

Curriculum Vitae

ROGER C. VIADERO, JR., PH.D., CSE, BCEEM

CONTACT

Western Illinois University

*1 University Circle
Macomb, IL, 61455
rc-viadero@wiu.edu
www.wiu.edu/viadero
309/298.1632 (office)
309/318.9146 (cell)*

EDUCATION

Ph.D., Civil and Environmental Engineering

*West Virginia University •
Morgantown, WV
1997*

M.S., Nuclear Engineering

*University of Illinois • Urbana,
IL
1994*

B.S., Physics, Summa Cum Laude

*Mary Washington College •
Fredericksburg, VA
1993*

PROFESSIONAL CERTIFICATION

Board Certified Environmental Engineering Member

*American Academy of
Environmental Engineers and
Scientists
2019 - present*

Certified Senior Ecologist

*Ecological Society of America
2009 - present*

Program Evaluator

*ABET • Baltimore, MD
2024 - 2029*

WORK EXPERIENCE

Chair, Environmental Science Ph.D. Program

Director, Institute for Environmental Studies
Professor, Department of Biological Sciences
*Western Illinois University • Macomb and Moline, IL
2007 - present*

Science Advisor and Panel Manager (GS 15), National Institute for Food and Agriculture, Institute of Bioenergy, Climate, and Environment

*US Department of Agriculture • Washington, DC
2015 - 2017*

Director, Center for Environmental Research

*Office of the Vice President for Research and Economic
Development
West Virginia University • Morgantown, WV
2005 - 2007*

Robert C. Byrd Associate Professor, Department of Civil & Environmental Engineering

*West Virginia University • Morgantown, WV
2005 - 2007*

Associate Professor, Department of Civil & Environmental Engineering

*West Virginia University • Morgantown, WV
2004 - 2005*

Assistant Professor, Department of Civil & Environmental Engineering

*West Virginia University • Morgantown, WV
1999 - 2004*

Assistant Professor of Environmental Engineering, Division of Natural and Applied Science

*University of Wisconsin-Green Bay • Green Bay, WI
1998 - 1999*

Research Assistant Professor, Department of Civil & Environmental Engineering

*West Virginia University • Morgantown, WV
1998*

Lecturer, Department of Civil & Environmental Engineering

*West Virginia University • Morgantown, WV
1996 - 1997*

Research Fellow, College of Engineering

*University of Illinois • Urbana, IL
1993 - 1995*

Consultant

Automated Sciences Group • Dahlgren, VA
Summer 1993

Intern, Office of the Director

Federal Bureau of Investigation • Washington, DC
Summer 1992

Intern, Forensic Science Research and Training Center

Federal Bureau of Investigation • Quantico, VA
Summer 1991 and Summer 1990

SYNERGISTIC PROFESSIONAL EXPERIENCE

Program Evaluator (Engineering Accreditation Commission)

ABET • Baltimore, MD
2024 - 2029

Member, Board of Professional Certification

Ecological Society of America • Washington, DC
2024 - present

Member, Quad Cities Clean River Advisory Council

QC Community Foundation and the Walton Family Foundation • Davenport, IA
2023 - present

Reviewer, Industrial Ties and Proof of Concept/Prototyping Initiative

Louisiana Board of Regents • Baton Rouge, LA
2022 - 2023

Member, Scientific Advisory Board, EARTH Center

Eastern Iowa Community College District • Davenport, IA
2021 - 2026

Senior Consulting Environmental Scientist

Riverside Global • Hampton, IL
2020 - present

Expert Witness

Smith and Amundsen • Chicago, IL
Rubin Anders • Brookline, MA
2020 - present

Succession from Second Vice President through President

Aquacultural Engineering Society • Riverview FL
2006 - 2008

Member, Board of Directors

Aquacultural Engineering Society • Riverview FL
2004 - 2006

Senior Fellow, Homeland Security Policy Institute

The George Washington University Medical Center • Washington, DC
2006

Editorial Board Member, Journal of Aquacultural Engineering

Elsevier Science, Ltd. • Amsterdam, NL

2006 - present

HONORS, AWARDS, AND ACHIEVEMENTS

Eddy Award for Excellence on the Mississippi River

River Action • Davenport, IA

2022

Inaugural Robert C. Byrd Endowed Associate Professorship

West Virginia University • Morgantown, WV

2005 - 2007

Outstanding Researcher, College of Engineering & Mineral Resources

West Virginia University • Morgantown, WV

2003 and 2004

Outstanding Paper Award, Journal of Aquacultural Engineering

Aquacultural Engineering Society • Riverview, FL

2004

Member, Board of Directors

Aquacultural Engineering Society • Riverview, FL

2004 - 2006

Outstanding Teacher, College of Engineering & Mineral Resources

West Virginia University • Morgantown, WV

2002

Excellence in Teaching Award, Department of Civil & Environmental Engineering

West Virginia University • Morgantown, WV

2000 and 2001

J.C. Burchinal Award for Outstanding Undergraduate Teaching, WVU Department of Civil and Environmental Engineering

West Virginia University • Morgantown, WV

1999 and 2000

Research Fellowship, College of Engineering

University of Illinois • Urbana, IL

1993 - 1995

Departmental Honors in Physics

Mary Washington College • Fredericksburg, VA

1993

Phi Beta Kappa, Kappa of Virginia

Mary Washington College • Fredericksburg, VA

1992

PUBLICATIONS

Papers in Archival Journals

Viadero, R., Singh, A., Thomas, D., and S. Babatunde. "Partitioning of Slag-Derived Metals in Freshwater, Sediment, and Aquatic Vegetation," *Journal of Soil and Water Conservation*, submitted, April 2024.

Rehbein, M., Viadero, R., Hunt, J., and C. Miller (2024). "The Role of Temperature, Wind Speed, and Precipitation on the Abundance of *Culex* Species and West Nile Virus Infection Rate in Rural West-Central Illinois," *Journal of the American Mosquito Control Association*, 40(10), 1-10, <https://doi.org/10.2987/23-7152>.

Hunt, J., Rehbein, M., Viadero, R. and C. Miller (2023). "Distribution of Invasive *Aedes* Mosquitoes in Western Illinois, 2014-2018: First Records for *Aedes japonicus* and *Aedes albopictus*," *Journal of the American Mosquito Control Association*, 39 (1), 1-11, <https://doi.org/10.2987/22-7105>.

Singh, A. and R. Viadero (2022). "Environmental Impact of the Historical Slag Pile in Davenport, Iowa, USA: Trace Metal Contamination in Soils and Terrestrial Vegetation," *Journal of Soil and Water Conservation*, 77(4), 365-371, <https://doi.org/10.2489/jswc.2022.00134>.

Rehbein, M., and Viadero, R. (2021). "A New Record of *Uranotaneia sapphirina* and *Aedes japonicus* in Lee and Oogle Counties, Illinois," *Journal of the American Mosquito Control Association*, 37 (4), 280-282, <https://doi.org/10.2987/21-6994>.

Viadero, R., Zhang, S., Hu, X., and X, Wei (2020). "Mine Drainage: Remediation Technology and Resource Recovery," *Water Environment Research*, 92 (10), 1533 - 1540.

Kang, R., Chacko, E., Kaur, D., and R. Viadero. (2019). "Siltation Patterns in the Reservoirs of Small- and Medium-Sized Earthen Check Dams in Humid Subtropical Monsoon Regions," *Earth Surface Processes and Landforms*, 44 (13), 2638-2648, <https://doi.org/10.1002/esp.4689>.

Viadero, R., and R. Fortney (2015). "Water Quality Assessment and Environmental Impact Minimization for Highway Construction in a Coal-Mined Watershed: the Beaver Creek Drainage," *Southeastern Naturalist*, 14 (7), 112-120, <https://doi.org/10.1656/058.014.sp712>.

Wei, X., Buzby, K., Hendricks, J., Creel, A., Semmens, K., and R. Viadero (2015). "Application of Geotextile Bag Filters in Flow-Through Aquaculture Systems: Solid Waste Management and Water Quality Implications," *Journal of Environmental Sciences*, 1(2): 004.

Wei, X., Bhojappa, S., Lin, L., and R. Viadero (2012). "Performance of Nano-Magnetite for Removal of Selenium from Aqueous Solutions," *Environmental Engineering Science*, 29 (6), 526-532, <http://dx.doi.org/10.1089/ees.2011.0383>.

Wei, X., Wei, H., and R. Viadero (2011). "Post-Reclamation Water Quality Trends in a Mid-Appalachian Watershed of Abandoned Mine Lands," *Science of the Total Environment*, 409 (5), 941-948, <http://dx.doi.org/10.1016/j.scitotenv.2010.11.030>.

Chen, Y., Viadero, R., Wei, X., Hedrick, L., Welsh, S., Anderson, J., and L. Lin (2008). "Effects of Highway Construction on Stream Water Quality and Macroinvertebrate Condition in a Mid-Atlantic Highlands Watershed, USA," *Journal of Environmental Quality*, 38, 4, 1672-1682, <http://dx.doi.org/10.2134/jeq2008.0423>.

Wei, X., Viadero, R., and S. Bhojappa (2008). "Phosphorus Removal by Acid Mine Drainage Sludge from Secondary Effluents of Municipal Wastewater Treatment Plants," *Water Research*, 42 (13), 3275-3284.

- Viadero, R., Fortney, R., and A. Tierney (2008). "Impact Assessment and Remediation Strategies for Roadway Construction in Acid-Bearing Media: A Case Study from Mid-Appalachia," *Journal of Infrastructure Systems*, 14 (3), 223-229, [http://dx.doi.org/10.1061/\(ASCE\)1076-0342\(2008\)14:3\(223\)](http://dx.doi.org/10.1061/(ASCE)1076-0342(2008)14:3(223)).
- Wei, X. and R. Viadero (2007). "Adsorption and Precoat Filtration Studies of Synthetic Dye Removal by Acid Mine Drainage Sludge," *Journal of Environmental Engineering*, 133 (6), 633-640, [http://dx.doi.org/10.1061/\(ASCE\)0733-9372\(2007\)133:6\(633\)](http://dx.doi.org/10.1061/(ASCE)0733-9372(2007)133:6(633)).
- Buzby, K. and R. Viadero (2007). "Structural and Functional Aspects of Treated Mine Water and Aquaculture Effluent Streams," *Hydrobiologia*, 583 (1), 251-263, <http://dx.doi.org/10.1007/s10750-006-0534-0>.
- Wei, X. and R. Viadero (2007). "Synthesis of Magnetite Nanoparticles with Ferric Iron Recovered from Acid Mine Drainage: Implications for Environmental Engineering," *Colloids and Surfaces: Physicochemical and Engineering Aspects*, 294 (1-3), 280-286, <http://dx.doi.org/10.1016/j.colsurfa.2006.07.060>.
- Chen, Y., Lin, L., Viadero, R., and D. Gang (2007). "Non-point Source Pollution," *Water Environment Research*, 79 (17), 2032-2048, <http://dx.doi.org/10.2175/106143007X218656>.
- Viadero, R., Rumberg, A., Gray, D., Tierney, A., and K. Semmens (2006). "Acoustic Doppler Velocimetry in Aquaculture Research: Raceway and Quiescent Zone Hydrodynamics," *Aquacultural Engineering*, 34 (1), 16-25, <http://dx.doi.org/10.1016/j.aquaeng.2005.03.002>.
- Viadero, R., Wei, X., and K. Buzby (2006). "Characterization and Dewatering Evaluation of Acid Mine Drainage Sludge from Ammonia Neutralization," *Environmental Engineering Science*, 23 (4), 734-743, <http://www.dx.doi.org/10.1089/ees.2006.23.734>.
- Wei, X., Viadero, R., and K. Buzby (2005). "Recovery of Iron and Aluminum from Acid Mine Drainage by Selective Precipitation," *Environmental Engineering Science*, 22 (6), 745-755, <http://www.dx.doi.org/10.1089/ees.2005.22.745>.
- Viadero, R., Cunningham, J., Semmens, K., and A. Tierney (2005). Effluent Characterization and Production Impacts of Flow-Through Aquaculture Operations in West Virginia," *Aquacultural Engineering*, 33 (4), 258-270, <http://dx.doi.org/10.1016/j.aquaeng.2005.02.004>.
- Miller, D., Semmens, K., Viadero, R., and A. Tierney (2004). "The Resource Potential of Mining Discharge Water for Aquaculture," *World Aquaculture*, 35 (4), 57-61.
- Viadero, R., Tierney, A., and K. Semmens (2004). "Use of Treated Mine Water for Rainbow Trout (*Oncorhynchus mykiss*) Culture - A Production Scale Assessment," *Aquacultural Engineering*, 31 (3-4), 319-336, <http://dx.doi.org/10.1016/j.aquaeng.2004.06.003>.
- Qiu, X., Reed, B., and R. Viadero (2004). "Effects of Plant Flavonoids on 14C[7,10]-Benzo[a]pyrene Degradation in Root Zone Soil," *Environmental Engineering Science*, 21 (5), 637-646, <http://www.dx.doi.org/10.1089/ees.2004.21.637>.
- Viadero, R., and A. Tierney (2003). "Use of Treated Mine Water for Rainbow Trout (*Oncorhynchus mykiss*) Culture - A Preliminary Assessment," *Aquacultural Engineering*, 29 (1-2), 43-56, [http://www.dx.doi.org/10.1016/S0144-8609\(03\)00030-X](http://www.dx.doi.org/10.1016/S0144-8609(03)00030-X).
- Viadero, R., and J. Noblet (2002). "Membrane Filtration for Removal of Fine Solids from Aquaculture Process Water," *Aquacultural Engineering*, 26 (3), 151-69, PAPER AWARD, [http://dx.doi.org/10.1016/S0144-8609\(02\)00011-0](http://dx.doi.org/10.1016/S0144-8609(02)00011-0).

- Reed, B., Bagby, M., Masciola, D., Viadero, R., and R. Vaughan (2002). "Microfiltration of a Dental Wastewater (DWW) for Mercury Removal," *Environmental Engineering Science*, 19 (1), 9-26, <http://www.dx.doi.org/10.1089/109287502753590205>.
- Masciola, D., Viadero, R., and B. Reed (2001). "Effects of Operating Parameters in Tubular Ultrafiltration," *Journal of Environmental Engineering*, 127 (4), 288-294, [http://www.dx.doi.org/10.1061/\(ASCE\)0733-9372\(2001\)127:4\(288\)](http://www.dx.doi.org/10.1061/(ASCE)0733-9372(2001)127:4(288)).
- Masciola, D., Viadero, R., and B. Reed (2001). "Tubular Ultrafiltration Flux Prediction for Oil-In-Water Emulsions: Analysis of Series Resistances," *Journal of Membrane Science*, 184, 197-208, [http://www.dx.doi.org/10.1016/S0376-7388\(00\)00625-6](http://www.dx.doi.org/10.1016/S0376-7388(00)00625-6).
- Viadero, R., Masciola, D., Reed, B., and R. Vaughan (2000). "Two Phase Limiting Flux Decline in the High-Shear Rotary Ultrafiltration of Oil-In-Water Emulsions," *Journal of Membrane Science*, 175, 85-96, [http://www.dx.doi.org/10.1016/S0376-7388\(00\)00408-7](http://www.dx.doi.org/10.1016/S0376-7388(00)00408-7).
- Vaughan, R., Reed, B., Viadero, R., Roark, G., and D. Masciola (2000). "Pilot-Scale Investigation of Chemical Addition-Dissolved Air Flotation for the Treatment of an Oily Wastewater," *Environmental Engineering Science*, 17 (5), 267-278; errata in 18 (3), 213, <http://www.dx.doi.org/10.1089/109287501750281103>.
- Reed, B., Vaughan, R., Lin, W., and R. Viadero (2000). "Recovery of Metal Working Fluids Using a Chelation Ultrafiltration (CUF) Process," *Journal of Environmental Engineering*, 126 (9), 807-814, [http://www.dx.doi.org/10.1061/\(ASCE\)0733-9372\(2000\)126:9\(807\)](http://www.dx.doi.org/10.1061/(ASCE)0733-9372(2000)126:9(807)).
- Viadero, R. and B. Reed (1999). "Rotation and Concentration Effects in High-Shear Ultrafiltration," *Journal of Environmental Engineering*, 125 (7), 638-646, [http://www.dx.doi.org/10.1061/\(ASCE\)0733-9372\(1999\)125:7\(638\)](http://www.dx.doi.org/10.1061/(ASCE)0733-9372(1999)125:7(638)).
- Viadero, R., Vaughan, R., and B. Reed (1999). "Study of Series Resistances in High-Shear Rotary Ultrafiltration," *Journal of Membrane Science*, 162 (1-2), 199-211, [http://www.dx.doi.org/10.1016/S0376-7388\(99\)00143-X](http://www.dx.doi.org/10.1016/S0376-7388(99)00143-X).
- Vaughan, R., Reed, B., Viadero, R., Jamil, M., and M. Berg (1999). "Simultaneous Removal of Organic and Heavy Metal Contaminants by Granular Activated Carbon (GAC) Columns," *Advances in Environmental Research*, 3 (3), 229-242.
- Viadero, R., Reed, B., Berg, M., and J. Ramsey (1998). "A Laboratory-Scale Study of the Effects of Applied Voltage on the Electrokinetic Separation of Lead from Soils," *Separation Science and Technology*, 33 (12), 1833-1859.
- Reed, B., Carriere, P., Lin, W., Roark, G., and R. Viadero (1998). "Treatment of An Aluminum Manufacturer's Oily Wastewater: Pilot-Scale Results and Preliminary Design," *ASCE Practice Periodical of Hazardous, Toxic, and Radioactive Waste Management*, 2 (3) 100-107, [http://www.dx.doi.org/10.1061/\(ASCE\)1090-025X\(1998\)2:3\(100\)](http://www.dx.doi.org/10.1061/(ASCE)1090-025X(1998)2:3(100)).
- Reed, B., Matsumoto, M., Viadero, R., Vaughan, R., and W. Lin (1999). "Physicochemical Processes," *Water Environment Research*, 71 (5), 589-617.
- Lin, W., Viadero, R., Reed, B., and R. Vaughan (1999). "Electronics and Metal Finishing and Processing," *Water Environment Research*, 71 (5), 816-822.
- Reed, B., Lin, W., and R. Viadero (1998). "Treatment of a Concentrated Oily Waste Using A High-Shear Rotary Ultrafiltration System: Preliminary Results," *Fluid-Particle Separation Journal*, 11 (1), 82-88.

Reed, B., Lin, W., Viadero, R., and J. Young (1997). "Treatment of Oily Wastes Using High-Shear Rotary Ultrafiltration," *ASCE Journal of Environmental Engineering*, 123 (12), 1234-1242, [http://www.dx.doi.org/10.1061/\(ASCE\)0733-9372\(1997\)123:12\(1234\)](http://www.dx.doi.org/10.1061/(ASCE)0733-9372(1997)123:12(1234)).

Lin, W., Reed, B., and R. Viadero (1997). "Electronics and Metal Finishing and Processing," *Water Environment Research*, 69 (4), 626-628.

Viadero, R. and S. Landsberger (1994). "Development of a Method for the Analysis of Low-Level Radioactive Waste from a Neutron Activation Analysis Laboratory," *Radioactivity and Radiochemistry*, 5 (4), 42-48.

Books

Viadero, R. (2024). "Aquatic Environmental Systems: An Interdisciplinary Approach for Scientists and Engineers," Taylor Francis Publishing, CRC Press, 158 pp., ISBN: 978-1-032-26718-0 (hbk), 978-1-032-26721-0 (pbk), 978-1-003-28963-0 (ebk), <https://doi.org/10.1201/9781003289630>.

Griffin, W.D. (2012). *Voices of the Hennepin Canal: Promoters, Politicians, and the US Army Corps of Engineers*, R. Viadero, Jr., Ed., Western Illinois University, Macomb, IL, 368 pp., ISBN: 978-0-9777116-2-8.

Reviewed Book Chapters

Viadero, R. (2019). "Principles of Gas Solubility in Water: Henry's Law," in *Encyclopedia of Water: Science, Technology, and Science, Part 1: Fundamentals of Water, Chemistry, Particles, and Ecology*, Patricia Maurice, Ed., John Wiley and Sons, NY, 175-182, [invited](https://doi.org/10.1002/9781119300762.wsts0133), <https://doi.org/10.1002/9781119300762.wsts0133>.

Viadero, R. (2019). "The Geochemistry of Acid Mine Drainage," in *Encyclopedia of Water: Science, Technology, and Science, Part 1: Fundamentals of Water, Chemistry, Particles, and Ecology*, Patricia Maurice, Ed., John Wiley and Sons, NY, 191-198, [invited](https://doi.org/10.1002/9781119300762.wsts0096), <https://doi.org/10.1002/9781119300762.wsts0096>.

Viadero, R. (2019). "Water Quality Factors Affecting Fish Growth and Production," in *Encyclopedia of Water: Science, Technology, and Science, Part 1: Fundamentals of Water, Chemistry, Particles, and Ecology*, Patricia Maurice, Ed., John Wiley and Sons, NY, 547-556, [invited](https://doi.org/10.1002/9781119300762.wsts0119), <https://doi.org/10.1002/9781119300762.wsts0119>.

Viadero, R. (2005). "Sedimentation and Flotation," in *Water Encyclopedia, Volume 3: Surface & Agricultural Water*, Jay H. Lehr and Jack Keeley, Eds., John Wiley & Sons Publishing, New York, 404-408.

Viadero, R. (2005). "Factors Affecting Fish Growth and Production," in *Water Encyclopedia, Volume 3: Surface & Agricultural Water*, Jay H. Lehr and Jack Keeley, Eds., John Wiley & Sons Publishing, New York, 129-133.

Viadero, R. (2005). "Geochemistry of Acid Mine Drainage," in *Water Encyclopedia, Volume 3: Surface & Agricultural Water*, Jay H. Lehr and Jack Keeley, Eds., John Wiley & Sons Publishing, New York, 13-15.

Viadero, R. (2005). "Henry's Law," in *Water Encyclopedia, Volume 4: Oceanography; Meteorology; Physics and Chemistry; Water Law; and Water History, Arts, and Culture*, Jay H. Lehr and Jack Keeley, Eds., John Wiley & Sons Publishing, New York, 466-468.

Viadero, R. (2005). "Lime-Soda-Ash Processes," in *Water Encyclopedia, Volume 1: Domestic, Municipal, and Industrial Water Supply & Waste Disposal*, Jay H. Lehr and Jack Keeley, Eds., John Wiley & Sons Publishing, New York, 320-322.

Invited Papers in Professional Publications

Tierney, A. and R. Viadero (2005). “Lower Loads – Vegetable-Based Trout Feed Produces Lower Waste Loads Than Fishmeal Diet,” *Global Aquaculture Advocate*, 8 (3), 69-71, invited.

Viadero, R. (2003). “Membrane Filtration: An Emerging Technology for the Removal of Fine Solids from Recirculating Aquaculture Systems,” *Global Aquaculture Advocate*, 6 (3), 32-34, INVITED.

Conference Plenary Papers

Viadero, R., Rehbein, M., and A. Singh (2017). “Hydropower on the Mississippi River,” *Raising the Grade on the Upper Mississippi River – Hydro Potential on the Mississippi River*, July 18, 2017, Western Illinois University-Quad Cities, Moline, IL, <http://www.riveraction.org/umrc/sites/default/files/UMRC%202017%20RTG%20Hydropower%20v4.pdf>.

Viadero, R., Sinkler, R., and K. Wine (2016). “Raising the Grade in the Upper Mississippi River and its Environs: Current Conditions, Ongoing Activities, and Future Opportunities,” *9th Annual Upper Mississippi River Conference*, October 13-14, 2016, Moline, IL, <http://www.riveraction.org/umrc/sites/default/files/UMRC2016RaiseTheGrade.pdf>.

Conference Presentations and Proceeding Papers († presenting author; * student author)

Helmke, C.†*, Singh, A., and R. Viadero, “Spatial Distribution of Extractable Metals in Sediment from Iron Foundry Slag Deposited at Carp Lake, Davenport, IA,” student award, *Upper Mississippi River Conference*, Moline, IL, October 19-20, 2022.

Viadero, R., “Diverting Mississippi River Water to Supplement the Water Supply in the Lower Colorado River Basin - An Exercise in Critical Thinking and Scientific Literacy,” *Upper Mississippi River Conference*, Moline, IL, October 19-20, 2022.

Viadero, R., “Critical Issues Roundtable: Looking Ahead and Lessons Learned,” *Great River Collaborative Conference*, Culver-Stockton College, Canton, MO, April 7 - 9, 2022.

Helmke, C.†*, Singh, A., and R. Viadero, “Spatial Distribution of Extractable Metals in Sediment from Iron Foundry Slag Deposited at Carp Lake, Davenport, IA,” *16th Emiquon Science Symposium*, March 30, 2022.

Williams, M. *, Nichols, J. *, Alford, A.†*, Davee, M. *, Helmke, C. *, Viadero, R., and M. Bernards, “Drain Tile Water Quality: Integration of Cover Crops, Year 1,” *IL Nutrient Reduction and Education Council Meeting*, Champaign, IL, February 16, 2021.

Viadero, R. “Headwater Streams: Their Importance in the Upper Mississippi River Basin,” *2020 Upper Mississippi River Webinar Series*, November 5, 2020; available at <https://youtu.be/jpq0AAKidX0>.

Singh, A.†* and R. Viadero, “Distribution of Trace Metals among Soil, Water, Sediment and Vegetation in the Vicinity of an Iron Foundry Slag Deposit at Carp Lake, Davenport, IA, US,” *Soil and Water Conservation Society (SWCS) 75th International Annual Conference*, Des Moines, IA, July 26-29, 2020.

Billingsley-Tobias, T.†*, Hunt, J. *, Henry, J. *, Viadero, R., Miller-Hunt, C., and A. Porrás-Alfaro, “Freshwater Fungal Diversity and Ecological Interactions with Mosquitoes and Plant Communities,” *12th International Mycological Congress*, Minneapolis, MN, August 10 - 14, 2019.

Viadero, R.[†], “Ecological, Hydrologic, and Geomorphic Characteristics of Alluvial Headwater Streams in the Upper Mississippi River Basin: An Overview,” invited, Illinois Statewide Master Naturalist Conference, University of Illinois, College of Agriculture, Consumer, and Environmental Sciences, Monticello, IL, October 26, 2018.

Billingsley-Tobias, T.^{†*}, Hunt, J.^{*}, Viadero, R., Miller-Hunt, C., and A. Porras-Alfaro, “Description of Aquatic Yeasts and Their Interactions with Plants and Aedes Mosquitoes,” 11th International Mycological Congress, San Juan, Puerto Rico, July 16 – 21, 2018.

Kang, R.Chacko, E., Kaur, D., and R. Viadero, “Pattern of Silting in the Reservoirs of Small and Medium Sized Earthen Check Dams in the Shiwalik Foot Hills of the Himalayas,” Geological Society of America Annual Meeting, Seattle, WA, October 2017.

Billingsley-Tobias, T.^{†*}, Hunt, J.^{*}, Viadero, R., Miller-Hunt, C., and A. Porras-Alfaro, “Yeast Diversity in an Urban Stream and their Impact on Mosquito Populations,” Mycological Society of America, Athens, GA, June 16 – 19, 2017.

Viadero, R., “A Cross Sectional View of Our River Environment,” Upper Mississippi River Conference, Davenport, IA, October 14 – 16, 2015.

Viadero, R., “Mining of Hydraulic Fracturing Sands in the Upper Mississippi River Basin: Environmental Challenges & Impacts,” Joint Upper Mississippi River and Urban Waterfronts Conference, Davenport, IA, September 25 – 27, 2013.

Wei, X.[†], Bhojappa, S.^{*}, Lin, L., and R. Viadero, “Removal of Selenium from Aqueous Solutions Using Magnetite Nanoparticles as Adsorbent,” TechConnect World Conference & Expo, Boston, MA, June 13 – 16, 2011.

Viadero, R., “Innovation in Wastewater Treatment - Resilient Infrastructure in the Upper Mississippi River Watershed,” Upper Mississippi River Conference, Moline, IL, September 24 – 25, 2009.

Chen, Y.^{†*}, Viadero, R. Wei, X., Hedrick, L.^{*}, Welsh, S., Anderson, J., and L. Lin, “Impacts of Highway Construction on Stream Water Quality and Macroinvertebrate Index in the Mid-Atlantic Highlands,” Ecological Society of America, 93rd Annual Meeting, Milwaukee, WI, August 3 – 8, 2008.

Buzby, K.[†], Hendricks, J.^{*}, Creel, A.^{*}, Semmens, K., and R. Viadero, “Efficacy of a Geotextile Bag at Solids Removal and Nutrient Retention of Flow-Through Aquaculture Solids Waste,” Aquaculture America, Lake Buena Vista, FL, February 9 – 12, 2008.

Smith, N.^{†*}, West, T., Buzby, K., Viadero, R., and K. Semmens, “Watercress Production Utilizing Flow-Through Aquaculture Effluent,” American Society for Horticultural Science 2007, Scottsdale, AZ, July 16 – 19, 2007.

Hendricks, J.^{†*}, Viadero, R., and A. Creel, “Polymer Selection for Geotube[®] Application for Waste Management in a Small Flow-Through Aquaculture System,” West Virginia Academy of Sciences, Huntington, WV, March 2007.

Tierney, A.[†], Viadero, R., and K. Semmens, “Mine Water Aquaculture Productivity: Species Selection and Economic Enhancement for Year-Round Operation,” Aquaculture America, San Antonio, TX, February 26 – March 2, 2007.

Buzby, K.[†], Dyer, D.^{*}, Viadero, R., West, T., and K. Semmens, “Evaluation of the Nutrient Removal Capabilities of Watercress, Lettuce and Basil from a Flow-Through Aquaculture System,” Aquaculture America, San Antonio, TX, February 26 – March 2, 2007.

Hendricks, J.^{†*}, Viadero, R., Tierney, A., and K. Semmens, “Geotube® Application for Waste Management in a Small Flow-Through Aquaculture System,” Aquaculture America, San Antonio, TX, February 26 – March 2, 2007.

D. Dyer^{†*}, Buzby, K., Viadero, R., West, T., and K. Semmens, “Effectiveness of Aquatic Phytoremediation of Nutrients Via Watercress (*Nasturtium officinale*) from Effluent of a Flow-Through Aquaculture Operation,” Aquaculture America, Las Vegas, NV, February 13 – 16, 2006.

Buzby, K.[†], Ravenscroft, W., Hedrick, L.^{*}, Viadero, R., and S. Welsh, “Cluster Analysis of Water Quality and Benthic Macroinvertebrate Data from 44 Mid-Appalachian Sites,” North American Benthological Society, Anchorage, AK, June 4 – 9, 2006.

Viadero, R., “Reporting Standards for Aquacultural Engineering Studies,” Aquaculture America, Las Vegas, NV, February 13 – 16, 2006.

Tierney, A.[†], Viadero, R., and K. Semmens. “Diet Selection Using Four Factored Analysis for Rainbow Trout (*Oncorhynchus mykiss*) Reared in Treated Mine Water,” Aquaculture America, Las Vegas, NV, February 13 – 16, 2006.

Viadero, R. and X. Wei^{†*}, “Synthesis of Magnetite Nanoparticles from Reclaimed Acid Mine Drainage,” 79th ACS Colloid and Surface Science Symposium, Clarkson University, Potsdam, NY, June 12 – 14, 2005.

Tierney, A.^{†*}, Viadero, R., and K. Semmens, “Applied Aquatic Chemistry Effects in Mine Water Aquaculture: Metal Speciation and Ion Interactions,” American Fisheries Society, Southern Division, Trout Committee, 4th East Coast Trout Management and Culture Workshop, Lock Haven, PA, June 6 – 8, 2005.

Miller, D.[†], Semmens, K., Davalos, J., and Viadero, R., “New Materials and Modular Construction of Small Raceway Systems in West Virginia,” American Fisheries Society, Southern Division, Trout Committee, 4th East Coast Trout Management and Culture Workshop, Lock Haven, PA, June 6 – 8, 2005.

Lin, L.[†], Cunningham, J.^{*}, and R. Viadero, “Tracking Effects of Pollution Sources on In-Stream Water Quality Using a Modeling Approach,” 2005 ASCE Watershed Management Conference: Engineering, Ecological, and Economic Challenges, Williamsburg, VA, July 19 – 22, 2005, [http://dx.doi.org/10.1061/40763\(178\)123](http://dx.doi.org/10.1061/40763(178)123).

Tierney, A.^{†*}, Viadero, R., and K. Semmens, “Waste Production Evaluation of Two Commercial Feeds for Rainbow Trout (*Oncorhynchus mykiss*) Reared in Treated Mine Water,” Aquaculture America, New Orleans, LA, January 17 – 20, 2005.

Viadero, R. and A. Tierney[†], “Development of Treated Mine Waters for Aquaculture: Non Ideal Water Chemistry Effects at Dogwood Lakes,” American Society of Mining and Reclamation, Morgantown, WV, April 18 – 22, 2004.

Viadero, R. and A. Tierney^{†*}, “Development of Treated Mine Waters for Aquaculture: Overview of Water Quality from Dogwood Lakes, 2002 – 2003,” American Society of Mining and Reclamation, Morgantown, WV, April 18 – 22, 2004.

Viadero, R. and A. Rumberg^{†*}, “Applications of Acoustic Doppler Velocimetry for Characterization of Quiescent Zone Hydrodynamics in Flow-Through Aquaculture Systems: Implications for Enhanced Solids Management,” Aquaculture America, Honolulu, HI, March 1 – 5, 2004, 612.

Cunningham, J.[†], Viadero, R., and K. Semmens, “Production Impacts of Effluent Pollutant Limits at Six West Virginia Aquaculture Operations,” Aquaculture America, Honolulu, HI, March 1 - 5, 2004, 137.

Tierney, A.^{†*}, Viadero, R., and K. Semmens, “Use of Treated Mine Water for Rainbow Trout (*Oncorhynchus mykiss*) Culture: A Production-Scale Assessment,” Aquaculture America, Honolulu, HI, March 1 - 5, 2004, 587.

Tierney, A.^{†*}, Viadero, R., and V. Tummala, “Use of Treated Mine Water for Rainbow Trout (*Oncorhynchus mykiss*) Culture: Reaeration in the Presence of an Oxygen Demand,” Aquaculture America, Honolulu, HI, March 1 - 5, 2004, 587.

Buzby, K.[†], Cunningham, J.^{*}, Miller, D., Tierney, A.^{*}, and R. Viadero, “Impacts of Trout Reared in Treated Acid Mine Water on Downstream Benthic Communities,” Aquaculture America, Honolulu, HI, March 1 - 5, 2004, 83.

Reed, B.[†] and R. Viadero, “High-Shear Rotary Ultrafiltration System: Treatment of Concentrated Oily Wastes,” American Institute of Chemical Engineers Annual Meeting, San Francisco, CA, November 16 - 21, 2003.

Vantaram, A.^{†*}, Davalos, J., Robinson, J., Viadero, R., Semmens, K., and J. Plunkett, “Component Failure and System Modeling of Honeycomb FRP Aquaculture Tanks,” 18th Annual Technical Conference: American Society for Composites, University of Florida, Gainesville, FL, July 2003.

Tierney, A.^{†*} and R. Viadero, “Implications of Active Dissolved Metal Concentrations and Speciation on the Use of Treated Mine Water for the Culture of *Oncorhynchus mykiss*,” Aquaculture America, Louisville, KY, February 2003, 291.

Cunningham, J.^{†*} and R. Viadero, “A Process Engineering Assessment of a West Virginia Aquaculture Operation to Determine Potential for Increased Production,” Aquaculture America, Louisville, KY, February 2003, 64.

Viadero, R.[†], Fortney, R., and P. Hudnall^{*}, “Baseline Water Quality Assessment for Environmental Impact Avoidance: The Beaver Creek Watershed,” Canaan Valley and its Environs: a Heritage Landscape Celebration, Davis, WV, October 16 - 20, 2002.

Tierney, A.^{†*} and R. Viadero, “Implications of Active Dissolved Metal Concentrations and Speciation on the Use of Treated Mine Water for the Culture of *Oncorhynchus mykiss*,” West Virginia Academy of Sciences, Morgantown, WV, April 2002.

Davalos, J.[†], Robinson, J., Vantaram, A.^{*}, Viadero, R., Semmens, K., and J. Plunkett, “Honeycomb Fiber-Reinforced Polymer Sandwich Panels for Fish Culture Tanks,” 3rd International Conference on Composites in Infrastructure, San Francisco, CA, June 10 - 11, 2002.

Viadero, R. and A. Tierney^{†*}, “Technical Feasibility of Using Treated Mine Waters to Rear *Oncorhynchus mykiss*,” Aquaculture America, San Diego, CA, January 31, 2002, 349.

Cunningham, J.^{†*} and R. Viadero, “Effluent Characterization of Flow-Through Aquaculture Operations in West Virginia,” Aquaculture America, San Diego, CA, January 31, 2002, 76.

Viadero, R., Reed, B., Vaughan, R.[†], and D. Masciola^{*}, “Two Phase Mass Transfer Controlled Flux in High-Shear Rotary Ultrafiltration,” Proceedings: 31st Mid-Atlantic Industrial and Hazardous Waste Conference, Storrs, CT, June 1999, 420 - 428.

Masciola, D.^{†*}, Viadero, R., Reed, B., Vaughan, R.^{*}, and M. Malak^{*}, “Effects of Feed Oil Content, Transmembrane Pressure and Membrane Rotational Speed on Permeate Water Quality in High-Shear Rotary Ultrafiltration,” Proceedings: 31st Mid-Atlantic Industrial and Hazardous Waste Conference, Storrs, CT, June 1999, 324 - 331.

Vaughan, R.^{†*}, Viadero, R., Reed, B., Masciola, D.^{*}, and M. Malak^{*}, “Study of Series Resistances in High-Shear Rotary Ultrafiltration,” Proceedings: 31st Mid-Atlantic Industrial and Hazardous Waste Conference, Storrs, CT, June 1999, 409 - 419.

Malak, M.^{†*}, Reed, B., Vaughan, R., Masciola, D.^{*}, and R. Viadero, “Full-Scale Operation of a Tubular Ultrafiltration System for the Treatment of an Oily Wastewater,” Proceedings: 31st Mid-Atlantic Industrial and Hazardous Waste Conference, Storrs, CT, June 1999, 314 - 323.

Reed, B.[†], Bagby, M., Masciola, D.^{*}, Malak, M.^{*}, Viadero, R., and R. Vaughan^{*}, “Treatment of Amalgam Waste for Mercury Removal Using Ultrafiltration Membrane Separation,” Proceedings: 31st Mid-Atlantic Industrial and Hazardous Waste Conference, Storrs, CT, June 1999, 429 - 438.

Reed, B.[†], Roark, G., Viadero, R., Carriere, P., Malak, M., Masciola, D.^{*}, and R. Vaughan^{*}, “Design and Implementation of a Treatment System from an Aluminum Manufacturer’s Oily Wastewater.” 1998 Pollution Prevention in the Aluminum Industry Workshop, Cincinnati, OH, October 1998.

Bagby, M.[†], Reed, B., Viadero, R., and H. Batchu^{*}, “Membrane Filtration and the Effects of Autoclaving Dental Wastewater.” General Session of the American Association for Dental Research, Minneapolis, MN, March 1998.

Reed, B., Lin, W., and R. Viadero^{†*}, “Treatment of Oily Wastes Using the SpinTek Centrifugal Membrane System,” Proceedings: 70th Water Environment Federation Conference, Chicago, IL, October 1997.

Reed, B., Lin, W., and R. Viadero^{†*}, “Treatment of Concentrated Oily Wastes Using the Centrifugal Membrane System,” Proceedings: 1997 Joint ASCE/CSCE Conference on Environmental Engineering, Edmonton, Alberta, July 1997.

Reed, B., Lin, W., and R. Viadero^{†*}, “Treatment of an Aluminum Manufacturer’s Oily Wastewater: Pilot-Scale Results and System Design,” 1997 Joint ASCE/CSCE Conference on Environmental Engineering, Edmonton, Alberta, July 1997.

Lin, W., Reed, B., and R. Viadero^{†*}, “Separation of Surfactant Micelle-Organic Pollutant Complex Using a High-Shear Rotary Ultrafiltration System,” Proceedings: 29th Mid-Atlantic Industrial and Hazardous Waste Conference, Roanoke, VA, July 1997.

Viadero, R.^{†*}, Reed, B., and W. Lin, “The Effects of Membrane Rotation on the Performance of a Centrifugal Ultrafiltration Separation System,” Proceedings: 29th Mid-Atlantic Industrial and Hazardous Waste Conference, Roanoke, VA, July 1997.

Reed, B., Lin, W., and R. Viadero^{†*}, “Metal Working Coolant/Lubricant Treatment Using the SpinTek High-Shear Rotary Ultrafiltration System,” Proceedings: 29th Mid-Atlantic Industrial and Hazardous Waste Conference, Roanoke, VA, July 1997.

Reed, B., Lin, W., Carriere, P., Roark, G., and R. Viadero^{†*}, “Treatment of an Aluminum Manufacturer’s Oily Wastewater: Pilot-Scale,” Proceedings: 29th Mid-Atlantic Industrial and Hazardous Waste Conference, Roanoke, VA, July 1997.

Reed, B., Lin, W.[†], and R. Viadero^{*}, “Direct Treatment of Concentrated Oily Wastes Using the Centrifugal Membrane System,” Proceedings: 52nd Purdue University Industrial Waste Conference, West Lafayette, IN, May 1997.

Reed, B., Lin, W.[†], and R. Viadero*, “Oil-Based Lubricant/Coolant Treatment by High-Shear Rotary Ultrafiltration,” Proceedings: 52nd Purdue Industrial Waste Conference, West Lafayette, IN, May 1997.

Reed, B.[†], Lin, W., and R. Viadero*, “Treatment of Concentrated Oily Wastes Using the SpinTek Rotary Ultrafiltration System,” Proceedings: Advances in Filtration and Separation Technology, Vol. 11, American Filtration and Separations Society, Minneapolis, MN, April 1997.

Reed, B.[†], Lin, W., Carriere, P., and R. Viadero*, “Treatment of an Aluminum Manufacturer’s Oily Wastewater: Ultrafiltration (UF) Versus Chemical Addition-Dissolved Air Flotation (CA/DAF),” Proceedings: Advances in Filtration and Separation Technology, Vol. 11, American Filtration and Separations Society, Minneapolis, MN, April 1997.

Viadero, R.^{†*} and S. Landsberger, “Background Reduction for Low-Level Nuclear Measurements in an Instrumental Neutron Activation Analysis Laboratory,” Proceedings: American Nuclear Society Winter Meeting, San Francisco, CA, October 1995.

Viadero, R.* and S. Landsberger[†], “Waste Stream Characterization in a Neutron Activation Analysis Facility,” Proceedings: American Nuclear Society Winter Meeting, Washington, DC, November 1994.

Viadero, R.^{†*} and S. Landsberger, “Characterization of Radionuclides Produced in the University of Illinois’ Neutron Activation Analysis Laboratory,” Environmental Radiation Conference, Prairie State Chapter of the Health Physics Society, Springfield, IL, October 1994.

SPONSORED RESEARCH

Funded As Principal Investigator

“Assessing the Need for Nutrient Reduction Measures on the Rock and Mississippi Rivers in the Vicinity of Moline, IL - Decision-Making Support for Nutrient Assessment Reduction Planning in an Agriculture Dominated Watershed,” City of Moline, IL, 2023, \$36,000.

“Stream Monitoring Study for Appalachian Corridor H: Water Quality, Fisheries, and Benthic Macroinvertebrate Studies” and Amendments, Federal Highways Administration via the West Virginia Division of Highways, 2000-2010, \$3,653,524 total.

“Program to Stimulate Interdisciplinary Research,” West Virginia University Research Corporation, June 2005-May 2007, \$400,000.

“Cooperative Agreement Between the WV Department of Environmental Protection, Division of Mining & Reclamation, Office of Special Reclamation and West Virginia University’s Department of Civil & Environmental Engineering,” West Virginia Department of Environmental Protection, 2003-2005, \$248,355.

“Aquaculture Food and Market Development Program,” US Department of Agriculture, Cooperative State Research, Education, and Extension Service, 2000-2007, \$1,278,060 total.

“Strategic Assessment of Roadway Runoff Research Needs in West Virginia,” West Virginia Division of Highways, 2000-2001, \$97,773.

“Removal of Fine Particulate Matter from Intensive Fish Production Systems Using Microfiltration,” University of Wisconsin System, 1999-2000, \$39,000.

Funded As Co-Investigator

“Integrating Livestock Grazing into the Western Illinois Corn-Soybean Cropping System to Enhance Farm Profitability and Reduce Nutrient Loss, 2023-2024,” Illinois Nutrient Research and Education Council, Dr. J. Gruver PI, October 2023, \$63,377.

“Integrating Livestock Grazing into the Western Illinois Corn-Soybean Cropping System to Enhance Farm Profitability and Reduce Nutrient Loss, 2022-2023,” Illinois Nutrient Research and Education Council, Dr. M. Bernards PI, September 2022, \$84,242.

“Integrating Livestock Grazing into the Western Illinois Corn-Soybean Cropping System to Enhance Farm Profitability and Reduce Nutrient Loss, 2021-2022,” Illinois Nutrient Research and Education Council, Dr. M. Bernards PI, September 2021, \$81,128.

“Integrating Livestock Grazing into the Western Illinois Corn-Soybean Cropping System to Enhance Farm Profitability and Reduce Nutrient Loss, 2020-2021,” Illinois Nutrient Research and Education Council, Dr. M. Bernards PI, September 2020, \$84,242.

“Long-Term Riparian and Aquatic Ecosystem Monitoring Projects on the Upper Mississippi River,” Earthwatch Institute, Dr. S. Jenkins PI, August 2009, \$16,000.

“Long-Term Riparian and Aquatic Ecosystem Monitoring Projects on the Upper Mississippi River,” Earthwatch Institute, Dr. S. Jenkins PI, 2008, \$16,000.

“Evaluating Restoration and Mitigation Species and Market Opportunities to Advance the Commercialization of the Aquatic Plant Industry,” Northeastern Regional Aquaculture Center (NRAC), Drs. A. Lazur (University of Maryland Center for Environmental Science) and D. McIntosh (Delaware State University) PIs, 2008, \$449,903.

“Increasing Economic and Environmental Sustainability of Aquaculture Production Systems Through Aquatic Plant Culture,” Sustainable Agriculture Research and Education Program (SARE), US Department of Agriculture, Drs. A. Lazur (University of Maryland Center for Environmental Science) and D. McIntosh (Delaware State University) PIs, 2005 - 2008, \$278,076.

“Evaluation of Highway and Other Transportation Rights-of-Way in West Virginia as Habitats & Vectors for Invasive Species,” West Virginia Division of Highways, Dr. R. Fortney PI, 2000-2002, \$150,419; \$12,512 extension.

“Partnership for Innovation: Honeycomb Polymer Materials for Construction and Aquaculture Marketing Development,” National Science Foundation, Dr. J. Davalos PI, 2001-2004, \$597,378.

“Trout Production Raceway System Using Advanced Composite Materials,” State of West Virginia Higher Education Policy Commission, Dr. J. Davalos PI, July 2001-June 2002, \$140,000.

“Assessment of Benthic Macroinvertebrates in Environmental Impact Assessment,” Potesta and Associates (Charleston, WV), Dr. T. Jones PI, 2000-2001, \$25,000.

TEACHING

Courses Developed, Taught, and/or Revised

(^g graduate level, ^d developed, ^r substantially revised, ^t taught, ^{tt} team taught, ^{dl/ol} distance learning/on line)

Western Illinois University

ENVR 401 Colloquium on Environmental Studies^{* t}

ENVR 675 Assessment and Management of Low Order Alluvial Stream Channels^{* d t}

ENVR 675 Watershed-Scale Environmental Assessment and Management^{* d t}

ENVR 730 Environmental Systems^{* d t dl/ol}

ENVR 740 Advanced Analytic Tools in Environmental Science^{* d}
 ENVR 750 Integrated Environmental Decision Making^{* d t dl/ol}
 GEOG 510 Environmental Impact Analysis^{* t}
 GEOG 609 GIS Research and Application Methods^{* t}

West Virginia University

CE 293 Civil Engineering Seminar^t
 CE 347 Introduction to Environmental Engineering^{tr}
 CE 443 Environmental Science and Technology^t
 CE 447 Environmental Engineering Design^{tr}
 CE 540 Aquatic Chemistry and Biology^{* t}
 CE 542 Physicochemical Unit Operations^{* t}
 CE 591 Hazardous Waste Site Remediation^{* t}
 CE 744 Industrial and Advanced Wastewater Treatment^{* t}
 ENG 1 Introduction to Engineering^{tt dl/ol}
 ENG 2 Freshman Engineering Design^{tr}

University of Wisconsin-Green Bay

ENGR 314 Engineering Mechanics II - Dynamics^t
 ENVSCI 102 Introduction to Environmental Science^t
 ENVSCI 305 Environmental Systems^d
 ENVSCI 318 Industrial Pollution Control^t
 ENVSCI 460 Waste Management and Resource Recovery^{* t}
 ENVSP 766 Resource Management Strategy^{* t}

STUDENT RESEARCH ADVISING

(MS - Master of Science; MSE - Master of Science in Engineering; MSCE - Master of Science in Civil Engineering; MSEnv - Master of Science in Environmental Science; MA - Master of Arts)

Graduate Students Currently Advised as Major Professor

John Nichols, M.S., WIU-BIO, topic under development.

E. Dave Thomas, Ph.D. Candidate, WIU-ES, "A GIS-based Decision Making Support System for Nutrient Assessment and Reduction Planning."

Samuel Babatunde, Ph.D. Candidate, WIU-ES, "Perennial Cover Cropping to Reduce Nutrient loading in Corn and Soybean Production Systems - a three-year study."

Ava Alford, M.S., WIU-BIO, "A Quantitative Assessment of the Impact of Cover Crops on Tile Water Quality in a Corn-Soybean Rotation."

Jennifer Sandrik-Rubio, Ph.D. candidate, WIU-ES, "Geomorphological, Hydrologic, and Water Quality Characteristics of Low Order, Low Gradient Streams in the Middle of the Upper Impounded Region of the Mississippi River."

Jason Hunt, Ph.D. candidate, WIU-ES, "The Role of Environmental and Geomorphological Conditions on the Prevalence of the Invasive Mosquito, *Aedes japonicas*, between the Lower Impounded and the Illinois River Reaches in the Upper Mississippi River Watershed."

Graduate Students Graduated As Major Professor

Victoria Livingston, Ph.D., WIU-EnvSci, "Embryonic, Larval, and Adult Amphibian Success at a former Superfund Site - Turned Urban Wetland - in Direct Hydraulic Contact with the Mississippi River - Population Counts and Heavy Metal Burdens," May 2024.

- Terri Tobias, Ph.D., WIU-EnvSci, "Role of Microbiological/Mycological Communities Native to River Corridors in West-Central IL and Water Quality on the Germination and Maturation of *Aedes albopictus* and *Aedes triseriatus* Larvae," December 2023.
- Madison Davee, M.S., WIU BioSci, "Real-Time Remote Sensing of Water Levels and Atmospheric Variables in an Urban Wetland, East Moline, IL, USA," December 2023.
- Claire Helmke, M.S., WIU BioSci, "Spatial Distribution of Extractable Metals in Sediment Leached from Iron Foundry Slag Deposit at Carp Lake, Davenport, IA, USA," May 2022.
- Matthew Williams, M.S., WIU BioSci, "Water Quality of Drain Tile Runoff with the Integration of Cover Crops and Intensive Grazing," May 2022.
- Michele Rehbein, Ph.D., WIU EnvSci, "Mosquitoes of Wetland and Low Order Streams in West-Central and North-Central Illinois: Developing Models of *Culex* Mosquito Abundance and Abiotic Factors and Identification of Mosquito Hosts Through Genetic Sequencing," December 2020.
- Anshu Singh, Ph.D., WIU EnvSci, "Passive Remediation of Heavy Metal Contaminated Sediment, Soil, and Water using Select Aquatic and Terrestrial Vegetation," December 2020.
- Derek Dyer, MSCE, WVU Civil Eng, "Effectiveness of Aquatic Phytoremediation of Nutrients Via Watercress (*Nasturtium officinale*), Basil (*Ocimum basilicum*), Dill (*Anethum graveolens*), and Lettuce (*Lactuca sativa*) from Effluent of a Flow-Through Aquaculture Operation," December 2006.
- Xinchao Wei, Ph.D., WVU Civil Eng, "Enhanced Management of Metal-Bearing Industrial Sludges through Physicochemical and Surface Investigations," December 2005.
- Jennifer Selfridge, MSE, WVU Civil Eng, "Pharmaceuticals and Personal Care Products in Domestic Wastewaters: Water Pollutants of Emerging Concern," December 2005.
- Mark Smith, MSE, WVU Civil Eng, "Effect of Water Quality Disturbances in a Mine Water Aquaculture System on Rainbow Trout, *Oncorhynchus mykiss*," August 2005.
- Phannindra Kunderu, MSCE, WVU Civil Eng, "Analysis of Aging Effects and Effectiveness of Dewatering Processes on Treated Acid Mine Drainage (AMD) Sludge," May 2005.
- Jennifer McGee, MSCE, WVU Civil Eng, "Geospatial Framework for Water Quality Impact Assessment: Corridor H," May 2005.
- Andrea Rumberg, MSCE, WVU Civil Eng, "Applications of Acoustic Doppler Velocimetry for Characterization of Quiescent Zone Hydrodynamics in Flow-Through Aquaculture Systems: Implications for Enhanced Solids Management," December 2004.
- John Gillilan, MSCE, WVU Civil Eng, "Land Cover and Land Use (LCLU) Impacts on Water Quality in Mid Appalachia," December 2003.
- Patrick F. Hudnall, MSCE, WVU Civil Eng, "Characterization and Recommendations for the Remediation of Acid Mine Drainage Impacted Streams," December 2003.
- James H. Cunningham, MSCE, WVU Civil Eng, "Effluent Characterization of Flow-Through Aquaculture Operations in West Virginia," August 2003.
- Aislinn E. Tierney, MSCE, WVU Civil Eng, "Technical Feasibility of Using Treated Mine Waters to Rear *Oncorhynchus mykiss* as a Value-Added Use of Industrial Wastewater," August 2002.
- Jaime M. Sayre, MSCE, WVU Civil Eng, "Ecosystem Impact Mitigation of Roadway Construction Based on Pre-Construction Engineering Analyses," May 2001.

David A. Masciola, Ph.D., WVU Civil Eng, “Development of Resistance-Based Model for Technical Performance Comparison of Membrane Separation Modules,” December 2000.

Ronald L. Vaughan, MSE, WVU Civil Eng, “High-Shear Rotary Ultrafiltration of a Synthetic Oily Wastewater: Resistance in Series Modeling,” August 1998.

Membership on Graduate Examining Committees

Maddie Tomczak, M.S., WIU-BioSci, Evaluation of the Age, Growth, and Emergence of Larval Fish in Mississippi River Pools 17-19, successfully defended June 2020.

Zachary Witzel, M.S., WIU-BioSci, Size Selectivity of Gill Nets Used to Capture Bighead Carp, Silver Carp, and Five Commonly Encountered Bycatch Species in the Upper Mississippi River, successfully defended May 2020.

Boone LaHood, M.S., WIU-BioSci, Larval Light Trapping Efforts Reveal Protracted Spawning in Bighead Carp Upstream of Lock and Dam 19 on the Upper Mississippi River, successfully defended April 2020.

Chelsea Center, M.S., WIU-BioSci, “Satellite-Linked GPS Identification and Tracking of Bigheaded Carp Invasion Front on the Illinois River,” in progress.

Erienne Davis, M.A., WIU-Geog, “Analysis of Streambank Erosion in Low Order Streams Using Terrestrial LIDAR Data,” June 2019.

Paige Ehryke, M.A., WIU-Geog, “High-Precision Analysis of Moss Treatments on Streambanks Using Terrestrial LIDAR Scanning (TLS)”

Hannah Helms, M.S., WIU-BioSci, “Single-Standing Wind Turbines Impact Bat Populations during Low Nocturnal Wind Speeds and Fall Migration”

Michele Rehbein, M.S., WIU-BioSci, “Arbovirus Surveillance in Rural Western Illinois”

John Bendick, Ph.D., University of Maryland-Chemical, Biochemical & Environmental Engineering, “High Shear Rotary Membrane System Enhancements for Naval Wastewaters”

Babita Gurung, M.S., WIU-BioSci, “Influence of Historical Land Use and Physiography on Current Forest Composition at the Post Wildlife Sanctuary, McDonough County, Illinois”

Raj Gondle, Ph.D., WVU Civil Eng, “Numerical Modeling of Overburden Response during Geologic Sequestration”

Selina Goddard, M.S., WIU-BioSci, “Temporal Assessment of Forest Habitat at the Ira and Reatha T. Post Wildlife Sanctuary, McDonough County, IL”

Honghong Wei, MSE, WVU Civil Eng, “Impact of Mine Land Restoration and Revegetation on Water Quality in a Mid-Appalachian Watershed: A Stream Monitoring Study”

Joshua Pike, MSCE, WVU Civil Eng, “Numerical Modeling of Soil- Geosynthetic Interactions”

Lara Raas-Hedrick, Ph.D., WVU-Division of Forestry, Wildlife, and Fisheries Resources, “Evaluation of the Impacts of Highway Construction on Sediment and Benthic Macroinvertebrates in Appalachian Streams”

Raj Gondle, MSCE, WVU Civil Eng, “Finite Element Analysis of Long-Term Performance of High Density Polyethylene Pipes”

Xiaochao Tang, MSCE, WVU Civil Eng, “Numerical Analysis of the Geomechanical Response of Overburden Strata to Carbon Dioxide Sequestration Injection in Coal Seams”

2012	Ashley VanSpeybroeck, Recreation, Parks, and Tourism Administration
2003 - 04	Derek Dyer, Civil and Environmental Engineering
2001 - 03	Andrea Rumberg, Civil and Environmental Engineering
2001 - 02	Nathaniel Krause, Civil and Environmental Engineering
2000 - 03	Brad Messenger, Civil and Environmental Engineering Jenna McGee, Civil and Environmental Engineering
2000 - 02	April Belle, Civil and Environmental Engineering
2000 - 01	Daniel Grudzinski, Civil and Environmental Engineering
1999 - 00	Scott Copen, Civil and Environmental Engineering Aislinn Tierney, Civil and Environmental Engineering
1999 - 2001	John Gillilan, Civil and Environmental Engineering
1999	Andrew Tuel, Civil and Environmental Engineering Jeff Ross, Civil and Environmental Engineering Melanie Holman, Civil and Environmental Engineering Jennifer Gain, Civil and Environmental Engineering
1998	Jaimie Sayre, Civil and Environmental Engineering

EDITORIAL AND REVIEW EXPERIENCE

Editorial Board Membership

2006 - present Journal of Aquacultural Engineering, Elsevier Science, Ltd.

Manuscript Reviewer

Applied Clay Science

Aquaculture

Aquacultural Engineering

Colloids and Surfaces A: Physicochemical and Engineering Aspects

Environmental Engineering Science

Environmental Science and Pollution Research

Environmental Science and Technology

International Journal of Recirculating Aquaculture

Journal of the American Water Resource Association

Journal of Hydrology

Journal of Ecological Engineering

Journal of Environmental Engineering

Science of the Total Environment

Separation Science and Technology

Water Environment Research

Water Research

SERVICE

Professional Affiliations and Offices Held

Board of Professional Certification • Ecological Society of America

Senior Member • American Institute of Chemical Engineers

Member • AIChE Safety and Chemical Engineering Education Program

Member • AIChE Institute for Sustainability

Past President, President, First Vice President, Second Vice President • Aquacultural Engineering Society

Member, Board of Directors • Aquacultural Engineering Society

Member • Ecological Society of America

Volunteer • Engineers without Borders US and UK

Member • Society of Biological Engineers

Other Professional Service

2022 - present Member, Quad Cities Clean River Advisory Council, QC Community Foundation and the Walton Family Foundation.

Member, Conference Planning Committee, 16th Annual Upper Mississippi River Conference.

2022 Evaluator, Engineers without Borders UK, Engineering for the People Student Design Contest.

Member, Conference Planning Committee, 15th Annual Upper Mississippi River Conference, Moline, IL, October 21-22, 2022.

2021 Evaluator, Engineers without Borders UK, Engineering for the People Student Design Contest.

Member, Conference Planning Committee, 14th Annual Upper Mississippi River Conference, Moline, IL, October 5-7, 2021.

2020 Member, Conference Planning Committee, 13th Annual Upper Mississippi River Conference, Moline, IL, October (virtual) 2020.

Panelist, Aquaculture Special Research Program, US Department of Agriculture, National Institute for Food and Agriculture, Institute of Food Production and Sustainability.

2019 Member, Conference Planning Committee, 12th Annual Upper Mississippi River Conference, Moline, IL, October 23-24, 2019.

Organizer, Student Research Poster Session, 12th Annual Upper Mississippi River Conference, Moline, IL, October 23, 2019.

2018 Panelist, Aquaculture Research Program, US Department of Agriculture, National Institute for Food and Agriculture, Institute of Food Production and Sustainability.

Member, Conference Planning Committee, 11th Annual Upper Mississippi River Conference, Moline, IL, October 24-25, 2018.

- Organizer, Student Research Poster Session, 11th Annual Upper Mississippi River Conference, Moline, IL, October 24, 2018.
- 2017 Member, Conference Planning Committee, 10th Annual Upper Mississippi River Conference, Moline, IL, October 11-12, 2017.
- Organizer, Student Research Poster Session, 10th Annual Upper Mississippi River Conference, Moline, IL, October 11, 2017.
- 2016 Moderator, “Raising the Grade in the Upper Mississippi River, Ecosystem Health Working Group,” 9th Annual Upper Mississippi River Conference, Moline, IL, October 13-14.
- Member, Conference Planning Committee, 9th Annual Upper Mississippi River Conference, Moline, IL, October 13-14, 2016.
- Organizer, Student Research Poster Session, 9th Annual Upper Mississippi River Conference, Moline, IL, October 13, 2016.
- 2015 Chair, Youth Summit, 8th Annual Upper Mississippi River Conference, Davenport, IA, October 14-16, 2015.
- Member, Conference Planning Committee, 8th Annual Upper Mississippi River Conference, Davenport, IA, October 14-16, 2015.
- Organizer, Student Research Poster Session, 8th Annual Upper Mississippi River Conference, Davenport, IA, October 14, 2015.
- 2014 Session Organizer and Moderator, “Farmers Address Non-point Source ,” 7th Annual Upper Mississippi River Conference Joint Meeting with the Mississippi River Network, Moline, IL, October 14-17, 2014.
- Member, Conference Planning Committee, 7th Annual Upper Mississippi River Conference Joint Meeting with the Mississippi River Network, Moline, IL, October 14-17, 2014.
- Organizer, Student Research Poster Session, 7th Annual Upper Mississippi River Conference Joint Meeting with the Mississippi River Network, Moline, IL, October 15, 2014.
- 2013 Member, Conference Planning Committee, 6th Annual Upper Mississippi River Conference Joint Meeting with the Waterfront Center’s Thirty-first Urban Waterfronts Conference, Davenport, IA, September 25-28, 2013.
- Organizer, Student Research Poster Session, 6th Annual Upper Mississippi River Conference, Davenport, IA, September 26, 2013.
- 2012 Member, Conference Planning Committee, 5th Annual Upper Mississippi River Conference, Moline, IL, September 26-28, 2012.
- Organizer, Student Research Poster Session, 5th Annual Upper Mississippi River Conference, Moline, IL, September 26-28, 2012.
- 2011 Member, Conference Planning Committee, 4th Annual Upper Mississippi River Conference, Bettendorf, IA, September 21-23, 2011.
- Organizer, Student Research Poster Session, 4th Annual Upper Mississippi River Conference, Bettendorf, IA, September 21-23, 2011.

- Member, College of Reviewers, Canada Research Chairs (Chaires de recherche du Canada), Ottawa, Ontario, Canada, 2011.
- 2010 Member, Conference Planning Committee, 3rd Annual Upper Mississippi River Conference, Moline, IL, August 25-27, 2010.
- Organizer, Student Research Poster Session, 3rd Annual Upper Mississippi River Conference, Moline, IL, August 25-27, 2010.
- 2010, 14, 15 Panelist, Small Business Innovation Research Program, US Department of Agriculture, National Institute for Food and Agriculture, Institute of Bioenergy, Climate, and Environment
- 2009 Member, International Organization for Standardization (ISO) Technology Committee (TC) 234-Fisheries & Aquaculture, Society of Agricultural and Biological Engineers
- Member, Conference Planning Committee, 2nd Annual Upper Mississippi River Conference, Moline, IL, September 23-25, 2009.
- Organizer, Student Research Poster Session, 2nd Annual Upper Mississippi River Conference, Moline, IL, September 23-25, 2009.
- 2008 Member, College of Reviewers, Canada Research Chairs (Chaires de recherche du Canada), Ottawa, Ontario, Canada
- Session Organizer and Moderator, “Natural Resources and Environmental Planning,” Inaugural Upper Mississippi River Conference, Moline, IL, August 22, 2008.
- Member, Conference Planning Committee, Inaugural Upper Mississippi River Conference, Moline, IL, August 21-23, 2008.
- Organizer, Student Research Poster Session, Inaugural Upper Mississippi River Conference, Moline, IL, August 21-23, 2008.
- 2007 Chair, Awards Committee, Aquacultural Engineering Society
- Program Chair, “Special Session: Computer Tools for Design, Production Planning, and Operation of High-Intensity Flow-Through Production Systems” and “Bio Floc Technology,” World Aquaculture Society International Meeting, San Antonio, TX, February 27 - March 2, 2007.
- 2005 - 10 Chair, Research Reporting Standards Committee, Aquacultural Engineering Society
- 2004 - 10 Member, Board of Directors, Aquacultural Engineering Society
- Chair, Promotions & Meetings Committee, Aquacultural Engineering Society
- 2001 - 03 Member, Board of Directors, Water Board, Route 19 Water District, Marion County, WV
- 2000 - 03 Member, Technical Subgroup, Aquaculture Effluents Task Force, Federal Joint Subcommittee on Aquaculture (US EPA and USDA)
- 1999 Session Chair, “Membrane Processes II,” 31st Mid-Atlantic Industrial and Hazardous Waste Conference, Storrs, CT, June 20 - 23, 1999.

- 1998 Session Chair, “Hazardous Waste & Site Remediation,” American Power Conference, Chicago, IL, April 14 - 16, 1998.
- 1996 - 99 Member, Literature Review Committee (Physical/Chemical Processes and Metal Finishing), Water Environment Federation

University, College, & Department Service

Western Illinois University

- 2021 Member, Aquatic Ecologist Search Committee, Department of Biological Sciences
- 2019 - present WIU Quad Cities Leadership Council
- 2013 - present Graduate Program Coordinator
- 2013 - present University Chairs’ Council
- 2015 - 19 Coordinator, WIU Udall Fellowship Coordinator, Centennial Honors College
- 2010 - present WIU Quad Cities Riverfront Campus Master Planning Committee
- 2014 - 17 WIU Faculty Senate Council on Campus Planning and Usage
- 2008 - 10 North Central Association - Higher Learning Commission (HLC) Accreditation Self-Study Committee on Outreach and Public Service
- 2009 Chair, Search Committee for Interim Chair, Department of Biological Sciences
- 2008 - present Post Wildlife Sanctuary Advisory Board
- 2008 - present Advisory Board Member, Liberal Arts and Sciences Program
- 2008 - 09 Search Committee for College of Arts and Sciences (CAS) Associate Dean of Administration and Strategic Planning
- 2007 - 10 Chair, Environmental Science Ph.D. Program Development Committee
- 2007 - present Chair, Advisory Board, Institute for Environmental Studies
- 2007 - present College of Arts and Sciences Chairs’ Council

West Virginia University

- 2005 - 07 Member, WVU Research Cabinet, Office of the Vice President for Research and Economic Development

Co-Chair, Working Group on Mass Migration through Rural Areas - Infrastructure Resource Focus
- 2006 - 07 Member, Advisory Committee, WVU Center for Immunopathology and Microbial Pathogenesis, WVU Health Sciences Center

Member, Faculty Search Committee, WVU Center for Immunopathology and Microbial Pathogenesis, WVU Health Sciences Center

Member, Civil and Environmental Engineering (CEE) Chair Search Committee

Member, Promotion and Tenure Committee
- 2006 Member, College of Engineering and Mineral Resources (CEMR) Researcher of the Year Selection Committee

2004 - 07 Faculty Advisor, American Society of Civil Engineers Student Chapter
 Ex officio Member, Student Expectations & Performance Committee

2004 Chair, Promotion and Tenure Committee

2003 - 04 Chair, Environmental Engineering Faculty Search Committee

2002 - 03 Member, ABET Preparation Committee

2002 - 07 Member, Undergraduate Academic Affairs Committee

2001 - 07 Member, Graduate Admissions Committee
 Member, Undergraduate Recruiting Committee

2001 - 07 Faculty Advisor, CEMR Graduate Student Council

2001 - 02 Member, CEMR Safety Committee
 Member, Promotion and Tenure Committee
 Member, Undergraduate Assessment Committee
 Chair, Environmental Engineering Faculty Search Committee

2000 - 07 Radiation Safety Officer

2000 - 01 Member, Student Awards Committee

1999 - 2000 Member, Academic Computing Committee
 Member, Environmental and Geo-environmental Engineering Faculty Search
 Committees
 Member, Undergraduate Laboratory Committee

University of Wisconsin-Green Bay

1998 Chair, Course Development Committee, 362-305, Environmental Systems