NATALIE A KRUSE DANIELS

Environmental Studies Program
Voinovich School of Leadership and Public Service Ohio University
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EDUCATION

Ph.D., Civil Engineering and Geosciences, Newcastle University, United Kingdom, July 2007
B.S., magna cum laude, Civil Engineering, minor: Geological Sciences, Ohio University, Athens, Ohio, June 2004

PROFESSIONAL EMPLOYMENT

Director, Environmental Studies Program, Ohio University, 2018 – present
Professor, Environmental Studies, Ohio University, 2020 - present
Associate Professor, Environmental Studies, Ohio University, 2015 – present
Assistant Professor, Environmental Studies, Ohio University, 2009 – 2015
Research Associate, Sir Joseph Swan Institute of Energy Research, Newcastle University, United Kingdom 2007 - 2009

AWARDS AND HONORS

Ohio University Office of Sustainability, Faculty Sustainability Award, 2022
Ohio University Honors Tutorial College Distinguished Mentor, 2019
MAC Academic Leadership Development Program (ALDP) Fellow, 2019
Richard I. and Lela M. Barnhisel Researcher of the Year Award, American Society of Mining and Reclamation, 2019
Janet and George Voinovich Faculty and Staff Leadership Award, Ohio University, 2018
Charles and Claire Ping Recent Graduate Award, Ohio University, 2012
Ohio University Office of Nationally Competitive Awards Faculty Involvement Award, 2012
Best Paper Award, Mine Water and the Environment, 2009
British Marshall Scholarship, 2004 - 2007
Barry M. Goldwater Scholarship, 2003
Morris K. Udall Scholarship, 2003
Cruse and Virginia Patton Moss Manasseh Cutler Scholarship, 2001 – 2004
National Merit Scholar, 2001-2004

EXTERNALLY FUNDED GRANTS

Growing STEM Education in Appalachian Ohio, AEP Ohio Foundation, $100,000, (January 2024 – December 2025), J. Bowman (P.I.), **N. Kruse** (Key Personnel)
Ohio Nutrient Reduction Plan Update, Ohio Environmental Protection Agency, $200,000, (July 2023 – December 2024), J. Bowman (P.I.), **N. Kruse** (Co-P.I.), S. Davis (Co-P.I.)

Bloody Run Swamp Post-construction Study, Stream and Wetlands Foundation, 120,816, (October 2022 – August 2025), **N. Kruse** (P.I.), J. Bowman (Co-P.I.)

Building Resilience to Extreme Weather Events in Central Appalachia, NOAA, $99,938, (September 2022 – August 2023), **N. Kruse** (P.I.), E. Garner (Co-P.I.), L.A. Krometis (Co-P.I.)

Rush Creek Brownfields, USEPA, $39,677, (October 2021 – September 2024), J. Bowman (P.I), R.G. Riefler (Co-P.I.), **N. Kruse** (Co-I.)

Appalachian STEM Enrichment Academy, AEP Ohio Foundation, $100,000, (August 2021 – August 2023), J. Bowman (P.I.), **N. Kruse** (Co-P.I.), Kelly Johnson (Co-P.I.), Sarah Davis (Co-P.I.)

Bloody Run Swamp Baseline, Steam and Wetlands Foundation, $64,678, (January 2021 – June 2022), **N. Kruse** (P.I.), J. Bowman (Co-P.I.)

Assessment and Prioritization of Culverts for Enhanced Fish Passage, Ohio Department of Transportation, $59,921, (June 2021 – December 2021), **N. Kruse** (P.I.), B. Sperry (P.I.), J. Bowman (Co-P.I.), D. Che (Co-P.I.), N. Sullivan (Co-P.I.), A. Mackey (Co-P.I.)

Evaluation of the Palmiter Stream Restoration Method, Ohio Department of Transportation, $59,983, (December 2020 – June 2021), B. Sperry (P.I.), **N. Kruse** (Co-P.I.)

INFEWS/T2: Organic Waste Lifecycles at the interface of Food, Energy, Water Systems (OWL-FEWs), National Science Foundation, $2,000,000, (September 2019 – August 2023), D. Kauneckis (P.I.), S. Davis (Co-P.I.), **N. Kruse** (Co-P.I.), Toufiq Reza (Co-P.I.), Jay Wilhelm (Co-P.I.)

Robinson Run and Ryerson Fork Mitigation Assessment, Pennsylvania Department of Environmental Protection, $340,000, (January 2020 – June 2023), **N. Kruse** (P.I.), K. Johnson (Co-P.I.), Kim Miller (Co-P.I.), Morgan Vis (Co-P.I.), Jen Bowman (Co-P.I.), Nora Sullivan (Co-P.I.), Nicole Kirchner (Co-P.I.)

Engaging Students through a Green Roof Project, Ohio University Academic Innovation Accelerator, $320,000, (May 2019 – June 2020), K. Thompson (P.I.), **N. Kruse** (Co-P.I.), David Rosenthal (Co-P.I.), Julio Arauz (Co-P.I.), Amy Lynch (Co-P.I.)

Green Roof Educational Connections at Ohio University, Ohio University 1804 Fund, $43,272, K. Thompson (P.I.), **N. Kruse** (Co-P.I.), David Rosenthal (Co-P.I.), Julio Arauz (Co-P.I.), Amy Lynch (Co-P.I.)

Appalachian Ohio Drinking Water Platform, Appalachian New Economy Partnership, $100,000, (May 2019 – December 2019), J. Bowman (P.I.), **N. Kruse** (P.I.)

Civitan Park Forested Wetland, Ohio Environmental Protection Agency, $27,900, (June 2019 – June 2020), J. Bowman (P.I.), **N. Kruse** (Co-P.I.)

Wayne National Forest Assessment and Planning for Forest Plan Revision Process, Wayne National Forest, $84,985, (August 2018 – August 2023), **N. Kruse** (P.I.)

Appalachian Ohio Watershed Support 2018-2019, Ohio Department of Natural Resources, $119,000, (July 2018 – June 2019), J. Bowman (P.I.), A. Mackey (P.I.), **N. Kruse** (key personnel)

Bringing Transparency to Environmental Issues Surrounding Class II Injection Wells through Community Engagement, Year 2, Sugarbush Foundation, $36,000, (July 2017 – July 2018), **N. Kruse** (P.I.), J. Bowman, A. Chadwick; Partnership with Buckeye Environmental Network

AEP Environmental STEM Education, AEP Foundation, $50,000, (July 2017 – July 2018), J. Bowman, K. Johnson, **N. Kruse**, M. Vis, D. Lopez

Tools to predict the hydrological response and mine pool formation in underground mines, Office of Surface Mines, $196,520, (October 2016 – March 2019), **N. Kruse** (P.I.), D. Lopez (P.I.)

Condition evaluation of in-service chemically stabilized subgrades in high sulfate environments, Ohio Department of Transportation, (October 2016 – December 2017), **N. Kruse** (key personnel)

Bringing Transparency to Environmental Issues Surrounding Class II Injection Wells through Community Engagement, Year 1 Sugarbush Foundation, $36,000, (July 2016 – July 2017), **N. Kruse** (P.I.), J. Bowman, A. Chadwick; Partnership with Buckeye Forest Council

Partnership for Digitally Connected Environmental Monitoring, Ohio University Innovation Strategy, $20,000, (January 2016 – January 2017), **N. Kruse** (P.I.) (with a large interdisciplinary team)

Athens County Baseline Groundwater Study, Athens County Commissioners, $15,637, (June 2015 – April 2016), J. Bowman (Co-P.I.), **N. Kruse** (Co-P.I.)

Baseline Environmental Data Collection at Ohio University Eastern Campus and Dysart Woods in Belmont County, Ohio, Ohio University Board of Trustees, $72,950 (October 2014 – September 2015), J. Bowman (Co-P.I.), **N. Kruse** (Co-P.I.)

Appalachian Ohio Clean Watershed Initiative, Ohio Environmental Protection Agency, $250,000, (April 2015 – March 2017), J. Bowman (P.I.), **N. Kruse** (Key Personnel)

Environmental Monitoring Technology: From Stream to Cloud, Ohio University 1804 Fund, $49,327, (July 2014 – June 2016), **N. Kruse** (P.I.), H. Kruse (Co-P.I.), P. Campbell (Co-P.I.), J. Arauz (Co-P.I.), L. Villamil (Co.-P.I.).

AEP Watershed Research and Education Program, AEP Foundation, $150,000, (July 2014 – June 2017), J. Bowman (Co-P.I.), **N. Kruse** (Co-P.I.), K. Johnson (Co-P.I.).

Cost-Effective Treatment of Flowback and Produced Waters via an Integrated Precipitative Supercritical Process, Research Partnership to Secure Energy for America, $1,936,630, (July 2013 – June 2015), J. Trembly (P.I.), **N. Kruse** (Co-P.I).

Ohio Department of Natural Resources Technical Support Ohio Department of Natural Resources Division of Mineral Resources Management, $55,308 (July 2013 – June 2015), J. Bowman (P.I.), K. Johnson (Co-P.I.), **N. Kruse** (Co-P.I.).

Wetland and Headwaters Mitigation Conceptual Design, Habitat and Land Use Mapping U.S. Department of Energy, $165,000 (4/1/2013 – 6/30/2014), **N. Kruse** (Co-P.I.), J. Bowman (Co-P.I.), K. Johnson (Co-P.I.), R. Wiley (Co-P.I.)

Background groundwater quality characterization before hydraulic fracturing for shale gas in Belmont and Athens Counties, Ohio, Sugarbush Foundation, $10,000 (January 2012 – December 2012), **N. Kruse** (P.I.), J. Bowman (P.I.).

Appalachian Watershed Research Graduate Assistant Program, American Electric Power Foundation, $100,000 (September 2012 – August 2016), **N. Kruse** (Co-P.I.), J. Bowman (Co-P.I.), K. Johnson (Co-P.I.).

Site Characterization, Habitat and Land Use Mapping and Data/Wildlife Management Plan, U.S. Department of Energy, $239,307 (1/31/2011 – 12/31/2012), **N. Kruse** (Co-P.I.), J. Bowman (Co-P.I.), R. Wiley (Co-P.I.)

Expedited Field Survey & Sampling Techniques for Polychlorinated Biphenyl (PCB) Congeners and Dioxins: Graphical Information System (GIS) Mapping of PCB Congeners and Dioxins in Sediments and Soils: Preliminary Assessment of Sediments on the PORTS Site, U.S. Department of Energy, $284,345 (1/31/2011 – 12/31/2012) J. Bowman (Co-P.I.), **N. Kruse** (Co-P.I.), G. Jackson (Co-P.I.)

Groundwater: Site-Wide Groundwater Model Review and Verification and Regulatory Requirement Review, U.S. Department of Energy, $158,438 (1/31/2011 – 12/31/2012), **N. Kruse** (Co-P.I.), J. Bowman (Co-P.I.)

Hydraulic and Chemical Performance of Steel Slag Leach Beds in Ohio, Ohio University Research Committee, $7,915.48 (1/1/2010 – 12/31/2010), **N. Kruse** (P.I.)

MRI: Acquisition of Transmission Electron Microscope for Advanced Materials Relating to Energy Storage, Alternative Energy, Remediation, and Superconductors National Science Foundation $1,169,325, **N. Kruse (**Key Personnel).

PUBLICATIONS

Peer-Reviewed Journal Articles:

J.L. Kane, R.G. Shartiger, N.K. Daniels, Z.B. Freedman, L.M. McDonald, J.G. Skousen, E.M. Morrissey, 2023. Bioenergy crop *Miscanthus x giganteus* acts as an ecosystem engineer to increase bacterial diversity and soil organic matter on marginal land. Soil Biology and Biochemistry, 186: 109-178.

N.A. Kruse, C. Hawkins, D. Lopez, K. Johnson, 2019. Recovery of and Acid Mine Drainage-Impacted Stream Treated by Steel Slag Leach Beds. Mine Water and the Environment, 38(4): 718-734.

N.A. Kruse, R. Reber, N. Schlater, R. Spencer, M. Steinmaus, D. Imhoff, 2019. The interaction of acid mine drainage and untreated sewage. Environmental Earth Sciences, 78:659.

K. Johnson, E. Rankin, J. Bowman, J. Deeds, N. Kruse, 2018. Predicting Mayfly Recovery in Acid Mine Impaired Streams using Logistic Regression Models of In-Stream Habitat and Water Chemistry. Environmental Monitoring and Assessment, 190(4): 1-16.

I. Blanco, D.J. Sapsford, D. Trumm, J. Pope, N. Kruse, Y-W. Cheong, H. McLaughlan, E. Sinclair, P. Weber, W. Olds, 2018. International trials of vertical flow reactors for coal mine water treatment. Mine Water and the Environment, 37(1): 4-17.

W. Fan, B. Liberati, M. Novak, N. Kruse, D. Young, J. Trembly, 2016. Radium-226 Removal from Simulated Produced Water Using Natural Zeolite and Ion-Exchange Resin. Industrial & Engineering Chemistry Research, DOI: 10.1021/acs.iecr.6b03230.

M. Zhang, N.A. Kruse, J.R. Bowman, G.P. Jackson, 2016. Field analysis of polychlorinated biphenyls (PCBs) in Soil Using Solid-Phase Microextraction (SPME) and a Portable Gas Chromatography-Mass Spectrometry System. Applied spectroscopy, 70(5): 785-793.

S.C. Davis, D. Kauneckis, N.A. Kruse, K.E. Miller, M. Zimmer, G.D. Dabelko, 2016. Closing the loop: integrative systems management of waste in food, energy, and water systems. Journal of Environmental Studies and Sciences, 6(1):11-24.

M. Morrone, A.E. Chadwick, N. Kruse, 2015. A community divided: Hydraulic fracturing in rural Appalachia. Journal of Appalachian Studies, 21(2):207-228.

N.A. Kruse, W.H.J. Strosnider, 2015. Carbon dioxide dynamics and sequestration in mine water and waste. Mine Water and the Environment, 34(1): 3-9.

M. Morrone, N.A. Kruse, A.E. Chadwick, 2015. Environmental and Health Disparities in Appalachian Ohio: Perceptions and Realities. Journal of Health Disparities Research and Practice, 7(5), 67-81.

T.R. Macy, N.A. Kruse, B.J. Stuart, 2015. Carbon footprint analysis of source water for hydraulic fracturing: A case study of mine water versus freshwater. Mine Water and the Environment, 34(1):20-30.

N.A. Kruse, J. Bowman, D. Lopez, E. Migliore, G. Jackson, M. Zhang, 2014. Characterization of polychlorinated biphenyls, polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans in soils and sediments at the Portsmouth Gaseous Diffusion Plant, Ohio. Chemosphere, 114:93-100.

N. Kruse, MW Stoertz, DH Green, JR Bowman, DL Lopez, 2014. Acidity Loading Behavior in Coal-mined Watersheds. Mine Water and the Environment, 33(2):177-186.

B. Underwood, N.A. Kruse, J.R. Bowman, 2014. Long-term improvement in an acid mine drainage impacted watershed. Environmental Monitoring and Assessment, DOI 10.1007/s100661-014-3946-8.

M. Zhang, G. Jackson, N. Kruse, J. Bowman, P. Harrington, 2014. Determination of Aroclor 1260 in Soil Samples by GC/MS with Solid Phase Microextraction. Journal of Separation Science, DOI: 10.1002/jssc.201400102.

J.R. Pool, N.A. Kruse, M.L. Vis, 2013. Assessment of mine drainage remediated streams using diatom assemblages and biofilm enzyme activities. Hydrobiologia, DOI 10.1007/s10750-012-1440-2.

N. Kruse, L. DeRose, R. Korenowsky, J. Bowman, D. Lopez, K. Johnson, E. Rankin, 2013. The role of remediation, natural alkalinity sources and physical stream parameters in stream recovery. Journal of Environmental Management, 128:1000- 1011.

N. Kruse, K. Brewster, J. Bowman, RG Riefler, 2012. Alkalinity production as an indicator of failure in steel slag leach beds treating acid mine drainage. Environmental Earth Sciences 67(5): 1389-1395.

N. Kruse, J. Bowman, A. Mackey, B. McCament, K. Johnson, 2012. The Lasting Impacts of Offline Periods in Lime Dosed Streams: A Case Study in Raccoon Creek, Ohio. Mine Water and the Environment, 31(4): 266-272.

N. Kruse, K. Brewster, B. Blair, K. Shaw, 2012. Contribution of Aluminum from Abandoned Surface Mine Pits in Raccoon Creek, Ohio. Environmental Earth Sciences DOI: 10.1007/s12665-012-1839-0.

N. Kruse, S. Ferrante, B. Blair, A. Mackey, 2012. Geochemistry downstream from steel slag leach beds treating acid mine drainage from abandoned surface coal mines. Journal of Mining World Express, 1(1): 8-12.

N. Kruse, E. Gozzard and A.P. Jarvis, 2009. Determination of Hydraulic Residence Times in Several UK Mine Water Treatment Systems and their Relationship to Iron Removal. Mine Water and the Environment, 28 (2), 115–123. *Best Paper Award for 2009.

N.A. Kruse, P.L. Younger, 2009. Development of kinetically-based models for simulation of hydrogeochemical processes coupled to channel flow processes in abandoned underground mines. Applied Geochemistry, 24, 1301–1311.

N.A. Kruse, P.L. Younger, 2009. Sinks of iron and manganese in underground coal mine workings. Environmental Geology, 57 (8), 1893–1899.

Book Chapters:

N. Kruse Daniels, J. Labar, L. McDonald, 2021. Acid Mine Drainage: Sources, Legacy, and Treatment. Eds: C. Zipper, J. Skousen, Ecology and Management of Appalachian Mined Landscapes. Springer.

N. Kruse, J. Bowman, K. Johnson, A. Mackey, N. Sullivan, D. Twilley, D. Lopez, 2021. Recovering Appalachian Streams. Eds: M. Morrone, T. Arnold, From Surviving to Thriving in Appalachia: Positive Narratives about Community Engagement.

N. Kruse, J. Bowman, K. Johnson, A. Mackey, N. Sullivan, D. Lopez, 2021. The Legacy of Appalachian Coal Mining. Eds: M. Morrone, T. Arnold, From Surviving to Thriving in Appalachia: Positive Narratives about Community Engagement.

Trade Publications:

N. Kruse-Daniels, 2015. Stream recovery of a heavily coal mined watershed in Ohio. Reclamation Matters, Issue 1.

N. Kruse, P.L. Younger, 2007. The Rise and Fall of the Coal Industry in the United Kingdom. Reclamation Matters, Issue 2.

Conference Papers and Abstracts:

E. Pokuah, N. Kruse Daniels, K. Ositimehin, Z. Rundell, 2023. Combined stream and wetland restoration on agricultural ground: Bloody Run, Ohio, American Society of Reclamation Sciences, Boise, ID, June 2023.

S. Teas, Z. Rundell, K. Ositimehin, J. Bowman, N. Kruse Daniels, 2023. Early water quality changes from stream and wetland restoration in former agriculture land, American Society of Reclamation Sciences, Boise, ID, June 2023.

A. Mackey, N. Sullivan, J. Bowman, N. Kruse Daniels, 2023. Beyond reclamation and remediation, next steps in a recovered watershed, American Society of Reclamation Sciences, Boise, ID, June 2023.

N. Kruse Daniels, J. Facun, S. Teas, J. Bowman, 2023. Making the case for urban stream restoration and urban stream channel management, American Society of Reclamation Sciences, Boise, ID, June 2023.

N. Kruse Daniels, N. Sullivan, J. Bowman, T. Burkett, A. Gurrola, R. Pazol, K. Love, N. Mazzone, M. Vis, K. Johnson, E. Zimmerman, 2023. Floodplain reconnection stream restoration increases water and nutrient retention, American Society of Reclamation Sciences, Boise, ID, June 2023.

J. Bowman, N. Kirchner, J. Schaudt, N. Kruse Daniels, S. Howe, 2023. Appalachian STEM Enrichment Academy Online and In Person K-12 Curriculum, American Society of Reclamation Sciences, Boise, ID, June 2023.

K. Ositimehin, N.A. Kruse Daniels, S. Davis, K. Johnson, 2022. Hydrology and agriculture sediment pollution in the Bloody Run Swamp of Ohio, American Geophysical Union, Chicago, December 2022.

N. Kruse Daniels, B. Sapkota, 2022. Assessment and Prioritization of Culverts for Enhanced Fish Passage, Ohio Transportation Engineering Conference, Columbus, OH, October 2022.

J. Viti, N. Kruse Daniels, B. Sperry, J. Bowman, N. Sullivan, L. Myers, 2022. The Use of the Palmiter Method of Stream Restoration, Adapted to Infrastructure, and its Effects on Streams, American Society of Reclamation Sciences, Duluth, MN, June 2022.

N. Kruse Daniels, J. Bowman, N. Sullivan, K. Johnson, A. Gurrola, R. Pazol, A. Widener, J. South, 2022. Analyzing Floodplain Reconnection as a Restoration Method, American Society of Reclamation Sciences, Duluth, MN, June 2022.

N. Kruse Daniels, 2022. Teaching Reclamation through Applied Curricular and Co-Curricular Experiences, American Society of Reclamation Sciences, Duluth, MN, June 2022.

D.L. Kauneckis, S.C. Davis, N. Kruse, T. Reza, 2021. Organic Waste Sciences as Convergent Research: Connecting Food, Energy, and Water-System Sciences. American Geophysical Union, December 2021.

N. Kruse Daniels, J. Brancho, M.L. Vis, 2021. The effects of storm events on sediment, nutrient, and biofilm dynamics in a stream recovering from acid mine drainage. International Mine Water Association Congress, online, July 2021.

N. Kruse Daniels, J. Bowman, N. Sullivan, K. Johnson, A. Gurrola, J. Pazol, A. Widener, J. South, 2021. Ohio Transportation Engineering Conference, 2021.

J. Brancho, N.A. Kruse Daniels, M.L. Vis, 2019. Effects of Precipitation Patterns on Sediment, Nutrient, and Biofilm Dynamics in an Acid Mine Drainage Stream. American Society of Mining and Reclamation, Big Sky, Montana, June 2019.

N.A. Kruse Daniels, Z. Matthews, 2019. Streamflow variability and treatment system effectiveness in a changing climate. American Society of Mining and Reclamation, Big Sky, Montana, June 2019.

R. Steinberg, Z. Matthews, N.A. Kruse Daniels, D.L. Lopez, J.R. Bowman, N. Sullivan, 2019. Development of a GIS Tool for Estimating Post-Mining Water Levels in Underground Coal Mines in Ohio. American Society of Mining and Reclamation, Big Sky, Montana, June 2019.

L. Shafer, F. Twumasi, R. Steinberg, Z. Matthews, N. Sullivan, R. Delach, J. Bowman, N. Kruse, D. Lopez, 2018. Statistical Modeling of Mine Pool Formation in Underground Coal Mines of Ohio. National Association of Abandoned Mine Land Programs, Williamsburg, VA, September 2018.

N. Kruse, N. Sullivan, 2018. Mapping the risk of acid mine drainage impairment in the coal-bearing region of Ohio. National Association of Abandoned Mine Land Programs, Williamsburg, VA, September 2018.

R. Steinberg, N. Sullivan, L. Schafer, Z. Matthews, F. Twumasi, R. Delach, J. Bowman, N. Kruse, D. Lopez, 2018. Development of a tool to estimate post-mining water level in Ohio. National Association of Abandoned Mine Land Programs, Williamsburg, VA, September 2018.

N.A. Kruse, Z. Martin, 2018. Seasonal Trends in Water Quality in a Treated Acid Mine Drainage Impaired Stream. American Society of Mining and Reclamation, St. Louis, MO, June 2018.

R. Steinberg, Z. Matthews, D.L. Lopez, N.A. Kruse, J. Bowman, F. Twumasi, L. Schafer, N. Sullivan, R. Delach, 2018. Data Management for OSMRE Mine Pool Project at Ohio University: Lessons Learned. American Society of Mining and Reclamation, St. Louis, MO, June 2018.

L. Schafer, D.L. Lopez, N.A. Kruse, J. Bowman, F. Twumasi, R. Delach, N. Sullivan, R. Steinberg, Z. Matthews, 2018. Statistical Modeling of Mine Pool Formation in Underground Coal Mines of Ohio. American Society of Mining and Reclamation, St. Louis, MO, June 2018.

N.A. Kruse, 2018. Relationship between water quality and stream recovery. West Virginia Acid Mine Drainage Task Force, Morgantown, WV, March 2018.

N.A. Kruse, S. Damdinbal, D.L. Lopez, 2017. Relationship between aqueous and sediment chemistry and biological recovery across a gradient of acid mine drainage impairment. American Society of Mining and Reclamation, Morgantown, WV, April 2017.

Z.I. Martin, N.A. Kruse, 2017. Understanding storm response of AMD impacted streams. American Society of Mining and Reclamation, Morgantown, WV, April 2017.

N.A. Kruse, G.G. Ogallo, H. Kruse, 2017. Development of a low-cost remote water quality monitoring system in acid mine drainage impaired watersheds. American Society of Mining and Reclamation, Morgantown, WV, April 2017.

D.A.L. Lopez, N. Kruse, J. Bowman, 2016. The role of chemical and physical watershed processes in the remediation of AMD impacted streams. American Geophysical Union Fall Meeting, San Francisco, December 2016.

N. Kruse, N. Sullivan, J. Bowman, 2016. Evaluating stream capturing subsidence closure for acid and metal loading reductions. International Mine Water Association Symposium, Leipzig, Germany, July 2016.

N. Kruse, A. Mackey, 2016. The effect of an alkaline pulse in an acid stressed watershed. International Mine Water Association Symposium, Leipzig, Germany, July 2016.

N. Sullivan, N. Kruse, S. Porter, 2015. Water Quality Monitoring-There's an App for That. Pennsylvania Abandoned Mine Lands Conference, State College, PA, June 2015.

H. Bedu-Mensah, N. Kruse, D. Lopez, K. Johnson, 2015. Influence of water chemistry and sediment transport on biological recovery downstream of lime dosers. National Meeting of American Society of Mining and Reclamation, Lexington, KY, June 2015.

K. Johnson, E. Rankin, J. Bowman, J. Deeds, N. Kruse, 2014. Using Logistic Regression to Predict Recovery of Mayfly Population in Acid Mine Drainage Impaired Streams based on Current and Future In-stream Habitat and Water Chemistry. 2014 Meeting of National Association of Abandoned Mine Land Programs, Columbus, OH, September 2014.

H. Bedu-Mensah, N. Kruse, D. Lopez, K. Johnson, 2014. Influence of water chemistry and sediment transport on biological recovery downstream of lime dosers. 2014 Meeting of National Association of Abandoned Mine Land Programs, Columbus, OH, September 2014.

C. Hawkins, N. Kruse, D. Lopez, K. Johnson, 2014. Physical and chemical parameters influencing biological recovery downstream of steel slag leach beds in the East Branch of Raccoon Creek. 2014 Meeting of National Association of Abandoned Mine Land Programs, Columbus, OH, September 2014.

N. Kruse, M. Stoertz, J. Bowman, D. Green, D. Lopez, 2014. The Stoertz Water Quality Evaluation Method for Evaluating Acid Load Reduction. 2014 Meeting of National Association of Abandoned Mine Land Programs, Columbus, OH, September 2014.

S. Landers, S. Maj, A. Mackey, N. Kruse, 2014. Steel slag leach bed longevity analysis. 2014 Meeting of National Association of Abandoned Mine Land Programs, Columbus, OH, September 2014.

T. Macy, N. Kruse, S. Byrd, 2014. Comparison of Long-term Recovery Between Managed and Unmanaged Reclaimed Mine Lands. 2014 Meeting of National Association of Abandoned Mine Land Programs, Columbus, OH, September 2014.

G. Ogallo, N. Kruse, H. Kruse, 2014. Environmental Monitoring Technology: From Stream to Cloud. 2014 Meeting of National Association of Abandoned Mine Land Programs, Columbus, OH, September 2014.

N. Sullivan, N. Kruse, S. Porter, 2014. Water Quality Monitoring-There's an App for That. 2014 Meeting of National Association of Abandoned Mine Land Programs, Columbus, OH, September 2014.

S. Maj, D. Lopez, K. Schleich, N. Kruse, J. Bowman, 2014. Redox transformation of iron in an acid mine drainage remediated stream. National Association of Abandoned Mine Land Programs, Columbus, OH September 2014.

H. Bedu-Mensah, N. Kruse, 2014. Influence of water chemistry and sediment transport on biological recovery downstream of lime dosers. National Meeting of the American Society of Mining and Reclamation, Oklahoma City, OK, June 2014.

C. Hawkins, N. Kruse, A. Mackey, J. Bowman, 2014. The recovery of an AMD-impacted stream treated by steel slag leach beds: A case study in the East Branch of Raccoon Creek, Ohio. National Meeting of the American Society of Mining and Reclamation, Oklahoma City, OK, June 2014.

W. Hellyer, N. Kruse, K. Johnson, 2014. Assessment of benthic macroinvertebrate community impairment from residual aluminum contamination in the confluence of Middleton Run, Ohio, USA and the impacts of ingested aluminum of crayfish growth. National Meeting of the American Society of Mining and Reclamation, Oklahoma City, OK, June 2014.

S. Landers, S. Maj, A. Mackey, N. Kruse, 2014. Steel slag leach bed longevity analysis. National Meeting of the American Society of Mining and Reclamation, Oklahoma City, OK, June 2014.

T. Macy, N. Kruse, 2014. Comparison of long-term recovery between managed and unmanaged reclaimed min lands. National Meeting of the American Society of Mining and Reclamation, Oklahoma City, OK, June 2014.

N.A. Kruse, 2014. Environmental and Social Legacy of Resource Extraction in Appalachian Ohio. Policy History Conference, Columbus, Ohio, June 2014.

K.S. Johnson, M. Thrush, J.R. Bowman, N. Kruse, 2014. Stability and persistence of macroinvertebrate communities in relation to yearly variation in precipitation, flow and acid mine drainage intensity. Joint Aquatic Sciences Meeting, Portland, OR, May 2014.

K.L. Schleich, D.A. Lopez, J.R. Bowman, N.A. Kruse, A.L. Mackey, D. VanDervort, R. Korenowsky, 2013. Sources of alkalinity and acidity along an acid mine drainage remediated stream in SE Ohio: Hewett Fork. American Geophysical Union, San Francisco, CA, December 2013.

J.R. Bowman, K. Johnson, B. McCament, J. Calhoun, A. Mackey, N. Schlater, N. Kruse, 2013. Collaborative biomonitoring at the state and local level to track acid mine drainage remediation achievements in Southeast Ohio, yields success. 42nd Water Management Association of Ohio Conference, Columbus, OH, November 2013.

N. A. Kruse Daniels, K.S. Johnson, J. Bowman, 2013. Habitat and watershed characteristics that limit stream recovery after acid mine drainage treatment. In: Peer Reviewed Proceedings of the International Mine Water Association Symposia, Golden, CO, August 2013.

N.A. Kruse Daniels, J.R. Bowman, A.L. Mackey, D. Lopez, 2013. A comparative study of lime doser treatment. In: Peer Reviewed Proceedings of the International Mine Water Association Symposia, Golden, CO, August 2013.

N.A. Kruse Daniels, L. Breckenridge, C.P. Kruse, 2013. A simple modelling approach for an acid generating, backfilled mine pit. In: Peer Reviewed Proceedings of the International Mine Water Association Symposium, Golden, CO, August 2013.

"Policy and Environmental Impacts Panel" 2nd Annual Appalachian State of the Region Roundtable, Athens, Ohio, June 2013.

N.A. Kruse, D. Lopez, J.R. Bowman, 2013. Biological impacts of spatial and temporal water quality variation downstream of an alkaline addition treatment system. Society of Freshwater Science, Jacksonville, FL, May 2013.

J.L. Deeds, K.S. Johnson, N. Kruse, J. Bowman, 2013. Evaluating recovery potential of mayflies in acidified streams based on habitat and water chemistry. Society of Freshwater Science, Jacksonville, FL, May 2013.

N.A. Kruse, J. Bowman, A. Mackey, B. McCament, K. Johnson, 2013. Lasting Impacts of Off-line Periods in Lime-Dosed Streams – Ohio. West Virginia Acid Mine Drainage Task Force, Morgantown, WV, March 2013.

"Women in Watersheds Panel" Women In Appalachia: Sisters in Science Conference, Zanesville, Ohio, October 2012

"Appalachian Coal Mining: The Past We Inherit, The Future We Build" Women In Appalachia: Sisters in Science Conference, Zanesville, Ohio, October 2012

"Public Health Impacts of Hydraulic Fracturing" Ohio Society of Public Health Educators Rural Health/Health Educators Institute, Deer Creek State Park, Ohio, October 2012

"Baseline Data for Managing Change – Environmental Data" Appalachian Ohio State of the Region Conference, Understanding the Boom-Bust Cycle for Greater Sustainability, Athens, Ohio, May 2012

N. Kruse, J. Bowman, A. Mackey, B. McCament, K. Johnson, 2011. When dosers turn off: A case study in Raccoon Creek, Ohio. In Rüde, Freund and Wolkersdorfer (eds.). Proceedings of International Mine Water Association Congress, Aachen, Germany, September 5-9, 2011.

N. Kruse, K. Brewster, B. Blair, K. Shaw, 2011. Contribution of Aluminum from Abandoned Surface Mine Pits in Raccoon Creek, Ohio. In Rüde, Freund and Wolkersdorfer (eds.). Proceedings of International Mine Water Association Congress, Aachen, Germany, September 5-9, 2011.

N. Kruse, 2011. International Mining and Mine Water. Eastern Coal Regional Roundtable, Pipestem, WV, March 2011

N. Kruse, R. Kerber, K. Brewster, L. McCosker, 2010. "A road to progress? The impacts of cutting a new highway through the heavily mined hills of Southeast Ohio" In: Peer Reviewed Proceedings of the 2010 International Mine Water Symposium, Sydney, Nova Scotia, Canada, September 2010.

N.A. Kruse, K. Brewster, R.G. Riefler, 2010. "A new look at designing steel slag leach beds." In: Peer Reviewed Proceedings of the 2010 International Mine Water Symposium, Sydney, Nova Scotia, Canada, September 2010.

N. Kruse, P.L. Younger, 2008. "Using a novel reactive transport model to determine flow distribution between major roadways in a partially flooded abandoned underground metal mine." In: Peer Reviewed Proceedings of the 10th International Mine Water Association Congress, Karlovy Vary, Czech Republic, June 2008.

N.A. Kruse, V. Kutija, P.L. Younger. 2006. "Computational methods for acid mine drainage management: simulation of hydrogeochemical processes in abandoned underground coal mines." In: Peer Reviewed Proceedings of the 7th International Congress on Acid Rock Drainage. St. Louis, Missouri, USA. March, 2006.

N.A. Kruse, P.L. Younger. 2005. "Computational methods for acid mine drainage management: decision-making for post-closure decision making." In: Peer Reviewed Proceedings of the 9th International Mine Water Association Congress. Oviedo, Spain. September, 2005.

Professional Reports:

M. Trainer, J. Bowman, E. Erfanian, E. Beard, N. Kruse, 2022. Appalachia Ohio Drinking Water Accessibility Initiative Summary Report and Maps, https://www.mayorspartnership.org/_files/ugd/5359c6_9d8e93df582e456ea5201ba3823292be.pdf.

N. Kruse Daniels, J. Bowman, N. Sullivan, A. Mackey, D. Che, B. Sapkota, 2022. Division of Planning Research On-Call Task #8 – Assessment and Prioritization of Culverts for Enhanced Fish Passage. Prepared for The Ohio Department of Transportation Office of Statewide Planning and Research. https://www.dot.state.oh.us/Divisions/Planning/SPR/Research/reportsandplans/Reports/Final%20Reports/136125%20Task%208%20Final%20Report%201.14.22.pdf

B. Sperry, N. Kruse Daniels, J. Bowman, N. Sullivan, J. Viti, E. Myers, K. Cubick, M. Fedosick, 2021. Division of Planning Research on Call Task #7 – Evaluation of the Palmiter Method for Erosion Control and Stream Management. Prepared for The Ohio Department of Transportation Office of Statewide Planning and Research. https://www.dot.state.oh.us/Divisions/Planning/SPR/Research/reportsandplans/Reports/Final%20Reports/136125%20T7%20Final%20Report.pdf

N. Kruse, D. Lopez, J. Bowman, N. Sullivan, R. Steinberg, L. Schafer, F. Twumasi, 2019. Final Report: Tools to predict the hydrological response and mine pool formation in underground mines. Report to Office of Surface Mining Reclamation and Enforcement.

K. Johnson, D. D'Amore, N. Sullivan, N. Kruse, 2019. Aquatic Ecosystem Assessment for the Wayne National Forest. Report to the National Forest Service

R. Steinberg, N. Sullivan, N. Kruse, 2019. User's Guide for Model to Predict Post-Mining Water Levels. Public User's Guide, funded by Office of Surface Mining Reclamation and Enforcement

J. Bowman, N. Kruse, S. Porter, 2016. Regional Groundwater Quality Report for Athens County, Ohio. Report to Athens County Commissioners

J. Bowman, N. Kruse, N. Sullivan, 2016. Chapter 1: Regional Baseline Groundwater Quality Report; Baseline Environmental Data Collection at Ohio University Eastern Campus and Dysart Woods in Belmont County, Ohio. Report to the Ohio University Board of Trustees

J. Bowman, K. Giordano, N. Kruse Daniels, B. Underwood, 2015. Quality Assurance Quality Control (QAQC Plan for Surface Water Quality Data Collection and Analysis. Ohio Department of Natural Resources – Division of Mineral Resources Management AMD Program

J. Bowman, K. Johnson, G. Conley, R. Wiley, N. Kruse, S. Porter, 2014. Feasibility Study of a Mitigation Bank for Both Primary Headwater Streams and Wetlands at the Portsmouth Gaseous Diffusion Plant in Pike County, Ohio. Final Report. US Department of Energy.

J. Bowman, B. Underwood, N. Kruse, 2013. Little Raccoon Creek Gage Station RM 12.7 Data Report 1999-2013. Ohio Department of Natural Resources.

N. Kruse, D. Lopez, A. Cranford, J. Bowman, B. Underwood, S. Porter, 2013. Site-wide Groundwater Model Application for the United States Department of Energy (DOE) Portsmouth Gaseous Diffusion Plant (PORTS), Piketon, Ohio. Final Report. US Department of Energy.

N. Kruse, D. Lopez, J. Bowman, A. Cranford, B. Eichenberg, G. Conley, 2013. Site-wide Groundwater Model Review for the United States Department of Energy (DOE) Portsmouth Gaseous Diffusion Plant (PORTS), Piketon, Ohio. Final Report. US Department of Energy.

J. Bowman, N. Kruse, E. Migliore, R. Gilliom, 2013. Regional Baseline Groundwater Quality Report for Athens, Belmont and Surrounding Counties.

R. Wiley, G. Conley, S. Porter, D. Simon, N. Kruse, B. Eichenberg, J. Bowman, 2012. Habitat Mapping of the Land and Vicinity of the United States Department of Energy (DOE) Portsmouth Gaseous Diffusion Plant (PORTS), Piketon, Ohio. Final Report. US Department of Energy.

G.P. Jackson, M. Zhang, J. Bowman, N. Kruse, D. Lopez, 2012. Expedited Field Survey & Sampling Techniques for Polychlorinated Biphenyl (PCB) Congeners and Dioxins. Final Procedures Manual. US Department of Energy.

J. Bowman, D. Lopez, N. Kruse, E. Migliore, 2012. Preliminary Assessment of Polychlorinated Biphenyl (PCBs) Congeners, Aroclors, Dioxins and Furans in the Sediment and Soil at the United States Department of Energy (DOE) Portsmouth Gaseous Diffusion Plant (PORTS), Piketon, Ohio. Final Report. US Department of Energy.

N. Kruse, J. Bowman, D. Lopez, 2012. A Review of Groundwater Regulations Applied Across Facilities in Ohio. Final Report for Groundwater: Site-Wide Groundwater Model Review and Verification and Regulatory Requirement Review. US Department of Energy.

J. Bowman, N. Kruse, D. Simon, 2010. Environmental Questionnaire for ComNet Broadband Project. Final Report for Tom Reid Consulting.

J. Bowman, N. Kruse, D. Simon, 2009. Mapping for Environmental Questionnaire. Final Report for Tom Reid Consulting.

TEACHING

Classroom Courses:

ES 6850 Capstone: Resilient Communities and Infrastructure, Fall 2023
ES 4250/5250 Watershed Management, Fall 2023
ES 6580 Environmental Studies Colloquium, Fall 2023
ES 6850 Capstone: Resilient Communities and Infrastructure, Summer 2023
ES 4720/5720 Energy Systems and Policy, Spring 2023
ES 6840 Environmental Leadership, Spring 2023
ES 6850 Capstone: Resilient Communities and Infrastructure, Spring 2023
ES 4300/5300 Field Methods in Environmental Studies, Fall 2022
ES 4250/5250 Watershed Management, Fall 2021
ES 6580 Environmental Studies Colloquium, Fall 2021
ES 4720/5720 Energy Systems and Policy, Spring 2021
ES 4300/5300 Field Methods in Environmental Studies, Fall 2020
ES 4301/5301 Global Water Resources, Spring 2020
ES 4250/5250 Watershed Management, Fall 2019
ES 6580 Environmental Studies Colloquium, Fall 2019
ES 6930 Independent Study, Global Water Resources, Spring 2019
ES 4300/5300 Field Methods in Environmental Studies, Fall 2018
ES 4250/5250 Watershed Management, Fall 2017
ES 4250/5250 Watershed Management, Spring 2017
ES 4300/5300 Field Methods in Environmental Studies, Fall 2016
ES 5301 Global Water Resources, Spring 2016
ES 6900 Environmental Monitoring Technology, Spring 2016

ES 4250 Watershed Management, Fall 2015
ES 5250 Watershed Management, Fall 2015
ES 5900 Watershed Seminar, Fall 2015
CE 3420 Applied Hydraulic and Hydrology, Summer 2015
ES 5900 Water and Climate, Fall 2014
ES 5301 Global Water Resources, Fall 2014
ES 4900 Special Topics in Environmental Studies: Appalachian Agroecology and Biocultural Diversity, Summer 2014
ES 4250 Watershed Management, Spring 2014
ES 5250 Watershed Management, Spring 2014
ES 5300 Field Methods in Environmental Studies, Fall 2013
ES 4900 Special Topics in Environmental Studies: Hydraulic Fracturing, Spring 2013
ES 4250 Watershed Management, Fall 2012
ES 5250 Watershed Management, Fall 2012
CE 353 Environmental Engineering Basics, Fall 2011
ES 690 Independent Reading on Land Use and Water Interactions and Water Development in Africa, Fall 2010
ES 569 Watershed Management, Spring 2010, Spring 2011, Spring 2012
ES 469 Watershed Management, Spring 2010, Spring 2011, Spring 2012

Course Development:

ES 469/569 Watershed Management (Quarters)
ES 4250/5250 Watershed Management (Semesters)
ES 4300/5300 Field Methods in Environmental Studies
ES 5301 Global Water Resources
ES 4900 Special Topics – Hydraulic Fracturing
ES 4900 Special Topics – Appalachian Agroecology and Biocultural Diversity
ES 5720 Energy Systems and Policy (online course)
ES 6850 Capstone: Resilient Communities and Infrastructure (online course)

Presentations and Workshops:

Assessment and Prioritization of Culverts for Enhanced Fish Passage, Ohio Department of Transportation, December 2021
Unconventional Oil and Gas Development in Ohio: An Update, Ohio Society of Professional Engineers, October 2021
Presentation to the Office of Surface Mining Reclamation and Enforcement Appalachian Regional Technology Transfer group, August 2019
Global Learning Community Leipzig Program Guest Lecture, May 2019
West Virginia University Department Seminar, October 2018
Restoration Ecology Field Trip, October 2018
Appalachian Studies Field Trip, October 2018
Science Café, October 2018
Online Professional Development Module, Ohio Society of Professional Engineers, 2018

Newcastle University Civil Engineering Department Seminar, April 27, 2018
West Virginia Acid Mine Drainage Task Force Annual Tour, October 2017
Science Café, February 3, 2016.
Hydraulic Fracturing and Water, International Space University, June 22, 2015.
Hydraulic Fracturing and Water, Athens Noon Rotary, June 2015.
Acid Mine Drainage Treatment and Stream Recovery, St Francis University, March 20, 2015.
On-Site Treatment of Hydraulic Fracturing Flowback and Produced Water: Removing Hardness Ions and Radioactive Isotopes, University of Cincinnati, September 30, 2014.
PORTS Annual Site Evaluation Report Student Training, December 10, December 17 2013.
Consortium for Energy, Economics and the Environment Webinar, "Water Resource Use in Ohio Fracking", October 2013
Manasseh Cutler Scholars Colloquium, "Water", August 26, September 9, October 21, November 28, 2013
Ohio Society of Professional Engineers Spring Continuing Professional Development (CPD) Conference, Athens, Ohio, June 2013
Science Café, February 27, 2013
Guest Lecture, Energy Engineering and Management, ME 4350/5350, February 2013
Guest Lecture, Environmental Studies Undergraduate Capstone, January 2013
Injection Well Panel Presentation/Forum, Appalachia Resist Action Camp, Athens, Ohio, November 2012
Injection Well Outreach Forum, Patton College of Education, Ohio University, Athens, Ohio, November 2012
Community Based Environmental Studies Guest Lecture, Acid Mine Drainage and the Carbondale Doser, November 2012 "Mining Impacts and Remediation" Science Café Public Presentation, Athens, Ohio, October 2012
"Success and Challenges of Acid Mine Drainage Remediation" Colloquium in Department of Environmental and Plant Biology, Ohio University, Athens, Ohio, October 2012
"Acid Mine Drainage Remediation and Restoration" Ecolunch Seminar, Evolution and Ecology Group, Biological Sciences, Ohio University, Athens, Ohio, October 2012
"Class II Injection Wells and Environmental Risk" Athens, Ohio Chapter of the Sierra Club Public Meeting, October 2012
"Class II Injection Wells and Environmental Risk" Injection Well Forum sponsored by Athens County Fracking Action Network and OU Institute for Applied and Professional Ethics, Athens, Ohio, April 2012
Women in Science and Engineering, April 2012
"Fracking Frenzy" WOUB Live Panel Discussion, Athens, Ohio, February 2012
Geological Sciences Graduate Seminar, Ohio University, Athens, Ohio, October 2011
Environmental Studies Colloquium, Ohio University, Athens, Ohio, October 2011
Environmental Studies Seminar, Ohio University, Athens, Ohio, October 2011
"Sustainable Development Panel" Global Leaders Institute, Athens, Ohio, August 2011
Boat of Knowledge (BOOKS) Teacher Workshop, Athens, Ohio, August 2011
STEM Teachers Workshop, Voinovich School of Leadership and Public Affairs, Athens, Ohio, August 2011
Earth Justice Seminar on Energy at Christ Lutheran Church, Athens, Ohio, June 2011

Young Scholars Ohio, May 2011
Eco Café Presentation sponsored by Rural Action, May 2011
Women in Science and Engineering, April 2011
Chemical Engineering Graduate Seminar, Ohio University, Athens, Ohio, February 2011
Guest Lecture, Environmental Studies Leadership Practicum Course, Ohio University, Athens, Ohio, February 2011
Guest Lectures, Water and Wastewater Analysis, Civil Engineering, Ohio University, Athens, Ohio, January 2011
Ohio Energy Institute Workshop on Acid Mine Drainage, July 2010
Engineering and Technology Public Policy Guest Lecture, May 2010
Young Scholars Ohio, May 2010
Environmental Journalism Field Trip, April 2010
Women in Science and Engineering, April 2010

STUDENT ADVISING

Undergraduate and Graduate Theses/Projects **Supervised (Completed)**

Wisdom Nudze, M.S. Environmental Studies, (Practicum, "Assessing the Environmental Costs and Benefits of Building Materials" Summer 2023)
Kehinde Ositimehin, M.S. Environmental Studies, (Thesis, "Hydrology and Agriculture Sediment Pollution in the Pre-Restoration Bloody Run Swamp of Ohio" Summer 2023)
Zachary Rundell, M.S. Environmental Studies, (Thesis, "Water Quality Impacts of Wetland Restoration and Drainage Channel Improvement in a Formerly Drained Agricultural Field" Summer 2023)
Tatiana Burkett, M.S. Environmental Studies, (Thesis, "The Influence of Riparian Vegetation on Total Organic Carbon in Restored Streams After Replanting" Summer 2023)
Madeline Yeatts, M.S. Environmental Studies, (Practicum, "Community Democracy in the Ohio River Valley" Spring 2023)
Edward Abbiw, M.S. Environmental Studies, (Thesis, "Removing heavy metals from mine-polluted waters using agricultural waste materials" Summer 2022)
Benjamin Quardey, M.S. Environmental Studies, (Thesis, "Sorption of Metals from Mining Polluted Water using Hydrochar and Potential for Direct Use" Fall 2022)
Maxwell Omane Henneh, M.S. Environmental Studies, (Leadership Practicum, "Wild and Scenic River Designation for Raccoon Creek" Summer 2022)
Nichole Mazzone, M.S. Environmental Studies, (Thesis, "The Effect of Substrate on Treatment Efficiency of Constructed Wetlands for Year-Round Onsite Sanitation" Summer 2022)
Jon Viti, M.S. Environmental Studies, (Thesis, "The Palmiter Method of Stream Restoration, Adapted to Protect Infrastructure, and its Effect on Streams" Spring 2022)
Jacob South, M.S. Environmental Studies, (Leadership Practicum, "Triple Bottom Line Cost Benefit Analysis of the Schoonover Center Green Roof" Spring 2021)
Annika Gurrola, M.S. Environmental Studies, (Thesis: "Analyzing Floodplain Reconnection as a Restoration Method: Water Storage, Sediment Dynamics, and Nutrient Cycling in Restored and Unrestored Streams" Spring 2021)

Red Pazol, B.A. Environmental Studies, (Thesis: “Effects of Floodplain Reconnection on Storm Response of Restored River Ecosystems” Spring 2021)

Rebekah Simkovich, (Leadership Practicum: “Eco-Literacy and Environmental Entrepreneurship Education for Solid Ground School” Spring 2020)

Jasmine Facun, (Thesis: “Effects of Mowing Regimes on the Plants, Pollinators, and Roughness of the Channelized Hocking River's Riparian Zone, Athens, Ohio” Spring 2020)

Moira Snuffer, (Thesis: “A Study of the Watershed Management in the Headwaters of the Hocking River: Environmental Communication in the City” Spring 2020)

Jennie Brancho, M.S. Environmental Studies (Thesis: “Effects of Precipitation Patterns on Sediment, Nutrient, and Biofilm Dynamics in an Acid Mine Drainage Stream” Spring 2019)

Rebecca Steinberg, M.S. Environmental Studies (Thesis: “Predicting Post-Mining Hydrologic Effects of Underground Coal Mines in Ohio through Multivariate Analysis and GIS Tool Building” Spring 2019)

Grace Fuchs, B.A. Environmental Studies Honors Tutorial College (Thesis: “How Community Concerns about Hydraulic Fracturing and Injection Wells can be Addressed through the Application of Environmental Monitoring Technology” Spring 2019)

Brooke Stokes, M.S. Environmental Studies (Leadership Practicum: “Low-head Dam Removal Feasibility in the Raccoon Creek Watershed” Spring 2018)

Valeska Silva Vasquez, M.S. Environmental Studies (Leadership Practicum: “Stormwater Community Education and Outreach” Summer 2017)

Zebulon Martin, M.S. Environmental Studies (Thesis: “Effects of Precipitation on the Acid Mine Drainage Impacted Hewett Fork Watershed” Spring 2017)

Sebastian Teas (Thesis: “A Design for Low-Cost Nutrient Runoff Monitoring Technology” Spring 2017)

Siti Hj Abd Rahman (Thesis: “Water Quality Alert system for Detection of Brine Spills Using Low-Cost Technology” Spring 2017)

Janessa Hill (Practicum: “Wayne County Dairy Manure Storage” Spring 2017)

Saruul Damdinbal, M.S. Environmental Studies (Thesis: “Relationship between Aqueous and Sediment Chemistry and its Impact on Biological Recovery in Acid Mine Drainage-Impaired Streams: Monday Creek, Sunday Creek, Thomas Fork, Raccoon Creek, and Hewett Fork” Summer 2016)

Jess Cogan, M.S. Environmental Studies (Thesis: “The Removal of Barium, Strontium, Calcium and Magnesium from Hydraulic Fracturing Produced Water Using Precipitation with Traditional and Alternative Reactant Feedstocks” Spring 2016)

Nora Sullivan, M.S. Environmental Studies (Thesis: “Comparing Acid and Metal Loading Before and After Stream Capturing Subsidence Closure” Spring 2016)

Godfrey Ogallo, M.S. Environmental Studies (Thesis: “Development of Remote Water Quality Monitoring System Using Disruption Tolerant Networking (DTN)” Spring 2016)

Blake Liberati, M.S. Civil Engineering (Thesis: “Removal of Naturally Occurring Radioactive Material from Flowback/Produced Water from the Hydraulic Fracturing Process” August 2015)

Henry Bedu-Mensah, M.S. Environmental Studies (Thesis: “Influence of Water Quality and Sediment Transport on Biological Recovery Downstream of Lime Doser Systems” August 2015)

Caleb Hawkins, M.S. Environmental Studies (Thesis: "The Recovery of an AMD-impacted Stream Treated by Steel Slag Leach Beds: a Case Study in the East Branch of Raccoon Creek, Ohio" May 2015)

Lisa Montgomery-Chorey, M.S. Environmental Studies (Leadership Practicum: "The Sustainability of the Appalachia Ohio Alliance Land Trust" December 2014)

Augusto Pinto, M.S. Environmental Studies (Thesis: "Traditional Knowledge and Water Quality in Timor-Leste: Climate Change Adaptation Strategies Used by Local Communities in Laco-Mesac and Ulmera Villages" December 2014)

Sarah Wright, M.S. Environmental Studies (Thesis: "Sample Frequency, Duration, and Spatial Representation Considerations of Great Lakes Beach Sanitary Survey Data at Three Beaches in Racine, Wisconsin" December 2014)

Joseph Jennings, M.S. Environmental Studies (Leadership Practicum: "Developing a University/Community Environmental Education Partnership" May 2014)

Bruce Underwood, M.S. Environmental Studies (Leadership Practicum: "Environmental Education at Logan Public School District" May 2014)

Lauren Reynolds, M.S. Environmental Studies (Leadership Practicum: "Forest Gardening Guide for Appalachian Ohio" May 2014)

William Hellyer, M.S. Environmental Studies (Thesis: "Assessment of Benthic Macroinvertebrate Community Impairment from High-Aluminum Acid Mine Drainage in Middleton Run, Ohio, USA and the Impact of Ingested Aluminum on Crayfish Growth" May 2014)

Taylor Macy, B.S. Environmental and Plant Biology and B.A. Environmental Studies Honors Tutorial College (Thesis: "Comparison of Long-Term Recovery Between Managed and Unmanaged Reclaimed Mine Lands" May 2014)

Elizabeth Migliore, M.S. Environmental Studies (Thesis: "A Case Study of Hydraulic Fracturing in Wetzel County, West Virginia" August 2013)

Renee Reber, M.S. Environmental Studies (Leadership Practicum: "The interaction between acid mine drainage and untreated sewage in Murray City, Ohio" June 2012)

Kathryn Staver, M.S. Environmental Studies (Leadership Practicum: "An analysis of the Marin County Water District, California, sampling route, corrosion and tank chlorination" March 2012)

Kimberly Brewster, M.S. Environmental Studies (Leadership Practicum: "Contribution of Acid Mine Drainage to Middleton Run from Two Tributaries Draining Abandoned Surface Mine Pits" June 2011)

Michelle Shively (Shaw), M.S. Environmental Studies (Leadership Practicum: "Pine Run Characterization and Treatment Exploration Project" June 2011)

Janene Ritchie (Giuseffi), M.S. Environmental Studies (Leadership Practicum: "Raccoon Creek Partnership Leaders and Learners Experience" December 2010)

Nicholas Schell, M.S. Environmental Studies (Leadership Practicum: "A Feasibility Study to Reintroduce Native Muskellunge to Raccoon Creek" June 2010)

Jonathon Brauer, M.S. Environmental Studies (Leadership Practicum: "Revealing New Sources: Elk Fork Acid Mine Drainage Study" June 2010)

Undergraduate and Graduate Theses/Project **Committee Membership (Completed)**

Lawrence Ajayi, M.S. Chemical and Biomolecular Engineering

Kelly Love, M.S. Environmental Studies
Samuel Mwangi, M.S. Environmental Studies
Mohiedin Hariri, M.S., Chemical Engineering
Zachary Williams, M.S., Mechanical Engineering
Chad Abbott, Ph.D. Mechanical Engineering
Sebastian Barkett, M.S. Geological Sciences
Charlene Hopkins, Ph.D. Biological Sciences
Lauren Sudimak, M.S. Environmental Studies (Summer 2021)
Manuel Lopez Sanchez, M.S. Environmental Studies (Spring 2021)
Andreana Madera Martorell, M.S. Environmental Studies (Spring 2020)
Kalub Kennedy, M.S., Civil Engineering (Spring 2019)
Makayla Wells, M.A., Latin American Studies (Spring 2019)
Mariah Thrush, Ph.D. Biological Sciences (Fall 2019)
Jesus Pagan, Ph.D., Mechanical Engineering (Fall 2018)
Melanie Rudolf, M.S. Environmental Studies (Summer 2018)
Lindsey Schafer, M.S. Geological Sciences (Spring 2018)
Fred Twumasi, M.S. Geological Sciences (Spring 2018)
Hanna Brourman, M.S. Geological Sciences (Spring 2018)
Gabby Russell, M.S. Environmental Studies (Spring 2018)
Linsey Edmunds, M.S. Environmental Studies (Spring 2018)
Donald Brooks, M.S. Environmental Studies (April 2017)
John Timmons, M.S. Civil Engineering (April 2017)
Jennifer Yurky, M.S. Environmental Studies (April 2017)
Jennifer Yurky, M.Ed. Recreation Studies (April 2017)
Kristeena Blaser, M.S. Environmental Studies (April 2017)
Julianna Murphy, M.S. Civil Engineering (April 2017)
Merri Collins, M.S. Environmental Studies (April 2017)
Daniel McKay, M.S. Geological Sciences (April 2017)
Michael Lachman, M.S. Environmental Studies (December 2016)
Johnnatan Garcia-Ruiz, M.S. Civil Engineering (July 2016)
Sarah Maj, M.S. Geological Sciences (June 2016)
Amoghavarsha Urs, M.S. Civil Engineering (April 2016)
Chamara deSilva, M.S. Chemical Engineering (February 2016)
Elliot Heckler, M.S. Civil Engineering (November 2015)
Elaine Goetz, Ph.D. Civil Engineering (November 2015)
Thomas Johnson, M.S. Mechanical Engineering (August 2015)
Can Celikbilek, M.S. Civil Engineering (August 2015)
Godfrey Ogallo, M.S. Information Telecommunications Systems (August 2015)
Xiao Dong, M.S. Mechanical Engineering (May 2015)
Alex Doksa, M.S. Civil Engineering (December 2014)
Mengliang Zhang, Ph.D. Chemistry (December 2014)
Alex Lunka, Ph.D. Mechanical Engineering (August 2014)
Stephen Ecrement, M.S. Environmental Studies (August 2014)

Abhijeet Shrawage, M.S. Mechanical Engineering (August 2014)
Joshua Richardson, M.S. Geological Sciences (May 2014)
Katharine Schleich, M.S. Geological Sciences (May 2014)
Jessica Deeds, M.S. Environmental Studies (May 2013)
Adam Dettmer, B.S. Geological Sciences (May 2013)
Patrick Fry, M.S. Civil Engineering (May 2013)
Lizhi Tong, M.S. Environmental Studies (May 2013)
Kyle Kingma, M.S. Environmental Studies (June 2012)
Rebekah Korenowski, B.S. Geological Sciences (June 2012)
Robert Holderbaum, M.S. Environmental Studies (June 2012)
Joseph Edmonds, M.S. Environmental Studies (June 2011)
James Laske, M.S. International Studies (June 2011)
Melissa Menerey, M.S. Geography (June 2011)
Victoria Suarez, M.S. International Studies (June 2011)

Students In Progress

Master of Science in Environmental Studies Practicum/Thesis **Advising**:

Liliana Kijek, M.S. Environmental Studies
Cassidy Mollick, M.S. Environmental Studies
Aliching Marma, M.S. Environmental Studies
Sana Jamshidifard, M.S. Environmental Studies
Ellen Pokuah, M.S. Environmental Studies
Maya Clouse-Henry, M.S. Environmental Studies
Zack Matthews, M.S. Environmental Studies, inactive
Mark Dengler, M.S. Environmental Studies, inactive
Sarah Hayley Shaw, M.S. Environmental Studies, inactive
Lucy Kavi, M.S. Environmental Studies, inactive
Alina Raulinaitis, M.S. Environmental Studies, inactive

Russ College of Engineering and Technology Thesis **Committee Member**:

Fatemeh Rezaeitaveabe, Ph.D. Civil Engineering
Peng Lin, Ph.D. Chemical Engineering, inactive
Joshua Schendel, Ph.D. Electrical Engineering and Computer Science, inactive
Mark Hritz, M.S. Mechanical Engineering, inactive

Other Student Support

Black Madden, Voinovich Scholar, 2023-2024
Chloe Partlow, Voinovich Scholar, 2023-2024
Samantha Holdaway, Voinovich Scholar, 2022-2023
Gabi Lindsey, Voinovich Scholar 2022-2023
Red Pazol, Research Apprentice, 2020-2021
Alexandra Sines, PACE Student, 2019-2020
Grace Fuchs, Voinovich Scholar, 2016-2019

Lydia Ramlo, Voinovich Scholar, 2017-2018
Tyler Stewart, Voinovich Scholar, 2017-2018
Rachel Rossin, Voinovich Scholar, 2016-2017
Grace Fuchs, Undergraduate Research Apprentice, 2016
Gracie Keyes, Undergraduate Intern, 2016
Rachel Rossin, Undergraduate Intern, 2016
Bethany Bella, Voinovich Scholar, 2015-2018
Aaron Coons, Voinovich Scholar, 2014-2016
Meagan Novak, Undergraduate Researcher, 2014-2015
Mira Cooper, Undergraduate Researcher, 2014-2015
Sarah Maj, Environmental Studies Undergraduate Leadership Experience, 2014
Taylor Smith, Environmental Studies Undergraduate Leadership Experience, 2014
Ohio Water Project Subject Matter Expert, Supported Scripps College of Communication students with subject specific expertise, Spring 2014
Blake Liberati, Ad-hoc project advisor, but cannot be his official thesis advisor, 2013-2015
Taylor Macy, Voinovich Scholar, 2013-2014
Delaney Bolger, Voinovich Scholar, 2013-2014
Taylor Mirfendereski, Support for Honors Tutorial College Thesis, 2013
Samuel Miller, Voinovich Scholar, 2012-2013
Zac Castor, Undergraduate Intern, 2012-2013

UNIVERSITY AND PROFESSIONAL SERVICE

International Scientific Committee Member, International Mine Water Association, 2024
Editor in Chief, Reclamation Sciences, American Society of Reclamation Sciences, 2022-present
Member, Mid-Ohio Regional Planning Commission Sustainability Council, 2022-present
Member, Ohio Attorney General's Advisory Council, 2021-present
Search Committee Master Teacher Child Development Center, 2017
Director, District 12 Science Day, Southeast Ohio Regional Science Fair, 2017-present
Co-Chair Science Fair Standing Committee, 2016-present
Voinovich School Promotion and Tenure Committee, 2016-2017
Faculty Senate Representative, Spring 2017
Faculty Senate P&T Committee, Spring 2017
Graduate Council, Spring 2017
UCC Programs Committee, Spring 2017
Chair Cutler Scholar Scholarship Interview Committee, 2017
Organizer Innovative Environmental Monitoring Symposium, 2016
Cutler Scholar Internal Steering Committee, 2016 – present
Search Committee Chair for Cutler Scholar Director, 2016
Search Committee for Environmental Specialist, Voinovich School of Leadership and Public Affairs, 2016
Ohio Academy of Science Junior Academy District 12 Collegiate Representative, 2016-present
Baker Awards Committee, 2015-2016
Cutler Scholars Advisory Board, 2015 – present

Environmental Studies Curriculum Committee, 2009 – present
Environmental Studies Advisory Board, 2011 – present
Voinovich School Professional Development Committee, 2009 – 2011
Search Committee for Assistant Professor, Environmental Studies, Voinovich School of Leadership and Public Affairs, 2012
Search Committee for Assistant/Associate Professor, Environmental Studies, Voinovich School of Leadership and Public Affairs, 2014
Search Committee for Associate Director of the Cutler Scholars Program, Ohio University, 2012
Office of Nationally Competitive Awards Goldwater Selection Committee, 2010 - 2013
Office of Nationally Competitive Awards Fulbright Interview Committee, 2012
Office of Nationally Competitive Awards British Marshall and Gates-Cambridge Scholarship Candidate Mentorship and Mock Interview Committee, 2009, 2010, 2012, 2014
Research and Creativity Expo Judge, 2010, 2012, 2013, 2014
University Climate Action Plan, Education and Outreach Committee, 2012
Manasseh Cutler Scholars Program Interview Committee, 2010 - present
President's Advisory Council for Sustainability Transportation Working Group, 2011
International Mine Water Association International Scientific Committee, 2010 - 2017
British Marshall Scholarship Chicago Region Pre-Selection Committee, 2010-2016
Peer Reviewer for Environmental Earth Sciences Journal, ongoing as needed
Peer Reviewer for Mine Water and the Environment, ongoing as needed
Peer Reviewer for Applied Geochemistry, ongoing as needed
Peer Reviewer for Environmental Pollution, ongoing as needed
Peer Reviewer for Environmental Science and Technology, ongoing as needed
Peer Reviewer for Hydrobiologia, ongoing as needed
Peer Reviewer for Environmental Science and Pollution Research, ongoing as needed
Ohio University Women's Ultimate Frisbee Team Coach, 2013 – 2015
Friends of the Shelter Dogs Faculty Advisor, 2013 – 2016
Voinovich School Future Leaders in Public Affairs Faculty Advisor (Environmental Studies), 2013 – 2015

COMMUNITY LEADERSHIP

Raccoon Creek Partnership Board of Directors, Member, 2009 – 2015
Raccoon Creek Partnership Board of Directors Chairperson, 2010 – 2015
Raccoon Creek Partnership Board of Directors Vice Chairperson, 2009 – 2010
Raccoon Creek Partnership Fundraising Committee, 2010 – 2012
Raccoon Creek Partnership Technical Advisory Committee Member, 2009 – 2015
Leading Creek Watershed Technical Advisory Committee Member, 2012 – 2015
Freshwater International Board of Directors Member, 2011 – 2015
Athens Professionals for Philanthropy Board Member, 2013 – 2017