

**IDENTIFYING INFORMATION:****NAME:** Byrne, Diana Marie**POSITION TITLE:** Assistant Professor**PRIMARY ORGANIZATION AND LOCATION:** University of Kentucky, Lexington, Kentucky, United States**Professional Preparation:**

ORGANIZATION AND LOCATION	DEGREE (if applicable)	RECEIPT DATE	FIELD OF STUDY
University of Illinois at Urbana-Champaign, Urbana, Illinois, United States	PHD	05/2020	Environmental Engineering
University of Illinois at Urbana-Champaign, Urbana, Illinois, United States	MS	08/2015	Civil Engineering
Saint Louis University, St. Louis, Missouri, United States	BS	05/2013	Civil Engineering

**Appointments and Positions**

2020 - present Assistant Professor, University of Kentucky, Lexington, Kentucky, United States

**Products****Products Most Closely Related to the Proposed Project**

1. Li Y, Trimmer J, Hand S, Zhang X, Chambers K, Lohman H, Shi R, Byrne D, Cook S, Guest J. Quantitative sustainable design (QSD) for the prioritization of research, development, and deployment of technologies: a tutorial and review. *Environmental Science: Water Research & Technology*. 2022; 8(11):2439-2465. Available from: <http://xlink.rsc.org/?DOI=D2EW00431C> DOI: 10.1039/D2EW00431C
2. Byrne D, Hamilton K, Houser S, Mubasira M, Katende D, Lohman H, Trimmer J, Banadda N, Zerai A, Guest J. Navigating Data Uncertainty and Modeling Assumptions in Quantitative Microbial Risk Assessment in an Informal Settlement in Kampala, Uganda. *Environmental Science & Technology*. 2021 March 22; 55(8):5463-5474. Available from: <https://pubs.acs.org/doi/10.1021/acs.est.0c05693> DOI: 10.1021/acs.est.0c05693
3. Corominas L, Byrne D, Guest J, Hospido A, Roux P, Shaw A, Short M. The application of life cycle assessment (LCA) to wastewater treatment: A best practice guide and critical review. *Water Research*. 2020 October; 184:116058-. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0043135420305959> DOI: 10.1016/j.watres.2020.116058
4. Byrne D, Grabowski M, Benitez A, Schmidt A, Guest J. Evaluation of Life Cycle Assessment (LCA) for Roadway Drainage Systems. *Environmental Science & Technology*. 2017 July 25; 51(16):9261-9270. Available from: <https://pubs.acs.org/doi/10.1021/acs.est.7b01856> DOI: 10.1021/acs.est.7b01856
5. Byrne D, Lohman H, Cook S, Peters G, Guest J. Life cycle assessment (LCA) of urban water infrastructure: emerging approaches to balance objectives and inform comprehensive decision-making. *Environmental Science: Water Research & Technology*. 2017; 3(6):1002-1014.

Available from: <http://xlink.rsc.org/?DOI=C7EW00175D> DOI: 10.1039/C7EW00175D

Other Significant Products, Whether or Not Related to the Proposed Project

1. Byrne D, Roux P, Corominas L. Environmental assessment of urban water systems: LCA case studies. *Assessing Progress Towards Sustainability* [Internet] Elsevier; 2022. 327-345p. Available from: <https://linkinghub.elsevier.com/retrieve/pii/B9780323858519000171> DOI: 10.1016/B978-0-323-85851-9.00017-1
2. Zib L, Byrne D, Marston L, Chini C. Operational carbon footprint of the U.S. water and wastewater sector's energy consumption. *Journal of Cleaner Production*. 2021 October; 321:128815-. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S0959652621030110> DOI: 10.1016/j.jclepro.2021.128815
3. Trimmer J, Lohman H, Byrne D, Houser S, Jjuuko F, Katende D, Banadda N, Zerai A, Miller D, Guest J. Navigating Multidimensional Social–Ecological System Trade-Offs across Sanitation Alternatives in an Urban Informal Settlement. *Environmental Science & Technology*. 2020 August 21; 54(19):12641-12653. Available from: <https://pubs.acs.org/doi/10.1021/acs.est.0c03296> DOI: 10.1021/acs.est.0c03296
4. Trimmer J, Byrne D, Lohman H, Guest J. Preliminary Greenhouse Gas (GHG) Emissions Analysis of Four Gates Sanitation Systems: Emissions During Steady-State Operation. 2020. Available from: <https://gatesopenresearch.org/documents/4-1> DOI: 10.21955/GATESOPENRES.1116564.1
5. Trimmer J, Lohman H, Byrne D, Guest J. Preliminary Techno-Economic Analysis (TEA) of Duke Reclaimer System: Ultrafiltration, Granular Activated Carbon, and Electrolysis Liquid Treatment System. 2019. Available from: <https://gatesopenresearch.org/documents/3-1718> DOI: 10.21955/GATESOPENRES.1116559.1

Synergistic Activities

1. Sustainability Committee, Chair, Environmental and Water Resources Institute (EWRI), American Society of Civil Engineers (ASCE); 2023-present
2. Envision Sustainability Professional (ENV SP), Institute for Sustainable Infrastructure; 2022-present
3. Innovations at the Nexus of Food, Energy, and Water Systems (INFEWS), Faculty Advisor, University of Kentucky National Science Foundation Graduate Research Traineeship (NSF NRT), 2020-present
4. Teaching Innovation Institute, Participant, Center for the Enhancement of Learning and Teaching (CELT), University of Kentucky; 2021-2022
5. Faculty Fellows in Science Communication, Faculty Fellow, University of Kentucky Center for Appalachian Research in Environmental Sciences (UK-CARES); 2020-2021

**Certification:**

When the individual signs the certification on behalf of themselves, they are certifying that the information is current, accurate, and complete. This includes, but is not limited to, information related to domestic and foreign appointments and positions. Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.

Certified by Byrne, Diana Marie in SciENCv on 2023-09-05 10:55:11