE effort). 2006-9. Designated Academic Team Member.

Interstate Technology & Regulatory Council: Perchlorate Team. 2006-2009.

Interstate Technology & Regulatory Council: Bioremediation of DNAPLs Team. 2004-2005

State of Oklahoma Golden Algae Research Task Force. 2004-2005.

2004 Oklahoma Academy Town Hall Meeting. Oklahoma's Environment: Pursuing a Responsible Balance. Norman, OK. October 10-13.

HAZWOPER, 40 Hr, 8Hr. Certification and Refresher Courses. 2003-2016. East Central University, Ada, OK. (Course Organizer and Instructor)

Natural Attenuation Roundtable: How Do We Achieve Technical Consensus? US-EPA Ground Water, Engineering and Federal Facilities Forums. November 17-20, 1998. San Antonio, TX. (Invited Round Table Member)

Environmental Fate and Effects Test Methods Workshop. US-EPA Office of Pollution Prevention and Toxics, Agriculture Canada. March 25-26, 1997. Alexandria VA. (Invited Environmental Subsurface Fate Workgroup)

Bioremediation Case Studies: Chlorinated Solvents. Short Course, Gulf Coast Hazardous Substance Research Center. November 15, 1994. University Houston, Houston, TX. (Course Organizer and Speaker)

Biotransformation of Metals-Technical Session. Emerging Technologies in Hazardous Waste Management VI. Special Symposium IEC Division, American Chemical Society. September 19-21, 1994. Atlanta GA. (Session Co-Chair and Organizer)

Development of Ecological Tier Testing Schemes for Microbial Biotechnology Applications Workshop. US-EPA Office Pollution Prevention and Toxics, Environment Canada. Jan 11-13, 1994. Arlington VA. (Invited Workgroup Participant)

Bioremediation Risk Assessment Work Shop. US-EPA Office Pollution Prevention and Toxics, Environment Canada. June 17-18, 1993, Duluth MN. (Co-Chair Fate Protocols and Issues for GEMS and Metabolites Workgroup)

Journal Reviewer:

Environmental Science and Technology
Applied and Environmental Microbiology
Environmental Toxicology & Chemistry
Bioremediation Journal

Technical Reviewer/Technical Advisor:

Los Alamos National Laboratory, DOE. Technical Expert/Advisor, 2014-2018.

USGS, National Institute for Water Resources, National Competitive Grants Program, 2005, 2006, 2009.

US-EPA, Innovative Research Centers. 2004

Department of Energy, NABIR Oakridge National Laboratory Field Demonstration Program. 2000.

Advanced Research/Advanced Technology Program. 1993, 1995. State of Texas Higher Education Coordinating Board.

Department of Energy, Innovative Treatment Remediation Demonstration (ITRD) Program. Sandia National Laboratory: Mound, Pinellas, Tuba City, Hanford, Oak Ridge.

Specific proposal reviews for NSF, USGS, USDA, NRC, EPA.

Recent External Funding:

Bioelectric Treatment of Nitrate Impaired Waters. Oklahoma Water Resources Center/USGS 104(b) grants program. \$20,005. 2021. PI-Sewell

Comparison of Fluorescent Magnetic Nano-Particles, with Traditional and Non-Traditional Tracers Methods, in Fractured Rock Aquifers. Chickasaw Nation/BIA-Water Management, Planning, and Pre-Development Grant. 2020. \$49,901. PI-Sewell.

Arbuckle Aquifer Recharge Feasibility Study. Chickasaw Nation/BIA-Water Management, Planning, and Pre-Development Grant. 2017. \$50K. PI-Sewell.

Let's Talk About Water Challenge Grant. The Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI). 2017. \$2.7K. PI-Sewell.

The Oka' Institute, \$2,495K. 2016-2021. CoPI-Sewell.

NSF-EPSCoR, Aerial Thermography as a Water Resource Management Tool, \$12K. 2014. PI-Sewell

Oklahoma Department of Commerce. Green Jobs Training Grant. \$255K. 2011. CoPI-Sewell

USDA Rural Development Grant: Green Jobs Training Institute. \$200K. 2009. CoPI-Sewell.

Veterans Workforce Investment Program: Green Jobs Grant. \$500K. 2009. CoPI-Sewell.

Oklahoma NASA Space Grant/NASA EPSCoR Research Initiation Grant. Salt Water Discharge Assessments. \$2K. 2008. PI-Sewell.

US-EPA. AST Brownfield Job Training Grant. \$200K. 2008. CoPi-Sewell

NASA mini-grant. Assessing Salt Water Impact. \$2K. 2007. PI-Sewell.

US-EPA. AST Brownfields Job Training Grant. \$200K. 2006. CoPi-Sewell

Oklahoma Water Resources Research Institute. Evaluation of Chemical and Biological Loading to Blue River. \$25K. 2004. PI-Sewell

US-EPA, National Risk Management Research Laboratory Ecosystem Restoration Program. “Development of protocols and decision support tools for assessing watershed system assimilative capacity (SAC), in support of risk based ecosystem management/restoration practices.” \$1,200K. 1998-2002. PI-Sewell

Strategic Environmental Restoration Development Program (SERDP-DoD/EPA) “Federal Integrated Bioremediation Research Consortium.” \$250K/year. 1998-2000. PI-Sewell

Environmental Security Technology Certification Program (ESCTP-DoD) “Establishment of Treatability Test for Enhanced In Situ Anaerobic Dechlorination.” \$2,000K. 1998-2000. CoPI-Sewell.

Additional Educational Course Work:

Remedy Selection for Contaminated Sediments. 2016. Interstate Technology and Regulatory Council. CLU-IN Seminar. June 2, 2016.

Forensic Methods for Chlorinated Solvents: Focus on Dry Cleaning and Vapor Degreasing. September 12, 2012. Exponent, Inc. Webinar.

Vapor Intrusion Pathway: A Practical Guideline. 2009. ITRC Classroom-Based Training Course. April 6-7. Oklahoma City, OK.

Oklahoma Water Law Seminar. 2008. Oklahoma Water Resources Research Institute-Oklahoma Water Resources Board. July 28-29. Oklahoma City, OK.

Modular Emergency Response Radiological Transportation Training (& Train-the-Trainer). U.S. Department of Energy. June 28th, 2007.

Asbestos Management Planner Course. GEBCO Associate-UNT. April 26-27, 2007

Asbestos Inspector Course. GEBCO Associate-UNT. February 19-21, 2007

IS-005, Introduction to Hazardous Materials. FEMA Emergency Management Institute Feb 6th, 2007.

Working with HEC-Hydrologic Modeling System 3.0. Oklahoma State University. October 4th, 2006. (8.0 PDH)

Environmental Site Assessments for Commercial Real Estate. ASTM International. April 19-20, 2005. (1.4 CEU)

EPA Approved Asbestos Inspector Course. Moore Norman Technology Center. June 14-16, 2004.

Quick Advantage Entrepreneurship Program. East Central University. October 8, 2003.

OSHA 8-Hour Training for Supervisors. ABAG Training Center, December 13, 2002. (0.8 CEU)

DNA Microarray Technology: Methods and Applications Workshop. . The Committee on Continuing Education of the Society for Industrial Microbiology. July 2000. (8hrs CME)

Economics and the Environment Program. Harvard University, John F. Kennedy School of Government. Governmental Executive Training Program. May 15-21, 2000

Introduction to *Mathematica*. Rocky Mountain Mathematica. 1999. (24hrs CI)

Introduction to ARCVIEW GIS. Environmental Systems Research Institute, Inc. February 1998 (16hrs CI)

The Identification, Enumeration and Detection of Water-Borne Microbes. The Committee on Continuing Education of the American Society for Microbiology. May, 1996. (6hrs CME)

Introduction to the Polymerase Chain Reaction: Basic Principles and Applications. . The Committee on Continuing Education of the Society for Industrial Microbiology. 1995 (8hrs CME)

Systems Thinking with STELLA II Workshop. High Performance Systems Inc. 1993 (28hrs CI)

Plasmids in the Environment: Detection, Recovery and Amplification Techniques. The Committee on Continuing Education of the American Society for Microbiology. May, 1992. (6hrs CME)

Application of Nucleic Acid probes in Environmental Biotechnology. The Committee on Continuing Education of the American Society for Microbiology. May, 1991. (8hrs CME)

Metabolic Pathway Engineering in Microorganisms. The Committee on Continuing Education of the American Society for Microbiology. May 1990. (7hrs CME)

Hazardous Waste Operations and Safety Training Certifications

EPA Lead Safety (RRP) Training and Certification	11/15/2010
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Waterworks Operator D, Wastewater Operator D (99183) Oklahoma Department of Environmental Protection	6/30/2010
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CPR/AED-Adult American Red Cross	9/18/2009
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Asbestos Instructor Certification. Absentee Shawnee Tribe, Oklahoma Department of Labor.	7/2007, 7/2008, 3/2009
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MERRITT-TEPP (DOE) Trainer Certification	6/2007
AHERA (Asbestos) Inspector. Oklahoma Department of Labor. License No. OK158343.	7/2007, 5/2009
Supervisor Level HAZWOPER Certification (29 CFR 1919.120)	12/2002
40-Hour HAZWOPER Certification (29 CFR 1919.120)	6/1988, 11/1993
8-Hour HAZWOPER Annual Refresher (29 CFR 1919.120)	5/11/1990 - 5/6/2020
US-EPA, Field Safety-Drilling and Sample Collection (12hr)	8/30/1993
US-EPA, Use of Toxic in the Laboratory (24hr)	12/29/1994
US-EPA, Laboratory Safety Refresher (8hrs)	6/18/1998
US-EPA, Radiation Safety in the Laboratory (4hrs)	5/3/1993, 7/6/1995
Boating Skills and Seamanship Certification Course (USCG)	6/15/1999

Awards, Honors and Leadership Positions

Member, Managed Aquifer Recharge Team, Interstate Technology Regulator Committee (ITRC)	2022
Member WEF Research and Innovation Committee	2019-2020
Member, American Academy Environmental Engineers and Scientists, Seminars and Workshops Committee.	2018-2022
Member, National Ground Water Association	2018-2022
Member, American Ground Water Trust	2017-2022
Member, Water Environment Federation	2017-2021
Board Certified Environmental Scientist, (BCES) Specialty: Groundwater and the Subsurface Environment American Academy Environmental Engineers and Scientists	2016-2022
Chairman, Oklahoma Groundwater Foundation	2015-2019
Mayor City of Ada	2015-2018
Environmental Biotechnology Program Advisory Board Pontotoc Technology Center	2014-2020

Councilman Ward 4, Ada City Council	2012-2022
Chairman, Ada Water Resources Board	2012-present
Member, National Water Resource Association	2010-2022
Chairman of the Board, Arbuckle Federal Credit Union	2009 – 2016
Oklahoma Water Resources Institute, Certificate of Appreciation	2010
Coast Guard Unit Commendation, US Coast Guard Auxiliary	2009
Advanced Placement National Test Grader, Environmental Sci.	2009-2014
President, ECU Faculty Senate	2008 – 2009
President, Ada Sunrise Rotary	2008 – 2009
Citizens for the Protection of the Arbuckle-Simpson Aquifer	
Board of Directors	2006 - 2011
Technical Review Board	2011 - 2017
Oklahoma Academy for State Goals, Certificate of Recognition and Appreciation	2005
US-EPA Science and Technology Achievement Award, Honorable Mention. <i>Integrating Source –Zone and Plume Remedial Options into a Treatment-Train Approach to Facilitate Site Remediation</i>	2004
Epsilon Nu Eta, <i>Charter Member</i> (Environmental Health Science National Honor Society)	2004
US-EPA Science and Technology Achievement Award, Honorable Mention. <i>Research Related to the Application and Development of a Cost-Effective Approach for Ground Water Restoration</i>	2004
Robert S. Kerr Endowed Chair and Professor of Environmental Health Science	2002 – Present
US-EPA Special Achievement Award. <i>The 2000 Business and Industry Externship Program</i>	2000
US-EPA Special Achievement Award. <i>Solvent Extraction Residual Biotreatment Research</i>	2000
US-EPA Special Achievement Award.	

<i>QSI-In Recognition of High Quality Performance</i>	2000
US-EPA Special Achievement Award. <i>Permeable Reactive Barriers Team</i>	1999
US-EPA Science and Technology Achievement Award. <i>Biodegradation of Petroleum Hydrocarbons by Aquifer Microorganisms under Denitrifying Conditions</i>	1991
Gas Research Institute Postdoctoral Research Fellowship,	1986-1988

References:

Tyrrell Conway, Ph.D.
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 307 Life Science East
 Oklahoma State University
 Stillwater, OK 74078
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 (colleague and research collaborator)

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Roger Cosby
 14490 County Rd 3490
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 1100 E 14th St.
 Ada, OK 74820
 580-559-5548
 dweirick@ecok.edu
 (Department Chairman EHS-ECU)

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 President
 Robert Puls Environmental Consulting
 Norman OK 73019
 405-361-3290
 puls.robert@gmail.com

(past supervisor, collaborator and Director, Oklahoma Water Survey)

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Ada, OK 74820

580-559-5212

(past President, East Central University)